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Detailed Site Investigation and Assessment Report

Prepared for:	Figgis & Jefferson Tepa Pty Ltd
Site Address	35-39 Cater Road, Brookvale, NSW
Prepared by	Jeffrey Yu • Principal Environmental Consultant • Certified Environmental Practitioner (#1516) • Licensed Asbestos Assessor (#001366) • PhD (EnvEng), PhD (MediChem)
Date of Fieldwork	06/06/2025
Reference. No.	DRYU642J_DSI_V1_35-39 Carter Road, Brookvale, NSW_25062025.

25 June 2025

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Document History and Status

Rev	Status	Description	Author	Reviewer	Release Date
1	Final	Issued	Jeffrey YU		25/06/2025

Distribution of Copies

Rev	Format	Issued To
1	Electronic (Email)	Figgis & Jefferson Tepa Pty Ltd

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Abbreviations

ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AHD	Australian Height Datum
AMP	Asbestos Management Plan
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure
ASS	Acid Sulfate Soils
BGS	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
COPC	Contaminant of Potential Concern
Council	Northern Beaches Council
CSM	Conceptual Site Model
DA	Development Application
DQI	Data Quality Indicator
DQO	Data Quality Objective
DSI	Detailed Site Investigation
EIL	Ecological Investigation Level
ESL	Ecological Screening Level
EP&A	Environmental Planning and Assessment
DRYU	Dr Upsilon Environments Pty Ltd
HIL	Health Investigation Level
HSL	Health Screening Level
IL	Investigation Level
LOR	Limit of Reporting
NATA	National Association of Testing Authorities, Australia
NEPC	National Environment Protection Council
NSW EPA	Environment Protection Authority of New South Wales
NSW OEH	Office of Environment and Heritage of New South Wales
OCP	Organochlorine Pesticide
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PPE	Personal Protective Equipment
QA	Quality Assurance
QC	Quality Control
RAP	Remediation Action Plan
RPD	Relative Percent Difference
SEPP	State Environmental Planning Policy
SWMS	Safe Work Method Statement
TRH	Total Recoverable Hydrocarbon
PFAS	Per- and Polyfluoroalkyl Substances
VENM	Virgin Excavated Natural Material

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Executive Summary

Dr Upsilon Environments Pty Ltd ("**DRYU**") was commissioned by Figgis & Jefferson Tepa Pty Ltd ("**The Client**") on 06 June 2025 to perform a Detailed Site Investigation and Assessment report ("**DSI**") in order to assist in the proposed mixed-use development application (DA2025/0042), "Alterations and additions to industrial development - Demolition works and construction of a mixed use development including light industry, a vehicle body repair workshop, a take away food and drink premises and business identification signage", at 35-39 Cater Road, Brookvale, NSW to Northern Beaches Council ("**The Council**").

The architectural plans (Ref. No.: Ref. No. 3857, DA 000~442, Issue A, Figgis & Jefferson Tepa Architects, dated 17 January 2025) were made available for reference. The proposed soil disturbance could include the following:

1. The excavation of 37-39 Carter Road for around 1.3 m on average below existing ground level and minor fill around 0.24 m on average at the front entry
2. No excavation will be conducted at 35 Carter Road
3. Slab demolition
4. landscaping

Main Findings

Based on the findings of this DSI report for the proposed excavation area with a judgmental sampling programme, DRYU concludes the following:

- Among eight soil samples from eight borehole locations for asbestos by NEPM gravimetric testing/observation, several fibro-cement fragments over 7 mm in dimensions during onsite sieving were sighted in BH02_0.13-0.5.
- Bonded asbestos was detected in BH01_0.15-0.35 (0.005%w/w below the HSL-D of 0.005%w/w). The concentration of bonded asbestos in BH02_0.13-0.5 (0.78%) did exceed the HSL-D (0.05%w/w, bonded).
- Asbestos fine was detected in one soil sample, BH06_0.1-0.3 (0.003%w/w, exceeding the HSL-D of 0.001%w/w).
- The concentrations of the tested contaminants of potential concern including Heavy Metals – Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc, Total Recoverable Hydrocarbons (TRHs), Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Organophosphorus Pesticides (OPPs), Organochlorine Pesticides (OCPs), Polychlorinated Biphenyl (PCBs) below the laboratory limit of reporting or below the guideline HIL-D values. Carcinogenic PAHs, BaP TEQ <LOR=0 of BH05_0.1-0.25 (2.2 mg/Kg) did not exceed HIL-D (sand) (4 mg/Kg).
- The concentrations of petroleum compounds and fractions below the HSL-D & HSL D Commercial/Industrial (F1 and F2, BTEXN) for vapour intrusion, or below the laboratory limit of reporting for Silt/Clay texture, 0 m to <1 m.
- DSI analytical results for nine soil samples collected indicate concentrations of As, Cu, Cr^{III}, DDT, naphthalene, Ni, Pb and Zn were either below the laboratory limit of reporting or below the corresponding guideline values for EIL-Commercial/Industrial. The elevated Pb concentrations in BH04_0.3-0.5 (350 mg/Kg) and BH05_0.1-0.25 (620 mg/Kg) did not exceed the Generic added contaminant limits for Pb (1800 mg/Kg).
- DSI analytical results for nine soil samples indicate concentrations of TPH fractions (F1, F2, F3 and F4), BTEX and Benzo(α)pyrene did not exceed the ESL-Commercial/Industrial values – coarse texture, below the laboratory limit of reporting

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or not detected, except for BH05_0.1-0.25 with BaP 1.7 mg/Kg, slightly higher than ESL-coarse 1.4 mg/Kg.

- DSI analytical results for soil samples collected indicates concentrations of TPH fractions were either below the laboratory limit of reporting or below the guideline values of Management Limits.

Date Gaps
Several data gaps may exist and to be addressed during construction stage due to site access constraints"

- Soil beneath the dwelling structures such as the footings, slabs

Data gap closure works are required to be completed in accordance with sampling requirement outlined in the NSW EPA Sampling Design Guidelines (2022).

Conclusion
The risk of contamination in soils at the localised area is **medium**, traceable to historical backfilling and demolition activities rather than car repair/painting business.

Therefore, DRYU proposes that the Site can be made **suitable** for the proposed mixed-use development from site contamination perspective.

Recommendations

- A **Remedial Action Plan** with contingency plans shall be prepared to guide the remediation process in light of any additional contamination identified during data gap works.
- On completion of the friable asbestos removal, **an asbestos clearance certificate** will be required to be undertaken by a licensed asbestos assessor and clearance certificate issued in accordance with the requirements of NSW Work Health and Safety Regulation (2017) and Code of Practice - How to Safely Remove Asbestos (Safework, 2022) to validate that the asbestos fine related contamination has indeed been removed and that the asbestos impacted areas are safe for re-use.
- **Waste Classification Report(s)** shall be conducted for **scraped topsoil/FILL under slab for offsite disposal** in accordance with the NSW EPA Waste Classification Guidelines (2014),
- **A Validation report** at the completion of the demolition and earthworks (and after any further investigation and/or remediation works), i.e. prior to construction, to confirm that:
    - remediation works have been undertaken in accordance with the RAP requirements;
    - the site is suitable for its intended use; and
    - that all works have been completed in accordance with SEPP – Resilience and Hazards 2021 and the NSW EPA requirements for consultants reporting on contaminated sites.

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1 Introduction

1.1 General

Dr Upsilon Environments Pty Ltd ("**DRYU**") was commissioned by Figgis & Jefferson Tepa Pty Ltd ("**The Client**") on 06 June 2025 to perform a Detailed Site Investigation and Assessment report ("**DSI**") in order to assist in the proposed mixed-use development application (DA2025/0042), "Alterations and additions to industrial development - Demolition works and construction of a mixed use development including light industry, a vehicle body repair workshop, a take away food and drink premises and business identification signage", at 35-39 Cater Road, Brookvale, NSW to Northern Beaches Council ("**The Council**").

The architectural plans (Ref. No.: Ref. No. 3857, DA 000~442, Issue A, Figgis & Jefferson Tepa Architects, dated 17 January 2025) were made available for reference. The proposed soil disturbance could include the following:

5. The excavation of 37-39 Carter Road for around 1.3 m on average below existing ground level and minor fill around 0.24 m on average at the front entry
6. No excavation will be conducted at 35 Carter Road
7. Slab demolition
8. landscaping

"The application proposes the demolition of the existing warehouse building and mechanical workshop on the southern portion of the consolidated allotment (37-39 Carter Road) and alterations and additions to the two-storey industrial building located on the northern portion of the site (35 Carter Road) to facilitate the construction of a new industrial building comprising 12 industrial tenancies each with an ancillary office space and building signage. The proposal includes the retention of the existing vehicle repair station use and the provision of additional light industrial tenancies with associated loading dock facilities and carparking. A small 22.98 m² takeaway food and drink premises is proposed along the Carter Road frontage"

The Request for Further Information letter (Ref. No. N/A, Northern Beaches Council, dated 29 May 2025) states the following:
"Contamination
Council's Environmental Health Officer has reviewed the application and raised the following concerns: The applicant has provided information in relation to the potential for site contamination in the form of a Preliminary Site Investigation (PSI) prepared by a specialist consultant. The PSI concludes (in part) that the risk of contamination is "low to medium" and that the site is suitable for the proposed development based on several recommendations, one of which being that a Detailed Site (DSI) Investigation is warranted. A DSI has not been included with the proposal documentation. Accordingly, Environmental Health does not support the proposal as consent cannot be granted in accordance with clause 4.6 of State Environmental Planning Policy (Resilience and Hazards) 2021 until such time as a DSI is submitted and further information considered. Accordingly, a DSI must be submitted."

The DSI report was required to provide a high level of data for the Client to address the council requirements and to assess the risk of potential contamination on the site, comment on the suitability of the site for the proposed industrial land use as well as recommendation(s) for the additional investigation and assessment (if necessary).

1.2 Objectives

The objectives of the preliminary site contamination investigation and assessment included the following:

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- provide adequate information on potential soil contamination issues based on desktop study, site inspection and representative soil sampling
- provide detailed site characterisation assessment information on the type, extent and level of contamination for the site
- provide recommendations for further assessments, remediation and/or management, as required

1.3 Scope of Work

In order to assist in the Client's development application, DRYU provided the Client with the following environmental consulting services (the "**Services**"):

- review of planning and regulatory requirements
- review of the proposed development plan
- summary of previous investigation reports
- conduct preliminary contaminant characterisation and behaviour (volatility, leachability, speciation, degradation products and physical and chemical conditions on-site which may affect how contaminants behave)
- assess potential effects of contaminants on human health, including the health of occupants of built structures (for example arising from risks to service lines from hydrocarbons in groundwater, or risks to concrete from acid sulphate soils, if applicable) and the environment
- identify potential and actual contaminant migration routes including potential preferential pathways
- evaluate the adequacy and completeness of all information available for use in the assessment of risk and for making decisions on management requirements, including an assessment of uncertainty
- update conceptual site model from the site investigation. If the results of the detailed site investigation indicate that the contamination at the site has the potential to pose unacceptable risk to human health or the environment (on- or off-site), under either the current or the proposed land use, then further assessment needs to be carried out and/or a remedial action/management plan needs to be prepared and implemented
- conduct representative field sampling, laboratory analysis of selected soil samples by a National Association of Testing Authorities (NATA) accredited laboratory for contaminants of potential concern (COPC)
- prepare a detailed site contamination investigation and assessment report, presenting the results of the contamination assessment, identifying areas of environmental concern where contamination was found to be present and discusses the soil sample analytical results including extent and severity of contamination if exists
- provide recommendations for additional investigation, remediation and/or management (if required)

The assessment of the Site was carried out in accordance with, but not limited to:

- Acid Sulfate Soils Manual, Acid Sulfate Soils Management Advisory Committee (ASSMAC), 1998 (ASS Manual)
- National Acid Sulfate Soils Guidance: National Acid Sulfate Soils Identification and Laboratory Methods Manual, 2018
- Guidelines for the Use of Acid Sulfate Soil Risk Maps, Acid Sulfate Soils Management Advisory Committee (ASSMAC), 1998
- National Environment Protection (Assessment of Site Contamination) Measure 1999 – 2013 Amendment (NEPC, 2013, referred to as the "ASC NEPM")

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- Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (NSW EPA, 2015; referred to as the 'Duty to Report Guidelines')
- Consultants Reporting on Contaminated Land: Contaminated Land Guidelines (NSW EPA, 2020, referred to as the "Consultant reporting Guidelines")
- Sampling Design Part 1 – Application: Contaminated Land Guidelines (NSW EPA, 2022, referred to as the "Sampling Design Guidelines")
- NSW EPA (2022) Sampling Design Part 2 – Interpretation: Contaminated Land Guidelines (NSW EPA, 2022, referred to as the "Sampling Design Guidelines");
- Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (The WA Department of Health, 2021, referred to as the "WA Asbestos Guideline")
- New South Wales Environment Protection Authority. (2014). Waste Classification Guidelines - Part 1: Classifying Waste. Sydney, Australia (NSW EPA, 2014, referred to as the "Waste Classification Guideline").

2 Site Description

2.1 Site Location and Identification

General Site details are included below in Table 1, Figure 1 and Appendix 1 – Representative Photographs.

Table 1 Site Details

Item	Description
Site Address:	The Site is located at 35-39 Carter Road, Brookvale, NSW
Approximate Site Area:	Around 2050 m^2
Site Identification Details:	Lot 15/12, DP5767; Lot 1, DP 1278077
LGA	Northern Beaches Council
Current Land Use:	The Site is used as E4, General Industrial
Future Land Use:	The Site is going to be used as a E4, General industrial
Zoning	E4, General Industrial
Surrounding Land Uses:	• Industrial properties along the northern, western and southern boundaries • Northern Beaches Secondary College within 150 m in the east • John Fisher Park, Denzil Joyce Oval, Frank Gray Oval within 300 m in the south-east • Greendale Creek within 400 m in the south
Site Co-ordinates:	The centre at 340626.621(E), 6262892.232(N) (CRS GDA94, MGA Zone 56)

2.2 Site Observations and Surrounding Land Use

From the Site layout shown in Figure 1 and Appendix 1 – Representative Photographs, site features identified during the Site walkover are summarised below:

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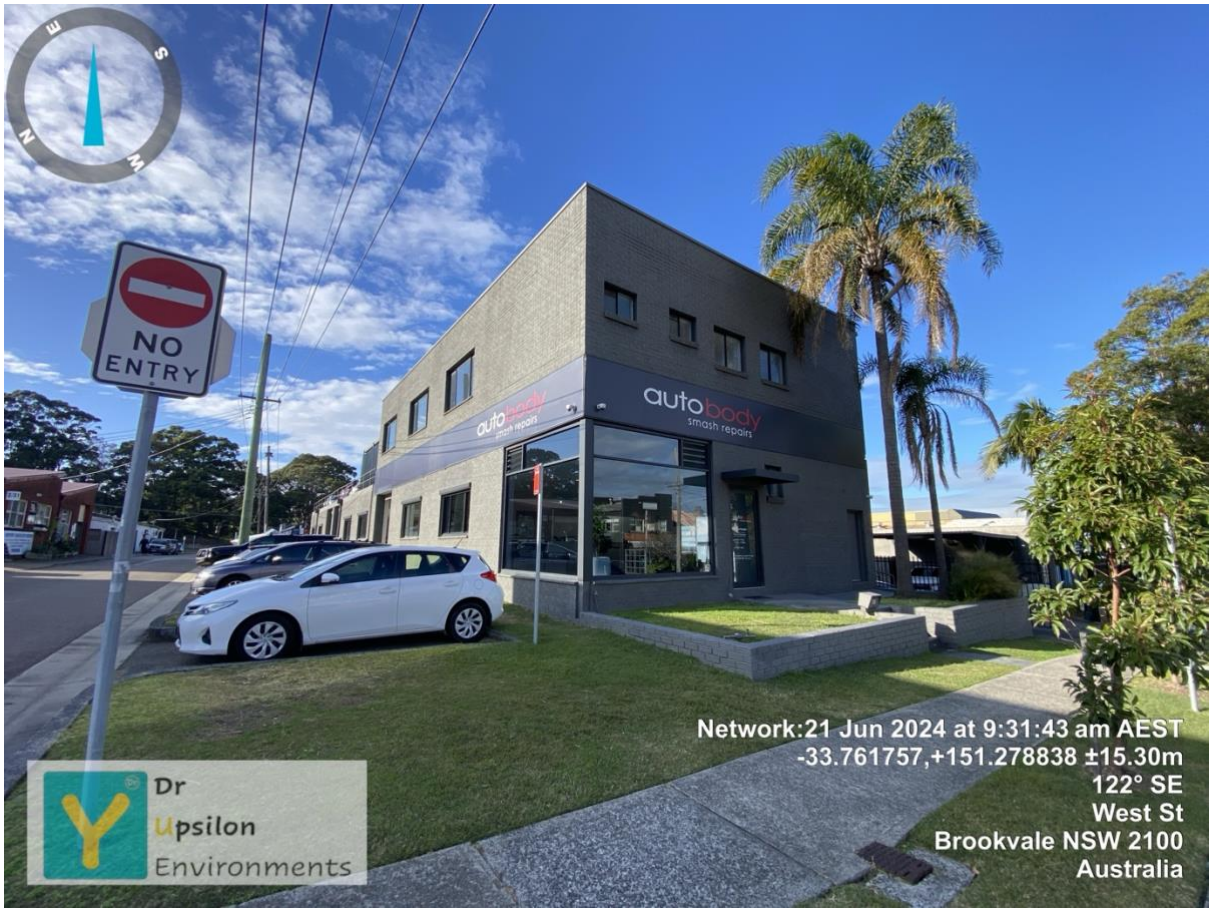

Figure 1 The site at 35-39 Carter Road, Brookvale, NSW

Site features identified during the site walkover are summarised below:

- The site was observed with car body repair and panel paining under good working conditions.
- The site was predominantly covered by hardstand surfaces.
- The site was observed with well-maintained brick structures and colorbond sheeting roof.
- 37 Carter Road, Brookvale had the Super 6 roof removed three years ago.
- The site is accessible from West Street and Carter Road.
- No vegetation stress was observed.
- No evidence of underground storage tank(s) was observed onsite.
- No above ground storage tank(s) was observed.

The observations in surrounding areas were summarised as follows:

- Northern Beaches Secondary College was located at the easterly direction.
- Two petrol stations were observed within 700 m in the upgradient northern direction, while several petrol stations were located at the downgradient in the south.

2.3 Site Topography

Reference to the Sixmap topographic maps 1:25000 indicates that the. The site slightly slopes from the northern section at around 16 mAHD to 14 m AHD in the southwest.

It is expected that Site surface waters would become surface runoff and flow towards the Carter Road drainage.

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2.4 Regional Geology and Soils

Refence to the Geological Map (https://gmaps.geoscience.nsw.gov.au/100K/Sydney/), the site is located at Alluvial fan deposits with fluvially deposited quartz-lithic sand, silt, gravel and clay.

According to ESPADE data source (https://www.environment.nsw.gov.au/Salis5app/resources/spade/reports/9130xx.pdf), the landscape features of the site are level plain to hummocky terrain, extensively disturbed by human activity, including complete disturbance, removal or burial of soil. The geology of the site is Artificial fill. Dredged estuarine sand and mud, demolition rubble, industrial and household waste. Also includes rocks and local soil materials.

2.5 Regional Hydrogeology and Local Groundwater Usage

Groundwater beneath the Site is anticipated to be present in a porous, extensive aquifers of low to moderate productivity. Groundwater could flow southern direction towards the creek.

Fourteen groundwater bores were registered within the within 1000 m date buffer of the site (https://realtimedata.waternsw.com.au/water.stm), as shown in **Error! Reference source not found.**. Twenty-two wells were identified within 2000 m data buffer. Groundwater could be used for monitoring and water supply purposes. The groundwater contamination is unknown as no information could be obtained regarding off-site migration from close proximity (if exist or located at the upgradient of the site to impact the site).

2.6 Acid Sulfate Soils Map

Acid sulfate soils is the common name given to naturally occurring soils and sediments that contain iron sulfide (pyrite). As sea levels slowly rose (between 6,000 and 10,000 years ago), substantial deposits of pyritic sediments formed in estuarine mud, where tidal seawater (containing sulfur) met and mixed with freshwater outflows (containing iron). Acid sulfate soils are defined as either:

- **Actual** acid sulfate soils (AASS) - where the soils have already been exposed to oxygen and have a pH < 4, or
- **Potential** acid sulfate soils (PASS) - where the soils have not been exposed but have the potential to generate sulfuric acid if exposed. PASS are naturally occurring soils and sediment that contains iron sulfides (pyrite) which, when exposed to oxygen generate sulfuric acid.

Left undisturbed, acid sulfate soils do not pose any harm. However, if they are disturbed and exposed to oxygen (air) through activities such as excavation or the lowering of the water table, sulfuric acid may be produced in large quantities.

The ASS planning maps provide an indication of the relative potential for disturbance of ASS to occur at locations within the council area. These maps do not provide an indication of the actual occurrence of ASS at a site or the likely severity of the conditions.

NSW Planning Industry & Environment resources: https://www.environment.nsw.gov.au/topics/land-and-soil/soil-degradation/acid-sulfate-soils and https://datasets.seed.nsw.gov.au/dataset/acid-sulfate-soils-risk0196c) Acid Sulfate Soil ("**ASS**") Risk Mapping (https://www.environment.nsw.gov.au/eSpade2Webapp#) for the site indicate that the Site is classified as NO known occurrence.

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According to the Warringah LEP 2001 (https://eplanningdlprod.blob.core.windows.net/pdfmaps/1800_COM_ASS_010A_010_20110919), the site has no known acid sulfate soils potential.

