
DETAILED SITE INVESTIGATION

97-123 & 125-151 WALLGROVE ROAD, CECIL PARK NSW

Cecil Park Business Hub Development

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EXECUTIVE SUMMARY

Fyfe was engaged by Western Sydney Parklands Trust to undertake a detailed site investigation (DSI) of land at 97-123 and part of 125-151 Wallgrove Road, Cecil Park, NSW 2178 (the site). The site is proposed for development as a business hub that includes a warehouse, an ancillary office and an internal road. The DSI involved two rounds of soil sampling and analysis to investigate data gaps and recommendations in an earlier preliminary site investigation (PSI) undertaken by Construction Sciences (CS) in 2024.

The PSI and subsequently this DSI are required to inform the development consent planning decision making processes referred to in the *State Environmental Planning Policy – Resilience and Hazards (2021)* and the Secretary's Environmental Assessment Requirements (SEARs).

The site is part forested and part cleared land and has been used for agricultural purposes since at least 1947. The DSI undertaken by Fyfe included a review of the PSI and the history of the site. The PSI had identified potential sources of contamination including a discarded sheet of bonded asbestos containing material and various domestic wastes (oil and chemical containers, scrap metal, tyres) in the south of the site. An extensive site walkover by Fyfe did not identify any discarded asbestos containing material other than in the driveway and the sheet previously identified in the PSI.

The DSI sampled near surface soils from 14 locations near a farm shed, the former residence and the unsealed driveway. Concentrations of potential contaminants in every sample tested were below the criteria protective of human health and the environment for a commercial or industrial land use. Asbestos was confirmed to be present in some of the building waste fragments present in the fill material used to construct the driveway. A bundle of loose asbestos fibres was also present in one soil sample recovered from the driveway.

A preliminary classification of site soils was undertaken to inform the requirements for off-site disposal of surplus soils. The majority of site soils have been classified as Virgin Excavated Natural Material (VENM). Shallow soil near the farm shed on the southern boundary of the site had an elevated zinc concentration above natural background levels and therefore has been classified as General Solid Waste. Shallow fill that makes up the unsealed driveway contains asbestos and will require disposal as Special Waste (asbestos waste).

Following the removal of the waste ACM and the fill material in the entrance driveway the site would be considered suitable for its proposed commercial / industrial use. The zinc containing soil is suitable to both remain in its current location and/or to be reused elsewhere on the site.

Fyfe recommends that appropriately qualified contractors be engaged to undertake a pre-demolition asbestos audit of the dwelling on the site, and to remove the discarded ACM sheet and the asbestos containing shallow soils used to construct the unsealed driveway.

The reader is referred to the limitations presented in Section 11 of this report.

1. INTRODUCTION

Fyfe Pty Ltd (Fyfe) was commissioned by Western Sydney Parklands Trust to undertake a Detailed Site Investigation (DSI) of land at 97-123 and part of 125-151 Wallgrove Road, Cecil Park, NSW 2178 (the site). A plan showing the location of the site is attached as Figure 1.

This work is subsequent to a Preliminary Site Investigation (PSI) conducted by Construction Sciences (CS) in 2023/24. The site comprises two allotments: the northern portion of the site is known as 125-151 Wallgrove Road and the southern portion is at 97-123 Wallgrove Road. The northern portion is comprised of vacant land on the western side, with the eastern side currently being leased to Transport for NSW for the M7-M12 integration project. This leased land was originally included in the PSI but has not been included in the scope of this DSI, at the request of WSPT. The southern portion of the site includes native bushland in the west and mostly open paddocks in the east, with some areas of native flora and site infrastructure that includes two sheds; a dam; a horse pen; a poultry pen; an access road; and an unoccupied residential dwelling. The site is proposed for development as a business hub that will comprise a warehouse and ancillary office that will be accessed by an internal road.

The PSI and this DSI have been prepared for the development consent planning decision making processes referred to in the *State Environmental Planning Policy – Resilience and Hazards (2021)* and Item 13 – Soils and Contamination in the Secretary's Environmental Assessment Requirements (SEARs) 1.

1.1 Background information

A PSI was conducted in 2023/24 which investigated potential contamination associated with the sites former residential and small scale agricultural or hobby farm use. The PSI included a review of the site history and found the site was used for residential and small scale agricultural or hobby farm purposes from at least 1947. The agricultural activities appear to have ceased in 1986. Infrastructure including residential dwellings and sheds were present on the both the northern and southern land parcels. The PSI identified no soil contamination, however one sheet of asbestos containing material (ACM) was identified north of the residential dwelling (Figure 1). The PSI recommended further investigation of identified areas of concern.

1.2 Objectives

The objectives of this work were to – produce a DSI that identifies the nature and extent of contamination:

Scope:

- Identify contamination and the extent in soil;
- Identify potential risk to groundwater based on soil analytical results;
- review the PSI conducted by CS, site characterisation and historical information and identify potential data gaps;
- identify any associated potential risks to human health and/or the environment; and
- provide recommendations for further assessment/management of any identified site contamination.

1.2.1 Detailed Site Investigation

A DSI represents the second stage of the site assessment process. A DSI is required when the findings of a PSI indicate there is potential for site contamination to be present at the site and the available information is insufficient to enable site management strategies to be developed.

The main objective of the DSI is to characterise the nature of the contamination and delineate its lateral and vertical extent, such that an adequate level of risk assessment can be undertaken, the CSM can be updated and an appropriate remedial or management strategy can be developed as required.

This means that the DSI should characterise the nature, severity and extent of any impacts from the identified PCAs to determine whether further investigation and/or remedial works may be required.

2. DATA QUALITY OBJECTIVES

Systematic planning and verification is critical to the successful implementation of a contaminated site investigation project. The Data Quality Objectives (DQO) process, as described in Australian Standard AS4482.1-2005 and the ASC NEPM (1999), involves a seven-step iterative planning approach to enable the project team to communicate the project goals and decisions, project constraints (e.g. time, budget) and an assessment of the project uncertainties and how they are to be addressed (Steps 1 to 6) as well as to optimise the project specific sampling and analysis plan (Step 7).

The DQOs defined for the site are summarised in Table 2.1.

Table 2-1 Seven step DQO process

Step		Statement
1	<i>State the Problem</i>	Development works are proposed at the site, including construction of a warehouse and ancillary office facilities. The planning authority has requested that a DSI be undertaken in order that they may complete their decision making process. The DSI had been recommended in an earlier PSI that identified the presence of some asbestos containing material (ACM). The problem was that the PSI had not fully assessed the potential contamination risks associated with ACM and other potentially contaminating actives at the site. It was not known if remedial works would be required, or if there would be restrictions on the reuse or disposal of surplus soils from the site.
2	<i>Identify the Decision</i>	To address the identified problems stated above the following questions need to be answered: – What is the nature and extent of contamination present at the site? – Are there any risks to human health and/or ecological receptors associated with soil at the site which may affect the suitability of the land for future commercial/industrial use? – Are there any potential contamination matters associated with soils at the site, such as human health risk, that may affect the progress of site construction works? – Are the site soils impacted by other contaminants of potential concern (COPCs) such as PFAS or VOCs? – Are site soils suitable for disposal/re-use and what is their likely waste classification? – What is the appropriate level of environmental management for soils at the site? – Are there any risks to underground water as a result of potential soil impacts?
3	<i>Identify Inputs to the Decision</i>	The selection of soil sampling locations, and analytical suites, was based on the site history review, PSI, the ASC NEPM (1999), relevant Australian/New Zealand Standards, Environment Protection Policies (EPPs) and guideline documents. In addition, to help address the objectives detailed in Section 1.2, the following was also taken into consideration: – field observations of soil and the surrounding landscape; – sampling and analytical methodologies, including the outcome of relevant quality assurance (QA)/quality control (QC) measures; – adopted soil assessment criteria; – soil analytical data; and – any additional relevant information obtained during the work program.
4	<i>Define the Study Boundaries</i>	The study boundary includes the northern portion of the site made up of 125-151 Wallgrove Road and the southern portion, made up of 97-123 Wallgrove Road. The eastern portion of 125-151 Wallgrove Road is leased by Transport for NSW and is not a part of the study area - refer to Figure 1 (attached) and the site identification details in Section 3.3.

Step		Statement
5	<i>Develop a Decision Rule</i>	The ASC NEPM, relevant Australian/New Zealand Standards, Environment Protection Policies (EPPs) and guideline documents have been accessed to guide decisions on the methodology to be used to assess the site and the criteria to be adopted for the interpretation of the analytical data. A more detailed description of the methodology and criteria selection process is covered in Section 4.
6	<i>Specify Limits on Decision Errors</i>	The purpose of establishing decision error tolerances is to control (i.e. set a limit on) the acceptable degree of uncertainty upon which decisions are made, to avoid an incorrect decision being made and to support additional investigation, monitoring or remediation activities required (on the basis of accurate data) for the protection of human health and the environment. There are two types of decisions errors: – deciding the site is acceptable when it is not, thereby resulting in potential on-going risks, with no action when some was required, and – deciding the site is unacceptable when it is, thereby resulting in unnecessary action. The quality control (QC) acceptance criteria, as detailed in Section 4, have been used to assess whether the DQOs have been met.
7	<i>Optimise the Design</i>	The design of the DSI program needs to be sufficiently comprehensive to address the project objectives (Section 1.2) and Steps 1 and 2 of the DQOs. The design of the assessment program has been based primarily on the ASC NEPM, as well as all currently available information for the site, and includes the following: – drilling, logging and sampling soil bores, including laboratory analysis of select samples for the identified contaminants of potential concern (COPC) including asbestos; – generating a CSM to confirm and/or further assess any potentially unacceptable risks to human health and/or the environment; and – refining the program as necessary as new information becomes available.

3. SITE INFORMATION

3.1.1 Site identification

Property identification details are provided in Table 3.1.

Table 3-1 Property identification details

Address	97-123 and 125-151 Wallgrove Road, Cecil Park, NSW, 2178.
Certificate of Title	Southern portion: Lot 25, Section 4, DP 2954 Northern portion: Lot 24 DP 1152887 (part of)
Property description	The southern portion of the site identified as Lot 25, Section 4, DP 2954 includes native bushland in the west and mostly cleared land to the east with patches of native flora and site infrastructure that includes two sheds; a dam; a horse pen; a demolished poultry pen; an access road; and an unoccupied residential dwelling. The northern portion of the site is the farmland in the west of Lot 24 DP 1152887. The east of Lot 24 is leased to Transport for NSW and is not subject to the DSI.
Current site owner	Western Sydney Parklands Trust.
Local council	City of Fairfield
Zoning	Unzoned land.
Current land use	Currently vacant with infrastructure associated with the previous rural residential use.
Proposed land use	Development to host a business hub that will comprise a warehouse and ancillary office that will be accessed by an internal road.
Property area subject to the DSI	Approximately 74,000 m ²

3.1.2 Site description

The site is bound to the north and west by rural residential and small-scale agricultural properties which included residential infrastructure, greenhouses, and dams. To the south is native vegetation with some cleared agricultural land. Further south and to the east works are being undertaken by Transport for NSW for the M7-M12 integration project. The site comprises two allotments, the northern portion of the site known as 125-151 Wallgrove Road and the southern portion referred to as 97-123 Wallgrove Road. The northern portion is cleared agricultural land. To the east is land being leased to Transport for NSW for the M7-M12 integration. The southern portion includes bushland to the west made up of native vegetation and smaller undergrowth. The eastern portion of the site includes paddocks and some patches of native flora. Site infrastructure includes: two sheds; a dam; a horse pen; a poultry pen; an access road; and an unoccupied residential dwelling.

A plan showing the layout of the site is attached as Figure 1 and site photographs are included in Appendix A.

3.1.3 Surrounding land uses

The current surrounding land uses are detailed in Table 3.2.

Table 3-2 Surrounding land uses

North	Agricultural land.
West	Rural residential and agricultural land.
South	Bushland including native vegetation trees and undergrowth and an area of cleared agricultural land. Beyond is land undergoing development by Transport for NSW.
East	Road verge being developed by Transport for NSW with Wallgrove Road beyond.

3.1.4 Regional conditions

The regional conditions are summarised in Table 3.3.

Table 3-3 Summary of regional conditions

Topography	The site increases in elevation from west to east with the surrounding land increasing in elevation to the south, east and west. The land to the north of the site decreases in elevation towards Ropes Creek. The land beyond Ropes Creek increases in elevation to the north. Geoscience Australia Elvis database (2023) indicates that the site is located at a height ranging from approximately 93 m Australian Height Datum (AHD) in the west to approximately 111 m AHD in the east.
Geology and soils	Information obtained from the Department of Mineral Resources Geological Survey of Penrith (Geological Series Sheet 9030, Scale 1:100,000, Edition 1, 1991), indicates that soils within the site to be underlain by Triassic Age Shale of the Wianamatta Group, comprising shale, carbonaceous claystone, claystone, laminate, fine to medium grained lithic sandstone, rare coal and tuff.
Acid sulfate soils	According to the CSIRO's Australian Soil Resource Information System (ASRIS) website, the area that includes the site has an extremely low probability of containing acid sulfate soils, although this is based on limited (i.e. very low confidence) data. As acid sulfate soils are generally encountered below 5 m AHD (Sullivan et al., 2018), this supports the conclusion that acid sulfate soils are unlikely to be present.
Hydrology	The closest surface water bodies to the site are as follows: – Ropes Creek, located approximately 500 m to the northwest; – A tributary of Ropes Creek, flowing immediately adjacent (~10m) to the western boundary; – Approximately six farm dams located within 500 m radius of the site; and – An unnamed creek line located approximately 250 m to the southwest. Based on the location of the identified surface water courses and site topography, the inferred groundwater flow direction at the site is considered likely towards the west. Based on site surface topography, the overall surface water direction on the site is considered likely to be towards the west.
Hydrogeology	An online search of the WaterNSW Real-Time Groundwater Map identified one registered groundwater monitoring well within a 500 m radius of the site. The summary information for the registered monitoring well identifies the standing water level at 34 m BGL. The monitoring well was drilled to a depth of 246 m BGL with the geology encountered including clay (0-3m BGL) followed by shale and sandstone.

3.1.5 Local groundwater use

A review of the WaterNSW groundwater map indicated that there is only one registered bore within a 500 m radius of the site. The location of this groundwater bores is approximately 380 m north of the site. The listed intended purpose of the identified monitoring well is for test purposes with a SWL of 34 m BGL with a salinity measured as total dissolved solids (TDS) ranging from 950 to 1300 mg/L.

The WaterNSW data, is presented in Appendix B.

Localised groundwater flow direction is inferred to be in a westerly direction based on the local topography and identified surface water courses.

3.1.6 Site zoning

The NSW planning portal spatial viewer ([NSW Planning Portal Spatial Viewer](#)) website indicated that the site is currently in an unzoned area.

3.1.7 Ecological constraints

Through site inspections and history information groundwater dependent ecosystems (GDEs) or other ecological constraints were identified within a 1 km radius of the site. GDEs and ecological constraints identified include surface water bodies within 500 m of the site, areas of native flora located on the southwestern portion of the site and surrounding agricultural properties.

3.2 Historical review

3.2.1 Previous environmental Investigations

Table 3.4 Summary of previous environmental investigations

Construction Sciences (2024) Preliminary Site Investigation	
Scope of work	The scope of work undertaken as part of the PSI included: – A desktop review of the site history; – A walkover of the site; – Collection of a limited number of environmental samples from geotechnical boreholes; and – Data assessment and reporting. The report covered an area greater than that subject to this DSI: the north-eastern portion of the PSI site is not within the scope of this DSI.
Conclusions and recommendations	As the PSI addressed a greater area than that of the DSI, some of the conclusions and recommendations in the PSI are not relevant here and so have not been included in the following summary: – There is contamination present at the site arising from past land use activities, specifically the presence of visible fragments of asbestos containing material (ACM) in surface soils near P1-PACM2, P1-PACM3 and P2-PACM1 (refer to Figure 4 and Figure 5 in Appendix B for the approximate locations of these identified ACM hotspots). Recommendations included the following: – The client should barricade off the areas where ACM has been observed at the site and erect appropriate signage to prevent access by the public; and – The client should seek the advice of an appropriately qualified environmental consultant on how best to remediate or implement interim controls to prevent potential asbestos exposure risks. – A stage 2 detailed site investigation (DSI) should be undertaken at the site to further assess potential contamination risks associated with the identified areas of environmental concern; and – Any contamination found while undertaking the DSI should be remediated in accordance with a Remedial Action Plan (RAP); and – The stage 2 DSI and the RAP (if required) should be undertaken / prepared by a suitably experienced environmental consultant.

3.2.2 Historical land ownership

A summary of land ownership information of the current and historical Certificates of Title (CT) for the period 1904 to 2023 was made by Construction Sciences and is presented in Appendix B.

3.2.3 Historical aerial photograph review

Aerial photographs were reviewed for the period 1947 to 2024 and identified the site and surrounding land has been used as residential and small scale agricultural or hobby farm purposes. Various infrastructure associated with these land uses were erected and removed throughout this period. A detailed summary of the site and surrounding land uses is presented in Appendix B.

3.2.4 Historical and data-based searches

A range of historical and databased searches were interrogated by Construction Sciences in their PSI (Appendix B). It found no records suggestive of potentially contaminating activities in the following categories:

- Historical business within 100 m of the site;
- NSW EPA records:
 - Site Contamination Land Records;
 - Register of Notified Sites;
 - Register of Licences, Application, Notices, Audits or Pollution Studies and Reduction Programs; and
 - Certificates issued under section 10.7(2).
- Dangerous substance licensing;
- NSW Protected and special water resources; and
- Mines and Mineral Deposits.

3.3 Data Gaps

Fyfe's review of the PSI and historical information identified the following data gaps:

- Potential soil contamination associated with the metal shed in the centre of the site adjacent to the southern boundary;
- Potential soil contamination associated with the residential dwelling in the southeastern portion of the site; and
- Potentially contaminated fill material that makes up the unsealed driveway in the southeastern portion of the site.

4. SCOPE OF WORK

Fyfe undertook two phases of investigation at the site.

4.1.1 Soil investigations

The scope of work undertaken in August 2024 as part of the DSI by Fyfe included the following:

- Drilling, logging and sampling of four soil bores across the site, targeting areas not assessed as part of the PSI including the metal shed, former residence and unsealed driveway (refer Figure 1);
- An extensive site walkover to identify any potential sources of contamination or ACM that may have been overlooked in the PSI inspection; and
- Selected soil samples were analysed for a range of identified COPC, which included total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylene and naphthalene (BTEXN), metals, PAH, asbestos, organochlorine pesticides (OCPs) and organophosphate pesticides (OPPs) including waste classification suite which was made up of a broad range of COPC required for preliminary classification of site soils.

Fyfe returned to the site on 18 September 2024 for further assessment of the site which included:

- Collection of surface samples from ten locations targeting shallow fill soils along the unsealed driveway on the southeastern portion of the site (refer Figure 1); and
- All surface soil samples were analysed for the presence of ACM including three suspected asbestos fragments.

Soil sample locations are in Figure 1 (attached) and soil bore logs are provided in Appendix C.

4.1.2 DSI Quality Control (QC) sampling

4.1.2.1 Soil

The soil QC sampling and analysis program is summarised in Table 4.2.

Table 4-1 Summary of soil QC analytical program

Analyte	Number of samples analysed			% QC samples relative to primary samples	Number of blank samples analysed		
	Primary	Intra-lab duplicates	Inter-lab duplicates		Rinsate	Trip Spike	Trip Blank
TRH	7	2	1	43%	1	1	1*
BTEXN	7	2	1	43%	1	1	1
OCP / OPP	2	-	-	-	-	-	-
PAH	2	-	-	-	-	-	-
metals	7	2	1	43%	1	-	-
Asbestos	17	-	-	-	-	-	-
Waste Screen	1	-	-	-	-	-	-

5. METHODOLOGY

5.1.1 Guidance

The field investigation program was undertaken with reference to the following guideline documents:

- Australian Standard AS4482.2-1999 - *Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances.*
- Australian Standard AS4482.1-2005 - *Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds.*
- *Contaminated Land Management Act 1997.*
- *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended in 2013).
- NSW EPA (2020) *Contaminated Land Guidelines.*

5.1.2 Field methodologies

Prior to the commencement of the field investigations, a site-specific Job Safety Analysis (JSA) document was prepared – all personnel working at the site were required to read, understand, sign and conform to the JSA.

The field methodologies are summarised in Tables 4.4 to 4.8.

Table 5-1 Soil sampling methodology

Activity	Details
Drilling method	Drilling of the soil bores was undertaken by a suitably trained environmental scientist using a hand auger.
Soil logging and sampling	Excavated soils were discharged onto a clean sheet of plastic and gloved hands used to recover samples – disposable nitrile gloves were worn by field personnel and changed prior to the collection of each sample. All soils recovered were logged with reference to Australian Standard 1726-2017, with particular consideration of any potential indicators of contamination. To assess the soil for the presence of volatile organic compounds (VOCs), a portion of each recovered sample was sealed into a zip-sealed plastic bag, broken up while in the bag, rested for a minimum of five minutes (to allow for equilibration). Samples were screened using both a 10.6 eV lamp equipped hand-held photo-ionisation detector (PID) unit to detect VOCs, and a 11.7 eV lamp equipped PID to detect petroleum hydrocarbons. Soil samples were collected from discrete depths throughout the soil profile – i.e. corresponding to changes in lithology, colour and/or evidence of potential contamination (e.g. odour, staining, elevated PID readings). Soil bore logs, including soil descriptions and PID readings, are included in Appendix C.
Sample preservation and transportation	Soil samples were collected in laboratory-supplied screw top jars with minimal headspace allowed. Samples were chilled during storage and transport to the analytical laboratory.
Equipment decontamination	Decon 90 was used for decontamination of equipment.
Waste disposal	Soil cuttings were used to reinstate the hand auger boreholes, therefore no surplus soils required removal from the site.

6. ASSESSMENT CRITERIA

6.1 Guidance

During the preparation of the DSI report, consideration has been given to the information/guidance provided in the following documents:

- *Schedule B2* of the ASC NEPM; and
- Australian Standard AS4482.1-2005 - *Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds*.
- NEPC (2013) *National Environment Protection (Assessment of Site Contamination) Measure*.
- SEARs (2022) *Streamlined Secretary's Environmental Assessment Requirements*.
- WA DOH (2009) *Guidelines for the assessment, remediation and management of asbestos contaminating sites*.

In order to assess the relative concentration and significance of any potential contaminants detected through laboratory analysis it is usual to reference established screening criteria. The contaminant screening criteria represent threshold concentrations of specific contaminants which, if exceeded in a particular sample, may pose a health or environmental risk and therefore warrant further site-specific investigation or risk analysis.

6.1.1 Soil

The ASC NEPM sets out the basis for assessing the significance of soil contamination. Based on an understanding that the site's current and proposed future use is equivalent to NEPM's commercial/industrial land use scenario rather than the recreation/public open space scenario, the following ASC NEPM investigation and screening levels have been adopted to assess the suitability of site soils for this particular land use:

- Health Investigation Levels (HILs): HIL-D (Commercial/industrial land use) values for a range of organic and inorganic contaminants;
- Health Screening Levels (HSLs): HSL-D (Commercial/ Industrial land use) values for soil vapour intrusion (hydrocarbons only) for a conservative sandy soil type;
- Management Limits: values for hydrocarbons (in conservatively coarse-grained soils) which are based on a consideration of the formation of LNAPL, fire and explosive hazards and effects on buried services; and
- Health screening levels (HSLs): HSL-D (Commercial/Industrial land use) values for asbestos in soil.

In addition, the HSL-D direct contact criteria for commercial/industrial land use have been adopted from Friebe and Nadebaum (2011).

Ecological investigation and screening levels have been adopted from the ASC NEPM as follows:

- Soil Ecological Investigation Levels (EILs) for commercial and industrial land use; and
- Soil Ecological Screening Levels (ESLs) for a commercial land use and conservative sandy soil profile;

In addition, NEPM provides generic aged EILs for arsenic, lead, dichlorodiphenyltrichloroethane (DDT), and naphthalene. Aged EILs for chromium (III), copper, nickel and zinc are dependent upon the physio-chemical

parameters of site soils. In the absence of these parameters, EILs have been conservatively adopted from Tables 1B(1) to 1B(3) of the ASC NEPM, as summarised in Table 4.9.

Table 6-1 Soil field investigation EILs inputs and criteria

Chemical	Input value	Adopted value (commercial/industrial) (mg/kg)
Chromium III (Cr III)	The most conservative value for % clay (1%) was adopted	310
Copper (Cu)	The most conservative value for cation exchange capacity (CEC) of 5 cmol _c /kg was adopted	140
Nickel (Ni)	The most conservative value for CEC (5 cmol _c /kg) was adopted	55
Zinc (Zn)	The most conservative values for pH (4.0) and CEC (5 cmol _c /kg) were adopted	110

Soil analytical data were also compared against the waste soil classification guidelines published in NSW EPA (2014). Chemical concentrations were compared against the criteria for the following waste classification categories:

- General Solid Waste;
- Restricted Solid Waste; and
- Hazardous Waste.

In addition, waste soils are also required to meet the physical requirements to be classified as wastes other than General Solid Waste (non-putrescible). As defined in NSW EPA (2014) materials that contain certain wastes are pre-classified as 'general solid waste (non-putrescible)', these include:

- glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal
- paper or cardboard
- household waste from municipal clean-up that does not contain food waste
- waste collected by, or on behalf of, local councils from street sweepings
- grit, sediment, litter and gross pollutants collected in, and removed from, stormwater treatment devices and/or stormwater management systems, that has been dewatered so that they do not contain free liquids
- grit and screenings from potable water and water reticulation plants that has been dewatered so that it does not contain free liquids
- garden waste
- wood waste
- waste contaminated with lead (including lead paint waste) from residential premises or educational or childcare institutions
- containers, previously containing dangerous goods, from which residues have been removed by washing or vacuuming
- drained oil filters (mechanically crushed), rags and oil-absorbent materials that only contain non-volatile petroleum hydrocarbons and do not contain free liquids
- drained motor oil containers that do not contain free liquids
- non-putrescible vegetative waste from agriculture, silviculture or horticulture
- building cavity dust waste removed from residential premises or educational or childcare institutions, being waste that is packaged securely to prevent dust emissions and direct contact

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- synthetic fibre waste (from materials such as fibreglass, polyesters and other plastics) being waste that is packaged securely to prevent dust emissions, but excluding asbestos waste
 - virgin excavated natural material
 - building and demolition waste
 - asphalt waste (including asphalt resulting from road construction and waterproofing works)
 - biosolids categorised as unrestricted use, or restricted use 1, 2 or 3, in accordance with the criteria set out in the Biosolids Guidelines (EPA 2000)
 - cured concrete waste from a batch plant
 - fully cured and set thermosetting polymers and fibre-reinforcing resins
 - fully cured and dried residues of resins, glues, paints, coatings and inks
 - any mixture of the wastes referred to above.

6.1.1.1 Assessment of harm to water

The NSW EPA regulates water pollution with environmental protection licenses and environmental protection notices that aim to identify the potential for contamination from an activity, identify ways at preventing contamination and identify the environmental values that will be impacted if contamination was to occur. The environmental values are defined in the Protection of the Environment Operations regulations 2022 (schedule 5) and are specified in the *Australian and New Guidelines for Fresh and Marine Water Quality 2018* (the national Water Quality Guidelines WQGs)). The WQGs along with the Water Quality Management Strategy have been adopted as the policy and framework to manage and assess water pollution.

The EPA's policy is that water pollution should be but cannot always be avoided. In the circumstances where pollution could not be avoided the EPA should be notified under the *Contaminated Land Management Act (1997)* where they will take the steps necessary to assess whether the land is to be considered significantly contaminated. The EPA's considerations include:

- whether the substances have already caused harm (for example in the form of toxic effects on plant or animal life);
- whether the substances are toxic, persistent or bio accumulative or are present in large quantities or high concentrations or occur in combinations;
- whether there are exposure pathways available to the substances (that is, the routes whereby the substances may proceed from the source of the contamination to human beings or other aspects of the environment);
- whether the uses to which the land and land adjoining it are currently being put are such as to increase the risk of harm from the substances (for example, use for childcare, dwellings or domestic food production);
- whether the approved uses of the land and land adjoining it are such as to increase the risk of harm from the substances; and
- whether the substances have migrated or are likely to migrate from the land (whether because of the nature of the substances or because of the nature of the land).

The EPA may also declare land significantly contaminated even if harm from contamination only occurs under specific circumstances such as the potential future use of the land that does not exist at the time but are reasonable and foreseeable and consistent with the approved land use at the time.

Based on the soil analytical results, site history review and historical surrounding land uses, there is no identified risk of harm to water.

7. RESULTS

7.1 Field observations

The soil bore logs are included in Appendix C and provide details of the soil profile encountered at the site during the DSI conducted by Fyfe with details included in Table 4.12.

Table 7.12 Soils encountered

Material Type	Generalised Description	Comments
Surficial fill	Sand, gravel, cobbles and sandy gravel, fine to very coarse grained, brown to orange.	All fill material was associated with the unsealed driveway in the southeastern portion of the site (BH16_0.0-0.2 and S01 to S10) at depths ranging from 0.0-0.2 m BGL. Anthropogenic inclusions included tile, brick, plastic, metal, glass, asbestos fragments and concrete fragments.
Natural Soils	Sandy clay and clay with sand, light to dark brown/orange, mottled grey and red/orange, friable, medium plasticity, dry to w <PL.	Sandy clay and clay with sands were found in all boreholes ranging from 0.0 m to 1 m BGL.
Natural Soils	Clayey sand, light brown and brown/grey, dry to moist. Sandstone gravels noted in BH15.	Clayey sand identified in bore holes BH14 and BH15 starting at a depth of 0.8 m BGL and extended to the termination depth of 1 m BGL.
Natural Soils	Sandstone, orange, hard to friable, dry.	Sandstone identified in soil bore BH13 at a depth of 0.75 m where refusal was reached.

Anthropogenic inclusions noted within the fill material included:

- Trace tile fragments, plastic, metal, glass, asbestos fragments, brick fragments and concrete fragments, within fill soils in boreholes BH16 and surface samples S01 to S10
- Three samples (S06-A, S07-A and S09-A) of suspected asbestos fragments collected for lab analysis.

No other visual or olfactory evidence of contamination was identified by the field scientist, no evidence of volatile contaminants was detected with the PID (>10 PPM).

7.2 Laboratory analytical results

A summary of the soil analytical results is provided in Table 1 (attached). Copies of laboratory certificates and signed chain of custody (COC) documents are included in Appendix D.

Laboratory analytical testing showed that concentrations of chemical contaminants tested were either below the laboratory limits of reporting or below the adopted human health and ecological screening criteria applicable to a commercial or industrial land use.

ACM including a loose fibre bundle was identified within shallow fill soils at four out of the 10 sample locations (BH16, S06, S07 and S09) along the unsealed driveway in the southeastern portion of the site.

In addition to identifying whether the site poses a risk to human health or ecological receptors, Fyfe undertook a preliminary waste classification which involved comparing the physical and chemical makeup of site soils against NSW EPA waste classification guidelines. This classification applies to soils that may be surplus to requirements and need to be removed from the site.

The data showed that all soils sampled (except for BH14_0.1) generally reported analyte concentrations below the laboratory limit of reporting, except for metals concentrations indicative of natural background levels, therefore have been given a preliminary classification of VENM (refer to Table 1). These soils are also suitable for re-use elsewhere on the site, provided they also meet any geotechnical specifications that the redevelopment works may specify.

A concentration of zinc above the Excavated Natural Material (absolute max) waste disposal criteria (300mg/kg) was identified, in soil sample BH14_0.1. Shallow soils within the vicinity of BH14 have been given a preliminary classification of General Solid Waste (refer to Table 1). Whilst this zinc impacted soil is classified as General Solid Waste for off-site disposal purposes, it is suitable to remain on-site for a commercial/industrial land use without any remediation required.

ACM was reported in shallow fill soils in the unsealed driveway which will require disposal offsite as Special Waste (asbestos waste).

7.3 Quality Assurance/Quality Control (QA/QC)

Tabulated analytical results for the primary and QC samples for soils are presented in Table 2. The results of internal laboratory QC procedures are provided within the laboratory analysis report in Appendix D.

Table 7-1 indicates conformance to specific QA/QC procedures – in summary, the analytical data were deemed to be of acceptable quality for the purpose of this assessment.

Table 7-1 Data validation

QA/QC requirement	Completed	Comments
<i>Field instruments calibrated before use</i>	Yes	The field equipment was calibrated by the hire company prior to use – calibration documentation is provided in Appendix E.
<i>Samples kept chilled</i>	Mostly	Immediately upon collection, the soil samples were placed into chilled insulated coolers (esbies), where they remained during transport to the analytical laboratories. Although an attempt to chill was evident, the Eski for sample batch ES2428119 was received at the secondary laboratory (ALS) at slightly over the ideal temperature ($\leq 4^{\circ}\text{C}$). Sample batch 1140565 noted “no attempt to chill was evident”.
<i>Samples delivered to laboratory within sample holding times and with correct preservative</i>	Yes	Soil samples were delivered to the laboratory within the specified holding times and in laboratory-supplied containers prepared with the appropriate preservatives (where required). All samples were transported under strict COC procedures.
<i>Samples extracted/analysed within sample holding times</i>	Yes	Samples were all extracted within the laboratory-specified holding times

QA/QC requirement	Completed	Comments
All analyses National Association of Testing Authorities (NATA) accredited	Yes	Eurofins and Australian Laboratory Services (ALS) are NATA accredited for all of the analyses performed.
Acceptable laboratory limits of reporting (LOR)	Mostly	Although the laboratory LORs for soil were also mostly below the adopted assessment criteria, the LOR for TRH C ₁₀ -C ₁₆ and F2 were above ESLs for Areas of Ecological Significance criteria. There could be a risk that some minor concentrations of the COPC could be masked by a raised LOR, however, this risk is considered minor.
Required number of field QC samples analysed - Soil	Yes	As detailed in Section 4.1.4, field QC soil samples submitted for laboratory analysis included QC01, QC02 and QC03 – these samples were analysed for TRH, BTEXN and metals.
Duplicate sample pairs reported acceptable relative percentage differences (RPDs) – Soil	Mostly	Where they were able to be calculated (i.e. detectable concentrations in both samples), calculated RPD values for the duplicate QC soil sample pairs were mostly less than 30%. Exceptions were only identified in duplicate sample pairs BH14_0.1 and QC02 for zinc and BH16_0.1 and QC03 for nickel. Elevated RPDs between Primary sample BH14_0.1 and external triplicate sample QC02 is likely due natural variations within the soil itself and differences in the sampling and analysis methodologies between primary and secondary labs and therefore not considered to be of any significance. Elevated RPDs between primary sample BH16_0.1 and secondary sample QC03 is due to low reported concentrations of analytes creating large percentage differences and are not considered to be of significance. Where applicable, the highest concentration has been adopted for data interpretation
Acceptable blank sample results – soil	Yes	Analyte concentrations in the equipment rinsate blank sample were less than the laboratory LOR, indicating that the decontamination procedure was effective, and that cross-contamination had not adversely impacted sample integrity. Analyte concentrations in the trip blank sample were less than the laboratory LOR, indicating that cross-contamination by volatiles did not occur during sample transport.
Acceptable spike sample results – soil	Yes	Analyte concentrations in the trip spike reported a percentage concentration of analytes in a range considered acceptable for the purposes of demonstrating reliability in the testing procedures and equipment adopted by the receiving laboratory.
Acceptable laboratory QA procedures and QC results	Mostly	Exceedances of laboratory QA/QC parameters were identified in the following analytical batches: – ES2428119 As laboratory QA parameters for these batches were compliant for >95% of parameters assessed, consistent with the recommendations of the ASC NEPM, the overall reliability of reported laboratory data was considered acceptable.

8. CONCEPTUAL SITE MODEL (CSM)

Schedule B2 of the ASC NEPM (1999) recommends the development and refinement of a conceptual site model (CSM) that identifies the potential sources of contamination, the COPC, the likely media involved and the pathways by which exposure to any contamination at the subject site may occur. For exposure to occur, a complete pathway must exist between the source of contamination and the receptor (i.e. the person or ecosystem components potentially affected). Where the exposure pathway is incomplete, there is no exposure and hence no risk via that pathway.

Contamination at the site has been identified in the form of a discarded piece of ACM sheeting. This sheeting was likely derived from sheeting that had been used elsewhere on the site. ACM contamination was also found in the fill material used to construct the unsealed driveway into the property. A loose fibre bundle was detected in one of the samples from the roadway.

In addition, there are a range of wastes present that should be disposed of. These wastes include domestic oil and chemical containers, an engine, tyre, vehicle batteries, scrap metal and concrete fragments.

The ACM sheeting is present in a bonded form within the matrix of the building material and so does not present a risk to human health in its current undisturbed condition whilst the site remains vacant. However, the presence of a loose fibre bundle indicates that the roadway fill material may present a potential risk to human health. The fibre bundle has almost certainly been generated from the movement of vehicles over the bulk ACM fragments present in the material used to construct the driveway.

To avoid risks to human health the discarded ACM sheeting and the fill material used to construct the entry driveway should be removed by an appropriately licensed asbestos removalist before any other works are undertaken.

At the completion of these works the site should not present any unacceptable risks to human health or the environment under a commercial/industrial use of the site.

9. CONCLUSIONS AND RECOMMENDATIONS

The site history and limited soil sampling investigation conducted by Construction Science identified some wastes present at the site arising from past land use activities, specifically the presence of a sheet of asbestos containing material on the ground and various domestic type wastes (oil and chemical containers, scrap metal, a tyre and an engine) in the southeastern portion of the site (refer to Figure 1). Fyfe reviewed the PSI report and identified the need for some limited further sampling and analysis of soils near a metal clad shed adjacent to the southern boundary of the site, near the former residence and along the unsealed entrance driveway (Figure 1).

Soils were sampled by Fyfe at 14 locations and chemical analyses showed there to be no analyte concentrations that exceeded the adopted human health or ecological criteria for a commercial/industrial use of the site.

ACM including a loose fibre bundle was identified in shallow soils that had been used to construct the unsealed entrance driveway. Fyfe undertook a comprehensive site walkover to determine if there may be more discarded ACM present than that identified in the PSI. The walkover confirmed that the ACM reported in the PSI was still present. It did not identify any other ACM except for that in the entrance driveway.

Laboratory analytical testing showed that concentrations of chemical contaminants in soil were either below the laboratory limits of reporting, or below the adopted human health and ecological screening criteria applicable to a commercial or industrial land use.

A preliminary classification of site soils was undertaken by Fyfe to inform the disposal of excess soils that may be generated by the development and require off-site disposal. The majority of the soils at the site have been given a preliminary classification as Virgin Excavated Natural Material.

One elevated zinc concentration above natural background levels was reported in soil sample BH14_0.1. Therefore, shallow soils in the vicinity of BH14 have been given a preliminary waste classification of General Solid Waste, should they require removal from the site. Alternatively, these soils are suitable for reuse elsewhere onsite.

Asbestos present in the fill material used to construct the unsealed driveway is classified as Special Waste (asbestos waste) and will require disposal to a licenced landfill facility.

Based on the depth to groundwater (expected to be approximately 34 m BGL), soil analytical results, site history review and historical surrounding land uses identified, there is no identified risk of harm to water and therefore no groundwater assessment is considered necessary.

Following the removal of the waste ACM and the fill material in the entrance driveway, the site would be considered suitable for its proposed future commercial / industrial use.

Fyfe recommends that:

- An appropriately qualified person should be engaged to undertake an assessment of the dwelling on the site to identify any asbestos containing material (ACM) within the structure.
- An appropriately licensed asbestos removal contractor should be engaged to remove the ACM sheet discarded to the north of the residential dwelling and the asbestos containing shallow fill soils used to construct the unsealed driveway.

10. REFERENCES

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11. LIMITATIONS

The opinions and conclusions presented in this report are specific to the conditions of the site and the state of legislation currently enacted as at the date of this report. Fyfe does not make any representation or warranty that the opinions and conclusions in this report will be applicable in the future as there may be changes in the condition of the site, applicable legislation or other factors that would affect the opinions and conclusions contained in this report.

Fyfe has used the degree of skill and care ordinarily exercised by reputable members of our profession practising in the same or similar locality. This report has been prepared for the Western Sydney Parklands Trust, for the specific purpose identified in the report. Fyfe accepts no liability or responsibility to any other party for the accuracy of any information contained in the report or any opinion or conclusion expressed in the report. Neither the whole of the report nor any part or reference thereto may be in any way used, relied upon or reproduced by any other party without Fyfe's prior written approval. This report must be read in its entirety, including all tables and attachments.

SITE PLANS





DATA SUMMARY TABLES



TABLE 1
Soil Analytical Results



	BTEXN								TRH											
	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene	Total BTEX	C6-C10	>C10-C16	>C16-C34	>C34-C40	>C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (>C10-C16 minus Naphthalene)	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36 (Sum of total)
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.2	10	50	100	100	50	10	50	10	20	50	50	50
ASC NEPM (1999) Vapour intrusion HSL Commercial/Industrial, Sand, 0m < 1m	3	NL	NL			230	NL							260	NL					
NEPM 2013 Table 7 Comm/Ind D HSL for Asbestos in Soil																				
ASC NEPM (1999) HIL Commercial/Industrial																				
ASC NEPM (1999) Management Limits Commercial/Industrial, Coarse Soil									700	1,000	3,500	10,000								
ASC NEPM (1999) Generic EIL - Areas of Ecological Significance							10													
ASC NEPM (1999) Generic EIL - Comm/Ind							370													
ASC NEPM (1999) Generic EIL - Urban Res & Public Open Space							170													
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Coarse Soil, 0m < 2m	8	10	1.5			10				25				125	25					
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil, 0m < 2m	75	135	165			180				170	1,700	3,300		215	170					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil, 0m < 2m	50	85	70			105				120	300	2,800								
Friebel and Nadebaum (2011) Vapour Intrusion HSL, IMW (Shallow Trench), Sand, 0m < 2m	77	NL	NL			NL			NL	NL				180	120					
Friebel and Nadebaum (2011) Direct Contact HSL, Commercial/Industrial	430	99,000	27,000			81,000			26,000	20,000	27,000	38,000								
Friebel and Nadebaum (2011) Direct Contact HSL, IMW	1,100	120,000	85,000			130,000			82,000	62,000	85,000	120,000								
NSW 2014 Excavated Natural Material (Absolute Max)	0.5	65	25			15														500
NSW 2014 General Solid Waste CT1 (No Leaching)	10	288	600			1,000										650				10,000
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	40	1,152	2,400			4,000										2,600				40,000

Sample Name	Lab Report Number	Date Sampled	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
BH13_0.1	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
BH13_0.4	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
BH13_0.7	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.1	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
BH14_1.0	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
BH15_0.1	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
BH15_0.5	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
BH15_1.0	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.1	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
BH16_0.5	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
BH16_1.0	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S01-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S02-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S03-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S04-0.1	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S05-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S06-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S06-A	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S07-0.15	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S07-A	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S08-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S09-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S09-A	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S10-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Duplicate Sample Summary																						
BH14_0.1	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
QC01	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
	RPD (%)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.1	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
QC02	E52428119	23 Aug 2024	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50
	RPD (%)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.1	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
QC03	1132079	23 Aug 2024	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50
	RPD (%)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments

#1 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 years.

#2 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.

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

#4 Errata 30 April 2014. Naphthalene should not be subtracted from >C

#5 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.

#6 Revised as per NEPC errata 6 Feb 2014

* Criteria are inclusive of all cresol isomers

Abbreviations

N = No

Y = Yes

AF = Friable Asbestos

ACM - Asbestos Containing Material

FA - Fibrous asbestos

TABLE 1
Soil Analytical Results



			Metals											Phenols																							
	Units		Arsenic	Beryllium	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Zinc		2,4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dinitrophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol	4-Nitrophenol	Cresol Total	Pentachlorophenol	Tetrachlorophenols	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	
LOR	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
ASC NEPM (1999) Vapour intrusion HSL Commercial/Industrial, Sand, 0m < 1m																																					
NEPM 2013 Table 7 Comm/Ind D HSL for Asbestos in Soil																																					
ASC NEPM (1999) HIL Commercial/Industrial	3,000	500	900	3,600		240,000	1,500	730			6,000	10,000			400,000	25000																660		240,000			
ASC NEPM (1999) Management Limits Commercial/Industrial, Coarse Soil																																					
ASC NEPM (1999) Generic EIL - Areas of Ecological Significance	40																																				
ASC NEPM (1999) Generic EIL - Comm/Ind	160																																				
ASC NEPM (1999) Generic EIL - Urban Res & Public Open Space	100																																				
NEPM 2013 Table 18(6) ESLs for Areas of Ecological Significance, Coarse Soil, 0m < 2m																																					
NEPM 2013 Table 18(6) ESLs for Comm/Ind, Coarse Soil, 0m < 2m																																					
NEPM 2013 Table 18(6) ESLs for Urban Res, Coarse Soil, 0m < 2m																																					
Friebel and Nadebaum (2011) Vapour Intrusion HSL, IMW (Shallow Trench), Sand, 0m < 2m																																					
Friebel and Nadebaum (2011) Direct Contact HSL, Commercial/Industrial																																					
Friebel and Nadebaum (2011) Direct Contact HSL, IMW																																					
NSW 2014 Excavated Natural Material (Absolute Max)	40		1		150	200	100	1			60				300																						
NSW 2014 General Solid Waste CT1 (No Leaching)	100	20	20	100			100	4	100	40	20	100				8,000	40								4,000							4,000					288
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	400	80	80	400			400	16	400	160	80	400				32,000	160								16,000							16,000					1,152
Sample Name			Lab Report Number		Date Sampled																																
BH13_0.1	1132079	23 Aug 2024	11	-	<0.4	-	24	16	21	<0.1	-	12	-	-	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.4	1132079	23 Aug 2024	11	-	<0.4	-	30	28	19	<0.1	-	19	-	-	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.7	1132079	23 Aug 2024	8.4	-	<0.4	-	23	31	11	<0.1	-	13	-	-	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.1	1132079	23 Aug 2024	7.5	-	<0.4	-	23	21	16	<0.1	-	15	-	-	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_1.0	1132079	23 Aug 2024	8.2	-	<0.4	-	20	30	15	<0.1	-	31	-	-	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.1	1132079	23 Aug 2024	6.7	-	<0.4	-	19	19	17	<0.1	-	13	-	-	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.5	1132079	23 Aug 2024	7.8	-	<0.4	-	17	39	17	<0.1	-	20	-	-	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_1.0	1132079	23 Aug 2024	6.3	-	<0.4	-	15	36	15	<0.1	-	16	-	-	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.1	1132079	23 Aug 2024	9.0	<2	<0.4	<1	-	-	27	<0.1	<5	17	<2	<2	-	<0.4	<1	<1	<5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<0.5	<20	<1	<5	<0.5	<1	<10	<0.5	<1	<20	<20	
BH16_0.5	1132079	23 Aug 2024	4.2	-	<0.4	-	21	35	15	<0.1	-	15	-	-	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_1.0	1132079	23 Aug 2024	7.1	-	<0.4	-	20	43	14	<0.1	-	17	-	-	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S01-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S02-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S03-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S04-0.1	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S05-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S06-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S06-A	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S07-0.15	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S07-A	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S08-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S09-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S09-A	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S10-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Duplicate Sample Summary																																					
BH14_0.1	1132079	23 Aug 2024	7.5	-	<0.4	-	23	21	16	<0.1	-	15	-	-	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	1132079	23 Aug 2024	8.3	-	<0.4	-	22	19	22	<0.1	-	14	-	-	650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD (%)			10	-	-	-	4	10	32	-	-	7	-	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.1	1132079	23 Aug 2024	7.5	-	<0.4	-	23	21	16	<0.1	-	15	-	-	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	ES2428119	23 Aug 2024	11	-	<1	-	30	22	25	<0.1</																											

Comments

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* Criteria are inclusive of all cresol isomers

Abbreviations

N = No

Y = Yes

AF = Friable Asbestos

ACM - Asbestos Containing Material

FA - Fibrous asbestos

TABLE 1
Soil Analytical Results



		PAH																	
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benz(a)pyrene	Benz(b)fluoranthene	Benz(g,h,i)perylene	Benz(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Benz(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ASC NEPM (1999) Vapour intrusion HSL Commercial/Industrial, Sand, 0m < 1m															NL				
NEPM 2013 Table 7 Comm/Ind D HSL for Asbestos in Soil																			
ASC NEPM (1999) HIL Commercial/Industrial																		40	4,000
ASC NEPM (1999) Management Limits Commercial/Industrial, Coarse Soil																			
ASC NEPM (1999) Generic EIL - Areas of Ecological Significance															10				
ASC NEPM (1999) Generic EIL - Comm/Ind															370				
ASC NEPM (1999) Generic EIL - Urban Res & Public Open Space															170				
NEPM 2013 Table 18(6) ESLs for Areas of Ecological Significance, Coarse Soil, 0m < 2m						1.4													
NEPM 2013 Table 18(6) ESLs for Comm/Ind, Coarse Soil, 0m < 2m						1.4													
NEPM 2013 Table 18(6) ESLs for Urban Res, Coarse Soil, 0m < 2m						0.7													
Friebel and Nadebaum (2011) Vapour Intrusion HSL, IMW (Shallow Trench), Sand, 0m < 2m															NL				
Friebel and Nadebaum (2011) Direct Contact HSL, Commercial/Industrial															11,000				
Friebel and Nadebaum (2011) Direct Contact HSL, IMW															29,000				
NSW 2014 Excavated Natural Material (Absolute Max)						1													40
NSW 2014 General Solid Waste CT1 (No Leaching)						0.8													200
NSW 2014 Restricted Solid Waste CT2 (No Leaching)						3.2													800

Sample Name	Lab Report Number	Date Sampled																	
BH13_0.1	1132079	23 Aug 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH13_0.4	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.7	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.1	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_1.0	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.1	1132079	23 Aug 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH15_0.5	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_1.0	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.1	1132079	23 Aug 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH16_0.5	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_1.0	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S01-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S02-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S03-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S04-0.1	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S05-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S06-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S06-A	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S07-0.15	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S07-A	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S08-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S09-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S09-A	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S10-0.2	1,140,565	18 Sep 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Duplicate Sample Summary																			
BH14_0.1	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD (%)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.1	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	ES2428119	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD (%)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16_0.1	1132079	23 Aug 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC03	1132079	23 Aug 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD (%)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments

#1 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 years.

#2 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.

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

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#5 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.

#6 Revised as per NEPC errata 6 Feb 2014

* Criteria are inclusive of all cresol isomers

Abbreviations

N = No

Y = Yes

AF = Friable Asbestos

ACM - Asbestos Containing Material

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[illegible]

Sample Name	Lab Report Number	Date Sampled
BH13_0.1	1132079	23 Aug 2024
BH13_0.4	1132079	23 Aug 2024
BH13_0.7	1132079	23 Aug 2024
BH14_0.1	1132079	23 Aug 2024
BH14_1.0	1132079	23 Aug 2024
BH15_0.1	1132079	23 Aug 2024
BH15_0.5	1132079	23 Aug 2024
BH15_1.0	1132079	23 Aug 2024
BH16_0.1	1132079	23 Aug 2024
BH16_0.5	1132079	23 Aug 2024
BH16_1.0	1132079	23 Aug 2024
S01-0.2	1,140,565	18 Sep 2024
S02-0.2	1,140,565	18 Sep 2024
S03-0.2	1,140,565	18 Sep 2024
S04-0.1	1,140,565	18 Sep 2024
S05-0.2	1,140,565	18 Sep 2024
S06-0.2	1,140,565	18 Sep 2024
S06-A	1,140,565	18 Sep 2024
S07-0.15	1,140,565	18 Sep 2024
S07-A	1,140,565	18 Sep 2024
S08-0.2	1,140,565	18 Sep 2024
S09-0.2	1,140,565	18 Sep 2024
S09-A	1,140,565	18 Sep 2024
S10-0.2	1,140,565	18 Sep 2024

[illegible]

Comments

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TABLE 2
SOIL FIELD BLANKS



			BTEXN														TRH				
			Benzene		Toluene		Ethylbenzene		Xylene (o)		Xylene (m & p)		Xylene Total		Naphthalene		C6-C10		F1 (C6-C10 minus BTEX)	C6-C9	C6-C9
Units	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	%	mg/kg	mg/kg	%
LOR	0.1	1	0.1	1	0.1	1	0.1	1	0.2	1	0.3	1	0.5	1	20	1	20		20		1
Sample Name	Lab Report Number	Date Sampled																			
TRIP BLANK	1132079	23 Aug 2024	<0.1	-	<0.1	-	<0.1	-	<0.1	-	<0.2	-	<0.3	-	<0.5	-	<20	-	<20	<20	-
TRIP SPIKE	1132079	23 Aug 2024	-	95	-	95	-	93	-	83	-	95	-	87	-	95	-	83	-	-	89

			BTEXN							TRH											Metals								
			Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene	C6-C10	>C10-C16	>C16-C34	>C34-C40	>C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (>C10-C16 minus Naphthalene)	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36 (Sum of total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
Units			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR			1	1	1	1	2	3	10	0.02	0.05	0.1	0.1	0.1	0.02	0.05	0.02	0.05	0.1	0.1	0.1	1	0.2	1	1	1	0.1	1	5
Sample Name	Lab Report Number	Date Sampled																											
RB01	1132079	23 Aug 2024	<1	<1	<1	<1	<2	<3	<10	<0.02	<0.05	<0.1	<0.1	<0.1	<0.02	<0.05	<0.02	<0.05	<0.1	<0.1	<0.1	<1	<0.2	<1	<1	<1	<0.1	<1	<5

APPENDIX A
SITE PHOTOS



DSI PHOTOS



Image 1: Unsealed Driveway located in the south-eastern portion of the site (location of borehole BH16).



Image 2: Fill Material from Unsealed Driveway located in the south-eastern portion of the site (location of surface soil sample S07 and identified ACM).

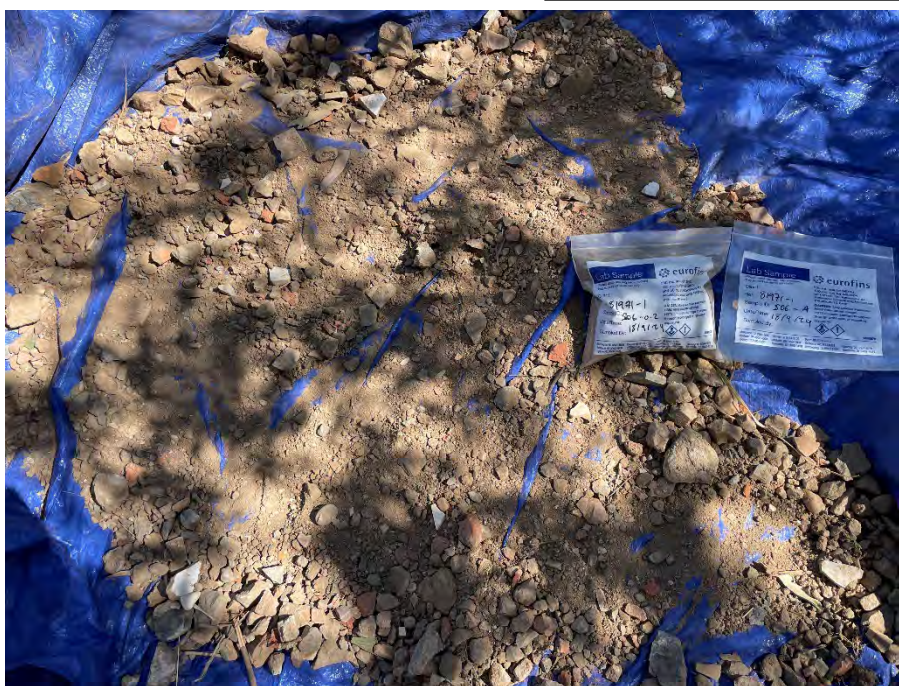


Image 3: Fill Material from Unsealed Driveway located in the south-eastern portion of the site (location of surface soil sample S06 and ACM S06A).



Image 4: Metal Shed located in the south-central portion of the site (Location of bore holes BH13 and BH14)



Image 5: Residential Dwelling located in the south-eastern portion of the site (Location of bore hole BH15)



Image 6: Storage Shed located in the south-eastern portion of the site to the west of the Residential Dwelling.



Image 7: Dam located in the south-central portion of the site.

PSI IMAGES



ACM sheet, located to the immediate north of the Residential Dwelling.



View of Unpaved Driveway with shallow filling, facing east.

HISTORICAL IMAGES



Aerial Image of The Site in 1955



Aerial Image of The Site in 1965



Aerial Image of The Site in 1978



Aerial Image of The Site in 1986



Aerial Image of The Site in 1998



Aerial Image of The Site in 2004



Aerial Image of The Site in 2015



Aerial Image of The Site in 2023

APPENDIX B
CONSTRUCTION SCIENCES PSI



Stage 1 Preliminary Site Investigation

**97-123 AND 125-151 WALLGROVE ROAD, CECIL
PARK, NSW 2178**

Prepared for Western Sydney Parklands Trust

Ref: 10791EV.P.402-R01_Rev2

6 February 2024





Document Information

Prepared for	Western Sydney Parklands Trust
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Site Address	97-123 and 125-151 Wallgrove Road, Cecil Park, NSW 2178
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Subsurface Conditions: Subsurface conditions can change with time and can vary between test locations. For example, the actual interface between the materials may be far more gradual or abrupt than indicated and contaminant presence may be affected by spatial and temporal patterns. Therefore, actual conditions in areas not sampled may differ from those predicted since no subsurface investigation, no matter how comprehensive, can reveal all subsurface details and anomalies. Construction operations at or adjacent to the site and natural events such as floods, earthquakes or groundwater fluctuations can also affect subsurface conditions and thus the continuing adequacy of a geotechnical report. CS should be kept informed of any such events and should be retained to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

Groundwater: Groundwater levels indicated on borehole and test pit logs are recorded at specific times. Depending on ground permeability, measured levels may or may not reflect actual levels if measured over a longer time period. Also, groundwater levels and seepage inflows may fluctuate with seasonal and environmental variations and construction activities.

Interpretation of Data: Data obtained from nominated discrete locations, subsequent laboratory testing and empirical or external sources are interpreted by trained professionals in order to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions in accordance with any relevant industry standards, guidelines or procedures.

Soil and Rock Descriptions: Soil and rock descriptions are based on AS 1726 – 1993, using visual and tactile assessment except at discrete locations where field and / or laboratory tests have been carried out. Refer to the accompanying soil and rock terms sheet for further information.

Further Advice: CS would be pleased to further discuss how any of the above issues could affect a specific project. We would also be pleased to provide further advice or assistance including:

- Assessment of suitability of designs and construction techniques;
- Contract documentation and specification;
- Construction control testing (earthworks, pavement materials, concrete);
- Construction advice (foundation assessments, excavation support).



Executive Summary

Construction Sciences Pty Ltd (CS) was engaged by Western Sydney Parklands Trust (the client), to undertake a stage 1 preliminary site investigation (PSI) for land located at 97-123 and 125-151 Wallgrove Road, Cecil Park, NSW 2178 (the site).

At the commencement of this work, CS understood:

- The site is currently owned by Western Sydney Parklands;
- The site comprises of two adjoining lots:
 - Lot 25, Section 4 in DP 2954 – (97-123 Wallgrove Road); and
 - Lot 24 in DP 1152887 – (125-151 Wallgrove Road);
- The portion of the site identified as 97-123 Wallgrove Road currently contains an unoccupied residential dwelling;
- The portion of the site identified 125-151 Wallgrove Road is currently vacant and unoccupied;
- The site is proposed for development of a business hub to accommodate two industrial units, a warehouse, ancillary office facilities and an internal road. CS notes that the client intends to retain the vegetation present in the southwestern portion of the site (i.e. at 97-123 Wallgrove Road);
- The proposed development is in line with the commercial / industrial land use scenario presented in NEPC 2013;
- The proposed land use scenario assumes a reticulated potable water supply will be available at the site; and
- This PSI is required to address the development consent planning decision making processes referred to in State Environmental Planning Policy – Resilience and Hazards (2021) and Secretary's Environmental Assessment Requirements (SEARs).

The objectives of this project were to:

- Assess the potential for contamination to be present at the site, arising from past and present land use activities;
- Provide advice on whether the site is suitable, in the context of land contamination, for the proposed land use scenario; and
- Provide recommendations for supplementary investigations, contamination management, or remedial works.

The scope of work undertaken to address the project objectives included:

- A desktop review of site history;
- A walkover of the site;
- Collection of a limited number of environmental samples from geotechnical boreholes; and
- Data assessment and reporting.

The scope of works was undertaken with reference to the relevant sections of NEPC (2013), NSW EPA (2022), SEARs (2022) and WA DOH (2009).

