Liverpool Boys and Girls High School Upgrade Project

NSW Department of Education

Remedial Action Plan

165,444 | 68150 (Rev 0)

14 February 2025

We acknowledge the Traditional Custodians of Country throughout Australia and their connections to land, sea and community.

We pay respect to Elders past and present and in the spirit of reconciliation, we commit to working together for our shared future.

Caring for Country The Journey of JBS&G
Artist: Patrick Caruso, Eastern Arrernte

Table of Contents

List of Tables

Appendices

Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AEC	Areas of Environmental Concern
AHD	Australian Height Datum
AMP	Asbestos Management Plan
AQ	Asbestos Quantification
ASS	Acid Sulfate Soil Risk
bgs	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CEC	Cation Exchange Capacity
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DGI	Data Gap Investigation
DP	Deposited Plan
DQI	Data Quality Indicator
DQO	Data Quality Objective
DSI	Detailed Site Investigation
EIL	Ecological Investigation Level
EMP	Environmental Management Plan
ENM	Excavated Natural Material
EPA	Environment Protection Agency
ESD	Ecologically Sustainable Development
ESL	Ecological Screening Level
FA	Fibrous Asbestos
ha	Hectares
HIL	Health Investigation Level
HSL	Health Screening Level
JBS&G	JBS&G Australia Pty Ltd
LBGHS	Liverpool Boys and Girls High School
LBHS	Liverpool Boys High School
LBP	Lead-Based Paint
LCD	Lead Containing Dust
LGA	Local Government Area
LGHS	Liverpool Girls High School
LOR	Limit of Reporting
LTEMP	Long Term Environmental Management Plan
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NOHSC	National Occupational Health and Safety Commission

OCPs	Organochlorine Pesticides
ODS	Ozone Depleting Substances
OPPs	Organophosphate Pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness and Sensitivity
PASS	Potential Acid Sulfate Soil
PCBs	Polychlorinated Biphenyls
PFAS	Per- and Poly-fluoroalkyl Substances
PID	Photoionisation Detector
POEO Act 1997	Protection of the Environment Operations Act 1997
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance/Quality Control
R&H SEPP	State Environmental Planning Policy (Resilience and Hazards) 2021
RAP	Remedial Action Plan
REF	Review of Environment Factors
REMP	Remediation Environmental Management Plan
RPD	Relative Percent Difference
RRE	Resource Recovery Exemption
RRO	Resource Recovery Order
SCA	Site Contamination Assessment
SINSW	School Infrastructure NSW
SMF	Synthetic Mineral Fibres
SVOCs	Semi-volatile Organic Compounds
TPA	Titratable Peroxide Acidity
TRH	Total Recoverable Hydrocarbon
TSA	Titratable Sulfidic Acidity
UCL	Upper Confidence Limit
VENM	Virgin Excavated Natural Material
WH&S	Work, Health and Safety
WHSP	Work Health and Safety Management Plan

Executive Summary

This Remedial Action Plan (RAP) has been prepared by JBS&G Australia Pty Ltd (JBS&G) on behalf the NSW Department of Education (SINSW, the Applicant) to outline the identified contamination present at the site and the necessary remedial works to be undertaken during the redevelopment of the Liverpool Boys High School and Liverpool Girls High School (LBGHS), at 18 Forbes Street, Liverpool NSW, 217.

This report accompanies a Review of Environment Factors (REF) that seeks approval for redeveloping the LBHS and LGHS into a single co-educational school, including:

[redacted]

- Construction and operation of a six-storey school building, including school hall and gymnasium;
- Associated parking and building services;
- Tree removal;
- Associated landscaping and play spaces;
- Augmentation of service infrastructure; and
- Associated off-site infrastructure works to support the school, including (but not limited to) services, kiss and drop point and pedestrian crossings.

Refer to the REF prepared by Ethos Urban for a full description of works.

The site is located at 18 Forbes Street, Liverpool, within the Liverpool Local Government Area (LGA). The site is legally described as Lot 1 DP1137425 and has a total area of approximately 74,973 m^2.

The site comprises a broadly rectangular portion of land which currently contains the existing Liverpool Boys High School, Liverpool Girls High School, and the Gulyangarri Public School, which commenced operations in January 2024 and is located to the east of the wider site.

The site's western portion contains Liverpool Boys High School and Liverpool Girls High School. Liverpool Girls High School in the site's southwest comprises three, two-storey buildings. Liverpool Boys High School in the site's northwest, comprises approximately four, two-storey buildings, with adjacent at-grade carparking and various sports courts.

With consideration to the specific RAP scope of works, JBS&G was engaged by Meinhardt (the client) on behalf of the NSW Department of Education for the preparation of a RAP at a portion of LBGHS. The portion of the broader site which is subject to this plan and herein referred to as 'the site' comprises an area of approximately 3.3 hectares (ha). The site location and layout are shown on **Figures 1** and **2**, respectively.

This site has been subject to previous environmental investigation, comprising a site contamination assessment (SCA) covering the whole site area (Coffey 2019a[1]) and a concurrent asbestos and hazardous materials pre-demolition survey (Coffey 2019b[2]). Based on an Environmental Peer Review and Strategic Advice

[1] *Site Contamination Assessment, Department of Education (School Infrastructure) NSW Liverpool Boys and Girls High School,* Prepared for Department of Education (School Infrastructure) NSW by Coffey Services Australia Pty Ltd dated 07 November 2019 (Coffey 2019a)

[2] *Asbestos and Hazardous Materials Pre-Demolition Survey, Department of Education (School Infrastructure) NSW*, Prepared for Department of Education (School Infrastructure) NSW by Coffey Services Australia Pty Ltd dated 22 November 2019 (Coffey 2019b)

(JBS&G 2023[3]), a Data Gap Investigation (DGI) (JBS&G 2025[4]) was conducted which further characterised the extent of friable asbestos contamination within the Block A crawl space, identified an isolated area of asbestos impacted fill material behind a central retaining wall, and included an assessment of potential acid sulfate soil (PASS) conditions.