2.7 Summary of Preliminary Site Investigation

The Stage One Preliminary Site Investigation Report (Ref. No.: DRYU412J_PSI_35-39 Carter Road, Brookvale, SNW_01072024, dated 01 July 2024) indicates the following:

- Aerial photographic records indicate that there is no evidence of major landscape change at the site as residential from 1930 to 1971. Since around 1970s, the three residential dwellings were demolished and transformed into industrial land use. In around 1982 to 1986, the middle lawn section of the site was likely transformed into car park for industrial land use. From 1986, the site was no landscape change as industrial land use. In around 2022, the asbestos roof was removed in the middle of the site.
- A review of the 'List of NSW Contaminated Sites Notified to the EPA' listed by the NSW EPA identified seven contaminated sites notified to NSW EPA within the 1000-m data buffer. Records of Notice to NSW EPA were not identified within the 1000-m data buffer. However, none of notified sites nor records of notice was recorded onsite. As such, DRYU considers the most adjacent sites within 200 m in the south and south-east could not impact the site significantly via off-site migration. The upgradient petrol stations in the west and north could not be confidently assessed due to lack of information, but all of them are listed as Regulation under CLM Act not required.
- One record of Motor garages/Engineers businesses/or Service Stations was registered on site between 1978~1979. There were many motor mechanics/motor garage businesses registered within the 500 m data buffer in the close proximity from 1950s to present. There could be uncertainty of businesses located at the up-gradient or on immediate surroundings to impact the site via offsite migration.
- The former service stations and dry cleaners from 1950s at the upgradient northern direction were also identified. The former service station may have impacted soil and groundwater beneath the service station and beyond its boundary. Any residual hydrocarbons in groundwater (if present) have less potential to migrate to the upgradient southern direction beneath the subject site as local groundwater flow is inferred to be to the south. If groundwater flow direction in the vicinity of the subject site is south or south-east, it is likely to be impacted by any contaminant in groundwater from the former service station.

Few potential areas of environmental concern were identified at the site, associated with the following:

- Current and historical site uses;
- Importation of uncontrol fill for structure construction.
- A review of historical aerial photographs indicates that former sheds and/or structures were demolished in 1970s. The potential exists for buried demolition waste in this area.

2.8 Gaps in the Site History

The Site history review revealed the following gaps in the Site history:

- Motor garages/engineers businesses/or service stations were registered on site between 1978~1979 and many motor garages/Engineers/service stations in the immediate surroundings may have impacted soil and groundwater beneath the service station and beyond its boundary. Any residual hydrocarbons in groundwater (if present) have less potential to migrate to the upgradient southern direction beneath the subject

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site as local groundwater flow is inferred to be to the south. If groundwater flow direction in the vicinity of the subject site is south or south-east, it is likely to be impacted by any contaminant in groundwater from the former service station.
- The residential dwellings had been demolished and were likely transformed into industrial land use in 1970s, however the fate of the demotion waste was unknown.
- Subsurface conditions covered by concrete slabs/building footings/structures were not accessible for inspection.

3 Data Quality Objectives

3.1 Data Quality Objectives

In order to determine the requirements for a detailed characterisation of the Site, DRYU has adopted the data quality objectives (DQOs) planning process as recommended in the National Environment Protection (Assessment of Site Contamination) Measure 2013 (ASC NEPM, 2013) to determine the appropriate level of data quality needed for the specific data requirements of the project. Details of the DQOs process are presented below.

3.2 State the Problem

The Site had historically been utilised as low density residential and then mainly as commercial/industrial for decades. The sources and contents of potential contamination due to day to day operation, historical backfilling and demolition activities could not be confidently identified or assumed.

3.3 Identify the Decision

To assess whether the current and historical land use of the Site have led to potential contamination of soils at concentrations that would preclude the future industriall land use, the following decisions need to be addressed:

- Will the DSI provide high level data for contaminant characterisation and behaviour in site soils if necessary?
- Will the DSI provide an appraisal of the site history of all information available for use in the assessment of risk and for making decisions on management requirements, including an assessment of the likelihood of site contamination?
- Do the findings provide a degree of certainty of the source of identified contamination?
- Does the data set provide preliminary information to assess the potential contamination in site soils if necessary for any off-site migration of contaminants?
- The preliminary conceptual site model?
- Do the DSI adequately identify potential human and ecological receptors (on- and off-site) and identify potentially affected media?
- Does the DSI provide adequate preliminary characterisation of contaminants of potential concern and areas of environmental concern to enable an assessment of further investigation?

3.4 Identify Inputs into the Decision

The inputs required to make the decision include the following:

- Geological data;
- Hydrogeological data;
- Visual observations of staining, odours and of building waste containing ACM;
- Concentrations of the contaminants of potential concern (COPC) in soil and fill; and
- The preliminary characterisation of vertical and lateral distribution of contaminants (if exist) in the subsurface.

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The investigation could involve additional soil sampling from boreholes, distributed the entire site using a stratified sampling and triangular sampling pattern. The approach is consistent with the sampling pattern for site characterisation as described in the NSW EPA Sampling Design Guidelines, 2022.

Based on the previous findings, data gaps and recommendations, it is considered to be appropriate for the assessment of potential contaminants of potential concern as listed in the analytical plan:

- Analysis of discrete soil samples from various depth intervals for Heavy Metals, TPHs, BTEXN, PAHs, OCPs, OPPs, PCBs and asbestos

3.5 Define the Boundaries of the Study

The spatial boundaries of the DSI with the approximate boundaries identified in Appendix 2 – Site Layout, Sampling Locations and Areas of Environmental Concern**.** Inaccessible areas including, but not limited to, the building footprint, structures and all underground assets/facilities and sealed areas were out of the scope of work.

3.6 Develop a Decision Rule Identify the Decision

The statistical parameters of interest are the COPC and the Tier One Site Assessment Criteria ("**SAC**") are presented in the following sections. The criteria have been used as screening levels for the proposed residential development to determine whether additional assessment is required.

The following decision statements for analysis of the results were adopted with respect to the adopted criteria, as shown in Table 9.

3.7 Soil Health-based Investigation levels

Where the data sets are not sufficiently populated to allow calculation of the 95% upper confidence limit (UCL_{mean}) then the individual results must be less than the adopted criteria. If all the individual results are below the adopted criteria then no additional assessment and/or management is required. Where individual results exceed that adopted criteria, then further assessment and/or management is required.

In accordance with the ASC NEPM (2013), where 95% UCL_{mean} of the average concentration for each soil analyte can be calculated, then the 95% UCL_{mean} must be below the adopted criteria; no single analyte concentration exceeds 250% of the adopted criteria; the standard deviation of the results must be less than 50% of the adopted criteria; and the normal distribution will only be used where the coefficient of variance is not greater than 1.2. Where 95% UCL mean results exceed the aforementioned criteria, then further assessment and/or management is required.

3.8 Soil Ecological Investigation levels

Only soil samples within the top 2 m of the soil profile were compared to the adopted EILs.

Comparison of the data set to the top 2 m of the soil profile will be undertaken as follows:
Where the data sets are not sufficiently populated to allow calculation of the 95% upper confidence limit (UCL_{mean}) then the individual results must be less than the adopted criteria. If all the individual results are below the adopted criteria, then no additional assessment and/or management is required. Where individual results exceed that adopted criteria, then further assessment and/or management is required.

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In accordance with the ASC NEPM (2013), where 95% UCL_{mean} of the average concentration for each soil analyte can be calculated, then the 95% UCL_{mean} must be below the adopted criteria; no single analyte concentration exceeds 250% of the adopted criteria; the standard deviation of the results must be less than 50% of the adopted criteria; and the normal distribution will only be used where the coefficient of variance is not greater than 1.2. Where 95% UCL_{mean} results exceed the aforementioned criteria, then further assessment and/or management is required.

Where exceedances are observed, the data shall be compared to published background levels or consideration would be given to the location of areas in the current / future proposed land use.

3.9 Specify Acceptable Limits of Decision Errors

The acceptable limits are listed as follows:

- Individual or 95% UCL_{mean} concentrations are below the adopted criteria.
- 95% of the data will satisfy the Data Quality Indicators (DQIs) which were determined for completeness, representativeness, precision and accuracy of both field and laboratory data. Therefore, the limit on the decision error will be 5% that a conclusive statement may be incorrect.
- A comprehensive Quality Assurance/Quality Control (QA/QC) program is undertaken including representative sampling and sampling at an appropriate density for the purpose of the investigation.

The acceptable limit of error for sampling techniques and laboratory analysis is defined by the DQIs as follows:

Data Representativeness
Expresses the accuracy and precision with which sample data represents and an environmental condition. Data representativeness is achieved by the collection of samples at an appropriate pattern and density as well as consistent and repeatable sampling techniques and procedures.

Completeness
Refers to, the percentage of data that can be considered valid data. Sufficient data is required to enable an assessment of the decision rules.

Comparability
A qualitative comparison of the confidence with which one data set can be compared to another. This is achieved through consistent sampling and analytical testing and reporting techniques.

Precision
Precision is the quality of reproducibility of measurements under a given set of conditions. The relative percent difference (RPD) has been adopted to assess the precision of data between duplicate sample pairs according to the following equation.

$$RPD\% = \frac{(C_p - C_d)}{(C_p + C_p)} \times 200$$

Where:
C_p = Primary sample C_d = Duplicate Sample

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An acceptance criterion of ±50% had been adopted for inorganic field duplicates and triplicates. However, it should be noted that exceedances of these criteria are common for heterogeneous soil or fill or for low analyte concentrations.

Accuracy
Accuracy is a measure of the bias in the analytical results and can often be attributed to: field contamination; insufficient preservation or sample preparation; or inappropriate analytical techniques. Accuracy of the analytical data is assessed by consideration of laboratory control samples, laboratory spikes and analytical techniques in accordance with appropriate standards. Accuracy of the fieldwork is assessed against an assessment of field blank, field trip and rinsate results.

3.10 Optimise the Design for Obtaining Data

The purpose of the stratified sampling strategy was to collect some limited soils to provide a preliminary characterisation of potential contamination at the Site from identified historical contaminating activities. DRYU considers that the adopted sampling program is appropriate for the purposes of the DSI and the DQOs around proposed potential/disturbed soils of the site. There is uncertainty in all other areas of the Site as well as inaccessible areas such as sharp slope, tree roots, under bulk items, heavy dense vegetation areas, and/or prior to refusal - suspected rocks (further inspections and/or investigations are recommended with consultation during construction phase).

3.11 Data Quality Indicators

The DQOs, requirements and indicators for the assessment are presented in Table 2.

Table 2 Data Quality Objectives, Requirements and Indicators

Data Quality Objective	Requirement	Data Quality Indicator	Conclusion
Precision			
Standard operating procedures appropriate and complied with	The sampling methods comply with industry standards and guidelines	Meet Requirement	Acceptable
Intra-laboratory Duplicates	1 per 20 samples	RPDs < 50%	Acceptable
Inter-laboratory Duplicates	1 per 20 samples	RPDs < 50%	-
Laboratory Duplicates	Minimum of 1 per batch per analyte	RPDs < 50%	Acceptable
Accuracy			
Laboratory Matrix Spikes	1 per batch per volatile/semi-volatile analyte	Recoveries 50% to 150%	Acceptable
Laboratory Surrogate Spikes	1 per batch per volatile/semi-volatile analyte (as appropriate)	Recoveries 70% to 130%	Acceptable
Laboratory Control Samples	At least 1 per batch per analyte tested for	Result < Limit of reporting	Acceptable
Representativeness			
Sampling methodology - preservation	Appropriate for the sample type and analytes	Meet Requirement	Acceptable
Samples extracted and analysed within holding times	Specific to each analyte Meet Requirement	Meet Requirement	Acceptable

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Data Quality Objective	Requirement	Data Quality Indicator	Conclusion
Field equipment calibration All field equipment calibrated and	All field equipment calibrated and calibration records provided.	Meet Requirement	Acceptable
Laboratory Method Blanks	At least 1 per batch per analyte tested for	Result < Limit of reporting	Acceptable
Trip Blanks	1 per lab batch for volatile analytes	Result < Limit of reporting	-
Trip Spikes	1 per lab batch for volatile analytes	Recoveries 60-100%	-
Rinsate samples	1 per each sampling day	Result < Limit of reporting	-
Comparability			
Sampling approach	Consistent for each sample	Meet Requirement	Acceptable
Analysis methodology Consistent methodology for each	Consistent methodology for each sample	Meet Requirement	Acceptable

The RPD exceedance was not observed for the heterogeneous fill. Therefore, all indicators are considered to be acceptable for the DQOs.

4 Site Assessment Criteria

The Site assessment criteria adopted for this project are predominantly based on the following references:

- National Environment Protection (Assessment of Site Contamination Measure) Measure 1999 (2013 amendment), NEPC, 2013

The sections below discuss the adopted Site assessment criteria, as shown in Table 9.

4.1 Soil Investigation and Screening Levels

ASC NEPM (2013) define an 'Investigation Level' ("**IL**") as "the concentration of a contaminant above which further appropriate investigation and evaluation will be required". The investigation and evaluation are to ascertain:

- the typical and extreme concentrations of the contaminant(s) on the Site;
- the horizontal and vertical distribution of the contaminant(s) on the Site;
- the physio-chemical form(s) of the contaminant(s); and
- the bioavailability of the contaminant(s).

Soil ILs have been used in this assessment to identify contaminant(s) that are considered to be present at concentrations that have the potential to present an unacceptable risk to future Site users and identify where further investigation may be required.

No single summary statistic will fully characterise a site and appropriate consideration of relevant statistical measurements should be used in the data evaluation process and iterative development of the CSM. The preferred approach is to examine a range of summary statistics including the contaminant range, median, arithmetic/geometric mean, standard deviation and 95% upper confidence limit (UCL). Where exceedance of Tier 1 investigation and screening levels indicates that there is a likelihood of an adverse impact on human health or ecological values for that site, site-specific health and/or ecological risk assessment (Tier 2 or 3) should be carried out as appropriate, which usually require the collection of additional site data.

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The ILs adopted for this assessment are:
Health Investigation Levels ("HILs"): The HILs for Commercial/industrial D land use for silt and clay, 0 m to <1 m depth are considered to be appropriate for the assessment of human health risk associated with contamination at the Site, based on the proposed future land use and current land use.

Soil specific added contaminant limits (Aged Zn, Cu, Cr^{III} and Ni) – Commercial/Industrial

Health Screening Levels ("HSLs"). The HSLs (petroleum compounds and fractions) for Commercial/industrial D land use land use applicable for soils within the top 3 m of the soil profile are considered to be appropriate for the assessment of human health risk associated with vapour intrusion, based on the proposed future land use (Industrial land use), the soil profile encountered and the anticipated depth of contamination.

Ecological Investigation Levels ("EILs"): The EILs for Commercial/Industrial land use are considered to be appropriate for the assessment of risk to vegetation growth and transitory wildlife associated with soil contamination at the Site. It is noted that **EILs only apply to the top 2 m of the soil profile**. EILs are based on Site specific data relating to soil pH, cation exchange capacity and clay content. In the absence of Site-specific data, generic values are to be established.

Ecological investigation levels (EILs) for the protection of Commercial/Industrial have been derived for common contaminants in soil based on a species sensitivity distribution (SSD) model developed for Australian conditions. EILs are derived for As, Cu, Cr^{III}, DDT, naphthalene, Ni, Pb and Zn. Site specific derivation of ACLs for CrIII, Cu, Ni, Pb and Zn for aged contamination (>2 years) are considered to be appropriate if applicable.

Ecological Screening Levels ("ESLs"): The ESLs for Commercial and Industrial applicable for fine soil textures (predominantly silt) are considered to be appropriate for the assessment of risk to vegetation growth and transitory wildlife associated with soil contamination at the Site. Ecological screening levels (ESLs) have been developed for selected petroleum hydrocarbon compounds and total petroleum hydrocarbon (TPH) fractions and are applicable for assessing risk to terrestrial ecosystems. ESLs broadly apply to coarse- and fine-grained soils and various land uses. They are generally applicable to the top 2 m of soil derived as Tier 1 ESLs for BTEX, benzo(a)pyrene and F1 and F2.

The adopted investigation criteria are provided in Table 9**.**

4.2 Management Limits for Petroleum Hydrocarbon Compounds

ASC NEPM (2013) provides management limits to avoid or minimise the following potential effects, relating to petroleum hydrocarbons:

- Formation of observable Light Non-Aqueous Phase Liquids ("LNAPL");
- Fire and explosive hazards; and
- Effects on buried infrastructure.

ASC NEPM (2013) notes that application of management limits requires consideration of Site specific factors such as the depths of services and basements, and the depth to groundwater. If management limits are exceeded, further site-specific assessments may be undertaken to address identified risks.

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In addition to appropriate consideration and application of the HSLs and ESLs, 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.

The CWS PHC includes 'management limits' to avoid or minimise these potential effects and these values have been adopted as interim Tier 1 guidance. The values are included in Table 1B(7) NEPM. A site-specific assessment (Tier 2 or 3) may be preferred where relevant site specific information is available.

Application of the management limits will require consideration of site-specific factors such as the depth of building basements and services and depth to groundwater, to determine the maximum depth to which the limits should apply. The 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. When the management limits are exceeded, further site-specific assessment and management may enable any identified risk to be addressed. The presence of site 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.

4.3 Asbestos in Soil Assessment Criteria

The WA DoH (2021) Guidelines and NEPM 2013 provide the following definitions / groups for asbestos:

- ACM is defined as material, which is in sound condition, the asbestos is bound in a matrix, and cannot pass through a 7 mm x 7 mm sieve;
- Fibrous Asbestos ("**FA**") encompasses friable asbestos material, such as severely weathered ACM, and loose fibrous materials such as insulation products. This material can be broken or crumbled by hand pressure; and
- Asbestos Fines ("**AF**") includes free fibres of asbestos, small fibre bundles and ACM fragments that can pass through a 7mm x 7mm sieve.

The WA DoH (2021) Guidelines and ASC NEPM 2013 also provide Health Investigation levels ("HILs") for the assessment of asbestos concentrations in soil, for each of the three definitions / groups listed above. The HILs have been developed for various land use scenarios including low-density residential, high-density residential (with minimal access to soils), recreational and commercial / industrial.

Table 3 Health Investigation Levels for Asbestos Contamination in Soil (NEPM 2013)

Form of asbestos	Health Investigation Level (w/w)			
	Residential A[1]	Residential B[2]	Recreational C[3]	Commercial/ Industrial D[4]
Bonded ACM	0.01%	0.04%	0.02%	**0.05%**
FA and AF (friable asbestos)	**0.001%**			
All forms of asbestos	No visible asbestos for surface soil			

Note:

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- Recreational A with garden/accessible soil also includes children's day care centres, preschools and primary schools.
- Residential B with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
- Recreational C includes public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and unpaved footpaths.
- Commercial/industrial D includes premises such as shops, offices, factories and industrial sites.

The NEPM (2013) Schedule B (2) - Guideline on Site Characterisation provide the following management options in accordance with the WA Guidelines:

Small-scale low-risk asbestos soil contamination on single residential lots can be subject to a simplified investigation and remediation process, involving Local Government Environmental Health Officers. Application elsewhere should be discussed first with the Department of Health (DOH).

Asbestos buried deeper than 3 m is not usually regarded as contamination provided it is not likely to be disturbed.

The Guidelines provide that the percentage of soil asbestos is calculated using the following formula:

$$\%\ \text{w/w asbestos in soil} = \frac{\%\ \text{asbestos content x (ACM) kg}}{\text{Soil volume (L) x soil density (kg/L)}}$$

In the example included in enHealth (2005) it was assumed that:
% asbestos content (within bonded ACM) = 15% and soil density (for sandy soils) = 1.65 kg/L.

The Site assessment criteria applicable for asbestos in soil adopted for this project are:
ACM = 0.05% (weight of asbestos per weight of soil) since the Site is proposed for Commercial/Industrial D;
FA and AF = 0.001% (weight of asbestos per weight of soil); and
No visible asbestos on soil surface.

The adopted asbestos in soil assessment criteria are provided in Table 3**.**

5 Methodology, Sampling and Analysis Plan

DRYU employed the following methodologies for the assessment in relation to identification of suspected asbestos contamination from any potentially disturbed ACM and other contaminants of potential concern.

5.1 Visual Inspection & Assessment

DRYU Consultants conducted the inspections, allowing inspection to be completed on a grid system walking across the surface at 90 degrees to each walk path within the grid. For each grid (5 m x 5 m) for areas of concern in the site, a walkover visual inspection was undertaken to identify suspected ACM in or on the surface to identify damaged and unstable ACM, fragments and debris as applicable.

The inspection process is listed below:
DRYU personnel walked across the surface. The inspection was carried out by means of a visual observation, during a slow traverse across the materials, with the consultant inspecting on a grid pattern at 90 degrees to each walk path. The surfaces were inspected to detect

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evidence of suspected asbestos containing materials (ACM). Colour, size and shape are used as indicators.

If suspected ACM was identified during the inspection, it was marked as a suspected ACM sample. The remainder of the surface was inspected for any additional suspected ACM.

A qualitative assessment was made into the location of the ACM and likely exposure of occupants, workers and neighbours.

5.2 Identification of Materials to Contain Asbestos

Materials suspected to contain asbestos were collected and selected based on the likely pattern, morphology and appearance of the materials as well as our professional experience in the visual identification of such materials. The collected representative samples were sent to a NATA accredited laboratory for analysis in accordance with Australian Standard AS4964-2004 Method for the qualitative identification of asbestos in bulk samples.

5.3 Soil Sampling and Laboratory Analysis

5.3.1 Sampling Plan and Methodology

Sampling of the site was undertaken by DRYU Consultants, as shown in Table 4 and Appendix 2 – Site Layout, Sampling .

Table 4 Sampling Plan and Site Investigation Summary for Areas of Environmental Concern

Areas of Concern	Area /m^2	Minimum Sampling No.	DRYU TP/BH No.	Contamination Depth /m BGL	Contaminants of Potential Concern
37-39 Carter Road	~1300	8	8	0.0 – 1.5, visually natural excavated material or prior to refusal	Asbestos and Chemicals

Note 1. If any suspect materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos sheets/pieces/pipes, ash material, etc.) or any potentially contaminated area(s) and filled area(s) in or between the sampling locations, are encountered during site investigation, further sampling could be undertaken after consultation with the client.
Note 2. In several locations around the suspected contamination, the depth of sampling could be further conducted up to 1.5 m or till visually clean sand, natural material layer or prior to refusal was reached.