Based on the site history review and site walkover observations, a number of areas of environmental concern (AECs) have been identified for the site, where potential land contaminating activities may have occurred.



The identified AEC are presented in Figure 3 and Figure 4, and the COPC associated with those AEC are presented in the table below.

ID	AEC	Source	COPC
AEC01	Footprint of residential dwelling (~250m ²)	Use of hazardous building material Uncontrolled filling Storage of hydrocarbon compounds and chemicals Boat and vehicle maintenance Hydrocarbon staining in the car park shed Storage of acid batteries Tyres Degraded metal roofing sheets	Hydrocarbons, pesticides, PCB, Phenols, metals, asbestos
AEC02	Metal shed 2 (~50m ²)	Potential storage and spillage of chemicals Uncontrolled filling	Hydrocarbons, pesticides, phenols, metals, asbestos
AEC03	Horse Pen (~180m ²)	Manure, potential use of parasite control chemicals and horse cleaning activities	Pathogens, metals, nutrients, pesticides
AEC04	Dam (~360m ²)	Uncontrolled filling of dam bund Dam sediments Dam water	Soil: Hydrocarbons, pesticides, PCB, metals, asbestos Sediment: Hydrocarbons, metals, nitrogen, nitrate, ammonia, phosphorus, pathogens Water: TRH, BTEX, low level PAH, Ammonia, nitrate, metals, microbes
AEC05	Septic tank	Domestic wastewater handling	Pathogens, metals
AEC06	2x ACM Sheets (north of residence)	Uncontrolled demolition of former structures Illegal dumping	Asbestos
AEC07	Unpaved driveway (~100m)	Uncontrolled filling	Hydrocarbons, pesticides, metals, asbestos
AEC08	Historic chicken pen footprint (~100m ²)	Poultry dust, litter and manure	Pathogens, metals, nutrients, pesticides and asbestos



ID	AEC	Source	COPC
AEC09	Storage shed 1 (~10m ²)	Potential storage of chemicals and hydrocarbon compounds Potential leakage / spillage of chemicals and hydrocarbon compounds Uncontrolled filling	Hydrocarbons, phenols, pesticides, metals, asbestos
AEC10	Historic building footprint (1955 to 1978, ~1200m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC11	Historic building footprint (1965 to 1978, ~1,300m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC12	Historic agricultural land use / potential orchard (~25,000m ²)	Agricultural / orchard activities	Pesticides, metals, Herbicides
AEC13	Historic building footprint (1947 to 2004, 100m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC14	Historic residential footprint (1965 to 2004, 80m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC15	Corrugated ACM roofing sheets	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Asbestos
AEC16	Historic driveway footprint (~90m)	Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC17	Historic building footprint (1955 to 2004, 40m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC18	Shed A footprint (~10m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC19	Shed B footprint (~10m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos



ID	AEC	Source	COPC
AEC20	AEC21: Historic building footprint (1955 to 2004, 30m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC21	Stockpile SP1 (30m ³)	Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC22	Stockpile SP2 (10m ³)	Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC23	Stockpile SP3 (10m ³)	Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos
AEC24	Power poles	Termite treated power poles	Creosote

Based on CS's assessment of desktop review information and fieldwork observations, CS makes the following conclusions:

- There is contamination present at the site arising from past land use activities, specifically the presence of visible fragments of asbestos containing material (ACM) in surface soils near P1-PACM2, P1-PACM3 and P2-PACM1 (refer to Figure 4 and Figure 5 for the approximate locations of these identified ACM hotspots).
- Based on this, CS recommends the following:
 - The client should barricade off the areas where ACM has been observed at the site and erect appropriate signage to prevent access by the public; and
 - The client should seek the advice of an appropriately qualified environmental consultant on how best to remediate or implement interim controls to prevent potential asbestos exposure risks.
- CS considers that the site could be made suitable for commercial / industrial land use, from a site contamination perspective, subject to the following measures:
 - A stage 2 detailed site investigation (DSI) should be undertaken at the site to further assess potential contamination risks associated with the identified areas of environmental concern; and
 - Any contamination found while undertaking the DSI should be remediated in accordance with a Remedial Action Plan (RAP); and
 - The stage 2 DSI and the RAP (if required) should be undertaken / prepared by a suitably experienced environmental consultant.

This report must be read in conjunction with the **Information About This Report** page at the front of this report.



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Appendix B GROUNDWATER

Appendix C EPA, CLM & POEO SEARCHES

Appendix D SECTION 10.7 (2) CERTIFICATE

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Appendix I DQO Assessment

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Figure 1 – Site Locality

Figure 2 – Site Layout

Figure 3 – Sampling Point Layout Plan

Figure 4 – Areas of Environmental Concern at 97-123 Wallgrove Road

Figure 5 – Areas of Environmental Concern at 125-151 Wallgrove Road



Tables

Table 1 – LR01 – Soil Results



1. Introduction

1.1 Background

Construction Sciences Pty Ltd (CS) was engaged by Western Sydney Parklands Trust (the client), to undertake a stage 1 preliminary site investigation (PSI) for land located at 97-123 and 125-151 Wallgrove Road, Cecil Park, NSW 2178 (the site).

At the commencement of this work, CS understood:

- The site is currently owned by Western Sydney Parklands;
- The site comprises of two adjoining lots:
 - Lot 25, Section 4 in DP 2954 – (97-123 Wallgrove Road); and
 - Lot 24 in DP 1152887 – (125-151 Wallgrove Road);
- The portion of the site identified as 97-123 Wallgrove Road currently contains an unoccupied residential dwelling;
- The portion of the site identified 125-151 Wallgrove Road is currently vacant and unoccupied;
- The site is proposed for development of a business hub to accommodate two industrial units, a warehouse, ancillary office facilities and an internal road. CS notes that the client intends to retain the vegetation present in the southwestern portion of the site (i.e. at 97-123 Wallgrove Road);
- The proposed development is in line with the commercial / industrial land use scenario presented in NEPC 2013;
- The proposed land use scenario assumes a reticulated potable water supply will be available at the site; and
- This PSI is required to address the development consent planning decision making processes referred to in State Environmental Planning Policy – Resilience and Hazards (2021) and Secretary's Environmental Assessment Requirements (SEARs)¹.

1.2 Objectives

The objectives of this project were to:

- Assess the potential for contamination to be present at the site, arising from past and present land use activities;
- Provide advice on whether the site is suitable, in the context of land contamination, for the proposed land use scenario; and
- Provide recommendations for supplementary investigations, contamination management, or remedial works.

1.3 Scope of Work

The scope of work undertaken to address the project objectives included:

¹ Planning Secretary's Environmental Assessment Requirements, Wallgrove Business Hub, 97-151 Wallgrove Road, Cecil Park Part Lot 24 DP 1152887 and Part Lot 25 Sec. 4 DP2954, ref: SSD- 50972718, dated 16 December 2022.



- A desktop review of site history;
- A walkover of the site;
- Collection of a limited number of environmental samples from geotechnical boreholes²; and
- Data assessment and reporting.

The scope of works was undertaken with reference to the relevant sections of NEPC (2013), NSW EPA (2022), SEARs (2022) and WA DOH (2009).

² CS 2023, 'Geotechnical Investigation – Wallgrove Business Hub, 97-123 & 125-151 Wallgrove Road, Cecil Park NSW 2178', dated August 2023, ref: 10791E-P-710-A.



2. Site Identification

2.1 Site Locality

The locality of the site is presented in Figure 1.

2.2 Site Layout

The site covers an area of approximately 9.9 hectares. However, CS notes that the proposed commercial / industrial development for the site will cover an area of approximately 7.2 hectares.

The general layout of the site is present in Figure 2. The layout plan also includes locations of:

- Boundary of the site;
- Extent of proposed development for the site;
- Established site access points;
- Previous and current buildings / structures; and
- Surface water bodies at the site.

2.3 Lot Number and Deposited Plan

The site comprises of the following lots and deposited plans:

- Lot 25, Section 4 in DP 2954 (97-123 Wallgrove Road); and
- Lot 24 in DP 1152887 (125-151 Wallgrove Road).

2.4 Local Government Authority

The local government authority for the site is Fairfield City Council.

2.5 Zoning

Section 10.7 (2) planning certificates obtained for the site indicate that the site is currently unzoned.

2.6 Geographic Coordinates

The geographic coordinates of the general centre of the site obtained from Google Earth were 33° 52' 11" S, 150° 50' 39" E.

2.7 Detail and Level Survey

A copy of a detail and level survey of the site is presented in Appendix A.



3. Geology, Topography, Elevation, Hydrogeology, Hydrology and Acid Sulfate Soils

3.1 Geology

The Department of Mineral Resources Geological Survey of Penrith (Geological Series Sheet 9030, Scale 1:100,000, Edition 1, 1991), indicates the residual soils within the site to be underlain by Triassic Age Shale of the Wianamatta Group, comprising shale, carbonaceous claystone, claystone, laminate, fine to medium grained lithic sandstone, rare coal and tuff.

3.2 Topography and Elevation

A detail and level survey plan of the site indicated that the topography of the site typically slopes from east (approximate elevation of 111m AHD) to west (approximate elevation of 93m AHD).

3.3 Hydrogeology and Hydrology

An online search of the WaterNSW RealTime Groundwater Map (accessed at <https://realtimedata.watarnsw.com.au/>) reported that there is one registered groundwater feature located within 500m radius of the site.

Summary information presented for the registered groundwater monitoring well, indicated that the depth to standing water level in this well was 34m. The borehole was drilled to a depth of 246m below ground level (bgl). The geology encountered during drilling (using rotary methods) included CLAY (0-3m bgl), followed by shale and sandstone.

A copy of the search record is presented in Appendix B.

A review of the site on Google Maps indicated that surface water bodies near the site included:

- Ropes Creek, located approximately 500m to the northwest;
- A tributary of Ropes Creek, flowing immediately adjacent (~10m) to the western boundary;
- A number of dams located within a 500m radius of the site; and
- An unnamed creek line located approximately 250m to the southwest.

Based on the location of the identified surface water courses and site topography, the inferred groundwater flow direction at the site is considered likely to be towards the west.

Based on site surface topography, the inferred general surface water flow direction on the site is considered likely to be towards the west.

3.4 Acid Sulfate Soils

A review of <http://www.asris.csiro.au/mapping/viewer.htm> indicated that the site is located in an area mapped as 'C4 Extremely Low Probability / Very Low Confidence'.

Furthermore, the elevation of the site ranges from approximately 93 to 111m AHD (refer Section 3.2). Acid sulfate soils are generally encountered below 5m AHD (Sullivan et al., 2018), and therefore acid sulfate soils are considered unlikely to be present onsite.

Further assessment of acid sulfate soils, in the context of this project is considered not warranted.



4. Regulatory Records

4.1 Contaminated Land Management (CLM) Act 1997

4.1.1 [Record of Notices](#)

A search of the NSW EPA online contaminated land record of notices indicated that the site (and land located immediately adjacent to the site) was not the subject of:

- Orders made under Part 3 of the Contaminated Land Management Act 1997;
- Notices available to the public under section 58 of the CLM Act;
- An approved voluntary management proposal under the CLM Act that has not been fully carried out and where NSW EPA approval has not been revoked;
- Site audit statements provided to the NSW EPA under section 53B of the CLM Act that relate to significantly contaminated land;
- Where practicable, copies of anything formerly required to be part of the public record; or
- Actions taken by NSW EPA (or the previous State Pollution Control Commission) under section 35 or 36³ of the Environmentally Hazardous Chemicals Act 1985.

A copy of the search record is presented in Appendix C.

4.1.2 [Register of Notified Sites](#)

A search of the NSW EPA online list of NSW contaminated sites notified to NSW EPA indicated that the site (and land located immediately adjacent to the site) was not on the list.

A copy of a relevant extract of the search record is presented in Appendix C.

4.2 Protection of the Environment Operations (POEO) Act 1997

4.2.1 [Register of Licences, Applications, Notices, Audits or Pollution Studies and Reduction Programs](#)

A search of the NSW EPA online POEO public register indicated that the subject site (and land located immediately adjacent to the site) was not the subject of a licence, application, notice, audit, pollution study or reduction program.

A copy of the search record is presented in Appendix C.

4.3 Environmental Planning and Assessment (EP&A) Act 1979

4.3.1 [Section 10.7 Planning Certificate](#)

Copies of the planning certificates issued under section 10.7(2) of the EP&A Act were obtained, and indicated that, within the meaning of the CLM Act, the site was not:

- Significantly contaminated land;
- Subject to a management order;
- The subject of an approved voluntary management proposal;

³ Sections 35 and 36 of the Environmentally Hazardous Chemicals Act 1985 have been repealed. Notices under these sections are treated by the CLM Act as management orders.



- Subject to an ongoing maintenance order; or
- The subject of a site audit statement.

The copies of the certificates are presented in Appendix D.

4.4 Work Health and Safety (WHS) Regulation 2017

4.4.1 [Schedule 11 Hazardous Chemicals](#)

A site search with SafeWork NSW for Schedule 11 hazardous chemicals (dangerous goods)⁴ on the site was not undertaken.

CS's review of historical aerial photography and historical land title ownership records (refer Section 5.1 and 5.2 of this report), did not indicate a potential for licensable quantities of Schedule 11 hazardous chemicals (dangerous goods) to have been stored on the site.

CS considers that further assessment of the storage of licensable quantities of Schedule 11 hazardous chemicals (dangerous goods), within the context of this project, is considered not warranted.

⁴ Under the Work Health and Safety Regulation.



5. Site History

5.1 Aerial Photography

A selection of historical aerial photographs of the site were reviewed. A copy of each historical aerial photograph reviewed is presented below. The approximate site boundary is indicated by a red outline.

Image 5.1.1 View of 1947 historical photograph





Image 5.1.2 View of 1955 historical photograph



Image 5.1.3 View of 1965 historical photograph





Image 5.1.4 View of 1978 historical photograph



Image 5.1.5 View of 1986 historical photograph





Image 5.1.6 View of 1998 historical photograph



Image 5.1.7 View of 2004 historical photograph



Image 5.1.8 View of 2015 historical photograph



Image 5.1.9 View of 2023 historical photograph





Observations made during that review (considered relevant to this project) are presented in Table 5.1.

Table 5.1 Aerial Photography

Photo Date	Site Observations	Surrounding Land-use
1947	The site comprises of a residential dwelling and two sheds in the southeast portion. A dam is visible in the central southern portion of the site. In the northeast portion of the site, there is another residential dwelling with an adjoining shed. Two additional sheds are situated in the vicinity of the residence in the northeast. One shed is positioned to the immediate northwest of the residence, and another shed is located to the south of the residence. The eastern portion of the site appears to be utilised for agricultural activities, while the rest of the site appears to be vacant and covered with scattered trees. A creek line is observed along the western boundary of the site, flowing in a south-north direction.	North: An unpaved driveway then low-density residential land-use. South: Low-density residential. East: Wallgrove Road then agricultural land-use. West: Creek line then undeveloped land.
1955	Three new warehouses with two additional sheds in series are visible along the central portion of the site. A new warehouse is also present in the southern portion of the site. Two new sheds can be seen in the vicinity of the southern warehouse; one located immediately to the east of the warehouse, and another to the north. A new building is observed to the northwest of the existing dwelling. Two new sheds are located in the central east portion, and three sheds are present in the northern area of the site. What appears to be an orchard is visible in the eastern portion of the site with trees in a grid pattern. Potential ground disturbance is visible in the northeast portion of the site, adjacent to the farm. Unpaved driveways are present in the south-east and north-east portions of the site,	North: Unpaved driveway then low-density residential land-use. South: Undeveloped land. East: Wallgrove Road then agricultural land-use. West: Creek line then undeveloped land.



Photo Date	Site Observations	Surrounding Land-use
	connecting the residential dwellings to Wallgrove Road. A creek line can be observed in the central west section of the site, originating from the creek along the western boundary and flowing towards the central dam.	
1965	Two new warehouses are present in the central section of the site. What appears to be a potential rainwater tank can be observed in the immediate vicinity of these new warehouses. The two small sheds that were located in the vicinity of the southern warehouse are no longer present. A new shed is present towards the north of the warehouse. The orchard observed in the eastern portion of the site is no longer present. Potential ground disturbance can be observed in the north eastern portion of the site.	North – Low-density residential land-use. South – Low-density residential land-use. East – Wallgrove Road appears to be paved. Low-density residential and agricultural activities can be observed beyond Wallgrove Road. West – Creek, then agricultural land-use including a dam.
1978	The warehouses previously observed in the central portion of the site are no longer present. The central portion of the site appears to be clear of any vegetation and a new shed is present in the cleared area. What appears to be a stockpile is situated in the northwest portion of the site. Furthermore, demolition rubble is present in the central portion of the site where former warehouses were present. A new shed is present to the immediate north of the residence, located to the southeast section of the site. Another shed is located towards the west of the dwelling. Scattered waste material can be observed in the southern area between the dwelling and the western shed.	North: Low-density residential land-use. South: Mixed residential and agricultural land-use. East: Commercial development to the southeast. West: Agricultural land-use.
1986	The scattered waste in the southern portion of the site is removed. Furthermore, the stockpile in the northwest portion of the site is no longer visible. The eastern portion of the site appears to be no longer used for agricultural land-use.	North: Mixed residential and agricultural land-use. South: Low-density residential land-use. East: Commercial development to the southeast. West: Agricultural land-use.



Photo Date	Site Observations	Surrounding Land-use
1998	The southern dwelling appears to have received an extension in the form of shed towards the south. The shed to the north of the dwelling is no longer visible. A patch of cleared vegetation is present in the eastern section of the site. Increased vegetation is noted in the southwestern portion of the site.	North: Low density residential land-use. South: Low-density residential land-use. East: Commercial land-use (nursery) towards southeast. West: Agricultural and then commercial land-use.
2004	The dwellings and shed in the northern portion of the site are no longer visible. The vegetation around the southern dwelling appears to be cleared.	North: Low density residential land-use. South: Low-density residential land-use. East: Wallgrove Road and then ongoing construction of the M7 Motorway. West: Agricultural land-use.
2015	A circular pen is present to the southeast portion of the site.	North: Low density residential land-use. South: Low-density residential land-use. East: Wallgrove Road, then M7 Motorway and then orchard towards southeast. West: Agricultural land-use to the west. A potential orchard is visible to the southwest of the site.
2023	No significant change since previous image.	No significant change since previous image.

The review of historical aerial photography indicated a potential for land contaminating activities to have been undertaken on the site, specifically:

- Uncontrolled filling during the construction of dwellings before 1947;
- Agricultural / Orchard land-use in the north-eastern portion of the site between 1947 and 1986;
- Uncontrolled filling during the construction of commercial buildings and new dwellings between 1947 and 1978;
- Illegal dumping between 1947 and 1986;
- Stockpiling activities between 1978 and 1986; and
- Uncontrolled demolition of structures between 1965 and 2004.

Further assessment of these identified potential land contaminating activities, in the context of other historical evidence reviewed during this project, and observations made during the site walkover (refer Section 6 of this report), is considered warranted.

5.2 Historical Land Titles

A selection of historical land title ownership records of the site were reviewed.

Observations made during that review (considered relevant to this project), indicated that registered proprietors of Lot 25 Section 4 in DP 2954, 97-123 Wallgrove Road, Cecil Park, NSW since 1904, have included:



- Perpetual Trustee Company Ltd between 1904 and 1925;
- Private individuals (laborers) between 1925 and 1949;
- A plumber between 1949 and 1952;
- A motor engineer between 1952 and 1953;
- A truck driver between 1953 and 1956;
- A bus driver between 1956 and 1960;
- An investor between 1960 and 1966;
- A builder between 1966 and 1973;
- The State Planning Authority of New South Wales⁵ between 1973 and 2008; and
- Western Sydney Parklands Trust from 2008 to date.

There were no lease or easements reported for 97-123 Wallgrove Road, Cecil Park, NSW.

The review of historical land titles for 97-123 Wallgrove Road, Cecil Park, NSW indicated a potential for land contaminating activities to have been undertaken on the site, specifically:

- Agricultural activities between 1949 and 1952;
- Motor repair and maintenance activities between 1952 and 1953; and
- Construction and demolition activities between 1966 and 1973.

The historical land title records for Lot 24 in DP 1152887, 125-151 Wallgrove Road, Cecil Park, NSW were obtained and reviewed. Observations considered relevant to this project, indicated that registered proprietors of this property since 1906, have included:

- A farmer between 1906 and 1929;
- Bus conductor between 1929 and 1934;
- A contractor from 1934 till 1934;
- A married woman between 1934 and 1935;
- A dentist from 1935 till 1935;
- A married woman between 1935 and 1937;
- A farmer between 1946 and 1949;
- A married woman between 1949 and 1974;
- The State Planning Authority of New South Wales⁶ between 1974 and 2008; and
- Western Sydney Parklands Trust from 2008 till date.

There were no lease or easements reported for 125-151 Wallgrove Road, Cecil Park, NSW.

The review of historical land titles indicated a potential for land contaminating activities to have been undertaken on the site, specifically:

- Agricultural land use from 1906 until 1929 and from 1946 until 1949.

⁵ Now the Minister Administering the Environmental Planning and Assessment Act 1979.

⁶ Now the Minister Administering the Environmental Planning and Assessment Act 1979.



Further assessment of these identified potential land contaminating activities, in the context of other historical evidence reviewed during this project, and observations made during the site walkover (refer Section 6 of this report), is considered warranted.

A copy of the historical land title search record is presented in Appendix E.

5.3 Local Meteorology

The Bureau of Meteorology website (<http://www.bom.gov.au/climate/data/index.shtml?bookmark=200>) was accessed and a search conducted for climatic information measured by the nearest bureau station to the site. A summary of data obtained from that search is presented in Table 5.3.

Table 5.3 Local Meteorology

Nearest Weather Station Location and Number	Mean Annual Temperature (°C)		Mean Annual Rainfall (mm)
	Maximum	Minimum	
Horsley Park Equestrian Centre – 067026	23.8	12.1	807.1

The search record is presented in Appendix F.

5.4 Complaints

There was no evidence provided to CS during the project, regarding historical complaints about the site.

5.5 Incident Reports

There was no evidence provided to CS during the project, regarding historical incidents at the site.

5.6 Previous Contamination Assessments

There were no copies of previous contamination assessments provided to CS during the project.

5.7 Anecdotal Evidence

During the site walkover, the client informed CS that the northwest portion of the site is proposed to be used as a site compound by Transport for NSW (TfNSW) during the M7-M12 integration project.



6. Site Condition

A site walkover was undertaken by a suitably experienced environmental consultant from CS (Amay Latwadekar), on both the 15th and 30th June 2023. CS notes that the first walkover undertaken on 15th June 2023 was unsuccessful as the site was heavily vegetated with tall grass and the ground surface wasn't clearly visible. Therefore, CS undertook a second walkover of the site on the 30th June 2023 once the tall grass had been slashed. Observations obtained from the walkovers is presented in the following sub-sections.

6.1 Current Land Use

The land use scenario at 97-125 Wallgrove Road, Cecil Park NSW appeared to be low density residential comprising an unoccupied two storey residential dwelling. Whereas the adjoining property located at 125-151 Wallgrove Road Cecil Park NSW appeared to be vacant.

6.2 Buildings, Structures and Surfaces

The following buildings were observed in the southern portion of the site during the walkover (i.e. lot 25, Section 4 in DP 2954):

- A two-storey brick and timber house with tile roofing in the south-eastern portion of the site;
- A single storey metal storage shed (shed 1) on a concrete slab, to the immediate west of the dwelling; and
- A single storey metal shed (shed 2) with damaged metal roofing, in the southern section of the site.

No buildings were observed in the northern portion of the site (i.e. lot 24 in DP 1152887).

The following structures were observed during the walkover:

- A round horse pen, in the southeast section of the site;
- An unpaved driveway, along the south-eastern boundary of the site, connecting the house to Wallgrove Road;
- A potential chicken pen, in the southeast section of the site, located to the immediate west of the residence; and
- Potentially termite treated timber poles across the site.

The following site surfaces were observed during the walkover:

- The floor of the carpark attached to the southern end of the house consisted of brick tiles;
- The driveway in the south-eastern portion of the site was unpaved and filled with a brown, coarse grained, sandy gravel, with crushed concrete, bricks and tile pieces;
- The southern portion of the site between the dwelling and the western metal shed (shed 2) was partially covered with concrete and asphalt which was observed in poor condition; and
- The majority of the site was unsealed and vegetated with overgrown grasses and weeds.



Image 6.2.1 View of two-storey residential dwelling with attached carpark, facing west



Image 6.2.2 View of single storey metal storage shed (shed 1) in the backyard of the house, facing north





Image 6.2.3 View of metal shed (shed 2) with damaged roofing, facing west



Image 6.2.4 View of presumed horse pen in the southeast section of the site, facing northeast





Image 6.2.5 View of potentially termite treated power pole within the southeast portion of the site



Image 6.2.6 View of unsealed grass surface in the northern portion of the site, facing south





6.3 Site Boundaries

All the site boundaries were fenced. The western section of the site was vegetated with trees and bushes therefore, the western fence line was not directly observed during the walkover.

Image 6.3.1 View of northern site boundary fencing (facing northwest)



6.4 Surface Water and Drainage

There was a dam located in the southern portion of the site. The dam water appeared to be turbid and presented a discernible green colouration. A wetland consisting of tall grass was observed in the north-western portion of the site, adjacent to the western boundary of the site.

Based on observations made during the walkover, site drainage mechanisms on site are considered likely to include:

- Infiltration into site soils, if soil permeability allows it;
- Overland surface flow following site topography, towards subsurface drainage pipes; and
- Inflow to downpipes attached to building roofs and gutters, into subsurface drainage pipes.



Image 6.4.1 View of the dam showing green colouration, present within the southern portion of the site



6.5 Staining and Odours

There was no visual evidence observed of significant or widespread staining on the surface of the site. There was evidence of a localised area of oil staining (<1m³) on the concrete tile in the carpark attached to the residential house.

There was no olfactory evidence detected of significant or widespread odours at the site. There was a very weak solvent-based odour detected within the carpark shed considered to derive from the storage of chemicals.



Image 6.5.1 View of localised area of oil staining on brick surface in carpark attached to the dwelling



6.6 Chemical Inventory, Handling and Storage

The following chemicals, and indicative volumes, were observed stored in the garden bed area, located along the southern side of the house:

- Three 20L containers labelled 'Cleaners Tile and Grout Acidic Restorer';
- Two 5L, two 10L and one 7L diesel engine oil containers labelled 'HPR Diesel 5 Semi Synthetic';
- One 4L container labelled 'Metal Epoxy'; and
- One 5L container labelled 'Iveco Degreaser'.

CS notes that the majority of the abovementioned containers were completely or partially filled.



Image 6.6.1 View of chemicals stored on an unsealed surface within the carpark shed attached to the house



6.7 Aboveground and Underground Storage Tanks

There was no visual evidence observed during the walkover of aboveground or underground storage tanks.

6.8 Onsite Septic Systems

One septic system was observed to the north of the house.



Image 6.8.1 View of septic system located to the north of the house



6.9 Wastes

There was visual evidence observed during the walkover to indicate the storage of wastes on the site, specifically boat and vehicle parts. A boat motor, six car/boat batteries, an exhaust pipe and several other vehicle parts were observed to be placed on an unsealed surface adjacent to the house, located in the southeast section of the site.

Several other waste items including the metal roof of a van, degraded metal roofing sheets, two tyres and a bathtub were also observed in the vicinity of the potential chicken pen, in the southeast portion of the site.

Several metal pipes were also noted in the eastern portion of the site.

Building rubble including pieces of bricks and concrete were observed in the north-eastern portion of the site. A tyre was also observed adjacent to the central northern boundary of the site. A bathtub was observed in the central northern portion of the site.

Waste including glass bottles and metal pieces were noted scattered across the entire site.



Image 6.8.1 View of boat motor resting on a tyre, located adjacent to the dwelling



Image 6.8.2 View of vehicle batteries sitting on an unsealed surface, adjacent to the house



Image 6.8.3 View of presumed chicken pen on an unsealed surface, with corrugated metal roofing sheets



Image 6.8.4 View of the concrete block, in the northeast portion of the site





Three soil stockpiles were observed at the site, referred to as stockpile 1, stockpile 2 and stockpile 3 herein.

Stockpile 1 was located towards the northern site boundary and was estimated to be approximately 30m³ in volume. The surface of the stockpile was covered with grass. A piece of metal pipe rested on top of the stockpile.

Stockpile 2 was also located towards the northern site boundary and was estimated to be approximately 10m³ in volume. The surface of the stockpile was covered with grass.

Stockpile 3 was located in the central portion of the site and was estimated to be approximately 10m³ in volume. The surface of the stockpile was generally covered with grass.

Image 6.8.2 View of stockpile 1 within the northern portion of the site, facing west





Image 6.8.3 View of stockpile 2 within the northern portion of the site, facing north



Image 6.8.4 View of stockpile 3 within the northern portion of the site, facing south





6.10 Hazardous Materials

There was visual evidence observed during the walkover of asbestos containing materials (ACM) on the surface of the site. Several corrugated ACM sheets were identified in the northeastern portion of the site, in the vicinity of historic building footprint. A representative sample P2-PACM1 was collected from the corrugated roofing sheets and submitted for laboratory verification.

Two ACM sheets were also observed to the north of the residential house, on the unsealed surface. These two ACM sheets appeared to be in damaged condition and were situated approximately 5m apart from each other. Two samples (P1-PACM2 and P1-PACM3) were collected from each PACM sheet for laboratory verification.

Additionally, a potential ACM concrete pipe was observed within the backyard of the dwelling. A sample (P1-PACM 1) was collected from the fibrous cement pipe for laboratory verification. The testing did not identify asbestos in the material.

There was evidence of paint flakes on the surface of the site, in the vicinity of the dwelling. The paint on the walls of the dwelling displayed signs of deterioration. The paint on the walls was the same colour as the paint flakes observed on the surface.

A hazardous building materials survey was not within the scope of this project.

Image 6.10.1 View of broken ACM sheet, located to the immediate north of the dwelling





Image 6.10.2 View of corrugated ACM roofing sheets, in the northeast portion of the site



6.11 Fill Material

There was no visual evidence observed to suggest widespread filling observed at the site. However, there was visual evidence of potential shallow filling in the driveway, located in the southeast portion of the site.

There was also visual evidence of potential shallow filling within the two garden beds areas were observed located along the southern wall of the dwelling. One of these garden bed areas was used to store containers of chemicals, hydrocarbon compounds and a television.



Image 6.11.1 View of unpaved driveway with potential shallow filling, facing east



Image 6.11.2 View of shallow filling observed in garden bed, along the southern wall of the house





6.12 Phytotoxicity

There was no visual evidence observed to suggest widespread or significant phytotoxic impact in the form of plant stress and/or dieback in vegetation present on the site. Similar observations were made of vegetation on land immediately beyond the site boundaries.

Image 6.12.1 View of healthy vegetation at the site (facing east)



6.13 Activities on Adjacent Land

Observations made from the site boundary, indicated land use activities on adjacent properties were comprised of the following:

- North – Mixed residential and commercial;
- East – Wallgrove Road, M7 Motorway and then low density residential beyond;
- West – Mixed commercial and residential development; and
- South – Low density residential.



Image 6.13.1 View of land use activities to the south



Image 6.13.2 View of land use activities to the west





7. Emerging Contaminants of Concern and Chemical Control Orders

7.1 Per and Poly-Fluoroalkyl Substances (PFAS)

Per and Poly-Fluoroalkyl Substances (PFAS) are a group of chemicals that are manufactured for their unique properties. There are numerous PFASs that may be present in the environment. Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are two major PFASs, that were originally found as components in products used to provide stain resistance or as firefighting foams.

Some PFASs have been recognised as highly persistent, potentially bio-accumulative and toxic, and have been detected in the environment, wildlife, people and food.

CS also considered guidance in HEPA (2020). Section 6 of HEPA (2020) advises that consideration should be given to identifying the presence of:

- Major primary sources of PFAS, including major commercial, industrial and government facilities, infrastructure and activities that historically or currently use or store PFAS containing products, noting that all PFAS formulations should be considered, such as surfactants used in chrome plating or firefighting, hydraulic fluids and lubricants, and wastes and liquid wastes;
- Other primary sources where PFAS is or has been used, such as firefighting training facilities, foam deluge system installations, metal plating works, car washes, and electricity generation and distribution facilities;
- Secondary sources where diffuse PFAS inputs are or have been received, such as landfills, wastewater treatment facilities, liquid waste treatment facilities, and bio-solids stockpiles.

CS has adapted the PFAS decision matrix presented in EnRisk (2016), along with the aforementioned guidance in Section 6 of HEPA (2020) to facilitate an assessment of the potential for PFAS to be present on site.

Table 7.1 Adapted PFAS Decision Matrix

Preliminary PFAS Screening Question	Decision
Is there evidence of major commercial, industrial and government facilities, infrastructure and activities that historically or currently use or store PFAS containing products?	No
Is there evidence of fuel ⁷ fires on the site?	No
Is there evidence of foam deluge systems, metal plating works, car washes, or electricity generation / distribution on the site?	No
Is there evidence of landfill, wastewater treatment, liquid waste treatment, bio-solid stockpiles or paper mill wastes on site?	No
Is there evidence of fire training occurring at the site?	No
Is there evidence of fire training occurring up gradient or adjacent to the site?	No
Is there evidence of the presence of an airport or fire station, up-gradient of, or adjacent to, the site?	No

⁷ Fuels could include solvents, petrol, diesel and kerosene.



Based on the results of the preliminary PFAS screening questions above, further assessment of PFAS related land contamination risks at the site, is considered not warranted.

7.2 Chemical Control Orders

Chemical control orders (CCO) are created under Part 3, Division 5 of the Environmentally Hazardous Chemicals Act 1985, and are used to selectively and specifically control particular chemicals or chemical wastes to limit their potential or actual impact on the environment. CS uses the decision matrix presented in Table 7.2 (based on the NSW EPA CCO available at the time of this project), to facilitate an assessment of the potential for those control chemicals to be present on site.

Table 7.2 CCO Decision Matrix

Preliminary CCO Screening Question	Decision
Were aluminium smelter wastes used or stored on site? ⁸	No
Were dioxin contaminated wastes generated or stored on site? ⁹	No
Were organotin wastes generated or stored on site? ¹⁰	No
Were polychlorinated biphenyls (PCB) used or stored on site? ¹¹	No
Were scheduled chemicals ¹² used, or wastes stored, on site? ¹³	Yes

Based on the results of the preliminary CCO screening questions above, further assessment of CCO related land contamination risks at the site, is considered warranted.

⁸ SPCC 1986, 'Chemical Control Order In Relation to Aluminium Smelter Wastes Containing Fluoride and/or Cyanide' dated 21 March 1986.

⁹ NSW EPA 1986, 'Chemical Control Order In Relation to Dioxin-Contaminated Waste Materials' dated 14 March 1986.

¹⁰ NSW EPA 1989, 'Chemical Control Order In Relation to Organotin Wastes' dated 11 March 1989.

¹¹ NSW EPA 1997, 'Polychlorinated Biphenyl Chemical Control Order' dated 20 June 1997.

¹² Primarily organochlorine pesticide (OCP) compounds, with some industrial by-products.

¹³ NSW EPA 2004, 'Chemical Control Order in Relation to Scheduled Chemical Wastes.



8. Preliminary Field Investigation

8.1 Background

CS undertook a preliminary field investigation to understand the risk of subsoil contamination at the site at the request of the client. This investigation was undertaken opportunistically alongside a geotechnical investigation of the site (CS, 2023). CS notes that the sampling strategy and frequency adopted here is insufficient for a comprehensive assessment of site suitability in reference to NSW EPA sampling guidelines (NSW EPA, 2022) and that the data obtained is indicative of general site conditions only.

Image 8.1.1 View of sampling work at BH05, facing east



8.2 Sampling

Soil sampling works were undertaken by CS on 15, 29 and 30 June 2023. The sampling was undertaken alongside a geotechnical investigation of the site. A sampling quality & analysis plan is presented in Appendix I.

During the fieldwork, the following activities were undertaken:

- Twelve (12) boreholes were drilled within/near the proposed building footprint and road alignment, using a 4WD mounted drilling rig. The boreholes were drilled to a depth of up to 8.80m¹⁴;
- Soil samples were collected at each sampling point at the surface and at regular intervals thereafter until natural ground was encountered. One sample was also collected from natural ground at each borehole.

¹⁴ CS notes that three of these boreholes were converted into groundwater monitoring wells as part of the geotechnical fieldwork. However, no groundwater samples were collected as part of this project.



- Samples were collected from spoil sourced from the auger using a fresh pair of nitrile gloves. Samples were placed in suitable laboratory prepared containers and labelled;
- Recording of observations of material encountered at each borehole location; and
- Backfilling of boreholes with drill cuttings.

Sampling point locations were confirmed on a site plan which is presented in Figure 3.

8.3 Observations

8.3.1 [Site Specific Geology](#)

Observations made of soils encountered during intrusive investigation works were recorded on logs. These logs are presented in Appendix H.

A summary of subsurface conditions is presented in Table 8.3.1.

Table 8.3.1 Summary of Subsurface Conditions

Layer	Description	Depth (m)
Topsoil	Clayey SILT, dark brown with rootlets	0.0m to 0.05m
Natural	Silty CLAY, medium to high plasticity, orange-brown	0.05m to 0.8m
Bedrock	SHALE and SILTSTONE	0.8m

8.3.2 [Potential Asbestos Containing Materials](#)

There was no visual evidence of potential asbestos contaminating materials (PACM) observed during the intrusive investigation.

8.3.3 [Odours](#)

There was no olfactory evidence of strong odours detected in the soil samples collected.

8.3.4 [Staining](#)

There was no visual evidence of staining observed in the soil samples collected.

8.4 Laboratory

A copy of the sample receipts and certificates of analysis, is presented in Appendix H.

The samples were transported to the analytical laboratory using chain of custody protocols. Samples were scheduled for laboratory analysis, taking into consideration the laboratory analytical schedule presented in Appendix H and observations made in the field.

The relevant laboratory analytical results were tabulated and presented in the attached Tables LR1.

8.5 QA/QC – Assessment of Data Quality Indicators

An assessment of performance against data quality indicators (DQI) is set out in Appendix I.



9. Laboratory Results

9.1 Human Health – Dermal Contact / Ingestion / Dust Inhalation

The detected concentrations of the relevant COPC in the soil samples analysed, were less than the adopted human health dermal contact / ingestion / dust inhalation assessment criteria.

9.2 Human Health – Vapour Intrusion / Inhalation

The detected concentrations of the relevant COPC in the soil samples analysed, were less than the adopted human health vapour intrusion / inhalation assessment criteria.

9.3 Human Health – Asbestos

9.3.1 [Bonded Asbestos Containing Materials](#)

Fragments of bonded ACM identified in section 8.3.2 were submitted for laboratory verification. The laboratory results indicate that chrysotile asbestos was detected in sample P1-PACM3 and P2-PACM1.

No asbestos was detected in sample P1-PACM1 (the sample that was collected from the concrete pipe observed in the adjacent to the house).

The presence of visible asbestos in surface soils is considered to be an exceedance of the adopted 'no visible asbestos for surface soil' criterion (refer to Table 7 of NEPC (2013a)).

9.3.2 [Fibrous Asbestos / Asbestos Fines](#)

No Fibrous Asbestos (FA) or Asbestos Fines (AF) were detected in the soil analysed.

9.4 Management Limits for Petroleum Hydrocarbons

The detected concentrations of the relevant COPC in the soil samples analysed, were less than the adopted management limits for petroleum hydrocarbon assessment criteria.



10. Conceptual Site Model

The site history review, observations made during the site walkover and findings of the preliminary intrusive investigation, were assessed in the context of the project objectives, in order to develop a conceptual site model (CSM) for the site.

10.1 Sources of Contamination

A number of potential land contaminating activities have been identified for the site, based on the site history review and site walkover observations. These include:

- Uncontrolled filling;
- Domestic waste water handling;
- Stockpiling;
- Uncontrolled demolition;
- Boat and vehicle servicing;
- Illegal dumping;
- Termite treatment;
- Use of hazardous building materials; and
- Use of pesticides and herbicides in former agricultural / orchard land use.

The locations of these potential land contaminating activities, or areas of environmental concern (AEC), are presented in Figure 3 and Figure 4.

Table J1 in Appendix J of AS 4482.1-2005 and Appendix A in DUAP (1998) provides guidance on chemicals associated with the land uses activities. That guidance provides a basis for deciding on contaminants of potential concern (COPC) for each relevant land use activity. Information on COPC adopted for this investigation is presented in Section 10.5 of this report.

10.2 Land Use Scenario

10.2.1 [Adopted Land Use Scenario](#)

For the purpose of this investigation, CS understands that the proposed land use scenario for the site includes:

- Commercial / industrial such as shops, offices, factories and industrial sites.

10.2.2 [Assumptions for Adopted Land Use Scenario](#)

Section 3 of NEPC (2013e) advises that the commercial/industrial land use scenario, which assumes typical commercial or light industrial properties, consisting of single or multistorey buildings where work areas are on the ground floor (constructed on a ground level slab) or above subsurface structures (such as basement car parks or storage areas).

The outdoor areas of the commercial/industrial facilities are largely covered by hardstand, with some limited areas of landscaping or lawns and facilities. Opportunities for direct access to soil by employees using these facilities are likely to be minimal, but there may be potential for employees to inhale, ingest or come into direct dermal contact with dust particulates derived from the soil on the site.



The land use scenario does not include more sensitive uses that may be permitted under relevant commercial or industrial zonings. These more sensitive uses include childcare, educational facilities, caretaker residences and hotels and hostels, etc. Information on uses permitted under local council zoning schemes for commercial/industrial land use can be obtained from local council planning zones/schemes. Should these more sensitive uses be permitted, then 'residential with accessible soil', 'residential with minimal access to soil', or 'public open space' land use scenarios should be considered.

10.3 Receptors

10.3.1 [Identified Receptors](#)

Based on the adopted land use scenario, CS considers receptors at the site may include employees, construction workers and terrestrial ecosystems.

10.3.2 [Assumptions for Identified Receptors](#)

The human receptors at a commercial/industrial site are adult employees, who are largely involved in office-based or light indoor industrial activities. The employees who are most susceptible to health risks associated with volatile soil contaminants are the employees who work in offices on the ground floor, as the greatest potential for vapour intrusion occurs with workspaces immediately overlying contaminated soil.

Employees may make use of outdoor areas of a commercial/industrial premises for activities such as meal breaks. Opportunities for direct access to soil by employees using these facilities are likely to be minimal, but there may be potential for employees to inhale, ingest or come into direct dermal contact with dust particulates derived from the soil on the site.

10.4 Exposure Pathways

10.4.1 [Human Health](#)

10.4.1.1 *Dermal Contact / Ingestion / Dust Inhalation*

Site history information and walkover observations indicated a potential for contaminants to be present in soils at the site, which may present a dermal contact or ingestion or dust inhalation risk to human health.

None of the samples analysed during the preliminary field investigation reported concentrations greater than the adopted criteria for dermal contact / ingestion / dust inhalation.

The proposed land use scenario is likely to be largely covered by hardstand, with some limited areas of landscaping or lawns and facilities. Opportunities for direct access to soil by employees using these facilities are likely to be minimal. CS therefore considers a situation where a pathway between identified receptors and direct contact / ingestion contaminant sources, to be complete is unlikely.

Further assessment of dermal contact, dust inhalation and ingestion risk is considered not warranted.

10.4.1.2 *Vapour Intrusion / Inhalation*

Site history information and walkover observations indicated storage of hydrocarbon compounds and a potential for historical uncontrolled filling. However, CS considers that:

- The hydrocarbon compounds were stored in sealed containers and are likely to be removed from the site prior to the proposed development;



- The transport, placement and spreading of uncontrolled filling typically includes significant disturbance of soils, which would typically result in the volatilisation of contaminants that might normally present an intrusion / inhalation risk; and
- The potential for contaminants to be present in uncontrolled filling at concentrations which could present an intrusion / inhalation risk, is low.

Furthermore, CS notes that none of the soil samples analysed as part of the preliminary field investigation reported concentrations greater than the adopted health screening criteria for hydrocarbons.

Further assessment of vapour intrusion / inhalation risks at the site is considered not warranted.

10.4.1.3 Asbestos

Bonded asbestos containing materials (ACM) comprises asbestos which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin.

Fibrous asbestos (FA) comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material, which can be broken or crumbled by hand pressure.

Asbestos fines (AF) include free fibres, small fibre bundles and small fragments of bonded ACM that can pass through a 7mm x 7mm sieve.

Asbestos poses a risk to human health when asbestos fibres are made airborne and inhaled. The assessment of sites contaminated with asbestos in soil should aim to describe the nature and quantity of asbestos in soil in sufficient detail to enable a risk management plan to be developed for the proposed land use scenario.

Site history information, walkover observations and laboratory results indicate that broken fragments of bonded ACM are present on the site and that FA and/or AF may also be present in soils at the site.

The proposed land use scenario is likely to be largely covered by hardstand, with limited areas of landscaping or lawns and facilities. Opportunities for direct access to the asbestos impacted soil by employees using these facilities are likely to be minimal. However, CS notes that the primary exposure pathway for FA and/or AF asbestos contamination is via inhalation. Exposure to the asbestos fibres may pose a potential risk to the construction workers.

As such, further assessment of asbestos exposure risk is considered warranted.

10.4.2 Hazardous Ground Gases

NSW EPA (2020a) provides advice on ground gases that if present in the pore space of soils and rocks, can adversely impact human health and safety or the integrity of structures. The ground gases that are generally of concern in this context are:

- Bulk ground gases, including methane, carbon dioxide, carbon monoxide, hydrogen, hydrogen sulphide, and petroleum vapours; and
- Trace ground gases including radon, volatile organic compounds and mercury vapour.

CS has reviewed desktop site history information review and site walkover data in the context of sources and origins of hazardous ground gases in Table 1 and Table 2 of NSW EPA (2020a). Based on that review, CS is of the opinion that further assessment of hazardous ground gases in the context of this project, is considered not warranted.



10.4.3 Aesthetics

CS has used the guidance in Section 3.6.2 and Section 3.6.3 of NEPC (2013a) to facilitate an assessment of site history review information and site walkover observations, in the context of aesthetics risk and the sensitivity of the proposed land use. For example, higher expectations apply to residential properties with gardens compared with industrial settings.

Table 10.4.3 Preliminary Aesthetics Risk Screening

Preliminary Aesthetics Risk Screening Questions	Potential
Is there a potential for highly malodorous soils or extracted groundwater (e.g. strong residual petroleum hydrocarbon odours, hydrogen sulphide in soil or extracted groundwater, organosulfur compounds) to be present on site?	No
Is there a hydrocarbon sheen on surface waters on site?	No
Is there potential for discoloured chemical deposits or soil staining with chemical waste other than of a very minor nature, on be present in site soils;	No
Is there potential for large monolithic deposits of otherwise low risk material, e.g. gypsum as powder or plasterboard or cement kiln dust, to be present in site soils;	No
Is there potential for the 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, in site soils?	No
Is there potential for soils containing residue from animal burial (e.g., former abattoir sites) to be onsite?	No
Is there a potential for large quantities of non-hazardous inert material to be present in site soils?	Yes
Is there a potential for high odour residue material to be present in site soils?	No
Is there a potential for large quantities of various fill types and demolition rubble to be present in site soils proposed for residential land use?	No

The historical records review, observations made during the site walkover and results of the preliminary risk screening, identified the following potential aesthetics risks for the site:

- Storage of building material including corrugated metal roofing and concrete pipe, located in the backyard of the residence situated in southeastern portion of the site;
- Demolition rubble including corrugated ACM roofing sheets, bricks and concrete located in the northeastern portion of the site; and
- Three stockpiles (refer to section 6.9) in the northern portion of the site, in the vicinity of the historic building footprints.

The historical records review, observations made during the site walkover and results of the preliminary risk screening, did identify a potential for unacceptable aesthetics risks to be present on the site. Further assessment of aesthetic risks on site, is considered warranted.

10.4.4 Management Limits for Petroleum Hydrocarbons

Section 2.9 of NEPC (2013a) indicates 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.

Section 2.9 of NEPC (2013a) notes that CCME (2008) includes management limits to avoid or minimise these potential effects. Application of management limits requires consideration of site specific factors such as depth of building basements and services, and depth to groundwater, to determine the maximum depth to which the limits should apply. NEPC (2013a) also states that:

- Management limits may have less relevance at operating industrial sites (including mine sites) which have no or limited sensitive receptors in the area of potential impact.
- The presence of site total petroleum hydrocarbon (TPH) contamination at the levels of the management limits does not imply that there is no need for administrative notification or controls in accordance with jurisdiction requirements.

Site history information and walkover observations indicated a potential these policy considerations to be associated with relevant identified AEC at the site, in the context of the proposed future land use scenario.

Although none of the samples analysed reported concentrations greater than the adopted criteria for management limits, CS notes that the intrusive investigation was preliminary in nature, and that the number of sampling points was less than the recommended frequency required by the NSW EPA (2022) for the site area of 9.9 hectares.

CS understands that the proposed land use scenario is likely to be largely covered by hardstand, with limited areas of landscaping or lawns and facilities. Opportunities for direct access to the hydrocarbon impacted soil by employees using these facilities are likely to be minimal. However, CS notes that the primary exposure pathway for hydrocarbon contamination is via inhalation. Inhalation of the hydrocarbon impacted soils may pose a potential risk to the construction workers and adult employees.

On that basis, further assessment of petroleum hydrocarbons in soils in the context of those policy considerations, is considered warranted.

10.4.5 Dam Water

10.4.5.1 *Dam Water – Drinking*

Review of site history information and walkover observations indicated that the dam located at the was turbid and likely to be shallow. Therefore, the dam water is unlikely to be used for drinking water purposes.

Furthermore, a review of monitoring bores located within 500m radius of the site also did not indicate presence of wells authorised for drinking water purpose.

Based on this, CS considers that the drinking water exposure pathway is incomplete and further assessment of drinking water risk, in the context of this project, is not warranted.

10.4.5.2 *Dam Water – Recreational*

The proposed land use scenario for the site does not include future use of surface water bodies for recreational purposes.

Based on this, CS considers that the recreational water exposure pathway is incomplete and further assessment of recreational water use, in the context of this project, is not warranted.



10.4.5.3 Dam Water – Agricultural (Irrigation and Stock Watering)

Urban development both on the site and on land down gradient of the site, is likely to prevent agricultural land use activities from being undertaken. Subsequently, utilisation of the dam water for agricultural purposes in the future is considered unlikely.

Based on this, CS considers that the agricultural water exposure pathway is incomplete and further assessment of agricultural water risk, in the context of this project, is not warranted.

10.4.5.4 Dam Water – Aquatic Ecosystems

Site history information and walkover observations indicated a potential for contaminants, which may present an aquatic ecosystems risk, to be present on site due to surface water runoff.

Based on this, it is considered that an aquatic ecosystems dam water exposure pathway may be complete.

10.4.6 Groundwater

Section 2.2 of NSW DEC (2007) provides guidance on the need for the potential for groundwater contamination to be assessed, for the purposes of evaluating whether it may pose an unacceptable risk to human health and/or the environment.

Section 3.2 of NEPC (2013d) provides guidance on the environmental values (that are conducive to public benefit, welfare, safety or health) and that require protection from the effects of pollution, waste discharge and deposits. These values include:

- Ecosystem protection;
- Aquaculture and human consumers of food;
- Agricultural water (irrigation and stock water);
- Recreation and aesthetics;
- Drinking water; and
- Industrial water.

Each of these values is considered in the following sub-sections.

10.4.6.1 Aquatic ecosystem protection

The tributary of Ropes Creek situated along the western boundary of the site, and the dam located within the site are likely to host aquatic ecosystems. However, both of these water bodies are considered likely to be polluted due to nearby agricultural land use and to be of a quality that is not consistent with natural background water quality.

The shallowest groundwater at the site is likely to be transient perched groundwater generally present at the soil-bedrock interface after heavy rain events. Data on natural background water quality for transient groundwater is generally not available. Subsequently, comparison of site specific shallow transient groundwater data against background quality is therefore not practical.

It is considered unlikely that any contaminants would become sufficiently mobile, migrate into groundwater and subsequently be transported to the nearest surface water receptor.

Based on these scenarios, CS considers that further assessment of aquatic ecosystem protection as a groundwater value, is not warranted.



However, CS recommends conducting further assessment of the dam water to evaluate the risk to the existing aquatic ecosystem in the dam.

10.4.6.2 Aquaculture and human consumers of food

During the walkover, it was evident that the dam located at the site was turbid and likely to be shallow. Furthermore, tributary of the Ropes Creek is also likely to be shallow in nature. On that basis, it is considered unlikely that site occupants would frequently utilise dam water for the collection and consumption of aquatic based foods at a rate that the intake would present an unacceptable risk to human health.

Based on the walkover, CS considers that the dam is likely to be shallow in nature. On that basis, it is unlikely that the surface water body would contain an aquatic food source suitable for human consumption.

Given the combination of:

- Regional geology (which is likely to include low permeability clays); and
- The likely nature of the contaminants of potential concern on the site.

It is considered unlikely that those contaminants would become sufficiently mobile and migrate into groundwater in order to potentially present an unacceptable aquaculture or human food consumption risk.

Based on these scenarios, CS considers that further assessment of aquaculture and human consumers of food as a groundwater value, is not warranted.

10.4.6.3 Agricultural water (irrigation and stock water)

Section 3.3 of this report did not identify any registered groundwater bores within a 500m radius of the site, authorised for irrigation or stock watering purposes.

Urban development both on the site and on land down gradient of the site, is likely to prevent agricultural land use activities from being undertaken. Subsequently, extraction of groundwater for agricultural purposes in the future is considered unlikely.

Based on these scenarios, CS considers that further assessment of agricultural water as a groundwater value, is not warranted.

10.4.6.4 Recreation and aesthetics

The tributary along the western boundary are likely to be shallow in nature and have limited access to the general public. On that basis, it is unlikely that the surface water body would be used for:

- Sports in which the user comes into frequent direct contact with water, either as part of the activity or accidentally, for example, swimming or surfing (primary contact);
- Sports that generally have less-frequent body contact with the water, for example, boating or fishing (secondary contact); or
- Visual passive recreational use, for example, pleasant places to be near or to look at (no body contact).

Given the combination of:

- Regional geology (which is likely to include low permeability clays); and
- The likely nature of the contaminants of potential concern on the site,



It is considered unlikely that those contaminants would become sufficiently mobile, migrate into groundwater and subsequently be transported to the dam located onsite or the creek line located approximately 250m to potentially present an unacceptable recreation or aesthetics risk.

Based on these scenarios, CS considers that further assessment of recreation and aesthetics as a groundwater value, is not warranted.

10.4.6.5 Drinking water

Section 3.3 of this report did not identify any registered groundwater bores within a 500m radius of the site, authorised for drinking water purposes.

The current / future land use scenario for the site includes a reticulated drinking water system. Urban development surrounding the site is also likely to include a reticulated drinking water system.

The shallowest groundwater at the site is likely to be transient perched groundwater generally present at the soil-bedrock interface, after heavy rain events, and therefore, unlikely to be a reliable drinking water extraction source.

McNally (2009) advises that:

- Deeper regional groundwater present in the fractures of the Ashfield / Bringelly shales (in western Sydney) is generally saline, typically in the range of 5,000-50,000mg/L, due to their sea salt content, and therefore not suitable for drinking; and
- These shales are also considered to have no value as sources of groundwater.

Therefore, CS considers that further assessment of drinking water as a groundwater value, is not warranted.

10.4.6.6 Industrial water

Section 3.3 of this report did not identify any registered groundwater bores within a 500m radius of the site, authorised for industrial purposes.

Commercial development both on the site and on land down gradient of the site, is likely to prevent industrial activities from being undertaken. Subsequently, extraction of groundwater for industrial purposes in the future is considered unlikely.

Based on these scenarios, CS considers that further assessment of industrial water as a groundwater value, is not warranted.

10.4.7 Terrestrial Ecosystems

Site history information and walkover observations indicated a potential for contaminants, which may present an ecological risk, to be present on site.

Section 3.4.2 of NEPC (2013a) indicates that:

- A pragmatic risk-based approach should be taken when assessing ecological risk in residential and commercial / industrial land use settings;
- In existing residential and urban development sites, there are often practical considerations that enable soil properties to be improved by addition of ameliorants with a persistent modifying effect or by the common practice of backfilling or top dressing with clean soil;
- In other cases, all of the site soils will be removed during site development works or relocated for the formation of new land forms;



- Sites may also be backfilled with clean soil/fill and the fate of any excavated contaminated soil should be considered in process; and
- Commercial and industrial sites may have large building structures and extensive areas covered with concrete, other pavement or hardstand materials and may have limited environmental values requiring consideration while in operational use.

Although none of the samples analysed reported concentrations greater than the adopted criteria for ecological screening, CS notes that the intrusive investigation was preliminary in nature, and that the number of sampling points was less than the recommended frequency required by the NSW EPA (2022) for the site area of 9.9 hectares.

The southwestern portion of the site is likely to include unsealed, open space and landscaped areas, where an ecological exposure pathway may be complete.

On that basis, further assessment of terrestrial ecosystem exposure risks is considered warranted.

10.5 Source, Receptor, Pathway Model

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources and receptors, and exposure pathways between those sources and receptors.

Based on:

- The areas of environmental concern (AEC) at the site where sources of contamination may be present;
- The contaminants of potential concern (COPC) identified for the site;
- Receptors identified for the site; and
- The exposure pathways between those sources and receptors assessed as being potentially or actually complete,

a CSM is presented for the site in Table 10.5.

**Table 10.5 Conceptual Site Model**

ID	AEC	Source	COPC	Exposure Pathway	Receptor
AEC01	Footprint of residential dwelling (~250m ²)	Use of hazardous building material Uncontrolled filling Storage of hydrocarbon compounds and chemicals Boat and vehicle maintenance Hydrocarbon staining in the car park shed Storage of acid batteries Tyres Degraded metal roofing sheets	Hydrocarbons, pesticides, PCB, Phenols, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Direct uptake Aesthetics Management limits	Residents Maintenance workers Terrestrial ecosystems
AEC02	Metal shed 2 (~50m ²)	Potential storage and spillage of chemicals Uncontrolled filling	Hydrocarbons, pesticides, phenols, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Aesthetics Management limits	Residents Maintenance workers Terrestrial ecosystems
AEC03	Horse Pen (~180m ²)	Manure, potential use of parasite control chemicals and horse cleaning activities	Pathogens, metals, nutrients, pesticides	Dermal contact Soil ingestion Dust inhalation Aesthetics	Residents Maintenance workers Terrestrial ecosystems



ID	AEC	Source	COPC	Exposure Pathway	Receptor
AEC04	Dam (~360m ²)	Uncontrolled filling of dam bund Dam sediments Dam water	Soil: Hydrocarbons, pesticides, PCB, metals, asbestos Sediment: Hydrocarbons, metals, nitrogen, nitrate, ammonia, phosphorus, pathogens Water: TRH, BTEX, low level PAH, Ammonia, nitrate, metals, microbes	Dermal contact Soil ingestion Dust inhalation Direct uptake Aesthetics Management limits Aquatic pathway	Residents Site Workers Maintenance Workers Terrestrial Ecosystems Aquatic ecosystem
AEC05	Septic tank	Domestic wastewater handling	Pathogens, metals	Dermal contact Soil Ingestion Dust inhalation Management limits	Residents Site workers Maintenance workers
AEC06	2x ACM Sheets (north of residence)	Uncontrolled demolition of former structures Illegal dumping	Asbestos	Dust inhalation	Residents
AEC07	Unpaved driveway (~100m)	Uncontrolled filling	Hydrocarbons, pesticides, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems



ID	AEC	Source	COPC	Exposure Pathway	Receptor
AEC08	Historic chicken pen footprint (~100m ²)	Poultry dust, litter and manure	Pathogens, metals, nutrients, pesticides and asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Aesthetics Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC09	Storage shed 1 (~10m ²)	Potential storage of chemicals and hydrocarbon compounds Potential leakage / spillage of chemicals and hydrocarbon compounds Uncontrolled filling	Hydrocarbons, phenols, pesticides, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Aesthetics Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC10	Historic building footprint (1955 to 1978, ~1200m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC11	Historic building footprint (1965 to 1978, ~1,300m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems



ID	AEC	Source	COPC	Exposure Pathway	Receptor
AEC12	Historic agricultural land use / potential orchard (~25,000m ²)	Agricultural / orchard activities	Pesticides, metals	Dermal contact Soil ingestion Dust inhalation Direct uptake Aesthetics	Residents Terrestrial ecosystems
AEC13	Historic building footprint (1947 to 2004, 100m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC14	Historic residential footprint (1965 to 2004, 80m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC15	Corrugated ACM roofing sheets	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Asbestos	Dust inhalation	Residents Site workers Maintenance workers



ID	AEC	Source	COPC	Exposure Pathway	Receptor
AEC16	Historic driveway footprint (~90m)	Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC17	Historic building footprint (1955 to 2004, 40m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC18	Shed A footprint (~10m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC19	Shed B footprint (~10m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems



ID	AEC	Source	COPC	Exposure Pathway	Receptor
AEC20	AEC21: Historic building footprint (1955 to 2004, 30m ²)	Uncontrolled demolition Use of hazardous building materials Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil Ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC21	Stockpile SP1 (30m ³)	Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC22	Stockpile SP2 (10m ³)	Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems
AEC23	Stockpile SP3 (10m ³)	Uncontrolled filling	Hydrocarbons, phenols, pesticides, PCB, metals, asbestos	Dermal contact Soil ingestion Dust inhalation Vapour inhalation Management limits	Residents Site workers Maintenance workers Terrestrial ecosystems



ID	AEC	Source	COPC	Exposure Pathway	Receptor
AEC24	Power poles	Termite treated power poles	Creosote	Dermal contact Soil ingestion Dust inhalation Direct uptake Management limits	Residents Terrestrial ecosystems



11. Conclusions and Recommendations

Based on CS's assessment of desktop review information and fieldwork observations, CS makes the following conclusions:

- There is contamination present at the site arising from past land use activities, specifically the presence of visible fragments of asbestos containing material (ACM) in surface soils near P1-PACM2, P1-PACM3 and P2-PACM1 (refer to Figure 4 and Figure 5 for the approximate locations of these identified ACM hotspots).
- Based on this, CS recommends the following:
 - The client should barricade off the areas where ACM has been observed at the site and erect appropriate signage to prevent access by the public; and
 - The client should seek the advice of an appropriately qualified environmental consultant on how best to remediate or implement interim controls to prevent potential asbestos exposure risks.
- CS considers that the site could be made suitable for commercial / industrial land use, from a site contamination perspective, subject to the following measures:
 - A stage 2 detailed site investigation (DSI) should be undertaken at the site to further assess potential contamination risks associated with the identified areas of environmental concern; and
 - Any contamination found while undertaking the DSI should be remediated in accordance with a Remedial Action Plan (RAP); and
 - The stage 2 DSI and the RAP (if required) should be undertaken / prepared by a suitably experienced environmental consultant.