To facilitate the redevelopment of the site, the identified site contamination issues and potential unexpected contamination finds will require remediation/management to enable the site to be suitable for the ongoing secondary educational land use and the proposed redevelopment outlined in **Section 1.2.**

The RAP documented herein has been prepared with reference to relevant guidelines made or endorsed by the NSW Environment Protection Agency (EPA) inclusive of National Environment Protection Council (NEPC) (2013[5]) and the Remediation of land requirements of *State Environmental Planning Policy (Resilience and Hazards) 2021* (R&H SEPP).

it is considered that the proposed actions outlined in this RAP conform to the requirements of the *Contaminated Land Management Guidelines for the NSW Site Auditor Scheme (3rd Edition)* (EPA 2017) because they are: technically feasible; environmentally justifiable; and consistent with relevant laws policies and guidelines endorsed by NSW EPA.

Subject to the successful implementation of the measures described in this RAP and with consideration to the Limitations presented in **Section 12**, it is considered that the site can be made suitable for the intended uses and that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment.

[3] *Environmental Peer Review and Strategic Advice – Liverpool Boys and Girls High School*, Prepared for Department of Education (School Infrastructure) NSW, care of Colliers, by JBS&G Australia Pty Ltd dated 13 December 2023 (JBS&G 2023).
[4] *Data Gap Investigation, Liverpool Boys and Girls High School,* Prepared for School Infrastructure NSW, care of Meinhardt, by JBS&G Australia Pty Ltd dated 31 January 2025 (JBS&G 2025).
[5] *National Environment Protection (Assessment of Site Contamination) Measure 1999*, as amended 2013. National Environment Protection Council (NEPC 2013).

1. Introduction & Objectives

1.1 Introduction and Background

This Remedial Action Plan (RAP) has been prepared by JBS&G Australia Pty Ltd (JBS&G) on behalf the NSW Department of Education (SINSW, the Applicant) to outline the identified contamination present at the site and the necessary remedial works to be undertaken during the redevelopment of the Liverpool Boys High School and Liverpool Girls High School (LBGHS), at 18 Forbes Street, Liverpool NSW, 217.

This report accompanies a Review of Environment Factors (REF) that seeks approval for redeveloping the LBHS and LGHS into a single co-educational school, including:

[redacted]

- Construction and operation of a six-storey school building, including school hall and gymnasium;
- Associated parking and building services;
- Tree removal;
- Associated landscaping and play spaces;
- Augmentation of service infrastructure; and
- Associated off-site infrastructure works to support the school, including (but not limited to) services, kiss and drop point and pedestrian crossings.

Refer to the REF prepared by Ethos Urban for a full description of works.

The site is located at 18 Forbes Street, Liverpool, within the Liverpool Local Government Area (LGA). The site is legally described as Lot 1 DP1137425 and has a total area of approximately 74,973 m^2.

The site comprises a broadly rectangular portion of land which currently contains the existing Liverpool Boys High School, Liverpool Girls High School, and the Gulyangarri Public School, which commenced operations in January 2024 and is located to the east of the wider site.

The site's western portion contains Liverpool Boys High School and Liverpool Girls High School. Liverpool Girls High School in the site's southwest comprises three, two-storey buildings. Liverpool Boys High School in the site's northwest, comprises approximately four, two-storey buildings, with adjacent at-grade carparking and various sports courts.

With consideration to the specific RAP scope of works, JBS&G was engaged by Meinhardt (the client) on behalf of the NSW Department of Education for the preparation of a RAP at a portion of LBGHS. The portion of the broader site which is subject to this plan and herein referred to as 'the site' comprises an area of approximately 3.3 hectares (ha). The site location and layout are shown on **Figures 1** and **2**, respectively.

This site has been subject to previous environmental investigation, comprising a site contamination assessment (SCA) covering the whole site area (Coffey 2019a[6]) and a concurrent asbestos and hazardous materials pre-demolition survey (Coffey 2019b[7]). Based on an Environmental Peer Review and Strategic Advice

[6] *Site Contamination Assessment, Department of Education (School Infrastructure) NSW Liverpool Boys and Girls High School,* Prepared for Department of Education (School Infrastructure) NSW by Coffey Services Australia Pty Ltd dated 07 November 2019 (Coffey 2019a)

[7] *Asbestos and Hazardous Materials Pre-Demolition Survey, Department of Education (School Infrastructure) NSW*, Prepared for Department of Education (School Infrastructure) NSW by Coffey Services Australia Pty Ltd dated 22 November 2019 (Coffey 2019b)

(JBS&G 2023[8]), a Data Gap Investigation (DGI) (JBS&G 2025[9]) was conducted which further characterised the extent of friable asbestos contamination within the Block A crawl space, identified an isolated area of asbestos impacted fill material behind a central retaining wall, and included an assessment of potential acid sulfate soil (PASS) conditions.