The NSW EPA (2022) Sampling Design Guidelines and the WA Department of Health (2021) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (adopted by NEPM 2013) recommends that the minimum sampling points required for site characterisation based on detection of circular hot spots using systematic GRID sampling pattern should be **8** for an area (~1000 m^2) for the Area of Environmental Concern around the proposed house.

DRYU undertook judgmental sampling from **eight** locations for the site.

Therefore, to provide a soil contamination assessment of asbestos and other potential contaminants of concern, DRYU carried out sampling and/or inspection from **eight** locations at Area of Environmental Concern with various depth up to 1.5 m BGL at 25 cm increment or prior to refusal or visually virgin natural material or grab soils from the drilling tools.

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The sampling was undertaken by a senior DRYU environmental scientist, trained in sampling contaminated land. DRYU has allowed for:

- Collection of soil samples in an approximate grid pattern across accessible areas of the Site. The samples were collected using shovels, hand trowels, or other hand tools as appropriate.
- Soil samples collected for chemical analysis were placed into NATA accredited laboratory-supplied glass jars;
- A separate 500 mL soil sample was collected and placed into a zip-lock plastic bag for NEPM asbestos analysis.
- A clean pair of disposable nitrile gloves was worn when collecting each sample.
- The sample locations were recorded with a hand-held GPS or measured relative to site features; or measured on the landscape footing marking piers.

Each sample was dispatched to SGS Alexandria ("SGS"), a NATA-accredited laboratory and analysed for potential chemicals of environmental concern in accordance with the ASC NEPM (2013) guideline and to Australian Safer Environment and Technology ("ASET"), a National Association of Testing Authorities, Australia ("NATA") accredited laboratory for asbestos identification and soil analysis. The samples were examined using a stereo microscope and selected fibres were further examined using polarised light microscopy supplemented with dispersion staining in accordance with the ASC NEPM (2013) guideline and WA Department of Health (2021) Guidelines.

5.3.2 Laboratory Analysis - Soil

The samples collected were dispatched to the National Association of Testing Authorities ("**NATA**") accredited laboratory. The samples were analysed for:

- Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc);
- Total Recoverable Hydrocarbons ("TRH");
- Benzene, Toluene, Ethylbenzene and Xylenes ("BTEX");
- Polycyclic Aromatic Hydrocarbons ("PAH");
- Organo Chlorine Pesticides (OCPs);
- Organo Phosphorus Pesticides (OPPs);
- Polychlorinated biphenyls (PCBs); and
- Asbestos.

6 Quality Assurance and Quality Control

The sampling will be carried out in accordance with DRYU Standard Operating Procedures ("**SOPs**"), which are based on current industry standards.

6.1 Field QAQC

6.1.1 Sampling Personnel

Field investigations and soil sampling were conducted by appropriately qualified and trained environmental consultants relevant experience in the assessment and management of contaminated sites in compliance with:

- adherence to a stratified sampling and analytical plan, which was based on site operational history and other pertinent information obtained during the site contamination assessment and inspections; and
- the use of methodologies and procedures, including the testing of quality assurance and control (QAQC) sample, consistent with relevant published environmental guidelines.

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6.1.2 Sample Handling and Decontamination Procedures

6.1.2.1 Soil Sampling

All samples were collected as described using a stainless steel, hand trowel and a pair of new nitrile glove, which was decontaminated between each sampling location.

The discrete soil samples using the decontaminated stainless steel hand trowel or directly from each core using a new pair of nitrile glove were placed in sterile glass jars with Teflon lined lids. The sterile glass jars were transferred to a cooler box which contained ice packs (or equivalent) present to maintain the samples at a temperature below approximately 4 °C.

Decontamination of soil sampling equipment involved the initial removal of solids by scrubbing with a nylon brush using phosphate-free detergent and potable water, followed by a final rinse with potable water.

All soil samples were transported to SGS Australia Pty Ltd (SGS) under refrigerated conditions. using strict Chain-of-Custody procedures. All laboratory analyses were conducted on discrete (un-composited) samples.

After sampling, the collected soil and groundwater samples were transported in refrigerated sample chests to SGS using strict Chain-of-Custody procedures. A Sample Receipt Advice was provided by each laboratory to indicate the condition of the samples upon receipt and copies of these are presented, along with copies of the completed Chain-of-Custody certificates.

6.1.2.2 Field Duplicate Sample - Soil

Field QC may be collected as field, split duplicates of one random soil sample. This split duplicate was collected to check the level of sample representativeness that was achieved under the standard field procedures. The duplicate sample was presented “blind” to SGS (the primary laboratory) to avoid any potential analytical bias, hence they were referred to as the Field Duplicates (QAQC). The preparation of the QAQC sample involved the collection of a bulk quantity of soil from the same sampling point, without mixing, before dividing the material into identical jars.

7 Findings and Site Characterisation

DRYU site layout, test pit sampling locations, areas of environmental concern and suspected areas of environmental concern for further investigation are summarised in Appendix 2 – Site Layout, Sampling Locations and Areas of Environmental Concern.

7.1 Visual Observations & Assessment of Identified ACM

Visual observation of the site noted the following, as shown in Appendix 1 – Representative Photographs.

- Metal parts were encountered under the slab around BH03.
- Fill materials with stained clay or sandy clay silt were observed in BH03 (0.45 mBGL, refusal prior to clay) and BH04 up to 0.4 mBGL.

7.2 Soil Investigation Results

7.2.1 Subsurface Conditions

Based on the borehole information, subsurface conditions at the site consist of the following:

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Figure 2 Subsurface Conditions

Geotechnical Conditions	Description	Subsurface profile depth
Slab	Slab	~0.15 mBGL
FILL	Clay loam to sandy clay, slag, minor rubble	~0.1 or up to 0.5 mBGL; overlying
Residual Soil	Sand or sand with gravel	From around 0.5 mBGL to over 1.5 mBGL
Groundwater	Not encountered	Potential seepage between soil and rock interface; groundwater drilling/investigation out of scope of work

7.2.2 Asbestos in Soil Identification and Results

Eight soil samples from the eight borehole locations were collected for testing and/or inspected by DRYU to determine the presence/absence of asbestos.

Among eight soil samples for asbestos by NEPM gravimetric testing/observation, several fibro-cement fragments over 7 mm in dimensions during onsite sieving were sighted in BH02_0.13-0.5.

Bonded asbestos was detected in BH01_0.15-0.35 (0.005%w/w below the HSL-D of 0.005%w/w). The concentration of bonded asbestos in BH02_0.13-0.5 (0.78%) did exceed the HSL-D (0.05%w/w, bonded).

Asbestos fine was detected in one soil sample, BH06_0.1-0.3 (0.003%w/w, exceeding the HSL-D of 0.001%w/w).

A summary of laboratory results is presented and the NATA endorsed reports was contained in Appendix 4 – Assessment Criteria, CoPCs Testing Results and Analytical Reports.

7.2.3 Other Potential Contaminants of Concern in Soil

Ten soils samples were collected from eight boreholes for lab analysis of Heavy metals, TRHs, BETXN, PAHs, OCPs, OPPs and PCBs.

- The concentrations of the tested contaminants of potential concern including Heavy Metals – Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc, Total Recoverable Hydrocarbons (TRHs), Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Organophosphorus Pesticides (OPPs), Organochlorine Pesticides (OCPs), Polychlorinated Biphenyl (PCBs) below the laboratory limit of reporting or below the guideline HIL-D values. Carcinogenic PAHs, BaP TEQ <LOR=0 of BH05_0.1-0.25 (2.2 mg/Kg) did not exceed HIL-D (sand) (4 mg/Kg).
- The concentrations of petroleum compounds and fractions below the HSL-D & HSL D Commercial/Industrial (F1 and F2, BTEXN) for vapour intrusion, or below the laboratory limit of reporting for Silt/Clay texture, 0 m to <1 m.
- DSI analytical results for nine soil samples collected indicate concentrations of As, Cu, Cr^{III}, DDT, naphthalene, Ni, Pb and Zn were either below the laboratory limit of reporting or below the corresponding guideline values for EIL-Commercial/Industrial. The elevated Pb concentrations in BH04_0.3-0.5 (350 mg/Kg) and BH05_0.1-0.25 (620 mg/Kg) did not exceed the Generic added contaminant limits for Pb (1800 mg/Kg).

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- DSI analytical results for nine soil samples indicate concentrations of TPH fractions (F1, F2, F3 and F4), BTEX and Benzo(α)pyrene did not exceed the ESL-Commercial/Industrial values – coarse texture, below the laboratory limit of reporting or not detected, except for BH05_0.1-0.25 with BaP 1.7 mg/Kg, slightly higher than ESL-coarse 1.4 mg/Kg.
- DSI analytical results for soil samples collected indicates concentrations of TPH fractions were either below the laboratory limit of reporting or below the guideline values of Management Limits.

7.3 Preliminary Waste Classification – Topsoil/Fill

For the fill layer under the slab:

- At the front section of the site, around BH01, BH02 and BH06 (from 0.0 m to 0.5 mBGL)

The analytical results for samples collected indicates concentrations of the tested contaminants of potential concern were either below the laboratory limit of reporting or below the CT1 guideline values for General Solid Waste – Non-putrescible – Special Waste (Bonded and Friable Asbestos), subject to further Toxicity Characteristic Leaching Procedure (TCLP) testing during excavation for offsite disposal.

7.4 Aesthetic Assessment

Based on the site inspection and representative sampling, the following characteristics or presentations have observed that:

- NO highly malodorous soils or extracted groundwater (e.g. strong residual petroleum hydrocarbon odours, hydrogen sulphide in soil or extracted groundwater, organosulfur compounds)
- NO discoloured chemical deposits or soil staining with chemical waste other than of a very minor nature
- NO large monolithic deposits of otherwise low-risk material, e.g. gypsum as powder or plasterboard, cement kiln dust
- NO presence of putrescible refuse including material that may generate hazardous levels of methane such as a deep-fill profile of green waste or large quantities of timber waste
- NO soils containing residue from animal burial (e.g. former abattoir sites).

There are no specific numeric aesthetic guidelines, however site assessment requires balanced consideration of the quantity, type and distribution of foreign material or odours in relation to the specific land use and its sensitivity. General assessment considerations include:

- that chemically discoloured soils or large quantities of various types of inert refuse, particularly if unsightly, may cause ongoing concern to site users
- the depth of the materials, including chemical residues, in relation to the final surface of the site
- the need for, and practicality of, any long-term management of foreign material.
- In some cases, documentation of the nature and distribution of the foreign material may be sufficient to address concerns relating to potential land use restrictions.

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In arriving at a balanced assessment, the presence of small quantities of non-hazardous inert material on site that will decrease over time should not be a cause of concern or limit the use of a site in most circumstances. Similarly, sites with large quantities of well-covered known inert materials that present no health hazard such as brick fragments and cement wastes (for example, broken cement blocks) are usually of low concern for both non-sensitive and sensitive land uses.

Therefore, the miscellaneous materials (concrete, rubble, ash, etc.) are considered to be aesthetic concern on the site, which shall be disposed offsite after DA stage, during the construction of lift and partition walls if the old warehouse slab is to be removed.

8 Data Gaps

Several data gaps may exist and to be addressed during construction stage due to site access constraints"

- Soil beneath the other structures such as: slabs, footing, drainage, etc.

Data gap closure works are required to be completed in accordance with sampling requirement outlined in the NSW EPA Sampling Design Guidelines (2022).

8.1 Limitations of Field Investigation

The information in this report relates only to the subject soil materials in the proposed soil excavation areas (refer to Table 4) Due care should be taken to ensure no further interpolation is added to the subject site. Visual inspection was limited to the upper layers of the subject soils. If there are any unexpected finds that are not consistent with this characterisation, please contact Dr Upsilon Environments immediately.

Once slab is overturned, the surfaces shall be inspected by an experienced Environmental Consultant during excavation stage.

9 Conceptual Site Model

Based on the Site history review and Site walkover, a preliminary CSM has been prepared to outline the frame work for identifying how the site may have become contaminated and how potential receptors may be exposed to contamination either in the present or the future through an assessment of the potential source – pathway – receptor linkage (complete pathway).

The key elements of the preliminary CSM as outlined in NEMP 2013 include:

- Known and potential sources of contamination
- Potential contaminants of concern
- Mechanism of contamination
- Potentially affected media
- Human and ecological receptors
- Potential for migration
- Exposure pathways

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9.1 Areas of Concern and Contaminants of Potential Concern

Based on the desktop review and site walkover of the site (potential contamination – landfill, offsite migration), the following potential sources of contamination and associated contaminants of potential concern (COPC) have been identified, as shown in Table 5, Figure 3 and Table 9.

- Uncontrolled Filling along the boundary: A potential source of contamination is imported fill or residual demolition waste. It is possible that hazardous building materials such as asbestos and lead paint being a potential issue in surface soils and fill for the structure footprints. Various COPC can be associated with filling, such as heavy metals, polycyclic aromatic hydrocarbons (PAHs), petroleum hydrocarbons, organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs), and asbestos.
- Potential contaminants associated with deteriorated building materials include heavy metals, asbestos and PCBs;
- Heavy metals: As, Cu and Cr from Copper Chrome Arsenate timber treatments;
- Heavy metals: Zn from Zinc Alum sheeting.
- Agricultural use: Organophosphorus Pesticides (OPPs), Organochlorine Pesticides (OCPs) ;
- Potential contaminants associated with car services business in one year period: Heavy metals, petroleum hydrocarbons, BTEX.

The main potential receptors of contamination at the site (current and future) are considered to be:

- Site users (residents, visitors);
- Construction works (for the construction of any future development);
- Maintenance workers;
- Adjacent site users;
- Surface water;
- Groundwater;
- Terrestrial and aquatic ecology.

The potential contamination pathways through which the identified receptors could come into contact with contamination are considered to be:

- Ingestion and dermal contact;
- Inhalation of dust;
- Inhalation of landfill and/or volatile vapours;
- Surface water run off;
- Leaching and vertical migration into groundwater;
- Lateral migration of groundwater;
- Contact with terrestrial and aquatic ecology.

Table 5 Contaminants of Potential Concern and Areas of Environmental Concern

AEC No.	Positive Sample Locations	Stratum of concern and depth /mBGL	Area /m^2	Approximate Volume /m^3	Notes
Asbestos Impacted Area					
Front section of 37-39	BH01, BH02 and BH06	in fill up to 0.5 mBGL (refusal due to fill)	~500 m^2	~200	• Medium risk and shall be remediated and managed according to the WHS regulation

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Carter Road					• Class A asbestos removal; • Excavation for offsite disposal if slab disturbance for lift construction; • Waste classification of spoil

Note:

- Red sample locations denote where bonded/friable asbestos were observed or detected.
- Asbestos did not exceed the HSL-D shall be managed according to the WHS legislation.
- These estimated areas, volumes, tonnage numbers are estimated with approximately ±25% deviation with high uncertainty due to heterogeneous fill.

9.2 Potential Sources, Pathways and Receptors of Contamination

The potential sources, pathways and receptors of contamination are provided below in Table 6.

Table 6 Potential Sources, Pathways and Receptors of Contamination

Potential Sources	Pathway	Receptor	Comment/Risk Management/Action Recommended
Importation of potentially contaminated fill onsite throughout	Ingestion and dermal contact	Current and future Site users	There is low potential for Site users to come into contact with contaminated soil, therefore a complete pathway potentially does not exist.
	Inhalation of dust and vapours	Current and future Site users and surrounding Site users	There is potential for Site users and surrounding land users to be exposed to dust from the Site, therefore a complete pathway potentially likely exists.
	Leaching of contaminants into ground surface	Soils across the Site	There is low potential for surface and shallow soils to be contaminated as a result of historical Site activities, therefore a complete pathway could less likely exist. Therefore, a complete pathway is not considered to exert a significant impact on the site.
	Leaching of contaminants into groundwater	Groundwater beneath the Site	Given the historical and current Site use, surrounding land uses, groundwater is anticipated to be at depths of >1 m BGL, and groundwater beneath the Site is potentially anticipated to be not contaminated as a result of Site activities. Therefore, a potentially complete pathway is unlikely to exist.
	Surface water runoff	Terrestrial and aquatic ecology	There is low potential for stormwater runoff from the Site to be impacted from soil contamination, which can then impact off-site surface water receptors through stormwater system flow, therefore a complete pathway could not exist.

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Potential Sources	Pathway	Receptor	Comment/Risk Management/Action Recommended
Potentially hazardous building materials on ground surface and buried below ground surface – around the footprint and in the structures	Ingestion and dermal contact	Current and future Site users	There is low potential for Site users to come into contact with contaminated soil, therefore a complete pathway does not exist.
	Inhalation of dust and vapours	Current and future Site users and surrounding Site users	There is potential for Site users and surrounding land users to be exposed to dust and vapours from the Site, therefore a complete pathway likely exists.
Potentially contaminants offsite migration from day to day industrial operation (mechanic repair)	Ingestion and dermal contact	Current and future Site users	There is less likely for Site users to come into contact with contaminated soil, therefore a complete pathway does not exist.
	Inhalation of dust and vapours	Current and future Site users and surrounding Site users	There is low potential for Site users to be exposed to dust and vapours from the Site, therefore a complete pathway is not considered to potentially exist.
	Leaching of contaminants into ground surface	Soils across the Site	There is less likely that leachate/plume from the upgradient to impact the site subsurface soils as groundwater water could flow towards northern creek, therefore a complete pathway is not considered to impact the site.
	Leaching of contaminants into groundwater	Groundwater beneath the Site	The groundwater level is anticipated to be at the depths of over ~1.0 m BGL. Therefore, a complete pathway is not considered to exert a significant impact on the site.

10 Main Findings, Data Gaps, Conclusion and Recommendation

10.1 Main Findings

Based on the findings of this DSI report with a judgmental sampling programme, DRYU concludes the following:

- Among eight soil samples from eight borehole locations for asbestos by NEPM gravimetric testing/observation, several fibro-cement fragments over 7 mm in dimensions during onsite sieving were sighted in BH02_0.13-0.5.
- Bonded asbestos was detected in BH01_0.15-0.35 (0.005%w/w below the HSL-D of 0.005%w/w). The concentration of bonded asbestos in BH02_0.13-0.5 (0.78%) did exceed the HSL-D (0.05%w/w, bonded).
- Asbestos fine was detected in one soil sample, BH06_0.1-0.3 (0.003%w/w, exceeding the HSL-D of 0.001%w/w).
- The concentrations of the tested contaminants of potential concern including Heavy Metals – Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc, Total Recoverable Hydrocarbons (TRHs), Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Organophosphorus Pesticides (OPPs), Organochlorine Pesticides (OCPs), Polychlorinated Biphenyl (PCBs) below the laboratory limit of reporting or below the guideline HIL-D values. Carcinogenic PAHs, BaP TEQ <LOR=0 of BH05_0.1-0.25 (2.2 mg/Kg) did not exceed HIL-D (sand) (4 mg/Kg).

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- The concentrations of petroleum compounds and fractions below the HSL-D & HSL D Commercial/Industrial (F1 and F2, BTEXN) for vapour intrusion, or below the laboratory limit of reporting for Silt/Clay texture, 0 m to <1 m.
- DSI analytical results for nine soil samples collected indicate concentrations of As, Cu, Cr^{III}, DDT, naphthalene, Ni, Pb and Zn were either below the laboratory limit of reporting or below the corresponding guideline values for EIL-Commercial/Industrial. The elevated Pb concentrations in BH04_0.3-0.5 (350 mg/Kg) and BH05_0.1-0.25 (620 mg/Kg) did not exceed the Generic added contaminant limits for Pb (1800 mg/Kg).
- DSI analytical results for nine soil samples indicate concentrations of TPH fractions (F1, F2, F3 and F4), BTEX and Benzo(α)pyrene did not exceed the ESL-Commercial/Industrial values – coarse texture, below the laboratory limit of reporting or not detected, except for BH05_0.1-0.25 with BaP 1.7 mg/Kg, slightly higher than ESL-coarse 1.4 mg/Kg.
- DSI analytical results for soil samples collected indicates concentrations of TPH fractions were either below the laboratory limit of reporting or below the guideline values of Management Limits.

10.2 Data Gaps

Several data gaps may exist and to be addressed during construction stage due to site access constraints”

- Soil beneath the dwelling structures such as the footings, slabs

Data gap closure works are required to be completed in accordance with sampling requirement outlined in the NSW EPA Sampling Design Guidelines (2022).

10.3 Conclusion

The risk of contamination in soils at the localised areas is **medium**, traceable to historical backfilling and demolition activities rather than car repair/painting business.

Therefore, DRYU proposes that the Site can be made **suitable** for the proposed mixed-use development from site contamination perspective, provided that the recommendations as follows are to be implemented properly:

10.4 Recommendations

- A **Remedial Action Plan** with an Unexpected Finds Protocol shall be prepared to guide the remediation process in light of any additional contamination identified during data gap works at demolition & excavation stage.
- On completion of the asbestos removal, **an asbestos clearance certificate** will be required to be undertaken by a licensed asbestos assessor and clearance certificate issued in accordance with the requirements of NSW Work Health and Safety Regulation (2017) and Code of Practice - How to Safely Remove Asbestos (Safework, 2022) to validate that the asbestos fine related contamination has indeed been removed and that the asbestos impacted areas are safe for re-use.
- **Waste Classification Report(s)** shall be conducted for **scraped topsoil/FILL under slab for offsite disposal** in accordance with the NSW EPA Waste Classification Guidelines (2014),

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- **A Validation report** at the completion of the demolition and earthworks (and after any further investigation and/or remediation works), i.e. prior to construction, to confirm that:
  - remediation works have been undertaken in accordance with the RAP requirements;
  - the site is suitable for its intended use; and
  - that all works have been completed in accordance with SEPP – Resilience and Hazards 2021 and the NSW EPA requirements for consultants reporting on contaminated sites.

This report is based on a limited desktop review, site walkover and an intrusive and stratified sampling programme. It may possible that contaminants and differing ground conditions may be present below covered surfaces or in the site not intrusively investigated. If suspicious or foreign materials encountered during construction phase, a contingency plan for soils, on-site inspection and /or sampling should be implemented to address contaminants of environmental concern (if exist; or if soil disturbances happen) that could potentially be encountered.