This report must be read in conjunction with the **Information About This Report** page at the front of this report.



12. References

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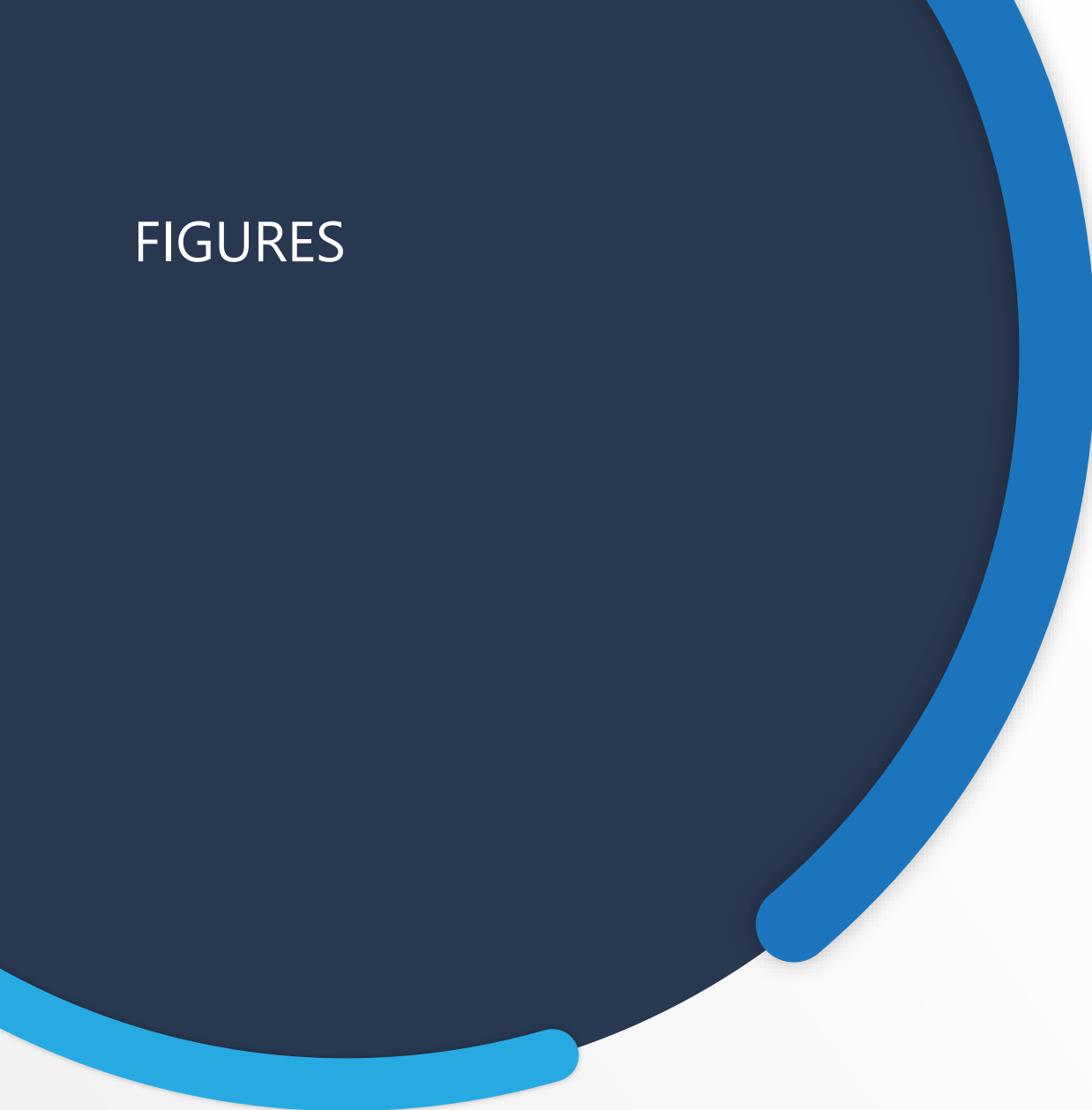
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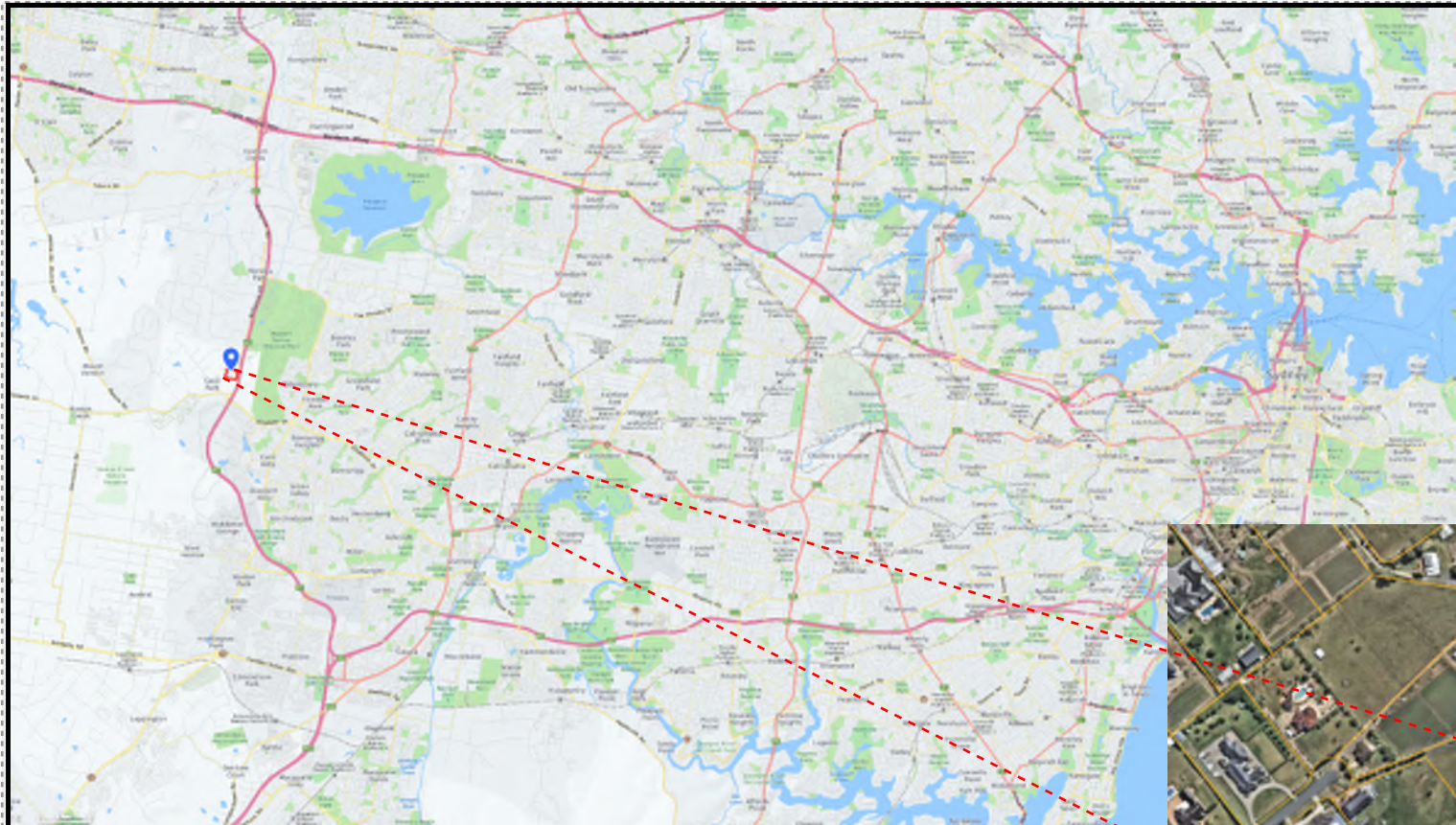
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FIGURES

A decorative graphic on the left side of the page. It features a large, dark blue circle. A thick, light blue arc is positioned along the right edge of this circle, starting from the bottom and curving upwards towards the right. The background of the entire page is white.



PLAC



LEGEND:



Approximate site location



Approximate site boundary



2/4 Kellogg Road
ROOTY HILL NSW 2766
Tel: +61 1300 165 769
Web: www.constructionsciences.net

Scale: Not to scale

Date: 7 July 2023

Drawn By: AL

Drawing No: 10791EV.P.402-R01-F1

Client: Western Sydney Parklands Trust

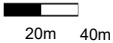
Project: Stage 1 Preliminary Site Investigation

Location: 97-123 and 125-151 Wallgrove Road, Cecil Park, NSW 2178

Version:

SITE LOCALITY

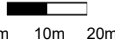


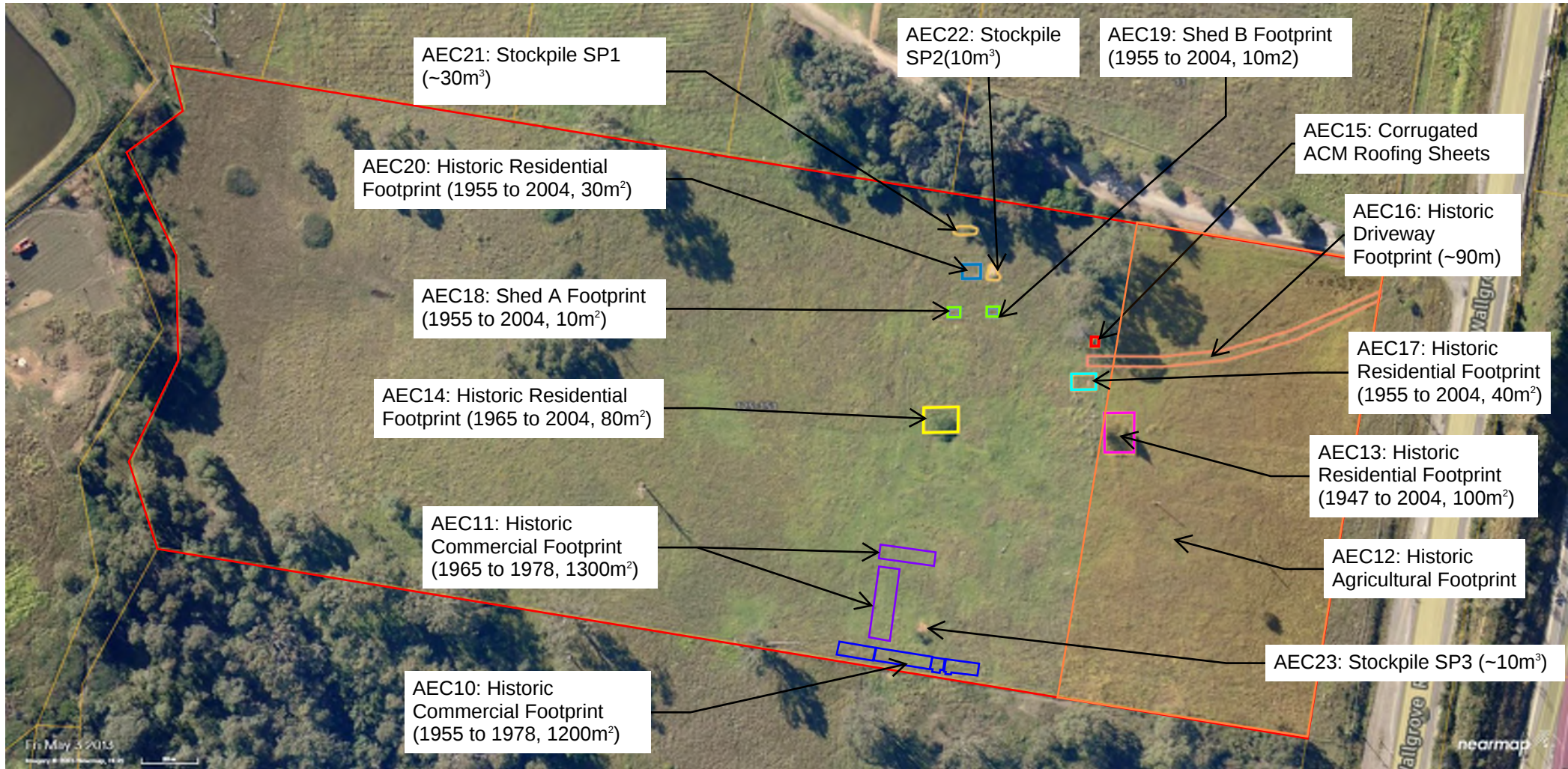
	LEGEND:  Site boundary	 Construction Sciences 2/4 Kellogg Road ROOTY HILL NSW 2766 Tel: 1300 165 769 Web: www.constructionsciences.net	Scale: 		Client: Western Sydney Parklands Trust
			Date: 7 July 2023		Project: Stage 1 Preliminary Site Investigation
			Drawn By: AL		Location: 97-123 and 125-151 Wallgrove Road, Cecil Park, NSW 2178
			Drawing No: 10791EV.P.402-R01-F2	Sheet: 1 of 1	Site Layout Plan



	LEGEND:  Site boundary  Test pit location	 2/4 Kellogg Road ROOTY HILL NSW 2766 Tel: 1300 165 769 Web: www.constructionsciences.net	Scale:  0m 20m 40m		Client: Western Sydney Parklands Trust
			Date: 7 July 2023		Project: Stage 1 Preliminary Site Investigation
			Drawn By: AL		Location: 97-123 and 125-151 Wallgrove Road, Cecil Park, NSW 2178
			Drawing No: 10791EV.P.402-R01-F3	Sheet: 1 of 1	Sampling Point Layout Plan

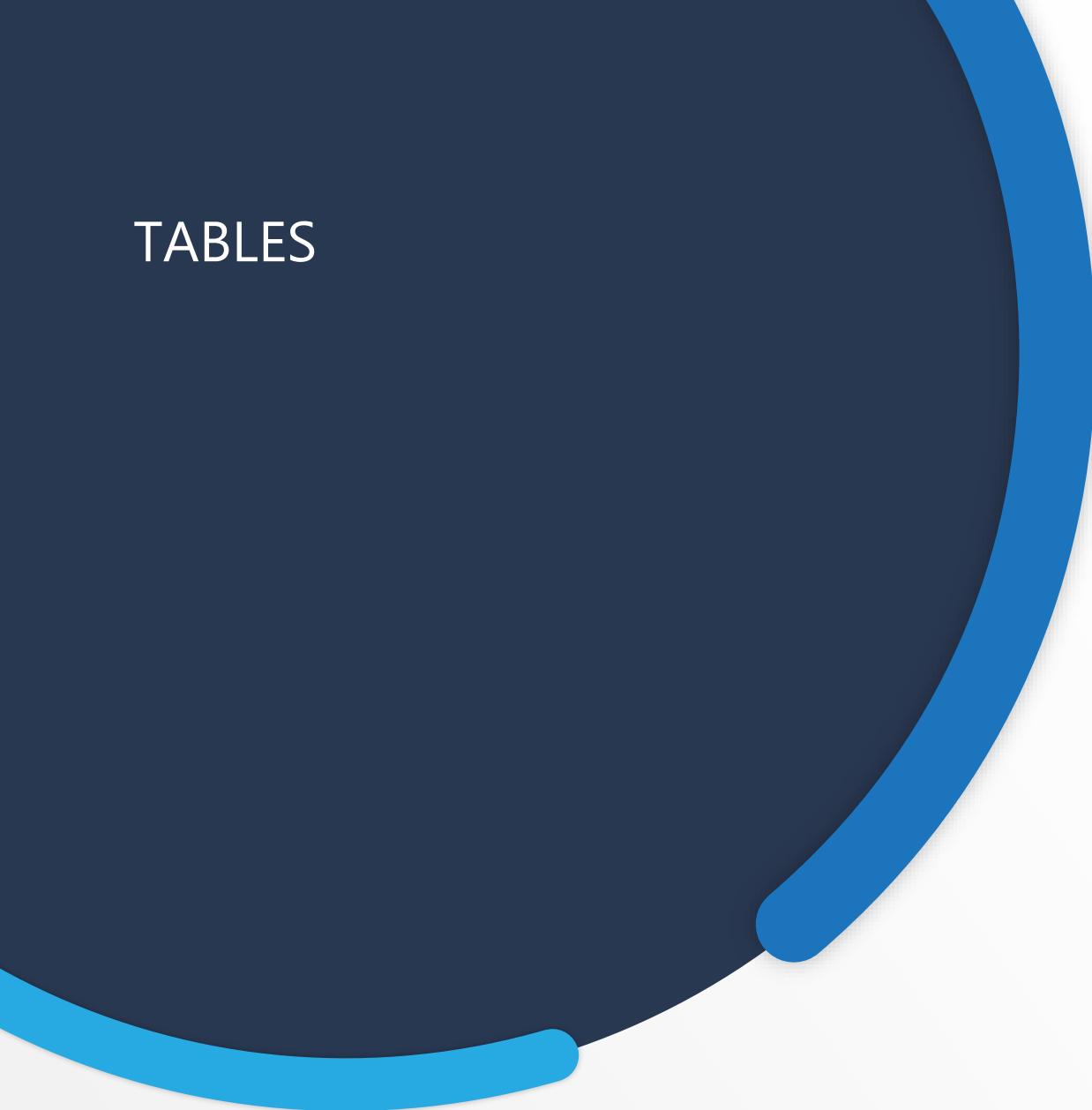


	LEGEND:  Site boundary	 2/4 Kellogg Road ROOTY HILL NSW 2766 Tel: 1300 165 769 Web: www.constructionsciences.net	Scale: 		Client: Western Sydney Parklands Trust
			Date: 7 July 2023		Project: Stage 1 Preliminary Site Investigation
			Drawn By: AL		Location: 97-123 Wallgrove Road, Cecil Park, NSW 2178
			Drawing No: 10791EV.P.402-R01-F4	Sheet: 1 of 1	Site Layout Plan



	LEGEND:  Site boundary	 2/4 Kellogg Road ROOTY HILL NSW 2766 Tel: 1300 165 769 Web: www.constructionsciences.net	Scale: 		Client: Western Sydney Parklands Trust
			Date: 7 July 2023		Project: Stage 1 Preliminary Site Investigation
			Drawn By: AL		Location: 125-151 Wallgrove Road, Cecil Park, NSW 2178
			Drawing No: 10791EV.P.405-R01-F5	Sheet: 1 of 1	Site Layout Plan

TABLES

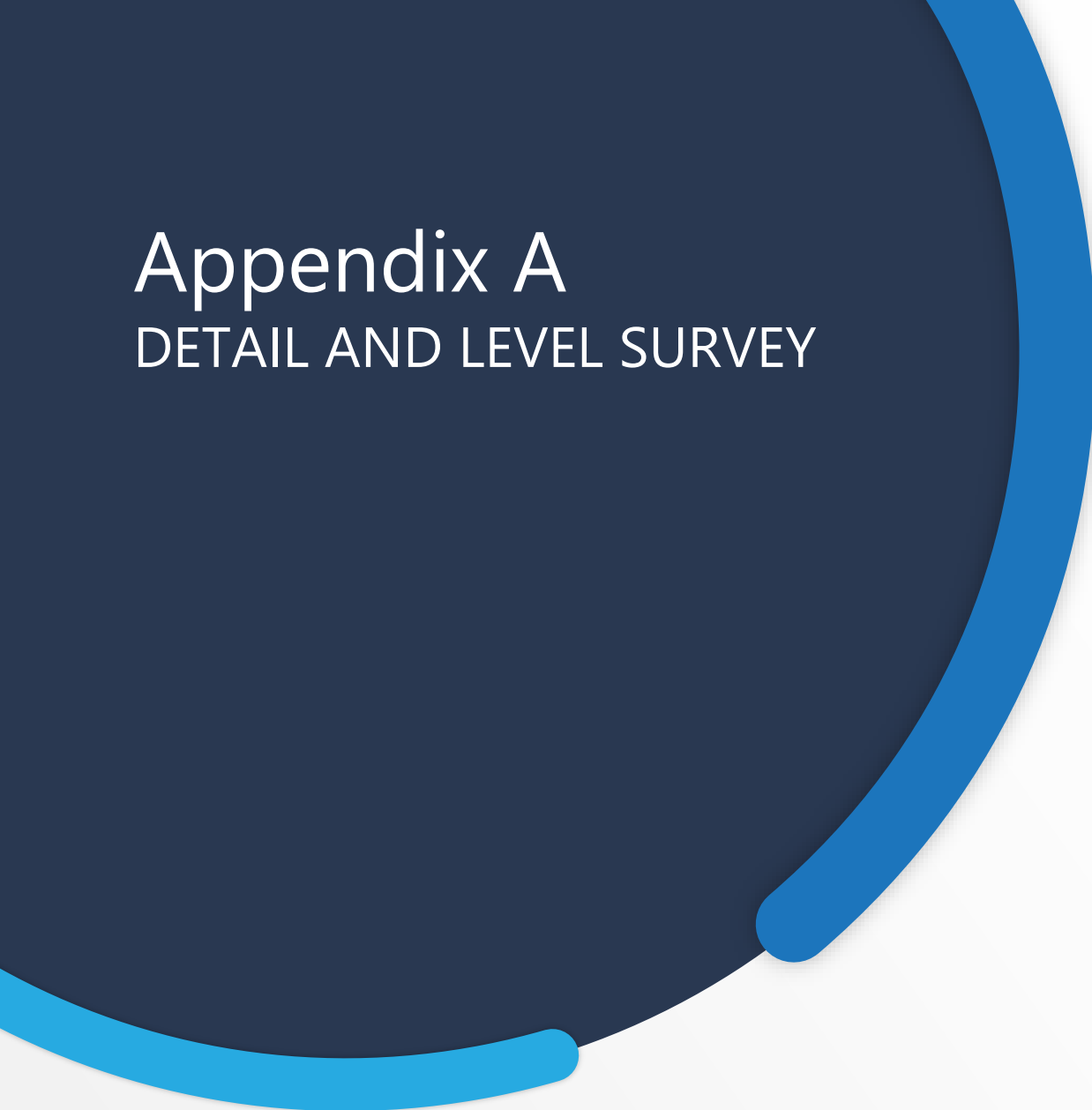


LR01- Soil Results

[illegible]

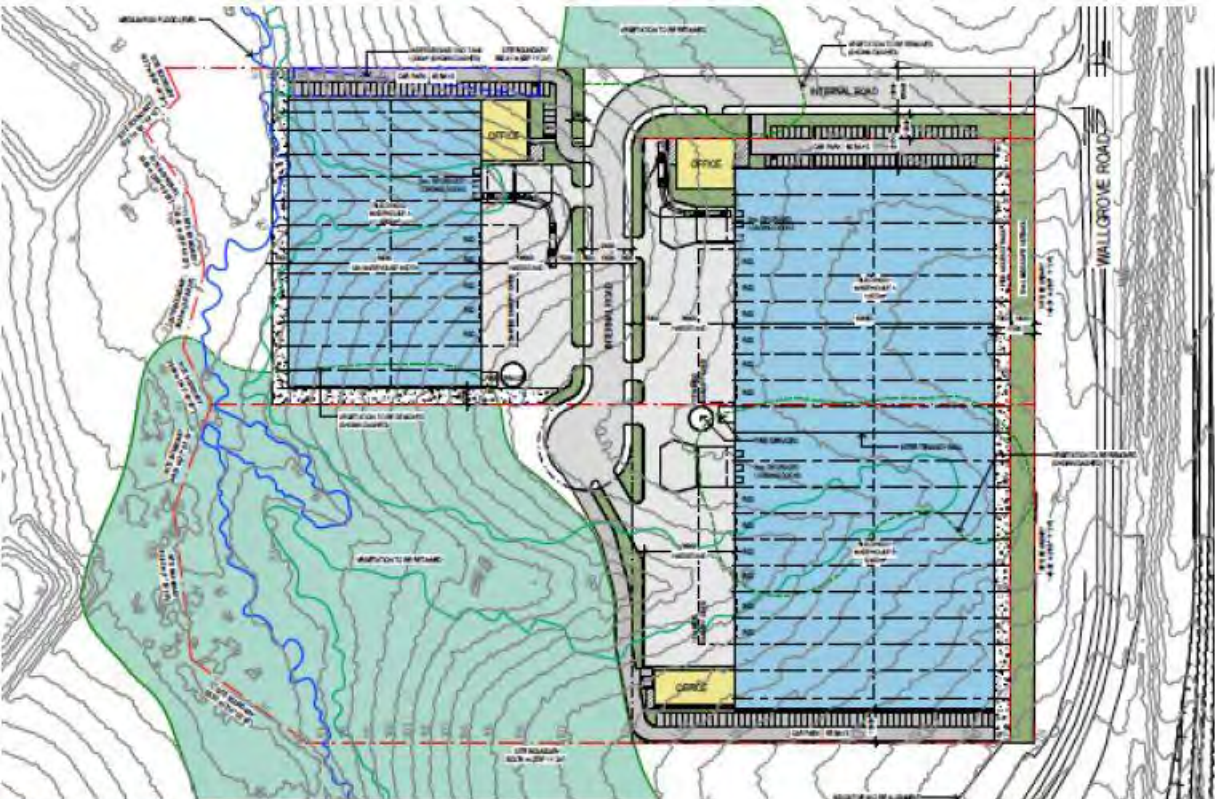
Number of Nodes	Number of Links	Minimum Link Cost	Minimum Link Cost	Maximum Link Cost	Minimum Link Cost	Average Link Cost	Median Link Cost	Standard Deviation	95th-99th Percentile	% of Nodes with Degree 1	% of Nodes with Degree 2
10	2	2	2	2	2	2	2	0	2	0	0
15	4	2	2	2	2	2.05	2.05	0	2.05	0	0
20	6	2	2	2	2	2.02	2.02	0	2.02	0	0
25	8	2	2	2	2	2.01	2.01	0	2.01	0	0
30	10	2	2	2	2	2.005	2.005	0	2.005	0	0
35	12	2	2	2	2	2.002	2.002	0	2.002	0	0
40	14	2	2	2	2	2.001	2.001	0	2.001	0	0
45	16	2	2	2	2	2.0005	2.0005	0	2.0005	0	0
50	18	2	2	2	2	2.0002	2.0002	0	2.0002	0	0
55	20	2	2	2	2	2.0001	2.0001	0	2.0001	0	0
60	22	2	2	2	2	2.00005	2.00005	0	2.00005	0	0
65	24	2	2	2	2	2.00002	2.00002	0	2.00002	0	0
70	26	2	2	2	2	2.00001	2.00001	0	2.00001	0	0
75	28	2	2	2	2	2.000005	2.000005	0	2.000005	0	0
80	30	2	2	2	2	2.000002	2.000002	0	2.000002	0	0
85	32	2	2	2	2	2.000001	2.000001	0	2.000001	0	0
90	34	2	2	2	2	2.0000005	2.0000005	0	2.0000005	0	0
95	36	2	2	2	2	2.0000002	2.0000002	0	2.0000002	0	0
100	38	2	2	2	2	2.0000001	2.0000001	0	2.0000001	0	0
105	40	2	2	2	2	2.00000005	2.00000005	0	2.00000005	0	0
110	42	2	2	2	2	2.00000002	2.00000002	0	2.00000002	0	0
115	44	2	2	2	2	2.00000001	2.00000001	0	2.00000001	0	0
120	46	2	2	2	2	2.000000005	2.000000005	0	2.000000005	0	0
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130	50	2	2	2	2	2.000000001	2.000000001	0	2.000000001	0	0
135	52	2	2	2	2	2.0000000005	2.0000000005	0	2.0000000005	0	0
140	54	2	2	2	2	2.0000000002	2.0000000002	0	2.0000000002	0	0
145	56	2	2	2	2	2.0000000001	2.0000000001	0	2.0000000001	0	0
150	58	2	2	2	2	2.00000000005	2.00000000005	0	2.00000000005	0	0
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160	62	2	2	2	2	2.00000000001	2.00000000001	0	2.00000000001	0	0
165	64	2	2	2	2	2.000000000005	2.000000000005	0	2.000000000005	0	0
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175	68	2	2	2	2	2.000000000001	2.000000000001	0	2.000000000001	0	0
180	70	2	2	2	2	2.0000000000005	2.0000000000005	0	2.0000000000005	0	0
185	72	2	2	2	2	2.0000000000002	2.0000000000002	0	2.0000000000002	0	0
190	74	2	2	2	2	2.0000000000001	2.0000000000001	0	2.0000000000001	0	0
195	76	2	2	2	2	2.00000000000005	2.00000000000005	0	2.00000000000005	0	0
200	78	2	2	2	2	2.00000000000002	2.00000000000002	0	2.00000000000002	0	0
205	80	2	2	2	2	2.00000000000001	2.00000000000001	0	2.00000000000001	0	0
210	82	2	2	2	2	2.000000000000005	2.000000000000005	0	2.000000000000005	0	0
215	84	2	2	2	2	2.000000000000002	2.000000000000002	0	2.000000000000002	0	0
220	86	2	2	2	2	2.000000000000001	2.000000000000001	0	2.000000000000001	0	0
225	88	2	2	2	2	2.0000000000000005	2.0000000000000005	0	2.0000000000000005	0	0
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245	96	2	2	2	2	2.00000000000000002	2.00000000000000002	0	2.00000000000000002	0	0
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255	100	2	2	2	2	2.000000000000000005	2.000000000000000005	0	2.000000000000000005	0	0
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400	158	2	2	2	2	2.000000000000000000000000001	2.000000000000000000000000001	0	2.000000000000000000000000001	0	0
405	160	2	2	2	2	2.0000000000000000000000000005	2.0000000000000000000000000005	0	2.0000000000000000000000000005	0	0
410	162	2	2	2	2	2.0000000000000000000000000002	2.0000000000000000000000000002	0	2.0000000000000000000000000002	0	0
415	164	2	2	2	2	2.0000000000000000000000000001	2.0000000000000000000000000001	0	2.0000000000000000000000000001	0	0
420	166	2	2	2	2	2.00000000000000000000000000005	2.00000000000000000000000000005	0	2.00000000000000000000000000005	0	0
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430	170	2	2	2	2	2.00000000000000000000000000001	2.00000000000000000000000000001	0	2.00000000000000000000000000001	0	0
435	172	2	2	2	2	2.000000000000000000000000000005	2.000000000000000000000000000005	0	2.000000000000000000000000000005	0	0
440	174	2	2	2	2	2.000000000000000000000000000002	2.000000000000000000000000000002	0	2.000000000000000000000000000002	0	0
445	176	2	2	2	2	2.000000000000000000000000000001	2.000000000000000000000000000001	0	2.000000000000000000000000000001	0	0
450	178	2	2	2	2	2.0000000000000000000000000000005	2.0000000000000000000000000000005	0	2.0000000000000000000000000000005	0	0
455	180	2	2	2	2	2.0000000000000000000000000000002	2.0000000000000000000000000000002	0	2.0000000000000000000000000000002	0	0
460	182	2	2	2	2	2.0000000000000000000000000000001	2.0000000000000000000000000000001	0	2.0000000000000000000000000000001	0	0
465	184	2	2	2	2	2.00000000000000000000000000000005	2.00000000000000000000000000000005	0	2.00000000000000000000000000000005	0	0
470	186	2	2	2	2	2.00000000000000000000000000000002	2.00000000000000000000000000000002	0	2.000		

Environmental Standards
 NQPM, NQPM 2012 Table 1A(7) Management Limits Comm / Ind, Fine Soil
 2012, NQPM 2012 Table 1A(2) Comm/Ind D-Soil HGL for Vapour Intrusion, Clay
 2012, NQPM 2012 Table 1A(3) ESAs for Comm/Ind, Coarse Soil
 2012, NQPM 2012 Table 1A(1) HGLs Comm/Ind D-Soil



Appendix A

DETAIL AND LEVEL SURVEY



(Source: Watson Young Architects)



NOTES:

- ONLY SERVICES WHICH WERE VISIBLE & ACCESSIBLE AT THE TIME OF THE SURVEY ARE SHOWN. FULL DETAILS OF SEWER AND OTHER SERVICES SHOULD BE OBTAINED FROM THE RELEVANT AUTHORITIES. UNDERGROUND SERVICES INFORMATION CAN BE OBTAINED FROM BEFORE YOU DIG AUSTRALIA (PH 1100 05) www.beyond.com.au
- CONTOURS ARE APPROXIMATE ONLY. PREFERENCE TO BE GIVEN TO SPOT HEIGHTS
- MAJOR TREES SHOWN ONLY
- PROJECT CO-ORDINATES ARE MGA2020 (EOM65)
- AIRIAL ORTHOPHOTO CAPTURED 20.03.2023
- THIS PLAN HAS BEEN PREPARED FOR THE SOLE PURPOSE OF LODGING A DEVELOPMENT APPLICATION WITH THE LOCAL COUNCIL. THIS PLAN IS NOT TO BE USED FOR ANY OTHER PURPOSE WITHOUT THE EXPRESS PERMISSION OF BOXALL SURVEYORS PTY LTD.

Detail Survey Certificate

I, Shawn Jackson-Bing (Ceo) of Boxall Surveyors, a surveyor registered under the Surveying and Spatial Information Act 2002, certify that the survey represented in this plan was made in accordance with Clause 10 of the Surveying and Spatial Information Regulation 2017 with regard to the location of the boundaries shown on this plan.

Signature: *[Signature]* Dated: 16.03.2023

Surveyor Identification No. 115
Surveyor registered under the Surveying and Spatial Information Act 2002

PRINT IN COLOUR

LEGEND:

	HYDRANT		GRATED DRAIN		TREE
	STOP VALVE		SEWER/SEPTIC PIT		TOP OF BANK
	WATER VALVE		SEWER MAN HOLE		BOTTOM OF BANK
	WATER METER		FENCE LINE		CONCRETE LINE
	GAS VALVE		VEGETATION		EASEMENT LINE
	GAS MARKER		PAVEMENT LINE		KERB LINE
			POWER POLE		POOL
			COMM PIT		ROCK
					ROOF LINE

APPROX LINE OF SERVICES

OVER HEAD ELECTRICITY

CLIENT:
WESTERN SYDNEY PARKLANDS TRUST

ADDRESS:
No.97 WALLGROVE ROAD
CECIL PARK
LOT 24 IN DP 1152887 &
LOT 25 SECTION 4 IN DP 2954

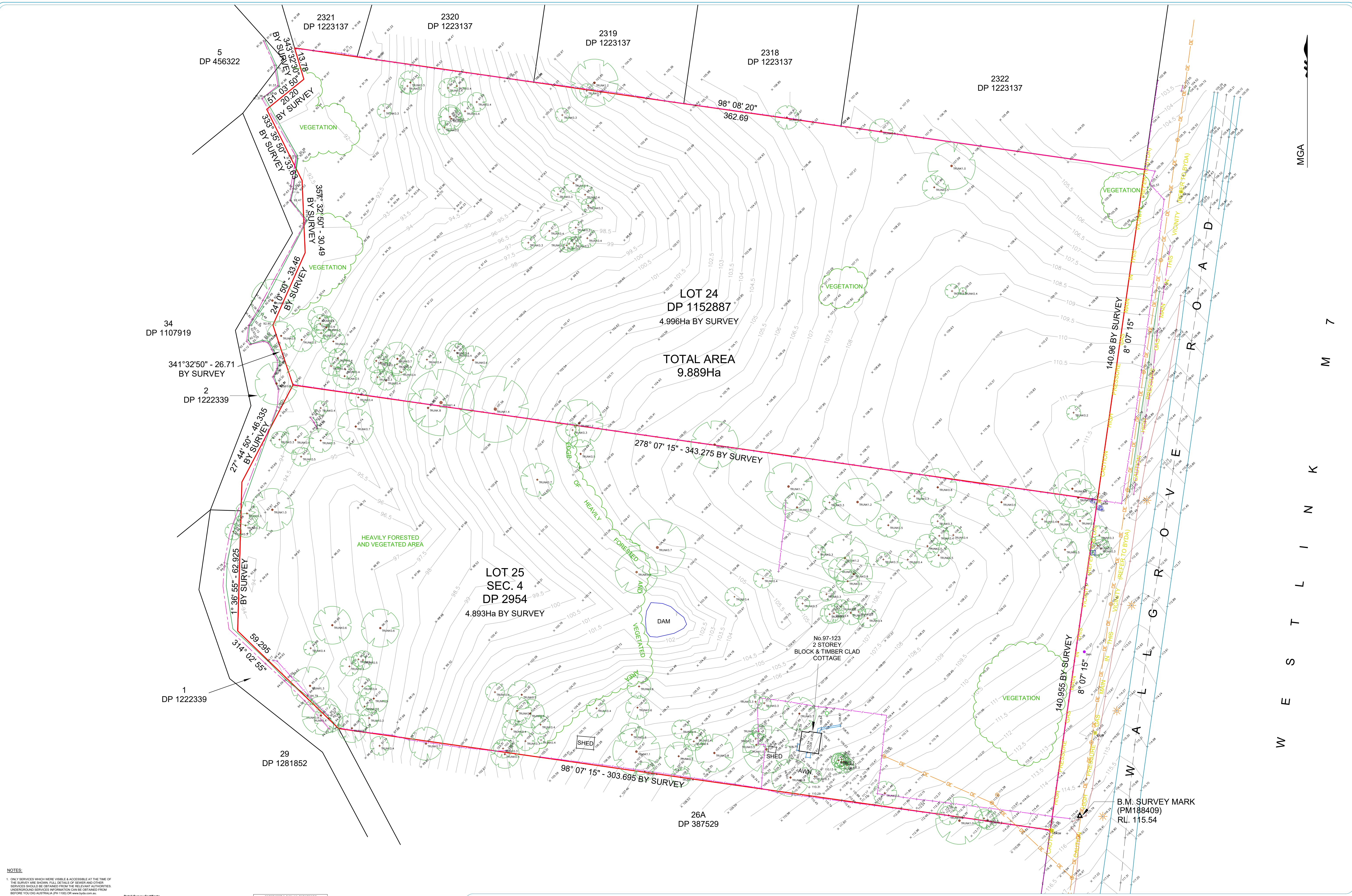
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02 9521 5737 | www.boxallsurveyors.com.au | ACN 114 644 058

TITLE: PLAN OF SITE DETAIL AND LEVELS

REV	DATE	REVISION DETAILS

ORIGIN LEVELS: SSM 26613 RL 118.6
AZIMUTH: MGA20 DATUM: AHD
SURVEY: LC DATE: 20.02.2023
DRAWN: LC DATE: 16.03.2023
APPROVED: SL DATE: 16.03.2023
SCALE: 1:700
DRAWING No: 11550-001
REV:
SIZE: A1

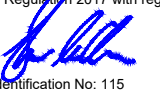


NOTES:

- ONLY SERVICES WHICH WERE VISIBLE & ACCESSIBLE AT THE TIME OF THE SURVEY ARE SHOWN. FULL DETAILS OF SEWER AND OTHER SERVICES SHOULD BE OBTAINED FROM THE RELEVANT AUTHORITIES. UNDERGROUND SERVICES INFORMATION CAN BE OBTAINED FROM BEFORE YOU DIG AUSTRALIA (PH 1160) OR www.byou.com.au.
- CONTOURS ARE APPROXIMATE ONLY. PREFERENCE TO BE GIVEN TO SPOT HEIGHTS.
- MAJOR TREES SHOWN ONLY.
- PROJECT CO-ORDINATES ARE MGA2020 (20K656).
- AIRIAL ORTHOPHOTO CAPTURED 20.03.2023.
- THIS PLAN HAS BEEN PREPARED FOR THE SOLE PURPOSE OF LODGING A DEVELOPMENT APPLICATION WITH THE LOCAL COUNCIL. THIS PLAN IS NOT TO BE USED FOR ANY OTHER PURPOSE WITHOUT THE EXPRESS PERMISSION OF BOXALL SURVEYORS PTY LTD.

Detail Survey Certificate

I, Shawn Lachlan Ding (Gao) MBE of Boxall Surveyors, a surveyor registered under the Surveying and Spatial Information Act 2002, certify that the survey represented in this plan was made in accordance with Clause 10 of the Surveying and Spatial Information Regulation 2017 with regard to the location of the boundaries shown on this plan.

Signature:  Dated: 16.03.2023

Surveyor Identification No. 115
Surveyor registered under the Surveying and Spatial Information Act 2002

LEGEND:

HYDRANT	GRATED DRAIN	TREE
STOP VALVE	SEWER/SEPTIC PIT	BOUNDARY LINE
WATER VALVE	SEWER MAN HOLE	TOP OF BANK
WATER METER	LIGHT POLE	BOTTOM OF BANK
GAS VALVE	POWER POLE	CONCRETE LINE
GAS MARKER	COMM PIT	EASEMENT LINE
		VEGETATION
		FENCE LINE
		PAVEMENT LINE
		KERB LINE
		POOL
		ROCK
		ROOF LINE

APPROX LINE OF SERVICES

OVER HEAD ELECTRICITY

CLIENT:
WESTERN SYDNEY PARKLANDS TRUST

ADDRESS:
No.97 WALLGROVE ROAD
CECIL PARK
LOT 24 IN DP 1152887 &
LOT 25 SECTION 4 IN DP 2954

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TITLE: PLAN OF SITE DETAIL AND LEVELS

REV	DATE	REVISION DETAILS

ORIGIN LEVELS: SSM 26613 RL 118.6

AZIMUTH: MGA20	DATUM: AHD
SURVEY: LC	DATE: 20.02.2023
DRAWN: LC	DATE: 16.03.2023
APPROVED: SL	DATE: 16.03.2023
SCALE: 1:1700	SHEET: 2 OF 2
DRAWING No: 11550-001	REV: ---
	SIZE: A1



Appendix B

GROUNDWATER

Real Time Data - River...

Daily River Reports

⊕ Daily River Reports

Dams

favourites search

download sites

find a site

⊕ Real Time Data - Ma...

Groundwater (Telemetered data)

favourites search

download sites

find a site

⊕ Real Time Data - Bo...

All Groundwater Site details

search

download sites

find a site

search by licence

⊕ All Groundwater Map

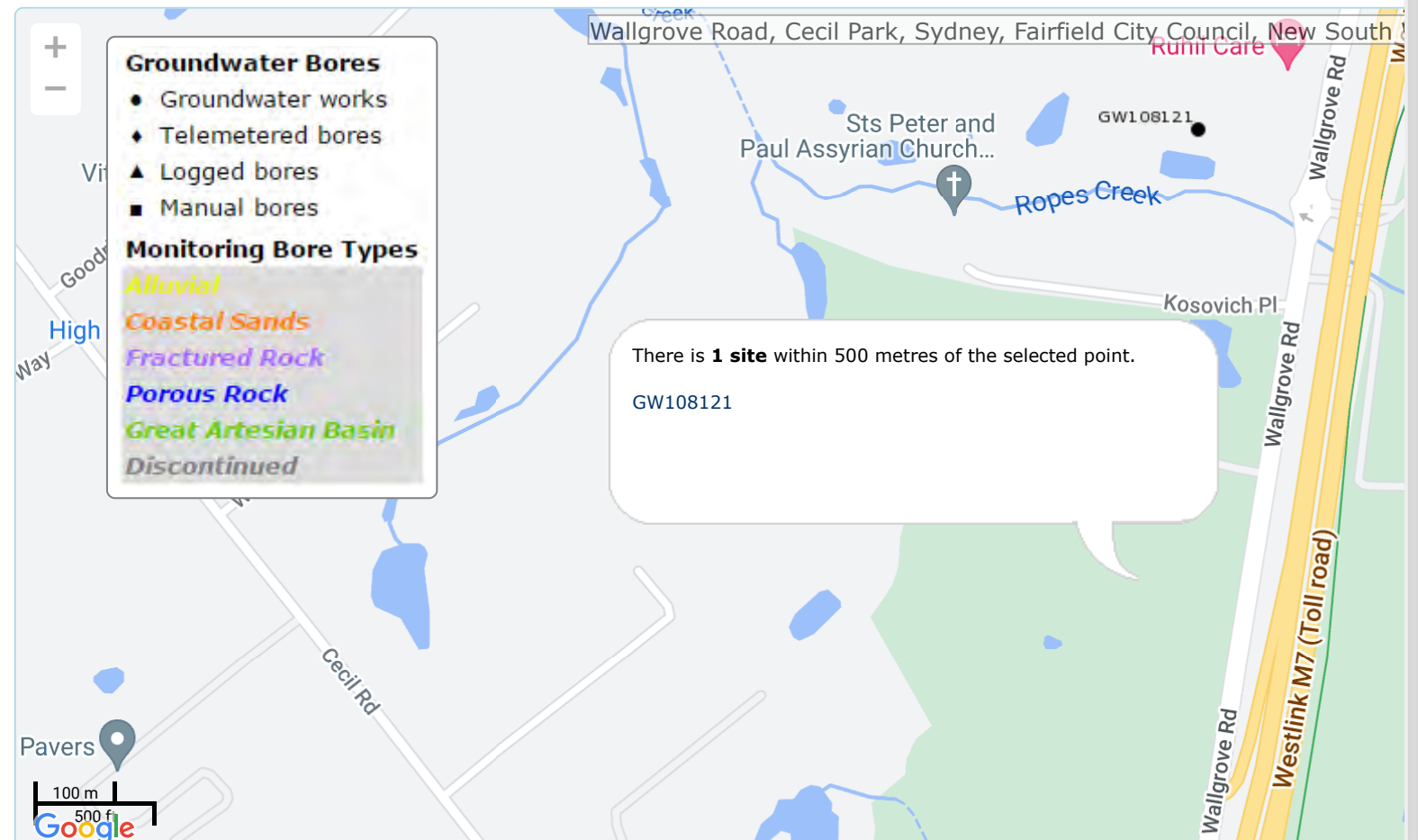
All Groundwater Site Details

ALL GROUNDWATER MAP

bookmark this page

All data times are Eastern Standard Time

Map Info



WaterNSW

Work Summary

GW108121

Licence:

Licence Status:

Authorised Purpose(s):

Intended Purpose(s): TEST BORE

Work Type: Bore

Work Status:

Construct.Method: Rotary

Owner Type:

Commenced Date:

Completion Date: 30/07/2004

Final Depth: 246.00 m

Drilled Depth: 246.00 m

Contractor Name: INTERTEC DRILLING SERVICES

Driller: William Crump

Assistant Driller:

Property:

Standing Water Level 34.000
(m):

GWMA:

Salinity Description:
Yield (L/s): 0.100

GW Zone:

Site Details

Site Chosen By:

County
Form A: CUMBERLAND
Licensed:

Parish
MELVILLE

Cadastre
2 202907

Region: 10 - Sydney South Coast

CMA Map:

River Basin: - Unknown

Grid Zone:

Scale:

Area/District:

Elevation: 0.00 m (A.H.D.)

Northing: 6250701.000

Latitude: 33°51'54.7"S

Elevation Source: Unknown

Easting: 300677.000

Longitude: 150°50'42.7"E

GS Map: -

MGA Zone: 56

Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	2.50	208			Rotary Air
1		Hole	Hole	2.50	180.00	165			Down Hole Hammer
1		Hole	Hole	180.00	246.00	154			Down Hole Hammer
1	1	Casing	Pvc Class 9	-0.50	59.50	140			Suspended in Clamps, Screwed and Glued
1	1	Casing	Steel	-0.50	2.50	168			Driven into Hole

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
13.00	13.20	0.20	Unknown			0.10	18.00		1300.00
199.00	200.00	1.00	Unknown			0.10	204.00		1250.00
219.00	219.50	0.50	Unknown	34.00		0.10	222.00		950.00

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	3.00	3.00	CLAY BROWN	Clay	

3.00	6.00	3.00	SHALE BROWN	Shale	
6.00	13.00	7.00	SHALE GREY	Shale	
13.00	13.20	0.20	SHALE FRACTURED	Shale	
13.20	19.00	5.80	SHALE GREY	Shale	
19.00	22.00	3.00	SHALE SOFT	Shale	
22.00	40.50	18.50	SHALE HARD	Shale	
40.50	42.00	1.50	SHALE SOFT	Shale	
42.00	52.00	10.00	SHALE HARD	Shale	
52.00	54.00	2.00	SANDSTONE	Sandstone	
54.00	153.50	99.50	SHALE HARD	Shale	
153.50	199.00	45.50	SANDSTONE GREY	Sandstone	
199.00	200.00	1.00	SANDSTONE QUARTZ	Sandstone	
200.00	219.00	19.00	SANDSTONE GREY	Sandstone	
219.00	219.50	0.50	SANDSTONE QUARTZ	Sandstone	
219.50	242.00	22.50	SANDSTONE GREY	Sandstone	
242.00	243.00	1.00	SANDSTONE DARK GREY	Sandstone	
243.00	246.00	3.00	SANDSTONE GREY	Sandstone	

*** End of GW108121 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

Appendix C

EPA, CLM & POEO SEARCHES

Search results

Your search for: Suburb: CECIL PARK

did not find any records in our database.

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

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

More information about particular sites may be available from:

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

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

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

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

[Search Again](#)

[Refine Search](#)

Search TIP

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

... [more search tips](#)

For business and industry ^

10 July 2023

For local government ^

Contact us

131 555 (tel:131555)

Online (<https://www.epa.nsw.gov.au/about-us/contact-us/feedback>)

info@epa.nsw.gov.au (<mailto:info@epa.nsw.gov.au>)

EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

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Background

A strategy to systematically prioritise, assess and respond to notifications under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under *Government Information (Public Access) Act 2009*.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The Protection of the Environment Operations Act 1997 (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an incident management process to manage significant incidents (<https://www.epa.nsw.gov.au/reporting-and-incidents/incident-management>).

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the planning and development consent process. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time (<https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/role-of-planning-authorities>).

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

As such, the sites notified to the EPA and presented in the list of contaminated sites notified to the EPA are at various stages of the assessment and remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The list provides an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the person who notified the site.

The following questions and answers may assist those interested in this issue.

Frequently asked questions

Why does my land appear on the list of notified sites?

Your land may appear on the list because:

- the site owner and/or the polluter has notified the EPA under section 60 of the CLM Act
- the EPA has been notified via other means and is satisfied that the site is or was contaminated.

If a site is on the list, it does not necessarily mean the contamination is significant enough to regulate under the CLM Act.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that EPA is aware of. If a site is not on the list, it does not necessarily mean the site is not contaminated.

The EPA relies on responsible parties and the public to notify contaminated sites.

How are notified contaminated sites managed by the EPA?

There are different ways the EPA can manage notified contaminated sites. Options include:

- regulation under the CLM Act, POEO Act, or both
- notifying the relevant planning authority for management under the planning and development process
- managing the site under the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

There are specific cases where contamination is managed under a tailored program operated by another agency (for example, the Resources & Geoscience's Legacy Mines Program).

What should I do if I am a potential buyer of a site that appears on the list?

You should seek advice from the seller to understand the contamination issue. You may need to seek independent contamination or legal advice.

The information provided in the list is indicative only and a starting point for your own assessment. Land contamination from past site uses is common, mainly in urban environments. If the site is properly remediated or managed, it may not affect the intended future use of the site.

Who can I contact if I need more information about a site?

You can contact the Environment Line at any time by calling 131 555 or by emailing info@environment.nsw.gov.au.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or <i>Protection of the Environment Operations Act 1997</i> .
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the <i>Contaminated Land Management Act 1997</i> , to obtain additional information needed to complete the assessment.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the <i>Contaminated Land Management Act 1997</i> is not required.

Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the <i>Contaminated Land Management Act 1997</i> . A regulatory approach is being finalised.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record.
Contamination currently regulated under POEO Act	Contamination is currently regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA as the appropriate regulatory authority reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the <i>Contaminated Land Management Act 1997</i> (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the <i>Protection of the Environment Operations Act 1997</i> (POEO Act).

Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record.