To facilitate the redevelopment of the site, the identified site contamination issues and potential unexpected contamination finds will require remediation/management to enable the site to be suitable for the ongoing secondary educational land use and the proposed redevelopment outlined in **Section 1.2.**

The RAP documented herein has been prepared with reference to relevant guidelines made or endorsed by the NSW Environment Protection Agency (EPA) inclusive of National Environment Protection Council (NEPC) (2013[10]) and the Remediation of land requirements of *State Environmental Planning Policy (Resilience and Hazards) 2021* (R&H SEPP).

1.2 Proposed Works and Redevelopment Plans

Based on communication with the client and proposed redevelopment plans shown in Appendix A the following works are anticipated:

- Demolition of existing [redacted] trees and pedestrian pathways;
- Alteration and augmentation of services including:
  - Water, sewer, and fire services;
  - Electrical services;
  - Telecommunications infrastructure;
  - Stormwater services;
  - On-site detention;
- Remediation of impacts within the REF boundary identified in JBS&G (2025);
- Bulk earthworks predominantly associated with site levels where new buildings are proposed; and
- Construction of a new interconnected multi-storey infrastructure in the northwest, a covered outdoor learning space, hall and library in the northeast, open recreational spaces including a games field extending from the centre to the south of site and on-grade car parking along the western boundary for ongoing use as a secondary school.

1.3 Objectives

The objectives of this RAP are to:

- Define the conceptual site model (CSM) for the site and intended use, including identification of potential areas of contaminant exposure with consideration to the most conservative land use applicable to the site, being ongoing secondary educational land use (Recreational C), which includes developed open space such as parks, playgrounds, playing fields (e.g., ovals), secondary schools and footpaths (NEPC 2013);

[8] *Environmental Peer Review and Strategic Advice – Liverpool Boys and Girls High School*, Prepared for Department of Education (School Infrastructure) NSW, care of Colliers, by JBS&G Australia Pty Ltd dated 13 December 2023 (JBS&G 2023).
[9] *Data Gap Investigation, Liverpool Boys and Girls High School,* Prepared for School Infrastructure NSW, care of Meinhardt, by JBS&G Australia Pty Ltd dated 31 January 2025 (JBS&G 2025).
[10] *National Environment Protection (Assessment of Site Contamination) Measure 1999*, as amended 2013. National Environment Protection Council (NEPC 2013).

- Define the extent of additional characterisation/validation activities required to determine the suitability of site soils for potential beneficial reuse at the site;
- Determine the extent of remedial works required to make the site suitable for the proposed redevelopment;
- Establish a framework and methodologies to validate the remediation/management of site contamination identified as posing a potential risk, including protocols for addressing unexpected contamination finds including asbestos as may be encountered; and
- Include provision for management of environmental and safety risks during the implementation of the remedial works, and guidance for the any requirements of ongoing management of impacted materials retained on the site.

1.4 Statement of Significance

Based on the identification of potential issues, and an assessment of the nature and extent of the impacts of the proposed development, it is determined that:

- The extent and nature of potential impacts are low, and will not have significant adverse effects on the locality, community and the environment; and
- Potential impacts can be appropriately mitigated or managed to ensure that there is minimal effect on the locality, community.

1.5 REF Deliverables Requiring Reporting

This RAP report accompanies a broader REF that seeks approval for the proposed redevelopment of LBGHS and addresses the following REF deliverables outlined below in **Table 1.1.**

Table 1.1: REF Deliverable Requirements

Requirement	Y	N	N/A	Comments
Contamination				
Have either of the following been prepared to inform the REF: • a Preliminary Site Investigation (PSI) and/or Detailed Site Investigation (DSI) that conclude that there is a low risk of contamination and that the site is suitable for the use of the site as a school; or • a PSI and/or DSI and a RAP?	☒	☐	☐	RAP prepared, following the findings of the SCA and DGI.
Does the PSI, DSI and RAP address all the potential sources of contamination mentioned in the various report?	☒	☐	☐	See **Section 3** and **Section 4.**
If the DSI or RAP identifies that limited further testing is required, has this been incorporated as a mitigation measure in the REF?	☐	☐	☒	No further testing required to address data gaps.
If remediation is required, does the REF determine if the remediation is Category 1 or 2 having regarded to the Resilience and Hazards SEPP?	☒	☐	☐	See **Section 10**.
Does the REF include an interim statement from a Site Auditor confirming that the RAP is appropriate?	☐	☐	☒	
If no interim statement, does the RAP set out actions to remediate all potential sources of contamination?	☒	☐	☐	See **Section 5, Section 6, Section 7** and **Section 8**.

Does the REF summarise investigations undertaken and conclude that contamination risk has been appropriately addressed in accordance with the Hazards and Resilience SEPP?	☒	☐	☐	See **Section 3** and **Section 4.**
Has the PSI, DSI and/or RAP concluded that the proposal would not be likely to result in significant environmental effects as a result of contamination and/or contamination management?	☒	☐	☐	See **Section 11**.
Does the REF list any mitigation measures identified in the assessment and incorporate them into the design where applicable?	☒	☐	☐	See **Appendix D**.

2. Site Identification and Setting

2.1 Site Identification

The site details are summarised in **Table 2.1**. The location of the site is provided in **Figure 1**.

Table 2.1: Site Identification Details

Lots/DPs	Part of Lot 1 DP 1137425
Site Address	18 Forbes Street, Liverpool, NSW
Local Government Authority	Liverpool City Council
Site Area	Approximately 3.3 hectares
Approximate MGA Coordinates (GDA2020 MGA56) (Site Centre)	E: 308799.90 N: 6245109.97
Site Zoning	Zone SP2 - Infrastructure
Proposed Use	Secondary Educational Land Use (high school)
Historical and Current Use	Secondary Educational Land Use (high school)

2.2 Surrounding Land Use

The current land uses of nearby properties within the surrounding areas are outlined below.