Should unexpected finds such as asbestos containing materials or any other contaminating features such as buried waste, staining or odours be encountered during disposal, relocation and/or placement of the material, further assessment will be required to re-assess the suitability for off-site disposal or on-site reuse based on further waste classification reports.

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11 References

- Protection of the Environment Operations Act 1997 (Cth.) (Austl.).
- Protection of the Environment Operations (Waste) Regulation 2014 (Cth.) (Austl.).
- State Environmental Planning Policy (Resilience and Hazards) 2021
- National Environment Protection (Assessment of Site Contamination) Measure 1999 – 2013 Amendment (NEPC, 2013, referred to as the "ASC NEPM")
- Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (NSW EPA, 2015; referred to as the 'Duty to Report Guidelines')
- Consultants Reporting on Contaminated Land: Contaminated Land Guidelines (NSW EPA, 2020, referred to as the "Consultant reporting Guidelines")
- Sampling Design Part 1 – Application: Contaminated Land Guidelines (NSW EPA, 2022, referred to as the "Sampling Design Guidelines")
- NSW EPA (2022) Sampling Design Part 2 – Interpretation: Contaminated Land Guidelines (NSW EPA, 2022, referred to as the "Sampling Design Guidelines");
- Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (The WA Department of Health, 2021, referred to as the "WA Asbestos Guideline")
- New South Wales Environment Protection Authority. (2014). Waste Classification Guidelines - Part 1: Classifying Waste. Sydney, Australia (NSW EPA, 2014, referred to as the "Waste Classification Guideline").

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12 Limitations

This report has been prepared for the exclusive use of the client. Dr Upsilon Environments has used a degree of care and skill ordinarily exercised in similar investigations by reputable members of the environmental industry in Australia. No other warranty, expressed or implied, is made or intended. No one section or part of a section, of this report should be taken as giving an overall idea of this report. Each section must be read in conjunction with the whole of this report, including its appendices and attachments.

Any other party should satisfy themselves that the scope of work conducted, and report herein meets their specific needs. Dr Upsilon Environments cannot be held liable for third party reliance on this document, as Dr Upsilon Environments is not aware of the specific needs of the third party.

The subsurface environment can present substantial uncertainty due to it complex heterogeneity. The conclusions presented in this report are based on limited investigation of conditions at specific sampling locations chosen to be as representative as possible under the given circumstances. However, it is possible that this investigation may not have encountered all areas of contamination at the site due to the visual inspection, limited sampling and testing program undertaken.

The material subject to classification pertains only to the Site and subject stockpile outlined within the report and must be consistent with the soil description reported. If there are any unexpected finds that are not consistent with this classification, Dr Upsilon Environments must be notified immediately.

DRYU professional opinions are based upon its professional judgement, experience, training and results from analytical data. In some cases, further testing and analysis may be required, thus producing different results and / or opinions. DRYU has limited its investigation to the scope agreed upon with its client.

Investigations are based on inspections conducted in accordance with industry guidelines and standards, and common industry practice, having regard to the client instructions, and interpretations of conditions are based on the data from those inspections and, where relevant and conducted, testing. They will represent to the best of our knowledge, a reasonable interpretation of the condition of the site as able to be inspected. However, there can be no guarantee that conditions at specific points not able to be inspected do not vary from the interpreted conditions based on the available observations/data.

In practice, it is generally impossible to locate all asbestos in the course of an inspection due to factors including but not limited to access restrictions to certain areas including subsoil, the need to avoid damage, minimising inconvenience, operating plant, unavailability of specific information regarding the premises. The presence of asbestos and asbestos containing materials (ACM) is determined visually while the consultant will collect samples of suspected ACM and have them analysed in a laboratory. Any restrictions on the amount of sampling will reduce confidence in the inspection findings. The ACM that cannot be seen will not be found.

No warranty, undertaking, or guarantee, whether expressed or implied, will be made with respect to the data reported or to the findings, observations, conclusions and recommendations expressed in DRYU report. Furthermore, such data, findings, observations, conclusions and recommendations are based solely upon existence at the time of the investigation. The passage of time, manifestation of latent conditions or impacts of future

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events (e.g. changes in legislation, scientific knowledge, land uses, climatic conditions, etc) may require further investigation at the site with subsequent data analysis and re-evaluation of the findings, observations, conclusions and recommendations expressed in DRYU report.

DRYU report will be prepared on behalf of and for the exclusive use of the Client and is subject to and issued in connection with the provisions of the agreement between DRYU and the Client. DRYU accepts no liability or responsibility whatsoever and expressly disclaims any responsibility for or in respect of any use of or reliance upon DRYU report by any third party or parties. It is the responsibility of the Client to accept if the Client so chooses any recommendations contained within and implement them in an appropriate, suitable and timely manner.

All works undertaken by DRYU are subject to DRYU Terms and conditions for professional services and the statement of limitation.

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Appendices

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Appendix 1 – Representative Photographs

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Table 7 Representative Inspection Images for Area of Environmental Concern

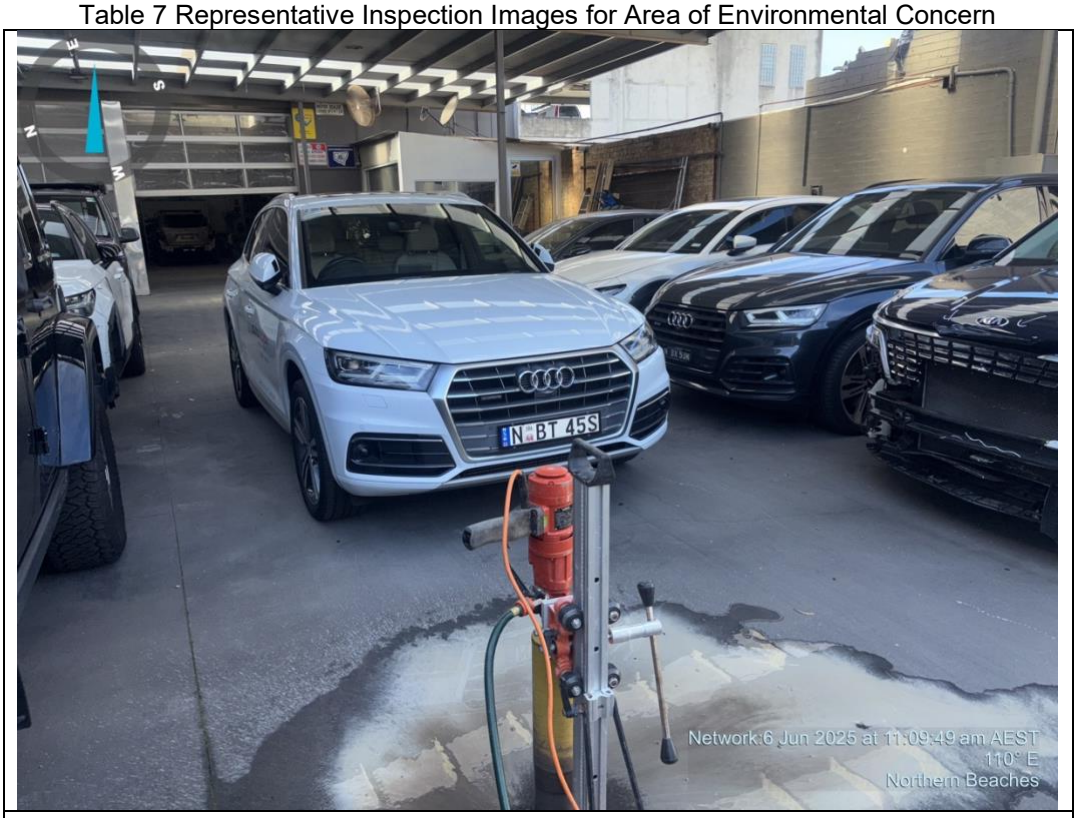

Image 1
The site

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Appendix 2 – Site Layout, Sampling Locations and Areas of Environmental Concern

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Figure 3 Site layout, sampling locations at 35-39 Cater Road, Brookvale, NSW

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Appendix 3 – Test Pit/Borehole Log

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Table 8 Representative Sampling Images

	
Image 1 BH01_0.15-0.35 Sandy loam to sand, minor rubble Bonded asbestos	Image 2 BH01_0.35-0.8 Sand, white, moist.
	
Image 3 BH01_0.8-1.1 Sand, white to grey, some gravel, no rubble	Image 4 BH01_1.1-1.5 Sand, white to grey, some gravel, no rubble
	
Image 5 BH02_0.13-0.5 Fill with rubble. Refusal. Asbestos fragments detected	Image 6 BH03_0.1-0.4 Sand, grey, no rubble

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Image 7
BH03_0.4-0.9
Sand, white, moist.

Image 8
BH04_0.1-0.3
Clayey sand, fill with some rubble, moist.

Image 9
BH04_0.3-0.65
Fill, grey/black or stained, moist.

Image 10
BH05_0.1-0.25
Fill with some shell, stained, moist.

Image 11
BH05_0.25-0.7
Sand, grey to white, no rubble

Image 12
BH06_0.1-0.3
Fill with some rubble, moist.
Asbestos fine

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Image 13
BH06_0.3-0.8
Sand, grey to white, no rubble

Image 14
BH07_0.1-0.35
Fill with ash, moist.

Image 15
BH07_0.35-0.8
Sand, grey to yellow, no rubble

Image 16
BH08_0.1-0.35
Fill with gravel, moist.

Image 17
BH08_0.35-0.8
Sand, grey to white, no rubble

ENVIRONMENTAL BOREHOLE BH01

PROJECT NUMBER DRYU642J
PROJECT NAME DSI
CLIENT FGT
ADDRESS 35-37 Carter Road, Brookvale, NSW

DRILLING DATE 06 June 2025
DRILLING COMPANY DRYU
DRILLER JY
DRILLING METHOD HA
TOTAL DEPTH 1.5 m

COORDINATES 340608.125, 6262899.940
COORD SYS GDA94, MAG Zone 56
SURFACE ELEVATION 15 m
LOGGED BY JY

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
	-	N		SLAB	Slab	Slab
	BH01_0.15-0.35	Y		FILL	Fill with grey black sand, minor rubble	Fill with some roadbase, grey sand
0.5	BH01_0.35-0.8	N		SAND	Sand, grey to white, moist	Sand, white grey, no rubble
	BH01_0.8-1.1	N		SAND	Sand with some gravel, grey, dense, moist.	
1						Gravelly sand, no rubble
	BH01_1.1-1.5	N		SAND	Sand, white, dense, moist.	Sand, white, visually natural
1.5					Termination Depth at: 1.5 m	Termination Depth at: 1.5 m

produced by ESlog.ESdat.net on 20 Jun 2025

ENVIRONMENTAL BOREHOLE BH02

PROJECT NUMBER DRYU642J
PROJECT NAME DSI
CLIENT FGT
ADDRESS 35-37 Carter Road, Brookvale, NSW

DRILLING DATE 06 June 2025
DRILLING COMPANY DRYU
DRILLER JY
DRILLING METHOD HA
TOTAL DEPTH 0.5 m

COORDINATES 340615.329, 6262895.038
COORD SYS GDA94, MAG Zone 56
SURFACE ELEVATION 15 m
LOGGED BY JY

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
	-	N		SLAB	Slab	Slab
	BH02_0.13-0.5	Y		FILL	Fill with grey black sand, building rubble and some ACM fragments	building rubble, weathered ACM fragments; refusal (pit?)
0.5					Termination Depth at: 0.5 m	Termination Depth at: 0.5 m

produced by ESlog.ESdat.net on 20 Jun 2025

ENVIRONMENTAL BOREHOLE BH03

PROJECT NUMBER DRYU642J
PROJECT NAME DSI
CLIENT FGT
ADDRESS 35-37 Carter Road, Brookvale, NSW

DRILLING DATE 06 June 2025
DRILLING COMPANY DRYU
DRILLER JY
DRILLING METHOD HA
TOTAL DEPTH 0.9 m

COORDINATES 340627.436, 6262892.136
COORD SYS GDA94, MAG Zone 56
SURFACE ELEVATION 15 m
LOGGED BY JY

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
	-	N		SLAB	Slab	Slab
	BH03_0.1-0.4	Y		FILL	Fill with grey black sand, minor building rubble	minor building rubble
0.5	BH03_0.4-0.9	N		SAND	Sand, white, moist.	white natural sand
					Termination Depth at: 0.9 m	Termination Depth at: 0.9 m

produced by ESlog.ESdat.net on 20 Jun 2025

Dr Upsilon Environments

ENVIRONMENTAL BOREHOLE BH04

PROJECT NUMBER DRYU642J
PROJECT NAME DSI
CLIENT FGT
ADDRESS 35-37 Carter Road, Brookvale, NSW

DRILLING DATE 06 June 2025
DRILLING COMPANY DRYU
DRILLER JY
DRILLING METHOD HA
TOTAL DEPTH 0.6 m

COORDINATES 340639.802, 6262891.920
COORD SYS GDA94, MAG Zone 56
SURFACE ELEVATION 15 m
LOGGED BY JY

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
	-	N		SLAB	Slab	Slab
	BH04_0.1-0.3	Y		FILL	Fill with grey black sand, clayey sand	minor building rubble
0.5	BH04_0.3-0.65	N		SAND	Sand, grey/black, moist.	grey sand or fill
					Termination Depth at: 0.65 m	Termination Depth at: 0.65 m

ENVIRONMENTAL BOREHOLE BH05

PROJECT NUMBER DRYU642J
PROJECT NAME DSI
CLIENT FGT
ADDRESS 35-37 Carter Road, Brookvale, NSW

DRILLING DATE 06 June 2025
DRILLING COMPANY DRYU
DRILLER JY
DRILLING METHOD HA
TOTAL DEPTH 0.7 m

COORDINATES 340607.477, 6262878.162
COORD SYS GDA94, MAG Zone 56
SURFACE ELEVATION 14 m
LOGGED BY JY

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
	-	N		SLAB	Slab	Slab
	BH05_0.1-0.25	Y		FILL	Fill with grey black sand, shell	minor building rubble, shell
0.5	BH05_0.25-0.7	N		SAND	Sand, grey to white, moist.	grey sand or fill
					Termination Depth at: 0.7 m	Termination Depth at: 0.7 m

produced by ESlog.ESdat.net on 20 Jun 2025

ENVIRONMENTAL BOREHOLE BH06

PROJECT NUMBER DRYU642J
PROJECT NAME DSI
CLIENT FGT
ADDRESS 35-37 Carter Road, Brookvale, NSW

DRILLING DATE 06 June 2025
DRILLING COMPANY DRYU
DRILLER JY
DRILLING METHOD HA
TOTAL DEPTH 0.8 m

COORDINATES 340607.477, 6262878.162
COORD SYS GDA94, MAG Zone 56
SURFACE ELEVATION 14.5 m
LOGGED BY JY

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
	-	N		SLAB	Slab	Slab
	BH06_0.1-0.3	Y		FILL	Fill with grey black sand, rubble	minor building rubble, ACM
0.5	BH06_0.3-0.8	N		SAND	Sand, grey, moist.	grey sand
					Termination Depth at: 0.8 m	Termination Depth at: 0.8 m

ENVIRONMENTAL BOREHOLE BH07

PROJECT NUMBER DRYU642J
PROJECT NAME DSI
CLIENT FGT
ADDRESS 35-37 Carter Road, Brookvale, NSW

DRILLING DATE 06 June 2025
DRILLING COMPANY DRYU
DRILLER JY
DRILLING METHOD HA
TOTAL DEPTH 0.6 m

COORDINATES 340628.783, 6262877.249
COORD SYS GDA94, MAG Zone 56
SURFACE ELEVATION 14 m
LOGGED BY JY

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
	-	N		SLAB	Slab	Slab
	BH07_0.1-0.35	Y		FILL	Fill with grey black sand, coal ash	some building rubble, coal ash
0.5	BH07_0.35-0.6	N		SAND	Sand with gravel, grey/yellow, moist.	gravelly sand,
					Termination Depth at: 0.6 m	Termination Depth at: 0.6 m

produced by ESlog.ESdat.net on 20 Jun 2025

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ENVIRONMENTAL BOREHOLE BH08

PROJECT NUMBER DRYU642J
PROJECT NAME DSI
CLIENT FGT
ADDRESS 35-37 Carter Road, Brookvale, NSW

DRILLING DATE 06 June 2025
DRILLING COMPANY DRYU
DRILLER JY
DRILLING METHOD HA
TOTAL DEPTH 0.9 m

COORDINATES 340640.349, 6262877.797
COORD SYS GDA94, MAG Zone 56
SURFACE ELEVATION 14 m
LOGGED BY JY

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
	-	N			Slab	Slab
	BH08_0.1-0.35	Y		FILL	Fill with grey black sand, rubble	some building rubble
0.5	BH08_0.35-0.8	N		SAND	Sand, grey to white, moist.	grey to yellow sand
	BH08_0.8-0.9	N		Sand	Sand with gravel, grey, moist.	grey sand with gravel
					Termination Depth at: 0.9 m	Termination Depth at: 0.9 m

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Appendix 4 – Assessment Criteria, CoPCs Testing Results and Analytical Reports

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Table 9 Representative contaminant concentrations, site assessment criteria and data analysis for soil

			Method Name	VOC's in Soil	VOC's in Soil	VOC's in Soil	VOC's in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil	Volatile Petroleum Hydrocarbons in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	OP Pesticides in Soil	OC Pesticides in Soil	PCBs in Soil	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals
Dr Upsilon Environments			Analyte Name	Benzene	Toluene	Ethylbenzene	m/p-xylene	Total Xylenes	TRH C6-C9	TRH C6-C10 minus BTEX (F1)	TRH >C10-C16	TRH >C10-C16 - Naphthalene (F2)	TRH >C16-C34 (F3)	TRH >C34-C40 (F4)	TRH C10-C36 Total	Naphthalene	Benzo(a)pyrene	Carcinogenic PAHs, BaP TEQ <LOR=0	Total PAH (NEPM/WHO 16)	Total OP Pesticides	Total CLP OC Pesticides	Total PCBs (Arochlors)	Arsenic, As	Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Nickel, Ni	Zinc, Zn	Mercury
			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	TEQ (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
Sample Name	Description	Matrix	Reporting Limit	0.1	0.1	0.1	0.2	0.3	20	25	25	25	90	120	110	0.1	0.1	0.2	0.8	1.7	-	0.1	1	0.3	0.5	0.5	1	0.5	2	0.05
SE284324.001	BH01_0.15-0.35	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	<90	<120	<110	<0.1	<0.1	<0.2	<0.8	<1.7	<0.1	<0.1	<1	<0.3	2.1	8.4	38	5.5	59	<0.05
SE284324.002	BH02_0.13-0.5	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	<90	<120	<110	<0.1	0.1	<0.2	<0.8	<1.7	<0.1	<0.1	1	<0.3	5.1	29	100	19	260	<0.05
SE284324.003	QAQC	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	<90	<120	<110	<0.1	0.1	<0.2	<0.8	<1.7	<0.1	<0.1	<1	<0.3	4.5	31	93	23	230	<0.05
SE284324.004	BH03_0.1-0.4	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	<90	<120	<110	<0.1	0.3	0.3	2.4	<1.7	<0.1	<0.1	<1	<0.3	1	15	42	0.9	87	<0.05
SE284324.005	BH04_0.1-0.3	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	<90	<120	<110	<0.1	<0.1	<0.2	<0.8	<1.7	<0.1	<0.1	1	<0.3	9.4	8.8	7	1.8	11	<0.05
SE284324.006	BH04_0.3-0.5	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	<90	<120	<110	<0.1	0.1	<0.2	<0.8	<1.7	<0.1	<0.1	1	1.7	4.4	18	350	2	240	<0.05
SE284324.007	BH05_0.1-0.25	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	100	<120	<110	<0.1	1.7	2.2	16	<1.7	<0.1	<0.1	2	1.9	5.6	22	620	4.2	390	0.09
SE284324.008	BH06_0.1-0.3	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	140	<120	150	<0.1	0.3	0.3	2.8	<1.7	<0.1	<0.1	2	1	1.9	28	76	1.8	160	0.08
SE284324.009	BH07_0.1-0.35	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	<90	<120	<110	<0.1	<0.1	<0.2	<0.8	<1.7	<0.1	<0.1	<1	<0.3	2.7	19	15	7.9	40	<0.05
SE284324.010	BH08_0.1-0.35	Soil	Result	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<25	<25	<25	<90	<120	<110	<0.1	0.5	0.7	4.7	<1.7	<0.1	<0.1	1	<0.3	4.2	9.7	38	2.4	67	0.11
			Maximum concentraion										140		150		1.7	2.2	16				2	1.9	9.4	31	620	23	390	0.11
			95% UCLmean																						5.8	25	278	12.4	242	
			RPD %														0								13	7	7	19	12	
			Average														0.4	0.9	6.5				1.3	1.5	4.1	18.9	137.9	6.9	154.4	0.1

DRYU	**Benzene**	**Toluene**	**Ethylbenzene**	**m&p-Xylenes**	**Xylenes - Total***	**TRH C6-C9**	**TRH C6-C10 less BTEX (F1)**	**TRH >C10-C16**	**TRH >C10-C16 less Naphthalene (F2)**	**TRH >C16-C34**	**TRH >C34-C40**	**TRH C10-C36 (Total)**	**Naphthalene**	**Benzo(a)pyrene**	**Benzo(a)pyrene TEQ (lower bound) ***	**Total PAH***	**Total OP Pesticides**	**Total CLP OC Pesticides**	**Total PCBs (Arochlors)**	**Arsenic**	**Cadmium**	**Chromium (IV)**	**Copper**	**Lead**	**Nickel**	**Zinc**	**Mercury**
HIL D/HSL D (Sand)	3/3/3/3	NL/NL/NL/NL	NL/NL/NL/NL	230/NL/NL/NL	230/NL/NL/NL		260/370/630/NL		NL/NL/NL/NL						40	4000			7	3000	900	3600	240000	1500	6000	400000	730