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BYRON BAY	Butler Street Reserve Byron Bay	Butler STREET	Landfill	Under assessment	-28.64340617	153.6099674
CABARITA	Dulux (Orica Australia)	Cabarita ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.84643972	151.1157115
CABARITA	Wellcome Soil Containment Cells Cabarita	47 and 48 Phillips STREET	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85250251	151.1176366
CABRAMATTA	Caltex (former Mobil) Lansvale Service Station	141 Hume HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.89442261	150.9571507
CABRAMATTA	Caltex Service Station Cabramatta	168 John STREET	Service Station	Regulation under CLM Act not required	-33.89422314	150.9279279
CABRAMATTA	Cabramatta Creek	17 A and 19A Liverpool Street STREET	Unclassified	Regulation under CLM Act not required	-33.90284952	150.9415616
CABRAMATTA WEST	BP Cabramatta (Lansvale)	115-119 Hume HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.89373753	150.9587201
CABRAMURRA	Selwyn Snowfields / Selwyn Snow Resort	213A Kings Cross ROAD	Other Industry	Regulation under CLM Act not required	-35.90869221	148.4565678
CALGA	Former service station	101 Peats Ridge ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.37592138	151.2254951
CALLALA BEACH	Callala Beach General Store	(formerly 1 Quay Rd) 114A Quay ROAD	Service Station	Regulation under CLM Act not required	-35.0101817	150.6964322
CAMBRIDGE GARDENS	Caltex Cambridge Park	1 Boomerang PLACE	Service Station	Regulation under CLM Act not required	-33.74068794	150.717174
CAMDEN	Camden High School (former)	John STREET	Gasworks	Regulation under CLM Act not required	-34.05114079	150.6951285
CAMDEN	Caltex Camden Service Station	21 Barsden STREET	Service Station	Regulation under CLM Act not required	-34.05808413	150.6914744
CAMDEN SOUTH	Coles Express Service Station Camden South	273 Old Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.08660995	150.6945444
CAMELLIA	Hymix Concrete	14 Grand AVENUE	Metal Industry	Contamination currently regulated under CLM Act	-33.82243454	151.044789

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CAMELLIA	Mauri Foods	15 Grand AVENUE	Other Industry	Regulation being finalised	-33.81996985	151.0335725
CAMELLIA	James Hardie Factory (former, eastern portion)	1 Grand AVENUE	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.81822448	151.0260958
CAMELLIA	Bitumen Manufacturer	12 Grand AVENUE	Other Industry	Contamination currently regulated under CLM Act	-33.82189695	151.0429251
CAMELLIA	Hambear	14 Thackeray STREET	Metal Industry	Regulation under CLM Act not required	-33.81920482	151.0419394
CAMELLIA	Former Asciano Properties	37A and 39 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.82056014	151.0443331
CAMELLIA	Railway Land	27 Grand AVENUE	Other Industry	Regulation under CLM Act not required	-33.81910822	151.0382483
CAMELLIA	Wrigg	13 Grand AVENUE	Metal Industry	Under preliminary investigation order	-33.81971361	151.0321525
CAMELLIA	Former Shell Clyde Refinery	Durham STREET	Other Petroleum	Contamination currently regulated under CLM Act	-33.82804924	151.0378966
CAMELLIA	Council Reserve	11B Grand AVENUE	Metal Industry	Regulation under CLM Act not required	-33.81850502	151.0302425
CAMELLIA	Veolia	37 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.81980027	151.0430689
CAMELLIA	Sydney Water	41 Grand AVENUE	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.8217493	151.0453367
CAMELLIA	Maritime Services Board	33A Grand AVENUE	Metal Industry	Regulation under CLM Act not required	-33.81836086	151.0401249
CAMMERAY	Tunks Park	Brothers AVENUE	Landfill	Contamination formerly regulated under the CLM Act	-33.81734704	151.2113338
CAMMERAY	Coles Express Cammeray	477-483 Miller STREET	Service Station	Regulation under CLM Act not required	-33.82141124	151.2108658
CAMPBELLTOWN	Mobil Service Station	96-98 Queen STREET	Service Station	Regulation under CLM Act not required	-34.06407588	150.8170082

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CAMPBELLTOWN	BP Macarthur Service Station	Cnr Blaxland ROAD and Campbelltown ROAD	Service Station	Regulation under CLM Act not required	-34.05312872	150.8234349
CAMPBELLTOWN	Former vehicle wrecking yard	38 Blaxland ROAD	Other Industry	Regulation under CLM Act not required	-34.06055735	150.8130598
CAMPERDOWN	Former Gee Graphics	27 Church STREET	Other Industry	Regulation under CLM Act not required	-33.88737747	151.1773616
CAMPERDOWN	O'Dea Reserve	Salisbury LANE	Landfill	Contamination formerly regulated under the CLM Act	-33.89072786	151.1736948
CAMPERDOWN	The Spruce	12-14 Marsden STREET	Other Industry	Regulation under CLM Act not required	-33.88720632	151.1784514
CAMPSIE	Budget Petroleum and adjacent property	403 Canterbury Road and 1 Una STREET	Service Station	Contamination currently regulated under CLM Act	-33.91605617	151.1086596
CAMPSIE	Former Sunbeam factory	60 Charlotte STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.92254225	151.1025796
CANLEY HEIGHTS	Former Caltex Canley Heights	368 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88271081	150.9154176
CANLEY HEIGHTS	Caltex Canley Heights Service Station	280-286 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88393501	150.9241656
CANLEY VALE	Coles Express Lansvale	99 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.89295753	150.9606136
CANLEY VALE	Former Mobil Service Station	96 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88591573	150.9369801
CANOWINDRA	BP-branded Jasbe Service Station	76 Rodd STREET	Service Station	Regulation under CLM Act not required	-33.56131773	148.6682805
CANTERBURY	Metro Petroleum Service Station	13-19 Canterbury ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90783455	151.125207
CAPTAINS FLAT	Rail corridor adjacent to Lake George Mine	1 Copper Creek Road ROAD	Other Industry	Contamination currently regulated under CLM Act	-35.59038471	149.4382246
CAPTAINS FLAT	Captains Flat former Station Masters Cottage	2 Copper Creek ROAD	Other Industry	Contamination currently regulated under CLM Act	-35.59027127	149.4384122

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CAPTAINS FLAT	Captains Flat Rail Corridor	Copper Creek ROAD	Other Industry	Under assessment	-35.590513	149.438729
CARDIFF	7-Eleven Service Station	399 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93391137	151.6562111
CARDIFF	Former Caltex Service Station	367 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93761223	151.6577781
CARDIFF	Maneela Oval	Main ROAD	Other Industry	Regulation under CLM Act not required	-32.93018443	151.6435559
CARDIFF	Former Mobil Depot	7 Ranton STREET	Other Petroleum	Regulation under CLM Act not required	-32.94516764	151.6470387
CARDIFF	BP Service Station (Reliance Petroleum)	Corner Sturt and Main ROADS	Service Station	Regulation under CLM Act not required	-32.93792229	151.6569905
CARDIFF	Woolworths (former Mobil) Cardiff Service Station	43 Macquarie ROAD	Service Station	Regulation under CLM Act not required	-32.94118246	151.6578195
CARINGBAH	Adjacent to Spirent Australia	101-103 Cawarra ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-34.03360747	151.1245577
CARINGBAH	Former Consumer Health Products Manufacturer	32-40 Cawarra ROAD	Other Industry	Regulation under CLM Act not required	-34.03024369	151.1277755
CARINGBAH	Caltex Lilli Pilli Service Station	477-481 Port Hacking ROAD	Service Station	Regulation under CLM Act not required	-34.05243807	151.1216353
CARINGBAH	7-Eleven Service Station	367 The KINGSWAY	Service Station	Regulation under CLM Act not required	-34.03948677	151.1203268
CARINGBAH	Spirent Australia	105 Cawarra ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-34.03425343	151.1245092
CARINGBAH	BP Service Station Caringbah	54 Captain Cook DRIVE	Service Station	Regulation under CLM Act not required	-34.032986	151.1250656
CARLINGFORD	Caltex Service Station Carlingford	131 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.78762398	151.0279422
CARLINGFORD	Caltex Service Station	797 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.7757819	151.0516532

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CARLTON	Shell Coles Express Service Station	277 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.9748579	151.1272732
CARRINGTON	Commercial Metals Company (CMC) Australia Pty Ltd	117-121 Bourke STREET	Other Industry	Regulation under CLM Act not required	-32.9148832	151.7677193
CARRINGTON	Carrington redevelopment site	11 Howden STREET	Other Industry	Regulation under CLM Act not required	-32.91309509	151.7625341
CARRINGTON	Forgacs Dockyard	81 Denison STREET	Other Industry	Regulation under CLM Act not required	-32.9207441	151.764816
CARRINGTON	NAT vacant land	Bourke STREET	Unclassified	Regulation under CLM Act not required	-32.91276029	151.7685894
CARRINGTON	Dyke Point Containment Cell	Dyke ROAD	Other Industry	Regulation under CLM Act not required	-32.91763422	151.7727101
CARRINGTON	Carrington Coal Tar Pavements	Bourke Street to Dyke ROAD	Other Industry	Regulation under CLM Act not required	-32.91441348	151.770271
CARRINGTON	Pasminco Ship Loader	Dyke Berth 2 (off Bourke Street) OTHER	Metal Industry	Regulation under CLM Act not required	-32.9148698	151.7716837
CARSS PARK	Vacant Property	334 Princes HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.98628486	151.1133908
CARSS PARK	Kogarah War Memorial Pool	78 Carwar AVENUE	Other Industry	Regulation under CLM Act not required	-33.9889195	151.1178227
CARWELL	Cement Australia Carwell Creek Quarries	Quarry ROAD	Other Industry	Regulation under CLM Act not required	-32.85570277	149.9170908
CASINO	Caltex Service Station and Depot Casino	28 & 32 Dyraaba STREET	Service Station	Regulation under CLM Act not required	-28.85488567	153.044806
CASINO	Caltex Service Station	96 Centre STREET	Service Station	Regulation under CLM Act not required	-28.86539567	153.0450654
CASINO	Former Gasworks	134-136 North STREET	Gasworks	Regulation under CLM Act not required	-28.86080712	153.0526043
CASINO	Woolworths Service Station Casino	130 Canterbury STREET	Service Station	Regulation under CLM Act not required	-28.86231341	153.0464642

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CASINO	18 Beith Street, Casino	18 Beith STREET	Unclassified	Regulation under CLM Act not required	-28.84951426	153.0446585
CASINO	Corner Store	30 Barker STREET	Service Station	Regulation under CLM Act not required	-28.86316792	153.0389124
CASINO	Casino Roadhouse	86 Johnston STREET	Service Station	Contamination formerly regulated under the CLM Act	-28.85960698	153.0562429
CASULA	Caltex Casula Service Station	646 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.95641262	150.8934783
CATHERINE HILL BAY	Catherine Hill Bay Coal Handling and Preparation Plant	1A Keene STREET	Other Industry	Regulation under CLM Act not required	-33.16120556	151.6302456
CESSNOCK	Caltex Cessnock Service Station	103-105 Wollombi (Cnr James Street) ROAD	Service Station	Regulation under CLM Act not required	-32.83936243	151.3430078
CESSNOCK	Former Mobil Service Station	102 Wollombi ROAD	Service Station	Regulation under CLM Act not required	-32.83844074	151.3436022
CESSNOCK	Former Service Station	2-4 Allandale ROAD	Service Station	Regulation under CLM Act not required	-32.83118911	151.3560677
CESSNOCK	Lot 340 DP 755215	Old Maitland ROAD	Gasworks	Under assessment	-32.822025	151.379859
CESSNOCK	Cessnock Former Landfill	Quarry St and Maitland Sts STREET	Landfill	Under assessment	-32.822275	151.379365
CHARBON	Charbon Colliery	Clarence ROAD	Other Industry	Regulation under CLM Act not required	-32.92390131	149.9839098
CHARLESTOWN	7-Eleven Charlestown	273 Charlestown ROAD	Service Station	Regulation under CLM Act not required	-32.95797076	151.6896275
CHARLESTOWN	Caltex Service Station	81 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-32.96715274	151.6955462
CHARLESTOWN	Caltex Woolworths (Former BP)	91-93 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-32.96631255	151.6959086
CHARLESTOWN	Ausgrid Powell Street Depot	8 Powell STREET	Other Industry	Regulation under CLM Act not required	-32.95912375	151.6944136

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CHARMHAVEN	Caltex Charmhaven Service Station	13-15 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.21655768	151.5091452
CHATSWOOD	Former Caltex Chatswood Service Station	607 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.80396472	151.1795766
CHATSWOOD	Woolworths Chatswood	364-366 Eastern Valley WAY	Service Station	Regulation under CLM Act not required	-33.78667419	151.2010828
CHATSWOOD	Caltex Service Station Chatswood	572 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.80381271	151.1789656
CHATSWOOD	Auto Repairs	2 Devonshire STREET	Service Station	Regulation under CLM Act not required	-33.8015482	151.1859632
CHATSWOOD	Coles Express Service Station Chatswood	877-879 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.79182176	151.1804867
CHATSWOOD	Chatswood Toyota	728 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.79654247	151.1776136
CHERRYBROOK	Caltex Service Station	67 Shepherds DRIVE	Service Station	Regulation under CLM Act not required	-33.72069183	151.0451415
CHESTER HILL	Former Orica, Chester Hill	127 Orchard ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.8869823	150.9952873
CHESTER HILL	Various industrial premises	191 Miller ROAD	Chemical Industry	Under assessment	-33.88412112	150.9947587
CHESTER HILL	Integrated Packaging	141 Miller STREET	Other Industry	Under assessment	-33.88471858	150.9948992
CHESTER HILL	Building Recycling Operations 191 Miller Rd Chester Hill assessment (including 149 Orchard Rd).	191 Miller St & 149 Orchard Rd STREET	Chemical Industry	Under assessment	-33.884088	150.994779
CHIPPENDALE	Cnr Regent Street & Wellington Street, Chippendale	Wellington STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.88668912	151.2015246
CHIPPING NORTON	Former Solchem (Mobil) Depot Chipping Norton	49-51 Riverside ROAD	Other Petroleum	Regulation under CLM Act not required	-33.91621314	150.9696948
CHIPPING NORTON	Former ACR	85-107 Alfred STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.92226795	150.9586496

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CHISWICK	Former Sydney Wiremills (BHP) site	Blackwall Point ROAD	Other Industry	Regulation under CLM Act not required	-33.85131849	151.1369131
CHISWICK	9-17 Bibby Street, Chiswick	9-17 Bibby STREET	Other Industry	Regulation under CLM Act not required	-33.884088	150.994779
CHITTAWAY BAY	Former Caltex Chittaway Point	100 Chittaway ROAD	Service Station	Regulation under CLM Act not required	-33.32707555	151.4293546
CHULLORA	Chullora Railway Workshops	Worth STREET	Other Industry	Regulation under CLM Act not required	-33.88639388	151.0598201
CLANDULLA	Brogans Creek Quarry	Brogans Creek ROAD	Other Industry	Under assessment	-32.9851278	149.9587005
CLARENCE	Clarence Colliery	Chifley ROAD	Other Industry	Regulation under CLM Act not required	-33.46450217	150.2522729
CLARENDON	Coles Express Clarendon Service Station	244 Hawkesbury Valley WAY	Service Station	Regulation under CLM Act not required	-33.6083729	150.7890956
CLEARFIELD	Former Pamplings Dip Site	Off Clearfield ROAD	Cattle Dip	Regulation under CLM Act not required	-29.16287185	152.882974
CLYBUCCA	BP Service Station	2171 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.93845014	152.9422791
CLYDE	7-Eleven Clyde	3 Parramatta Road, corner Harbord STREET	Service Station	Regulation under CLM Act not required	-33.83494433	151.0222628
CLYDE	4 Tennyson Street, Clyde NSW 2142	4 Tennyson STREET	Other Industry	Regulation under CLM Act not required	-33.83268843	151.0267361
COBAR	Former Caltex (Bogas) Service Station Cobar	56-58 Marshall STREET	Service Station	Regulation under CLM Act not required	-31.49793339	145.8346684
COBAR	Mckinnons Gold Mine	Cobar ROAD	Metal Industry	Regulation under CLM Act not required	-31.78179755	145.693
COBAR	Caltex Service Station Cobar	99 Marshall (formerly Cnr Barrier Highway and Bathurst Street) STREET	Service Station	Regulation under CLM Act not required	-31.49631924	145.8275727
COBAR	Caltex Service Station	Lot 10 Railway PARADE	Service Station	Regulation under CLM Act not required	-31.49350124	145.8442372

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
COFFS HARBOUR	BP Service Station	134-136 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-30.29187037	153.1182106
COFFS HARBOUR	Dan Murphy's Coffs Harbour	10 Elbow STREET	Service Station	Regulation under CLM Act not required	-30.29439262	153.115069
COFFS HARBOUR	Mobil Service Station	314-316 Harbour DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-30.3056983	153.131966
COFFS HARBOUR	Mobil Coffs Harbour Airport	Aviation DRIVE	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.313385	153.1175018
COFFS HARBOUR	Woolworths Petrol	Park Beach Plaza, Arthur STREET	Service Station	Regulation under CLM Act not required	-30.28101154	153.132027
COFFS HARBOUR	Caltex Service Station	157 Orlando STREET	Service Station	Regulation under CLM Act not required	-30.28975334	153.1306354
COFFS HARBOUR	Coffs Harbour Slipway	38 Marina DRIVE	Other Industry	Regulation under CLM Act not required	-30.30325637	153.1441437
COFFS HARBOUR	Aussitel Backpackers Hostel	312 Harbour DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-30.30585731	153.131645
COLEAMBALLY	Former Mobil Coleambally Depot	19 Bencubbin AVENUE	Other Petroleum	Regulation under CLM Act not required	-34.80279552	145.8945239
COLLARENEBRI	Former Shell Depot	Corner Narran Street and Queen STREET	Other Petroleum	Regulation under CLM Act not required	-29.54114772	148.5789365
COLONGRA	Munmorah Colliery	Scenic DRIVE	Other Industry	Regulation under CLM Act not required	-33.21297737	151.5416882
COLONGRA	Endeavour Colliery	Scenic DRIVE	Other Industry	Regulation under CLM Act not required	-33.21297737	151.5416882
COLYTON	Coles Express (former Ampol) Service Station	86-88 Great Western HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.77552363	150.7953105
CONCORD	Caltex Service Station	89 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.86785624	151.0993769
CONCORD WEST	Caltex Service Station - 369 -375 Concord Road, Concord West	369-375 Concord ROAD	Service Station	Regulation under CLM Act not required	-33.84113835	151.0888843

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CONDOBOLIN	BP-Branded Service Station	38 Denison Street, corner Molong STREET	Service Station	Regulation under CLM Act not required	-33.08520378	147.1524976
CONDOBOLIN	Former Mobil Depot	6 Burnett STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.08010515	147.1642972
CONDOBOLIN	Former Ampol Depot	Cnr Parkes Road and Goobang STREET	Service Station	Regulation under CLM Act not required	-33.08034753	147.1642436
CONDOBOLIN	Former Caltex Depot	Parkes ROAD	Service Station	Regulation under CLM Act not required	-33.08255593	147.1585922
CONDOBOLIN	Mobil Condobolin Depot Railway Siding	Railway Siding behind 6 Burnett STREET	Other Petroleum	Regulation under CLM Act not required	-33.08058612	147.164225
CONSTITUTION HILL	Sydney Water Land	Caloola ROAD	Unclassified	Regulation under CLM Act not required	-33.79781738	150.9697436
COOGEE	Caltex Coogee Service Station	146-148 Coogee Bay Road, corner Mount STREET	Service Station	Regulation under CLM Act not required	-33.91989232	151.2517454
COOKS HILL	Former Council Depot Cooks Hill	152 Bruce Street and 115 Corlette STREET	Other Industry	Regulation under CLM Act not required	-32.93525537	151.7641074
COOLAC	Coolac Service Station	Corner Hume Highway and Coleman STREET	Service Station	Regulation under CLM Act not required	-34.95435052	148.1595525
COOLAH	BP Depot (Reliance Petroleum)	72 (formerly 17-23) Cunningham STREET	Other Petroleum	Regulation under CLM Act not required	-31.82275896	149.7243171
COOLONGLOOK	Caltex Service Station	Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-32.21648325	152.322813
COOMA	Caltex Cooma Service Station	44 Sharp Street, corner Baron STREET	Service Station	Regulation under CLM Act not required	-36.23323489	149.1304134
COOMA	Former Mobil Cooma Depot	2 Commissioner STREET	Other Petroleum	Regulation under CLM Act not required	-36.23266081	149.1346674
COOMA	Former Caltex Cooma Depot	2 Short STREET	Service Station	Regulation under CLM Act not required	-36.2338672	149.1348862
COOMA	Lowes Petroleum Cooma Depot and Service Station (Former BP Reliance Petroleum)	2-4 Sharp STREET	Other Petroleum	Regulation under CLM Act not required	-36.22819468	149.1357696

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
COOMA	Woolworths Caltex Cooma Service Station	Bombala Street Cnr Massie STREET	Service Station	Regulation under CLM Act not required	-36.23364626	149.1267469
COOMA	Former Shell Depot	48-50 Bradley STREET	Other Petroleum	Regulation under CLM Act not required	-36.23448955	149.1347987
COOMA	Former Shell Service Station	48-52 Sharp STREET	Service Station	Contamination formerly regulated under the CLM Act	-36.23350402	149.1299514
COONABARABRAN	Former Mobil Depot	49 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-31.27096226	149.2818461
COONABARABRAN	Shell Coles Express Service Station	2-6 John STREET	Service Station	Regulation under CLM Act not required	-31.27706775	149.27836
COONABARABRAN	Former Shell Coonabarabran CVRO	Corner Cowper St and Dawson St, formerly 51 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-31.27003745	149.281788
COONABARABRAN	Caltex Service Station	Cnr Dawson & Drummond STREET	Service Station	Regulation under CLM Act not required	-31.26994941	149.28183
COONABARABRAN	Caltex Service Station	85-87 John STREET	Service Station	Regulation under CLM Act not required	-31.27231215	149.2771297
COONAMBLE	Former Shell Coonamble Depot	Corner Aberford Street and Quambone ROAD	Other Petroleum	Regulation under CLM Act not required	-30.95349182	148.3793432
COONAMBLE	Caltex Service Station	Quambone ROAD	Service Station	Regulation under CLM Act not required	-30.95410067	148.3792167
COORANBONG	Former Poultry Farm - 91 Alton Road, Cooranbong	64 - 98 Alton ROAD	Unclassified	Regulation under CLM Act not required	-33.06860138	151.4512156
COORANBONG	Avondale Auto Centre	679 Freemans DRIVE	Service Station	Regulation under CLM Act not required	-33.06968809	151.4636293
COOTAMUNDRA	Former BP Depot	1-5 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-34.62915841	148.0306962
COOTAMUNDRA	Caltex Service Station	26-34 Hovell STREET	Service Station	Regulation under CLM Act not required	-34.63624703	148.0347479
COOTAMUNDRA	Former Caltex Depot	219 Sutton STREET	Other Petroleum	Regulation under CLM Act not required	-34.65126548	148.0145283

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
COOTAMUNDRA	Former Ampol Service Station	72 Parker STREET	Service Station	Regulation under CLM Act not required	-34.63471008	148.0296112
COOTAMUNDRA	Cootamundra Gasworks	140-146 Hovell STREET	Gasworks	Contamination currently regulated under CLM Act	-34.64572841	148.0255049
COOTAMUNDRA	Former Amoco Depot	68-72 Hovell STREET	Other Petroleum	Contamination currently regulated under CLM Act	-34.63871124	148.0321134
COOTAMUNDRA	Former Ampol Cootamundra Rail Siding	Back Brawlin ROAD	Other Petroleum	Regulation under CLM Act not required	-34.65326425	148.0143068
CORAMBA	Martin Street	End of Martin Street and adjacent car park OTHER	Service Station	Ongoing maintenance required to manage residual contamination (CLM Act)	-30.22125208	153.0156997
CORNWALLIS	532 Cornwallis Road, Cornwallis	532 Cornwallis ROAD	Other Industry	Regulation under CLM Act not required	-33.57473895	150.7792839
COROWA	Corowa Shire Council Works Depot	24 Poseidon ROAD	Other Petroleum	Regulation under CLM Act not required	-35.98807923	146.3652266
COROWA	Former Ampol Corowa	10 Bow STREET	Service Station	Regulation under CLM Act not required	-35.99364786	146.3901259
COROWA	Cignall Corowa	280 Hume STREET	Service Station	Under preliminary investigation order	-36.00996015	146.3760437
CORRIMAL	Woolworths Petrol - Corrimal	275 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.37527426	150.8962637
CORRIMAL	7-Eleven Corrimal	138-146 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.36986818	150.8978241
COWRA	Landmark Fertiliser Storage Facility	Corner Young Road & Waratah STREET	Chemical Industry	Regulation under CLM Act not required	-33.84321832	148.6722578
COWRA	Lowes Petroleum (former BP Cowra Depot)	12 Campbell STREET	Other Petroleum	Regulation under CLM Act not required	-33.83803706	148.6977873
COWRA	Former Gasworks	30 Brougham STREET	Gasworks	Contamination currently regulated under CLM Act	-33.8389659	148.6963482
COWRA	Shell Depot	34 Brougham STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.83913341	148.6973491

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
COWRA	Former Railway Gatekeeper Residence Cowra	32 Brougham STREET	Gasworks	Regulation under CLM Act not required	-33.8389659	148.6963482
CRANGAN BAY	Former Service Station	555 and 565 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.17306517	151.6084446
CREMORNE	Shell Coles Express Service Station	225 Military ROAD	Service Station	Regulation under CLM Act not required	-33.83063306	151.226223
CRESTWOOD	Former Caltex Depot Queanbeyan	36 Kendall (Cnr Stephens Rd) AVENUE	Other Petroleum	Regulation under CLM Act not required	-35.34615546	149.207807
CRESTWOOD	Former BP Queanbeyan	64 Uriarra ROAD	Service Station	Regulation under CLM Act not required	-35.34646177	149.2246263
CROMER	Former Roche Products Dee Why Facility	100 South Creek ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.73893118	151.2870389
CRONULLA	Breen Holdings	Bate Bay ROAD	Other Industry	Regulation under CLM Act not required	-34.03861737	151.1614114
CROWS NEST	Caltex Service Station	111-121 Falcon STREET	Service Station	Regulation under CLM Act not required	-33.82868236	151.2060317
CROYDON	Caltex Service Station	404-410 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88853994	151.115879
CROYDON	BP Ashfield	584 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.87399409	151.1267296
CROYDON PARK	Mobil Service Station	334 Georges River ROAD	Service Station	Regulation under CLM Act not required	-33.89771626	151.0999194
CULCAIRN	Caltex Service Station	2883 Olympic HIGHWAY	Service Station	Regulation under CLM Act not required	-35.67441635	147.0356845
CULLEN BULLEN	Baal Bone Colliery	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.27193875	150.0587194
CUNDLETOWN	Caltex Service Station (1 Manning River Drive)	Old Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-31.89329598	152.5068225
CURL CURL	John Fisher Park	Corner Harbord and Abbott ROADS	Landfill	Regulation under CLM Act not required	-33.76622613	151.2860705

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
DACEYVILLE	Astrolabe Park	Cook AVENUE	Landfill	Regulation under CLM Act not required	-33.92963704	151.221773
DAPTO	7-Eleven Dapto	125 Princes HIGHWAY	Service Station	Under assessment	-34.4983106	150.7912911
DAPTO	RailCorp Dapto	(Rear of property) 12-14 Hamilton STREET	Other Industry	Regulation under CLM Act not required	-34.50045405	150.787353
DAPTO	Nicheinvest Pty Ltd (Former service station)	133-139 Lakelands DRIVE	Service Station	Regulation under CLM Act not required	-34.50335	150.803177
DARLINGHURST	Proposed Retail Unit	139-155 Palmer STREET	Unclassified	Regulation under CLM Act not required	-33.87504688	151.2168106
DARLINGHURST	Cross City Tunnel	Riley Street and William STREET	Service Station	Contamination was addressed via the planning process (EP&A Act)	-33.87424636	151.2158305
DARLINGHURST	18-28 Neild Avenue, Darlinghurst	18-28 Neild AVENUE	Landfill	Regulation under CLM Act not required	-33.87876581	151.2276546
DARLINGTON	Redfern North Eveleigh Precinct – Paint Shop and Clothing Store sub-precincts	281 Wilson STREET	Unclassified	Under assessment	-33.893419	151.190342
DEE WHY	United Dee Why	148 Pacific Parade STREET	Service Station	Contamination currently regulated under CLM Act	-33.75569536	151.295963
DEE WHY	United Dee Why Pittwater	625 Pittwater (Cnr Mooramba Road) ROAD	Service Station	Under assessment	-33.7559565	151.2826053
DEE WHY	Caltex Service Station	793-797 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.74566596	151.2920719
DEE WHY	Dee Why Town Centre	Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.753169	151.2875805
DENHAM COURT	Denham Court Caravan Park and Service Station	505 Campbelltown ROAD	Service Station	Contamination currently regulated under CLM Act	-33.98208395	150.8459471
DENILIQUIN	Shell Coles Express Service Station	336 Victoria STREET	Service Station	Contamination formerly regulated under the CLM Act	-35.52373613	144.9807345
DENILIQUIN	Former Deniliquin Gasworks	365, 369 and 329-331 George and 380 and 386 Charlotte STREET	Gasworks	Under assessment	-35.52670898	144.9634996

Number	Name	Location	Type	Status	Issued date
1597018		LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	5-Nov-20
1594131		ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	29-Jan-21
1582628	ALIN NAAMO	2159 Elizabeth Drive , CECIL PARK, NSW 2178	s.91 Clean Up Notice	Issued	30-Jul-19
3173528454	ALIN NAAMO	2159 Elizabeth Drive , CECIL PARK, NSW 2178	Penalty Notice	Issued	1-Oct-19
12618	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	POEO licence	Issued	28-Feb-07
1080705	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	25-Feb-08
1093310	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	31-Oct-08
1112532	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	19-Mar-10
1114014	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	11-May-10
1114287	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	14-Jul-10
1518245	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	16-Apr-14
1532443	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	17-Oct-16
1567241	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	13-May-19
1585801	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.96 Prevention Notice	Issued	24-Sep-19
1611790	BRANDOWN PTY. LIMITED	ELIZABETH DRIVE, CECIL PARK, NSW 2178	Compliance Audit	Complete	20-Aug-21
1502208	Calibre Construction Corp Pty Ltd	ELIZABETH DRIVE, CECIL PARK, NSW 2178	s.91 Clean Up Notice	Issued	1-Nov-11
1034917	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	23-Sep-04
1045659	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	21-Mar-05
1048880	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	25-Jul-05
1057741	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	16-May-06
1067750	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	18-Jan-07

1072215	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	31-Aug-07
1079900	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	15-Nov-07
1098502	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	22-Apr-09
1104808	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	25-Sep-09
1106782	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	7-Oct-09
1118918	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	30-Aug-10
1508705	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	21-Feb-13
1513231	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	10-Apr-13
1517638	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	21-Oct-13
1522811	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	19-Jun-14
1522946	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	20-Jun-14
1523503	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	30-Jul-14
1527801	CSR BUILDING PRODUCTS LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	5-Feb-15
1015078	CSR LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	26-Jun-02
1563608	GUISEPPE SCARFONE	15-21 Brolen Way, CECIL PARK, NSW 2178	s.91 Clean Up Notice	Issued	24-Apr-19

1578166	IMLA BAI	129-141 Lincoln Road, CECIL PARK, NSW 2178	s.91 Clean Up Notice	Issued	8-Nov-19
21829	JOHN HOLLAND PTY LTD	112 WALLGROVE ROAD, CECIL PARK, NSW 2178	POEO licence	Pending	
1587562	MAHENDRA GOUNDAR	129-141 Lincoln Road, CECIL PARK, NSW 2178	s.91 Clean Up Notice	Issued	8-Nov-19
1564700	NICOLA SALERNO	250B Cecil Road, CECIL PARK, NSW 2178	s.91 Clean Up Notice	Issued	27-Jul-18
1569215	NICOLA SALERNO	250B Cecil Road, CECIL PARK, NSW 2178	s.91 Clean Up Notice	Issued	12-Sep-18
1571223	NICOLA SALERNO	250B Cecil Road, CECIL PARK, NSW 2178	s.110 Variation of Clean Up Notice	Issued	7-Nov-18
1613416	NICOLA SALERNO	250B Cecil Road, CECIL PARK, NSW 2178	s.110 Variation of Clean Up Notice	Issued	22-Oct-21
1027	PGH BRICKS & PAVERS PTY LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	POEO licence	Issued	13-May-00
1532061	PGH BRICKS & PAVERS PTY LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	15-Jul-15
1538973	PGH BRICKS & PAVERS PTY LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	25-Jul-16
1546246	PGH BRICKS & PAVERS PTY LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	4-Nov-16
1549905	PGH BRICKS & PAVERS PTY LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	3-Mar-17
1554062	PGH BRICKS & PAVERS PTY LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	1-Aug-17
3173524980	PGH BRICKS & PAVERS PTY LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	Penalty Notice	Issued	2-Mar-18
1563032	PGH BRICKS & PAVERS PTY LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.96 Prevention Notice	Issued	28-Mar-18
1617104	PGH BRICKS & PAVERS PTY LIMITED	LOT 7 CECIL ROAD, CECIL PARK, NSW 2178	s.58 Licence Variation	Issued	11-Mar-22

Application summary

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Summary Application No: 21829

Applicant: JOHN HOLLAND PTY LTD
Premises: M7-M12 Integration Project
112 WALLGROVE ROAD, CECIL PARK, NSW, 2178
LGA: LIVERPOOL **Catchment:** Hawkesbury
Application type: New licence
Application status: Pending
Activity type: Road construction (>=50,000T & road to be constructed >10km & <30km)
Received: 23 Jun 2023
Pollution incident management plan: No

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Contact us

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Appendix D

SECTION 10.7 (2) CERTIFICATE

03/07/2023

Kim McManus
2/4 Kellogg Road
Gledenning NSW 2761

Dear Sir/ Madam,

Following is your planning certificate as requested. Should you have any further queries please contact Council on (02) 9725 0821.

PLANNING CERTIFICATE

(under section 10.7 of the Environmental Planning and Assessment Act 1979 as amended)

Applicant:	Kim McManus
Certificate No.:	2263/2023
Applicant's Reference:	10791EV/Q/1057
Issue Date:	03/07/2023
Receipt No.:	4337584

PROPERTY ADDRESS:	97-123 Wallgrove Road CECIL PARK NSW 2178
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LEGAL DESCRIPTION:	PLT: 25 Sec: 4 DP: 2954
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Marcus Rowan
MANAGER STRATEGIC LAND USE PLANNING

PLEASE NOTE: This is page 1 of 19. Should this certificate or any subsequent copy not contain this many pages, please confirm with Council prior to acting on the basis of information contained in this certificate under Section 10.7(2) not inclusive of Flood Information Sheet.

Information provided under Section 10.7(2) of the Environmental Planning and Assessment Act 1979

Notes:

- (1) The following prescribed matters may apply to the land to which this certificate relates.
 - (2) Where this certificate refers to a specific allotment (or allotments) within a strata plan, the certificate is issued for the whole of the land within the strata plan, not just the specific allotment(s) referred to, and any information contained in the certificate may relate to the whole, or any part, of the strata plan.
 - (3) The following information is provided pursuant to Section 10.7(2) of the Environmental Planning and Assessment Act 1979 as prescribed by Schedule 3 of the Environmental Planning and Assessment Regulation 2021 and is applicable as at the date of this certificate.
 - (4) Information provided in this certificate should be interpreted in conjunction with the relevant plans, policies and documents held at Council. In order to obtain copies of these documents you may purchase them by either contacting Council on (02) 9725 0821 or attending Council's Administration Centre at 86 Avoca Road, Wakeley.
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1. Names of relevant planning instruments and development control plans

- (1) The name of each environmental planning instrument and development control plan that applies to the carrying out of development on the land.

State Environmental Planning Policies (SEPP)

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

State Environmental Planning Policy (Transport and Infrastructure) 2021

State Environmental Planning Policy (Biodiversity and Conservation) 2021

State Environmental Planning Policy (Primary Production) 2021

State Environmental Planning Policy (Resilience and Hazards) 2021

State Environmental Planning Policy (Industry and Employment) 2021

State Environmental Planning Policy (Resources and Energy) 2021

State Environmental Planning Policy (Planning Systems) 2021

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

State Environmental Planning Policy (Housing) 2021

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

State Environmental Planning Policy No 65 – Design and Quality Residential Apartment Development

Regional Environmental Plans (Deemed SEPP)

There is no Regional Environmental Plan applying to this land.

Local Environmental Plans (LEP)

Fairfield Local Environmental Plan DOES NOT apply to the land.

Development Control Plans (DCP)

The land is not affected by any Draft or adopted Development Control Plans.

Note: Further advice is provided under s.10.7(5) on the relationship of development on the land with the Fairfield City Wide DCP 2013.

- (2) The name of each proposed environmental planning instrument and draft development control plan, which is or has been the subject of community consultation or on public exhibition under the Act that will apply to the carrying out of development on that land.

Draft State Environmental Planning Policies (SEPP)

There is no draft SEPP applying to this land.

Draft Local Environmental Plan (LEP)

Fairfield Local Environmental Plan 2013 (Amendment No.46). The amendment aims to: (a). Rezone certain land and/or amend development standards for certain land in the Fairfield, Cabramatta, Canley Vale and Carramar centres and in adjoining residential areas in Canley Vale and Carramar (if applicable, details are provided under section 2 of this planning certificate below); (b). Increase the floor space ratio and height of building under certain circumstances in Zone R3 Medium Density Residential in the eastern part of the City; (c). Replace clause 6.4 - Floodplain Risk Management with a new standard flood clause 5.22 - Special Flood Considerations; and (d). List four new local heritage items in Schedule 5 Environmental Heritage. Council's Outcomes Committee at its meeting held on 14 June 2022 resolved to endorse the above changes inclusive of the new land use zonings and associated development standards. Amendment No.46 will come into effect once further endorsed and implemented by the NSW Department of Planning and Environment on the NSW Legislation website.

Draft Development Control Plan (DCP)

No Draft DCP applies

- (3) Subclass (2) does not apply in relation to a proposed environmental planning instrument or draft development control plan if –

- a) It has been more than 3 years since the end of the public exhibition period for the proposed instrument or draft plan, or
- b) for a proposed environmental planning instrument – the Planning Secretary has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved.

None relevant.

- (4) In this section, ***proposed environmental planning instrument*** means a draft environmental planning instrument and includes a planning proposal for a local environmental plan.

2. Zoning and land use under relevant planning instruments

The following matters for each environmental planning instrument or draft environmental planning instrument that includes the land in any zone, however described –

**Fairfield Local Environmental Plan DOES NOT apply to the land.
State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (Chapter 7) Applies.**

(a) what is the identity of the zone,

Unzoned (SEPP (Precincts – Western Parkland City) 2021)

(b) the purposes for which development in the zone

(i) may be carried out without development consent

Clause 7.9 (1) of the SEPP (P-WPC) 2021 applies.

The following development may be carried out on land in the Western Parklands without consent, but only if it is carried out by or on behalf of a public authority--

amenity facilities; community facilities; depots; entertainment facilities; environmental facilities; environmental protection works; function centres; information and education facilities; kiosks; public administration buildings; recreation areas; recreation facilities (outdoor); restaurants or cafes; roads; signage (for directional, informative, or interpretative purposes); ticketing facilities.

Clause 7.9 (2) of the SEPP (P-WPC) 2021 applies.

Development for the purposes of extensive agriculture, other than farm buildings, may be carried out on public land in the Western Parklands without consent unless the land is in an environmental conservation area as shown on the Environmental Conservation Areas Map.

(ii) may not be carried out except with development consent

Clause 7.9 (3) of the SEPP (P-WPC) 2021 applies. Any development not specified in subsection (i) or (iii) may be carried out in the Western Parklands only with consent.

(iii) is prohibited,

Clause 7.9 (4) of the SEPP (P-WPC) 2021 applies. Development for the purposes of residential accommodation.

- c) whether any additional uses apply to the land,

There are no additional uses permitted with consent.

- d) whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling house on the land and, if so, the fixed minimum land dimensions,

No development standards that fix the minimum land dimensions for the erection of a dwelling house apply to this land. Controls in other policies and plans may apply.

- (e) whether the land is in an area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016*,

No.

- (f) whether the land is in a conservation area, however described,

No

- (g) whether an item of environmental heritage, however described, is located on the land.

Fairfield Local Environmental Plan 2013 does not apply to the land.

No.

The site is not identified as a heritage item under the State Environmental Planning Policy (Precinct - Western Parkland City) 2021.

3. Contributions plans

- (1) The name of each contributions plan under the Act, Division 7.1 applying to the land, including draft contributions plans.

Fairfield City Council indirect (Section 7.12) Development Contributions Plan 2011 applies to all land within the City of Fairfield.

- (2) If the land is in a special contributions area under the Act, Divisions 7.1, the name of the area.

None.

4. Complying development

- (1) If the land is land on which complying development may be carried out under each of the complying development codes under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* because of that Policy clause 1.17A (1) (c)- (e), (2), (3) or (4), 1.18 (1)(c3) or 1.19.

Housing Code:

No. The Housing Code does not apply to this land.

Rural Housing Code:

No. The Rural Housing Code does not apply to this land.

Low Rise Housing Diversity Code:

No. The Low Rise Housing Diversity Code does not apply to the land.

Housing Alterations Code:

No. The Housing Alterations Code does not apply to this land.

General Development Code:

No. The General Development Code does not apply to this land.

Industrial and Business Alterations Code:

No. The Industrial and Business Alteration Code does not apply to this land.

Industrial and Business Buildings Code:

No. The Industrial and Business Buildings Code does not apply to the land.

Container Recycling Facilities Code:

No. The Container Recycling Facilities Code does not apply to the land.

Subdivisions Code:

No. The Subdivision Code does not apply to this land.

Demolition Code:

No. The Demolition Code does not apply to this land.

Fire Safety Code:

No. The Fire Safety Code does not apply to this land.

Agritourism Code:

No. The Agritourism Code does not apply to the land.

- (2) If complying development may not be carried out on the land because of one of those clauses, the reasons why it may not be carried out under the clause.

None relevant.

- (3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that –
- (a) a restriction applies to the land, but it may not apply to all of the land, and
 - (b) the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

FLOOD CONTROL LOT

The subject property is identified as a flood control lot as defined under the SEPP (Exempt & Complying Development Codes) 2008 and SEPP (Housing) 2021. Development under the SEPP (Exempt and Complying Development Code) 2008 and SEPP (Housing) 2021 must not be carried out on any part of a flood control lot, other than that part of the lot that the council or a professional engineer who specialises in hydraulic engineering has certified, for the purposes of the issue of the relevant complying development certificate, as not being any of the following—

- (a) a flood storage area,
- (b) a floodway area,
- (c) a flow path,
- (d) a high hazard area,
- (e) a high risk area.

Under the SEPP (Exempt & Complying Development Codes) 2008 and SEPP (Housing) 2021 certification is also required from a professional engineer specialising in hydraulic engineering that a range of other restrictions, development standards and requirements relevant for various categories of residential, commercial and industrial complying development located on flood control lots have been met.

Further details in relation to flood levels relevant to the site can be obtained by applying for a 10.7(5) planning certificate and accompanying Council flood information sheet.

For further information please contact Council's Catchment Planning Branch on 9725 0222

- (4) If the complying development codes are varied, under that Policy, clause 1.12, in relation to the land.

The Housing Code is varied in its application by omitting clauses 3.16(1(a) and 4 and 3.23(3).

5. Exempt development

- (1) If the land is land on which exempt development may be carried out under each of the exempt development codes under the *State Environmental*

Planning Policy (Exempt and Complying Development Codes) 2008
because of that Policy, clause 1.16(1)(b1)–(d) or 1.16A.

Yes - exempt development may be carried out on the land.

- (2) If exempt development may not be carried out on the land because of one of those clauses, the reasons why it may not be carried out under the clause.

Not applicable

- (3) If the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land, a statement that—
- (a) a restriction applies to the land, but it may not apply to all of the land, and

Restrictions apply to carrying out exempt development on the land or part of the land as it is identified as a flood control lot. Refer to the SEPP (Exempt and Complying Development Codes) 2008 for further information.

Restrictions apply to carrying out exempt development on the land or part of the land as it is identified as being bush fire prone land. Refer to the SEPP (Exempt and Complying Development Codes) 2008 for further information.

- (b) the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land.

To be exempt development, the development must meet the requirements and criteria specified under the SEPP (Exempt and Complying Development Codes) 2008 that can be viewed on the NSW Legislation Website at www.legislation.nsw.gov.au/browse/inforce.

- (4) If the exempt development codes are varied, under that Policy, clause 1.12, in relation to the land.

None.

6. Affected building notices and building product rectification orders

- (1) Whether the council is aware that –
- (a) an affected building notice is in force in relation to the land, or

- (b) a building product rectification order is in force in relation to the land that has been fully complied with, or
 - (c) a notice of intention to make a building product rectification order given in relation to the land is outstanding.
- (2) In this section –
affected building notice has the same meaning as in the Building Products (Safety) Act 2017, Part 4.
building product rectification order has the same meaning as in the Building Products (Safety) Act 2017.

None relevant.

7. Land reserved for acquisition

Whether an environmental planning instrument or proposed environmental planning instrument referred to in section 1 makes provision in relation to the acquisition of the land by an authority of the State, as referred to in the Act, section 3.15.

The land is not reserved for acquisition under Fairfield Local Environmental Plan 2013.

Refer to Clause 7.20 of SEPP (Precincts - Western Parkland City) 2021#

8. Road widening and road realignment

Whether the land is affected by road widening or road realignment under-

- (a) the *Roads Act* 1993, Part 3, Division 2, or
- (b) an environmental planning instrument, or
- (c) a resolution of the council.

The land is not affected by any road widening proposal under Division 2 of Part 3 of the Roads Act or Fairfield Local Environmental Plan 2013.

9. Flood related development controls

- (1) If the land or part of the land is within the flood planning area and subject to flood related development controls.

Based on the information currently available to Council, the land or part of the land is within the flood planning area and is subject to flood related development controls.

Mainstream Flooding

This parcel is within the floodplain and identified as being partly within a High Flood Risk Precinct, partly within a Medium Flood Risk Precinct, partly within a Low Flood Risk Precinct as a result of mainstream flooding and partly not affected by mainstream flooding.

The term mainstream flooding means inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam.

The term High Flood Risk Precinct is defined as the area of land below the 100-year flood event that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties.

The term Medium Flood Risk Precinct is defined as land below the 100-year flood level that is not within a High Flood Risk Precinct. This is land that is not subject to a high hydraulic hazard or where there are no significant evacuation difficulties.

The term Low Flood Risk Precinct is defined as all land within the floodplain (i.e. within the extent of the probable maximum flood) but not identified within either a High Flood Risk or a Medium Flood Risk Precinct. The Low Flood Risk Precinct is that area above the 100-year flood event.

Overland Flooding

Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

Note: The above Flood Risk Precinct classification(s) and associated flood related development controls mean that the subject land is a 'Flood Control Lot'. Under a number of State Environmental Planning Policy (SEPP), certification must be provided by a professional engineer specialising in hydraulic engineering for any form of complying development proposed on the land. See Part 4. Complying development, section (3) of this certificate for further information.

- (2) If the land or part of the land is between the flood planning area and the probable maximum flood and subject to flood related development controls.

Based on the information currently available to Council, the land or part of the land is between the flood planning area and the probable maximum flood and development for the following purposes is subject to flood related development controls:

- (a) Caravan parks,**
- (b) Commercial premises,**
- (c) Correctional centres,**
- (d) Emergency services facilities,**
- (e) Group homes,**
- (f) Hospitals,**
- (g) Industries,**
- (h) Residential accommodation,**
- (i) Residential care facilities,**
- (j) Tourist and visitor accommodation.**

Note: The flood information is the current information to date. However, Council reviews flood studies on an on-going basis and new information may become available in future. Please contact Council's Catchment Planning Division on 9725 0222 for any updated information.

- (3) In this clause –
flood planning area has the same meaning as the Floodplain Development Manual.
Floodplain Development Manual means the *Floodplain Development Manual* (ISBN 0 7347 5476 0) published by the NSW Government in April 2005.
probable maximum flood has the same meaning as in the Floodplain Development Manual.
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10. Council and other public authority policies on hazard risk restrictions

- (1) Whether any of the land is affected by an adopted policy that restricts the development of the land because of the likelihood of land slip, bush fire, tidal inundation, subsidence, acid sulfate soils, contamination, aircraft noise, salinity, coastal hazards, sea level rise or another risk, other than flooding.

Policies on hazard risk restrictions are as follows:

(i) Landslip

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of landslide risk or subsidence.

(ii) Bushfire

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979. Council is also required to have regard to the guidelines "Planning for Bushfire Protection" (published by the NSW Rural Fire Service and Planning NSW) or comments provided by the NSW Rural Fire Service pursuant to s.4.14 of the Environmental Planning and Assessment Act 1979 (as amended) which may place restrictions or special requirements on development of the site in relation to the bushfire affectation.

(iii) Tidal Inundation

No.

(iv) Subsidence

No, the land is not so affected

(v) Acid Sulfate Soils

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of acid sulfate soils.

(vi) Contamination

The provisions of Section 3.6 - Land Contamination of the Fairfield City Wide DCP applies to all land in the Fairfield Local Government Area. Under State Government planning legislation, this requires Council to take into consideration the potential for contamination of land when a development application or a rezoning proposal is considered by Council, having regard to current or previous uses of the land

(vii) Aircraft Noise

None relevant

(viii) Salinity

A Council adopted policy -No 67. Building in saline environments applies to the land.

(ix) Coastal hazards

None relevant.

(x) Sea level rise

None relevant.

(xi) Any other risks

The land is within or in close proximity to a Jemena gas pipeline corridor. Under Clause 2.77 of State Environmental Planning Policy (Transport and Infrastructure) 2021, any application lodged with Council for development on the land would need to be referred to Jemena for advice. For further information contact Jemena on 1300 137 078

(2) In this section—

adopted policy means a policy adopted—

- (a) by the council, or
- (b) by another public authority, if the public authority has notified the council that the policy will be included in a planning certificate issued by the council.

11. Bush fire prone land

- (1) If any of the land is bush fire prone land, designated by the Commissioner of the NSW Rural Fire Service under the Act, section 10.3, a statement that all or some of the land is bush fire prone land.
- (2) If none of the land is bush fire prone land, a statement to that effect.

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within

the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979. Council is also required to have regard to the guidelines "Planning for Bushfire Protection" (published by the NSW Rural Fire Service and Planning NSW) or comments provided by the NSW Rural Fire Service pursuant to s.4.14 of the Environmental Planning and Assessment Act 1979 (as amended) which may place restrictions or special requirements on development of the site in relation to the bushfire affectation.

12. Loose-fill asbestos insulation

If the land includes any residential premises, within the meaning of the *Home Building Act 1989, Part 8, Division 1A*, that are listed on the register kept under that Division, a statement to that effect.

Not Applicable.

13. Mine Subsidence

Whether the land is declared to be a mine subsidence district, within the meaning of the *Coal Mine Subsidence Compensation Act 2017*.

No, this land is not affected.

14. Paper subdivision information

- (1) The name of any development plan adopted by a relevant authority that –
(a) applies to the land, or
(b) is proposed to be subject to a ballot.

- (2) The date of any subdivision order that applies to the land.

- (3) Words and expressions used in this section have the same meaning as in this Regulation, Part 10 and the Act, Schedule 7.

No such plan or order applies to the land.

15. Property vegetation plans

If the land is land in relation to which a property vegetation plan approved and in force under the *Native Vegetation Act 2003*, Part 4, a statement to that effect, but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act.

No.

16. Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under the *Biodiversity Conservation Act 2016*, Part 5, a statement to that effect, but only if the council has been notified of the existence of the agreement by the the Biodiversity Conservation Trust.

Note: “Biodiversity stewardship agreements include biobanking agreements under the *Threatened Species Conservation Act 1995*, Part 7A that are taken to be biodiversity stewardship agreements under the *Biodiversity Conservation Act 2016*, Part 5.

No such agreement applies to the land.

17. Biodiversity certified land

If the land is biodiversity certificate land under the *Biodiversity Conservation Act 2016*, Part 8, a statements to that effect.

Note : Biodiversity certified land includes land certified under the *Threatened Species Conservation Act*, Part 7AA that is taken to be certified under the *Biodiversity Conservation Act 2016*, Part 8.

The land is not biodiversity certified land.

18. Orders under Trees (Disputes between Neighbours) Act 2006

Whether an order has been made under the *Trees (Disputes between Neighbours) Act 2006* to carry out work in relation to a tree on the land, but only if the council has been notified of the order.

No

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

(1) If the *Coastal Management Act 2016* applies to the council, whether the owner, or a previous owner, of the land has given written consent to the land being subject to annual charges under the *Local Government Act 1993*, section 496B, for coastal protection services that relate to existing coastal protection works.

(2) In this section –
existing coastal protection works has the same meaning as in the *Local Government Act 1993*, section 553B.

Note – Existing coastal protection works are works to reduce the impact of coastal hazards on land, such as seawalls, revetments, groynes and beach nourishment, that existing before 1 January 2011.

No annual charges under section 553B of the *Local Government Act 1993*, are applicable to the land.

20. Western Sydney Aerotropolis

Whether under *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*, Chapter 4 the land is –

(a) in an ANEF or ANEC contour of 20 or greater as referred to in that Chapter, section 4.17, or

No

- (b) shown on the Lighting Intensity and Wind Shear Map, or

No

- (c) shown on the Obstacle Limitation Surface Map, or

Yes

- (d) in the “public safety area” on the Public Safety Area Map, or

No

- (e) in the “3 kilometre wildlife buffer zone” or the “13 kilometre wildlife buffer zone” on the Wildlife Buffer Zone Map.

Yes

21. Development consent conditions for seniors housing

If *State Environmental Planning Policy (Housing) 2021*, Chapter 3, Part 5 applies to the land, any conditions of a development consent granted after 11 October 2007 in relation to the land that are of the kind set out in that Policy, clause 88(2).

None.

22. Site compatibility certificates and development consents for affordable rental housing

- (1) Whether there is a current site compatibility certificate under *State Environmental Planning Policy (Housing) 2021*, or a former site compatibility certificate, of which the council is aware, in relation to proposed development on the land and, if there is a certificate—

- (a) the period for which the certificate is current, and
(b) that a copy may be obtained from the Department.

None.

- (2) If *State Environmental Planning Policy (Housing) 2021*, Chapter 2, Part 2, Division 1 or 5 applies to the land, any conditions of a development consent in relation to the land that are of a kind referred to in that Policy, clause 21(1) or 40(1).

None.

- (3) Any conditions of a development consent in relation to land that are of a kind referred to in *State Environmental Planning Policy (Affordable Rental Housing) 2009*, clause 17(1) or 38(1).

None.

- (4) In this section—
former site compatibility certificate means a site compatibility certificate issued under *State Environmental Planning Policy (Affordable Rental Housing) 2009*.

Note: The following matters are prescribed by section 59 (2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate.

- (a) that the land to which the certificate relates is significantly contaminated land—if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,
- (b) that the land to which the certificate relates is subject to a management order—if it is subject to such an order at the date when the certificate is issued,
- (c) that the land to which the certificate relates is the subject of an approved voluntary management proposal—if it is the subject of such an approved proposal at the date when the certificate is issued,
- (d) that the land to which the certificate relates is subject to an ongoing maintenance order—if it is subject to such an order at the date when the certificate is issued,
- (e) that the land to which the certificate relates is the subject of a site audit statement—if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

Continuously updated information in relation to the above matters can also be found by searching the records of the Environmental Protection Authority (EPA) at the website of the EPA. The search page can be found at: <http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx>.

The following information is available to Council but may not be current:

The land is not within an investigation area or remediation site under Part 3 of the Contaminated Land Management Act 1997.

The land is not subject to a management order within the meaning of the Contaminated Land Management Act 1997.

The land is not subject to a Voluntary Management Proposal that is the subject of the Environment Protection Authority's agreement under Section 17 of the Contaminated Land Management Act 1997.

The land is not subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997.

Note 2: Any advice received by Council pursuant to section 26(2) of the Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009, is included below.

No such certificate applies to the land.

FAIRFIELD CITY COUNCIL DEVELOPMENT CONTROL PLANS

Fairfield Citywide Development Control Plan

Title	Adopted by Council*	Effective Date
Fairfield Citywide Development Control Plan 2013	13 November 2012	31 May 2013
<u>Amendment No.1</u> change maximum height permissible for detached secondary dwellings, clarify requirements and correct various anomalies, incorporate outdoor dining policy into a number of site specific DCPs (see table below)	11 February 2014	5 March 2014
<u>Amendment No.2</u> amend chapter 2 to reference Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
<u>Amendment No.3</u> Introduce Chapter 4B - Secondary Dwellings in Rural Area - Horsley Park and Cecil Park	11 December 2013	14 March 2014
<u>Amendment No. 4</u> amends Chapter 9 Industrial Development Site Specific Controls for 449 Victoria Street and 96 Newton Road, Wetherill Park	24 September 2013	21 March 2014
<u>Amendment No.5</u> amends Chapters 2 and 10 and Appendix B to ensure provisions within the DCP are in line with the SEPP (Exempt and Complying Development Codes) 2008.	13 May 2014	28 May 2014
<u>Amendment No. 5A</u> amends Chapter 6A – Multi Dwelling Housing – Town house and Villas: Site Specific DCP – 46 & 50 Cobbett Street, Wetherill Park.	12 March 2013	22 August 2014
<u>Amendment No. 6</u> including increase to building heights for detached granny flats, removal of reference to minimum lot sizes for R1 zoned lands, inclusion of new controls and provisions relating to neighbourhood shops and pad mounted sub stations, clarify requirements and correct a number of anomalies associated with secondary dwellings, dual occupancy, narrow lots and residential flat buildings and other minor inconsequential amendments.	12 August 2014	3 September 2014
<u>Amendment No. 6A</u> amends Chapter 14 Subdivision – Applying to land located on 630 Elizabeth Drive and 9-10 Schubert Place, Bonnyrigg Heights to facilitate a future road link between Stivala Place and Schubert Place.	12 August 2014	3 September 2014
<u>Amendment No.7</u> proposed amendments include – Additional Controls for Child Care Centres, Boarding Houses and Granny Flats; Revised Heritage Chapter; New provisions relating to CCTV for specific land uses, and; Acoustic measures for development in the Rural Area.	25 November 2014	3 December 2014
<u>Amendment No. 7A</u> amends Chapter 10 Miscellaneous Development - applying to land located on 1 Bartley Street, Cabramatta to facilitate the development of a hotel or motel accommodation at the Cabravale Diggers site.	26 August 2014	16 January 2015
<u>Amendment 8</u> amends Chapter 9 – Industrial Development. This amendment includes provisions for industrial/employment development proposals in close proximity to residential land. The amended controls cover the following issues: General Design Requirements (including setback considerations, driveways, loading and storage areas, etc); Bulk and scale; Vehicular and Pedestrian Access Privacy; Light Spill; Noise and Vibration; and Landscaping.	10 March 2015	1 April 2015
<u>Amendment 9</u> includes new provisions relating to various forms of residential development including: Building Appearance, Landscaping, Private Open space, Minimum Lot Width, Car Parking Rates and Notification of S82A Applications.	12 May 2015	27 May 2015
<u>Amendment 10</u> including amendments to: - the intent of the Development Control Plan and Development Application process – the DA Guide - provisions for rural zone development - residential flat building setbacks - heritage advice - road classifications	14 July 2015	5 August 2015
<u>Amendment No.11</u> includes site specific development controls (private open space, car parking and dwelling density) for 46-50 Cobbett Street, Wetherill Park included in Chapter 6A Multi Dwelling Housing – Townhouses and Villas.	1 December 2015	16 December 2015

<u>Amendment No. 12</u> addresses anomalies in the DCP including but not limited to providing clarity on minimum room sizes, updated acoustic proofing measures for new dwellings in rural areas, car parking rates for disabled parking, and provisions for site servicing and loading requirements in neighbourhood shops in residential zones.	10 May 2016	25 May 2016
<u>Amendment No. 13</u> Clarification to requirements for acoustic measures for development in the rural areas, location of alfresco areas for secondary dwellings, car parking rates for restaurants & amendments to ensure controls for residential flat buildings are consistent with the State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development & associated Apartment Design Guide.	14 March 2017	5 April 2017
<u>Amendment No. 14</u> Site specific provisions for 620 Elizabeth Drive, Bonnyrigg Heights.	27 June 2017	15 September 2017
<u>Amendment No. 15</u> Amendment to Appendix G, and addition of Appendix H to introduce Aboriginal Heritage Management controls for development across Fairfield City	12 September 2017	28 February 2018
<u>Amendment No. 16</u> Amendments provide clarity relating to alfresco areas and carports provisions for secondary dwellings, lot width provisions for dual occupancy and multi dwelling housing on cul-de-sac heads, setbacks for residential flat buildings on corner sites, removal of Chapter 8B Neighbourhood and Local Centres – Mixed Use (Up to 2 storeys) to ensure consistency with the Apartment Design Guide, inclusion of accessibility requirements, inclusion of Council's Stormwater Management Policy, and guidelines for acknowledging petitions.	27 February 2018	21 March 2018
<u>Amendment No. 18</u> Amendment to Chapter 10.11 to revise existing site specific DCP in relation to the Cabravale Diggers Club site at 1 Bartley Street, Canley Vale	14 November 2017	28 February 2018
<u>Amendment No. 19</u> Amendment to introduce site specific development controls for 17-23 Longfield Street, Cabramatta.	11 September 2018	28 February 2019
<u>Amendment No. 20</u> Amendment No. 20 provides clarity on controls and guidelines within the following chapters: • Chapter 3 – Environmental Management and Constraints; • Chapter 4A – Development in the Rural Zones; • Chapter 5A – Dwelling Houses; • Chapter 5B – Secondary Dwellings; • Chapter 6A – Multi Dwelling Housing; • Chapter 6B – Dual Occupancy; • Chapter 9 – Industrial Development; and • Chapter 14 – Subdivision	12 February 2019	13 March 2019
<u>Amendment No. 22</u> Amendment No. 22 provides clarity on control and guidelines within the following chapters: • Appendix A – Definitions • Chapter 2 – Development Application Process • Chapter 3 – Environmental Management and Constraints • Chapter 5A – Dwelling Houses • Chapter 5B – Secondary Dwellings • Chapter 5C – Dwelling Houses on Narrow Lots • Chapter 7 – Residential Flat Buildings and Shop Top Housing • Chapter 8 – Neighbourhood and Local Centres Business Use • Chapter 12 – Car Parking, Vehicle and Access Management • Chapter 13 – Child Care Centres • Chapter 14 - Subdivision	9 June 2020	21 September 2020

Place Based and Site Specific Development Control Plans

Title	Adopted by Council*	Effective Date
Bonnyrigg Town Centre DCP 2018	6 August 2019	4 September 2020
Cabramatta Town Centre DCP (5/2000) - <u>Amendment No.1</u> (Outdoor Dining Controls –5.3.2014) - <u>Amendment No. 2</u> (New clause regarding Model Submission – 3.09.2014) - <u>Amendment No. 3</u> (Amended clauses and map regarding Precinct 2- Dutton Lane Car Park) - <u>Amendment No. 4</u> (Precinct 4A – East side market square and station interface)	10 May 2022	07 October 2022
Fairfield City Centre DCP 2013 - <u>Amendment No.1</u> (Outdoor Dining Controls – 5.3. 2014) - <u>Amendment No. 2</u> (Remove reference to Public Art Guide and update signage controls reference – 3.09.2014) - <u>Amendment No. 3</u> (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Canley Corridor DCP No.37 (2013) (Canley Vale and Canley Heights town centres) - <u>Amendment No.1:</u> (Development Controls for Adams Reserve 12.9.2006) - <u>Amendment No.2:</u> (Development Controls for 45-47 Peel St, Canley Heights 9.4.2008) - <u>Amendment No.3:</u> (Awnings controls 3.11.2010) - <u>Amendment No.4:</u> (Development Controls for 190 Canley Vale Rd, Canley Heights 19.4.2011) - <u>Amendment No.5:</u> (References to Fairfield LEP 2013 31.5.2013) - <u>Amendment No.6:</u> (Outdoor Dining Controls –5.3.2014) - <u>Amendment No. 7</u> (Remove reference to Public Art Guide – 3.09.2014) - <u>Amendment No. 8</u> (Include 46 Derby Street, Canley Heights into Town Centre Catchment – 01.07.2015) - <u>Amendment No. 9</u> (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Prairiewood Town Centre – Southern Precinct DCP 2013	13 November 2012	31 May 2013
Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
Fairfield Heights Town Centre DCP 2018	06 August 2019	05 June 2020
Villawood Town Centre DCP 2020	28 April 2020	05 June 2020

Master Plans

Title	Adopted by Council*	Effective Date
Prairiewood Masterplan (December 2005)	13 November 2012	31 May 2013
Fairfield Town Centre Masterplans – The Crescent and Barbara Street Precincts (May 2007)		May 2007

Urban Design Studies

Title	Adopted by Council
Fairfield City Centre Key Sites Urban Design Study	27 March 2018
Fairfield Heights Town Centre Urban Design Study	27 March 2018
Villawood Town Centre Urban Design Study	27 March 2018

* Note: Some "In Force" Development Control Plans may be under review, check with Council for date of last amendment.

03/07/2023

Kim McManus
2/4 Kellogg Road
Glendenning NSW 2761

Dear Sir/ Madam,

Following is your planning certificate as requested. Should you have any further queries please contact Council on (02) 9725 0821.

PLANNING CERTIFICATE

(under section 10.7 of the Environmental Planning and Assessment Act 1979 as amended)

Applicant:	Kim McManus
Certificate No.:	2264/2023
Applicant's Reference:	10791EV/Q/1057
Issue Date:	03/07/2023
Receipt No.:	4337585

PROPERTY ADDRESS:	125-151 Wallgrove Road CECIL PARK NSW 2178
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LEGAL DESCRIPTION:	Lot: 24 DP: 1152887
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Marcus Rowan
MANAGER STRATEGIC LAND USE PLANNING

PLEASE NOTE: This is page 1 of 19. Should this certificate or any subsequent copy not contain this many pages, please confirm with Council prior to acting on the basis of information contained in this certificate under Section 10.7(2) not inclusive of Flood Information Sheet.

Information provided under Section 10.7(2) of the Environmental Planning and Assessment Act 1979

Notes:

- (1) The following prescribed matters may apply to the land to which this certificate relates.
 - (2) Where this certificate refers to a specific allotment (or allotments) within a strata plan, the certificate is issued for the whole of the land within the strata plan, not just the specific allotment(s) referred to, and any information contained in the certificate may relate to the whole, or any part, of the strata plan.
 - (3) The following information is provided pursuant to Section 10.7(2) of the Environmental Planning and Assessment Act 1979 as prescribed by Schedule 3 of the Environmental Planning and Assessment Regulation 2021 and is applicable as at the date of this certificate.
 - (4) Information provided in this certificate should be interpreted in conjunction with the relevant plans, policies and documents held at Council. In order to obtain copies of these documents you may purchase them by either contacting Council on (02) 9725 0821 or attending Council's Administration Centre at 86 Avoca Road, Wakeley.
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1. Names of relevant planning instruments and development control plans

- (1) The name of each environmental planning instrument and development control plan that applies to the carrying out of development on the land.

State Environmental Planning Policies (SEPP)

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

State Environmental Planning Policy (Transport and Infrastructure) 2021

State Environmental Planning Policy (Biodiversity and Conservation) 2021

State Environmental Planning Policy (Primary Production) 2021

State Environmental Planning Policy (Resilience and Hazards) 2021

State Environmental Planning Policy (Industry and Employment) 2021

State Environmental Planning Policy (Resources and Energy) 2021

State Environmental Planning Policy (Planning Systems) 2021

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

State Environmental Planning Policy (Housing) 2021

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

State Environmental Planning Policy No 65 – Design and Quality Residential Apartment Development

Regional Environmental Plans (Deemed SEPP)

There is no Regional Environmental Plan applying to this land.