- **North:** Lachlan Street, High density residential housing, and beyond, Hume Motorway and Warwick Farm Station;
- **East:** Gulyangarri Public School, Burnside Drive, T2/T3/T5 suburban railway lines, and commercial/industrial warehouses and Liverpool Water Recycling Plant;
- **South:** Liverpool Girls High School, Liverpool Hospital, Liverpool TAFE, rail corridor, and Georges River;
- **West:** Forbes Street, high density residential Housing and church.

2.3 Natural Site Setting

The environmental setting of the site as outlined in JBS&G (2025) is presented in Table 2.2.

Table 2.2: Summary of Environmental Characteristics

Environmental Aspect	Characteristics
Topography	Review of NSW Topographic Maps available through NSW Spatial Services[11] indicated that the site is sloping from the north-west to the south-east, in the direction of Burnside Drive and the rail corridor. The site lies at elevations between 9 m Australian Height Datum (AHD) in the south-east of the site and 14 m AHD in the north-west. The site is consistent with the general topography of the area which slopes south-east towards the Georges River located approximately 400 m to the south of the site, as indicated in **Figure 1**.
Geology	Based on a review of the Penrith 1:100,000 Soil Landscape Sheet (NSW DP&E 2010a[12]) the assessment area is within the Blacktown Residual soils landscape, which generally comprise of shallow to moderately deep hardsetting mottled texture contrast soils, Red and Brown Podzolic Soils on crests grading to Yellow Podzolic Soils on lower slopes and drainage lines.

[11] *NSW Topographic Maps.* Spatial Services | Department of Customer Service, accessed 27 November 2024.
[12] *Soil Landscape Series Sheet Penrith 1:100,000 sheet*, The Soil Conservation Service of NSW, now Department of Planning and Environment 2010 (NSW DP&E 2010a)

	Based on a review of the Penrith 1:100,000 Geological Sheet (NSW DP&E 2010b[13]), the area of investigation is underlain by Triassic Bringelly Shale, comprised of shale, carbonaceous claystone, claystone, laminate, fine to medium grained sandstone, coal and tuff. Bringelly Shale usually weathers to form moderately to highly reactive clay soils. Geology anticipated to the east of the site is Tertiary clayey quartzose sand, and clay. Previous investigations (Coffey 2019a and JBS&G 2025) reported fill material comprising of clay and clayey sand soils. These materials were noted to extend to depths of up to 0.6 m below ground surface (bgs). Anthropogenic inclusions were noted within this material, comprising of ash. Natural material was identified underlying fill materials comprising clay and clayey sands.
Acid Sulfate Soils	The site is reported to lie within an area of no known occurrence of Acid Sulfate Soil Risk (ASS) according to *1:25,000 Acid Sulfate Soils Risk Mapping*, 2nd ed., Department of Land and Water Conservation, Sydney (DLWC 1998). This is consistent with the site's location and geological setting. Based on the ASS Risk Map classification, no further consideration for management of acid sulfate soil is required. During the DGI (JBS&G 2025), no ASS were identified as part of soil sample analysis.
Hydrology	The nearest surface water receptor is the Georges River, located approximately 400 m south of the site. There is the rail corridor with elevated rail lines and are several roads with urban drainage systems between the site and the river. The site is comprised of a south-eastern sloping landscape. As the surface of the site is a combination of sealed and unsealed surfaces, rainfall within the site is expected to be collected by stormwater drainage systems in most sealed areas, which would otherwise flow downgradient of the site and infiltrate into the ground surface.
Hydrogeology	Groundwater is anticipated to be intermittently present as perched water at/near the residual clay soil and shale bedrock interface, with deeper groundwater in permeable zones in shale bedrock. Seepage groundwater flow is anticipated to be to follow local topography to the south/south-east, towards the Georges River. The presence of perched seepage groundwater will be largely influenced by local rainfall. No groundwater inflows were observed during advancement of sample locations as part of historic investigations (Coffey 2019a and JBS&G 2025)

2.4 Summary of Site History

A detailed site history is documented in the SCA (Coffey 2019a), as summarised in **Section 3**. A summary is provided below, including information from aerial photographs up to 2024.

The site appeared to be a cleared parcel of land between the 1930s and 1950s with three residential structures positioned along the eastern and western boundaries. Construction of the school infrastructure commenced in the early 1950s and continued through to the mid-1960s, where these buildings remain in-use to present day. The site remained relatively unchanged up to 2024 with minor additions of smaller buildings and recreational spaces to accommodate for the growing capacity of the school over the years.

There was no evidence of contaminated land notices/records pertaining to the site, which was not listed on the EPA's public contaminated land register.

[13] *Geological Series Sheet 9030 Penrith 1:100,000 sheet*, NSW Department of Minerals and Energy Sydney, now Department of Planning and Environment 2010 (NSW DP&E 2010b)

3. Previous Investigations

The following reports were reviewed and considered as part of this DGI report:

- *Site Contamination Assessment, Department of Education (School Infrastructure)* NSW Liverpool Boys and Girls High School, Prepared for Department of Education (School Infrastructure) NSW by Coffey Services Australia Pty Ltd dated 07 November 2019 (Coffey 2019a);
- *Asbestos and Hazardous Materials Pre-Demolition Survey, Department of Education (School Infrastructure) NSW*, Prepared for Department of Education (School Infrastructure) NSW by Coffey Services Australia Pty Ltd dated 22 November 2019 (Coffey 2019b);
- *Environmental Peer Review and Strategic Advice – Liverpool Boys and Girls High School*, Prepared for Department of Education (School Infrastructure) NSW, care of Colliers, by JBS&G Australia Pty Ltd dated 13 December 2023 (JBS&G 2023); and
- *Data Gap Investigation, Liverpool Boys and Girls High School,* Prepared for School Infrastructure NSW, care of Meinhardt, by JBS&G Australia Pty Ltd dated 31 January 2025 (JBS&G 2025).