DRYU	**Benzene**	**Toluene**	**Ethylbenzene**	**m&p-Xylenes**	**Xylenes - Total***	**TRH C6-C9**	**TRH C6-C10 less BTEX (F1)**	**TRH >C10-C16**	**TRH >C10-C16 less Naphthalene (F2)**	**TRH >C16-C34 (F3)**	**TRH >C34-C40 (F4)**	**TRH C10-C36 (Total)**	**Naphthalene**	**Benzo(a)pyrene**	**Benzo(a)pyrene TEQ (lower bound) ***	**Total PAH***	**Total OP Pesticides**	**Total CLP OC Pesticides**	**Total PCBs (Arochlors)**	**Arsenic**	**Cadmium**	**Chromium (IV)**	**Copper**	**Lead**	**Nickel**	**Zinc**	**Mercury**
EIL/ESL (D)	75/95	135/135	165/185	180/95	180/95		215/215		170/170	1700/2500	3300/6600		640/370	1.4/1.4						160/160				440/1800			
Site Specific EILs (pH, CEC, OC)																				100		410*	230	1100	270	770	

DRYU	**Benzene**	**Toluene**	**Ethylbenzene**	**m&p-Xylenes**	**Xylenes - Total***	**TRH C6-C9**	**TRH C6-C10 less BTEX (F1)**	**TRH >C10-C16**	**TRH >C10-C16 less Naphthalene (F2)**	**TRH >C16-C34 (F3)**	**TRH >C34-C40 (F4)**	**TRH C10-C36 (Total)**	**Naphthalene**	**Benzo(a)pyrene**	**Benzo(a)pyrene TEQ (lower bound) ***	**Total PAH***	**Total OP Pesticides**	**Total CLP OC Pesticides**	**Total PCBs (Arochlors)**	**Arsenic**	**Cadmium**	**Chromium (IV)**	**Copper**	**Lead**	**Nickel**	**Zinc**	**Mercury**
Management Limits - (A, B, C)							700/800	1000	1000/1000	2500/3500	10000/10000																

Waste Classification for Off-site Disposal	**Benzene**	**Toluene**	**Ethylbenzene**	**m&p-Xylenes**	**Xylenes - Total***	**TRH C6-C9**	**TRH C10-C36 (Total)**	**Benzo(a)pyrene**	**Total PAH***	**Total OP Pesticides**	**Total PCBs (Arochlors)**	**As**	**Cd**	**Cr Total**	**Cu**	**Pb**	**Ni**	**Zn**	**Hg**
General Solid Waste CT1 (mg/Kg)	10	288	600	1000	1000	650	10000	0.8	200		50	100	20	100		100	40		4
General Solid Waste TCLP1 (mg/L)	0.5		30			NR	NR	0.04	NR				1			5			
General Solid Waste SCC1 (mg/Kg)	18		1080			650	10000	10	200		50	500	100	1900		1500	1050		50
Restrict Solid Waste CT2 (mg/Kg)	40	1152	2400	4000	4000	2600	40000	3.2	800		50	400	80	400		400	160		16
General Solid Waste TCLP2 (mg/L)	20		120			NR	NR	0.16	NR			20	4	20		20	8		0.8
General Solid Waste SCC2 (mg/Kg)	2000		4320			2600	40000	23	800		50	2000	400	7600		6000	4200		200

Waste Classification for VENM; ENM	**Benzene**	**Toluene**	**Ethylbenzene**	**m&p-Xylenes**	**Xylenes - Total***	**TRH C10-C36 (Total)**	**Benzo(a)pyrene**	**Total PAH***	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Lead**	**Nickel**	**Zinc**	**Mercury**
Maximum average concentration for characterisation,(mg/kg 'dry weight' unless otherwise specified)	NA	NA	NA		NA	250	0.5	20	20	0.5	75	100	50	30	150	0.5
Absolute maximum concentration, (mg/kg 'dry weight' unless otherwise specified)	0.5	65	25		15	500	1	40	40	1	150	200	100	60	300	1

Notes to Table

NEPM, Sch B1, Table 1A Health investigation levels for soil contaminants

NEPM, Sch B7, Table 2 Health investigation levels for soil contaminants

NEPM, Sch B1, Table 4: Soil properties to be measured for site-specific derivation of ACLs for CrIII, Cu, Ni and Zn. EIL=ABC+ACL; Table 1B(1), 1B(2), 1B(3), 1B(4). For Cu/Zn, testing CEC and pH; Ni and CrIII, additonal testing with CEC meansurements;

Dr Upsilon Environments			Method Name	VOC's in Soil	VOC's in Soil	VOC's in Soil	VOC's in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil	Volatile Petroleum Hydrocarbons in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	OP Pesticides in Soil	OC Pesticides in Soil	PCBs in Soil	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals	Heavy Metals
			Analyte Name	Benzene	Toluene	Ethylbenzene	m/p-xylene	Total Xylenes	TRH C6-C9	TRH C6-C10 minus BTEX (F1)	TRH >C10-C16	TRH >C10-C16 - Naphthalene (F2)	TRH >C16-C34 (F3)	TRH >C34-C40 (F4)	TRH C10-C36 Total	Naphthalene	Benzo(a)pyrene	Carcinogenic PAHs, BaP TEQ <LOR=0	Total PAH (NEPM/WHO 16)	Total OP Pesticides	Total CLP OC Pesticides	Total PCBs (Arochlors)	Arsenic, As	Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Nickel, Ni	Zinc, Zn	Mercury
			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	TEQ (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
Sample Name	Description	Matrix	Reporting Limit	0.1	0.1	0.1	0.2	0.3	20	25	25	25	90	120	110	0.1	0.1	0.2	0.8	1.7	-	0.1	1	0.3	0.5	0.5	1	0.5	2	0.05

BTEX and F1, F2 from Sch B1, Table 1A(3) Soil HSLs for vapour intrusion (mg/kg)

Sch B1, Table 1B(6) ESLs for TPH fractions F1-F4, BTEX and benzo(a)pyrene in soil;

Sch B1, Table 1B(7) Management limits for TPH fractions F1-F4 in soil

Sch B1, Table 1A(2) for Interim soil vapour health investigation levels for volatile organic chlorinated compounds; The interim HILSs for soil are not derived

HSLs in the Soil Depth of 0m to <1m/1m to 2m/2m to 4m/4m+

ESL data in Coarse/Fine

ML data in Coarse/Fine

EIL data in Fresh/Aged

ND – Not detected / below Practical Quantitation Limit (PQL).

NA – Not Applicable

Landuse: **Industrial D**

CHAIN OF CUSTODY & ANALYSIS REQUEST

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

Lab ID Number: *(please quote on correspondence)*

Company Name:	Dr Upsilon Environments	Project Name/No:	DRYU 642 J
Address:	35-39 Carter Rd, Brookvale NSW	Purchase Order No:	
		Results Required Date:	4 days
		Telephone:	0406201136 Fax:
Contact Name:	Jeffrey Yu	Email Results to:	admin @ DrUpsilonGroup.com.au @
Quotation No:	1688845		

Matrix *(Tick as appropriate)*: Soil Sample; Water Sample; Other ____

NO. OF CONTAINERS: CL17

ANALYSIS REQUESTED

Additional Report Formats: NEPM; CSV; ESDAT; DQO; GO, Guidelines --------; Others ____

SGS ID	Client Sample ID	Sampling Date/ Time	Soil	Water	Other	NO. OF CONTAINERS	CL17	Notes/Guidelines/LOR/ Special instructions
1	BH01-0.15-0.35	7/6/25	1				1	
	BH01-0.35-0.8		1					on hold
2	BH02-0.1-0.5		1				1	
3	QAQC		1				1	
4	BH03-0.1-0.4		1				1	
5	BH04-0.1-0.3		1				1	
6	BH04-0.3-0.5		1				1	
7	BH05-0.1-0.25		1				1	
8	BH06-0.1-0.3		1				1	
	BH06-0.3-0.8		1					on hold
9	BH07-0.1-0.35		1				1	
	BH07-0.35-0.6		1					on hold
10	BH08-0.1-0.35		1				1	

SGS EHS Sydney COC
SE284324

Relinquished By: Jeffrey Yu	Date/Time: 7/6/25	Received By:	Date/Time: 10/06/25 @ 8:40
Relinquished By: Jeffrey Yu	Date/Time: 7/6/25	Received By:	Date/Time:
Samples Intact: (Yes) / No	Temperature: 8.2 °C	Sample Security Sealed: *Yes / No*	Hazards: *e.g. may contain Asbestos*

Comments / Subcontracting details:

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 2 of 2

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

Lab ID Number: *(please quote on correspondence)*

Company Name:	Dr Upsilon Environments	Project Name/No:	DRYU642J
Address:		Purchase Order No:	
		Results Required Date:	4 days
		Telephone: 0406201136	Fax:
Contact Name:		Email Results to:	admin @ DrUpsilonGroup.com.au
Quotation No:	688845		@

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix (Tick as appropriate): Soil Sample	Water Sample	Other	NO. OF CONTAINERS	ANALYSIS REQUESTED	Additional Report Formats / Notes/Guidelines/LOR/ Special instructions
	BH08_0.35-2.8	7/8/25	1			1	7	☑ NEPM ☑ CSV ☐ ESDAT ☑ DQO ☐ GO, Guidelines ☐ Others; on hold
							10	

Relinquished By: Jeffrey Yu	Date/Time: 7/8/25	Received By:	Date/Time: 10/06/25 @ 8:40
Relinquished By: Jeffrey Yu	Date/Time: 7.8.25	Received By:	Date/Time:
Samples Intact: Yes / No	Temperature: °C	Sample Security Sealed: Yes / No	Hazards: *e.g. may contain Asbestos*

Comments / Subcontracting details:

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Admin
Client	DR UPSILON ENVIRONMENTS PTY LTD
Address	PO Box 289 Kingsford NSW 2032
Telephone	(Not specified)
Facsimile	(Not specified)
Email	admin@DrUpsilonGroup.com
Project	**DRYU642J**
Order Number	**DRYU642J**
Samples	10

LABORATORY DETAILS

Manager	Shane McDermott
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	**SE284324 R0**
Date Received	10/6/2025
Date Reported	16/6/2025

COMMENTS

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

SIGNATORIES

Dong LIANG
Metals/Inorganics Team Leader

Nathan CAMILLERI
Organics Manager

Teresa NGUYEN
Organic Chemist

VOC's in Soil [AN433] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
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

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
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

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	**71**	**100**	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	**53**	<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	**100**	**140**	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	**150**	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.1**	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.1**	**0.2**	**0.2**	**0.4**	<0.1
Pyrene	mg/kg	0.1	**0.1**	**0.2**	**0.2**	**0.5**	<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	**0.2**	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.2**	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.2**	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	**0.1**	**0.1**	**0.3**	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.2**	<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	**0.2**	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	**0.3**	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	**0.4**	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	**0.2**	<0.2	**0.4**	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	**2.4**	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	**2.4**	<0.8

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
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	**0.3**	<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	**1.0**	**0.3**	<0.1	**0.3**
Anthracene	mg/kg	0.1	<0.1	**0.3**	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.2**	**2.8**	**0.6**	<0.1	**0.9**
Pyrene	mg/kg	0.1	**0.2**	**2.9**	**0.5**	<0.1	**0.9**
Benzo(a)anthracene	mg/kg	0.1	<0.1	**1.5**	**0.2**	<0.1	**0.4**
Chrysene	mg/kg	0.1	**0.1**	**1.6**	**0.2**	<0.1	**0.5**
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	**1.2**	**0.2**	<0.1	**0.3**
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	**1.0**	**0.2**	<0.1	**0.3**
Benzo(a)pyrene	mg/kg	0.1	**0.1**	**1.7**	**0.3**	<0.1	**0.5**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	**0.8**	**0.2**	<0.1	**0.3**
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	**0.7**	**0.2**	<0.1	**0.3**
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	**2.2**	**0.3**	<0.2	**0.7**
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	**2.3**	**0.4**	<0.3	**0.8**
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	**2.3**	**0.4**	<0.2	**0.7**
Total PAH (18)	mg/kg	0.8	<0.8	**16**	**2.8**	<0.8	**4.7**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	**16**	**2.8**	<0.8	**4.7**

OP Pesticides in Soil [AN420] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OC Pesticides in Soil [AN420] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobenzene (HCB)	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
Lindane (gamma 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	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
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
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
Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	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	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDD	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
Endosulfan sulphate	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
Endrin ketone	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
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total OC Pesticides	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total OC VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Other OCP VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

OC Pesticides in Soil [AN420] Tested: 12/6/2025 (continued)

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobenzene (HCB)	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
Lindane (gamma 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	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
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
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
Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	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	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDD	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
Endosulfan sulphate	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
Endrin ketone	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
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total OC Pesticides	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total OC VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Other OCP VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PCBs in Soil [AN420] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
Arochlor 1016	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total PCBs	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
Arochlor 1016	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total PCBs	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
Arsenic, As	mg/kg	1	<1	1	<1	<1	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	2.1	5.1	4.5	1.0	9.4
Copper, Cu	mg/kg	0.5	8.4	29	31	15	8.8
Lead, Pb	mg/kg	1	38	100	93	42	7
Nickel, Ni	mg/kg	0.5	5.5	19	23	0.9	1.8
Zinc, Zn	mg/kg	2	59	260	230	87	11

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
Arsenic, As	mg/kg	1	1	2	2	<1	1
Cadmium, Cd	mg/kg	0.3	1.7	1.9	1.0	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	4.4	5.6	1.9	2.7	4.2
Copper, Cu	mg/kg	0.5	18	22	28	19	9.7
Lead, Pb	mg/kg	1	350	620	76	15	38
Nickel, Ni	mg/kg	0.5	2.0	4.2	1.8	7.9	2.4
Zinc, Zn	mg/kg	2	240	390	160	40	67

Mercury in Soil [AN312] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
Mercury	mg/kg	0.05	<0.05	**0.09**	**0.08**	<0.05	**0.11**

Moisture Content [AN002] Tested: 12/6/2025

PARAMETER	UOM	LOR	BH01_0.15-0.35 SOIL - 7/6/2025 SE284324.001	BH02_0.13-0.5 SOIL - 7/6/2025 SE284324.002	QAQC SOIL - 7/6/2025 SE284324.003	BH03_0.1-0.4 SOIL - 7/6/2025 SE284324.004	BH04_0.1-0.3 SOIL - 7/6/2025 SE284324.005
% Moisture	%w/w	1	**9.7**	**7.8**	**7.0**	**8.0**	**14.0**

PARAMETER	UOM	LOR	BH04_0.3-0.5 SOIL - 7/6/2025 SE284324.006	BH05_0.1-0.25 SOIL - 7/6/2025 SE284324.007	BH06_0.1-0.3 SOIL - 7/6/2025 SE284324.008	BH07_0.1-0.35 SOIL - 7/6/2025 SE284324.009	BH08_0.1-0.35 SOIL - 7/6/2025 SE284324.010
% Moisture	%w/w	1	**10.4**	**14.3**	**14.8**	**26.5**	**18.8**

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.

FOOTNOTES

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

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

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

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

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

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

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

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

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

STATEMENT OF QA/QC PERFORMANCE

SE284324 R0

CLIENT DETAILS

Contact	Admin
Client	DR UPSILON ENVIRONMENTS PTY LTD
Address	PO Box 289 Kingsford NSW 2032
Telephone	(Not specified)
Facsimile	(Not specified)
Email	admin@DrUpsilonGroup.com
Project	**DRYU642J**
Order Number	**DRYU642J**
Samples	10

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
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Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE284324 R0**
Date Received	10 Jun 2025
Date Reported	16 Jun 2025

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:

Duplicate	Mercury in Soil	1 item
	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	2 items

SAMPLE SUMMARY

Sample counts by matrix	10 Soil	Type of documentation received	COC
Date documentation received	10/6/2025	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	8.2°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

SE284324 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

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.15-0.35	SE284324.001	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025
QAQC	SE284324.003	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350634	07 Jun 2025	10 Jun 2025	05 Jul 2025	12 Jun 2025	05 Jul 2025	16 Jun 2025

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.15-0.35	SE284324.001	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025
QAQC	SE284324.003	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350628	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	17 Jun 2025	16 Jun 2025

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.15-0.35	SE284324.001	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
QAQC	SE284324.003	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025

OP Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.15-0.35	SE284324.001	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
QAQC	SE284324.003	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.15-0.35	SE284324.001	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
QAQC	SE284324.003	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025

HOLDING TIME SUMMARY

SE284324 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

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.15-0.35	SE284324.001	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
QAQC	SE284324.003	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025

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_0.15-0.35	SE284324.001	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025
QAQC	SE284324.003	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350631	07 Jun 2025	10 Jun 2025	04 Dec 2025	12 Jun 2025	04 Dec 2025	16 Jun 2025

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_0.15-0.35	SE284324.001	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
QAQC	SE284324.003	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350596	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	22 Jul 2025	16 Jun 2025

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.15-0.35	SE284324.001	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
QAQC	SE284324.003	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025

Volatile Petroleum Hydrocarbons in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.15-0.35	SE284324.001	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH02_0.13-0.5	SE284324.002	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
QAQC	SE284324.003	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH03_0.1-0.4	SE284324.004	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH04_0.1-0.3	SE284324.005	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH04_0.3-0.5	SE284324.006	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH05_0.1-0.25	SE284324.007	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH06_0.1-0.3	SE284324.008	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH07_0.1-0.35	SE284324.009	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025
BH08_0.1-0.35	SE284324.010	LB350607	07 Jun 2025	10 Jun 2025	21 Jun 2025	12 Jun 2025	21 Jun 2025	16 Jun 2025

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	98
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	98
	QAQC	SE284324.003	%	60 - 130%	99
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	96
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	95
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	99
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	98
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	102
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	100
	BH08_0.1-0.35	SE284324.010	%	60 - 130%	100

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	98
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	97
	QAQC	SE284324.003	%	60 - 130%	99
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	96
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	96
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	100
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	99
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	99
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	99
	BH08_0.1-0.35	SE284324.010	%	60 - 130%	99
d14-p-terphenyl (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	100
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	99
	QAQC	SE284324.003	%	60 - 130%	101
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	99
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	101
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	101
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	100
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	102
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	100
	BH08_0.1-0.35	SE284324.010	%	60 - 130%	100

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH01_0.15-0.35	SE284324.001	%	70 - 130%	98
	BH02_0.13-0.5	SE284324.002	%	70 - 130%	97
	QAQC	SE284324.003	%	70 - 130%	99
	BH03_0.1-0.4	SE284324.004	%	70 - 130%	96
	BH04_0.1-0.3	SE284324.005	%	70 - 130%	96
	BH04_0.3-0.5	SE284324.006	%	70 - 130%	100
	BH05_0.1-0.25	SE284324.007	%	70 - 130%	99
	BH06_0.1-0.3	SE284324.008	%	70 - 130%	99
	BH07_0.1-0.35	SE284324.009	%	70 - 130%	99
	BH08_0.1-0.35	SE284324.010	%	70 - 130%	99
d14-p-terphenyl (Surrogate)	BH01_0.15-0.35	SE284324.001	%	70 - 130%	100
	BH02_0.13-0.5	SE284324.002	%	70 - 130%	99
	QAQC	SE284324.003	%	70 - 130%	101
	BH03_0.1-0.4	SE284324.004	%	70 - 130%	99
	BH04_0.1-0.3	SE284324.005	%	70 - 130%	101
	BH04_0.3-0.5	SE284324.006	%	70 - 130%	101
	BH05_0.1-0.25	SE284324.007	%	70 - 130%	100
	BH06_0.1-0.3	SE284324.008	%	70 - 130%	102
	BH07_0.1-0.35	SE284324.009	%	70 - 130%	100
	BH08_0.1-0.35	SE284324.010	%	70 - 130%	100
d5-nitrobenzene (Surrogate)	BH01_0.15-0.35	SE284324.001	%	70 - 130%	95
	BH02_0.13-0.5	SE284324.002	%	70 - 130%	100
	QAQC	SE284324.003	%	70 - 130%	96
	BH03_0.1-0.4	SE284324.004	%	70 - 130%	94
	BH04_0.1-0.3	SE284324.005	%	70 - 130%	93
	BH04_0.3-0.5	SE284324.006	%	70 - 130%	96

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d5-nitrobenzene (Surrogate)	BH05_0.1-0.25	SE284324.007	%	70 - 130%	93
	BH06_0.1-0.3	SE284324.008	%	70 - 130%	97
	BH07_0.1-0.35	SE284324.009	%	70 - 130%	97
	BH08_0.1-0.35	SE284324.010	%	70 - 130%	95

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	98
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	98
	QAQC	SE284324.003	%	60 - 130%	99
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	96
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	95
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	99
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	98
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	102
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	100
	BH08_0.1-0.35	SE284324.010	%	60 - 130%	100

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	81
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	76
	QAQC	SE284324.003	%	60 - 130%	80
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	84
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	84
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	81
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	78
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	77
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	73
	BH08_0.1-0.35	SE284324.010	%	60 - 130%	79
d4-1,2-dichloroethane (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	78
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	74
	QAQC	SE284324.003	%	60 - 130%	77
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	81
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	79
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	76
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	78
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	75
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	73
	BH08_0.1-0.35	SE284324.010	%	60 - 130%	75
d8-toluene (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	80
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	76
	QAQC	SE284324.003	%	60 - 130%	80
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	84
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	81
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	78
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	80
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	77
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	74
	BH08_0.1-0.35	SE284324.010	%	60 - 130%	77

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	81
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	76
	QAQC	SE284324.003	%	60 - 130%	80
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	84
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	84
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	81
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	78
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	77
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	73

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH08_0.1-0.35	SE284324.010	%	60 - 130%	79
d4-1,2-dichloroethane (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	78
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	74
	QAQC	SE284324.003	%	60 - 130%	77
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	81
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	79
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	76
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	78
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	75
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	73
	BH08_0.1-0.35	SE284324.010	%	60 - 130%	75
d8-toluene (Surrogate)	BH01_0.15-0.35	SE284324.001	%	60 - 130%	80
	BH02_0.13-0.5	SE284324.002	%	60 - 130%	76
	QAQC	SE284324.003	%	60 - 130%	80
	BH03_0.1-0.4	SE284324.004	%	60 - 130%	84
	BH04_0.1-0.3	SE284324.005	%	60 - 130%	81
	BH04_0.3-0.5	SE284324.006	%	60 - 130%	78
	BH05_0.1-0.25	SE284324.007	%	60 - 130%	80
	BH06_0.1-0.3	SE284324.008	%	60 - 130%	77
	BH07_0.1-0.35	SE284324.009	%	60 - 130%	74
	BH08_0.1-0.35	SE284324.010	%	60 - 130%	77