Local Environmental Plans (LEP)

Fairfield Local Environmental Plan DOES NOT apply to the land.

Development Control Plans (DCP)

The land is not affected by any Draft or adopted Development Control Plans.

Note: Further advice is provided under s.10.7(5) on the relationship of development on the land with the Fairfield City Wide DCP 2013.

- (2) The name of each proposed environmental planning instrument and draft development control plan, which is or has been the subject of community consultation or on public exhibition under the Act that will apply to the carrying out of development on that land.

Draft State Environmental Planning Policies (SEPP)

There is no draft SEPP applying to this land.

Draft Local Environmental Plan (LEP)

Fairfield Local Environmental Plan 2013 (Amendment No.46). The amendment aims to: (a). Rezone certain land and/or amend development standards for certain land in the Fairfield, Cabramatta, Canley Vale and Carramar centres and in adjoining residential areas in Canley Vale and Carramar (if applicable, details are provided under section 2 of this planning certificate below); (b). Increase the floor space ratio and height of building under certain circumstances in Zone R3 Medium Density Residential in the eastern part of the City; (c). Replace clause 6.4 - Floodplain Risk Management with a new standard flood clause 5.22 - Special Flood Considerations; and (d). List four new local heritage items in Schedule 5 Environmental Heritage. Council's Outcomes Committee at its meeting held on 14 June 2022 resolved to endorse the above changes inclusive of the new land use zonings and associated development standards. Amendment No.46 will come into effect once further endorsed and implemented by the NSW Department of Planning and Environment on the NSW Legislation website.

Draft Development Control Plan (DCP)

No Draft DCP applies

- (3) Subclass (2) does not apply in relation to a proposed environmental planning instrument or draft development control plan if –

- a) It has been more than 3 years since the end of the public exhibition period for the proposed instrument or draft plan, or
- b) for a proposed environmental planning instrument – the Planning Secretary has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved.

None relevant.

- (4) In this section, ***proposed environmental planning instrument*** means a draft environmental planning instrument and includes a planning proposal for a local environmental plan.

2. Zoning and land use under relevant planning instruments

The following matters for each environmental planning instrument or draft environmental planning instrument that includes the land in any zone, however described –

**Fairfield Local Environmental Plan DOES NOT apply to the land.
State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (Chapter 7) Applies.**

(a) what is the identity of the zone,

Unzoned (SEPP (Precincts – Western Parkland City) 2021)

(b) the purposes for which development in the zone

(i) may be carried out without development consent

Clause 7.9 (1) of the SEPP (P-WPC) 2021 applies.

The following development may be carried out on land in the Western Parklands without consent, but only if it is carried out by or on behalf of a public authority--

amenity facilities; community facilities; depots; entertainment facilities; environmental facilities; environmental protection works; function centres; information and education facilities; kiosks; public administration buildings; recreation areas; recreation facilities (outdoor); restaurants or cafes; roads; signage (for directional, informative, or interpretative purposes); ticketing facilities.

Clause 7.9 (2) of the SEPP (P-WPC) 2021 applies.

Development for the purposes of extensive agriculture, other than farm buildings, may be carried out on public land in the Western Parklands without consent unless the land is in an environmental conservation area as shown on the Environmental Conservation Areas Map.

(ii) may not be carried out except with development consent

Clause 7.9 (3) of the SEPP (P-WPC) 2021 applies. Any development not specified in subsection (i) or (iii) may be carried out in the Western Parklands only with consent.

(iii) is prohibited,

Clause 7.9 (4) of the SEPP (P-WPC) 2021 applies. Development for the purposes of residential accommodation.

- c) whether any additional uses apply to the land,

There are no additional uses permitted with consent.

- d) whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling house on the land and, if so, the fixed minimum land dimensions,

No development standards that fix the minimum land dimensions for the erection of a dwelling house apply to this land. Controls in other policies and plans may apply.

- (e) whether the land is in an area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016*,

No.

- (f) whether the land is in a conservation area, however described,

No

- (g) whether an item of environmental heritage, however described, is located on the land.

Fairfield Local Environmental Plan 2013 does not apply to the land.

No.

The site is not identified as a heritage item under the State Environmental Planning Policy (Precinct - Western Parkland City) 2021.

3. Contributions plans

- (1) The name of each contributions plan under the Act, Division 7.1 applying to the land, including draft contributions plans.

Fairfield City Council indirect (Section 7.12) Development Contributions Plan 2011 applies to all land within the City of Fairfield.

- (2) If the land is in a special contributions area under the Act, Divisions 7.1, the name of the area.

None.

4. Complying development

- (1) If the land is land on which complying development may be carried out under each of the complying development codes under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* because of that Policy clause 1.17A (1) (c)- (e), (2), (3) or (4), 1.18 (1)(c3) or 1.19.

Housing Code:

No. The Housing Code does not apply to this land.

Rural Housing Code:

No. The Rural Housing Code does not apply to this land.

Low Rise Housing Diversity Code:

No. The Low Rise Housing Diversity Code does not apply to the land.

Housing Alterations Code:

No. The Housing Alterations Code does not apply to this land.

General Development Code:

No. The General Development Code does not apply to this land.

Industrial and Business Alterations Code:

No. The Industrial and Business Alteration Code does not apply to this land.

Industrial and Business Buildings Code:

No. The Industrial and Business Buildings Code does not apply to the land.

Container Recycling Facilities Code:

No. The Container Recycling Facilities Code does not apply to the land.

Subdivisions Code:

No. The Subdivision Code does not apply to this land.

Demolition Code:

No. The Demolition Code does not apply to this land.

Fire Safety Code:

No. The Fire Safety Code does not apply to this land.

Agritourism Code:

No. The Agritourism Code does not apply to the land.

- (2) If complying development may not be carried out on the land because of one of those clauses, the reasons why it may not be carried out under the clause.

None relevant.

- (3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that –
- (a) a restriction applies to the land, but it may not apply to all of the land, and
 - (b) the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

FLOOD CONTROL LOT

The subject property is identified as a flood control lot as defined under the SEPP (Exempt & Complying Development Codes) 2008 and SEPP (Housing) 2021. Development under the SEPP (Exempt and Complying Development Code) 2008 and SEPP (Housing) 2021 must not be carried out on any part of a flood control lot, other than that part of the lot that the council or a professional engineer who specialises in hydraulic engineering has certified, for the purposes of the issue of the relevant complying development certificate, as not being any of the following—

- (a) a flood storage area,
- (b) a floodway area,
- (c) a flow path,
- (d) a high hazard area,
- (e) a high risk area.

Under the SEPP (Exempt & Complying Development Codes) 2008 and SEPP (Housing) 2021 certification is also required from a professional engineer specialising in hydraulic engineering that a range of other restrictions, development standards and requirements relevant for various categories of residential, commercial and industrial complying development located on flood control lots have been met.

Further details in relation to flood levels relevant to the site can be obtained by applying for a 10.7(5) planning certificate and accompanying Council flood information sheet.

For further information please contact Council's Catchment Planning Branch on 9725 0222

- (4) If the complying development codes are varied, under that Policy, clause 1.12, in relation to the land.

The Housing Code is varied in its application by omitting clauses 3.16(1(a) and 4 and 3.23(3).

5. Exempt development

- (1) If the land is land on which exempt development may be carried out under each of the exempt development codes under the *State Environmental*

Planning Policy (Exempt and Complying Development Codes) 2008
because of that Policy, clause 1.16(1)(b1)–(d) or 1.16A.

Yes - exempt development may be carried out on the land.

- (2) If exempt development may not be carried out on the land because of one of those clauses, the reasons why it may not be carried out under the clause.

Not applicable

- (3) If the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land, a statement that—
- (a) a restriction applies to the land, but it may not apply to all of the land, and

Restrictions apply to carrying out exempt development on the land or part of the land as it is identified as a flood control lot. Refer to the SEPP (Exempt and Complying Development Codes) 2008 for further information.

Restrictions apply to carrying out exempt development on the land or part of the land as it is identified as being bush fire prone land. Refer to the SEPP (Exempt and Complying Development Codes) 2008 for further information.

- (b) the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land.

To be exempt development, the development must meet the requirements and criteria specified under the SEPP (Exempt and Complying Development Codes) 2008 that can be viewed on the NSW Legislation Website at www.legislation.nsw.gov.au/browse/inforce.

- (4) If the exempt development codes are varied, under that Policy, clause 1.12, in relation to the land.

None.

6. Affected building notices and building product rectification orders

- (1) Whether the council is aware that –
- (a) an affected building notice is in force in relation to the land, or

- (b) a building product rectification order is in force in relation to the land that has been fully complied with, or
 - (c) a notice of intention to make a building product rectification order given in relation to the land is outstanding.
- (2) In this section –
affected building notice has the same meaning as in the Building Products (Safety) Act 2017, Part 4.
building product rectification order has the same meaning as in the Building Products (Safety) Act 2017.

None relevant.

7. Land reserved for acquisition

Whether an environmental planning instrument or proposed environmental planning instrument referred to in section 1 makes provision in relation to the acquisition of the land by an authority of the State, as referred to in the Act, section 3.15.

The land is not reserved for acquisition under Fairfield Local Environmental Plan 2013.

Refer to Clause 7.20 of SEPP (Precincts - Western Parkland City) 2021#

8. Road widening and road realignment

Whether the land is affected by road widening or road realignment under-

- (a) the *Roads Act* 1993, Part 3, Division 2, or
- (b) an environmental planning instrument, or
- (c) a resolution of the council.

The land is not affected by any road widening proposal under Division 2 of Part 3 of the Roads Act or Fairfield Local Environmental Plan 2013.

9. Flood related development controls

- (1) If the land or part of the land is within the flood planning area and subject to flood related development controls.

Based on the information currently available to Council, the land or part of the land is within the flood planning area and is subject to flood related development controls.

Mainstream Flooding

This parcel is within the floodplain and identified as being partly within a High Flood Risk Precinct, partly within a Medium Flood Risk Precinct, partly within a Low Flood Risk Precinct as a result of mainstream flooding and partly not affected by mainstream flooding.

The term mainstream flooding means inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam.

The term High Flood Risk Precinct is defined as the area of land below the 100-year flood event that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties.

The term Medium Flood Risk Precinct is defined as land below the 100-year flood level that is not within a High Flood Risk Precinct. This is land that is not subject to a high hydraulic hazard or where there are no significant evacuation difficulties.

The term Low Flood Risk Precinct is defined as all land within the floodplain (i.e. within the extent of the probable maximum flood) but not identified within either a High Flood Risk or a Medium Flood Risk Precinct. The Low Flood Risk Precinct is that area above the 100-year flood event.

Overland Flooding

Based on the information currently available to Council, this land is not affected by overland flooding. However, this is subject to future flood studies and reviews.

Note: The above Flood Risk Precinct classification(s) and associated flood related development controls mean that the subject land is a 'Flood Control Lot'. Under a number of State Environmental Planning Policy (SEPP), certification must be provided by a professional engineer specialising in hydraulic engineering for any form of complying development proposed on the land. See Part 4. Complying development, section (3) of this certificate for further information.

- (2) If the land or part of the land is between the flood planning area and the probable maximum flood and subject to flood related development controls.

Based on the information currently available to Council, the land or part of the land is between the flood planning area and the probable maximum flood and development for the following purposes is subject to flood related development controls:

- (a) Caravan parks,**
- (b) Commercial premises,**
- (c) Correctional centres,**
- (d) Emergency services facilities,**
- (e) Group homes,**
- (f) Hospitals,**
- (g) Industries,**
- (h) Residential accommodation,**
- (i) Residential care facilities,**
- (j) Tourist and visitor accommodation.**

Note: The flood information is the current information to date. However, Council reviews flood studies on an on-going basis and new information may become available in future. Please contact Council's Catchment Planning Division on 9725 0222 for any updated information.

- (3) In this clause –
flood planning area has the same meaning as the Floodplain Development Manual.
Floodplain Development Manual means the *Floodplain Development Manual* (ISBN 0 7347 5476 0) published by the NSW Government in April 2005.
probable maximum flood has the same meaning as in the Floodplain Development Manual.
-

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

- (1) Whether any of the land is affected by an adopted policy that restricts the development of the land because of the likelihood of land slip, bush fire, tidal inundation, subsidence, acid sulfate soils, contamination, aircraft noise, salinity, coastal hazards, sea level rise or another risk, other than flooding.

Policies on hazard risk restrictions are as follows:

(i) Landslip

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of landslide risk or subsidence.

(ii) Bushfire

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979. Council is also required to have regard to the guidelines "Planning for Bushfire Protection" (published by the NSW Rural Fire Service and Planning NSW) or comments provided by the NSW Rural Fire Service pursuant to s.4.14 of the Environmental Planning and Assessment Act 1979 (as amended) which may place restrictions or special requirements on development of the site in relation to the bushfire affectation.

(iii) Tidal Inundation

No.

(iv) Subsidence

No, the land is not so affected

(v) Acid Sulfate Soils

The land is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council (for the express purpose of its adoption by that authority being referred to in Planning Certificates issued by Council) that restricts development on the land because of the likelihood of acid sulfate soils.

(vi) Contamination

The provisions of Section 3.6 - Land Contamination of the Fairfield City Wide DCP applies to all land in the Fairfield Local Government Area. Under State Government planning legislation, this requires Council to take into consideration the potential for contamination of land when a development application or a rezoning proposal is considered by Council, having regard to current or previous uses of the land

(vii) Aircraft Noise

None relevant

(viii) Salinity

A Council adopted policy -No 67. Building in saline environments applies to the land.

(ix) Coastal hazards

None relevant.

(x) Sea level rise

None relevant.

(xi) Any other risks

The land is within or in close proximity to a Jemena gas pipeline corridor. Under Clause 2.77 of State Environmental Planning Policy (Transport and Infrastructure) 2021, any application lodged with Council for development on the land would need to be referred to Jemena for advice. For further information contact Jemena on 1300 137 078

(2) In this section—

adopted policy means a policy adopted—

- (a) by the council, or
- (b) by another public authority, if the public authority has notified the council that the policy will be included in a planning certificate issued by the council.

11. Bush fire prone land

- (1) If any of the land is bush fire prone land, designated by the Commissioner of the NSW Rural Fire Service under the Act, section 10.3, a statement that all or some of the land is bush fire prone land.
- (2) If none of the land is bush fire prone land, a statement to that effect.

Council has been supplied by the NSW Rural Fire Service with a hazard map for the purposes of a bush fire risk management plan applying to land within

the Fairfield local government area. Based on that map, it appears the land referred to in this certificate is bush fire prone as defined in Part 4 of the Environmental Planning and Assessment Act 1979. Council is also required to have regard to the guidelines "Planning for Bushfire Protection" (published by the NSW Rural Fire Service and Planning NSW) or comments provided by the NSW Rural Fire Service pursuant to s.4.14 of the Environmental Planning and Assessment Act 1979 (as amended) which may place restrictions or special requirements on development of the site in relation to the bushfire affectation.

12. Loose-fill asbestos insulation

If the land includes any residential premises, within the meaning of the *Home Building Act 1989, Part 8, Division 1A*, that are listed on the register kept under that Division, a statement to that effect.

Not Applicable.

13. Mine Subsidence

Whether the land is declared to be a mine subsidence district, within the meaning of the *Coal Mine Subsidence Compensation Act 2017*.

No, this land is not affected.

14. Paper subdivision information

- (1) The name of any development plan adopted by a relevant authority that –
(a) applies to the land, or
(b) is proposed to be subject to a ballot.

- (2) The date of any subdivision order that applies to the land.

- (3) Words and expressions used in this section have the same meaning as in this Regulation, Part 10 and the Act, Schedule 7.

No such plan or order applies to the land.

15. Property vegetation plans

If the land is land in relation to which a property vegetation plan approved and in force under the *Native Vegetation Act 2003*, Part 4, a statement to that effect, but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act.

No.

16. Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under the *Biodiversity Conservation Act 2016*, Part 5, a statement to that effect, but only if the council has been notified of the existence of the agreement by the the Biodiversity Conservation Trust.

Note: “Biodiversity stewardship agreements include biobanking agreements under the *Threatened Species Conservation Act 1995*, Part 7A that are taken to be biodiversity stewardship agreements under the *Biodiversity Conservation Act 2016*, Part 5.

No such agreement applies to the land.

17. Biodiversity certified land

If the land is biodiversity certificate land under the *Biodiversity Conservation Act 2016*, Part 8, a statements to that effect.

Note : Biodiversity certified land includes land certified under the *Threatened Species Conservation Act*, Part 7AA that is taken to be certified under the *Biodiversity Conservation Act 2016*, Part 8.

The land is not biodiversity certified land.

18. Orders under Trees (Disputes between Neighbours) Act 2006

Whether an order has been made under the *Trees (Disputes between Neighbours) Act 2006* to carry out work in relation to a tree on the land, but only if the council has been notified of the order.

No

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

(1) If the *Coastal Management Act 2016* applies to the council, whether the owner, or a previous owner, of the land has given written consent to the land being subject to annual charges under the *Local Government Act 1993*, section 496B, for coastal protection services that relate to existing coastal protection works.

(2) In this section –
existing coastal protection works has the same meaning as in the *Local Government Act 1993*, section 553B.

Note – Existing coastal protection works are works to reduce the impact of coastal hazards on land, such as seawalls, revetments, groynes and beach nourishment, that existing before 1 January 2011.

No annual charges under section 553B of the *Local Government Act 1993*, are applicable to the land.

20. Western Sydney Aerotropolis

Whether under *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*, Chapter 4 the land is –

(a) in an ANEF or ANEC contour of 20 or greater as referred to in that Chapter, section 4.17, or

No

- (b) shown on the Lighting Intensity and Wind Shear Map, or

No

- (c) shown on the Obstacle Limitation Surface Map, or

Yes

- (d) in the “public safety area” on the Public Safety Area Map, or

No

- (e) in the “3 kilometre wildlife buffer zone” or the “13 kilometre wildlife buffer zone” on the Wildlife Buffer Zone Map.

Yes

21. Development consent conditions for seniors housing

If *State Environmental Planning Policy (Housing) 2021*, Chapter 3, Part 5 applies to the land, any conditions of a development consent granted after 11 October 2007 in relation to the land that are of the kind set out in that Policy, clause 88(2).

None.

22. Site compatibility certificates and development consents for affordable rental housing

- (1) Whether there is a current site compatibility certificate under *State Environmental Planning Policy (Housing) 2021*, or a former site compatibility certificate, of which the council is aware, in relation to proposed development on the land and, if there is a certificate—

- (a) the period for which the certificate is current, and
(b) that a copy may be obtained from the Department.

None.

- (2) If *State Environmental Planning Policy (Housing) 2021*, Chapter 2, Part 2, Division 1 or 5 applies to the land, any conditions of a development consent in relation to the land that are of a kind referred to in that Policy, clause 21(1) or 40(1).

None.

- (3) Any conditions of a development consent in relation to land that are of a kind referred to in *State Environmental Planning Policy (Affordable Rental Housing) 2009*, clause 17(1) or 38(1).

None.

- (4) In this section—
former site compatibility certificate means a site compatibility certificate issued under *State Environmental Planning Policy (Affordable Rental Housing) 2009*.

Note: The following matters are prescribed by section 59 (2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate.

- (a) that the land to which the certificate relates is significantly contaminated land—if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,
- (b) that the land to which the certificate relates is subject to a management order—if it is subject to such an order at the date when the certificate is issued,
- (c) that the land to which the certificate relates is the subject of an approved voluntary management proposal—if it is the subject of such an approved proposal at the date when the certificate is issued,
- (d) that the land to which the certificate relates is subject to an ongoing maintenance order—if it is subject to such an order at the date when the certificate is issued,
- (e) that the land to which the certificate relates is the subject of a site audit statement—if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

Continuously updated information in relation to the above matters can also be found by searching the records of the Environmental Protection Authority (EPA) at the website of the EPA. The search page can be found at: <http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx>.

The following information is available to Council but may not be current:

The land is not within an investigation area or remediation site under Part 3 of the Contaminated Land Management Act 1997.

The land is not subject to a management order within the meaning of the Contaminated Land Management Act 1997.

The land is not subject to a Voluntary Management Proposal that is the subject of the Environment Protection Authority's agreement under Section 17 of the Contaminated Land Management Act 1997.

The land is not subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997.

Note 2: Any advice received by Council pursuant to section 26(2) of the Nation Building and Jobs Plan (State Infrastructure Delivery) Act 2009, is included below.

No such certificate applies to the land.

FAIRFIELD CITY COUNCIL DEVELOPMENT CONTROL PLANS

Fairfield Citywide Development Control Plan

Title	Adopted by Council*	Effective Date
Fairfield Citywide Development Control Plan 2013	13 November 2012	31 May 2013
<u>Amendment No.1</u> change maximum height permissible for detached secondary dwellings, clarify requirements and correct various anomalies, incorporate outdoor dining policy into a number of site specific DCPs (see table below)	11 February 2014	5 March 2014
<u>Amendment No.2</u> amend chapter 2 to reference Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
<u>Amendment No.3</u> Introduce Chapter 4B - Secondary Dwellings in Rural Area - Horsley Park and Cecil Park	11 December 2013	14 March 2014
<u>Amendment No. 4</u> amends Chapter 9 Industrial Development Site Specific Controls for 449 Victoria Street and 96 Newton Road, Wetherill Park	24 September 2013	21 March 2014
<u>Amendment No.5</u> amends Chapters 2 and 10 and Appendix B to ensure provisions within the DCP are in line with the SEPP (Exempt and Complying Development Codes) 2008.	13 May 2014	28 May 2014
<u>Amendment No. 5A</u> amends Chapter 6A – Multi Dwelling Housing – Town house and Villas: Site Specific DCP – 46 & 50 Cobbett Street, Wetherill Park.	12 March 2013	22 August 2014
<u>Amendment No. 6</u> including increase to building heights for detached granny flats, removal of reference to minimum lot sizes for R1 zoned lands, inclusion of new controls and provisions relating to neighbourhood shops and pad mounted sub stations, clarify requirements and correct a number of anomalies associated with secondary dwellings, dual occupancy, narrow lots and residential flat buildings and other minor inconsequential amendments.	12 August 2014	3 September 2014
<u>Amendment No. 6A</u> amends Chapter 14 Subdivision – Applying to land located on 630 Elizabeth Drive and 9-10 Schubert Place, Bonnyrigg Heights to facilitate a future road link between Stivala Place and Schubert Place.	12 August 2014	3 September 2014
<u>Amendment No.7</u> proposed amendments include – Additional Controls for Child Care Centres, Boarding Houses and Granny Flats; Revised Heritage Chapter; New provisions relating to CCTV for specific land uses, and; Acoustic measures for development in the Rural Area.	25 November 2014	3 December 2014
<u>Amendment No. 7A</u> amends Chapter 10 Miscellaneous Development - applying to land located on 1 Bartley Street, Cabramatta to facilitate the development of a hotel or motel accommodation at the Cabravale Diggers site.	26 August 2014	16 January 2015
<u>Amendment 8</u> amends Chapter 9 – Industrial Development. This amendment includes provisions for industrial/employment development proposals in close proximity to residential land. The amended controls cover the following issues: General Design Requirements (including setback considerations, driveways, loading and storage areas, etc); Bulk and scale; Vehicular and Pedestrian Access Privacy; Light Spill; Noise and Vibration; and Landscaping.	10 March 2015	1 April 2015
<u>Amendment 9</u> includes new provisions relating to various forms of residential development including: Building Appearance, Landscaping, Private Open space, Minimum Lot Width, Car Parking Rates and Notification of S82A Applications.	12 May 2015	27 May 2015
<u>Amendment 10</u> including amendments to: - the intent of the Development Control Plan and Development Application process – the DA Guide - provisions for rural zone development - residential flat building setbacks - heritage advice - road classifications	14 July 2015	5 August 2015
<u>Amendment No.11</u> includes site specific development controls (private open space, car parking and dwelling density) for 46-50 Cobbett Street, Wetherill Park included in Chapter 6A Multi Dwelling Housing – Townhouses and Villas.	1 December 2015	16 December 2015

<u>Amendment No. 12</u> addresses anomalies in the DCP including but not limited to providing clarity on minimum room sizes, updated acoustic proofing measures for new dwellings in rural areas, car parking rates for disabled parking, and provisions for site servicing and loading requirements in neighbourhood shops in residential zones.	10 May 2016	25 May 2016
<u>Amendment No. 13</u> Clarification to requirements for acoustic measures for development in the rural areas, location of alfresco areas for secondary dwellings, car parking rates for restaurants & amendments to ensure controls for residential flat buildings are consistent with the State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development & associated Apartment Design Guide.	14 March 2017	5 April 2017
<u>Amendment No. 14</u> Site specific provisions for 620 Elizabeth Drive, Bonnyrigg Heights.	27 June 2017	15 September 2017
<u>Amendment No. 15</u> Amendment to Appendix G, and addition of Appendix H to introduce Aboriginal Heritage Management controls for development across Fairfield City	12 September 2017	28 February 2018
<u>Amendment No. 16</u> Amendments provide clarity relating to alfresco areas and carports provisions for secondary dwellings, lot width provisions for dual occupancy and multi dwelling housing on cul-de-sac heads, setbacks for residential flat buildings on corner sites, removal of Chapter 8B Neighbourhood and Local Centres – Mixed Use (Up to 2 storeys) to ensure consistency with the Apartment Design Guide, inclusion of accessibility requirements, inclusion of Council's Stormwater Management Policy, and guidelines for acknowledging petitions.	27 February 2018	21 March 2018
<u>Amendment No. 18</u> Amendment to Chapter 10.11 to revise existing site specific DCP in relation to the Cabravale Diggers Club site at 1 Bartley Street, Canley Vale	14 November 2017	28 February 2018
<u>Amendment No. 19</u> Amendment to introduce site specific development controls for 17-23 Longfield Street, Cabramatta.	11 September 2018	28 February 2019
<u>Amendment No. 20</u> Amendment No. 20 provides clarity on controls and guidelines within the following chapters: • Chapter 3 – Environmental Management and Constraints; • Chapter 4A – Development in the Rural Zones; • Chapter 5A – Dwelling Houses; • Chapter 5B – Secondary Dwellings; • Chapter 6A – Multi Dwelling Housing; • Chapter 6B – Dual Occupancy; • Chapter 9 – Industrial Development; and • Chapter 14 – Subdivision	12 February 2019	13 March 2019
<u>Amendment No. 22</u> Amendment No. 22 provides clarity on control and guidelines within the following chapters: • Appendix A – Definitions • Chapter 2 – Development Application Process • Chapter 3 – Environmental Management and Constraints • Chapter 5A – Dwelling Houses • Chapter 5B – Secondary Dwellings • Chapter 5C – Dwelling Houses on Narrow Lots • Chapter 7 – Residential Flat Buildings and Shop Top Housing • Chapter 8 – Neighbourhood and Local Centres Business Use • Chapter 12 – Car Parking, Vehicle and Access Management • Chapter 13 – Child Care Centres • Chapter 14 - Subdivision	9 June 2020	21 September 2020

Place Based and Site Specific Development Control Plans

Title	Adopted by Council*	Effective Date
Bonnyrigg Town Centre DCP 2018	6 August 2019	4 September 2020
Cabramatta Town Centre DCP (5/2000) - <u>Amendment No.1</u> (Outdoor Dining Controls –5.3.2014) - <u>Amendment No. 2</u> (New clause regarding Model Submission – 3.09.2014) - <u>Amendment No. 3</u> (Amended clauses and map regarding Precinct 2- Dutton Lane Car Park) - <u>Amendment No. 4</u> (Precinct 4A – East side market square and station interface)	10 May 2022	07 October 2022
Fairfield City Centre DCP 2013 - <u>Amendment No.1</u> (Outdoor Dining Controls – 5.3. 2014) - <u>Amendment No. 2</u> (Remove reference to Public Art Guide and update signage controls reference – 3.09.2014) - <u>Amendment No. 3</u> (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Canley Corridor DCP No.37 (2013) (Canley Vale and Canley Heights town centres) - <u>Amendment No.1:</u> (Development Controls for Adams Reserve 12.9.2006) - <u>Amendment No.2:</u> (Development Controls for 45-47 Peel St, Canley Heights 9.4.2008) - <u>Amendment No.3:</u> (Awnings controls 3.11.2010) - <u>Amendment No.4:</u> (Development Controls for 190 Canley Vale Rd, Canley Heights 19.4.2011) - <u>Amendment No.5:</u> (References to Fairfield LEP 2013 31.5.2013) - <u>Amendment No.6:</u> (Outdoor Dining Controls –5.3.2014) - <u>Amendment No. 7</u> (Remove reference to Public Art Guide – 3.09.2014) - <u>Amendment No. 8</u> (Include 46 Derby Street, Canley Heights into Town Centre Catchment – 01.07.2015) - <u>Amendment No. 9</u> (removes reference to the Fairfield Art Strategy as Council has not formally adopted a Public Art Strategy)	10 May 2016	25 May 2016
Prairiewood Town Centre – Southern Precinct DCP 2013	13 November 2012	31 May 2013
Site Specific DCP – Wetherill Park Market Town	20 March 2013	7 March 2014
Fairfield Heights Town Centre DCP 2018	06 August 2019	05 June 2020
Villawood Town Centre DCP 2020	28 April 2020	05 June 2020

Master Plans

Title	Adopted by Council*	Effective Date
Prairiewood Masterplan (December 2005)	13 November 2012	31 May 2013
Fairfield Town Centre Masterplans – The Crescent and Barbara Street Precincts (May 2007)		May 2007

Urban Design Studies

Title	Adopted by Council
Fairfield City Centre Key Sites Urban Design Study	27 March 2018
Fairfield Heights Town Centre Urban Design Study	27 March 2018
Villawood Town Centre Urban Design Study	27 March 2018

* Note: Some "In Force" Development Control Plans may be under review, check with Council for date of last amendment.



Appendix E

LAND TITLE SEARCHES



ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0413 400 020)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Summary of Owners Report

Address: - 97-123 & 125-151 Wallgrove Road, Cecil Park NSW

Description: - Lot 25 Section 4 DP 2954 & Lot 24 DP 1152887

Lot 25 Section 4 DP 2954

<u>Date of Acquisition and term held</u>	<u>Registered Proprietor(s) & Occupations where available</u>	<u>Reference to Title at Acquisition and sale</u>
05.09.1904 (1904 to 1925)	Perpetual Trustee Company Limited	Volume 1557 Folio 80
07.12.1925 (1925 to 1933)	George Woolner (Laborer)	Volume 1557 Folio 80 Now Volume 3815 Folio 127
04.07.1933 (1933 to 1936)	Clarence Wetton (Labourer) Leslie Wetton (Labourer)	Volume 3815 Folio 127
03.10.1936 (1936 to 1949)	Leslie Wetton (Labourer)	Volume 3815 Folio 127
01.04.1949 (1949 to 1952)	Charles William Roberts (Plumber)	Volume 3815 Folio 127
15.09.1952 (1952 to 1953)	Reginald James Baker (Motor Engineer)	Volume 3815 Folio 127
05.03.1953 (1953 to 1956)	William Ernest Thomas Mason (Truck Driver)	Volume 3815 Folio 127
22.07.1956 (1956 to 1960)	Malcolm Harold Baker (Bus Driver)	Volume 3815 Folio 127
29.07.1960 (1960 to 1966)	Ejnar Flenoted Nielson (Investor)	Volume 3815 Folio 127
26.11.1966 (1966 to 1973)	Agner Kanstrup Nielson (Builder)	Volume 3815 Folio 127
11.05.1973 (1973 to 2008)	The State Planning Authority of New South Wales Now Minister Administering the Environmental Planning and Assessment Act 1979	Volume 3815 Folio 127 Now 25/4/2954
29.05.2008 (2008 to Date)	# Western Sydney Parklands Trust	25/4/2954

Denotes current registered proprietor

Leases & Easements: – Nil



ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0413 400 020)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

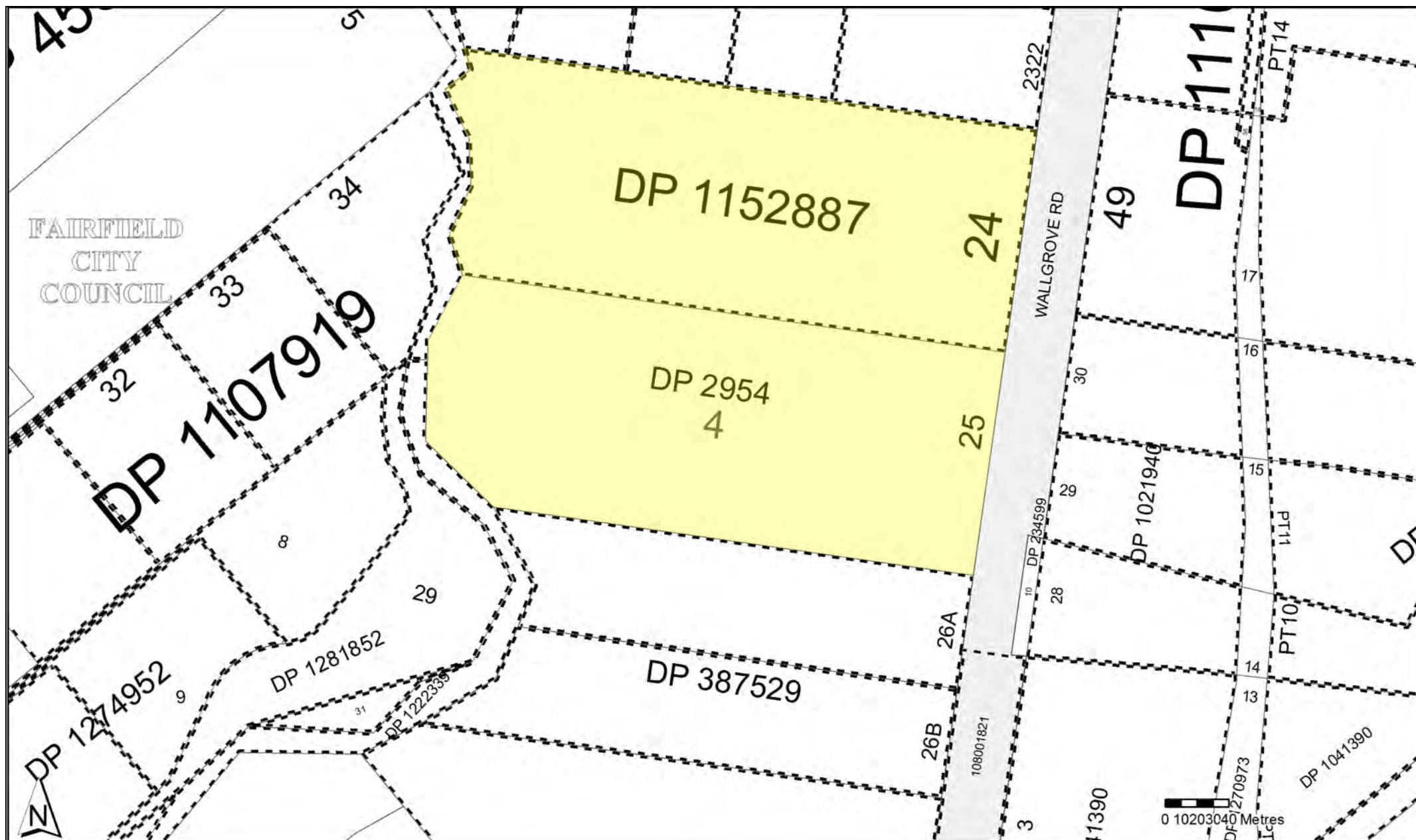
Lot 24 DP 1152887

<u>Date of Acquisition and term held</u>	<u>Registered Proprietor(s) & Occupations where available</u>	<u>Reference to Title at Acquisition and sale</u>
27.10.1906 (1906 to 1929)	James Stevenson (Farmer)	Volume 1726 Folio 1
04.09.1929 (1929 to 1934)	William Cecil Phillips (Bus Conductor)	Volume 1726 Folio 1 Now Volume 4337 Folio 123
17.01.1934 (1934 to 1934)	Thomas Connell (Contractor)	Volume 4337 Folio 123
18.07.1934 (1934 to 1935)	Maud Mary Worsley (Married Woman)	Volume 4337 Folio 123
05.02.1935 (1935 to 1935)	Henry Worsley (Dentist) (Transmission Application, not investigated)	Volume 4337 Folio 123
18.02.1935 (1935 to 1937)	Maude Main (Married Woman)	Volume 4337 Folio 123
25.02.1937 (1937 to 1946)	Thomas Main (Engineer) (Transmission Application, not investigated)	Volume 4337 Folio 123
19.11.1946 (1946 to 1949)	John Henry Smith (Farmer)	Volume 4337 Folio 123
24.06.1949 (1949 to 1974)	Minnie Emily Mason (Married Woman)	Volume 4337 Folio 123
02.07.1974 (1974 to 2008)	The State Planning Authority of New South Wales Now Minister Administering the Environmental Planning and Assessment Act 1979	Volume 4337 Folio 123 Now 24/4/2954
29.05.2008 (2008 to Date)	# Western Sydney Parklands Trust	24/4/2954 Now 24/1152887

Denotes current registered proprietor

Leases & Easements: – Nil

Yours Sincerely
Harrison Byrne
29th June 2023





SEARCH DATE

29/6/2023 10:19AM

FOLIO: 25/4/2954

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

Prior Title(s): VOL 3815 FOL 127

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
17/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
17/7/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
13/8/1990		AMENDMENT: PARISH-COUNTY	
4/5/1995	0172323	REQUEST	
1/8/1995	0421626	DEPARTMENTAL DEALING	EDITION 1
25/3/1998	3065173	CAVEAT	
27/8/1999	6136795	DEPARTMENTAL DEALING	
17/6/2002	8660065	WITHDRAWAL OF CAVEAT	
29/5/2008	AD766661	APPLICATION	EDITION 2
15/9/2020	AP912711	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

97-11R



REQUEST

Real Property Act 1900



0
172323 J

(A) **STAMP DUTY**

If applicable.

Office of State Revenue use only

(B) **TITLE**

Show no more than 20.

SEE ANNEXURES "A" AND "B"

(C) **REGISTERED DEALING**

If applicable.

(D) **LODGED BY**

L.T.O. Box

Name, Address or DX and Telephone

Dealing Code

691R

DEPARTMENT OF URBAN AFFAIRS AND PLANNING

REFERENCE (max 15 characters):

(E) **APPLICANT**

MINISTER ADMINISTERING THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

(F) **REQUEST**

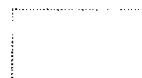
The Applicant requests the Registrar General to place the following notation on the folios of the Register of the Titles listed on Annexures "A" and "B".

No Certificate of Title exists and the entitlee is the Minister Administering the Environmental Planning and Assessment Act 1979. (Box 691R).

The Certificate of Title has been destroyed.

TM
24/4

CHECKED BY (office use only)



"A"

DEED	L.D.No.		LAND DESCRIPTION	TITLE REF.	
5555	093	412	LOT 7 DP553660	V11851 F57	
5557	214	64	LOT 2 DP30505	V10117 F54	
5557	214	64	LOT13 DP30505	V10117 F55	
5557	214	64	LOT 14 DP30505	V10117 F56	
5557	214	64	LOT 15 DP30505	V10117 F57	
5562	214	12	LOT 1 DP553351	V11881 F95	
5564	089	148	LOT 23 DP1346	V4322 F164	
5567	092	109	LOT 15 DP554496	V11917 F119	
5569	220	98	LOT 109 DP236902	V10882 F226	
5570	144	242	LOT 91 DP9633	V3194 F157	
5571	218	244	LOT 45 DP734639	45/734639	
5572	093	284	LOT A DP311875	V5718 F120	
5572	093	284	LOT B DP311875	V5698 F62	
5573	214	53	LOT 2 DP555519	V12022 F169	
5574	224	4019	LOT 4 DP839533	4/839533	
5577	218	124	LOT 47 DP734639	47/734639	
5586	092	81	LOT 1 DP547703	V11888 F132	
5591	084	185	LOT 14 DP241743 & LOT 8 DP557451	V12068 F180	
5591	084	185	LOT 14 DP241743 & LOT 8 DP557451	V12068 F182	
5592	218	243	LOT 5 DP223987	V9919 F61	
5593	214	65	LOT 1 DP523422, LOT 2 DP171732, LOT 1 EP915115, LOT 1 DP916147	V12012 F47	
5594	220	128	LOT 84 DP13961	V11035 F139	
5595	220	138	LOT 10 DP234284	V10644 F60	
5596	224	18	LOT 1 DP554965	V12050 F97	
5597	143	71	LOT 2 DP607630	V14370 F249	
5598	220	129	LOT B DP344373	V12067 F35	
5599	089	151	LOT 7 DP557828	V12055 F206	
5600	084	189	LOT 1 DP556247	V12044 F145	
5601	220	133	LOT 3 DP215787	V12087 F156	
5602	218	225	LOT 1 DP558565	V12079 F87	
5603	220	135	LOT 1 DP500092	V9317 F55	
5604	218	210	LOT 2 DP223987	V9919 F58	
5607	218	255	LOT 15 DP236809	V10895 F30	
5609	141	48	LOT 2 DP794233	2/794233	
5612	224	63	LOT A DP357212	V5730 F12	
5613	218	245	POR.372 PH.OF ST.PETER	V7831 F118	372/752062
5615	082	65	LOT 9 DP555120	V11903 F93	
5617	203	4001	LOTS 6 & 7 DP792885	6-7/792885	
5619	082	57	LOT 7 DP240287, LOT 1 DP567189	V11554 F241	
5619	082	57	LOT 7 DP240287, LOT 1 DP567189	V12372 F142	
5621	218	208	POR.216 PH.OF ST.PETER	V7362 F125	216/752062
5622	084	233	LOT 5 DP547142	V11689 F250	
5623	082	47	LOT 2 DP518933	V10409 F201	
5629	089	146	LOT 2 DP219633	V9648 F6	
5633	223	55	PT.LOT 2 DP380815	V6629 F87	2/380815
5635	093	290	LOT 7 DP11446	V7946 F113	
5636	220	84	LOTS 7 & 8 SEC.1 DP2954	V12004 F176	n1
5636	220	84	LOT 6 & PT. LOT 5 SEC.1 DP2954	V5278 F149	
* 5636	220	84	LOT 11 SEC.1 DP2954	V1610 F144	
* 5636	220	84	LOTS 9 10 SEC.1 DP 2954	V2375 F29	
5636	220	84	LOT 12 SEC.1 DP2954	V12083 F173	

COULD TITLES MARKED * BE
 DELIVERED TO BOX 691R AFTER
 CANCELLATION.

JS hatty
2023

"B"

DEED	L.D.No.		LAND DESCRIPTION	TITLE REF.	
5637	224	62	LOT 4 DP201850	V9120 F35	4/201850
5642	089	142	LOTS 21,22 DP1346	V4322 F184	
5644	220	149	LOT 122 DP233313	V10578 F100	
5644	220	149	LOT 6 DP218469	V9516 F65	
5645	220	140	LOT 2 DP555015	V11837 F85	
5646	214	42	LOTS 11,13,15,SEC.7 DP1128	V6724 F7	
5647	218	226	LOT 5 DP556918	V11976 F234	
5649	144	250	LOT 72 DP8754	V9748 F188	
5650	091	4001	LOT 2 DP811466	2/811466	
5650	091	4002	LOT 1 DP811466	1/811466	
5652	136	1285	LOT 1123 DP11761	V11621 F200	
5654	220	142	LOT 112 DP236902	V10882 F229	
5663	214	189	LOT 2 DP559158	V12134 F2	
5663	214	189	LOT 3 DP559158	V12134 F3	301/793236
5664	220	99	LOT 25 SEC.4 DP2954	V3815 F127	
5667	224	53	LOT 5 DP227162	V10176 F247	
5668	156		VARIOUS LOTS DP219719	V11917 F182	
5669	220	85	LOT 97 DP236902	V10882 F214	
5670	136	1250	LOT 9 DP16197	V12159 F74	
5678	214	4087/9	LOT 9 DP801210	9/801210	
5678	214	4087/9	LOT10 DP801210	10/801210	
5678	214	4087/9	LOT 17 DP801210	17/801210	
* 5679	223	58	PT.POR.142 PH.OF ST.LUKE	V2088 F32	M
5680	091	565	LOT 2 DP 526613	V10718 F150	2/526613
5681	089	168	LOT 34,35 DP86234	V11599 F65	
5682	223	57	LOT 3 DP557947	V12022 F244	
5683	220	147	LOT 65A DP338838	V5675 F140	
5684	144	253	LOTS 253,254 DP8755	V6497 F24	
5685	218	249	LOT 1 DP541969	V11318 F177	
5686	218	238	LOT 2 DP560771	V12074 F80	
5687	138	516	LOT 3 DP7276, LOT Y DP384780	V6773 F79	
5690	218	250	LOT 2 DP560596	V12074 F76	
5693	220	100	PT.28 SEC.4 DP2954	V11967 F209	28/654786
* 5695	214	45	PT. LAND IN DP62695	V2093 F171	1/62695
* 5698	214	1	LOTS 16,SEC.8, 69,SEC.10 DP1477	V868 F191	M
5704	081	52	LOT 2 DP203833	V9094 F119	
5705	091	285	LOT 8,SEC.63 DP5768	V12141 F95	
5706	089	150	LOT 11 DP557009	V12198 F91	

COULD TITLES MARKED *
 BE DELIVERED TO BOX 691A
 AFTER CANCELLATION.

[Handwritten signature]
 22/2/2027

(G)

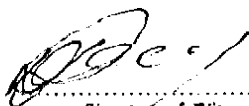
STANDARD EXECUTION

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

DATE

20 April 1995

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



Signature of Witness

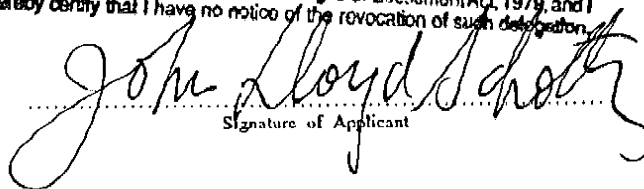
D. DAVEY

Name of Witness (BLOCK LETTERS)

175 LIVERPOOL ST SYDNEY.

Address of Witness

SIGNED by me JOHN LLOYD SCHOLTZ as delegate of the Minister
administering the Environmental Planning and Assessment Act, 1979, and I
hereby certify that I have no notice of the revocation of such delegation.



Signature of Applicant

EXECUTION INCLUDING STATUTORY DECLARATION

I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act 1900, and I certify this
Application correct for the purposes of the Real Property Act 1900. Made and subscribed at ..
in the State of on 19 in the presence of

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and Qualification of Witness

Signature of Applicant

\$1800

Form: 04RP
Release: 2.2
www.lands.nsw.gov.au

**APPLICATION TO RECOR
NEW REGISTERED PROPRIE**

New South Wales

Section 46C Real Property Act 190

Section 12(4) Trustee Act 1925



AD766661B

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 98B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

08-02-2008

0004838631-001

STAMP DUTY

Office of State Revenue use only

SECTION OTHER LEGN-ORIGINAL
NO DUTY PAYABLE

(A) LAND

Torrens Title

LAND REFERRED TO IN SCHEDULE 3 ATTACHED (EXCEPT ITEMS 3,4,5 AND 242)

RELODGED

(B) REGISTERED
DEALING

22 MAY 2008

(C) LODGED BY

Number

Torrens Title

Document
Collection
Box

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

CORPORATION SOLE EPA ACT (DEPT OF PLANNING)

PO BOX 404

PARRAMATTA NSW 2124

LLPN: 123509V

691R

Reference:

CODE

AP

(D) APPLICANT

WESTERN SYDNEY PARKLANDS TRUST

(E) PRESENT REG'D
PROPRIETOR

MINISTER ADMINISTERING THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

(F) NEW REG'D
PROPRIETOR

WESTERN SYDNEY PARKLANDS TRUST

(G) APPLICATION UNDER SECTION 46C REAL PROPERTY ACT 1900

In regard to the above land , the applicant requests the Registrar General to record the new registered proprietor on the relevant folio of the Register, the land having vested in the new registered proprietor pursuant to—

(H) PROCLAMATION OF THE COMMENCEMENT OF THE WESTERN SYDNEY PARKLANDS ACT 2006.

(G) APPLICATION UNDER SECTION 12(4) TRUSTEE ACT 1925

NOT APPLICABLE

In regard to the above land , the applicant requests the Registrar General to record the new registered registered proprietor on the folio of the Register consequent on—

(I)

DATE

~~8 February 2008~~

8/2/2008

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

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

Signature of witness:

M. Jeffree

Signature of authorised officer:

K. Taylor

Name of witness:

MATTHEW JEFFREE

Authorised officer's name:

KENNETH CHARLES TAYLOR

Address of witness:

10 VALENTINE AVE
PARRAMATTA NSW

Authority of officer:

WESTERN SYDNEY PARKLANDS ACT

Signing on behalf of:

WESTERN SYDNEY PARKLANDS
TRUST

CL45-11
(28FEB2007)

DRAFT PREPD	
----------------	--

DRFT	ISSUED ON	PURPOSE	SEQUENCE	PLAN NUMBER	CHECK DIGIT	NUMBERS	
	DP No 752052	NEW	of	DP		SECTION	LOT
							128
EST	TYPE	DETAILS					
	FS						
FRST	FIRST TITLE REFERENCES						
	THIS FOLIO						
PREF	PRIOR TITLE REFERENCES						
	CROWN LAND						
LAND	LOCALITY		MSC	LOCAL GOVERNMENT AREA		LGA OTHR	
	DOONSIDE			BLACKTOWN		N	
	PARISH		COUNTY		PHCO OTHR	TITLE DIAGRAM	
	PROSPECT		CUMBERLAND				
SET	OWNED BY GOVERNMENT		LEASED BY GOVERNMENT		CROWN GRANT RESERVATIONS		CROWN GRANT RESERVATIONS & EXCEPTION OF MINERALS
	OG	Y	LG	N	GR	N	GM
S	MEMORANDUM S700000A		MEMORANDUM S700000B		MEMORANDUM S700000C		MEMORANDUM S700000D
	SA	N	SB	N	SC	N	SD
S	FIRST SCHEDULE						
	THE STATE OF NEW SOUTH WALES						

CL45-11 p2
(28FEB2007)

SECOND SCHEDULE DIRECTIONS				
LOTS AFFECTED	DIRECTION	NOTIFICATION CODE	DEALING NUMBER	DETAILS
128	ON	XB		LAND EXCLUDES MINERALS- SEE SECTION 171 CROWN LANDS ACT 1989
FORMAT: CT		DELIVERY DIRECTIONS		
LOTS AFFECTED	BOX No.	INSTRUCTIONS/DETAILS/ADDRESS		
128		CT NOT TO ISSUE		
DISTRICT OFFICE SYDNEY			FILE REFERENCE AD766661	
AUTHORISED OFFICER C. H. M. M. M.			DATE 22-5-2008	

Commonwealth of Australia
STATUTORY DECLARATION
Statutory Declarations Act 1959

1 Insert the name, address and occupation of person making the declaration

1.1 Matthew Jeffree, Land Information Officer,
Dept. of Planning, 10 Valentine Ave, Parramatta, NSW, 2124

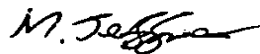
make the following declaration under the *Statutory Declarations Act 1959*:

2 Set out matter declared to in numbered paragraphs

2 The Certificates of Title for the lands referred to in Schedule A (attached) are unable to be located following an extensive and thorough search of the records of the Department of Planning.

I understand that a person who intentionally makes a false statement in a statutory declaration is guilty of an offence under section 11 of the *Statutory Declarations Act 1959*, and I believe that the statements in this declaration are true in every particular.

3 Signature of person making the declaration

3 

4 Place
5 Day
6 Month and year

Declared at ⁴ Parramatta on ⁵ 8th of ⁶ February, 2008

Before me,

7 Signature of person before whom the declaration is made (see over)

7 

8 Full name, qualification and address of person before whom the declaration is made (in printed letters)

8 SIGNED by me KENNETH CHARLES TAYLOR as delegate of the Minister administering the Environmental Planning and Assessment Act, 1979, and I hereby certify that I have no notice of revocation of such delegation.

DEPARTMENT OF PLANNING
10 VALENTINE AVENUE, PARRAMATTA NSW 2124

Note 1 A person who intentionally makes a false statement in a statutory declaration is guilty of an offence, the punishment for which is imprisonment for a term of 4 years — see section 11 of the *Statutory Declarations Act 1959*.

Note 2 Chapter 2 of the *Criminal Code* applies to all offences against the *Statutory Declarations Act 1959* — see section 5A of the *Statutory Declarations Act 1959*.