3.1 Site Contamination Assessment

SINSW engaged Coffey to undertake a SCA for the site as part of the wider Liverpool Education Precinct Development requiring an assessment for potential site contamination risks for the proposed development of Liverpool Primary School. Given the proposed land use for primary education, the investigation adopted assessment criteria associated with the residential with garden/accessible soils and primary schools land use scenario (Residential A) under NEPC (2013). JBS&G notes the current development only includes secondary (high) school facilities, which are treated under NEPC (2013) within the less sensitive Recreational C land use scenario.

Desktop review of regulatory records, and historical maps and imagery have identified contaminants of potential concern (COPC) and areas requiring investigation to be areas of fill, impacts from historical use of pesticides or herbicides, and potential asbestos or lead contamination as a result of poor demolition practices and weathering of building materials.

An intrusive site investigation was conducted with combination of a systematic grid and targeted sample location approach, where 29 sample locations were advanced across the site as test pits (11), boreholes (10), surface grab samples (5) and hand augers (3). Coffey (2019a) sample locations within the current site boundary are shown on **Figure 3**.

From the samples submitted for laboratory analysis, results of the soil sampling were assessed against relevant NEPC (2013) criteria and noted the following:

- All sample results reported concentrations of benzene, toluene, ethylbenzene, and xylene (BTEX), total recoverable hydrocarbons (TRH), semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs) and organophosphate pesticides (OPPs) below the laboratory limit of reporting (LOR).
- Concentrations of heavy metals were reported at most locations below the respective assessment criteria, with the exception of:
    - Copper (A08570) and zinc (A08509) exceeding ecological investigation levels (EILs) for urban residential and public open space for aged soils; and
    - Arsenic (TP07_0.1-0.2) exceeding health investigation levels (HILs) for residential soils.
- Asbestos was reported at sample location A08750 below the detection limit of 0.01 %w/w.

Based on these results, Coffey concluded the following:

- Asbestos reported in sample A08570 is considered friable asbestos in accordance with NEPC (2013) guidelines. The risks associated are currently reduced for students, considering access to the impacted area is restricted by a locked doorway. Maintenance workers with access to the sub-floor area could be exposed to asbestos, if soils were disturbed.
- Localised hotspot of arsenic (TP07_0.1-0.2) is present in shallow soils located on the school oval. The extent of arsenic in soil warrants further investigation and assessment considering the potential risk via ingestion/inhalation and dermal contact exposure.
- Exceedances of copper and zinc are considered to be a result of residual metal wastes from building maintenance/construction. Corroded metal was reported to be within the location of the zinc exceedance. At present these exceedances are not expected to present an ongoing risk to ecology due to its location within the sub floor void beneath the buildings.

It is noted total chromium (III+VI) was reported in two samples (BH25_0.1-0.2 and BH26_0.1-0.2) at levels exceeding the adopted site criteria for hexavalent chromium (VI), however, were not reported as contamination, presumably as hexavalent chromium (VI) was reported below the laboratory limit of reporting (LOR) and the adopted criterion which applies specifically to hexavalent chromium (VI). It is noted that the reported total chromium concentrations do not exceed the chromium VI criterion associated with a secondary educational land use as is relevant to the current proposed ongoing land use.

Regarding the asbestos impacted sample location A08570, this location was noted in the SCA text as being present in the crawl space of Block A within LBHS. However, the sample location was instead shown on Figure 3 of the SCA to be in the footprint of a building within LGHS and another sample location (A08526) within the LBHS Block A footprint. Given the ambiguity of the which sample location was located within the LBHS Block A footprint and the potential for mislabelling of sample location names, the impact was conservatively assumed to be associated with the LBHS and the identified asbestos impacted A08570 assumed to be located within LBHS Block A footprint in the position of A08526 as noted in the SCA. This is consistent with the body text of the SCA and descriptions of this impact. Given this assumption, the copper concentration reported for sample location A08570 exceeding ecological criteria were considered to also be present in the crawl space of Block A of the boy's campus and within the boundary of the current investigation.

Of the sample locations which reported elevated concentrations of contaminants it is noted that only sample location A08570 and BH26 are located within the current site boundary. It is also noted that the chromium concentrations reported in BH26 fall below the relevant assessment criteria where a secondary educational land use is adopted.

Regarding the arsenic concentration exceeding health and ecological criteria at sample location TP07, this location is noted to be external to the current site boundary and below an on-grade hardstand car parking area.

Tabulated analytical results are included in **0**.

Based on the conclusions of the SCA, recommendations were made to pursue further characterisation of the extent of arsenic and asbestos contamination to effectively determine the potential risks associated to site users, and to delineate and determine the level of remediation and/or management required prior to development.

3.2 Asbestos and Hazardous Materials Pre-Demolition Survey

Coffey conducted an asbestos and hazardous materials pre-demolition survey into the presence and likely risks of exposure to hazardous materials within the Liverpool Boys High School site. The hazardous materials survey involved the investigation and identification of Hazardous Materials inclusive of asbestos containing material (ACM). Other hazardous materials included Lead-Based Paint systems (LBP), Lead Containing Dust (LCD),

Synthetic Mineral Fibres (SMF), Polychlorinated Biphenyls in light capacitors and Ozone Depleting Substances (ODS) in accessible areas.