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB350634.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB350596.001		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
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.1	<0.1
		Endrin	mg/kg	0.1	<0.1
		Beta Endosulfan	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
		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)	%	-	95

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB350596.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	97
		d14-p-terphenyl (Surrogate)	%	-	100

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB350596.001	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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB350596.001		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)	%	-	97
		2-fluorobiphenyl (Surrogate)	%	-	97
		d14-p-terphenyl (Surrogate)	%	-	100

PCBs in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB350596.001		Arochlor 1016	mg/kg	0.1	<0.1
		Arochlor 1221	mg/kg	0.1	<0.1
		Arochlor 1232	mg/kg	0.1	<0.1
		Arochlor 1242	mg/kg	0.1	<0.1
		Arochlor 1248	mg/kg	0.1	<0.1
		Arochlor 1254	mg/kg	0.1	<0.1
		Arochlor 1260	mg/kg	0.1	<0.1
		Total PCBs	mg/kg	0.1	<0.1
	Surrogates	TCMX (Surrogate)	%	-	95

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

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

Sample Number		Parameter	Units	LOR	Result
LB350631.001		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
LB350596.001		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
LB350607.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	84
		d8-toluene (Surrogate)	%	-	89
		Bromofluorobenzene (Surrogate)	%	-	94
	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
LB350607.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	84

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

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

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

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

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

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.029	LB350634.022	Mercury	mg/kg	0.05	0.974331617	90.6733651631	36	37 ②
SE284324.010	LB350634.014	Mercury	mg/kg	0.05	0.11	0.19	63	47

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.029	LB350628.020	% Moisture	%w/w	1	23.851851851	823.5867446393	34	1
SE284324.010	LB350628.011	% Moisture	%w/w	1	18.8	18.9	35	0

OC Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.023	LB350596.025		Alpha BHC	mg/kg	0.1	4.081192502	43.1644574204	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	1.679951402	33.0864083561	200	0
			Beta BHC	mg/kg	0.1	5.875007679	84.0976519753	200	0
			Lindane (gamma BHC)	mg/kg	0.1	5.328387483	93.8276866197	200	0
			Delta BHC	mg/kg	0.1	0.000226289	90.0007480473	200	0
			Heptachlor	mg/kg	0.1	6.273590612	70.0001983797	200	0
			Aldrin	mg/kg	0.1	0.002988294	40.0027948353	200	0
			Heptachlor epoxide	mg/kg	0.1	2.729677609	66.7788328175	200	0
			Gamma Chlordane	mg/kg	0.1	3.399749454	33.2341933961	200	0
			Alpha Chlordane	mg/kg	0.1	3.002507827	73.6234998444	200	0
			Chlordane (alpha + gamma chlordane)	mg/kg	0.1	6.402257282	16.8576932405	200	0
			Alpha Endosulfan	mg/kg	0.1	0.000261163	40.0030294521	200	0
			p,p'-DDE	mg/kg	0.1	0.002883631	20.0065749537	200	0
			Dieldrin	mg/kg	0.1	0.000692492	20.0016262377	200	0
			Endrin	mg/kg	0.1	0.000626410	50.0023141024	200	0
			Beta Endosulfan	mg/kg	0.1	0.005064554	10.0052356414	200	0
			p,p'-DDD	mg/kg	0.1	0.000368683	00.0007574615	200	0
			Endrin aldehyde	mg/kg	0.1	6.007397083	50.0003681408	200	0
			Endosulfan sulphate	mg/kg	0.1	0	7.5514790290	200	0
			p,p'-DDT	mg/kg	0.1	0.000470255	00.0011911052	200	0
			Endrin ketone	mg/kg	0.1	0.000124321	60.0004288392	200	0
			Methoxychlor	mg/kg	0.1	0.001392143	80.0046140151	200	0
			Mirex	mg/kg	0.1	0.000288237	70.0012278902	200	0
			Total OC Pesticides	mg/kg	0.1	0	0	200	0
			Total OC VIC EPA IWRG621	mg/kg	0.1	0	0	200	0
			Total Other OCP VIC EPA IWRG621	mg/kg	0.1	0	0	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.476690153	70.4739978919	30	1
SE284324.010	LB350596.014		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
			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
			Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	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	0.1	<0.1	<0.1	200	0
			Endrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	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
			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

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

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

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

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

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

OC Pesticides in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284324.010	LB350596.014		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total OC Pesticides	mg/kg	0.1	<0.1	<0.1	200	0
			Total OC VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	200	0
			Total Other OCP VIC EPA IWRG621	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.50	0.49	30	2

OP Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.023	LB350596.025		Azinphos-methyl (Guthion)	mg/kg	0.2	0.000219228	0.0001138437	200	0
			Bromophos Ethyl	mg/kg	0.2	4.91900713172	2.9441374846	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	0.001019459	0.0014275494	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	5.80673157062	2.0172001086	200	0
			Dichlorvos	mg/kg	0.5	0.001087065	0.0001142529	200	0
			Dimethoate	mg/kg	0.5	7.418368112	3.0001917405	200	0
			Ethion	mg/kg	0.2	0.002989253	0.0038850212	200	0
			Fenitrothion	mg/kg	0.2	1.7704007628	0	200	0
			Malathion	mg/kg	0.2	6.0960720388	0	200	0
			Methidathion	mg/kg	0.5	0.000725813	90.0009535336	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	0.000315014	32.7520300027	200	0
			Total OP Pesticides*	mg/kg	1.7	0	0	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.479324338	90.4762164336	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.496839135	80.4785098512	30	4
SE284324.010	LB350596.014		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.023	LB350596.025		Naphthalene	mg/kg	0.1	0.000885946	10.0022654761	200	0
			2-methylnaphthalene	mg/kg	0.1	0.000496084	20.0011997055	200	0
			1-methylnaphthalene	mg/kg	0.1	0.000564863	40.0017323527	200	0
			Acenaphthylene	mg/kg	0.1	0.002419898	80.0060468619	200	0
			Acenaphthene	mg/kg	0.1	0.000490256	30.0009487265	200	0
			Fluorene	mg/kg	0.1	0.000669770	90.0015585205	200	0
			Phenanthrene	mg/kg	0.1	0.018431575	10.0447780695	200	0
			Anthracene	mg/kg	0.1	0.002988735	90.0071321876	200	0
			Fluoranthene	mg/kg	0.1	0.035718938	50.1146833069	163	14
			Pyrene	mg/kg	0.1	0.037445010	60.1172598473	159	16
			Benzo(a)anthracene	mg/kg	0.1	0.017596784	00.0485752425	200	0
			Chrysene	mg/kg	0.1	0.027630378	20.0843707951	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.034738159	70.0390027990	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	0.023450063	10.0470922685	200	0
			Benzo(a)pyrene	mg/kg	0.1	0.016906002	80.0662953338	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.013605366	80.0384278481	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	0.001975813	70.0106027946	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0.013206491	50.0363947889	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	0	0	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	0.121	0.121	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	0.242	0.242	134	0
			Total PAH (18)	mg/kg	0.8	0	0.2319431542	116	79
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.450117888	00.4539394269	30	1

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

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

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.023	LB350596.025	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.479324338	90.476216433	6 30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.496839135	80.478509851	2 30	4
SE284324.010	LB350596.014		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	0.3	0.2	69	28
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	0.9	0.6	44	43
			Pyrene	mg/kg	0.1	0.9	0.6	43	47 ②
			Benzo(a)anthracene	mg/kg	0.1	0.4	0.2	62	57
			Chrysene	mg/kg	0.1	0.5	0.3	56	48
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.3	0.2	66	45
			Benzo(k)fluoranthene	mg/kg	0.1	0.3	0.2	66	36
			Benzo(a)pyrene	mg/kg	0.1	0.5	0.4	52	42
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.3	0.2	73	38
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0.3	0.2	72	36
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	0.7	0.4	45	42
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	0.7	0.5	42	39
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	0.8	0.5	55	36
			Total PAH (18)	mg/kg	0.8	4.7	3.1	33	43 ②
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1

PCBs in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.023	LB350596.025		Arochlor 1016	mg/kg	0.1	0	0	200	0
			Arochlor 1221	mg/kg	0.1	0	0	200	0
			Arochlor 1232	mg/kg	0.1	0	0	200	0
			Arochlor 1242	mg/kg	0.1	0	0	200	0
			Arochlor 1248	mg/kg	0.1	0	0	200	0
			Arochlor 1254	mg/kg	0.1	0	0	200	0
			Arochlor 1260	mg/kg	0.1	0	0	200	0
			Total PCBs	mg/kg	0.1	0	0	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0.477	0.474	30	1
SE284324.010	LB350596.014		Arochlor 1016	mg/kg	0.1	<0.1	<0.1	200	0
			Arochlor 1221	mg/kg	0.1	<0.1	<0.1	200	0
			Arochlor 1232	mg/kg	0.1	<0.1	<0.1	200	0
			Arochlor 1242	mg/kg	0.1	<0.1	<0.1	200	0
			Arochlor 1248	mg/kg	0.1	<0.1	<0.1	200	0
			Arochlor 1254	mg/kg	0.1	<0.1	<0.1	200	0
			Arochlor 1260	mg/kg	0.1	<0.1	<0.1	200	0
			Total PCBs	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0.50	0.49	30	2

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

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.029	LB350631.022		Arsenic, As	mg/kg	1	8.630522105	15.923359212	5 44	37
			Cadmium, Cd	mg/kg	0.3	0.491328995	0 0.3283	103	40
			Chromium, Cr	mg/kg	0.5	17.85765799	005.386154330	7 33	15
			Copper, Cu	mg/kg	0.5	78.77113242	9855.988749606	2 31	9
			Nickel, Ni	mg/kg	0.5	6.520015010	75.6488280314	38	14
			Lead, Pb	mg/kg	1	60.28906145	110.075472440	30	15
			Zinc, Zn	mg/kg	2	84.74230175	796.167960629	31	26
SE284324.010	LB350631.014		Arsenic, As	mg/kg	1	1	1	102	11
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	4.2	4.3	42	1
			Copper, Cu	mg/kg	0.5	9.7	10	35	3

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

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

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

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

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

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

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284324.010	LB350631.014	Nickel, Ni	mg/kg	0.5	2.4	3.0	48	22
		Lead, Pb	mg/kg	1	38	48	32	24
		Zinc, Zn	mg/kg	2	67	77	33	14

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.023	LB350596.025		TRH C10-C14	mg/kg	20	1.7865822039	0	200	0
			TRH C15-C28	mg/kg	45	2.5299047267	0	200	0
			TRH C29-C36	mg/kg	45	0.7172410307	0	200	0
			TRH C37-C40	mg/kg	100	0.0860689236	0	200	0
			TRH C10-C36 Total	mg/kg	110	0	0	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	0	0	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	2.3108201937	0	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	0	0	200	0
			TRH >C16-C34 (F3)	mg/kg	90	2.5846758600	0	200	0
			TRH >C34-C40 (F4)	mg/kg	120	0.1851785934	0	200	0
SE284324.010	LB350596.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.029	LB350607.024	Monocyclic	Benzene	mg/kg	0.1	0.0025205900	0.0021907965	200	0
		Aromatic	Toluene	mg/kg	0.1	0.0113918462	0.0095441877	200	0
			Ethylbenzene	mg/kg	0.1	0.0034055227	0.0016804802	200	0
			m/p-xylene	mg/kg	0.2	0.0094823641	0.0057410133	200	0
			o-xylene	mg/kg	0.1	0.0041017886	0.0024189547	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	0.0675944801	0.0225282751	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5266665491	8.0271505205	50	6
			d8-toluene (Surrogate)	mg/kg	-	7.8549267650	8.2581955372	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.8456714032	8.1468137745	50	4
		Totals	Total BTEX*	mg/kg	0.6	0	0	200	0
			Total Xylenes*	mg/kg	0.3	0.0135841527	0.0081599680	200	0
SE284324.010	LB350607.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5	7.6	50	1
			d8-toluene (Surrogate)	mg/kg	-	7.7	7.8	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.9	7.9	50	0
		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)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284262.029	LB350607.024		TRH C6-C10	mg/kg	25	1.0824011982	0.1945476892	200	0
			TRH C6-C9	mg/kg	20	0.8359160810	0.1121371238	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5266665491	8.0271505205	50	6
			d8-toluene (Surrogate)	mg/kg	-	7.8549267650	8.2581955372	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.8456714032	8.1468137745	50	4
		VPH F Bands	Benzene (F0)	mg/kg	0.1	0.0025205900	0.0021907965	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	1.0824011982	0.1945476892	200	0
SE284324.010	LB350607.014		TRH C6-C10	mg/kg	25	<25	<25	200	0

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

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

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

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

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

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE284324.010	LB350607.014		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5	7.6	50	1
			d8-toluene (Surrogate)	mg/kg	-	7.7	7.8	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.9	7.9	50	0
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

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 %
LB350634.002		Mercury	mg/kg	0.05	0.21	0.2	80 - 120	107

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB350596.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	99
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	80
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	104
		Dieldrin	mg/kg	0.1	0.2	0.2	60 - 140	124
		Endrin	mg/kg	0.1	0.2	0.2	60 - 140	89
		p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	71
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.46	0.5	40 - 130	93

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB350596.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	2	60 - 140	85
		Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	102
		Dichlorvos	mg/kg	0.5	1.8	2	60 - 140	88
		Ethion	mg/kg	0.2	1.6	2	60 - 140	81
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	92
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	103

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB350596.002		Naphthalene	mg/kg	0.1	4.1	4	60 - 140	103
		Acenaphthylene	mg/kg	0.1	4.2	4	60 - 140	104
		Acenaphthene	mg/kg	0.1	4.4	4	60 - 140	109
		Phenanthrene	mg/kg	0.1	4.9	4	60 - 140	122
		Anthracene	mg/kg	0.1	4.5	4	60 - 140	112
		Fluoranthene	mg/kg	0.1	5.3	4	60 - 140	132
		Pyrene	mg/kg	0.1	5.4	4	60 - 140	134
		Benzo(a)pyrene	mg/kg	0.1	4.5	4	60 - 140	113
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	91
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	92
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	70 - 130	103

PCBs in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB350596.002		Arochlor 1260	mg/kg	0.1	0.4	0.4	60 - 140	101
	Surrogates	TCMX (Surrogate)	mg/kg	-	0.46	0.5	40 - 130	93

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 %
LB350631.002		Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
		Cadmium, Cd	mg/kg	0.3	5.1	4.81	70 - 130	105
		Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	99
		Copper, Cu	mg/kg	0.5	320	290	80 - 120	110
		Nickel, Ni	mg/kg	0.5	190	187	80 - 120	104
		Lead, Pb	mg/kg	1	93	89.9	80 - 120	104
		Zinc, Zn	mg/kg	2	290	273	80 - 120	106

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB350596.002		TRH C10-C14	mg/kg	20	200	200	60 - 140	101
	TRH F Bands	TRH >C10-C16	mg/kg	25	200	200	60 - 140	101

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB350607.002	Monocyclic Aromatic	Benzene	mg/kg	0.1	4.3	5	60 - 140	85
		Toluene	mg/kg	0.1	3.6	5	60 - 140	72
		Ethylbenzene	mg/kg	0.1	3.4	5	60 - 140	67

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 %
LB350607.002	Monocyclic	m/p-xylene	mg/kg	0.2	6.7	10	60 - 140	67
	Aromatic	o-xylene	mg/kg	0.1	3.7	5	60 - 140	75

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB350607.002		TRH C6-C10	mg/kg	25	79	92.5	60 - 140	85
		TRH C6-C9	mg/kg	20	65	80	60 - 140	81
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	55	62.5	60 - 140	89

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

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

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE284324.001	LB350634.004	Mercury	mg/kg	0.05	0.23	<0.05	0.2	93

OC Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE284324.001	LB350596.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	109
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	88
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	114
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Chlordane (alpha + gamma chlordane)	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.1	0.3	<0.1	0.2	127
			Endrin	mg/kg	0.1	0.2	<0.1	0.2	106
			Beta Endosulfan	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	81
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			Total OC Pesticides	mg/kg	0.1	1.3	<0.1	-	-
			Total OC VIC EPA IWRG621	mg/kg	0.1	1.3	<0.1	-	-
			Total Other OCP VIC EPA IWRG621	mg/kg	0.1	0.6	<0.1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.48	0.49	-	95

OP Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE284324.001	LB350596.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	<0.2	2	96
			Diazinon (Dimpylate)	mg/kg	0.5	2.2	<0.5	2	109
			Dichlorvos	mg/kg	0.5	1.9	<0.5	2	94
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.9	<0.2	2	92
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	7.8	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	97
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	106

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE284324.001	LB350596.004	Naphthalene	mg/kg	0.1	4.3	<0.1	4	108
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.2	<0.1	4	105
		Acenaphthene	mg/kg	0.1	4.4	<0.1	4	109
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	5.0	<0.1	4	125
		Anthracene	mg/kg	0.1	4.7	<0.1	4	116
		Fluoranthene	mg/kg	0.1	5.4	0.1	4	130

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE284324.001	LB350596.004		Pyrene	mg/kg	0.1	5.4	0.1	4	132
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.7	<0.1	4	115
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.7	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.7	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.8	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	38	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	93
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	97
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	106

PCBs in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE284324.001	LB350596.004		Arochlor 1016	mg/kg	0.1	<0.1	<0.1	-	-
			Arochlor 1221	mg/kg	0.1	<0.1	<0.1	-	-
			Arochlor 1232	mg/kg	0.1	<0.1	<0.1	-	-
			Arochlor 1242	mg/kg	0.1	<0.1	<0.1	-	-
			Arochlor 1248	mg/kg	0.1	<0.1	<0.1	-	-
			Arochlor 1254	mg/kg	0.1	<0.1	<0.1	-	-
			Arochlor 1260	mg/kg	0.1	0.4	<0.1	0.4	110
			Total PCBs	mg/kg	0.1	0.4	<0.1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0.48	0.49	-	95

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%
SE284324.001	LB350631.004		Arsenic, As	mg/kg	1	51	<1	50	100
			Cadmium, Cd	mg/kg	0.3	45	<0.3	50	90
			Chromium, Cr	mg/kg	0.5	50	2.1	50	95
			Copper, Cu	mg/kg	0.5	58	8.4	50	100
			Nickel, Ni	mg/kg	0.5	55	5.5	50	99
			Lead, Pb	mg/kg	1	89	38	50	101
			Zinc, Zn	mg/kg	2	110	59	50	106

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE284324.001	LB350596.004		TRH C10-C14	mg/kg	20	210	<20	200	105
			TRH C15-C28	mg/kg	45	<45	<45	-	-
			TRH C29-C36	mg/kg	45	<45	<45	-	-
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-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	210	<25	200	105
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	210	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	-	-
			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%
SE284324.001	LB350607.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	4.0	<0.1	5	79
			Toluene	mg/kg	0.1	4.0	<0.1	5	80
			Ethylbenzene	mg/kg	0.1	4.0	<0.1	5	79
			m/p-xylene	mg/kg	0.2	7.6	<0.2	10	76
			o-xylene	mg/kg	0.1	3.9	<0.1	5	79
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	7.8	-	81
			d8-toluene (Surrogate)	mg/kg	-	7.9	8.0	-	79
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.4	8.1	-	74

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

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

VOC's in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE284324.001	LB350607.004	Totals	Total BTEX*	mg/kg	0.6	23	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	12	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE284324.001	LB350607.004		TRH C6-C10	mg/kg	25	72	<25	92.5	77
			TRH C6-C9	mg/kg	20	60	<20	80	75
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	7.8	-	81
			d8-toluene (Surrogate)	mg/kg	-	7.9	8.0	-	79
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.4	8.1	-	74
		VPH F	Benzene (F0)	mg/kg	0.1	4.0	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	48	<25	62.5	77

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

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

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

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

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

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

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

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PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: info@ausset.com.au
WEBSITE: www.Ausset.com.au

CHAIN OF CUSTODY RECORD

ASET JOB NO: ASET127732/130912/1-8

Name/ Company Name: Dr Upsilon Environments

Address: 35-39 Carter Rd, Brookvale, NSW

Contact Ph: 0406 201 436

Contact Name: Jeffrey Yu

Job No: DRYU642J

Project Name: DRYU642J

Purchase Order:

Email Results to: admin@DrUpsilonGroup.com.au

	Sample ID	Date	Type	Container	Sample Location	Asbestos in Material	Asbestos in Soil (+/-)	Asbestos WA/ NEPM 500mL	Asbestos Fibre Count	Asbestos in Water	Asbestos in Dust	Lead Analysis
1	BH01-0.15-0.35	7/6/25	S	1	37 Carter Rd, BH01			1				
2	BH02-0.13-0.5	"	S	1	37 Carter Rd, BH02			1				
3	BH03-0.1-0.4	"	S	1	37 Carter Rd, BH03			1				
4	BH04-0.1-0.3	"	S	1	37 Carter Rd, BH04			1				
5	BH05-0.1-0.25	"	S	1	39 Carter Rd, BH05			1				
6	BH06-0.1-0.3	"	S	1	39 Carter Rd, BH06			1				
7	BH07-0.1-0.35	"	S	1	39 Carter Rd, BH07			1				
8	BH08-0.1-0.35	↓	S	1	39 Carter Rd, BH08			1				
9	/											
10	/							8				

ENTERED
12 JUN 2025
BY: SP

Relinquished By: Jeffrey Yu

Date & Time: 7/6/25

Signature: Jeffrey Yu

Received By: SP

Date & Time: 12:00PM

Signature:

Turn around time					Shipment Method
Same Day	24 hrs	48 hrs	3 Days	5 days	
		•	✓		

QA Form 37 - 20 Dec 2023

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref : ASET127732 / 130912 / 1 – 8
Your ref : DRYU642J – 35-39 Carter Road Brookvale NSW
NATA Accreditation No: 14484

16 June 2025

Dr Upsilon Environments Pty Ltd
PO Box 289
Kingsford NSW 2032

Attn: Mr Jeffrey Yu

Accredited for compliance with ISO/IEC 17025 - Testing.