	SCHEDULE	A		
Ref	Folio	Lot No.	Plan No.	LGA
1	128/752052	128	752052	Blacktown
2	1/875790	1	875790	Fairfield
24	1/135700	1	135700	Blacktown
42	1/744430	1	744430	Blacktown
66	1/1003222	1	1003222	Blacktown
125	1/1069269	1	1069269	Blacktown
126	2/1069269	2	1069269	Blacktown
127	1/1103023	1	1103023	Blacktown
128	1/1103025	1	1103025	Blacktown
129	VF2755-141 1/69882	1	69882	Blacktown
130	A/408966	A	408966	Blacktown
131	B/408966	B	408966	Blacktown
137	10/804051	10	804051	Blacktown
138	10/1061237	10	1061237	Blacktown
139	2/1062965	2	1062965	Blacktown
140	1/1077822	1	1077822	Blacktown
141	2/1077822	2	1077822	Blacktown
175	VF5724-74 38/13961	38	13961	Fairfield
370	9/1054500	9	1054500	Blacktown
371	6/229470	6	229470	Blacktown
372	17/1021839	17	1021839	Fairfield
373	10738/90 69/235949	69	235949	Blacktown
396	2/1042004	2	1042004	Fairfield

A statutory declaration under the *Statutory Declarations Act 1959* may be made before—

(1) a person who is currently licensed or registered under a law to practise in one of the following occupations:

Chiropractor	Dentist	Legal practitioner
Medical practitioner	Nurse	Optometrist
Patent attorney	Pharmacist	Physiotherapist
Psychologist	Trade marks attorney	Veterinary surgeon

(2) a person who is enrolled on the roll of the Supreme Court of a State or Territory, or the High Court of Australia, as a legal practitioner (however described); or

(3) a person who is in the following list:

Agent of the Australian Postal Corporation who is in charge of an office supplying postal services to the public
Australian Consular Officer or Australian Diplomatic Officer (within the meaning of the *Consular Fees Act 1955*)
Bailliff

Bank officer with 5 or more continuous years of service
Building society officer with 5 or more years of continuous service
Chief executive officer of a Commonwealth court
Clerk of a court

Commissioner for Affidavits
Commissioner for Declarations

Credit union officer with 5 or more years of continuous service

Employee of the Australian Trade Commission who is:

- (a) in a country or place outside Australia; and
- (b) authorised under paragraph 3 (d) of the *Consular Fees Act 1955*; and
- (c) exercising his or her function in that place

Employee of the Commonwealth who is:

- (a) in a country or place outside Australia; and
- (b) authorised under paragraph 3 (c) of the *Consular Fees Act 1955*; and
- (c) exercising his or her function in that place

Fellow of the National Tax Accountants' Association

Finance company officer with 5 or more years of continuous service

Holder of a statutory office not specified in another item in this list

Judge of a court

Justice of the Peace

Magistrate

Marriage celebrant registered under Subdivision C of Division 1 of Part IV of the *Marriage Act 1961*

Master of a court

Member of Chartered Secretaries Australia

Member of Engineers Australia, other than at the grade of student

Member of the Association of Taxation and Management Accountants

Member of the Australasian Institute of Mining and Metallurgy

Member of the Australian Defence Force who is:

- (a) an officer; or
- (b) a non-commissioned officer within the meaning of the *Defence Force Discipline Act 1982* with 5 or more years of continuous service; or
- (c) a warrant officer within the meaning of that Act

Member of the Institute of Chartered Accountants in Australia, the Australian Society of Certified Practising Accountants or the National Institute of Accountants

Member of:

- (a) the Parliament of the Commonwealth; or
- (b) the Parliament of a State; or
- (c) a Territory legislature; or
- (d) a local government authority of a State or Territory

Minister of religion registered under Subdivision A of Division 1 of Part IV of the *Marriage Act 1961*

Notary public

Permanent employee of the Australian Postal Corporation with 5 or more years of continuous service who is employed in an office supplying postal services to the public

Permanent employee of:

- (a) the Commonwealth or a Commonwealth authority; or
 - (b) a State or Territory or a State or Territory authority; or
 - (c) a local government authority;
- with 5 or more years of continuous service who is not specified in another item in this list

Person before whom a statutory declaration may be made under the law of the State or Territory in which the declaration is made

Police officer

Registrar, or Deputy Registrar, of a court

Senior Executive Service employee of:

- (a) the Commonwealth or a Commonwealth authority; or
- (b) a State or Territory or a State or Territory authority

Sheriff

Sheriff's officer

Teacher employed on a full-time basis at a school or tertiary education institution



FOLIO: 25/4/2954

SEARCH DATE	TIME	EDITION NO	DATE
-----	----	-----	----
29/6/2023	10:19 AM	2	29/5/2008

LAND

LOT 25 OF SECTION 4 IN DEPOSITED PLAN 2954
AT CECIL PARK
LOCAL GOVERNMENT AREA FAIRFIELD
PARISH OF MELVILLE COUNTY OF CUMBERLAND
TITLE DIAGRAM DP2954

FIRST SCHEDULE

WESTERN SYDNEY PARKLANDS TRUST (AP AD766661)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 EXCEPTING THE LAND IN RESUMPTION D222753 AS SHOWN IN VOL 3815 FOL 127 (BUT NOT THE MINERALS THEREUNDER SEE S 141 PUBLIC WORKS ACT 1912)

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***



SEARCH DATE

29/6/2023 10:19AM

FOLIO: 24/1152887

First Title(s): OLD SYSTEM

Prior Title(s): 24/4/2954

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
31/5/2010	DP1152887	DEPOSITED PLAN	FOLIO CREATED CT NOT ISSUED
12/10/2021	AR505799	DEPARTMENTAL DEALING	
16/3/2023	AS932276	DEPARTMENTAL DEALING	EDITION 1

*** END OF SEARCH ***



LAND
REGISTRY
SERVICES

Historical Title



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

29/6/2023 10:20AM

FOLIO: 24/4/2954

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 4337 FOL 123

Recorded	Number	Type of Instrument	C.T. Issue
9/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
7/7/1993		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
26/7/1993		AMENDMENT: PARISH-COUNTY	
27/4/1995	0172325	REQUEST	
1/8/1995	0421585	DEPARTMENTAL DEALING	EDITION 1
25/3/1998	3065173	CAVEAT	
30/8/1999	6143086	DEPARTMENTAL DEALING	
17/6/2002	8660065	WITHDRAWAL OF CAVEAT	
29/5/2008	AD766661	APPLICATION	EDITION 2
31/5/2010	DP1152887	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

97-123 & 125-151 Wallgrove Road

PRINTED ON 29/6/2023

InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Received: 29/06/2023 10:20:28

97-1812D

New South Wales Land Titles Office

DEPARTMENTAL DEALING



0
421585 R

This document is designed to record the effect of
Departmental actions and amendments on computer files

**Folio**
Identifier(s)

94/752043	11/566423	5/221499	161/16891
7/413642	1/204089	18/313113	3/562989
2/558150	24/412954	1/564191	3/563595
10/4158620	5/43'-217	1/563596	18/236809
311/2475	220/752062	13/10059	1/238513

Reason for Preparation: AMENDMENT - Request for issue of titles from
Department of Urban affairs and Planning

FIRST SCHEDULE DIRECTIONS

[illegible]

SECOND SCHEDULE AND OTHER DIRECTIONS

[illegible]



FOLIO: 24/1152887

SEARCH DATE	TIME	EDITION NO	DATE
-----	----	-----	----
29/6/2023	10:19 AM	1	16/3/2023

LAND

LOT 24 IN DEPOSITED PLAN 1152887
AT CECIL PARK
LOCAL GOVERNMENT AREA FAIRFIELD
PARISH OF MELVILLE COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1152887

FIRST SCHEDULE

WESTERN SYDNEY PARKLANDS TRUST

SECOND SCHEDULE (1 NOTIFICATION)

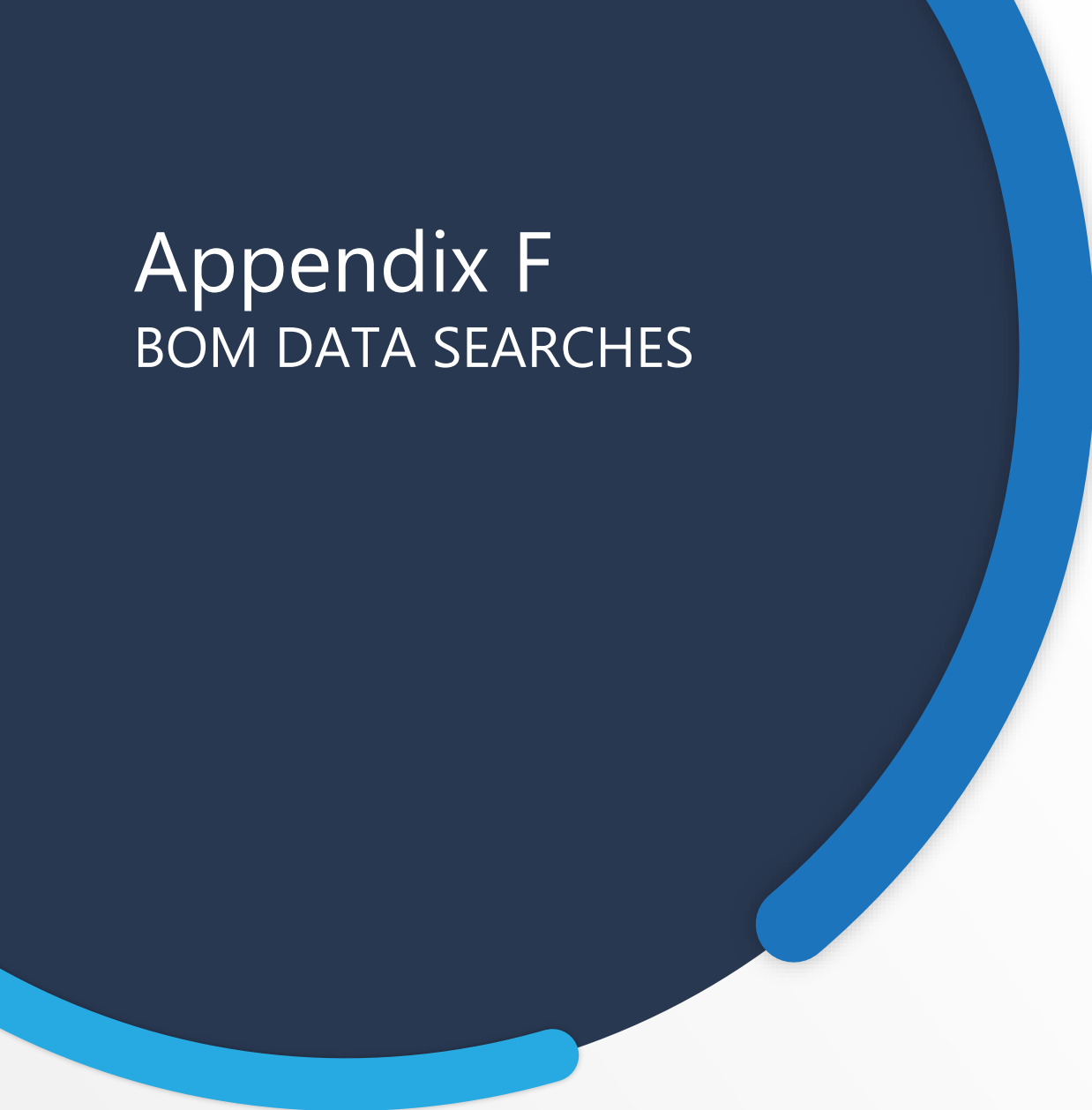
1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

NOTE: PROPOSED LEASE FOR THE PURPOSES OF THE ROADS ACT 1993 VIDE GOV.
GAZ. 17.12.2021 (N2021-2745)

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***



Appendix F

BOM DATA SEARCHES

Climate statistics for Australian locations

Monthly climate statistics

All years of record

Site name: HORSLEY PARK EQUESTRIAN CENTRE
AWS
Latitude: 33.85° S **Longitude:** 150.86° E

Site number: 067119

Commenced: 1997

[Map](#)

Elevation: 100 m

Operational status: Open



View: ☐ Main statistics ☒ All available



Period: 30 year period not available



Text size: ☒ Normal ☐ Large

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years
Temperature														
Maximum temperature														
Mean maximum temperature (°C)	30.0	28.7	26.7	23.8	20.5	17.7	17.4	19.1	22.3	24.7	26.4	28.3	23.8	1997 2023
Highest temperature (°C)	47.0	46.4	40.5	35.9	28.1	24.7	27.3	28.4	36.0	37.5	42.0	44.4	47.0	1997 2023
Date	04 Jan 2020	01 Feb 2020	13 Mar 1998	09 Apr 2018	01 May 2016	14 Jun 2004	30 Jul 2017	23 Aug 2012	23 Sep 2017	06 Oct 2015	27 Nov 1997	31 Dec 2019	04 Jan 2020	
Lowest maximum temperature (°C)	18.8	18.1	16.5	15.6	12.8	8.9	10.9	10.8	12.9	14.1	15.6	17.3	8.9	1997 2023
Date	19 Jan 2023	14 Feb 2009	14 Mar 2020	20 Apr 2015	30 May 2000	10 Jun 2021	13 Jul 2011	24 Aug 2021	04 Sep 2005	11 Oct 2021	19 Nov 2001	10 Dec 2002	10 Jun 2021	
Decile 1 maximum temperature (°C)	23.4	22.9	22.1	19.6	17.3	14.9	14.6	15.8	17.4	18.7	20.0	22.0		1997 2023
Decile 9 maximum temperature(°C)	37.0	34.3	32.0	28.0	23.8	20.2	19.8	22.9	27.9	31.8	33.8	34.9		1997 2023
Mean number of days ≥ 30 °C	13.6	9.5	6.1	1.2	0.0	0.0	0.0	0.0	1.5	5.1	6.5	10.8	54.3	1997 2023
Mean number of days ≥ 35 °C	5.1	2.6	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.6	2.0	3.3	14.5	1997 2023
Mean number of days ≥ 40 °C	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	2.2	1997 2023
Minimum temperature														
Mean minimum temperature (°C)	17.9	17.8	16.2	12.9	9.0	7.1	5.9	6.4	9.3	11.9	14.3	16.2	12.1	1997 2023
Lowest temperature (°C)	10.4	10.4	7.2	1.9	0.8	-1.8	-2.3	-0.5	0.7	3.6	5.6	8.9	-2.3	1997 2023
Date	12 Jan 2012	24 Feb 2008	31 Mar 2008	23 Apr 2006	28 May 2023	30 Jun 2010	17 Jul 2007	13 Aug 2005	13 Sep 2004	08 Oct 1998	03 Nov 2022	13 Dec 2022	17 Jul 2007	
Highest minimum temperature (°C)	24.8	25.3	22.7	22.2	17.4	14.7	15.0	16.4	20.1	21.6	27.4	25.0	27.4	1997 2023
Date	31 Jan 2017	02 Feb 2020	17 Mar 2000	14 Apr 2018	03 May 2015	05 Jun 2016	20 Jul 2016	12 Aug 2002	24 Sep 2003	26 Oct 2019	29 Nov 2020	20 Dec 2017	29 Nov 2020	
Decile 1 minimum temperature (°C)	14.8	15.0	12.9	9.2	4.7	2.7	2.0	2.7	5.3	7.7	10.9	12.5		1997 2023
Decile 9 minimum temperature (°C)	20.8	20.4	19.1	16.1	13.2	11.3	10.0	10.6	13.6	15.6	18.0	19.0		1997 2023
Mean number of days ≤ 2 °C	0.0	0.0	0.0	0.0	0.3	1.3	3.2	1.7	0.0	0.0	0.0	0.0	6.5	1997 2023
Mean number of days ≤ 0 °C	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.6	1997 2023
Ground surface temperature														
Mean daily ground minimum temperature (°C)														
Lowest ground temperature (°C)														
Date														
Mean number of days ground min. temp. ≤ -1 °C														
Rainfall														
Mean rainfall (mm)	75.2	123.2	92.6	69.0	43.6	66.5	53.0	38.0	38.3	64.3	77.4	64.2	807.1	1997 2023
Highest rainfall (mm)	254.6	461.8	317.6	298.2	182.0	298.2	401.6	157.0	124.8	203.2	297.2	172.6	1290.2	1997 2023
Date	2016	2020	2021	2015	2003	2007	2022	1998	2006	2004	1997	2014	2022	
Lowest rainfall (mm)	5.2	9.0	2.4	3.4	3.2	1.0	0.0	1.6	1.6	1.8	9.8	2.4	378.8	1997 2023
Date	2001	2000	2001	2006	2008	2014	2017	2005	2017	2002	2002	2019	2001	
Decile 1 rainfall (mm)	21.4	24.9	21.9	10.1	10.8	7.6	10.0	4.0	9.2	9.3	21.9	14.5	567.8	1997 2023
Decile 5 (median) rainfall (mm)	68.9	93.3	60.8	58.5	27.7	50.0	26.0	26.6	26.2	49.6	54.0	62.6	724.7	1997 2023
Decile 9 rainfall (mm)	138.3	265.7	204.9	137.4	82.5	120.5	103.8	75.6	84.2	148.3	166.5	112.7	1040.7	1997 2023
Highest daily rainfall (mm)	114.4	191.6	93.8	94.6	78.0	130.2	178.4	56.6	69.0	61.0	275.0	46.8	275.0	1997 2023
Date	29 Jan 2013	10 Feb 2020	21 Mar 2021	19 Apr 2012	19 May 1998	06 Jun 2016	05 Jul 2022	20 Aug 2007	07 Sep 2006	21 Oct 2004	28 Nov 1997	04 Dec 2014	28 Nov 1997	
Mean number of days of rain	12.1	11.8	12.8	11.0	9.2	10.5	8.8	7.2	8.6	9.8	11.3	11.3	124.4	1997 2023
Mean number of days of rain ≥ 1 mm	7.9	7.5	8.7	6.8	5.1	6.0	5.6	4.0	5.0	6.1	7.0	7.0	76.7	1997 2023
Mean number of days of rain ≥ 10 mm	2.4	3.3	3.1	2.0	1.4	1.8	1.1	1.2	1.2	2.0	2.3	2.1	23.9	1997 2023
Mean number of days of rain ≥ 25 mm	0.7	1.7	1.1	0.6	0.3	0.7	0.4	0.4	0.2	0.7	0.6	0.6	8.0	1997 2023
Statistics														
Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years
Other daily elements														
Mean daily wind run (km)	208	200	175	169	158	165	177	194	204	199	215	208	189	16 2003 2023
Maximum wind gust speed (km/h)	81	78	70	70	67	80	83	80	89	81	76	70	89	18 2003 2023
Date	24 Jan 2004	12 Feb 2010	11 Mar 2015	27 Apr 2008	27 May 2019	28 Jun 2014	05 Jul 2007	18 Aug 2017	19 Sep 2003	15 Oct 2010	22 Nov 2008	05 Dec 2013	19 Sep 2003	
Mean daily sunshine (hours)														
Mean daily solar exposure (MJ/m ²)	22.3	19.2	16.5	13.6	10.5	8.7	9.9	13.2	16.9	19.8	21.2	22.7	16.2	28 1990 2017
Mean number of clear days														
Mean number of cloudy days														
Mean daily evaporation (mm)														
Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years
9 am conditions														
Mean 9am temperature (°C)	22.0	21.5	19.4	17.5	13.8	11.1	10.3	12.0	15.6	18.1	19.2	20.9	16.8	13 1997 2010
Mean 9am wet-bulb temperature (°C)	19.0	18.5	16.9	15.3	12.0	9.6	8.4	9.5	12.1	14.0	16.1	17.5	14.1	12 1997 2010
Mean 9am dew-point temperature (°C)	16.5	17.1	15.8	12.9	9.6	7.5	6.2	6.1	8.4	9.5	13.1	14.8	11.5	13 1997 2010
Mean 9am relative humidity (%)	73	77	81	76	77	80	78	70	65	61	70	71	73	13 1997 2010
Mean 9am cloud cover (oktas)														0 2010 2010
Mean 9am wind speed (km/h)	10.1	9.7	8.9	10.5	10.7	10.3	10.8	11.7	12.2	12.5	11.8	10.7	10.8	13 1997 2010
Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years
3 pm conditions														
Mean 3pm temperature (°C)	28.2	27.1	25.3	22.2	19.2	16.6	16.1	17.8	20.8	22.5	24.2	26.5	22.2	13 1997 2010
Mean 3pm wet-bulb temperature (°C)	20.2	20.0	19.0	16.7	13.8	11.9	10.9	11.4	13.4	15.3	17.3	18.8	15.7	12 1997 2010
Mean 3pm dew-point temperature (°C)	14.7	15.6	14.2	11.1	8.1	6.6	4.8	3.6	5.6	7.6	11.2	12.7	9.6	13 1997 2010
Mean 3pm relative humidity (%)	49	53	54	53	52	55	50	42	42	45	50	48	49	13 1997 2010
Mean 3pm cloud cover (oktas)														
Mean 3pm wind speed (km/h)	19.4	17.0	14.8	14.4	13.0	12.9	13.9	16.1	18.1	19.8	19.5	19.9	16.6	13 1997 2010

red = highest value blue = lowest value

Product IDCJCM0037 Prepared at Thu 27 Jul 2023 00:49:35 AM AEST

Monthly statistics are only included if there are more than 10 years of data. The number of years (provided in the 2nd last column of the table) may differ between elements if the observing program at the site changed. More detailed data for individual sites can be obtained by contacting the Bureau.

Related Links

- This page URL: http://www.bom.gov.au/climate/averages/tables/cw_067119_All.shtml
- Summary statistics and locational map for this site:
http://www.bom.gov.au/climate/averages/tables/cw_067119.shtml
- About climate averages: <http://www.bom.gov.au/climate/cdo/about/about-stats.shtml>
- Data file (csv): http://www.bom.gov.au/clim_data/cdio/tables/text/IDCJCM0037_067119.csv
- Climate averages home page URL: <http://www.bom.gov.au/climate/data/index.shtml>
- Bureau of Meteorology website: <http://www.bom.gov.au>

Page created: Thu 27 Jul 2023 00:49:35 AM AEST

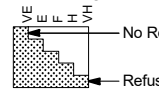
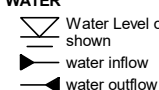
This page was created at on

Appendix G

Borehole Logs

Client: Project: Stage 1 Preliminary Site Investigation Location: 97-123 & 125-151 Wallgrove Road, Cecil Park						Hole No: BH01 Job No: P402 Sheet: 1 of 1																	
Position:						Angle from Horizontal: 90°						Surface Elevation:											
Rig Type: Ute Mounted Drill Rig						Mounting: Truck						Driller: Malik											
Casing Diameter:						Contractor: Malik																	
Data Started: 30/6/23						Date Completed: 30/6/23						Logged By: SB						Checked By:					

Drilling			Sampling & Testing		Material Description							
Method	Resistance	Casing	Water	Sample or Field Test	Depth (m)	Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations	
↑ AD/T ↓	F		Groundwater Not Encountered	ASB 0.00 - 0.05 m ES 0.00 - 0.05 m	0.00			Clayey SILT: brown and dark brown	M		0.00 m: No PACM, staining or odours were observed	
				ASB 0.25 - 0.35 m ES 0.25 - 0.35 m	0.25			Silty CLAY: medium to high plasticity, brown and orange brown		VSt	0.25 m: No PACM, staining or odours were observed	
					0.5							
					1.0				M	H		
					1.5					VSt		
					2.0					St		
					2.5							
					2.70m			SILTSTONE, dark brown and grey, DCP vs Bedrock variability inferred due to DCP offset at 2-4m DCP refusal at 2.3m, extremely weathered, very low strength				
					2.70m			TERMINATED AT 2.70 m Refusal				

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION  No Resistance Refusal WATER  Water Level on Date shown water inflow water outflow	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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Refer to explanatory notes for details of abbreviations and basis of descriptions

Client: Project: Stage 1 Preliminary Site Investigation Location: 97-123 & 125-151 Wallgrove Road, Cecil Park					Job No: P402 Sheet: 1 of 1				
Position:					Angle from Horizontal: 90°		Surface Elevation:		
Rig Type: Ute Mounted Drill Rig					Mounting: Truck		Driller: Malik		
Casing Diameter:					Contractor: Malik				
Data Started: 29/6/23			Date Completed: 29/6/23		Logged By: SB		Checked By:		

Drilling			Sampling & Testing		Material Description							
Method	Resistance	Casing	Water	Sample or Field Test	Depth (m)	Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations	
↑ AD/T ↓			Groundwater Not Encountered	ASB 0.00 - 0.30 m				0.05m Silty CLAY: low plasticity, dark brown and black, with roots and organics	M (<PL)	VSt	0.00 m: No PACM, staining or odours were observed	
				ES 0.00 - 0.05 m				Silty CLAY: high plasticity, colour grading to brown and orange, DCP refusal at 0.8m with bouncing				0.05 m: DCP refusal at 0.8m with bouncing
				ES 0.05 - 0.15 m								
					0.5							
					1.0			0.80m SILTSTONE, fine grained, brown, highly weathered, very low to low strength			0.80 m: No PACM, staining or odours were observed	
					1.5			TERMINATED AT 1.50 m Refusal				
					2.0							
					2.5							

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION  No Resistance Refusal WATER  Water Level on Date shown water inflow water outflow	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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Refer to explanatory notes for details of abbreviations and basis of descriptions

Client: Project: Stage 1 Preliminary Site Investigation Location: 97-123 & 125-151 Wallgrove Road, Cecil Park				Job No: P402 Sheet: 1 of 1			
Position:				Angle from Horizontal: 90°		Surface Elevation:	
Rig Type: Ute Mounted Drill Rig				Mounting: Truck		Driller: Malik	
Casing Diameter:				Contractor: Malik			
Data Started: 30/6/23		Date Completed: 30/6/23		Logged By: SB		Checked By:	

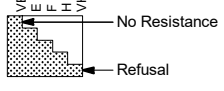
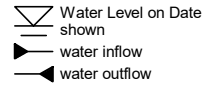
Drilling			Sampling & Testing		Material Description						
Method	Resistance	Casing	Water	Sample or Field Test	Depth (m)	Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations
↑ AD/T ↓ 04/06/2023			04/06/2023 Water Not Encountered	ASB 0.00 - 0.05 m ES 0.00 - 0.05 m				Clayey SILT: brown and dark brown	M		0.00 m: No PACM, staining or odours were observed
				ASB 0.20 - 0.30 m ES 0.20 - 0.30 m				CLAY: medium to high plasticity, orange brown, DCP refusal at 1.00m	M	F to VSt	0.20 m: DCP refusal at 1.00m
								CLAY: colour grading to yellow brown and pale grey		VSt to H	1.00 m: No PACM, staining or odours were observed
								SILTSTONE, grey brown, highly weathered and extremely weathered, very low strength			1.80 m: No PACM, staining or odours were observed
								TERMINATED AT 5.00 m Refusal			
					1						
					2						
					3						
					4						
					5						

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION WATER 	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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Refer to explanatory notes for details of abbreviations and basis of descriptions

Client:		Hole No: BH04	
Project: Stage 1 Preliminary Site Investigation		Job No: P402	
Location: 97-123 & 125-151 Wallgrove Road, Cecil Park		Sheet: 1 of 1	
Position:		Angle from Horizontal: 90°	
Rig Type: Ute Mounted Drill Rig		Mounting: Truck	
Casing Diameter:		Driller: Malik	
Data Started: 30/6/23		Checked By:	
Date Completed: 30/6/23		Logged By: SB	

Drilling			Water	Sampling & Testing	Depth (m)	Material Description						
Method	Resistance	Casing		Sample or Field Test		Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations	
↑ AD/T ↓			Groundwater Not Encountered	ASB 0.00 - 0.10 m ES 0.00 - 0.10 m			Clayey SILT: dark brown	M		0.00 m: No PACM, staining or odours were observed		
				Silty CLAY: medium to high plasticity, pale brown and brown			M	VSt to H		0.10 m: No PACM, staining or odours were observed		
							SILTSTONE, grey brown, DCP refusal at 0.8m, highly weathered to extremely weathered, very low strength					
							SILTSTONE, colour grading to grey and dark grey, extremely weathered, very low strength					
							TERMINATED AT 1.70 m Refusal					

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION  WATER 	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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Refer to explanatory notes for details of abbreviations and basis of descriptions

Client:
Project: Stage 1 Preliminary Site Investigation
Location: 97-123 & 125-151 Wallgrove Road, Cecil Park

Job No: P402

Sheet: 1 of 1

Position:

Angle from Horizontal: 90°

Surface Elevation:

Rig Type: Ute Mounted Drill Rig

Mounting: Truck

Driller: Malik

Casing Diameter:

Contractor: Malik

Data Started: 30/6/23

Date Completed: 30/6/23

Logged By: SB

Checked By:

Drilling			Sampling & Testing		Material Description							
Method	Resistance	Casing	Water	Sample or Field Test	Depth (m)	Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations	
AD/T			04/07/2024 Water Not Encountered	ASB 0.00 - 0.05 m ES 0.00 - 0.05 m				0.10m Silty CLAY: low plasticity, brown and dark brown, with roots and organics	M (>PL)		0.00 m: No PACM, staining or odours were observed 0.10 m: No PACM, staining or odours were observed 0.50 m: No PACM, staining or odours were observed	
		ASB 0.50 m ES 0.50 m			0.50m Silty CLAY: low plasticity, colour grading to orange brown							
					Silty CLAY: low to medium plasticity, colour grading to light brown and grey		M (<PL)					
						1		1.50m				1.50 m: No PACM, staining or odours were observed
						2		1.70m Silty CLAY: low plasticity, colour grading to orange brown, grading into completely weathered Shale	M (<PL)			
								SHALE, brown grey				
						3						
						4						
						5						
						6						
				7			6.80m SHALE, brown grey, highly weathered					
							7.30m					
							7.50m SHALE, colour grading to brown, extracted with medium to high plasticity clay					
							7.78m SILTSTONE, dark grey and black					
					8			SANDSTONE, dark grey and black, extracted with fine grained sand				
								8.72m				
					9			TERMINATED AT 8.72 m Target depth				

METHOD
EX Excavator bucket
R Ripper
HA Hand auger
PT Push tube
SON Sonic drilling
AH Air hammer
PS Percussion sampler
AS Short spiral auger
AD/V Solid flight auger: V-Bit
AD/T Solid flight auger: TC-Bit
HFA Hollow flight auger
WB Washbore drilling
RR Rock roller

PENETRATION

WATER
 Water Level on Date shown
 water inflow
 water outflow

FIELD TESTS
SPT - Standard Penetration Test
HP - Hand/Pocket Penetrometer
DCP - Dynamic Cone Penetrometer
PSP - Perth Sand Penetrometer
MC - Moisture Content
PBT - Plate Bearing Test
IMP - Borehole Impression Test
PID - Phito Ionization Detector
VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)

SAMPLES
B - Bulk disturbed sample
D - Disturbed sample
ES - Environmental sample
U - Thin wall tube 'undisturbed'

MOISTURE
D - Dry
M - Moist
W - Wet
PL - Plastic limit
LL - Liquid limit
w - Moisture content

SOIL CONSISTENCY
VS - Very Soft
S - Soft
F - Firm
St - Stiff
VSt - Very Stiff
H - Hard

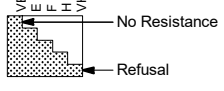
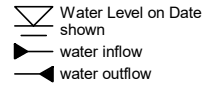
RELATIVE DENSITY
VL - Very Loose
L - Loose
MD - Medium Dense
D - Dense
VD - Very Dense

Refer to explanatory notes for details of abbreviations and basis of descriptions

CONSTRUCTION SCIENCES

Client: Project: Stage 1 Preliminary Site Investigation Location: 97-123 & 125-151 Wallgrove Road, Cecil Park						Hole No: BH06 Job No: P402 Sheet: 1 of 1					
Position:						Angle from Horizontal: 90°			Surface Elevation:		
Rig Type: Ute Mounted Drill Rig						Mounting: Truck			Driller: Malik		
Casing Diameter:						Contractor: Malik					
Data Started: 29/6/23				Date Completed: 29/6/23		Logged By: SB			Checked By:		

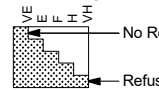
Drilling			Sampling & Testing		Material Description							
Method	Resistance	Casing	Water	Sample or Field Test	Depth (m)	Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations	
↑ AD/T ↓ Groundwater Not Encountered				ASB 0.00 - 0.05 m ES 0.00 - 0.05 m				Silty CLAY: low plasticity, dark brown and black, with roots and organics	M (>PL)	St to H	0.00 m: No PACM, staining or odours were observed	
				ASB 0.10 - 0.20 m ES 0.10 - 0.20 m			0.10m	Silty CLAY: high plasticity, colour grading to dark brown, DCP refusal at 0.7m			0.10 m: DCP refusal at 0.7m 0.10 m: No PACM, staining or odours were observed	
					0.5							
					1.0							
					1.5							
					2.0							
					2.5							
					2.70m			TERMINATED AT 2.70 m Refusal				

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION  WATER 	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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Refer to explanatory notes for details of abbreviations and basis of descriptions

Client: Project: Stage 1 Preliminary Site Investigation Location: 97-123 & 125-151 Wallgrove Road, Cecil Park						Hole No: BH07 Job No: P402 Sheet: 1 of 1																	
Position:						Angle from Horizontal: 90°						Surface Elevation:											
Rig Type: Ute Mounted Drill Rig						Mounting: Truck						Driller: Malik											
Casing Diameter:						Contractor: Malik																	
Data Started: 29/6/23						Date Completed: 29/6/23						Logged By: SB						Checked By:					

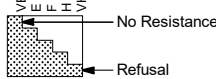
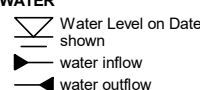
Drilling			Sampling & Testing		Material Description								
Method	Resistance	Casing	Water	Sample or Field Test	Depth (m)	Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations		
↑ AD/T ↓			Groundwater Not Encountered	ASB 0.00 - 0.05 m ES 0.00 - 0.05 m	0.05m		Silty CLAY: low plasticity, dark brown and black, with roots and organics Silty CLAY: high plasticity, colour grading to orange, DCP refusal at 1.2m	St to VSt		0.00 m: No PACM, staining or odours were observed 0.05 m: DCP refusal at 1.2m 0.05 m: No PACM, staining or odours were observed			
				ASB 0.30 m ES 0.30 m	0.5								
					1.0								
					1.20m		SHALE, brown, extremely weathered, very low to low strength						
					1.5								
					1.80m		SHALE, brown, highly weathered, very low to low strength						
					2.0								
					2.5								
					2.70m			TERMINATED AT 2.70 m Refusal					

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION  No Resistance Refusal WATER  Water Level on Date shown  water inflow  water outflow	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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Refer to explanatory notes for details of abbreviations and basis of descriptions

Client:		Hole No: BH08	
Project: Stage 1 Preliminary Site Investigation		Job No: P402	
Location: 97-123 & 125-151 Wallgrove Road, Cecil Park		Sheet: 1 of 1	
Position:		Angle from Horizontal: 90°	Surface Elevation:
Rig Type: Ute Mounted Drill Rig		Mounting: Truck	Driller: Malik
Casing Diameter:		Contractor: Malik	
Data Started: 29/6/23		Date Completed: 29/6/23	Logged By: SB
		Checked By:	

Drilling			Water	Sampling & Testing	Depth (m)	Material Description						
Method	Resistance	Casing		Sample or Field Test		Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations	
↑ AD/T ↓			Groundwater Not Encountered	ES 0.00 - 0.25 m	0.25		0.25m	Silty CLAY: low plasticity, dark brown and black, with roots and organics	M (<PL)	H	0.00 m: No PACM, staining or odours were observed	
				ASB 0.25 - 0.35 m				0.5			Silty CLAY: medium to high plasticity, colour grading to brown, refusal at 0.7m with bouncing DCP	0.25 m: DCP refusal at 0.7m with bouncing
				ES 0.25 - 0.35 m							0.80m	SILTSTONE, grey brown, very low to low strength
												1.0
					1.20m			TERMINATED AT 1.20 m Refusal				
					1.5							
					2.0							
					2.5							

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION  WATER 	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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Refer to explanatory notes for details of abbreviations and basis of descriptions

Hole No: BH09

Client: **Stage 1 Preliminary Site Investigation** **Hole No: BH09**
 Project: **97-123 & 125-151 Wallgrove Road, Cecil Park**
 Location: **Job No: P402** **Sheet: 1 of 1**

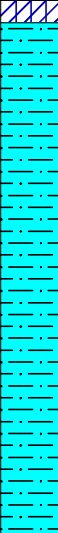
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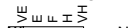
Rig Type: Ute Mounted Drill Rig	Mounting: Truck	Driller: Malik
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Casing Diameter:	Contractor: Malik
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Data Started: 29/6/23	Date Completed: 29/6/23	Logged By: SB	Checked By:
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Drilling		Sampling & Testing		Material Description
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Drilling			Sampling & Testing		Material Description						
Method	Resistance	Casing	Water	Sample or Field Test	Depth (m)	Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations
AD/T			Groundwater Not Encountered	ASB 0.10 m ES 0.10 m			0.05m	Silty CLAY: medium plasticity, brown and black, with roots and organics SHALE, brown, traces of low plasticity silty clay DCP refusal at 0.7m, extremely weathered, very low strength	M (<PL)		0.00 m: No PACM, staining or odours were observed 0.05 m: No PACM, staining or odours were observed
					0.80m	SHALE, colour grading to grey brown, highly weathered to extremely weathered, low strength					
					1.20m	TERMINATED AT 1.20 m Refusal					

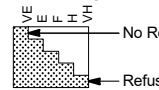
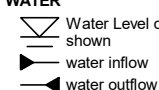
METHOD	PENETRATION	FIELD TESTS	SAMPLES	SOIL CONSISTENCY
EX Excavator bucket		SPT - Standard Penetration Test	B - Bulk disturbed sample	VS - Very Soft
R Ripper		HP - Hand/Pocket Penetrometer	D - Disturbed sample	S - Soft
HA Hand auger		DCP - Dynamic Cone Penetrometer	ES - Environmental sample	F - Firm
PT Push tube		PSP - Perth Sand Penetrometer	U - Thin wall tube 'undisturbed'	St - Stiff
SON Sonic drilling		MC - Moisture Content		VSt - Very Stiff
AH Air hammer		PBT - Plate Bearing Test		H - Hard
PS Percussion sampler		IMP - Borehole Impression Test		
AS Short spiral auger		PID - Photo Ionization Detector		
AD/V Solid flight auger: V-Bit		VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)		
AD/T Solid flight auger: TC-Bit				
HFA Hollow flight auger				
WB Washbore drilling				
RR Rock roller				

Refer to explanatory notes for details of abbreviations and basis of descriptions

CONSTRUCTION SCIENCES

Client: Project: Stage 1 Preliminary Site Investigation Location: 97-123 & 125-151 Wallgrove Road, Cecil Park						Hole No: BH10 Job No: P402 Sheet: 1 of 1																	
Position:						Angle from Horizontal: 90°						Surface Elevation:											
Rig Type: Ute Mounted Drill Rig						Mounting: Truck						Driller: Malik											
Casing Diameter:						Contractor: Malik																	
Data Started: 30/6/23						Date Completed: 30/6/23						Logged By: SB						Checked By:					

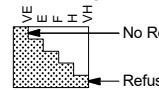
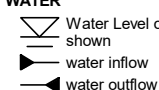
Drilling			Sampling & Testing		Material Description							
Method	Resistance	Casing	Water	Sample or Field Test	Depth (m)	Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations	
↑ AD/T ↓ AD/T			0.00m to 8.80m Water Not Encountered	ASB 0.00 - 0.10 m ES 0.00 - 0.10 m ASB 0.10 - 0.20 m ES 0.10 - 0.20 m	0.03m			Silty CLAY: low plasticity, dark grey and black, with roots and organics Silty CLAY: medium to high plasticity, colour grading to red brown and orange	M (<PL)		0.00 m: No PACM, staining or odours were observed	
					1			SHALE, fine to coarse grained, brown grey, traces of low plasticity silty clay DCP refusal at 1.1m, extremely weathered				
					2			2.30m	SHALE, brown grey, highly weathered			
					3							
					4			4.50m	SHALE, colour grading to dark grey			
					5			4.85m	SANDSTONE, grey, extracted with fine grained sand			
					6			5.70m	SANDSTONE, fine grained, grey			
					7			5.84m	SANDSTONE, colour grading to grey and black, extracted with fine grained sand			
					8							
					9			8.80m	TERMINATED AT 8.80 m Target depth			

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION  WATER 	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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Refer to explanatory notes for details of abbreviations and basis of descriptions

Client: Project: Stage 1 Preliminary Site Investigation Location: 97-123 & 125-151 Wallgrove Road, Cecil Park						Job No: P402 Sheet: 1 of 1																	
Position:						Angle from Horizontal: 90°						Surface Elevation:											
Rig Type: Ute Mounted Drill Rig						Mounting: Truck						Driller: Malik											
Casing Diameter:						Contractor: Malik																	
Data Started: 29/6/23						Date Completed: 29/6/23						Logged By: SB						Checked By:					

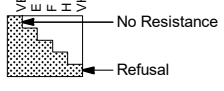
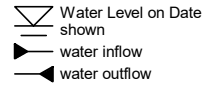
Drilling			Sampling & Testing		Material Description							
Method	Resistance	Casing	Water	Sample or Field Test	Depth (m)	Graphic Log	Classification	SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure	Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations	
↑ AD/T ↓ Groundwater Not Encountered				ASB 0.00 - 0.10 m ES 0.00 - 0.10 m	0.00			Silty CLAY: low plasticity, brown black, with roots and organics			0.00 m: No PACM, staining or odours were observed	
				ASB 0.30 - 0.40 m ES 0.30 - 0.40 m	0.20			Silty CLAY: medium to high plasticity, colour grading to orange brown and red, with gravel	M (<PL)	St	0.30 m: No PACM, staining or odours were observed	
					0.30			Silty CLAY: high plasticity, orange brown and red				
					0.5							St to F
					1.0							
					1.30							
					1.5			Silty CLAY: medium to high plasticity, colour grading to orange grey			St to VSt	
					2.0							
					2.30				Silty CLAY: high plasticity, colour grading to brown grey	M (<PL)	VSt	
					2.60				Silty CLAY: medium to low plasticity, brown grey, All DCP rods used		H	2.60 m: All DCP rods used
				3.00			SHALE, brown, highly weathered, low strength					
				4.00			TERMINATED AT 4.00 m Refusal					
					4.5							

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION  No Resistance Refusal WATER  Water Level on Date shown water inflow water outflow	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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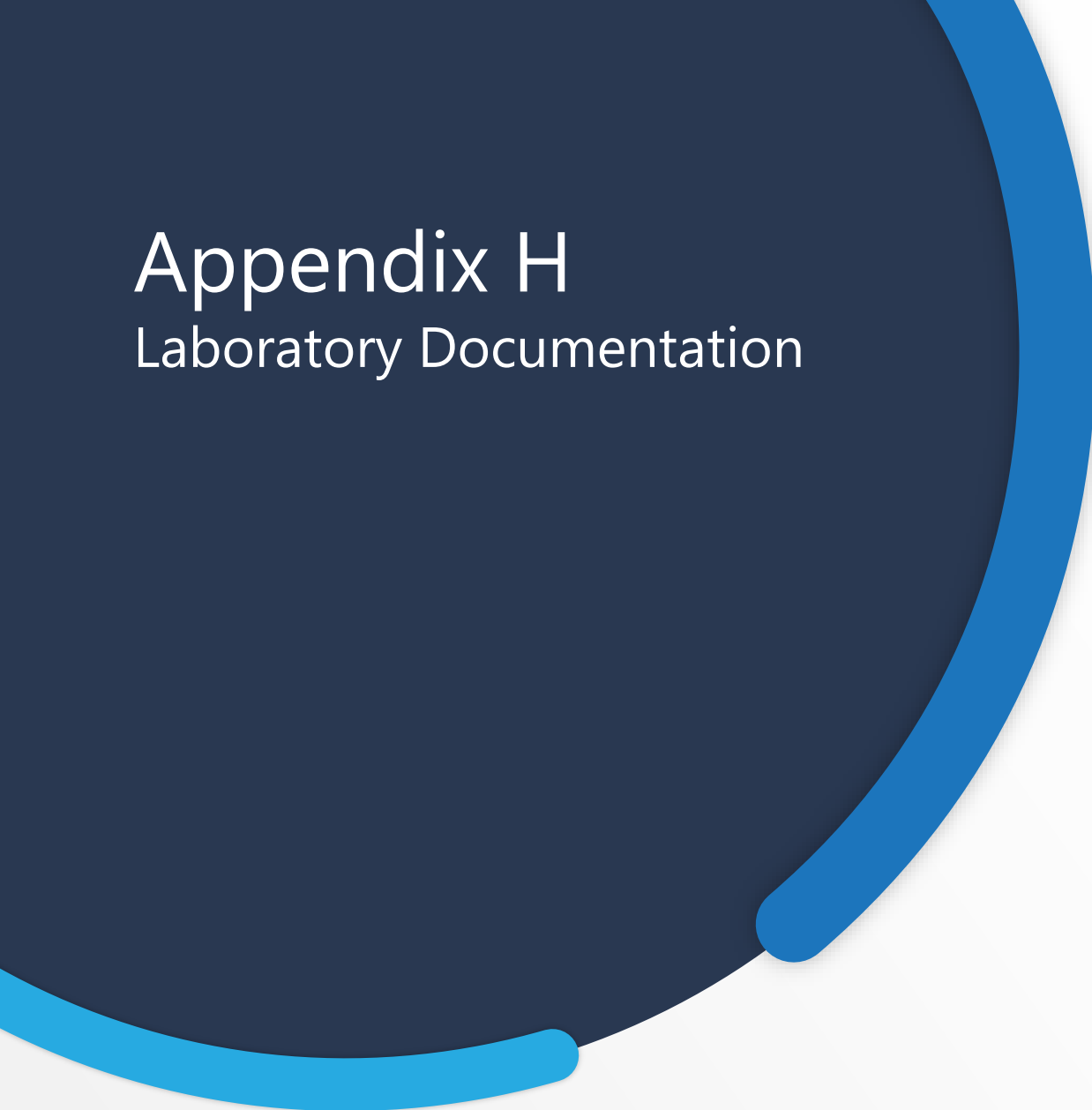
Refer to explanatory notes for details of abbreviations and basis of descriptions

Client:		Hole No: BH12	
Project: Stage 1 Preliminary Site Investigation		Job No: P402	
Location: 97-123 & 125-151 Wallgrove Road, Cecil Park		Sheet: 1 of 1	
Position:		Angle from Horizontal: 90°	Surface Elevation:
Rig Type: Ute Mounted Drill Rig		Mounting: Truck	Driller: Malik
Casing Diameter:		Contractor: Malik	
Data Started: 15/6/23		Date Completed: 15/6/23	Logged By: SB
		Checked By:	

Drilling			Water	Sampling & Testing	Depth (m)	Graphic Log	Classification	Material Description			Moisture Condition	Consistency Relative Density	STRUCTURE & Other Observations	
Method	Resistance	Casing		Sample or Field Test				SOIL TYPE, plasticity or particle characteristic, colour, secondary and minor components ROCK TYPE, grain size and type, colour, fabric & texture, strength, weathering, defects and structure						
↑ AD/T ↓			Groundwater Not Encountered	ASB 0.00 - 0.10 m ES 0.00 - 0.10 m	0.10m		0.10m	Clayey SILT: brown, with roots and organics	M		0.00 m: No PACM, staining or odours were observed			
				ES 0.10 - 0.30 m				Silty CLAY: medium to high plasticity, orange brown				H	0.10 m: No PACM, staining or odours were observed	
								0.40m						SILTSTONE, pale brown, DCP refusal at 0.7m, highly weathered to extremely weathered, very low strength
								0.5						1.10m
					2.0		2.00m	TERMINATED AT 2.00 m Refusal						
					2.5									

METHOD EX Excavator bucket R Ripper HA Hand auger PT Push tube SON Sonic drilling AH Air hammer PS Percussion sampler AS Short spiral auger AD/V Solid flight auger: V-Bit AD/T Solid flight auger: TC-Bit HFA Hollow flight auger WB Washbore drilling RR Rock roller	PENETRATION  WATER 	FIELD TESTS SPT - Standard Penetration Test HP - Hand/Pocket Penetrometer DCP - Dynamic Cone Penetrometer PSP - Perth Sand Penetrometer MC - Moisture Content PBT - Plate Bearing Test IMP - Borehole Impression Test PID - Phito Ionization Detector VS - Vane Shear; P=Peak, R=Residual (uncorrected kPa)	SAMPLES B - Bulk disturbed sample D - Disturbed sample ES - Environmental sample U - Thin wall tube 'undisturbed' MOISTURE D - Dry M - Moist W - Wet PL - Plastic limit LL - Liquid limit w - Moisture content	SOIL CONSISTENCY VS - Very Soft S - Soft F - Firm St - Stiff VSt - Very Stiff H - Hard RELATIVE DENSITY VL - Very Loose L - Loose MD - Medium Dense D - Dense VD - Very Dense
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Refer to explanatory notes for details of abbreviations and basis of descriptions



Appendix H

Laboratory Documentation

CHAIN OF CUSTODY - SGS

Sample Information					Tests Required										Comments				
Client Sample ID	Date Sampled	Lab Sample ID	Type of Sample	No of Containers	CS1 (CL16 TRH, BTEX, PAH, OCP, PCB, 8 Metals and Asbestos ID Soil)	CS15 (Asbestos ID in Soil (50g))	CS7 (TRH, BTEX, PAH and Metals)	8 Metals	CS16 (Asbestos ID in Building Material)	BTEX	HOLD								
BH01/0.0-0.05m	30/06/2023	1	Soil	1xJar, 1xASB	X														
BH01/0.25-0.35m	30/06/2023	2	Soil	1xJar, 1xASB		X		X											
BH02/0.0-0.05m	30/06/2023	3	Soil	1xJar	X														
BH02/0.05-0.15m	30/06/2023	4	Soil	1xJar		X		X											
BH02/0.0-0.3m	30/06/2023	5	Soil	1xASB		X													
BH03/0.0-0.05m	30/06/2023	6	Soil	1xJar, 1xASB	X														
BH03/0.2-0.3m	30/06/2023	7	Soil	1xJar, 1xASB		X		X											
BH04/0.0-0.1m	30/06/2023	8	Soil	1xJar, 1xASB		X	X												
BH04/0.1-0.2m	30/06/2023	9	Soil	1xJar, 1xASB		X		X											
BH05/0.0-0.05m	30/06/2023	10	Soil	1xJar, 1xASB	X														
BH05/0.5m	30/06/2023	11	Soil	1xJar, 1xASB		X		X											
BH06/0.0-0.05m	30/06/2023	12	Soil	1xJar, 1xASB	X														
BH06/0.1-0.2m	30/06/2023	13	Soil	1xJar, 1xASB		X		X											
BH07/0.0-0.05m	30/06/2023	14	Soil	1xJar, 1xASB	X														
BH07/0.3m	30/06/2023	15	Soil	1xJar, 1xASB		X		X											
BH08/0.0-0.25m	30/06/2023	16	Soil	1xJar, 1xASB		X	X												
BH08/0.25-0.35m	30/06/2023	17	Soil	1xJar, 1xASB		X		X											
BH09/0.1m	30/06/2023	18	Soil	1xJar, 1xASB	X														
BH10/0.1m	30/06/2023	19	Soil	1xJar, 1xASB	X														
BH10/0.1-0.2m	30/06/2023	20	Soil	1xJar, 1xASB		X		X											
BH11/0.0-0.1m	30/06/2023	21	Soil	1xJar, 1xASB	X														
BH11/0.3-0.4m	30/06/2023	22	Soil	1xJar, 1xASB		X	X												
BH12/0.0-0.1m	30/06/2023	23	Soil	1xASB, 1x Jar	X														
BH12/0.1-0.3m	30/06/2023	24	Soil	1xJar		X		X											
P1-PACM 1	30/06/2023	25	Cement Sheet	1xASB					X										
P1-PACM 2	30/06/2023	26	Cement Sheet	1xASB							X								
P1-PACM 3	30/06/2023	27	Cement Sheet	1xASB					X										
P2-PACM 1	30/06/2023	28	Cement Sheet	1xASB					X										
Trip Blank	30/06/2023	29	Soil	1 x Vial						X									
Trip Spike	30/06/2023	30	Soil	1 x Vial						X									

E-MAILED

5/7/23 12:53pm

SGS EHS Sydney COC

SE250263





SAMPLE RECEIPT ADVICE

SE250263

CLIENT DETAILS

Contact Nathan Watson
Client CONSTRUCTION SCIENCES PTY LTD
Address 2/4 KELLOGG RD
ROOTY HILL NSW 2766

Telephone 0436 620 611
Facsimile 02 8438 0310
Email nathan.watson@constructionsociences.net

Project **10791EV.P.402-Wallgrove Business Park**
Order Number **10791EV.P.402**
Samples 29

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 4/7/2023
Report Due Wed 12/7/2023
SGS Reference **SE250263**

SUBMISSION DETAILS

This is to confirm that 29 samples were received on Tuesday 4/7/2023. Results are expected to be ready by COB Wednesday 12/7/2023. Please quote SGS reference SE250263 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	26 Soil, 3 Material	Type of documentation received	COC
Date documentation received	5/7/2023@12.53pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	2.6°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

1 material sample has been placed on hold as no tests have been assigned for it. This sample will not be processed.

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



SAMPLE RECEIPT ADVICE

SE250263

CLIENT DETAILS

Client CONSTRUCTION SCIENCES PTY LTD

Project 10791EV.P.402-Wallgrove Business Park

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	BH01/0.0-0.05m	30	26	11	7	10	11	7
002	BH01/0.25-0.35m	-	-	-	7	-	-	-
003	BH02/0.0-0.05m	30	26	11	7	10	11	7
004	BH02/0.05-0.15m	-	-	-	7	-	-	-
006	BH03/0.0-0.05m	30	26	11	7	10	11	7
007	BH03/0.2-0.3m	-	-	-	7	-	-	-
008	BH04/0.0-0.1m	-	26	-	7	10	11	7
009	BH04/0.1-0.2m	-	-	-	7	-	-	-
010	BH05/0.0-0.05m	30	26	11	7	10	11	7
011	BH05/0.5m	-	-	-	7	-	-	-
012	BH06/0.0-0.05m	30	26	11	7	10	11	7
013	BH06/0.1-0.2m	-	-	-	7	-	-	-
014	BH07/0.0-0.05m	30	26	11	7	10	11	7
015	BH07/0.3m	-	-	-	7	-	-	-
016	BH08/0.0-0.25m	-	26	-	7	10	11	7
017	BH08/0.25-0/35m	-	-	-	7	-	-	-
018	BH09/0.1m	30	26	11	7	10	11	7
019	BH10/0.1m	30	26	11	7	10	11	7
020	BH010/0.1-0.2m	-	-	-	7	-	-	-
021	BH011/0-0.1m	30	26	11	7	10	11	7
022	BH011/0.3-0.4m	-	26	-	7	10	11	7
023	BH012/0.-0.1m	30	26	11	7	10	11	7
024	BH012/0.1-0.3m	-	-	-	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

SE250263

CLIENT DETAILS

Client **CONSTRUCTION SCIENCES PTY LTD**

Project **10791EV.P.402-Wallgrove Business Park**

SUMMARY OF ANALYSIS

No.	Sample ID	VOC's in Soil
028	Trip Blank	11
029	Trip Spike	11

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

SE250263

CLIENT DETAILS

Client CONSTRUCTION SCIENCES PTY LTD

Project 10791EV.P.402-Wallgrove Business Park

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
001	BH01/0.0-0.05m	2	1	1
002	BH01/0.25-0.35m	2	1	1
003	BH02/0.0-0.05m	2	1	1
004	BH02/0.05-0.15m	2	1	1
005	BH02/0-0.3m	2	-	-
006	BH03/0.0-0.05m	2	1	1
007	BH03/0.2-0.3m	2	1	1
008	BH04/0.0-0.1m	2	1	1
009	BH04/0.1-0.2m	2	1	1
010	BH05/0.0-0.05m	2	1	1
011	BH05/0.5m	2	1	1
012	BH06/0.0-0.05m	2	1	1
013	BH06/0.1-0.2m	2	1	1
014	BH07/0.0-0.05m	2	1	1
015	BH07/0.3m	2	1	1
016	BH08/0.0-0.25m	2	1	1
017	BH08/0.25-0/35m	2	1	1
018	BH09/0.1m	2	1	1
019	BH10/0.1m	2	1	1
020	BH010/0.1-0.2m	2	1	1
021	BH011/0-0.1m	2	1	1
022	BH011/0.3-0.4m	2	1	1
023	BH012/0.-0.1m	2	1	1
024	BH012/0.1-0.3m	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

SE250263

CLIENT DETAILS

Client **CONSTRUCTION SCIENCES PTY LTD**

Project **10791EV.P.402-Wallgrove Business Park**

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre ID in bulk materials	Moisture Content
025	P1-PACM 1	1	-
026	P1-PACM 3	1	-
027	P2-PACM 1	1	-
028	Trip Blank	-	1

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



ANALYTICAL REPORT



Accreditation No. 2562

CLIENT DETAILS

Contact **Nathan Watson**
Client **CONSTRUCTION SCIENCES PTY LTD**
Address **2/4 KELLOGG RD
ROOTY HILL NSW 2766**

Telephone **0436 620 611**
Facsimile **02 8438 0310**
Email **nathan.watson@constructionsciences.net**

Project **10791EV.P.402-Wallgrove Business Park**
Order Number **10791EV.P.402**
Samples **27**

LABORATORY DETAILS

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

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

SGS Reference **SE250263 R0**
Date Received **04 Jul 2023**
Date Reported **11 Jul 2023**

COMMENTS

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

Sample #25: No trace asbestos fibres detected using trace analysis technique.

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

Sample #3,4,24: A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Sample #23: A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin

SIGNATORIES

Ravee SIVASUBRAMANIAM
Hygiene Team Leader



ANALYTICAL REPORT

SE250263 R0

RESULTS

Fibre Identification in soil

Method AS4964/AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE250263.001	BH01/0.0-0.05m	Soil	65g Clay, Rocks, Plant Matter	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE250263.002	BH01/0.25-0.35m	Soil	113g Clay	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.003	BH02/0.0-0.05m	Soil	23g Sand, Soil	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.004	BH02/0.05-0.15m	Soil	67g Clay	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.005	BH02/0-0.3m	Soil	107g Clay, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.006	BH03/0.0-0.05m	Soil	148g Clay, Sand, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.007	BH03/0.2-0.3m	Soil	126g Clay, Sand, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.008	BH04/0.0-0.1m	Soil	133g Clay, Sand, Soil, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE250263.009	BH04/0.1-0.2m	Soil	123g Clay, Soil, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE250263.010	BH05/0.0-0.05m	Soil	210g Clay, Sand, Soil, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE250263.011	BH05/0.5m	Soil	168g Clay, Soil, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.012	BH06/0.0-0.05m	Soil	82g Clay, Rocks, Plant Matter	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.013	BH06/0.1-0.2m	Soil	140g Clay, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.014	BH07/0.0-0.05m	Soil	119g Clay, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.015	BH07/0.3m	Soil	146g Clay, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.016	BH08/0.0-0.25m	Soil	92g Clay, Soil, Rocks, Plant Matter	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE250263.017	BH08/0.25-0/35m	Soil	182g Clay, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.018	BH09/0.1m	Soil	84g Clay, Soil, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE250263.019	BH10/0.1m	Soil	89g Clay, Sand, Rocks, Plant Matter	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE250263.020	BH10/0.1-0.2m	Soil	122g Clay, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.021	BH011/0-0.1m	Soil	182g Clay, Sand, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE250263.022	BH011/0.3-0.4m	Soil	111g Clay, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE250263.023	BH012/0.-0.1m	Soil	136g Clay, Soil, Rocks	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE250263.024	BH012/0.1-0.3m	Soil	47g Clay	30 Jun 2023	No Asbestos Found at RL of 0.1g/kg	<0.01



ANALYTICAL REPORT

SE250263 R0

RESULTS

Fibre ID in bulk materials				Method	AN602/AS4964
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Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE250263.025	P1-PACM 1	Other	60x40x15mm Cement Sheet Fragment	30 Jun 2023	No Asbestos Detected Organic Fibres Detected	
SE250263.026	P1-PACM 3	Other	50x50x5mm Cement Sheet Fragment	30 Jun 2023	Chrysotile Asbestos Detected	
SE250263.027	P2-PACM 1	Other	65x40x8mm Cement Sheet Fragment	30 Jun 2023	Chrysotile Asbestos Detected	

METHOD

METHODOLOGY SUMMARY

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

FOOTNOTES

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

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

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

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

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

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

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

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

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

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Project **10791EV.P.402-Wallgrove Business Park**
Order Number **10791EV.P.402**
Samples 29

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SGS Reference **SE250263 R0**
Date Received 4/7/2023
Date Reported 11/7/2023

COMMENTS

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

Sample #25: No trace asbestos fibres detected using trace analysis technique.