Based on site survey and laboratory analysis results, a register of hazardous materials was produced, in accordance with the requirements of the relevant Codes of Practice and Guidance Notes. Asbestos or other Hazardous Materials remaining in situ will need to be detailed in the site-specific Hazardous Materials Register and Asbestos Management Plan as required by the Work Health and Safety Regulation, 2017.

The following hazardous materials and the form in which they take were identified during the asbestos and hazardous material pre-demolition survey as:

- Asbestos Containing Materials: Gable verge lining, vinyl floor tiles, security door lining, electrical backing board lining, ceiling panels, wall linings, heater unit insulation, waterproofing membrane, window caulking, eaves, awnings, and gaskets;
- Lead Based Paint: Concentrations of lead-based paint ranged from 0.13 %w/w to 0.41 %w/w identified with interior and exterior surfaces of the buildings onsite;
- Lead Containing Dust: Concentrations of lead containing dust ranged from 250 mg/kg to 2,700 mg/kg identified within the interiors of the buildings onsite;
- Synthetic Mineral Fibres: Suspected to be present in hot water units, ceiling battings, ceiling ducts, and roof sarking;
- Ozone Depleting Substances: Various air conditioning units located on the exterior of the buildings and interior ducting of the buildings onsite; and
- Polychlorinated Biphenyls: throughout the school, open, caged and cased light fittings.

3.3 Environmental Peer Review and Strategic Advice

JBS&G was engaged by SINSW, care of Colliers, for the provision of environmental/contamination peer review and strategic advice to facilitate the redevelopment of the site. Advice followed JBS&G's review of the key findings identified in the SCA completed by Coffey (2019a), to assist with future contaminated land investigations and strategic planning for the redevelopment of the LBHS and LGHS.

JBS&G agreed with the following data gaps recommended by Coffey (2019a) within the SCA:

- Further characterisation and systematic sampling to assess the extent of arsenic contamination within surface soils adjacent to sample location TP07. This will determine the level of remediation and/or management required prior to development.
- Further characterisation and systematic sampling of the subfloor soils beneath Block A to be undertaken to further assess the potential risks to site users and contractors from asbestos. This should include sieving of soils to allow for assessment against relevant land-use NEPC (2013) criteria.

Additional data gaps were identified by JBS&G after review of key SCA findings which addresses:

- Additional sampling within the Block A crawl space (LBHS) to further characterise the extent of friable asbestos contamination identified by the SCA;
- Additional intrusive sampling to further characterise surface and subsurface soils across the site (utilising test pits in soft-scaped areas and boreholes in hardscaped areas) to ensure sufficient data coverage for the site and to bring the total number of samples into closer alignment with the NSW EPA (2022) Contaminated land guidelines: Sample design part 1 – application; and
- Assessment of PASS conditions to address data gaps outlined in SCA and JBS&G (2023).

Following these investigations, JBS&G recommended that a RAP be prepared to outline the remediation of the arsenic contamination historically identified and any further contamination that may be identified as part of any future in-ground investigations.

3.4 Data Gap Investigation

JBS&G was engaged by Meinhardt on behalf of SINSW for the completion of a contaminated land DGI at LBGHS to further characterise the extent of friable asbestos contamination within the Block A crawl space, further characterise surface and subsurface soils across the site and include an assessment of PASS conditions.

The data gap was undertaken with consideration to the revised site boundary consistent with the proposed development boundary and the ongoing secondary educational land use.

In total, 24 sample locations were advanced across the redevelopment site area as part of this DGI, including nine (9) test pits and ten (10) boreholes across accessible site areas and five (5) surface soil samples within the sub-floor area of Block A. Sample locations were advanced utilising a combination of a targeted and stratified approach in order to achieve a broad data coverage of the site and target known impacted areas and those areas with higher potential for contamination. It is noted that the northern portion of the Block A subfloor space was unable to be inspected and sampled due to access restrictions.

From the samples submitted for laboratory analysis, results of the soil sampling were assessed against relevant NEPC (2013) criteria and noted the following:

- All individual or 95% upper confidence limit (UCL) heavy metal concentrations were below the adopted human health and ecological assessment criteria;
- All TRH and BTEX concentrations were reported below the adopted human health and ecological assessment criteria, with silica gel clean-up (SGC) confirming one initially-elevated TRH >C16-C34 fraction concentration within sample BH103_0.0-0.1 of 1900 mg/kg had a natural organic rather than petroleum source and the result was <LOR after clean-up;
- All PAH and OCP/OPP concentrations were reported below the adopted human health and ecological assessment criteria;
- ACM was identified in two sample locations, with concentrations of ACM exceeding the health screening levels (HSL) criterion for asbestos within soils at TP105_0.1-0.6 (0.123 %w/w) and exceeding the HSL criterion of 'no visible asbestos within surface soils' at TP107_0.0-0.2. Noting that a singular fragment was identified at TP107, inspection of surrounding area was conducted, and no additional ACM materials were identified. Asbestos fragments were removed from the site for weighing as part of the asbestos quantifications (AQ). Fragments of bonded ACM were also identified throughout subfloor soils below Block A of LBHS; and
- All representative natural soil samples reported Titratable Peroxide Acidity (TPA) below the adopted action criterion for fine soils (based on 1-1000 tonnes disturbed) of 62 mol H^+/t, with the exception of TP108_1.4-1.5 (76 mol H^+/t). However, Titratable Sulfidic Acidity (TSA) was reported below LOR and adopted criterion of 62 mol H^+/t. Peroxide Oxidisable Sulfur (% S_{POS}) at TP108_1.4-1.5 was below the adopted site action criterion for fine soils of 0.1 % S_{POS} (based on 1-1000 tonnes disturbed). While the TPA at TP108 location exceeded action criteria, the lower TSA and lack of oxidisable sulfur indicates the natural soil at TP108 is acidic but not acid sulfate.