Dear Jeffrey

Asbestos Identification
This report presents the results of eight samples, forwarded by Dr Upsilon Environments Pty Ltd on 12 June 2025, for analysis for asbestos.

1.Introduction: Eight samples forwarded were examined and analysed for the presence of asbestos on 13 June 2025.

2. Methods: The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Australian Standard AS 4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction) (Qualitative Analysis only).**

The report also provides approximate weights and percentages, categories of asbestos forms appearing in the sample, such as **AF** (Asbestos Fines), **FA** (Friable Asbestos) and **ACM** (Asbestos Containing Material), also satisfying the requirements of the NEPM Guidelines.

3. Results : **Sample No. 1. ASET127732 / 130912 / 1. BH01 - 0.15 - 0.35 - 37 Carter Road, BH01.**
Approx dimensions 10.0 cm x 10.0 cm x 6.5 cm
The sample consisted of a mixture of sandy soil, stone, sandstone, a fragment of fibre cement* (ACM), plant matter and organic fibres.
Chrysotile* asbestos (Approximate estimated weight = 0.038 g) detected.
Approximate total dry weight of soil = 726.0 g.
Approximate total weight of ACM = 0.3 g.
Approximate estimated weight of asbestos in soil in the form of ACM = 0.038 g.
Approximate w/w percentage of asbestos in soil in the form of ACM = 0.005 %.

Sample No. 2. ASET127732 / 130912 / 2. BH02 - 0.13 - 0.5 - 37 Carter Road, BH02.
Approx dimensions 10.0 cm x 10.0 cm x 7.4 cm
The sample consisted of a mixture of sandy soil, stone, sandstone, metal, a fragment of fibre cement*[1] (ACM), a fragment of fibre cement*[2] (ACM), plant matter, organic fibres and synthetic mineral fibres.
Chrysotile*[1, *2] asbestos (Approximate estimated weight = 4.51 g), Amosite*[1] asbestos (Approximate estimated weight = 0.64 g) and Crocidolite*[1] asbestos (Approximate estimated weight = 1.32 g) detected.
Approximate total dry weight of soil = 828.0 g.
Approximate total weight of ACM = 35.4 g.
Approximate estimated weight of asbestos in soil in the form of ACM = 6.47 g.
Approximate w/w percentage of asbestos in soil in the form of ACM = 0.78 %.

Sample No. 3. ASET127732 / 130912 / 3. BH03 - 0.1 - 0.4 - 37 Carter Road, BH03.
Approx dimensions 10.0 cm x 10.0 cm x 6.3 cm
Approximate total dry weight of soil = 692.0 g.
The sample consisted of a mixture of sandy soil, stone, sandstone, metal, plant matter and organic fibres.
No asbestos detected.

Sample No. 4. ASET127732 / 130912 / 4. BH04 - 0.1 - 0.3 - 37 Carter Road, BH04.
Approx dimensions 10.0 cm x 10.0 cm x 6.4 cm
Approximate total dry weight of soil = 698.0 g.
The sample consisted of a mixture of sandy soil, stone, sandstone, plant matter and organic fibres.
No asbestos detected.

Sample No. 5. ASET127732 / 130912 / 5. BH05 - 0.1 - 0.25 - 39 Carter Road, BH05.
Approx dimensions 10.0 cm x 10.0 cm x 5.8 cm
Approximate total dry weight of soil = 643.0 g.
The sample consisted of a mixture of sandy soil, stone, sandstone, plant matter, animal matter and organic fibres.
No asbestos detected.

Sample No. 6. ASET127732 / 130912 / 6. BH06 - 0.1 - 0.3 - 39 Carter Road, BH06.
Approx dimensions 10.0 cm x 10.0 cm x 5.9 cm
The sample consisted of a mixture of sandy soil, stone, sandstone, brick-like pieces, glass pieces, a fragment of fibre cement# (AF), plant matter and organic fibres.
Chrysotile# asbestos (Approximate estimated weight = 0.013 g), Amosite# asbestos (Approximate estimated weight = 0.003 g) and Crocidolite# asbestos (Approximate estimated weight = 0.006 g) detected.
Approximate total dry weight of soil = 657.0 g.
Approximate estimated weight of asbestos in soil in the form of AF = 0.022 g.
Approximate w/w percentage of asbestos in soil in the form of AF = 0.003 %.

Ω Sample No. 7. ASET127732 / 130912 / 7. BH07 - 0.1 - 0.35 - 39 Carter Road, BH07.
Approx dimensions 10.0 cm x 10.0 cm x 3.5 cm
Approximate total dry weight of soil = 386.0 g.
The sample consisted of a mixture of sandy soil, stone, sandstone, plant matter, animal matter and organic fibres.
No asbestos detected.

Sample No. 8. ASET127732 / 130912 / 8. BH08 - 0.1 - 0.35 - 39 Carter Road, BH08.
Approx dimensions 10.0 cm x 10.0 cm x 6.7 cm
Approximate total dry weight of soil = 745.0 g.
The sample consisted of a mixture of sandy soil, stone, sandstone, brick-like pieces, plant matter and organic fibres.
No asbestos detected.

Reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025 - Testing.

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia Guidelines for the Assessment Remediation and Management of Asbestos contaminated sites in Western Australia and it also satisfies the requirements of the current NEPM Guidelines. NATA Accreditation does not cover the performance of this service.

Disclaimers;

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos, as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported. This weight disclaimer also covers weight / weight percentages if given.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

^ denotes loose fibres of relevant asbestos types detected in soil/dust.
*** denotes asbestos detected in ACM in bonded form.**

 # denotes friable asbestos as soft fibro plaster, fragments of ACM smaller than 7mm which are considered as friable and / or highly weathered ACM that will easily crumble.
λ denotes samples that have been analysed only in accordance to AS 4964 – 2004.
Ω Sample volume criteria of 500mL have not been satisfied.

The results contained in this report relate only to the sample/s submitted for testing. Australian Safer Environment & Technology accepts no responsibility for whether or not the submitted sample/s is/are representative. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964 -2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No asbestos detected" as specified and recommended by A4964-2004. Trace / respirable level asbestos will be reported only when detected and trace analysis have been performed on each sample as required by AS4964-2004. When loose asbestos fibres/ fibre bundles are detected and reported that means they are larger handpicked fibres/ fibre bundles, and they do not represent respirable fibres. Dust/soil samples are always subjected to trace analysis except where the amounts involved are extremely minute and trace analysis is not possible to be carried out. When trace analysis is not performed on dust samples it will be indicated in the report that trace analysis has not been carried out due to the volume of the sample being extremely minute.

Estimation of asbestos weights involves the use of following assumptions;
Volume of each kind of Asbestos present in broken edges have been visually estimated and its been assumed that volumes remain similar throughout the binding matrix and those volumes are only approximate and not exact. Material densities have been assumed to be similar to commonly found similar materials and may not be exact.

All samples indicating "No asbestos detected" are assumed to be less than 0.001% for friable AF and FA portions detected and 0.01 % for ACM detected unless the approximate weight is given.

Dr Upsilon Environments Pty Ltd
ABN: 91 647 732 518
Phone: 0406 201 136
Email: Jeffrey.yu@DrUpsilonGroup.com
PO Box 289, Kingsford, NSW
Web: www.DrUpsilonGroup.com.au

Appendix 5 – Architectural Plan and Survey Plan

ALTERATIONS & ADDITIONS TO EXISTING INDUSTRIAL BUILDING

ISSUE DETAILS - ISSUED FOR DEVELOPMENT APPLICATION

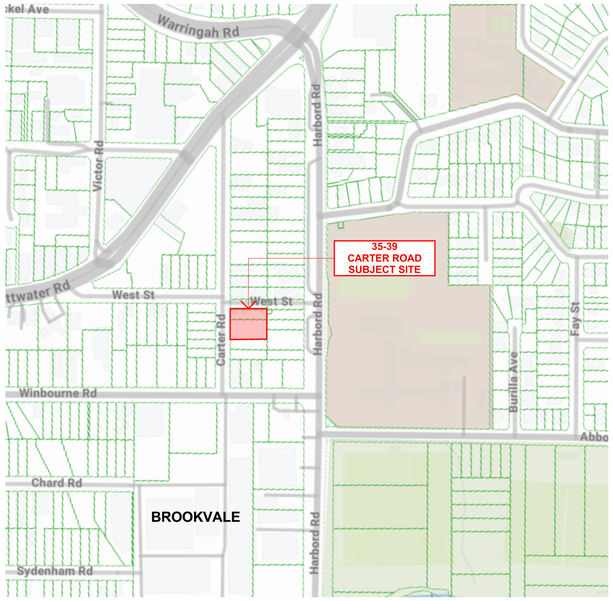
35-39 CARTER ROAD, BROOKVALE NSW 2100

DRAWING SCHEDULE

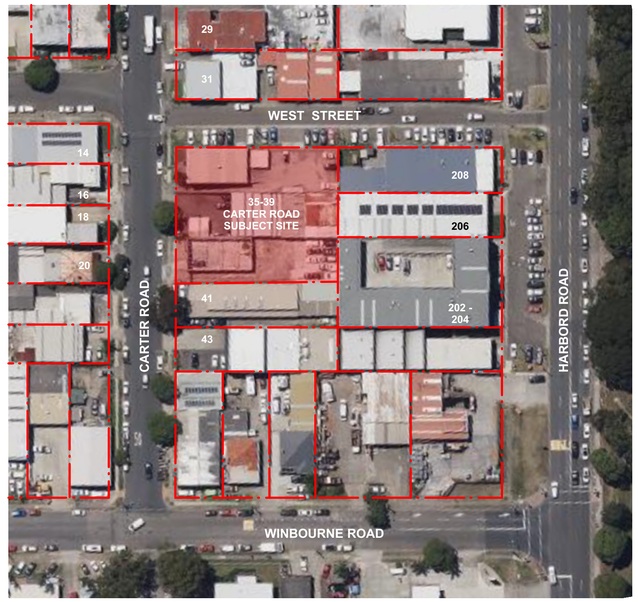
	DRAWING NO	DESCRIPTION	SCALE	REVISION
COVER PAGE				
	000	COVER PAGE	---	A
	001	DEVELOPMENT INFORMATION	1:100, 1:300	A
EXISTING BUILDING PLAN				
	010	EXISTING & DEMOLITION PLAN - GROUND FLOOR	1:100	A
	011	EXISTING & DEMOLITION PLAN - FIRST FLOOR	1:100	A
	012	EXISTING & DEMOLITION PLAN - ROOF PLAN	1:100	A
SITE ANALYSIS				
	030	SITE ANALYSIS PLAN	1:200	A
SHADOW DIAGRAMS				
	070	SHADOW DIAGRAMS	1:500	A
SITE PLAN				
	100	SITE PLAN	1:200	A
	101	CUT AND FILL PLAN	1:200	A
FLOOR PLAN				
	110	LOWER GROUND FLOOR PLAN	1:100	A
	111	GROUND FLOOR AND GROUND MEZZANINE PLAN	1:100	A
	112	PROPOSED FIRST FLOOR PLAN	1:100	A
	113	PROPOSED FIRST MEZZ FLOOR PLAN	1:100	A
	114	PROPOSED ROOF PLAN	1:100	A
EXTERNAL ELEVATIONS				
	200	EXISTING ELEVATIONS	1:100	A
	201	PROPOSED ELEVATIONS (1)	1:100	A
	202	PROPOSED ELEVATIONS (2)	1:100	A
SECTIONS				
	300	SECTIONS (1)	1:100	A
	301	SECTIONS (2)	1:100	A
MISCELLANEOUS DETAILS				
	440	CONCEPT STRATA PLAN	1:200	A
	441	CONCEPT SIGN PLAN	1:100	A
	442	ARTIST'S IMPRESSION	---	A

IMPORTANT NOTES:

1. DRAWINGS ARE FOR DA ONLY. NOTE FOR CONSTRUCTION.
2. BOUNDARY TAKEN FROM PROVIDED SURVEY.
3. ALL DIMENSIONS NEED TO BE CHCKED ON SITE AND NOT ASSUMED CORRECT.
4. ALL ACCESSIBLE TOILETS TO COMPLY WITH AS1428.1-2009
5. ALL EXISTS AND PATHS OF TRAVEL TO EXITS TARE NOT TO BE LESS THAN 1m CLEAR.
6. ALL FACADE ELEMENTS TO BE NON-COMBUSTABLE.
7. ALL STORMWATER TO ENGINEERS DETAILS.
8. ALL STRUCTURAL ELEMENTS TO STRUCTURAL ENGINEERS DETAILS.
9. ALL LANDSCAPING TO LANDSCAPE ARCHITECTS DRAWINGS.
10. ALL TRAFFIC REQUIREMENTS TO TRAFFIC ENGINEERS REPORT.
11. ALL BCA AND ACCESS REQUIREMENTS AS PER BCA AND ACCESS REPORT.
12. ARCHITECTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH ALL DA CONSULTANTS REPORTS AND DOCUMENTATION



1 - LOCATION PLAN NTS



2 - SITE AERIAL NTS

3 - VIEW FROM CORNER OF CARTER ROAD & WEST STREET NTS

REV	DATE	DESCRIPTION
A	18/12/2024	ISSUED FOR DA

LEGEND	
B	BOLLARD
CM	CONVEX MIRROR AS PER TRAFFIC ENGINEER'S REPORT
DB	DISTRIBUTION BOARD
DFH	DUEL FIRE HYDRANT
DP	DOWN PIPE
	DEMOLITION
	EASEMENT
EV.	ELECTRONIC VEHICLE CHARGING STATION
EX.	EXISTING
+XX.XX	EXISTING LEVEL
	FALL TO FLOOR WASTE
FC	FIBRE CEMENT SHEETING
FG	FIXED GLASS
FFL	FINISHED FLOOR LEVEL
FH	FIRE HYDRANT
FHR	FIRE HOSE REEL
FS-X	FIRE STAIR NUMBER
FW	FLOOR WASTE
HWU	HOT WATER UNIT
MRS	METAL ROOF SHEETING
MSB	MAIN SWITCH BOARD
MC	METAL CLADDING
NBN	NATIONAL BROADBAND NETWORK
NGL	NATURAL GROUND LEVEL
SC	STRUCTURAL COLUMN AS PER ENGINEER'S DETAIL
SFL	STRUCTURAL FLOOR LEVEL
SM	SEWER MAN HOLE
SP	SPANDREL PANEL
ST	STORAGE
SWP	STORMWATER PIT
TRS	TRANSLUCENT ROOF SHEETING
VC	PHOTOVOLTAIC CELL SYSTEM
VP	VENT PIPE
WC	WATER CLOSET
W/S	WASTE STORAGE

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W www.figgis.com.au

Nominated Architect:
Jeffrey Chan NSW ARB No. 10967

PROJECT
BROOKVALE INDUSTRIAL

FOR
AVAKIAN HOLDINGS (NSW) PTY LTD

AT
35-39 CARTER STREET BROOKVALE NSW 2100

DRAWING TITLE
COVER PAGE

ARCHITECT
JC

DRAWN
CL

NOT FOR CONSTRUCTION

TRUE NORTH

DRAWING NO.
3857 DA 000

ISSUE
A

SCALE

0m

REV	DATE	DESCRIPTION
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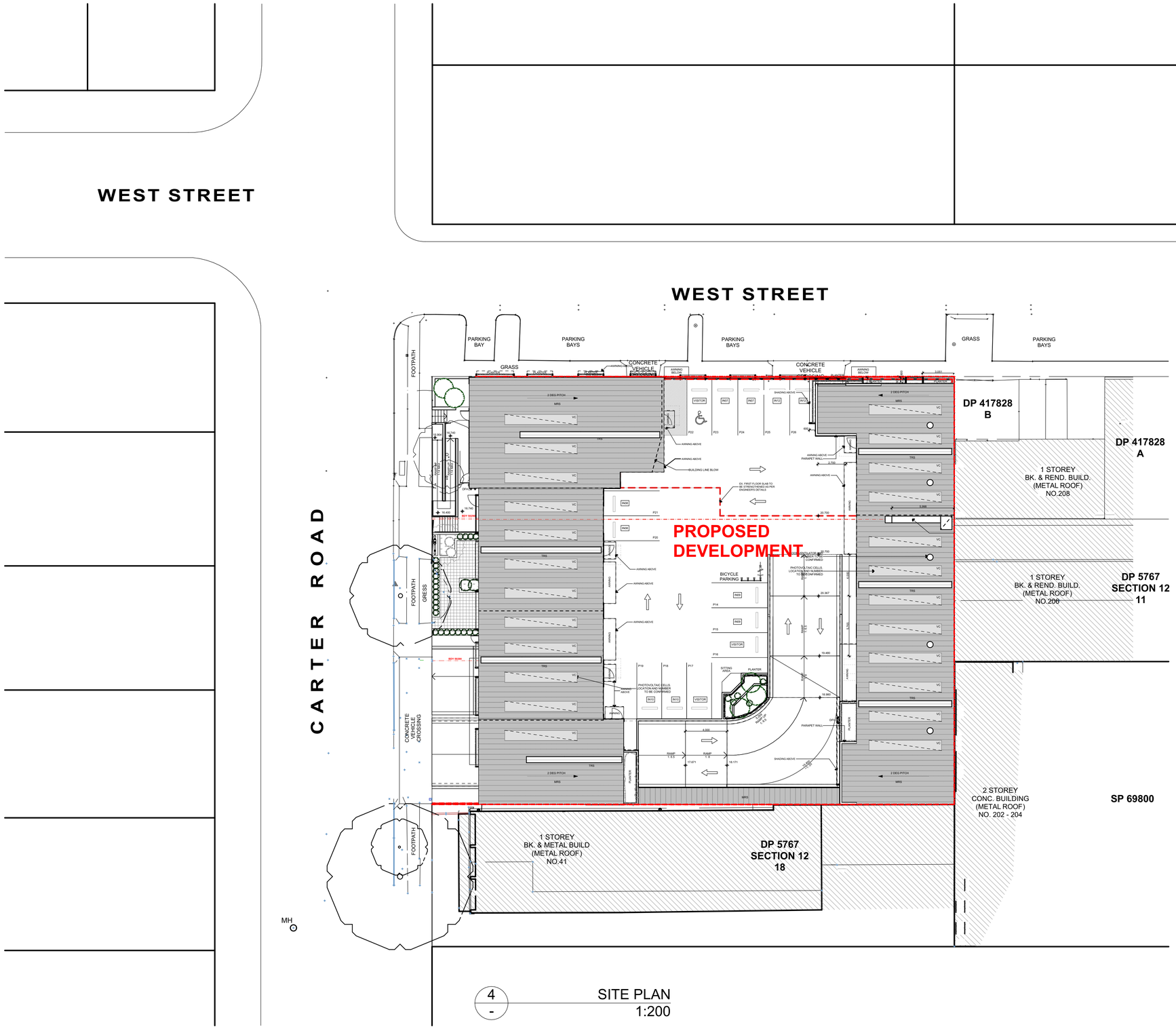

4 - SITE PLAN 1:200

LEGEND

B	BOLLARD
CM	CONVEX MIRROR AS PER TRAFFIC ENGINEER'S REPORT
DB	DISTRIBUTION BOARD
DFH	DUEL FIRE HYDRANT
DP	DOWN PIPE
	DEMOLITION
	EASEMENT
EV.	ELECTRONIC VEHICLE CHARGING STATION
EX.	EXISTING
XX.XX	EXISTING LEVEL
	FALL TO FLOOR WASTE
FC	FIBRE CEMENT SHEETING
FG	FIXED GLASS
FFL	FINISHED FLOOR LEVEL
FH	FIRE HYDRANT
FHR	FIRE HOSE REEL
FS-X	FIRE STAIR NUMBER
FW	FLOOR WASTE
HWU	HOT WATER UNIT
MRS	METAL ROOF SHEETING
MSB	MAIN SWITCH BOARD
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SFL	STRUCTURAL FLOOR LEVEL
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VC	PHOTOVOLTAIC CELL SYSTEM
VP	VENT PIPE
WC	WATER CLOSET
W/S	WASTE STORAGE

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Nominated Architect:
Jeffrey Chan NSW ARB No. 10967