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

Sample #3,4,24: A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Sample #23: A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam and Yusuf Kuthupudin

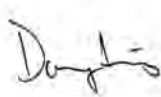
SIGNATORIES



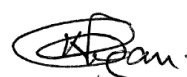
Akheeqar BENIAMEN
Chemist



Bennet LO
Senior Chemist



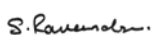
Dong LIANG
Metals/Inorganics Team Leader



Kamrul AHSAN
Senior Chemist



Ly Kim HA
Organic Section Head



Ravee SIVASUBRAMANIAM
Hygiene Team Leader



Shane MCDERMOTT
Inorganic/Metals Chemist



ANALYTICAL RESULTS

SE250263 R0

VOC's in Soil [AN433] Tested: 7/7/2023

PARAMETER	UOM	LOR	BH01/0.0-0.05m	BH02/0.0-0.05m	BH03/0.0-0.05m	BH04/0.0-0.1m	BH05/0.0-0.05m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.001	30/6/2023 SE250263.003	30/6/2023 SE250263.006	30/6/2023 SE250263.008	30/6/2023 SE250263.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH06/0.0-0.05m	BH07/0.0-0.05m	BH08/0.0-0.25m	BH09/0.1m	BH10/0.1m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.012	30/6/2023 SE250263.014	30/6/2023 SE250263.016	30/6/2023 SE250263.018	30/6/2023 SE250263.019
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH011/0-0.1m	BH011/0.3-0.4m	BH012/0-0.1m	Trip Blank	Trip Spike
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.021	30/6/2023 SE250263.022	30/6/2023 SE250263.023	30/6/2023 SE250263.028	30/6/2023 SE250263.029
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[101%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[105%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[100%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	[99%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[101%]
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	-
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	-
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-



ANALYTICAL RESULTS

SE250263 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 7/7/2023

			BH01/0.0-0.05m	BH02/0.0-0.05m	BH03/0.0-0.05m	BH04/0.0-0.1m	BH05/0.0-0.05m
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2023	30/6/2023	30/6/2023	30/6/2023	30/6/2023
PARAMETER	UOM	LOR	SE250263.001	SE250263.003	SE250263.006	SE250263.008	SE250263.010
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			BH06/0.0-0.05m	BH07/0.0-0.05m	BH08/0.0-0.25m	BH09/0.1m	BH10/0.1m
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2023	30/6/2023	30/6/2023	30/6/2023	30/6/2023
PARAMETER	UOM	LOR	SE250263.012	SE250263.014	SE250263.016	SE250263.018	SE250263.019
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			BH011/0-0.1m	BH011/0.3-0.4m	BH012/0.-0.1m
			SOIL	SOIL	SOIL
			-	-	-
			30/6/2023	30/6/2023	30/6/2023
PARAMETER	UOM	LOR	SE250263.021	SE250263.022	SE250263.023
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25



ANALYTICAL RESULTS

SE250263 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 7/7/2023

PARAMETER	UOM	LOR	BH01/0.0-0.05m	BH02/0.0-0.05m	BH03/0.0-0.05m	BH04/0.0-0.1m	BH05/0.0-0.05m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.001	30/6/2023 SE250263.003	30/6/2023 SE250263.006	30/6/2023 SE250263.008	30/6/2023 SE250263.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH06/0.0-0.05m	BH07/0.0-0.05m	BH08/0.0-0.25m	BH09/0.1m	BH10/0.1m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.012	30/6/2023 SE250263.014	30/6/2023 SE250263.016	30/6/2023 SE250263.018	30/6/2023 SE250263.019
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	88	62
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	100	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH011/0-0.1m	BH011/0.3-0.4m	BH012/0.-0.1m
			SOIL	SOIL	SOIL
			30/6/2023 SE250263.021	30/6/2023 SE250263.022	30/6/2023 SE250263.023
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	59
TRH C29-C36	mg/kg	45	<45	<45	76
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	110
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	130
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210



ANALYTICAL RESULTS

SE250263 R0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 7/7/2023

PARAMETER	UOM	LOR	BH01/0.0-0.05m	BH02/0.0-0.05m	BH03/0.0-0.05m	BH04/0.0-0.1m	BH05/0.0-0.05m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.001	30/6/2023 SE250263.003	30/6/2023 SE250263.006	30/6/2023 SE250263.008	30/6/2023 SE250263.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	1.2	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	1.2	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH06/0.0-0.05m	BH07/0.0-0.05m	BH08/0.0-0.25m	BH09/0.1m	BH10/0.1m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.012	30/6/2023 SE250263.014	30/6/2023 SE250263.016	30/6/2023 SE250263.018	30/6/2023 SE250263.019
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	0.1
Pyrene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8



ANALYTICAL RESULTS

SE250263 R0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 7/7/2023 (continued)

PARAMETER	UOM	LOR	BH011/0-0.1m	BH011/0.3-0.4m	BH012/0.-0.1m
			SOIL	SOIL	SOIL
			- 30/6/2023 SE250263.021	- 30/6/2023 SE250263.022	- 30/6/2023 SE250263.023
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	0.2	<0.1	<0.1
Pyrene	mg/kg	0.1	0.2	<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



ANALYTICAL RESULTS

SE250263 R0

OC Pesticides in Soil [AN420] Tested: 7/7/2023

PARAMETER	UOM	LOR	BH01/0.0-0.05m	BH02/0.0-0.05m	BH03/0.0-0.05m	BH05/0.0-0.05m	BH06/0.0-0.05m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.001	30/6/2023 SE250263.003	30/6/2023 SE250263.006	30/6/2023 SE250263.010	30/6/2023 SE250263.012
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1



ANALYTICAL RESULTS

SE250263 R0

OC Pesticides in Soil [AN420] Tested: 7/7/2023 (continued)

PARAMETER	UOM	LOR	BH07/0.0-0.05m	BH09/0.1m	BH10/0.1m	BH011/0-0.1m	BH012/0.-0.1m
			SOIL - 30/6/2023 SE250263.014	SOIL - 30/6/2023 SE250263.018	SOIL - 30/6/2023 SE250263.019	SOIL - 30/6/2023 SE250263.021	SOIL - 30/6/2023 SE250263.023
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1



ANALYTICAL RESULTS

SE250263 R0

PCBs in Soil [AN420] Tested: 7/7/2023

			BH01/0.0-0.05m	BH02/0.0-0.05m	BH03/0.0-0.05m	BH05/0.0-0.05m	BH06/0.0-0.05m
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2023	30/6/2023	30/6/2023	30/6/2023	30/6/2023
PARAMETER	UOM	LOR	SE250263.001	SE250263.003	SE250263.006	SE250263.010	SE250263.012
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

			BH07/0.0-0.05m	BH09/0.1m	BH10/0.1m	BH011/0-0.1m	BH012/0.-0.1m
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2023	30/6/2023	30/6/2023	30/6/2023	30/6/2023
PARAMETER	UOM	LOR	SE250263.014	SE250263.018	SE250263.019	SE250263.021	SE250263.023
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1



ANALYTICAL RESULTS

SE250263 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 7/7/2023

PARAMETER	UOM	LOR	BH01/0.0-0.05m	BH01/0.25-0.35m	BH02/0.0-0.05m	BH02/0.05-0.15m	BH03/0.0-0.05m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.001	30/6/2023 SE250263.002	30/6/2023 SE250263.003	30/6/2023 SE250263.004	30/6/2023 SE250263.006
Arsenic, As	mg/kg	1	7	8	9	11	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	19	20	22	18
Copper, Cu	mg/kg	0.5	21	21	7.8	17	13
Lead, Pb	mg/kg	1	36	13	18	11	19
Nickel, Ni	mg/kg	0.5	9.1	11	5.6	12	11
Zinc, Zn	mg/kg	2	48	46	99	30	29

PARAMETER	UOM	LOR	BH03/0.2-0.3m	BH04/0.0-0.1m	BH04/0.1-0.2m	BH05/0.0-0.05m	BH05/0.5m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.007	30/6/2023 SE250263.008	30/6/2023 SE250263.009	30/6/2023 SE250263.010	30/6/2023 SE250263.011
Arsenic, As	mg/kg	1	13	10	6	7	9
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	27	25	20	16	19
Copper, Cu	mg/kg	0.5	26	14	25	11	17
Lead, Pb	mg/kg	1	12	17	14	14	7
Nickel, Ni	mg/kg	0.5	21	11	16	8.6	8.1
Zinc, Zn	mg/kg	2	61	34	49	29	32

PARAMETER	UOM	LOR	BH06/0.0-0.05m	BH06/0.1-0.2m	BH07/0.0-0.05m	BH07/0.3m	BH08/0.0-0.25m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.012	30/6/2023 SE250263.013	30/6/2023 SE250263.014	30/6/2023 SE250263.015	30/6/2023 SE250263.016
Arsenic, As	mg/kg	1	10	10	8	7	9
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	20	20	17	19	21
Copper, Cu	mg/kg	0.5	25	20	27	23	31
Lead, Pb	mg/kg	1	30	24	39	16	18
Nickel, Ni	mg/kg	0.5	12	12	13	13	10
Zinc, Zn	mg/kg	2	64	43	84	48	41

PARAMETER	UOM	LOR	BH08/0.25-0/35m	BH09/0.1m	BH10/0.1m	BH10/0.1-0.2m	BH11/0-0.1m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.017	30/6/2023 SE250263.018	30/6/2023 SE250263.019	30/6/2023 SE250263.020	30/6/2023 SE250263.021
Arsenic, As	mg/kg	1	10	6	6	5	8
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	22	14	13	18	25
Copper, Cu	mg/kg	0.5	34	16	11	24	17
Lead, Pb	mg/kg	1	13	21	22	15	30
Nickel, Ni	mg/kg	0.5	14	8.6	6.7	11	6.4
Zinc, Zn	mg/kg	2	46	64	30	49	49



ANALYTICAL RESULTS

SE250263 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 7/7/2023

			BH011/0.3-0.4m	BH012/0.-0.1m	BH012/0.1-0.3m
			SOIL	SOIL	SOIL
			-	-	-
			30/6/2023	30/6/2023	30/6/2023
			SE250263.022	SE250263.023	SE250263.024
PARAMETER	UOM	LOR			
Arsenic, As	mg/kg	1	7	6	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	29	20
Copper, Cu	mg/kg	0.5	17	25	24
Lead, Pb	mg/kg	1	15	24	18
Nickel, Ni	mg/kg	0.5	6.1	22	13
Zinc, Zn	mg/kg	2	26	69	43



ANALYTICAL RESULTS

SE250263 R0

Mercury in Soil [AN312] Tested: 7/7/2023

			BH01/0.0-0.05m	BH01/0.25-0.35m	BH02/0.0-0.05m	BH02/0.05-0.15m	BH03/0.0-0.05m
			SOIL - 30/6/2023 SE250263.001	SOIL - 30/6/2023 SE250263.002	SOIL - 30/6/2023 SE250263.003	SOIL - 30/6/2023 SE250263.004	SOIL - 30/6/2023 SE250263.006
PARAMETER	UOM	LOR					
Mercury	mg/kg	0.05	0.06	<0.05	<0.05	<0.05	<0.05

			BH03/0.2-0.3m	BH04/0.0-0.1m	BH04/0.1-0.2m	BH05/0.0-0.05m	BH05/0.5m
			SOIL - 30/6/2023 SE250263.007	SOIL - 30/6/2023 SE250263.008	SOIL - 30/6/2023 SE250263.009	SOIL - 30/6/2023 SE250263.010	SOIL - 30/6/2023 SE250263.011
PARAMETER	UOM	LOR					
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			BH06/0.0-0.05m	BH06/0.1-0.2m	BH07/0.0-0.05m	BH07/0.3m	BH08/0.0-0.25m
			SOIL - 30/6/2023 SE250263.012	SOIL - 30/6/2023 SE250263.013	SOIL - 30/6/2023 SE250263.014	SOIL - 30/6/2023 SE250263.015	SOIL - 30/6/2023 SE250263.016
PARAMETER	UOM	LOR					
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			BH08/0.25-0/35m	BH09/0.1m	BH10/0.1m	BH010/0.1-0.2m	BH011/0-0.1m
			SOIL - 30/6/2023 SE250263.017	SOIL - 30/6/2023 SE250263.018	SOIL - 30/6/2023 SE250263.019	SOIL - 30/6/2023 SE250263.020	SOIL - 30/6/2023 SE250263.021
PARAMETER	UOM	LOR					
Mercury	mg/kg	0.05	<0.05	0.05	<0.05	<0.05	0.06

			BH011/0.3-0.4m	BH012/0.-0.1m	BH012/0.1-0.3m
			SOIL - 30/6/2023 SE250263.022	SOIL - 30/6/2023 SE250263.023	SOIL - 30/6/2023 SE250263.024
PARAMETER	UOM	LOR			
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05



ANALYTICAL RESULTS

SE250263 R0

Moisture Content [AN002] Tested: 7/7/2023

PARAMETER	UOM	LOR	BH01/0.0-0.05m	BH01/0.25-0.35m	BH02/0.0-0.05m	BH02/0.05-0.15m	BH03/0.0-0.05m
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2023 SE250263.001	30/6/2023 SE250263.002	30/6/2023 SE250263.003	30/6/2023 SE250263.004	30/6/2023 SE250263.006
% Moisture	%w/w	1	20.6	18.4	16.9	17.7	14.3

PARAMETER	UOM	LOR	BH03/0.2-0.3m	BH04/0.0-0.1m	BH04/0.1-0.2m	BH05/0.0-0.05m	BH05/0.5m
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2023 SE250263.007	30/6/2023 SE250263.008	30/6/2023 SE250263.009	30/6/2023 SE250263.010	30/6/2023 SE250263.011
% Moisture	%w/w	1	19.5	13.7	13.7	16.6	13.5

PARAMETER	UOM	LOR	BH06/0.0-0.05m	BH06/0.1-0.2m	BH07/0.0-0.05m	BH07/0.3m	BH08/0.0-0.25m
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2023 SE250263.012	30/6/2023 SE250263.013	30/6/2023 SE250263.014	30/6/2023 SE250263.015	30/6/2023 SE250263.016
% Moisture	%w/w	1	26.0	20.2	33.3	19.7	18.5

PARAMETER	UOM	LOR	BH08/0.25-0/35m	BH09/0.1m	BH10/0.1m	BH10/0.1-0.2m	BH11/0-0.1m
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			30/6/2023 SE250263.017	30/6/2023 SE250263.018	30/6/2023 SE250263.019	30/6/2023 SE250263.020	30/6/2023 SE250263.021
% Moisture	%w/w	1	20.5	13.7	13.9	16.1	14.2

PARAMETER	UOM	LOR	BH011/0.3-0.4m	BH012/0.-0.1m	BH012/0.1-0.3m	Trip Blank
			SOIL	SOIL	SOIL	SOIL
			-	-	-	-
			30/6/2023 SE250263.022	30/6/2023 SE250263.023	30/6/2023 SE250263.024	30/6/2023 SE250263.028
% Moisture	%w/w	1	15.3	10.9	12.5	<1.0



ANALYTICAL RESULTS

SE250263 R0

Fibre Identification in soil [AS4964/AN602] Tested: 7/7/2023

PARAMETER	UOM	LOR	BH01/0.0-0.05m	BH01/0.25-0.35m	BH02/0.0-0.05m	BH02/0.05-0.15m	BH02/0.0-0.3m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.001	30/6/2023 SE250263.002	30/6/2023 SE250263.003	30/6/2023 SE250263.004	30/6/2023 SE250263.005
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH03/0.0-0.05m	BH03/0.2-0.3m	BH04/0.0-0.1m	BH04/0.1-0.2m	BH05/0.0-0.05m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.006	30/6/2023 SE250263.007	30/6/2023 SE250263.008	30/6/2023 SE250263.009	30/6/2023 SE250263.010
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH05/0.5m	BH06/0.0-0.05m	BH06/0.1-0.2m	BH07/0.0-0.05m	BH07/0.3m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.011	30/6/2023 SE250263.012	30/6/2023 SE250263.013	30/6/2023 SE250263.014	30/6/2023 SE250263.015
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH08/0.0-0.25m	BH08/0.25-0/35m	BH09/0.1m	BH10/0.1m	BH10/0.1-0.2m
			SOIL	SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.016	30/6/2023 SE250263.017	30/6/2023 SE250263.018	30/6/2023 SE250263.019	30/6/2023 SE250263.020
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH011/0-0.1m	BH011/0.3-0.4m	BH012/0.-0.1m	BH012/0.1-0.3m
			SOIL	SOIL	SOIL	SOIL
			30/6/2023 SE250263.021	30/6/2023 SE250263.022	30/6/2023 SE250263.023	30/6/2023 SE250263.024
Asbestos Detected	No unit	-	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01



ANALYTICAL RESULTS

SE250263 R0

Fibre ID in bulk materials [AN602/AS4964] Tested: 10/7/2023

			P1-PACM 1	P1-PACM 3	P2-PACM 1
			MATERIAL	MATERIAL	MATERIAL
			-	-	-
			30/6/2023	30/6/2023	30/6/2023
			SE250263.025	SE250263.026	SE250263.027
PARAMETER	UOM	LOR			
Asbestos Detected	No unit	-	No	Yes	Yes

METHOD

METHODOLOGY SUMMARY

AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by AAS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting.
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602/AS4964	The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

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

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

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

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

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

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

Note that in terms of units of radioactivity:

- 1 Bq is equivalent to 27 pCi
- 37 MBq is equivalent to 1 mCi

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE250263 R0

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Project **10791EV.P.402-Wallgrove Business Park**
Order Number **10791EV.P.402**
Samples 29

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SGS Reference **SE250263 R0**
Date Received 04 Jul 2023
Date Reported 11 Jul 2023

COMMENTS

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

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

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

Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	TRH (Total Recoverable Hydrocarbons) in Soil	4 items

SAMPLE SUMMARY

Sample counts by matrix	26 Soil, 3 Material	Type of documentation received	COC
Date documentation received	5/7/2023@12.53pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	2.6°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		



HOLDING TIME SUMMARY

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the 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/AS4964

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
P1-PACM 1	SE250263.025	LB284814	30 Jun 2023	04 Jul 2023	29 Jun 2024	10 Jul 2023	29 Jun 2024	11 Jul 2023
P1-PACM 3	SE250263.026	LB284814	30 Jun 2023	04 Jul 2023	29 Jun 2024	10 Jul 2023	29 Jun 2024	11 Jul 2023
P2-PACM 1	SE250263.027	LB284814	30 Jun 2023	04 Jul 2023	29 Jun 2024	10 Jul 2023	29 Jun 2024	11 Jul 2023

Fibre Identification in soil

Method: ME-(AU)-[ENV]AS4964/AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01/0.0-0.05m	SE250263.001	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH01/0.25-0.35m	SE250263.002	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH02/0.0-0.05m	SE250263.003	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH02/0.05-0.15m	SE250263.004	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH02/0.0-0.3m	SE250263.005	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH03/0.2-0.3m	SE250263.007	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH04/0.1-0.2m	SE250263.009	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH05/0.0-0.05m	SE250263.010	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH05/0.5m	SE250263.011	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH06/0.1-0.2m	SE250263.013	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH07/0.3m	SE250263.015	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH08/0.0-0.25m	SE250263.016	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH08/0.25-0/35m	SE250263.017	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH09/0.1m	SE250263.018	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH10/0.1m	SE250263.019	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH010/0.1-0.2m	SE250263.020	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023
BH012/0.1-0.3m	SE250263.024	LB284688	30 Jun 2023	04 Jul 2023	29 Jun 2024	07 Jul 2023	29 Jun 2024	11 Jul 2023

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01/0.0-0.05m	SE250263.001	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH01/0.25-0.35m	SE250263.002	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH02/0.0-0.05m	SE250263.003	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH02/0.05-0.15m	SE250263.004	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH03/0.2-0.3m	SE250263.007	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH04/0.1-0.2m	SE250263.009	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH05/0.0-0.05m	SE250263.010	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH05/0.5m	SE250263.011	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH06/0.1-0.2m	SE250263.013	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH07/0.3m	SE250263.015	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH08/0.0-0.25m	SE250263.016	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH08/0.25-0/35m	SE250263.017	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH09/0.1m	SE250263.018	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH10/0.1m	SE250263.019	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH010/0.1-0.2m	SE250263.020	LB284730	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284733	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284733	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284733	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023
BH012/0.1-0.3m	SE250263.024	LB284733	30 Jun 2023	04 Jul 2023	28 Jul 2023	07 Jul 2023	28 Jul 2023	11 Jul 2023

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01/0.0-0.05m	SE250263.001	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH01/0.25-0.35m	SE250263.002	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023

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

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

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

Moisture Content (continued)

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH02/0.0-0.05m	SE250263.003	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH02/0.05-0.15m	SE250263.004	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH03/0.2-0.3m	SE250263.007	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH04/0.1-0.2m	SE250263.009	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH05/0.0-0.05m	SE250263.010	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH05/0.5m	SE250263.011	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH06/0.1-0.2m	SE250263.013	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH07/0.3m	SE250263.015	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH08/0.0-0.25m	SE250263.016	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH08/0.25-0/35m	SE250263.017	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH09/0.1m	SE250263.018	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH10/0.1m	SE250263.019	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH010/0.1-0.2m	SE250263.020	LB284736	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284737	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284737	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284737	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
BH012/0.1-0.3m	SE250263.024	LB284737	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023
Trip Blank	SE250263.028	LB284737	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	12 Jul 2023	11 Jul 2023

OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01/0.0-0.05m	SE250263.001	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH02/0.0-0.05m	SE250263.003	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH05/0.0-0.05m	SE250263.010	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH08/0.0-0.25m	SE250263.016	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH09/0.1m	SE250263.018	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH10/0.1m	SE250263.019	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01/0.0-0.05m	SE250263.001	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH02/0.0-0.05m	SE250263.003	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH05/0.0-0.05m	SE250263.010	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH08/0.0-0.25m	SE250263.016	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH09/0.1m	SE250263.018	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH10/0.1m	SE250263.019	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023

PCBs in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01/0.0-0.05m	SE250263.001	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH02/0.0-0.05m	SE250263.003	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023



HOLDING TIME SUMMARY

SE250263 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
BH05/0.0-0.05m	SE250263.010	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH08/0.0-0.25m	SE250263.016	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH09/0.1m	SE250263.018	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH10/0.1m	SE250263.019	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023

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
BH01/0.0-0.05m	SE250263.001	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH01/0.25-0.35m	SE250263.002	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH02/0.0-0.05m	SE250263.003	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH02/0.05-0.15m	SE250263.004	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH03/0.2-0.3m	SE250263.007	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH04/0.1-0.2m	SE250263.009	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH05/0.0-0.05m	SE250263.010	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH05/0.5m	SE250263.011	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH06/0.1-0.2m	SE250263.013	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH07/0.3m	SE250263.015	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH08/0.0-0.25m	SE250263.016	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH08/0.25-0/35m	SE250263.017	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH09/0.1m	SE250263.018	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH10/0.1m	SE250263.019	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH010/0.1-0.2m	SE250263.020	LB284729	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284731	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284731	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284731	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023
BH012/0.1-0.3m	SE250263.024	LB284731	30 Jun 2023	04 Jul 2023	27 Dec 2023	07 Jul 2023	27 Dec 2023	11 Jul 2023

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
BH01/0.0-0.05m	SE250263.001	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH02/0.0-0.05m	SE250263.003	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH05/0.0-0.05m	SE250263.010	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH08/0.0-0.25m	SE250263.016	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH09/0.1m	SE250263.018	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH10/0.1m	SE250263.019	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284727	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	16 Aug 2023	11 Jul 2023

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01/0.0-0.05m	SE250263.001	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH02/0.0-0.05m	SE250263.003	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH05/0.0-0.05m	SE250263.010	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023



HOLDING TIME SUMMARY

SE250263 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.

VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH08/0.0-0.25m	SE250263.016	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH09/0.1m	SE250263.018	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH10/0.1m	SE250263.019	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
Trip Blank	SE250263.028	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
Trip Spike	SE250263.029	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01/0.0-0.05m	SE250263.001	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH02/0.0-0.05m	SE250263.003	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH03/0.0-0.05m	SE250263.006	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH04/0.0-0.1m	SE250263.008	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH05/0.0-0.05m	SE250263.010	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH06/0.0-0.05m	SE250263.012	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH07/0.0-0.05m	SE250263.014	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH08/0.0-0.25m	SE250263.016	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH09/0.1m	SE250263.018	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH10/0.1m	SE250263.019	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH011/0-0.1m	SE250263.021	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH011/0.3-0.4m	SE250263.022	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
BH012/0-0.1m	SE250263.023	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
Trip Blank	SE250263.028	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023
Trip Spike	SE250263.029	LB284728	30 Jun 2023	04 Jul 2023	14 Jul 2023	07 Jul 2023	14 Jul 2023	11 Jul 2023



SURROGATES

SE250263 R0

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH01/0.0-0.05m	SE250263.001	%	60 - 130%	91
	BH02/0.0-0.05m	SE250263.003	%	60 - 130%	84
	BH03/0.0-0.05m	SE250263.006	%	60 - 130%	89
	BH05/0.0-0.05m	SE250263.010	%	60 - 130%	89
	BH06/0.0-0.05m	SE250263.012	%	60 - 130%	88
	BH07/0.0-0.05m	SE250263.014	%	60 - 130%	92
	BH09/0.1m	SE250263.018	%	60 - 130%	89
	BH10/0.1m	SE250263.019	%	60 - 130%	88
	BH011/0-0.1m	SE250263.021	%	60 - 130%	90
	BH012/0-0.1m	SE250263.023	%	60 - 130%	85

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH01/0.0-0.05m	SE250263.001	%	70 - 130%	91
	BH02/0.0-0.05m	SE250263.003	%	70 - 130%	87
	BH03/0.0-0.05m	SE250263.006	%	70 - 130%	87
	BH04/0.0-0.1m	SE250263.008	%	70 - 130%	90
	BH05/0.0-0.05m	SE250263.010	%	70 - 130%	91
	BH06/0.0-0.05m	SE250263.012	%	70 - 130%	88
	BH07/0.0-0.05m	SE250263.014	%	70 - 130%	92
	BH08/0.0-0.25m	SE250263.016	%	70 - 130%	90
	BH09/0.1m	SE250263.018	%	70 - 130%	89
	BH10/0.1m	SE250263.019	%	70 - 130%	91
	BH011/0-0.1m	SE250263.021	%	70 - 130%	88
	BH011/0.3-0.4m	SE250263.022	%	70 - 130%	85
	BH012/0-0.1m	SE250263.023	%	70 - 130%	85
d14-p-terphenyl (Surrogate)	BH01/0.0-0.05m	SE250263.001	%	70 - 130%	107
	BH02/0.0-0.05m	SE250263.003	%	70 - 130%	105
	BH03/0.0-0.05m	SE250263.006	%	70 - 130%	111
	BH04/0.0-0.1m	SE250263.008	%	70 - 130%	111
	BH05/0.0-0.05m	SE250263.010	%	70 - 130%	111
	BH06/0.0-0.05m	SE250263.012	%	70 - 130%	110
	BH07/0.0-0.05m	SE250263.014	%	70 - 130%	113
	BH08/0.0-0.25m	SE250263.016	%	70 - 130%	112
	BH09/0.1m	SE250263.018	%	70 - 130%	107
	BH10/0.1m	SE250263.019	%	70 - 130%	110
	BH011/0-0.1m	SE250263.021	%	70 - 130%	104
	BH011/0.3-0.4m	SE250263.022	%	70 - 130%	104
	BH012/0-0.1m	SE250263.023	%	70 - 130%	105
d5-nitrobenzene (Surrogate)	BH01/0.0-0.05m	SE250263.001	%	70 - 130%	89
	BH02/0.0-0.05m	SE250263.003	%	70 - 130%	89
	BH03/0.0-0.05m	SE250263.006	%	70 - 130%	88
	BH04/0.0-0.1m	SE250263.008	%	70 - 130%	89
	BH05/0.0-0.05m	SE250263.010	%	70 - 130%	91
	BH06/0.0-0.05m	SE250263.012	%	70 - 130%	90
	BH07/0.0-0.05m	SE250263.014	%	70 - 130%	90
	BH08/0.0-0.25m	SE250263.016	%	70 - 130%	89
	BH09/0.1m	SE250263.018	%	70 - 130%	86
	BH10/0.1m	SE250263.019	%	70 - 130%	90
	BH011/0-0.1m	SE250263.021	%	70 - 130%	88
	BH011/0.3-0.4m	SE250263.022	%	70 - 130%	84
	BH012/0-0.1m	SE250263.023	%	70 - 130%	87

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH01/0.0-0.05m	SE250263.001	%	60 - 130%	92
	BH02/0.0-0.05m	SE250263.003	%	60 - 130%	85
	BH03/0.0-0.05m	SE250263.006	%	60 - 130%	90
	BH05/0.0-0.05m	SE250263.010	%	60 - 130%	89
	BH06/0.0-0.05m	SE250263.012	%	60 - 130%	89
	BH07/0.0-0.05m	SE250263.014	%	60 - 130%	93
	BH09/0.1m	SE250263.018	%	60 - 130%	90



SURROGATES

SE250263 R0

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

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

PCBs in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH10/0.1m	SE250263.019	%	60 - 130%	89
	BH011/0-0.1m	SE250263.021	%	60 - 130%	90
	BH012/0-0.1m	SE250263.023	%	60 - 130%	86

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH01/0.0-0.05m	SE250263.001	%	60 - 130%	82
	BH02/0.0-0.05m	SE250263.003	%	60 - 130%	83
	BH03/0.0-0.05m	SE250263.006	%	60 - 130%	73
	BH04/0.0-0.1m	SE250263.008	%	60 - 130%	77
	BH05/0.0-0.05m	SE250263.010	%	60 - 130%	76
	BH06/0.0-0.05m	SE250263.012	%	60 - 130%	75
	BH07/0.0-0.05m	SE250263.014	%	60 - 130%	77
	BH08/0.0-0.25m	SE250263.016	%	60 - 130%	83
	BH09/0.1m	SE250263.018	%	60 - 130%	76
	BH10/0.1m	SE250263.019	%	60 - 130%	81
	BH011/0-0.1m	SE250263.021	%	60 - 130%	72
	BH011/0.3-0.4m	SE250263.022	%	60 - 130%	77
	BH012/0-0.1m	SE250263.023	%	60 - 130%	84
d4-1,2-dichloroethane (Surrogate)	Trip Blank	SE250263.028	%	60 - 130%	86
	Trip Spike	SE250263.029	%	60 - 130%	94
	BH01/0.0-0.05m	SE250263.001	%	60 - 130%	88
	BH02/0.0-0.05m	SE250263.003	%	60 - 130%	91
	BH03/0.0-0.05m	SE250263.006	%	60 - 130%	85
	BH04/0.0-0.1m	SE250263.008	%	60 - 130%	91
	BH05/0.0-0.05m	SE250263.010	%	60 - 130%	87
	BH06/0.0-0.05m	SE250263.012	%	60 - 130%	87
	BH07/0.0-0.05m	SE250263.014	%	60 - 130%	91
	BH08/0.0-0.25m	SE250263.016	%	60 - 130%	98
	BH09/0.1m	SE250263.018	%	60 - 130%	90
	BH10/0.1m	SE250263.019	%	60 - 130%	96
	BH011/0-0.1m	SE250263.021	%	60 - 130%	77
d8-toluene (Surrogate)	BH011/0.3-0.4m	SE250263.022	%	60 - 130%	90
	BH012/0-0.1m	SE250263.023	%	60 - 130%	92
	Trip Blank	SE250263.028	%	60 - 130%	100
	Trip Spike	SE250263.029	%	60 - 130%	89
	BH01/0.0-0.05m	SE250263.001	%	60 - 130%	95
	BH02/0.0-0.05m	SE250263.003	%	60 - 130%	98
	BH03/0.0-0.05m	SE250263.006	%	60 - 130%	90
	BH04/0.0-0.1m	SE250263.008	%	60 - 130%	99
	BH05/0.0-0.05m	SE250263.010	%	60 - 130%	94
	BH06/0.0-0.05m	SE250263.012	%	60 - 130%	94
	BH07/0.0-0.05m	SE250263.014	%	60 - 130%	99
	BH08/0.0-0.25m	SE250263.016	%	60 - 130%	106
	BH09/0.1m	SE250263.018	%	60 - 130%	98
Volatile Petroleum Hydrocarbons in Soil	BH10/0.1m	SE250263.019	%	60 - 130%	103
	BH011/0-0.1m	SE250263.021	%	60 - 130%	80
	BH011/0.3-0.4m	SE250263.022	%	60 - 130%	95
	BH012/0-0.1m	SE250263.023	%	60 - 130%	103
	Trip Blank	SE250263.028	%	60 - 130%	110
	Trip Spike	SE250263.029	%	60 - 130%	97
	BH01/0.0-0.05m	SE250263.001	%	60 - 130%	82
	BH02/0.0-0.05m	SE250263.003	%	60 - 130%	83
	BH03/0.0-0.05m	SE250263.006	%	60 - 130%	73
	BH04/0.0-0.1m	SE250263.008	%	60 - 130%	77
	BH05/0.0-0.05m	SE250263.010	%	60 - 130%	76
	BH06/0.0-0.05m	SE250263.012	%	60 - 130%	75
	BH07/0.0-0.05m	SE250263.014	%	60 - 130%	77
	BH08/0.0-0.25m	SE250263.016	%	60 - 130%	83

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH01/0.0-0.05m	SE250263.001	%	60 - 130%	82
	BH02/0.0-0.05m	SE250263.003	%	60 - 130%	83
	BH03/0.0-0.05m	SE250263.006	%	60 - 130%	73
	BH04/0.0-0.1m	SE250263.008	%	60 - 130%	77
	BH05/0.0-0.05m	SE250263.010	%	60 - 130%	76
	BH06/0.0-0.05m	SE250263.012	%	60 - 130%	75
	BH07/0.0-0.05m	SE250263.014	%	60 - 130%	77
	BH08/0.0-0.25m	SE250263.016	%	60 - 130%	83

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

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

Volatile Petroleum Hydrocarbons in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH09/0.1m	SE250263.018	%	60 - 130%	76
	BH10/0.1m	SE250263.019	%	60 - 130%	81
	BH011/0.0-0.1m	SE250263.021	%	60 - 130%	72
	BH011/0.3-0.4m	SE250263.022	%	60 - 130%	77
	BH012/0.0-0.1m	SE250263.023	%	60 - 130%	84
d4-1,2-dichloroethane (Surrogate)	BH01/0.0-0.05m	SE250263.001	%	60 - 130%	88
	BH02/0.0-0.05m	SE250263.003	%	60 - 130%	91
	BH03/0.0-0.05m	SE250263.006	%	60 - 130%	85
	BH04/0.0-0.1m	SE250263.008	%	60 - 130%	91
	BH05/0.0-0.05m	SE250263.010	%	60 - 130%	87
	BH06/0.0-0.05m	SE250263.012	%	60 - 130%	87
	BH07/0.0-0.05m	SE250263.014	%	60 - 130%	91
	BH08/0.0-0.25m	SE250263.016	%	60 - 130%	98
	BH09/0.1m	SE250263.018	%	60 - 130%	90
	BH10/0.1m	SE250263.019	%	60 - 130%	96
	BH011/0.0-0.1m	SE250263.021	%	60 - 130%	77
	BH011/0.3-0.4m	SE250263.022	%	60 - 130%	90
	BH012/0.0-0.1m	SE250263.023	%	60 - 130%	92
d8-toluene (Surrogate)	BH01/0.0-0.05m	SE250263.001	%	60 - 130%	95
	BH02/0.0-0.05m	SE250263.003	%	60 - 130%	98
	BH03/0.0-0.05m	SE250263.006	%	60 - 130%	90
	BH04/0.0-0.1m	SE250263.008	%	60 - 130%	99
	BH05/0.0-0.05m	SE250263.010	%	60 - 130%	94
	BH06/0.0-0.05m	SE250263.012	%	60 - 130%	94
	BH07/0.0-0.05m	SE250263.014	%	60 - 130%	99
	BH08/0.0-0.25m	SE250263.016	%	60 - 130%	106
	BH09/0.1m	SE250263.018	%	60 - 130%	98
	BH10/0.1m	SE250263.019	%	60 - 130%	103
	BH011/0.0-0.1m	SE250263.021	%	60 - 130%	80
	BH011/0.3-0.4m	SE250263.022	%	60 - 130%	95
	BH012/0.0-0.1m	SE250263.023	%	60 - 130%	103



METHOD BLANKS

SE250263 R0

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

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

Mercury in Soil

Method: ME-(AU)-ENVJAN312

Sample Number	Parameter	Units	LOR	Result
LB284730.001	Mercury	mg/kg	0.05	<0.05
LB284733.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB284727.001	Alpha BHC	mg/kg	0.1	<0.1
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Lindane (gamma BHC)	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.2	<0.2
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	Endrin aldehyde	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endrin ketone	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	98

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB284727.001	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)	%	-	91
	2-fluorobiphenyl (Surrogate)	%	-	97
	d14-p-terphenyl (Surrogate)	%	-	110

PCBs in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB284727.001	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



METHOD BLANKS

SE250263 R0

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

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

PCBs in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB284727.001	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	TCMX (Surrogate)	%	-	99

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

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

Sample Number	Parameter	Units	LOR	Result
LB284729.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0
LB284731.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB284727.001	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
LB284728.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	92
		d8-toluene (Surrogate)	%	-	124
		Bromofluorobenzene (Surrogate)	%	-	95
	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
LB284728.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-



DUPLICATES

SE250263 R0

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

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

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

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

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

Mercury in Soil

Method: ME-(AU)-[ENV]JAN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE250158.006	LB284733.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE250158.015	LB284733.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE250263.011	LB284730.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE250263.020	LB284730.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]JAN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE250158.005	LB284737.011	% Moisture	%w/w	1	17.6	15.1	36	15
SE250158.015	LB284737.022	% Moisture	%w/w	1	15.2	15.8	36	4
SE250263.011	LB284736.011	% Moisture	%w/w	1	13.5	13.9	37	3
SE250263.020	LB284736.021	% Moisture	%w/w	1	16.1	15.7	36	3

OC Pesticides in Soil

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE250263.019	LB284727.014	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
SE250263.023	LB284727.027	Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates						
		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.13	30	1
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0

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

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

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

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

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

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE250263.023	LB284727.027	p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.13	30	3

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE250263.019	LB284727.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	0.1	<0.1	129	8
		Pyrene	mg/kg	0.1	0.1	<0.1	127	8
		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/2*	mg/kg	0.2	<0.2	<0.2	175	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	123	73
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	30	1
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.6	30	3
SE250263.023	LB284727.027	Naphthalene	mg/kg	0.1	<0.1	0.0064489909	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	0.0246204208	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	0.0188016025	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	0.0113659385	200	0
		Acenaphthene	mg/kg	0.1	<0.1	0.0021222066	200	0
		Fluorene	mg/kg	0.1	<0.1	0.0090466050	200	0
		Phenanthrene	mg/kg	0.1	<0.1	0.0642927987	189	0
		Anthracene	mg/kg	0.1	<0.1	0.0147003308	200	0
		Fluoranthene	mg/kg	0.1	<0.1	0.1030050225	131	3
		Pyrene	mg/kg	0.1	<0.1	0.1016631669	130	2
		Benzo(a)anthracene	mg/kg	0.1	<0.1	0.0383928011	200	0
		Chrysene	mg/kg	0.1	<0.1	0.0497624915	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.0639701142	190	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.0274054247	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	0.0497976600	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.0413340308	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0.0072584113	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.0503410108	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	0	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	0.121	175	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	0.242	134	0

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

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

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE250263.023	LB284727.027	Total PAH (18)	mg/kg	0.8	<0.8	0.2046681895	128	69
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4258314760	30	2
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4356304229	30	3
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5057282098	30	4

PCBs in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE250263.019	LB284727.014	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
	Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	1
SE250263.023	LB284727.027	Arochlor 1016	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	0	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	0	200	0
	Surrogates	TCMX (Surrogates)	mg/kg	-	0	0.1320130188	30	3

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 %
SE250158.006	LB284731.014	Arsenic, As	mg/kg	1	3	3	62	3
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	22	22	32	2
		Copper, Cu	mg/kg	0.5	36	36	31	1
		Nickel, Ni	mg/kg	0.5	4.5	4.4	41	1
		Lead, Pb	mg/kg	1	8	8	43	3
		Zinc, Zn	mg/kg	2	14	14	44	1
SE250158.015	LB284731.024	Arsenic, As	mg/kg	1	3	3	65	10
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	20	20	33	0
		Copper, Cu	mg/kg	0.5	25	24	32	4
		Nickel, Ni	mg/kg	0.5	5.0	5.3	40	5
		Lead, Pb	mg/kg	1	7	7	44	4
		Zinc, Zn	mg/kg	2	16	18	42	13
SE250263.011	LB284729.014	Arsenic, As	mg/kg	1	9	9	41	6
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	19	18	33	1
		Copper, Cu	mg/kg	0.5	17	17	33	2
		Nickel, Ni	mg/kg	0.5	8.1	8.2	36	1
		Lead, Pb	mg/kg	1	7	7	44	2
		Zinc, Zn	mg/kg	2	32	33	36	4
SE250263.020	LB284729.024	Arsenic, As	mg/kg	1	5	4	53	6
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	18	18	33	1
		Copper, Cu	mg/kg	0.5	24	26	32	7
		Nickel, Ni	mg/kg	0.5	11	12	34	3
		Lead, Pb	mg/kg	1	15	13	37	10
		Zinc, Zn	mg/kg	2	49	52	34	7

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$
The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$
Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

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

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

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %		
SE250263.019	LB284727.014	TRH C10-C14	mg/kg	20	<20	<20	200	0		
		TRH C15-C28	mg/kg	45	<45	<45	146	0		
		TRH C29-C36	mg/kg	45	62	<45	119	31		
		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	154	0		
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0		
		SE250263.023	LB284727.027	TRH C10-C14	mg/kg	20	<20	<20	200	0
				TRH C15-C28	mg/kg	45	59	<45	127	26
TRH C29-C36	mg/kg			45	76	62	95	19		
TRH C37-C40	mg/kg			100	<100	<100	200	0		
TRH C10-C36 Total	mg/kg			110	130	<110	142	20		
TRH >C10-C40 Total (F bands)	mg/kg			210	<210	<210	200	0		
TRH F Bands	TRH >C10-C16			mg/kg	25	<25	<25	197	0	
TRH >C10-C16 - Naphthalene (F2)	mg/kg			25	<25	<25	200	0		
TRH >C16-C34 (F3)	mg/kg			90	110	<90	124	22		
TRH >C34-C40 (F4)	mg/kg			120	<120	<120	200	0		

VOC's in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE250263.019	LB284728.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.6	9.5	50	1
			d8-toluene (Surrogate)	mg/kg	-	10.3	10.4	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.1	8.2	50	1
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE250263.019	LB284728.014	TRH C6-C10	mg/kg	25	<25	<25	200	0	
		TRH C6-C9	mg/kg	20	<20	<20	200	0	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.6	9.5	50	1
		d8-toluene (Surrogate)	mg/kg	-	10.3	10.4	50	1	
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.1	8.2	50	1	
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0	

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 %
LB284730.002	Mercury	mg/kg	0.05	0.23	0.2	80 - 120	117
LB284733.002	Mercury	mg/kg	0.05	0.22	0.2	80 - 120	111

OC Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB284727.002	Delta BHC	mg/kg	0.1	0.1	0.2	60 - 140	70
	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	75
	Aldrin	mg/kg	0.1	0.1	0.2	60 - 140	73
	Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	72
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	77
	p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	72
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.15	40 - 130

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB284727.002	Naphthalene	mg/kg	0.1	3.6	4	60 - 140	89	
	Acenaphthylene	mg/kg	0.1	3.6	4	60 - 140	90	
	Acenaphthene	mg/kg	0.1	3.8	4	60 - 140	95	
	Phenanthrene	mg/kg	0.1	3.6	4	60 - 140	90	
	Anthracene	mg/kg	0.1	3.6	4	60 - 140	91	
	Fluoranthene	mg/kg	0.1	3.5	4	60 - 140	89	
	Pyrene	mg/kg	0.1	4.1	4	60 - 140	102	
	Benzo(a)pyrene	mg/kg	0.1	3.4	4	60 - 140	85	
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	80
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	85
d14-p-terphenyl (Surrogate)		ma/ka	-	0.5	0.5	40 - 130	104	

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB284727.002	Arochlor 1260	mg/kg	0.2	0.3	0.4	60 - 140	86

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 %
LB284729.002	Arsenic, As	mg/kg	1	360	318.22	80 - 120	112
	Cadmium, Cd	mg/kg	0.3	4.5	4.81	70 - 130	94
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	108
	Copper, Cu	mg/kg	0.5	330	290	80 - 120	114
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	106
	Lead, Pb	mg/kg	1	97	89.9	80 - 120	108
	Zinc, Zn	mg/kg	2	290	273	80 - 120	107
LB284731.002	Arsenic, As	mg/kg	1	360	318.22	80 - 120	114
	Cadmium, Cd	mg/kg	0.3	4.3	4.81	70 - 130	89
	Chromium, Cr	mg/kg	0.5	42	38.31	80 - 120	110
	Copper, Cu	mg/kg	0.5	330	290	80 - 120	113
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	105
	Lead, Pb	mg/kg	1	97	89.9	80 - 120	108
	Zinc, Zn	mg/kg	2	290	273	80 - 120	105

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB284727.002	TRH C10-C14	mg/kg	20	49	40	60 - 140	122	
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	107	
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	103	
	TRH F Bands	TRH >C10-C16	mg/kg	25	48	40	60 - 140	119
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	103
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	97

VOC's in Soil

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

Sample Number	Parameter	Units	LOR
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LABORATORY CONTROL SAMPLES

SE250263 R0

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

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

VOC's in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB284728.002	Monocyclic	Benzene	mg/kg	0.1	4.9	5	60 - 140 98
	Aromatic	Toluene	mg/kg	0.1	4.8	5	60 - 140 95
		Ethylbenzene	mg/kg	0.1	4.8	5	60 - 140 96
		m/p-xylene	mg/kg	0.2	9.5	10	60 - 140 95
		o-xylene	mg/kg	0.1	4.8	5	60 - 140 97
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.4	10	70 - 130 104
		d8-toluene (Surrogate)	mg/kg	-	11.1	10	70 - 130 111
		Bromofluorobenzene (Surrogate)	mg/kg	-	11.0	10	70 - 130 110

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB284728.002	TRH C6-C10	mg/kg	25	83	92.5	60 - 140	90	
	TRH C6-C9	mg/kg	20	72	80	60 - 140	90	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.4	10	70 - 130	104
		Bromofluorobenzene (Surrogate)	mg/kg	-	11.0	10	70 - 130	110
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	ma/ka	25	54	62.5	60 - 140	87

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

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

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE250263.001	LB284730.004	Mercury	mg/kg	0.05	0.27	0.06	0.2	107
SE250263.021	LB284733.004	Mercury	mg/kg	0.05	0.29	0.06	0.2	115

OC Pesticides in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE250263.003	LB284727.026	Alpha BHC	mg/kg	0.1	<0.1	-	-
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	-	-
		Beta BHC	mg/kg	0.1	<0.1	-	-
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	<0.1	0.2	74
		Heptachlor	mg/kg	0.1	<0.1	0.2	79
		Aldrin	mg/kg	0.1	<0.1	0.2	76
		Isodrin	mg/kg	0.1	<0.1	-	-
		Heptachlor epoxide	mg/kg	0.1	<0.1	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	-	-
		o,p'-DDE*	mg/kg	0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	-	-
		Dieldrin	mg/kg	0.2	<0.2	0.2	75
		Endrin	mg/kg	0.2	<0.2	0.2	81
		Beta Endosulfan	mg/kg	0.2	<0.2	-	-
		o,p'-DDD*	mg/kg	0.1	<0.1	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	-	-
		Endrin aldehyde	mg/kg	0.1	<0.1	-	-
		Endosulfan sulphate	mg/kg	0.1	<0.1	-	-
		o,p'-DDT*	mg/kg	0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	<0.1	0.2	75
		Endrin ketone	mg/kg	0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	-	-
		Total CLP OC Pesticides	mg/kg	1	<1	-	-
		Total OC VIC EPA	mg/kg	1	<1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	-	88

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE250263.003	LB284727.026	Naphthalene	mg/kg	0.1	<0.1	4	107
		2-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	<0.1	4	111
		Acenaphthene	mg/kg	0.1	<0.1	4	115
		Fluorene	mg/kg	0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	<0.1	4	105
		Anthracene	mg/kg	0.1	<0.1	4	106
		Fluoranthene	mg/kg	0.1	<0.1	4	105
		Pyrene	mg/kg	0.1	<0.1	4	108
		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	4	103
		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/2*	TEQ (mg/kg)	0.2	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	-	-
		Total PAH (18)	mg/kg	0.8	<0.8	-	-

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE250263.003	LB284727.026	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	-	82
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	-	88
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	-	90

PCBs in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE250263.003	LB284727.026	Arochlor 1016	mg/kg	0.2	<0.2	-	-
		Arochlor 1221	mg/kg	0.2	<0.2	-	-
		Arochlor 1232	mg/kg	0.2	<0.2	-	-
		Arochlor 1242	mg/kg	0.2	<0.2	-	-
		Arochlor 1248	mg/kg	0.2	<0.2	-	-
		Arochlor 1254	mg/kg	0.2	<0.2	-	-
		Arochlor 1260	mg/kg	0.2	<0.2	0.4	84
		Arochlor 1262	mg/kg	0.2	<0.2	-	-
		Arochlor 1268	mg/kg	0.2	<0.2	-	-
		Total PCBs (Arochlors)	mg/kg	1	<1	-	-
	Surrogates	TCMX (Surrogate)	mg/kg	-	0	-	89

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%
SE250263.001	LB284729.004	Arsenic, As	mg/kg	1	50	7	50	87
		Cadmium, Cd	mg/kg	0.3	38	<0.3	50	76
		Chromium, Cr	mg/kg	0.5	58	17	50	82
		Copper, Cu	mg/kg	0.5	61	21	50	79
		Nickel, Ni	mg/kg	0.5	50	9.1	50	82
		Lead, Pb	mg/kg	1	69	36	50	67 ④
		Zinc, Zn	mg/kg	2	84	48	50	71
SE250263.021	LB284731.004	Arsenic, As	mg/kg	1	55	8	50	95
		Cadmium, Cd	mg/kg	0.3	43	<0.3	50	86
		Chromium, Cr	mg/kg	0.5	73	25	50	95
		Copper, Cu	mg/kg	0.5	66	17	50	99
		Nickel, Ni	mg/kg	0.5	54	6.4	50	95
		Lead, Pb	mg/kg	1	75	30	50	90
		Zinc, Zn	mg/kg	2	95	49	50	92

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE250263.003	LB284727.026	TRH C10-C14	mg/kg	20	67	<20	40	162 ④
		TRH C15-C28	mg/kg	45	89	<45	40	215 ④
		TRH C29-C36	mg/kg	45	52	<45	40	122
		TRH C37-C40	mg/kg	100	<100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	210	<110	-	-
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
	TRH F Bands	TRH >C10-C16	mg/kg	25	79	<25	40	192 ④
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	79	<25	-	-
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	178 ④
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE250263.001	LB284728.004	Monocyclic	Benzene	mg/kg	0.1	5.7	<0.1	5	114
		Aromatic	Toluene	mg/kg	0.1	5.6	<0.1	5	111
			Ethylbenzene	mg/kg	0.1	5.5	<0.1	5	109
			m/p-xylene	mg/kg	0.2	11	<0.2	10	108
			o-xylene	mg/kg	0.1	5.5	<0.1	5	109
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	8.8	10	93
			d8-toluene (Surrogate)	mg/kg	-	10.0	9.5	10	100
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	8.2	10	96
		Totals	Total BTEX*	mg/kg	0.6	33	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	16	<0.3	-	-



MATRIX SPIKES

SE250263 R0

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

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

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE250263.001	LB284728.004	TRH C6-C10	mg/kg	25	110	<25	92.5	120
		TRH C6-C9	mg/kg	20	95	<20	80	118
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	8.8	10	93
		d8-toluene (Surrogate)	mg/kg	-	10.0	9.5	10	100
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	8.2	-	96
		VPH F						
		Benzene (F0)	mg/kg	0.1	5.7	<0.1	-	-
		Bands						
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	79	<25	62.5	124



MATRIX SPIKE DUPLICATES

SE250263 R0

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

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

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

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

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

No matrix spike duplicates were required for this job.



Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

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

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Appendix I

DATA QUALITY INDICATORS

An assessment of performance against the data quality indicators (DQI) is set out in the tables below.

Completeness DQI

Field Considerations	Target	Actual	Pass / Fail / Comment
Experienced sampling team used.	Yes	No	A geotechnical engineer with limited environmental sampling experience collected the samples. However, the engineer had been previously briefed on environmental sampling techniques for specifically for this project. Performance against DQI considered acceptable for the purpose of this project.
Sampling devices and equipment set out in sampling plan were used.	Yes	Yes	Pass
Critical locations in sampling plan, sampled.	Yes	Yes	Pass
Critical samples in sampling plan, collected.	Yes	Yes	Pass
Completed borehole logs attached.	Yes	Yes	Pass
Completed sample COC attached.	Yes	Yes	Pass
Laboratory Considerations	Target	Actual	Pass / Fail / Comment
Complete SRA and COA attached.	Yes	Yes	Pass
Critical samples identified in sampling plan, analysed.	Yes	Yes	Pass
Analysis undertaken addresses COPC in sampling plan.	Yes	Yes	Pass
Analytical methods reported in laboratory documentation and appropriate LOR used.	Yes	Yes	Pass
Sample holding times met.	Yes	Yes	Pass

The data is considered to be adequately complete.

Comparability DQI

Field Considerations	Target	Actual	Pass / Fail / Comment
Same sampling team used for all work.	Yes	Yes	Pass
Weather conditions suitable for sampling.	Yes	Yes	Pass
Same sample types collected and preserved in same way	Yes	Yes	Pass
Relevant samples stored in insulated containers and chilled.	Yes	Yes	Pass

Laboratory Considerations	Target	Actual	Pass / Fail / Comment
Same laboratory used for all analysis.	Yes	Yes	Pass
Comparable methods if different laboratories used.	N/A	N/A	N/A
Comparable LORs if different laboratories used.	N/A	N/A	N/A
Comparable units of measure if different laboratories used.	N/A	N/A	N/A

The data is considered to be adequately comparable.

Representativeness DQI

Field Considerations	Target	Actual	Pass / Fail / Comment
Media identified in sampling plan, sampled.	Yes	Yes	Pass
Samples required by sampling plan, collected.	Yes	Yes	Pass
Laboratory Considerations	Target	Actual	Pass / Fail / Comment
Samples identified in sampling plan, analysed.	Yes	Yes	Pass

The data is considered to be adequately representative.

Precision DQI

Field Considerations	Target	Actual	Pass / Fail / Comment
Minimum 5% duplicates collected and analysed.	Yes	No	Duplicate samples were not collected for this project. However, on the basis that: - all samples were analysed by a reputable NATA accredited laboratory; and - all soil results were below the adopted criteria and did not vary considerably; the omission of duplicate samples is not considered to significantly alter the outcome of this project. Performance against the DQI considered acceptable.
Minimum 5% triplicates collected and analysed.	Yes	No	Triplicate samples were not collected for this project. However, on the basis that: - all samples were analysed by a reputable NATA accredited laboratory; and - all soil results were below the adopted criteria and did not vary considerably;

			the omission of duplicate samples is not considered to significantly alter the outcome of this project. Performance against the DQI considered acceptable.
RPD (relative percentage difference) unlimited where detected concentrations are <10 times the LOR.	Yes	Yes	Duplicate samples were not collected for this project so RPD values were not able to be calculated.
RPD within 50% where detected concentrations are 10-20 times the LOR.	Yes	Yes	Pass
RPD within 30% where detected concentrations are >20 times the LOR.	Yes	Yes	Pass
Laboratory Considerations	Target	Actual	Pass / Fail / Comment
All laboratory duplicate RPDs within laboratory acceptance criteria.	Yes	Yes	Pass

The data is considered to be adequately precise.

Accuracy (bias) DQI

Field Considerations	Target	Actual	Pass / Fail / Comment
Trip blank analyte results less than LOR.	Yes	No	A trip blank was not used for this project. On the basis that BTEX was not detected in the samples analysed above the laboratory limit of reporting, the risk of volatile cross contamination of samples during storage and transport, is considered negligible.
Trip spike analyte results between 60% and 140%.	Yes	No	A trip spike was not used for this project. However, on the basis that: - no evidence of hydrocarbon odours or staining was observed in the soil samples collected; - the samples were placed in laboratory prepared containers with minimal headspace and stored in an insulated container with ice/ice bricks; and - hydrocarbon analytes were extracted and analysed within the relevant maximum laboratory holding times, the risk of loss of volatiles during storage and transport of samples is considered negligible. Performance against DQI considered acceptable for the purpose of this project.

Rinsate blank analyte results less than LOR.	N/A	N/A	A rinsate blank was not used for this project. The samples were collected directly from the drilling rig's auger head, using a fresh pair of nitrile gloves. On that basis, the risk of cross contamination during sampling is considered negligible
Laboratory Considerations	Target	Actual	Pass / Fail / Comment
Laboratory method blank results within laboratory acceptance limits.	Yes	Yes	Pass
Laboratory control sample results within laboratory acceptance limits.	Yes	Yes	Pass
Laboratory spike sample results within laboratory acceptance limits.	Yes	No	Two laboratory spikes samples exceeded laboratory acceptance limits: • Lead, Pb; and • Total Recoverable Hydrocarbons (TRH). The lead exceedance was attributed to matrix interference, while the TRH exceedance was attributed to sample heterogeneity. Performance considered suitable for the purpose of this project.

The data is considered to be adequately accurate.



Located across Australia and New Zealand

QLD

Airlie
Beenleigh
Brisbane (Acacia Ridge)
Brisbane (Beenleigh)
Brisbane (Brendale)
Brisbane (Petrie)
Cairns
Emerald
Gladstone
Gold Coast
Mackay
Moranbah
Rockhampton
Petrie
Sunshine Coast
Toowoomba
Townsville

NSW

Ballina
Coffs Harbour
Grafton
Lynwood
Newcastle
Sydney (Glendenning)
Sydney (St Peters)
Taree
Wollongong

VIC

Ararat
Bendigo
Echuca
Melbourne (Chadstone)
Melbourne (Keysborough)
Melbourne (Pakenham)
Melbourne (Oaklands Junction)
Melbourne (Sunshine West)
Traralgon

WA

Bunbury
Kalgoorlie
Newman
Perth
Port Hedland

SA

Adelaide
Port Augusta

NT

Darwin

ACT

Canberra

NZ

Wellington

APPENDIX C

BORE LOGS





Soil Bore BH13

Project No 81971-1	Drilling Date 23 Aug 2024	LOGGED BY JE + SP
Project Name Cecil Park	Drilling Co. TRACE Environmental	CHECKED BY ODP
Client Western Sydney Parklands Trust	Drilling Method Hand Auger	
Location 97-123 and 125-151 Wallgrove Road, Cecil Park NSW	Total Depth 0.75 m	

Comments

Depth (m)	Graphic Log	1726-1993 Class. Symbol	Soil Field Description	Samples	PID	Comments
0.5		CL	Sandy CLAY, low plasticity, brown/orange, friable, w < PL, no odour, no staining		6.7	10L visual inspection, no ACM.
				BH13/0.1		
		CL	Sandy CLAY, low plasticity, brown/orange/mottled grey, soft to firm, w < PL, no odour, no staining		6.5	
				BH13/0.4		
				BH13/0.7	6.4	
			SANDSTONE, orange, hard, to friable, dry, no odour, no staining			
			Termination Depth at: 0.75 m.			

Project No 81971-1	Drilling Date 23 Aug 2024	LOGGED BY JE + SP
Project Name Cecil Park	Drilling Co. TRACE Environmental	CHECKED BY ODP
Client Western Sydney Parklands Trust	Drilling Method Hand Auger	
Location 97-123 and 125-151 Wallgrove Road, Cecil Park NSW	Total Depth 1.00 m	

Comments

Depth (m)	Graphic Log	1726-1993 Class. Symbol	Soil Field Description	Samples	PID	Comments
0.5		CL	Sandy CLAY, low plasticity, brown/orange, friable, w < PL, no odour, no staining		3.4	10L visual inspection, no ACM.
				BH14/0.1, QC01, QC02		
			BH14/0.4	3.3		
	BH14/0.7	4.3				
		SC	Clayey SAND, brown/grey, loose, moist, no odour, no staining			
1			Termination Depth at: 1.00 m.			

Project No 81971-1
Project Name Cecil Park
Client Western Sydney Parklands Trust
Location 97-123 and 125-151 Wallgrove Road,
Cecil Park NSW

Drilling Date 23 Aug 2024
Drilling Co. TRACE Environmental
Drilling Method Hand Auger
Total Depth 1.00 m

LOGGED BY JE + SP
CHECKED BY ODP

Comments

Depth (m)	Graphic Log	1726-1993 Class. Symbol	Soil Field Description	Samples	PID	Comments
0.5		CL	Sandy CLAY, low to medium plasticity, dark brown/orange, friable, w < PL, no odour, no staining		3.6	10L visual inspection, no asbestos.
				BH15/0.1		
				BH15/0.5	5.0	
0.5		CL	Sandy CLAY, medium plasticity, light brown/orange, soft, dry, no odour, no staining		5.0	
1		SC	Clayey SAND, light brown, loose, with sandstone gravels, dry, no odour, no staining		4.1	
				BH15/1.0		
			Termination Depth at: 1.00 m.			



Soil Bore BH16

Project No 81971-1	Drilling Date 23 Aug 2024	LOGGED BY JE + SP
Project Name Cecil Park	Drilling Co. TRACE Environmental	CHECKED BY ODP
Client Western Sydney Parklands Trust	Drilling Method Hand Auger	
Location 97-123 and 125-151 Wallgrove Road, Cecil Park NSW	Total Depth 1.00 m	

Comments

Depth (m)	Graphic Log	1726-1993 Class. Symbol	Soil Field Description	Samples	PID	Comments
		FILL	FILL: MIXTURE OF SOIL (60%) AND COBBLES (40%): Sandy GRAVEL: fine to coarse grained, angular to sub-angular, brown-orange, fine to coarse grained sand, with tile fragments, with brick fragments, with concrete fragments, angular to sub-angular sandstone cobbles, dry, no odour, no staining.	BH16/0.1	2.8	Fill too compacted for 10L visual inspection, visual surface inspection conducted over 2m x 2m, no ACM.
0.5		CL	CLAY, red/orange, firm, w < PL, with sand, no odour, no staining	BH16/0.5	5.0	
			----- Becoming brown and friable.			
				BH16/1.0	4.6	
1			Termination Depth at: 1.00 m.			

APPENDIX D
LABORATORY ANALYTICAL REPORTS - SOIL



Fyfe Earth Partners
Level 1, Suite 2, 17 Cotham Road
Kew
VIC 3101



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition
Arrangement for the mutual recognition of the
equivalence of testing, medical testing, calibration,
inspection, proficiency testing scheme providers and
reference materials producers reports and certificates.