Tabulated analytical results are included in **0**.

Based on these results and in contrast with the SCA (Coffey 2019a), JBS&G determined the following:

- Additional characterisation activities conducted as part of the DGI reported achieved appropriate sampling density and spread in order to characterise the site surface and sub-surface soils;

- Characterisation activities conducted as part of the DGI reported COPC concentrations consistent with those identified by previous investigations, and confirmed there was no presence of PASS;
- ACM was reported at concentrations exceeding health criteria at two sample locations (TP105 and TP107). ACM fragments were removed from the sample locations as part of AQ. It is noted that only a single fragment was reported in TP107 and that no other ACM fragments were visible within excavated soils, the test pit excavation walls and base or the surrounding area. Given this, this sample location was not considered to represent contamination requiring remediation as the single asbestos fragment was removed as part of the investigation. ACM present in TP105 was observed within fill located behind the retaining wall and north of Block A. Similar fill material was identified at BH109. Whilst no further ACM fragments were observed at this northern location, given the similarity of fill it is conservatively assumed that asbestos contaminated fill is present behind the retaining wall north of Block A; and
- All individual or 95% UCL chemical COPC concentrations reported as part of this investigation were below the adopted human health and ecological assessment criteria. The copper exceedance historically reported at sample location A08570 has been conservatively assumed to be present in the footprint of Block A within the site and represents an exceedance of the ecological criteria adopted as part of the current investigation. It is noted that these impacted surface soils are the same as those impacted with asbestos already requiring management, and as such will be appropriately managed concurrently.

It was considered that the data gaps identified in the SCA and Peer Review had been adequately addressed and the site characterised, and that the site can be made suitable for secondary educational land use subject to the remediation of identified asbestos and copper contamination guided by a RAP documenting the known extent of contamination and a remedial approach consistent with current relevant legislation and guidelines.

4. Conceptual Site Model (CSM)

Based on the findings of previous investigations, the following CSM has been developed for site.

4.1 Areas of Environmental Concern

Based on the review of the site history and of previous investigations, JBS&G's assessment and understanding of site conditions, potential areas/aspects of environmental concern (AEC) and associated COPCs have been identified and summarised in **Table 4.1**.

Table 4.1: Areas of Environmental Concern and Associated Contaminants of Potential Concern

Areas of Environmental Concern	Contaminants of Potential Concern
Uncontrolled Fill	Heavy Metals, and Asbestos
Poor demolition practices or deterioration of buildings present	Heavy Metals, and Asbestos

4.2 Contaminated Media

Soil contamination identified at the site was assessed with respect to the applicable land use criteria, pursuant to NEPC (2013) – developed open space or recreational areas, which includes secondary education facilities (HIL/HSL C, NEPC 2013).

Borehole and test pit logs (Appendix C) from Coffey (2019a) and JBS&G (2025) identified fill across the site with an average depth of 0.4-0.5m bgs, using data from 43 sample locations. All sample locations terminated into natural soils, which generally comprised orange/brown/grey/red silty/sandy clay with minor inclusions of rootlets and shale gravels.

ACM was identified in two sample locations by JBS&G (2025), with concentrations of ACM exceeding the HSL criterion for asbestos within soils at TP105_0.1-0.6 and exceeding the HSL criterion of 'no visible asbestos within surface soils' at TP107_0.0-0.2. Noting that a singular fragment was identified at TP107, inspection of surrounding area was conducted, and no additional ACM materials were identified. As noted above, asbestos fragments were removed from the site for weighing as part of AQ. Fragments of bonded ACM were also identified throughout subfloor soils below Block A of Liverpool Boys High School in proximity to where friable asbestos was historically reported in representative surface soils samples. Asbestos impacts within soils at TP105 are considered to be the result of uncontrolled filling with fill of unknown origin to construct the raised level associated with the nearby retaining wall.

The asbestos and copper exceedance reported at sample location A08570 by Coffey (2019a) and the asbestos impacts within surface soils in the Block A crawl space reported by JBS&G (2025) are considered to be a result of residual wastes from building maintenance/construction and/or poor demolition practices. The asbestos reported in this sample is considered friable asbestos in accordance with NEPC (2013) guidelines. As noted in **Section 3.1,** these exceedances are not expected to present an ongoing risk to ecology considering its location in a sub-floor area restricted by a locked doorway.

As noted in **Section 3**, no impacts to natural soils were identified during previous investigations. No assessment of groundwater, ground gas or soil vapour was undertaken as part of previous investigations, however, given the limited quantities of fill, the presumed depth to groundwater and the restriction of non-volatile contamination to surface soils, the risk of potential contamination to these media is considered low.

4.3 Potential for Migration, Exposure Pathways and Receptors

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The contaminants identified as part of the site history review, detailed site inspection and previous investigations are in solid form (i.e. asbestos and heavy metals).

These contaminants are noted to be present within covered areas of the site either underlying hardstand areas or below building footprints.