PROJECT
BROOKVALE INDUSTRIAL

FOR
AVAKIAN HOLDINGS (NSW) PTY LTD

AT
35-39 CARTER STREET BROOKVALE NSW 2100

DRAWING TITLE
SITE PLAN

ARCHITECT JC

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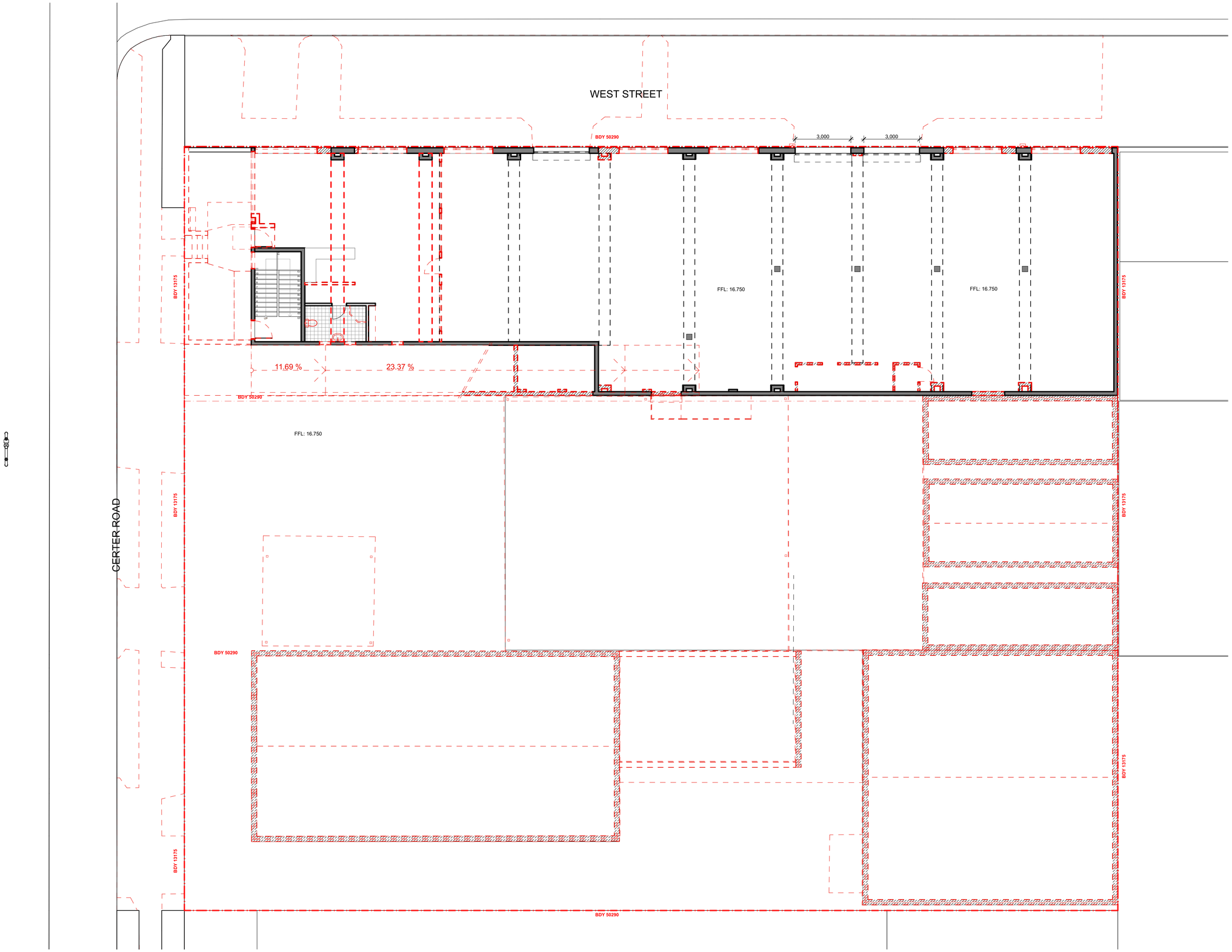
TRUE NORTH

DRAWING NO. 3857 DA 100

ISSUE A

SCALE 0m



1 EXISTING GROUND FLOOR PLAN
1:100

LEGENDS:

ITEMS TO BE DEMOLISHED

REV	DATE	DESCRIPTION
A	18/12/2024	ISSUED FOR DA

LEGEND	
B	BOLLARD
CM	CONVEX MIRROR AS PER TRAFFIC ENGINEER'S REPORT
DB	DISTRIBUTION BOARD
DFH	DUEL FIRE HYDRANT
DP	DOWN PIPE
	DEMOLITION
	EASEMENT
EV.	ELECTRONIC VEHICLE CHARGING STATION
EX.	EXISTING
XX.XX	EXISTING LEVEL
	FALL TO FLOOR WASTE
FC	FIBRE CEMENT SHEETING
FG	FIXED GLASS
FFL	FINISHED FLOOR LEVEL
FH	FIRE HYDRANT
FHR	FIRE HOSE REEL
FS-X	FIRE STAIR NUMBER
FW	FLOOR WASTE
HWU	HOT WATER UNIT
MRS	METAL ROOF SHEETING
MSB	MAIN SWITCH BOARD
MC	METAL CLADDING
NBN	NATIONAL BROADBAND NETWORK
NGL	NATURAL GROUND LEVEL
SC	STRUCTURAL COLUMN AS PER ENGINEER'S DETAIL
SFL	STRUCTURAL FLOOR LEVEL
SM	SEWER MAN HOLE
SP	SPANDREL PANEL
ST	STORAGE
SWP	STORMWATER PIT
TRS	TRANSLUCENT ROOF SHEETING
VC	PHOTOVOLTAIC CELL SYSTEM
VP	VENT PIPE
WC	WATER CLOSET
W/S	WASTE STORAGE

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W www.figgis.com.au

Nominated Architect:
Jeffrey Chan NSW ARB No. 10967

PROJECT
BROOKVALE INDUSTRIAL

FOR
AVAKIAN HOLDINGS (NSW) PTY LTD

AT
35-39 CARTER STREET BROOKVALE NSW 2100

DRAWING TITLE
EXISTING & DEMOLITION PLAN - GROUND FLOOR

ARCHITECT JC
DRAWN CL

NOT FOR CONSTRUCTION

TRUE NORTH

DRAWING NO. 3857 DA 010
ISSUE A

SCALE 0m

REV	DATE	DESCRIPTION
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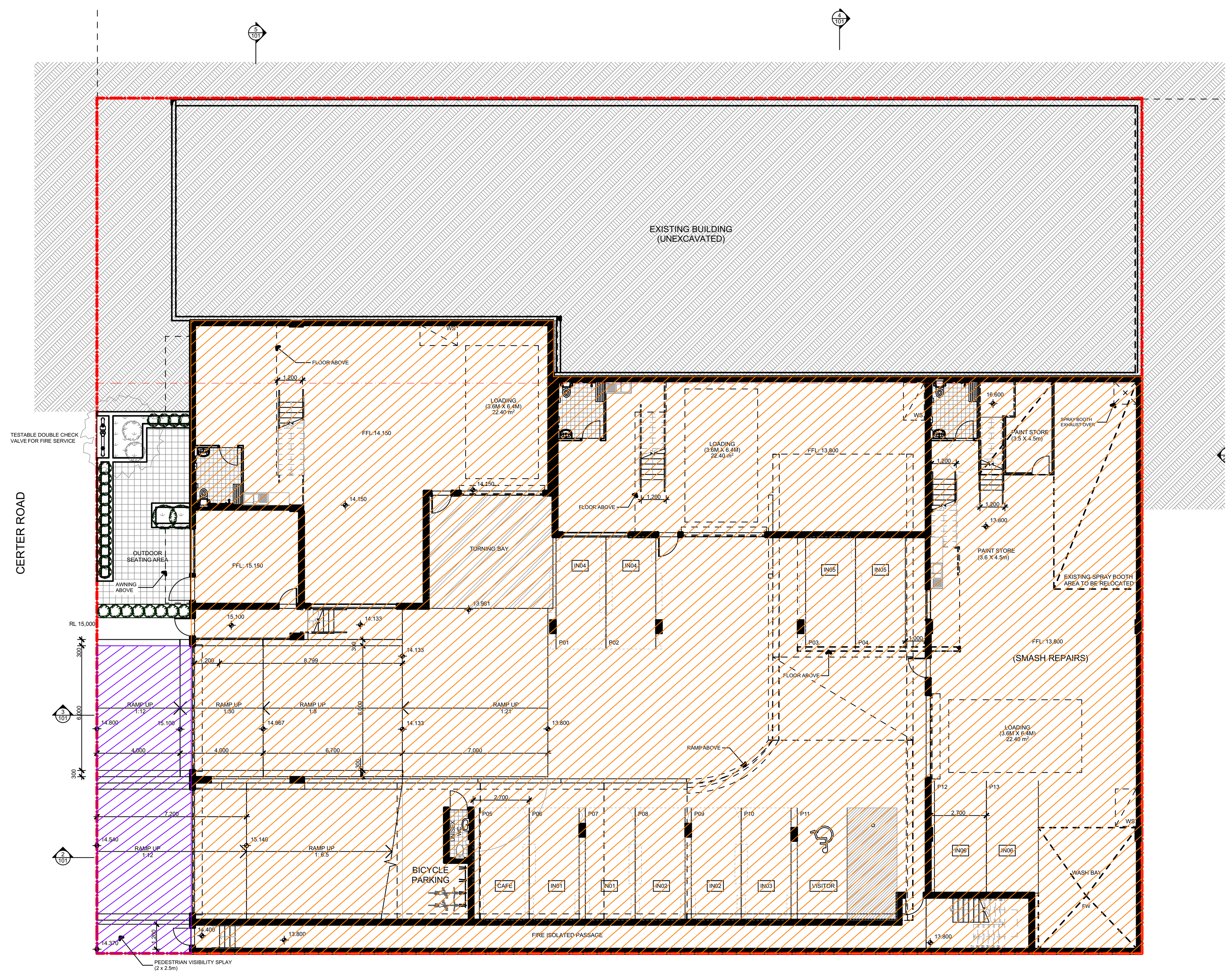
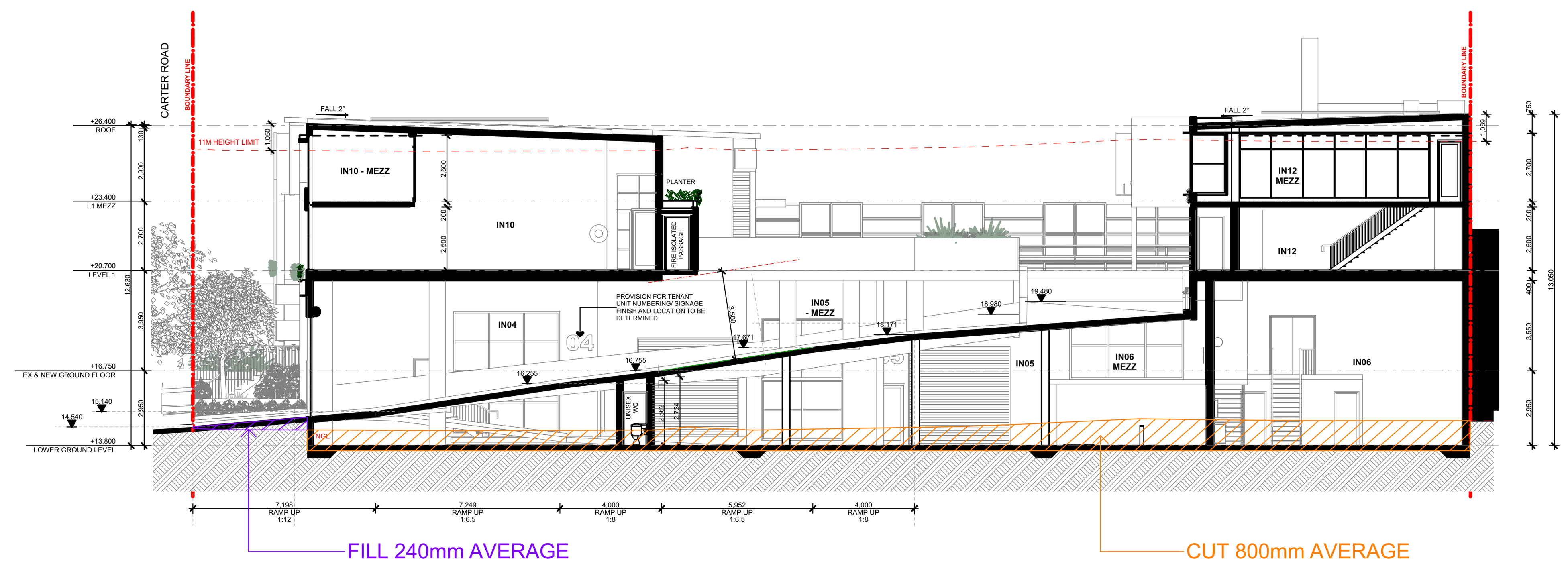
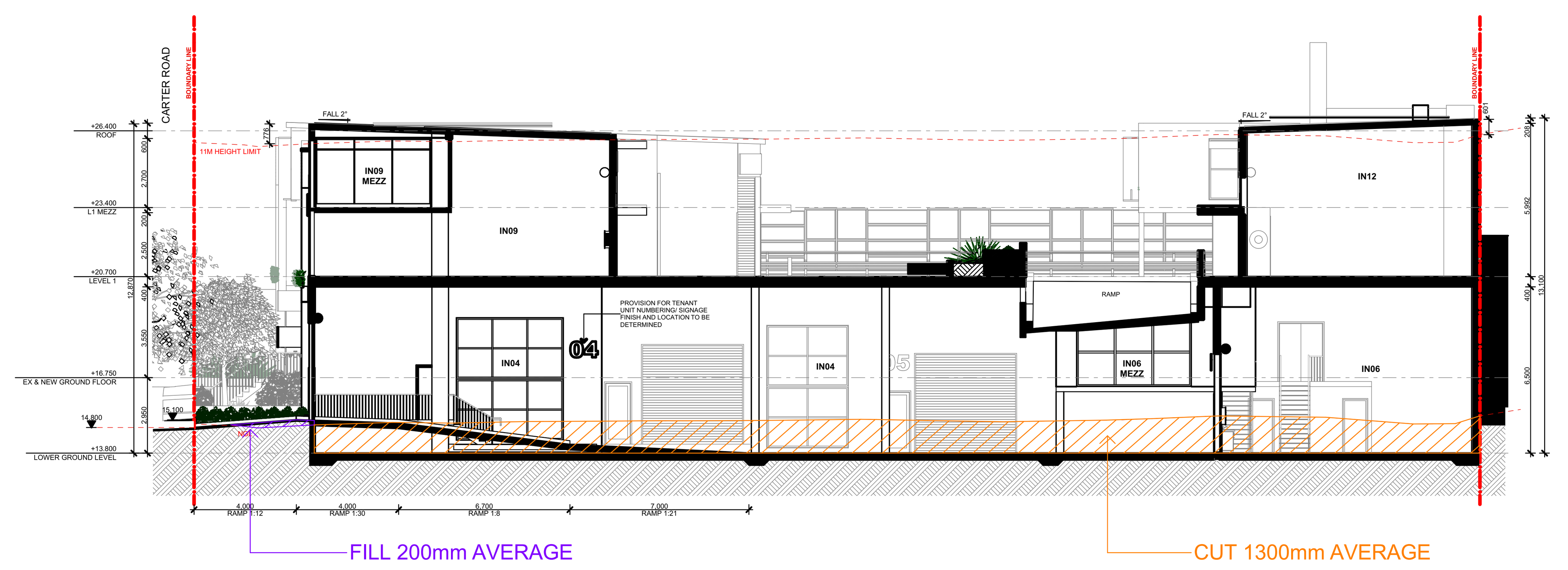


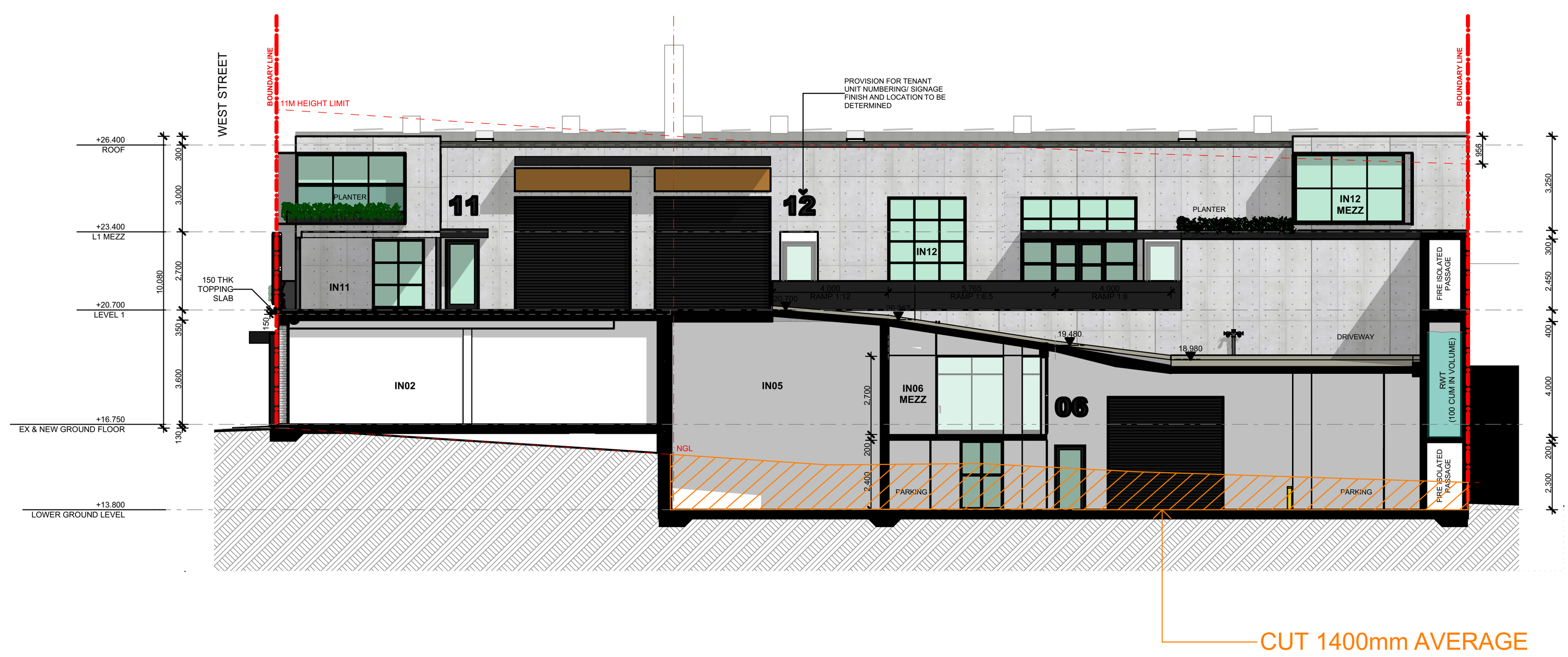
1 - CUT & FILL PLAN 1:200



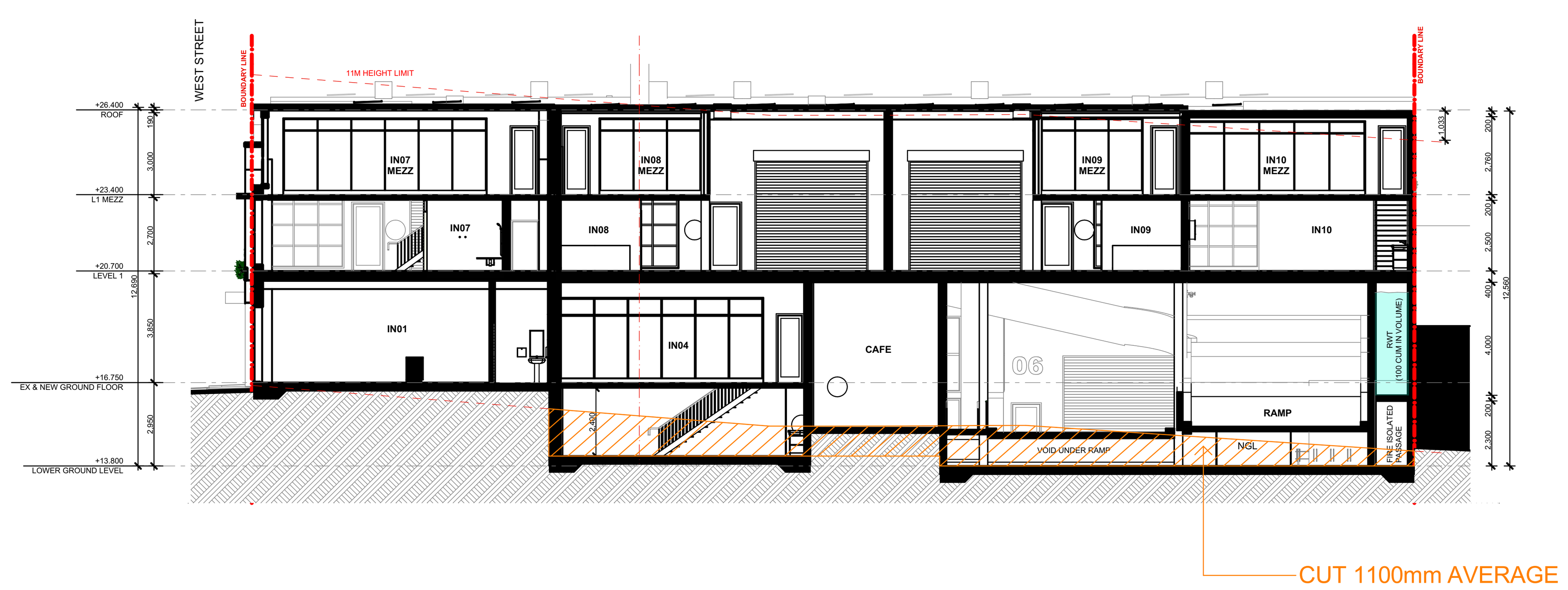
2 - CUT AND FILL PLAN - SECTION A



3 - CUT AND FILL PLAN - SECTION B



4 - CUT AND FILL PLAN - SECTION C



5 - CUT AND FILL PLAN - SECTION D

LEGENDS:

- EXCAVATION CUT
- INFILL

LEGEND

B	BOLLARD
CM	CONVEX MIRROR AS PER TRAFFIC ENGINEER'S REPORT
DB	DISTRIBUTION BOARD
DFH	DUEL FIRE HYDRANT
DP	DOWN PIPE
	DEMOLITION
	EASEMENT
EV.	ELECTRONIC VEHICLE CHARGING STATION
EX.	EXISTING
+XX.XX	EXISTING LEVEL
	FALL TO FLOOR WASTE
FC	FIBRE CEMENT SHEETING
FG	FIXED GLASS
FFL	FINISHED FLOOR LEVEL
FH	FIRE HYDRANT
FHR	FIRE HOSE REEL
FS-X	FIRE STAIR NUMBER
FW	FLOOR WASTE
HWU	HOT WATER UNIT
MRS	METAL ROOF SHEETING
MSB	MAIN SWITCH BOARD
MC	METAL CLADDING
NBN	NATIONAL BROADBAND NETWORK
NGL	NATURAL GROUND LEVEL
SC	STRUCTURAL COLUMN AS PER ENGINEER'S DETAIL
SFL	STRUCTURAL FLOOR LEVEL
SM	SEWER MAN HOLE
SP	SPANDREL PANEL
ST	STORAGE
SWP	STORMWATER PIT
TRS	TRANSLUCENT ROOF SHEETING
VC	PHOTOVOLTAIC CELL SYSTEM
VP	VENT PIPE
WC	WATER CLOSET
W/S	WASTE STORAGE

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FOR
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DRAWING TITLE
CUT AND FILL PLAN

ARCHITECT: JC
DRAWN: CL

NOT FOR CONSTRUCTION

TRUE NORTH

DRAWING NO.: 3857 DA 101
ISSUE: A

SCALE
0m

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