Attention: **Stewart Frater**

Report **1132079-S**
Project name **WSPT CECIL PARK**
Project ID **81971-1**
Received Date **Aug 23, 2024**

Client Sample ID			BH13_0.1	BH13_0.4	BH13_0.7	BH14_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24- Au0066069	S24- Au0066070	S24- Au0066071	S24- Au0066072
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	-	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	-	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{*N01}	50	mg/kg	< 50	< 50	-	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	101	88	-	108
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
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	-	-	-

Client Sample ID			BH13_0.1	BH13_0.4	BH13_0.7	BH14_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066069	S24-Au0066070	S24-Au0066071	S24-Au0066072
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	84	-	-	-
p-Terphenyl-d14 (surr.)	1	%	111	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
α-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
β-HCH	0.05	mg/kg	< 0.05	-	-	-
δ-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
γ-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	0.5	mg/kg	< 0.5	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchloroendate (surr.)	1	%	80	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	78	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled Test/Reference	LOR	Unit	BH13_0.1 Soil S24- Au0066069 Aug 23, 2024	BH13_0.4 Soil S24- Au0066070 Aug 23, 2024	BH13_0.7 Soil S24- Au0066071 Aug 23, 2024	BH14_0.1 Soil S24- Au0066072 Aug 23, 2024
Organophosphorus Pesticides						
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	77	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	11	11	8.4	7.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	24	30	23	23
Copper	5	mg/kg	16	28	31	21
Lead	5	mg/kg	21	19	11	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	19	13	15
Zinc	5	mg/kg	94	120	44	500
Sample Properties						
% Moisture	1	%	16	18	23	19

Client Sample ID			BH14_1.0	BH15_0.1	BH15_0.5	BH15_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066073	S24-Au0066074	S24-Au0066075	S24-Au0066076
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2) ^{*N01}	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	113	112	121	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
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	%	-	70	-	-
p-Terphenyl-d14 (surr.)	1	%	-	67	-	-

Client Sample ID			BH14_1.0	BH15_0.1	BH15_0.5	BH15_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066073	S24-Au0066074	S24-Au0066075	S24-Au0066076
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
α-HCH	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
β-HCH	0.05	mg/kg	-	< 0.05	-	-
δ-HCH	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
γ-HCH (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.05	mg/kg	-	< 0.05	-	-
Toxaphene	0.5	mg/kg	-	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Dibutylchloredate (surr.)	1	%	-	INT	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	57	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-

Client Sample ID			BH14_1.0	BH15_0.1	BH15_0.5	BH15_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066073	S24-Au0066074	S24-Au0066075	S24-Au0066076
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	77	-	-
Heavy Metals						
Arsenic	2	mg/kg	8.2	6.7	7.8	6.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	20	19	17	15
Copper	5	mg/kg	30	19	39	36
Lead	5	mg/kg	15	17	17	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	31	13	20	16
Zinc	5	mg/kg	95	37	78	67
Sample Properties						
% Moisture	1	%	12	18	15	11

Client Sample ID			BH16_0.1	BH16_0.5	BH16_1.0	QC01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066077	S24-Au0066078	S24-Au0066079	S24-Au0066080
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	-	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	-	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{*N01}	50	mg/kg	< 50	< 50	-	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	< 100

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled Test/Reference	LOR	Unit	BH16_0.1 Soil S24- Au0066077 Aug 23, 2024	BH16_0.5 Soil S24- Au0066078 Aug 23, 2024	BH16_1.0 Soil S24- Au0066079 Aug 23, 2024	QC01 Soil S24- Au0066080 Aug 23, 2024
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	109	-	110
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
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	%	101	-	-	-
p-Terphenyl-d14 (surr.)	1	%	97	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-HCH	0.05	mg/kg	< 0.05	-	-	-
d-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	-

Client Sample ID			BH16_0.1	BH16_0.5	BH16_1.0	QC01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066077	S24-Au0066078	S24-Au0066079	S24-Au0066080
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	0.5	mg/kg	< 0.5	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchloredate (surr.)	1	%	76	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	82	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	89	-	-	-

Client Sample ID			BH16_0.1	BH16_0.5	BH16_1.0	QC01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066077	S24-Au0066078	S24-Au0066079	S24-Au0066080
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	9.0	4.2	7.1	8.3
Beryllium	2	mg/kg	< 2	-	-	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	21	20	22
Copper	5	mg/kg	-	35	43	19
Lead	5	mg/kg	27	15	14	22
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	-	-	-
Nickel	5	mg/kg	17	15	17	14
Selenium	2	mg/kg	< 2	-	-	-
Silver	2	mg/kg	< 2	-	-	-
Zinc	5	mg/kg	-	59	78	650
Sample Properties						
% Moisture	1	%	8.8	19	16	19
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	-	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	-	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	-	-
Allyl chloride	0.5	mg/kg	< 0.5	-	-	-
Benzene	0.1	mg/kg	< 0.1	-	-	-
Bromobenzene	0.5	mg/kg	< 0.5	-	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromoform	0.5	mg/kg	< 0.5	-	-	-
Bromomethane	0.5	mg/kg	< 0.5	-	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	-	-
Chloroethane	0.5	mg/kg	< 0.5	-	-	-
Chloroform	0.5	mg/kg	< 0.5	-	-	-
Chloromethane	0.5	mg/kg	< 0.5	-	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			BH16_0.1	BH16_0.5	BH16_1.0	QC01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066077	S24-Au0066078	S24-Au0066079	S24-Au0066080
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Volatile Organics						
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Dibromomethane	0.5	mg/kg	< 0.5	-	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
Iodomethane	0.5	mg/kg	< 0.5	-	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Styrene	0.5	mg/kg	< 0.5	-	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Trichloroethene	0.5	mg/kg	< 0.5	-	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
Total MAH*	0.5	mg/kg	< 0.5	-	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	-	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	-	-	-
4-Bromofluorobenzene (surr.)	1	%	117	-	-	-
Toluene-d8 (surr.)	1	%	126	-	-	-
Phthalate Esters						
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	-	-	-
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Diethyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Dimethyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Acid Herbicides						
2.4-D	0.5	mg/kg	< 0.5	-	-	-
2.4-DB	0.5	mg/kg	< 0.5	-	-	-
2.4.5-T	0.5	mg/kg	< 0.5	-	-	-
2.4.5-TP	0.5	mg/kg	< 0.5	-	-	-
Actril (loxynil)	0.5	mg/kg	< 0.5	-	-	-
Dicamba	0.5	mg/kg	< 0.5	-	-	-
Dichlorprop	0.5	mg/kg	< 0.5	-	-	-
Dinitro-o-cresol	0.5	mg/kg	< 0.5	-	-	-
Dinoseb	0.5	mg/kg	< 0.5	-	-	-
MCPA	0.5	mg/kg	< 0.5	-	-	-
MCPB	0.5	mg/kg	< 0.5	-	-	-
Mecoprop	0.5	mg/kg	< 0.5	-	-	-
Warfarin (surr.)	1	%	128	-	-	-

Client Sample ID			BH16_0.1	BH16_0.5	BH16_1.0	QC01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066077	S24-Au0066078	S24-Au0066079	S24-Au0066080
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2,4,5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2,4,6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Nitrophenol	1	mg/kg	< 1	-	-	-
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2,4-Dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Total cresols*	0.5	mg/kg	< 0.5	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	74	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Semivolatile Organics						
2,4-Dinitrotoluene	0.5	mg/kg	< 0.5	-	-	-
Nitrobenzene	0.5	mg/kg	< 0.5	-	-	-
Chromium (hexavalent)	1	mg/kg	< 1	-	-	-
Cyanide (free)	1	mg/kg	< 1	-	-	-
Cyanide (total)	1	mg/kg	< 1	-	-	-
Fluoride	100	mg/kg	230	-	-	-

Client Sample ID			QC03	TRIP SPIKE	TRIP BLANK
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066081	S24-Au0066082	S24-Au0066083
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons					
TRH C6-C9	20	mg/kg	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-
TRH C6-C10	20	mg/kg	< 20	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{*N01}	50	mg/kg	< 50	-	-

Client Sample ID			QC03	TRIP SPIKE	TRIP BLANK
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S24-Au0066081	S24-Au0066082	S24-Au0066083
Date Sampled			Aug 23, 2024	Aug 23, 2024	Aug 23, 2024
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons					
TRH >C16-C34	100	mg/kg	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-
BTEX					
Benzene	0.1	mg/kg	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	116	-	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-
Heavy Metals					
Arsenic	2	mg/kg	6.2	-	-
Cadmium	0.4	mg/kg	< 0.4	-	-
Chromium	5	mg/kg	54	-	-
Copper	5	mg/kg	18	-	-
Lead	5	mg/kg	20	-	-
Mercury	0.1	mg/kg	< 0.1	-	-
Nickel	5	mg/kg	11	-	-
Zinc	5	mg/kg	52	-	-
Sample Properties					
% Moisture	1	%	9.1	-	-
TRH C6-C10	1	%	-	83	-
Total Recoverable Hydrocarbons					
Naphthalene	1	%	-	95	-
TRH C6-C9	1	%	-	89	-
BTEX					
Benzene	1	%	-	95	-
Ethylbenzene	1	%	-	93	-
m&p-Xylenes	1	%	-	95	-
o-Xylene	1	%	-	83	-
Toluene	1	%	-	95	-
Xylenes - Total	1	%	-	87	-
4-Bromofluorobenzene (surr.)	1	%	-	86	-
BTEX and Naphthalene					
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

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
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Aug 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Aug 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Aug 26, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Aug 29, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Aug 29, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Aug 29, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Aug 29, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Aug 29, 2024	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
DECC Metals : Metals M9DECC	Sydney	Aug 29, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Aug 29, 2024	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Phthalate Esters	Sydney	Aug 29, 2024	14 Days
- Method: USEPA 8270 Phthalate Esters			
Acid Herbicides	Melbourne	Sep 02, 2024	14 Days
- Method: LTM-ORG-2180 Phenoxy Acid Herbicides			
Phenols (Halogenated)	Sydney	Aug 29, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Aug 29, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Semivolatile Organics	Sydney	Aug 29, 2024	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Chromium (hexavalent)	Sydney	Aug 29, 2024	28 Days
- Method: In-house method E057.2			
Cyanide (free)	Sydney	Aug 29, 2024	14 Days
- Method: E054 Free Cyanide			
Cyanide (total)	Sydney	Aug 29, 2024	14 Days
- Method: E054 Total Cyanide			
Fluoride	Melbourne	Sep 02, 2024	28 Days
- Method: LTM-INO-4150 Determination of Total Fluoride PART A – CIC			
Eurofins Suite B6: BTEX/TRH/M8			
Metals M8	Sydney	Aug 29, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Aug 26, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			



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Company Name: Fyfe Earth Partners Pty Ltd VIC
Address: Level 1, Suite 2, 17 Cotham Road
Kew
VIC 3101

Project Name: WSPT CECIL PARK
Project ID: JOB NUMBER 81971-1

Order No.:
Report #: 1132079
Phone: 08 8201 9600
Fax: 08 8201 9650

Received: Aug 23, 2024 7:11 PM
Due: Sep 2, 2024
Priority: 5 Day
Contact Name: Stewart Frater

Eurofins Analytical Services Manager : Karl Bulow

Sample Detail						Asbestos - WA guidelines	HOLD*	Metals M8	Moisture Set	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/M8	Eurofins Suite B6: BTEX/TRH/M8	NSW DECC - Waste Classification Table 1	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254												X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X
External Laboratory														
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
1	BH13 0.1	Aug 23, 2024		Soil	S24-Au0066069	X			X	X				
2	BH13 0.4	Aug 23, 2024		Soil	S24-Au0066070				X		X			
3	BH13 0.7	Aug 23, 2024		Soil	S24-Au0066071			X	X					
4	BH14 0.1	Aug 23, 2024		Soil	S24-Au0066072	X			X		X			
5	BH14 1.0	Aug 23, 2024		Soil	S24-Au0066073				X		X			
6	BH15 0.1	Aug 23, 2024		Soil	S24-Au0066074	X			X	X				
7	BH15 0.5	Aug 23, 2024		Soil	S24-Au0066075				X		X			
8	BH15 1.0	Aug 23, 2024		Soil	S24-Au0066076			X	X					
9	BH16 0.1	Aug 23, 2024		Soil	S24-Au0066077	X			X			X		
10	BH16 0.5	Aug 23, 2024		Soil	S24-Au0066078				X		X			
11	BH16 1.0	Aug 23, 2024		Soil	S24-Au0066079			X	X					
12	QC01	Aug 23, 2024		Soil	S24-Au0066080				X		X			
13	QC03	Aug 23, 2024		Soil	S24-Au0066081				X		X			



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Melbourne Laboratory - NATA # 1261 Site # 1254												X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X
14	TRIP SPIKE	Aug 23, 2024		Soil	S24-Au0066082				X					X
15	TRIP BLANK	Aug 23, 2024		Soil	S24-Au0066083				X				X	
16	RB01	Aug 23, 2024		Water	S24-Au0066084						X			
17	TRIP SPIKE LAB	Aug 23, 2024		Soil	S24-Au0066085				X					X
18	BH14 0.5	Aug 23, 2024		Soil	S24-Au0066086		X							
19	QC04	Aug 23, 2024		Soil	S24-Au0066087		X							
Test Counts						4	2	3	16	2	8	1	1	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

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

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

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	ppm: parts per million
µg/L: micrograms per litre	ppb: parts per billion	%: Percentage
org/100 mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units	MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	Colour: Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - 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.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

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%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are not data from your samples.
3. 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.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. 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							
Total Recoverable Hydrocarbons							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	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	
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							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1			1	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1			1	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4,6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Beryllium	mg/kg	< 2			2	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 2			2	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1,2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1,3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1,2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1,3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phthalate Esters							
Bis(2-ethylhexyl)phthalate	mg/kg	< 5			5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Acid Herbicides							
2,4-D	mg/kg	< 0.5			0.5	Pass	
2,4-DB	mg/kg	< 0.5			0.5	Pass	
2,4,5-T	mg/kg	< 0.5			0.5	Pass	
2,4,5-TP	mg/kg	< 0.5			0.5	Pass	
Actril (loxynil)	mg/kg	< 0.5			0.5	Pass	
Dicamba	mg/kg	< 0.5			0.5	Pass	
Dichlorprop	mg/kg	< 0.5			0.5	Pass	
Dinitro-o-cresol	mg/kg	< 0.5			0.5	Pass	
Dinoseb	mg/kg	< 0.5			0.5	Pass	
MCPA	mg/kg	< 0.5			0.5	Pass	
MCPB	mg/kg	< 0.5			0.5	Pass	
Mecoprop	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1			1	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1			1	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4,6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Semivolatile Organics							
2,4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (free)	mg/kg	< 1			1	Pass	
Cyanide (total)	mg/kg	< 1			1	Pass	
Fluoride	mg/kg	< 100			100	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C10-C14	%	74			70-130	Pass	
TRH >C10-C16	%	73			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	
Cadmium	%	96			80-120	Pass	
Chromium	%	97			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	97			80-120	Pass	
Mercury	%	106			80-120	Pass	
Nickel	%	97			80-120	Pass	
Zinc	%	94			80-120	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	99			70-130	Pass	
Acenaphthylene	%	80			70-130	Pass	
Anthracene	%	92			70-130	Pass	
Benz(a)anthracene	%	101			70-130	Pass	
Benzo(a)pyrene	%	100			70-130	Pass	
Benzo(b&j)fluoranthene	%	109			70-130	Pass	
Benzo(g,h,i)perylene	%	108			70-130	Pass	
Benzo(k)fluoranthene	%	96			70-130	Pass	
Chrysene	%	102			70-130	Pass	
Dibenz(a,h)anthracene	%	102			70-130	Pass	
Fluoranthene	%	103			70-130	Pass	
Fluorene	%	106			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Indeno(1.2.3-cd)pyrene	%	103			70-130	Pass	
Naphthalene	%	98			70-130	Pass	
Phenanthrene	%	108			70-130	Pass	
Pyrene	%	109			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	100			70-130	Pass	
4.4'-DDD	%	95			70-130	Pass	
4.4'-DDE	%	107			70-130	Pass	
4.4'-DDT	%	87			70-130	Pass	
a-HCH	%	85			70-130	Pass	
Aldrin	%	103			70-130	Pass	
b-HCH	%	87			70-130	Pass	
d-HCH	%	88			70-130	Pass	
Dieldrin	%	94			70-130	Pass	
Endosulfan I	%	96			70-130	Pass	
Endosulfan II	%	120			70-130	Pass	
Endosulfan sulphate	%	87			70-130	Pass	
Endrin	%	87			70-130	Pass	
Endrin aldehyde	%	89			70-130	Pass	
Endrin ketone	%	78			70-130	Pass	
g-HCH (Lindane)	%	91			70-130	Pass	
Heptachlor	%	98			70-130	Pass	
Heptachlor epoxide	%	93			70-130	Pass	
Hexachlorobenzene	%	99			70-130	Pass	
Methoxychlor	%	87			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	102			70-130	Pass	
Dimethoate	%	120			70-130	Pass	
Ethion	%	75			70-130	Pass	
Fenitrothion	%	99			70-130	Pass	
Methyl parathion	%	107			70-130	Pass	
Mevinphos	%	106			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	88			25-140	Pass	
2.4-Dichlorophenol	%	90			25-140	Pass	
2.4.5-Trichlorophenol	%	103			25-140	Pass	
2.4.6-Trichlorophenol	%	94			25-140	Pass	
2.6-Dichlorophenol	%	91			25-140	Pass	
4-Chloro-3-methylphenol	%	84			25-140	Pass	
Pentachlorophenol	%	83			25-140	Pass	
Tetrachlorophenols - Total	%	85			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	77			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	67			25-140	Pass	
2-Nitrophenol	%	76			25-140	Pass	
2.4-Dimethylphenol	%	85			25-140	Pass	
2.4-Dinitrophenol	%	88			25-140	Pass	
2-Methylphenol (o-Cresol)	%	84			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	87			25-140	Pass	
4-Nitrophenol	%	63			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dinoseb	%	72			25-140	Pass	
Phenol	%	87			25-140	Pass	
LCS - % Recovery							
Heavy Metals							
Beryllium	%	97			80-120	Pass	
Molybdenum	%	120			80-120	Pass	
Selenium	%	93			80-120	Pass	
Silver	%	89			80-120	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	96			70-130	Pass	
1.1.1-Trichloroethane	%	99			70-130	Pass	
1.2-Dichlorobenzene	%	121			70-130	Pass	
1.2-Dichloroethane	%	116			70-130	Pass	
Trichloroethene	%	91			70-130	Pass	
LCS - % Recovery							
Acid Herbicides							
2.4-D	%	73			70-130	Pass	
2.4-DB	%	90			70-130	Pass	
2.4.5-T	%	105			70-130	Pass	
2.4.5-TP	%	101			70-130	Pass	
Actril (loxynil)	%	71			70-130	Pass	
Dicamba	%	83			70-130	Pass	
Dichlorprop	%	100			70-130	Pass	
Dinitro-o-cresol	%	70			70-130	Pass	
Dinoseb	%	75			70-130	Pass	
MCPA	%	72			70-130	Pass	
MCPB	%	81			70-130	Pass	
Mecoprop	%	101			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	88			25-140	Pass	
2.4-Dichlorophenol	%	74			25-140	Pass	
2.4.5-Trichlorophenol	%	77			25-140	Pass	
2.4.6-Trichlorophenol	%	81			25-140	Pass	
2.6-Dichlorophenol	%	79			25-140	Pass	
4-Chloro-3-methylphenol	%	81			25-140	Pass	
Pentachlorophenol	%	82			25-140	Pass	
Tetrachlorophenols - Total	%	71			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	72			25-140	Pass	
2-Nitrophenol	%	78			25-140	Pass	
2.4-Dimethylphenol	%	86			25-140	Pass	
2.4-Dinitrophenol	%	74			25-140	Pass	
2-Methylphenol (o-Cresol)	%	78			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	79			25-140	Pass	
Dinoseb	%	74			25-140	Pass	
Phenol	%	83			25-140	Pass	
LCS - % Recovery							
Semivolatile Organics							
2.4-Dinitrotoluene	%	89			70-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	117			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cyanide (free)			%	92			70-130	Pass	
Cyanide (total)			%	92			70-130	Pass	
Fluoride			%	112			70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons									
TRH C6-C9			%	87			70-130	Pass	
TRH C6-C10			%	85			70-130	Pass	
LCS - % Recovery									
BTEX									
Benzene			%	97			70-130	Pass	
Toluene			%	97			70-130	Pass	
Ethylbenzene			%	97			70-130	Pass	
m&p-Xylenes			%	88			70-130	Pass	
o-Xylene			%	92			70-130	Pass	
Xylenes - Total*			%	89			70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
Naphthalene			%	91			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	W24-Au0066215	NCP	%	74			70-130	Pass	
TRH >C10-C16	W24-Au0066215	NCP	%	73			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S24-Au0079836	NCP	%	75			70-130	Pass	
4,4'-DDD	S24-Au0079836	NCP	%	78			70-130	Pass	
4,4'-DDE	S24-Au0079836	NCP	%	86			70-130	Pass	
4,4'-DDT	S24-Au0079836	NCP	%	121			70-130	Pass	
Aldrin	S24-Au0079836	NCP	%	91			70-130	Pass	
b-HCH	S24-Au0079836	NCP	%	79			70-130	Pass	
d-HCH	S24-Au0079836	NCP	%	87			70-130	Pass	
Dieldrin	S24-Au0079836	NCP	%	89			70-130	Pass	
Endosulfan I	S24-Au0079836	NCP	%	83			70-130	Pass	
Endosulfan II	S24-Au0079836	NCP	%	94			70-130	Pass	
Endosulfan sulphate	S24-Au0079836	NCP	%	111			70-130	Pass	
Endrin	S24-Au0079836	NCP	%	117			70-130	Pass	
Endrin aldehyde	S24-Au0079836	NCP	%	117			70-130	Pass	
Endrin ketone	S24-Au0079836	NCP	%	95			70-130	Pass	
Heptachlor	S24-Au0079836	NCP	%	90			70-130	Pass	
Heptachlor epoxide	S24-Au0079836	NCP	%	82			70-130	Pass	
Hexachlorobenzene	S24-Au0079836	NCP	%	70			70-130	Pass	
Methoxychlor	S24-Au0079836	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-Au0079425	NCP	%	86			75-125	Pass	
Cadmium	S24-Au0079425	NCP	%	88			75-125	Pass	
Chromium	S24-Au0079425	NCP	%	84			75-125	Pass	
Copper	S24-Au0079425	NCP	%	89			75-125	Pass	
Lead	S24-Au0079425	NCP	%	88			75-125	Pass	
Mercury	S24-Au0079425	NCP	%	98			75-125	Pass	
Nickel	S24-Au0079425	NCP	%	84			75-125	Pass	
Zinc	S24-Au0079425	NCP	%	91			75-125	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S24-Au0066074	CP	%	87			70-130	Pass	
TRH C6-C10	S24-Au0066074	CP	%	84			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-Au0066074	CP	%	91			70-130	Pass	
Toluene	S24-Au0066074	CP	%	87			70-130	Pass	
Ethylbenzene	S24-Au0066074	CP	%	92			70-130	Pass	
m&p-Xylenes	S24-Au0066074	CP	%	78			70-130	Pass	
o-Xylene	S24-Au0066074	CP	%	91			70-130	Pass	
Xylenes - Total*	S24-Au0066074	CP	%	82			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-Au0066074	CP	%	71			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
a-HCH	S24-Au0084078	NCP	%	74			70-130	Pass	
g-HCH (Lindane)	S24-Au0084078	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Beryllium	S24-Au0081654	NCP	%	111			75-125	Pass	
Molybdenum	S24-Au0081654	NCP	%	107			75-125	Pass	
Selenium	S24-Au0081654	NCP	%	105			75-125	Pass	
Silver	S24-Au0081654	NCP	%	95			75-125	Pass	
Spike - % Recovery									
Acid Herbicides				Result 1					
2,4-D	S24-Au0079378	NCP	%	72			70-130	Pass	
Actril (loxynil)	S24-Au0079378	NCP	%	111			70-130	Pass	
Dichlorprop	S24-Au0079378	NCP	%	83			70-130	Pass	
MCPA	L24-Au0068006	NCP	%	73			70-130	Pass	
MCPB	M24-Au0028413	NCP	%	96			70-130	Pass	
Spike - % Recovery									
				Result 1					
Cyanide (free)	S24-Au0071800	NCP	%	96			70-130	Pass	
Cyanide (total)	S24-Au0071800	NCP	%	84			70-130	Pass	
Fluoride	M24-Au0084642	NCP	%	94			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Au0065417	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	X24-Au0070656	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	X24-Au0070656	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	X24-Au0070656	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S24-Au0065417	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	X24-Au0070656	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	X24-Au0070656	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	X24-Au0070656	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-Au0065417	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S24-Au0065417	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S24-Au0065417	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S24-Au0065417	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S24-Au0065417	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S24-Au0065417	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S24-Au0065417	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	R24-Au0067478	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	R24-Au0067478	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	R24-Au0067478	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	S24-Au0079846	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos-methyl	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	R24-Au0067478	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass

Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Dimethoate	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethion	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfthion	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	R24-Au0067478	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Omethoate	R24-Au0067478	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Phorate	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	R24-Au0067478	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Sample Properties				Result 1	Result 2	RPD		
% Moisture	S24-Au0066071	CP	%	23	23	1.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S24-Au0066076	CP	mg/kg	6.3	6.6	5.0	30%	Pass
Cadmium	S24-Au0066076	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S24-Au0066076	CP	mg/kg	15	18	16	30%	Pass
Copper	S24-Au0066076	CP	mg/kg	36	43	18	30%	Pass
Lead	S24-Au0066076	CP	mg/kg	15	17	12	30%	Pass
Mercury	S24-Au0066076	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	S24-Au0066076	CP	mg/kg	16	18	16	30%	Pass
Zinc	S24-Au0066076	CP	mg/kg	67	78	14	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Beryllium	R24-Au0067494	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Molybdenum	R24-Au0067494	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Selenium	R24-Au0067494	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	R24-Au0067494	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.2-Dichloropropane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromobenzene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Iodomethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methylene Chloride	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Styrene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.2-Dichloroethene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S24-Au0054824	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Acid Herbicides				Result 1	Result 2	RPD		
2.4-D	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-DB	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4.5-T	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4.5-TP	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Actril (loxylin)	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dicamba	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorprop	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dinitro-o-cresol	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dinoseb	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
MCPA	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
MCPB	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Mecoprop	M24-Au0084128	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	S24-Au0067044	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	S24-Au0067044	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	S24-Au0067044	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	S24-Au0067044	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	S24-Au0067044	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	S24-Au0067044	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	S24-Au0067044	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	S24-Au0067044	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	S24-Au0067044	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	S24-Au0067044	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	S24-Au0067044	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	S24-Au0067044	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	S24-Au0067044	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	S24-Au0067044	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	S24-Au0067044	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	S24-Au0067044	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	S24-Au0067044	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	S24-Au0067044	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	S24-Au0071800	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Cyanide (free)	S24-Au0066077	CP	mg/kg	< 1	< 1	<1	30%	Pass
Cyanide (total)	S24-Au0066077	CP	mg/kg	< 1	< 1	<1	30%	Pass
Fluoride	M24-Au0075968	NCP	mg/kg	< 100	< 100	<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
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
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:

Harry Bacalis	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Carroll Lee	Senior Analyst-Organic
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Sample Properties
Roopesh Rangarajan	Senior Analyst-Volatile
Ryan Phillips	Senior Analyst-Inorganic
Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
Managing Director

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](#).

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: Stewart Frater
Report 1132079-AID
Project Name **WSPT CECIL PARK**
Project ID **81971-1**
Received Date Aug 23, 2024
Date Reported Sep 04, 2024

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
 containing material
 (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Project Name

WSPT CECIL PARK

Project ID

81971-1

Date Sampled

Aug 23, 2024

Report

1132079-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH13_0.1	24-Au0066069	Aug 23, 2024	Approximate Sample 537g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH14_0.1	24-Au0066072	Aug 23, 2024	Approximate Sample 627g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH15_0.1	24-Au0066074	Aug 23, 2024	Approximate Sample 686g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH16_0.1	24-Au0066077	Aug 23, 2024	Approximate Sample 937g Sample consisted of: Brown coarse-grained sandy soil, brick, cement, ceramic tile, plant residue and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 8.1g Total estimated asbestos content in ACM = 0.40g* Total estimated asbestos concentration in ACM = 0.043% w/w* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

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
Asbestos - LTM-ASB-8020	Sydney	Aug 26, 2024	Indefinite



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ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	Brisbane 1/21 Smallwood Place Murarie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079
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Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370

ABN: 47 009 120 549

Perth ProMicro 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2561 Site# 2554
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NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
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Company Name: Fyfe Earth Partners Pty Ltd VIC
Address: Level 1, Suite 2, 17 Cotham Road
Kew
VIC 3101

Project Name: WSPT CECIL PARK
Project ID: 81971-1

Order No.: 81971-1
Report #: 1132079
Phone: 08 8201 9600
Fax: 08 8201 9650

Received: Aug 23, 2024 7:11 PM
Due: Sep 2, 2024
Priority: 5 Day
Contact Name: Stewart Frater

Eurofins Analytical Services Manager : Karl Bulow

Sample Detail						Asbestos - WA guidelines	HOLD*	Metals M8	Moisture Set	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/M8	Eurofins Suite B6: BTEX/TRH/M8	NSW DECC - Waste Classification Table 1	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254												X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X
External Laboratory														
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
1	BH13 0.1	Aug 23, 2024		Soil	S24-Au0066069	X			X	X				
2	BH13 0.4	Aug 23, 2024		Soil	S24-Au0066070				X		X			
3	BH13 0.7	Aug 23, 2024		Soil	S24-Au0066071			X	X					
4	BH14 0.1	Aug 23, 2024		Soil	S24-Au0066072	X			X		X			
5	BH14 1.0	Aug 23, 2024		Soil	S24-Au0066073				X		X			
6	BH15 0.1	Aug 23, 2024		Soil	S24-Au0066074	X			X	X				
7	BH15 0.5	Aug 23, 2024		Soil	S24-Au0066075				X		X			
8	BH15 1.0	Aug 23, 2024		Soil	S24-Au0066076			X	X					
9	BH16 0.1	Aug 23, 2024		Soil	S24-Au0066077	X			X			X		
10	BH16 0.5	Aug 23, 2024		Soil	S24-Au0066078				X		X			
11	BH16 1.0	Aug 23, 2024		Soil	S24-Au0066079			X	X					
12	QC01	Aug 23, 2024		Soil	S24-Au0066080				X		X			
13	QC03	Aug 23, 2024		Soil	S24-Au0066081				X		X			



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Melbourne Laboratory - NATA # 1261 Site # 1254												X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X
14	TRIP SPIKE	Aug 23, 2024		Soil	S24-Au0066082									X
15	TRIP BLANK	Aug 23, 2024		Soil	S24-Au0066083								X	
16	RB01	Aug 23, 2024		Water	S24-Au0066084						X			
17	BH14_0.5	Aug 23, 2024		Soil	S24-Au0066086		X							
18	QC04	Aug 23, 2024		Soil	S24-Au0066087		X							
Test Counts						4	2	3	13	2	8	1	1	1

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).

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.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/fld	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$

Asbestos Content (as asbestos): $\% w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A) \times x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2 (P_A)</i> . This estimate is not NATA-accredited.
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
AFM	Airborne Fibre Monitoring, e.g., by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
HSG248	UK HSE HSG248, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected eyepiece graticule area of the specific microscope used for the analysis (a).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%_{WA}).

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

Asbestos Counter/Identifier:

Chamath JHM Annakkage Senior Analyst-Asbestos

Authorised by:

Sayeed Abu Senior Analyst-Asbestos



Glenn Jackson
Managing Director

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](#).

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Fyfe Earth Partners
Level 1, Suite 2, 17 Cotham Road
Kew
VIC 3101



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: **Stewart Frater**

Report **1132079-W**
Project name **WSPT CECIL PARK**
Project ID **81971-1**
Received Date **Aug 23, 2024**

Client Sample ID			RB01
Sample Matrix			Water
Eurofins Sample No.			S24- Au0066084
Date Sampled			Aug 23, 2024
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2) ^{*N01}	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	83
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene ^{N02}	0.01	mg/L	< 0.01
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	0.005	mg/L	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

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
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Aug 29, 2024	7 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Aug 29, 2024	7 Days
BTEX - Method: LTM-ORG-2010 BTEX and Volatile TRH	Sydney	Aug 29, 2024	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Aug 29, 2024	7 Days
Eurofins Suite B6: BTEX/TRH/M8 Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Aug 29, 2024	28 Days



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Company Name: Fyfe Earth Partners Pty Ltd VIC

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Project Name: WSPT CECIL PARK

Project ID: JOB NUMBER 81971-1

Order No.:

Report #: 1132079

Phone: 08 8201 9600

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Received: Aug 23, 2024 7:11 PM

Due: Sep 2, 2024

Priority: 5 Day

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Eurofins Analytical Services Manager : Karl Bulow

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X
External Laboratory														
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
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2	BH13 0.4	Aug 23, 2024		Soil	S24-Au0066070				X		X			
3	BH13 0.7	Aug 23, 2024		Soil	S24-Au0066071			X	X					
4	BH14 0.1	Aug 23, 2024		Soil	S24-Au0066072	X			X		X			
5	BH14 1.0	Aug 23, 2024		Soil	S24-Au0066073				X		X			
6	BH15 0.1	Aug 23, 2024		Soil	S24-Au0066074	X			X	X				
7	BH15 0.5	Aug 23, 2024		Soil	S24-Au0066075				X		X			
8	BH15 1.0	Aug 23, 2024		Soil	S24-Au0066076			X	X					
9	BH16 0.1	Aug 23, 2024		Soil	S24-Au0066077	X			X			X		
10	BH16 0.5	Aug 23, 2024		Soil	S24-Au0066078				X		X			
11	BH16 1.0	Aug 23, 2024		Soil	S24-Au0066079			X	X					
12	QC01	Aug 23, 2024		Soil	S24-Au0066080				X		X			
13	QC03	Aug 23, 2024		Soil	S24-Au0066081				X		X			



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Eurofins Analytical Services Manager : Karl Bulow

Sample Detail						Asbestos - WA guidelines	HOLD*	Metals M8	Moisture Set	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/M8	Eurofins Suite B6: BTEX/TRH/M8	NSW DECC - Waste Classification Table 1	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254												X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X
14	TRIP SPIKE	Aug 23, 2024		Soil	S24-Au0066082				X					X
15	TRIP BLANK	Aug 23, 2024		Soil	S24-Au0066083				X				X	
16	RB01	Aug 23, 2024		Water	S24-Au0066084						X			
17	TRIP SPIKE LAB	Aug 23, 2024		Soil	S24-Au0066085				X					X
18	BH14 0.5	Aug 23, 2024		Soil	S24-Au0066086		X							
19	QC04	Aug 23, 2024		Soil	S24-Au0066087		X							
Test Counts						4	2	3	16	2	8	1	1	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

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

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

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	ppm: parts per million
µg/L: micrograms per litre	ppb: parts per billion	%: Percentage
org/100 mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units	MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	Colour: Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - 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.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

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%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are not data from your samples.
3. 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.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. 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							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	89			70-130	Pass	
TRH C6-C10	%	95			70-130	Pass	
TRH >C10-C16	%	93			70-130	Pass	
LCS - % Recovery							
BTEX							
Toluene	%	109			70-130	Pass	
Ethylbenzene	%	99			70-130	Pass	
m&p-Xylenes	%	93			70-130	Pass	
o-Xylene	%	98			70-130	Pass	
Xylenes - Total*	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	84			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	86			80-120	Pass	
Cadmium	%	85			80-120	Pass	
Chromium	%	86			80-120	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper			%	84			80-120	Pass	
Lead			%	89			80-120	Pass	
Mercury			%	96			80-120	Pass	
Nickel			%	86			80-120	Pass	
Zinc			%	87			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S24-Au0072494	NCP	%	87			70-130	Pass	
TRH C10-C14	S24-Au0072541	NCP	%	80			70-130	Pass	
TRH C6-C10	S24-Au0072494	NCP	%	87			70-130	Pass	
TRH >C10-C16	S24-Au0072541	NCP	%	83			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-Au0072494	NCP	%	95			70-130	Pass	
Toluene	S24-Au0072494	NCP	%	94			70-130	Pass	
Ethylbenzene	S24-Au0072494	NCP	%	88			70-130	Pass	
m&p-Xylenes	S24-Au0072494	NCP	%	83			70-130	Pass	
o-Xylene	S24-Au0072494	NCP	%	84			70-130	Pass	
Xylenes - Total*	S24-Au0072494	NCP	%	83			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-Au0072494	NCP	%	71			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-Au0080401	NCP	%	90			75-125	Pass	
Cadmium	S24-Au0080401	NCP	%	90			75-125	Pass	
Chromium	S24-Au0080401	NCP	%	89			75-125	Pass	
Copper	S24-Au0080401	NCP	%	87			75-125	Pass	
Lead	S24-Au0080401	NCP	%	92			75-125	Pass	
Mercury	S24-Au0080401	NCP	%	96			75-125	Pass	
Nickel	S24-Au0080401	NCP	%	89			75-125	Pass	
Zinc	S24-Au0080401	NCP	%	91			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Au0084118	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S24-Au0072540	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S24-Au0072540	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S24-Au0072540	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C6-C10	S24-Au0084118	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	S24-Au0072540	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S24-Au0072540	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S24-Au0072540	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-Au0084118	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S24-Au0084118	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S24-Au0084118	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S24-Au0084118	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S24-Au0084118	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S24-Au0084118	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S24-Au0084118	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S24-Au0066084	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Cadmium	S24-Au0070540	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Chromium	S24-Au0066084	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper	S24-Au0066084	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Lead	S24-Au0066084	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Mercury	S24-Au0066084	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel	S24-Au0066084	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Zinc	S24-Au0066084	CP	mg/L	< 0.005	< 0.005	<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
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised by:

Harry Bacalis	Analytical Services Manager
Fang Yee Tan	Senior Analyst-Metal
Raymond Siu	Senior Analyst-Volatile
Roopesh Rangarajan	Senior Analyst-Organic



Glenn Jackson
Managing Director

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](#).

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6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079

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Company Name: Fyfe Earth Partners Pty Ltd VIC

Address: Level 1, Suite 2, 17 Cotham Road
Kew
VIC 3101

Project Name: WSPT CECIL PARK

Project ID: JOB NUMBER 81971-1

Order No.:

Report #: 1132079

Phone: 08 8201 9600

Fax: 08 8201 9650

Received: Aug 23, 2024 7:11 PM

Due: Sep 2, 2024

Priority: 5 Day

Contact Name: Stewart Frater

Eurofins Analytical Services Manager : Karl Bulow

Sample Detail						Asbestos - WA guidelines	HOLD*	Metals M8	Moisture Set	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/M8	Eurofins Suite B6: BTEX/TRH/M8	NSW DECC - Waste Classification Table 1	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254												X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X
External Laboratory														
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
1	BH13 0.1	Aug 23, 2024		Soil	S24-Au0066069	X			X	X				
2	BH13 0.4	Aug 23, 2024		Soil	S24-Au0066070				X		X			
3	BH13 0.7	Aug 23, 2024		Soil	S24-Au0066071			X	X					
4	BH14 0.1	Aug 23, 2024		Soil	S24-Au0066072	X			X		X			
5	BH14 1.0	Aug 23, 2024		Soil	S24-Au0066073				X		X			
6	BH15 0.1	Aug 23, 2024		Soil	S24-Au0066074	X			X	X				
7	BH15 0.5	Aug 23, 2024		Soil	S24-Au0066075				X		X			
8	BH15 1.0	Aug 23, 2024		Soil	S24-Au0066076			X	X					
9	BH16 0.1	Aug 23, 2024		Soil	S24-Au0066077	X			X			X		
10	BH16 0.5	Aug 23, 2024		Soil	S24-Au0066078				X		X			
11	BH16 1.0	Aug 23, 2024		Soil	S24-Au0066079			X	X					
12	QC01	Aug 23, 2024		Soil	S24-Au0066080				X		X			
13	QC03	Aug 23, 2024		Soil	S24-Au0066081				X		X			



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Company Name:

Address:

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Level 1, Suite 2, 17 Cotham Road
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VIC 3101

WSPT CECIL PARK
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Aug 23, 2024 7:11 PM

Sep 2, 2024

5 Day

Stewart Frater

Eurofins Analytical Services Manager : Karl Bulow

Sample Detail						Asbestos - WA guidelines	HOLD*	Metals M8	Moisture Set	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/M8	Eurofins Suite B6: BTEX/TRH/M8	NSW DECC - Waste Classification Table 1	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254												X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X
14	TRIP SPIKE	Aug 23, 2024		Soil	S24-Au0066082				X					X
15	TRIP BLANK	Aug 23, 2024		Soil	S24-Au0066083				X				X	
16	RB01	Aug 23, 2024		Water	S24-Au0066084						X			
17	TRIP SPIKE LAB	Aug 23, 2024		Soil	S24-Au0066085				X					X
18	BH14 0.5	Aug 23, 2024		Soil	S24-Au0066086		X							
19	QC04	Aug 23, 2024		Soil	S24-Au0066087		X							
Test Counts						4	2	3	16	2	8	1	1	2

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Sample Receipt Advice

Company name: Fyfe Earth Partners Pty Ltd VIC
Contact name: Stewart Frater
Project name: WSPT CECIL PARK
Project ID: JOB NUMBER 81971-1
Turnaround time: 5 Day
Date/Time received: Aug 23, 2024 7:11 PM
Eurofins reference: 1132079

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.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

QC02 TO ALS

Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Karl Bulow on phone : or by email: KarlBulow@eurofins.com

Results will be delivered electronically via email to Stewart Frater - Stewart.Frater@fyfe.com.au.

Note: A copy of these results will also be delivered to the general Fyfe Earth Partners Pty Ltd VIC email address.



Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

[illegible]

Fyfe Earth Partners
Level 1, 124 South Tce
Adelaide
SA 5000



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: Stewart Frater
Report 1140565-AID
Project Name **WSPT CECIL PARK**
Project ID **81971-1**
Received Date Sep 18, 2024
Date Reported Sep 26, 2024

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
 containing material
 (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Project Name WSPT CECIL PARK
Project ID 81971-1
Date Sampled Sep 18, 2024
Report 1140565-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
S01-0.2	24-Se0046872	Sep 18, 2024	Approximate Sample 1223g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick, ceramic, glass and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
S02-0.2	24-Se0046873	Sep 18, 2024	Approximate Sample 1097g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
S03-0.2	24-Se0046874	Sep 18, 2024	Approximate Sample 1103g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick, ceramic and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
S04-0.1	24-Se0046875	Sep 18, 2024	Approximate Sample 943g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick, ceramic and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
S05-0.2	24-Se0046876	Sep 18, 2024	Approximate Sample 1000g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick, ceramic and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
S06-0.2	24-Se0046877	Sep 18, 2024	Approximate Sample 1018g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick, ceramic and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
S07-0.15	24-Se0046878	Sep 18, 2024	Approximate Sample 1068g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick, ceramic, plastic and rocks	AF: Chrysotile asbestos detected in the form of loose fibre bundle. Approximate raw weight of AF = 0.00050g* Estimated asbestos content in AF = 0.00050g* Total estimated asbestos concentration in AF = 0.000047% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
S08-0.2	24-Se0046879	Sep 18, 2024	Approximate Sample 1026g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick, ceramic and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
S09-0.2	24-Se0046880	Sep 18, 2024	Approximate Sample 894g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick, ceramic, bitumen and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
S10-0.2	24-Se0046881	Sep 18, 2024	Approximate Sample 803g Sample consisted of: Brown fine-grained clayey soil, organic debris, cement, brick, ceramic and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
S06-A	24-Se0046882	Sep 18, 2024	Approximate Sample 1g / 20x15x3mm Sample consisted of: Grey fibre cement material	Chrysotile asbestos detected.
S07-A	24-Se0046883	Sep 18, 2024	Approximate Sample 3g / 20x20x5mm Sample consisted of: Grey fibre cement material	No asbestos detected. Synthetic mineral fibre detected. No trace asbestos detected.
S09-A	24-Se0046884	Sep 18, 2024	Approximate Sample 5g / 30x20x2mm Sample consisted of: Grey fibre cement material	Chrysotile and amosite asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

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
Asbestos - LTM-ASB-8020	Sydney	Sep 18, 2024	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Sep 18, 2024	Indefinite



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ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	Brisbane 1/21 Smallwood Place Murarie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079
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ABN: 91 05 0159 898

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ABN: 47 009 120 549

Perth ProMicro 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2561 Site# 2554
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NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
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Company Name: Fyfe Earth Partners Pty Ltd SA
Address: Level 1, 124 South Tce
Adelaide
SA 5000

Project Name: WSPT CECIL PARK
Project ID: 81971-1

Order No.:
Report #: 1140565
Phone: 08 8201 9600
Fax: 08 8201 9650

Received: Sep 18, 2024 1:00 PM
Due: Sep 25, 2024
Priority: 5 Day
Contact Name: Stewart Frater

Eurofins Analytical Services Manager : Karl Bulow

Sample Detail						Asbestos - WA guidelines	Asbestos Absence / Presence
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	S01-0.2	Sep 18, 2024		Soil	S24-Se0046872	X	
2	S02-0.2	Sep 18, 2024		Soil	S24-Se0046873	X	
3	S03-0.2	Sep 18, 2024		Soil	S24-Se0046874	X	
4	S04-0.1	Sep 18, 2024		Soil	S24-Se0046875	X	
5	S05-0.2	Sep 18, 2024		Soil	S24-Se0046876	X	
6	S06-0.2	Sep 18, 2024		Soil	S24-Se0046877	X	
7	S07-0.15	Sep 18, 2024		Soil	S24-Se0046878	X	
8	S08-0.2	Sep 18, 2024		Soil	S24-Se0046879	X	
9	S09-0.2	Sep 18, 2024		Soil	S24-Se0046880	X	
10	S10-0.2	Sep 18, 2024		Soil	S24-Se0046881	X	
11	S06-A	Sep 18, 2024		Building Materials	S24-Se0046882		X
12	S07-A	Sep 18, 2024		Building Materials	S24-Se0046883		X
13	S09-A	Sep 18, 2024		Building	S24-Se0046884		X



web: www.eurofins.com.au
email: EnviroSales@eurofins.com

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	1/21 Smallwood Place Murarie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079

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NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402

Company Name: Fyfe Earth Partners Pty Ltd SA
Address: Level 1, 124 South Tce
Adelaide
SA 5000

Project Name: WSPT CECIL PARK
Project ID: 81971-1

Order No.:
Report #: 1140565
Phone: 08 8201 9600
Fax: 08 8201 9650

Received: Sep 18, 2024 1:00 PM
Due: Sep 25, 2024
Priority: 5 Day
Contact Name: Stewart Frater

Eurofins Analytical Services Manager : Karl Bulow

Sample Detail					Asbestos - WA guidelines	Asbestos Absence / Presence
Sydney Laboratory - NATA # 1261 Site # 18217					X	X
				Materials		
Test Counts					10	3

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/fld	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\% w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A) \times x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2</i> (PA). This estimate is not NATA-accredited.
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
AFM	Airborne Fibre Monitoring, e.g., by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total %w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos-containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to distinguish visibly and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess the degree of friability.
HSG248	UK HSE HSG248, <i>Asbestos: The Analysts Guide</i> , 2 nd Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (2012), ISBN: 9780717665020
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected eyepiece graticule area of the specific microscope used for the analysis (a).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
MMVF	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and "bio-soluble fibres". NOTE: previously known as "synthetic mineral fibre" (SMF).
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
PCM	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.. It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (% _{WA}).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	N/A
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

Asbestos Counter/Identifier:

Bennel Jiri Senior Analyst-Asbestos

Authorised by:

Sayeed Abu Senior Analyst-Asbestos



Glenn Jackson
Managing Director

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 shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.



Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	Brisbane 1/21 Smallwood Place Murarie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079
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Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370

Eurofins ProMicro Pty Ltd

ABN: 47 009 120 549

Perth ProMicro 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2561 Site# 2554
--

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
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Company Name:

Address:

Project Name:

Project ID:

Fyfe Earth Partners Pty Ltd SA

Level 1, 124 South Tce

Adelaide

SA 5000

WSPT CECIL PARK

81971-1

Order No.:

Report #:

Phone:

Fax:

1140565

08 8201 9600

08 8201 9650

Received:

Due:

Priority:

Contact Name:

Sep 18, 2024 1:00 PM

Sep 27, 2024

7 Day

Stewart Frater

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	Asbestos Absence / Presence
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	S01-0.2	Sep 18, 2024		Soil	S24-Se0046872	X	
2	S02-0.2	Sep 18, 2024		Soil	S24-Se0046873	X	
3	S03-0.2	Sep 18, 2024		Soil	S24-Se0046874	X	
4	S04-0.1	Sep 18, 2024		Soil	S24-Se0046875	X	
5	S05-0.2	Sep 18, 2024		Soil	S24-Se0046876	X	
6	S06-0.2	Sep 18, 2024		Soil	S24-Se0046877	X	
7	S07-0.15	Sep 18, 2024		Soil	S24-Se0046878	X	
8	S08-0.2	Sep 18, 2024		Soil	S24-Se0046879	X	
9	S09-0.2	Sep 18, 2024		Soil	S24-Se0046880	X	
10	S10-0.2	Sep 18, 2024		Soil	S24-Se0046881	X	
11	S06-A	Sep 18, 2024		Building Materials	S24-Se0046882		X
12	S07-A	Sep 18, 2024		Building Materials	S24-Se0046883		X
13	S09-A	Sep 18, 2024		Building	S24-Se0046884		X



Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079

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Perth
46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370

Eurofins ProMicro Pty Ltd

ABN: 47 009 120 549

Perth ProMicro
46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2561 Site# 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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Company Name:

Address:

Project Name:

Project ID:

Fyfe Earth Partners Pty Ltd SA

Level 1, 124 South Tce

Adelaide

SA 5000

WSPT CECIL PARK

81971-1

Order No.:

Report #:

Phone:

Fax:

1140565

08 8201 9600

08 8201 9650

Received:

Due:

Priority:

Contact Name:

Sep 18, 2024 1:00 PM

Sep 27, 2024

7 Day

Stewart Frater

Eurofins Analytical Services Manager : Ursula Long

Sample Detail					Asbestos - WA guidelines	Asbestos Absence / Presence
Sydney Laboratory - NATA # 1261 Site # 18217					X	X
				Materials		
Test Counts					10	3

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Unit 1, 2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	1/21 Smallwood Place Murarie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079

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Eurofins ProMicro Pty Ltd

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Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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Sample Receipt Advice

Company name: Fyfe Earth Partners Pty Ltd SA
Contact name: Stewart Frater
Project name: WSPT CECIL PARK
Project ID: 81971-1
Turnaround time: 6 Day
Date/Time received: Sep 18, 2024 1:00 PM
Eurofins reference: 1140565

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.
- N/A 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.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Standard TAT is currently 7 days due to temporary laboratory constraints, please contact your Analytical Services Manager should faster TAT be required or if you would like to receive an interim report.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Karl Bulow on phone : or by email: KarlBulow@eurofins.com

Results will be delivered electronically via email to Stewart Frater - Stewart.Frater@fyfe.com.au.

Note: A copy of these results will also be delivered to the general Fyfe Earth Partners Pty Ltd SA email address.



Sydney Laboratory
179 Magowra Road Girraween NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☒ **Brisbane Laboratory**
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory**
46-48 Banksia Road Welshpool WA 6106
08 6253 4444 Samples@ARLgroup.com.au

☐ **Melbourne Laboratory**
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

pd, nc

1140565



CERTIFICATE OF ANALYSIS

Work Order	: ES2428119	Page	: 1 of 5
Client	: FYFE PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: STEWART FRATER	Contact	: Customer Services ES
Address	: Level 3, 120 Edward Street Brisbane QLD 400	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: Job Number 81971-1 WSPT Cecil Park	Date Samples Received	: 27-Aug-2024 14:30
Order number	: 81971-1	Date Analysis Commenced	: 28-Aug-2024
C-O-C number	: ----	Issue Date	: 02-Sep-2024 15:59
Sampler	: Jack Ellis		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC02	----	----	----	----
Sampling date / time					23-Aug-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2428119-001	-----	-----	-----	-----
					Result	----	----	----	----
EP080: BTEXN - Continued									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of BTEX	-----	0.2	mg/kg		<0.2	----	----	----	----
^ Total Xylenes	-----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		93.8	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		83.3	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		91.8	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131



QUALITY CONTROL REPORT

Work Order : **ES2428119**

Page : 1 of 6

Client : **FYFE PTY LTD**

Laboratory : Environmental Division Sydney

Contact : **STEWART FRATER**

Contact : Customer Services ES

Address : Level 3, 120 Edward Street
Brisbane QLD 400

Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

Telephone : ----

Telephone : +61-2-8784 8555

Project : Job Number 81971-1 WSPT Cecil Park

Date Samples Received : 27-Aug-2024

Order number : 81971-1

Date Analysis Commenced : 28-Aug-2024

C-O-C number : ----

Issue Date : 02-Sep-2024

Sampler : Jack Ellis

Site : ----

Quote number : EN/222

No. of samples received : 1

No. of samples analysed : 1



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6023285)									
ES2427966-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	6	7	15.6	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	797	953	17.9	0% - 20%
		EG005T: Nickel	7440-02-0	2 (109)*	mg/kg	63300	68400	7.8	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	6	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7460	6760	9.8	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	106	118	10.5	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	9700	10900	11.4	0% - 20%
		EW2403936-006	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1
EG005T: Chromium	7440-47-3			2	mg/kg	25	23	10.6	0% - 50%
EG005T: Nickel	7440-02-0			2	mg/kg	6	7	19.2	No Limit
EG005T: Arsenic	7440-38-2			5	mg/kg	7	7	0.0	No Limit
EG005T: Copper	7440-50-8			5	mg/kg	34	40	14.8	No Limit
EG005T: Lead	7439-92-1			5	mg/kg	14	14	0.0	No Limit
EG005T: Zinc	7440-66-6			5	mg/kg	26	39	40.8	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6023286)									
ES2428119-001	QC02	EA055: Moisture Content	----	0.1 (1.0)*	%	19.4	19.8	2.1	0% - 50%
EW2403936-008	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	15.9	17.8	11.5	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6023282)									
ES2427930-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6019481)									

Page : 3 of 6
 Work Order : ES2428119
 Client : FYFE PTY LTD
 Project : Job Number 81971-1 WSPT Cecil Park



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6019481) - continued									
EW2403962-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6019522)									
ES2428171-005	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2428171-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6019481)									
EW2403962-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6019522)									
ES2428171-005	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2428171-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 6019522)									
ES2428171-005	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2428171-001	Anonymous	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
ES2428171-001	Anonymous	EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6023285)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	108	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	99.8	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	128	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	107	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	110	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	108	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	98.0	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6023282)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	89.8	70.0	125
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6019481)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	91.4	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	97.3	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	100	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6019522)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	84.3	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6019481)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	96.1	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	97.6	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	104	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6019522)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	84.7	72.4	133
EP080: BTEXN (QCLot: 6019522)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	106	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	88.0	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	89.1	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	101	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	105	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	104	78.8	122



Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6023285)							
ES2427966-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	112	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	101	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	# Not Determined	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	# Not Determined	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	103	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	# Not Determined	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	# Not Determined	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6023282)							
ES2427930-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	90.8	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6019481)							
EW2403962-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	113	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	105	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	116	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6019522)							
ES2428171-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	83.4	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6019481)							
EW2403962-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	99.8	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	114	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	117	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6019522)							
ES2428171-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	83.8	61.1	142
EP080: BTEXN (QCLot: 6019522)							
ES2428171-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	95.4	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	80.8	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	83.4	67.4	123
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	96.8	66.4	121
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	102	70.7	121
	EP080: Naphthalene	91-20-3	2.5 mg/kg	99.8	61.1	115	





QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2428119	Page	: 1 of 5
Client	: FYFE PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: STEWART FRATER	Telephone	: +61-2-8784 8555
Project	: Job Number 81971-1 WSPT Cecil Park	Date Samples Received	: 27-Aug-2024
Site	: ----	Issue Date	: 02-Sep-2024
Sampler	: Jack Ellis	No. of samples received	: 1
Order number	: 81971-1	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005(ED093)T: Total Metals by ICP-AES	ES2427966--001	Anonymous	Chromium	7440-47-3	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005(ED093)T: Total Metals by ICP-AES	ES2427966--001	Anonymous	Copper	7440-50-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005(ED093)T: Total Metals by ICP-AES	ES2427966--001	Anonymous	Nickel	7440-02-0	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005(ED093)T: Total Metals by ICP-AES	ES2427966--001	Anonymous	Zinc	7440-66-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content							
Soil Glass Jar - Unpreserved (EA055) QC02	23-Aug-2024	----	----	----	30-Aug-2024	06-Sep-2024	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QC02	23-Aug-2024	30-Aug-2024	19-Feb-2025	✓	30-Aug-2024	19-Feb-2025	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QC02	23-Aug-2024	30-Aug-2024	20-Sep-2024	✓	02-Sep-2024	20-Sep-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QC02	23-Aug-2024	28-Aug-2024	06-Sep-2024	✓	30-Aug-2024	06-Sep-2024	✓
Soil Glass Jar - Unpreserved (EP071) QC02	23-Aug-2024	29-Aug-2024	06-Sep-2024	✓	30-Aug-2024	08-Oct-2024	✓



Matrix: SOIL

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QC02	23-Aug-2024	28-Aug-2024	06-Sep-2024	✓	30-Aug-2024	06-Sep-2024	✓
Soil Glass Jar - Unpreserved (EP071) QC02	23-Aug-2024	29-Aug-2024	06-Sep-2024	✓	30-Aug-2024	08-Oct-2024	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QC02	23-Aug-2024	28-Aug-2024	06-Sep-2024	✓	30-Aug-2024	06-Sep-2024	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2428119**

Client	: FYFE PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: STEWART FRATER	Contact	: Customer Services ES
Address	: Level 3, 120 Edward Street Brisbane QLD 400	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: stewart.frater@fyfe.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: Job Number 81971-1 WSPT Cecil Park	Page	: 1 of 2
Order number	: 81971-1	Quote number	: EP2023FYFEAR0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: Jack Ellis		

Dates

Date Samples Received	: 27-Aug-2024 14:30	Issue Date	: 28-Aug-2024
Client Requested Due Date	: 02-Sep-2024	Scheduled Reporting Date	: 02-Sep-2024

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 7.0, 8.2'C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 1 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

CHAIN OF CUSTODY RECORD

Sydney Laboratory
173 Macquarie Road, Sydney NSW 2008
02 9900 5000 Environmental@sydneylab.com.au

Brisbane Laboratory
Unit 1/13 Sandstone Place, Brisbane QLD 4172
07 3602 4000 Environmental@brisbanelab.com.au

Perth Laboratory
46-48 Burke Road, West Perth WA 6150
08 9253 4444 Environmental@perthlab.com.au

Melbourne Laboratory
5 University Road, Doreville Vic 3175
03 9594 5000 ChainSample@melbournelab.com

Company		File		Project No		Job Number 81971-1		Project Manager		Shewart Fraser		Sample(s)		Jack Ellis	
Address		L1 / 120 Edward Street Brisbane QLD 4000		Project Name		WSPF Coal Park		EOD Referral EOD Code		EOD Referral EOD Code		Handled over by		Jack Ellis	
Contact Name		Shewart Fraser		Analyses		R12 NSW DECC Waste Classification Suite		BTEXN, TRH/TPH, METALS (8)		BTEXN, TRH/TPH, PAH, OCP/OPP, METALS (8)		METALS (8)		ASBESTOS	
Phone No		0423 704 321		Where results are required, please specify 'Total' or 'Filtered'. SUITE code must be used to obtain SUITE pricing.		BTEXN, TRH/TPH, PAH, OCP/OPP, METALS (8)		BTEXN / TRH		HOLD		500mL Plastic		250mL Plastic	
Special Directions				Sampled Date/Time 23/09/2024 0:00		Matrix Soil (1)						125mL Plastic		200mL Amber Glass	
Purchase Order		81971-1										40mL VOA vial		500mL PFAS Bottle	
Quote ID No		P/O Rate										Jar (Glass or HDPE)		Other (Asbestos AS4894, WA Guidelines)	
No		Chain Sample ID		Sampled Date/Time 23/09/2024 0:00		Matrix Soil (1)						Required Turnaround Time (TAT) Small volume < 500g, 1 day		Sample Comments / Dangerous Goods Hazard Warning	
1		BH13_01		8/23/2024 0:00	Soil		X								
2		BH13_04		8/23/2024 0:00	Soil	X									
3		BH13_07		8/23/2024 0:00	Soil			X							
4															
5		BH14_01		8/23/2024 0:00	Soil	X									
6		BH14_05		8/23/2024 0:00	Soil										
7		BH14_10		8/23/2024 0:00	Soil	X									
8															
9		BH15_01		8/23/2024 0:00	Soil			X							
10		BH15_05		8/23/2024 0:00	Soil	X									
11		BH15_10		8/23/2024 0:00	Soil			X							
12															
13		BH16_01		8/23/2024 0:00	Soil	X									
14		BH16_05		8/23/2024 0:00	Soil		X								
15		BH16_10		8/23/2024 0:00	Soil			X							
16															

Environmental Division
Sydney
Work Order Reference
ES2428119



Telephone : +61-2-8794 8555

Received
27/8/24
1430

APPENDIX E

CALIBRATION DOCUMENTS



PID Calibration Certificate

Instrument **PhoCheck Tiger**
Serial No. **T-119100**



Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		97 ppm Isobutylene	NATA	SY534		97.0ppm

Calibrated by: Samuel Tanner

Calibration date: 12/08/2024

Next calibration due: 11/09/2024

APPENDIX F
FIELD SAMPLING SHEETS



Equipment Use Summary

	Equip ID:	Used	Rented	Calibrated	Days Used	Returned
PID	T-119100		✓		1	
Oil-Water Probe						
W. Quality Meter						
LEL						
Land Gas Meter						
Low Flow Kit						
Hand Auger		✓	✓			
Steel Bailer						
OTHER						

Consumables / Disbursement Use

QAQC Summary

Item	Quantity	Samples		
		QAQC	Duplicate of	Triplicate of
		QS/QW 01	BH14/0.1	✓
		QS/QW 02		BH14/0.1
		QS/QW 03	BH16/0.1	
		QS/QW 04		BH16/0.1
		QS/QW		
		QS/QW		
		QS/QW		
		QS/QW		
		QS/QW		
		QS/QW		
		QS/QW		
		QS/QW		
		QS/QW		
		QSV		
		QSV		
		QSV		

Weather Summary

Sunny

Rinsates Summary

RBI - Hand Auger

Vehicle Use Summary

	Y/N	Registration	Days Used	Trip / Field Blank		
Rental Car				Soil	TS	
Private Car					TB	
Fyfe Car	Y					
Client Car						

TRACE

Project	81971-1	Project No.	81971-1
Date	23.8.24	Location	97 Wallgrove Rd
Contractor	TRACE	Field Staff	Jack Ellis-Byrne Shreya Pathak

Time	Activities
8:00	Arrive on site & organise access
9:30	unload gear & carry to site
9:50	Start Advance BH14
10:40	Advance BH13
11:15	Advance BH15
11:45	Site walkover - limited access due to overgrown vegetation & barbed wire fences. No PCAs identified.
11:55	Advance BH16
12:25	Return to vehicle & take PID readings, pack esky's
12:50	leave to go to lab.

Time Expense Summary

Staff Code							
On-Site Time	Hrs						
Travel Time	Hrs						
Dist. Travelled	Km						

Project 81971-1 Cecil Park
 Date 18/09/24
 Contractor —

Project No. 81971-1
 Location Cecil Park
 Field Staff JE + SP (TRACE)

Time Activities

07:45 Leave home & head to site via Station.
 09:00 Arrive at site
 09:00 - 11:45 Sample driveway. 10 Samples, refer to map.
 11:45 - 13:00 Drive to Lab (stopped at other site on way for 45mins)
 13:00 - 13:45 Return to office.

~~14:00~~ Samples collected: S01-0.2, S02-0.2, S03-0.2, S04-0.1, S05-0.2, S06-0.2, S07-0.15, S08-0.2, S09-0.2, S010-0.2. 3 additional Samples collected of potential ACM fragments: S06-A, S07-A, S09-A.

S06-A weight = 2g
 S07-A weight = 2g
 S09-A weight = 5g

All Samples consisted of same material:
 Light brown Sand, gravels & cobbles with tile fragments, bricks & occasional plastic, metal & glass. Dry, compacted, fine - very coarse grained, Natural underlying clay observed at 0.2mbgs at all locations except S04 (0.1mbgs) & S07 (0.15mbgs).

Time Expense Summary

Staff Code							
On-Site Time	Hrs						
Travel Time	Hrs						
Dist. Travelled	Km						

Equipment Use Summary							
		Equip ID:	Used	Rented	Calibrated	Days Used	Returned
PID		—					
Oil-Water Probe		—					
W. Quality Meter		—					
LEL		—					
Land Gas Meter		—					
Low Flow Kit		—					
Hand Auger		—					
Steel Bailer		—					
OTHER		—					

Consumables / Disbursement Use		QAQC Summary			
Item	Quantity	Samples			
		QAQC	Duplicate of	Triplicate of	
—	—	QAQC			
		QS/QW	—	—	
		QS/QW			
		QS/QW			
		QS/QW			
		QS/QW			
		QS/QW			
		QS/QW			
		QS/QW			
		QS/QW			
		QS/QW			
		QS/QW			
		QS/QW			
		QS/QW			
		QSV			
		QSV			
		QSV			

Weather Summary		Rinsates Summary	
Sunny			—
			—

Vehicle Use Summary				Trip / Field Blank			
	Y/N	Registration	Days Used				
Rental Car				—			
Private Car							
Fyfe Car	Y	(TRACE vehicle)	1				
Client Car							

Jack ELLIS-Byrne 