Furthermore, friable asbestos identified in the sub-floor area is restricted by a locked doorway, therefore reducing the potential for these asbestos impacted surface soils to be disturbed. The potential migration of asbestos fibres via dust is considered low given the restricted access of the sub-floor area.

Given the covered nature of the known contaminants the potential for rainwater infiltration is considered low.

In the limited areas where rainfall penetrates the surface soils in periods of extreme rainfall, this movement may result in vertical migration of contaminants through the soil profile to the soil-bedrock interface, this is likely to be intermittent and dependent on rainfall. Low permeability clay soils would limit vertical migration.

No elevated concentrations of COPC were noted within natural underlying soils.

Given the above lines of evidence, the potential for groundwater to pose an unacceptable risk to human and ecological health either on-site or at a downgradient receptor is considered to be low, and as such does not require further assessment.

Where any potential impacts to soil vapour are present it is anticipated that these would migrate along preferential pathways created by subsurface infrastructure within fill material and through cracks present within deeper natural shale materials. No elevated volatile contaminant concentrations were reported in previous investigations.

Sensitive receptors at the site under the current site conditions and in the immediate vicinity are considered to include:

- Future users of non-paved areas who may potentially be exposed to COPC through direct contact with impacted soils and/or inhalation of dusts / fibres associated with impacted soils; and/or
- Excavation / construction / maintenance workers conducting activities at the site, who may potentially be exposed to COPCs through direct contact with impacted soils present within excavations and/or inhalation of dusts / fibres associated with impacted soils including those in Block A subfloor areas; and
- Flora species to be established on the vegetated areas of the site.

5. Remedial Options

5.1 Remediation Objectives

The goal for the remediation and/or management of environmental impact is to:

- Remove unacceptable risks to human populations from contaminated fill materials/soil contamination; and
- Undertake remedial works, and associated site development works (i.e. bulk excavation, waste disposal, etc.) in a manner that best complies with the principles of ecologically sustainable development (ESD).

5.2 Extent of Remediation

Based on the appraisal of site contamination presented in **Section 4.2**, the approximate extent of contamination requiring remediation at the site based on currently available data is presented in Table 5.1. It is noted that the remedial extents will in practice be guided by validation outcomes. Approximate remedial extents are shown on **Figure 6**.

Table 5.1: Extent of Remediation

Location	Report Reference	Lateral Extent (m^2) assumed	Depth of Remediation	Approximate Volume (m^3)	Contaminant	Material	Remedial Strategy
Block A - Crawl Space	Coffey (2019a)/ JBS&G (2025)	1200	0.0-0.1	120	Copper and Asbestos (friable and non-friable)	Fill	See **Section 5.4**.
North-western retaining wall	JBS&G 2025	700	0.0-0.6	420	Asbestos (non-friable)	Fill	See **Section 5.4**.

Due to the presence of multiple contaminants within the fill, the remedial option will need to be applicable to all contamination.

It is noted that with regards to Block A, the eastern most portion of the building footprint is underlain by learning spaces through which the crawl space is accessed to the west of these spaces. The extent of the crawl space as requiring remediation has been identified on **Figure 6**.

5.3 Assessment of Remedial Options

NEPC 2013 lists the following order of preference for soil remediation and management, which is endorsed by EPA:

- On-site treatment of the contamination so that it is either destroyed or the associated risk is reduced to an acceptable level;
- Off-site treatment of excavated soil so that the contamination is either destroyed or the associated risk is reduced to an acceptable level, after which the soil is returned to the site;

  Or, if these are not practicable,
- Consolidation and isolation of the soil on-site by containment within a properly designed barrier; or
- Removal of contaminated soil to an approved site or facility, followed where necessary by replacement with appropriate material; or

- Where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

Remedial options have been assessed for the proposed development as detailed in Table 5.2 following.

Table 5.2: Assessment of Remedial Options

Option of Treatment	Applicability	Assessment
Option 1: Onsite treatment of the soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level.	Asbestos No methodologies are available for the onsite treatment of soils impacted with friable asbestos. Contamination will not be able to be separated to allow for onsite treatment for those impacted surface soils within the Block A crawl space. Asbestos present in non-friable ACM forms can be remediated by screening to remove ACM. However, the extent of ACM content and thus the area and volume of impact, where large, reduces the potential effectiveness of screening processes. In addition, if friable asbestos impacts are identified, picking is not viable, while disturbing friable asbestos impacted material increases the risk of exposure to site workers and migration of fibres within the works area. Copper Metals (copper) are unable to be destroyed. However, there are a number of microencapsulation treatment technologies which can reduce the mobility of the identified inorganic contaminants of concern (e.g. cement stabilisation).	Asbestos Not a suitable option as there is not a viable treatment method available for the treating friable impacted soils for remediation of surface soils within the Block A crawl space. Whilst this option may be considered for the in-situ non-friable asbestos impacted fill material behind the retaining wall, it is not considered suitable given it is labour intensive and requires the space and timeline to allow for treatment of soils to occur. Copper Not a suitable option. Metals (copper) are unable to be destroyed, so this is not an option which is able to be considered. Microencapsulation is not considered necessary given the absence of identified groundwater impacts requiring remediation. Additionally, copper impacts are noted to be co-mingled with friable asbestos, which as stated above, are unable to be treated onsite.
Option 2: Offsite treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to site.	Asbestos No offsite facilities able to treat asbestos impacted soil to enable it to be returned to site for reuse. Copper Metals (copper) are unable to be destroyed. However, there are a number of microencapsulation treatment technologies which can reduce the mobility of the identified inorganic contaminants of concern (e.g. cement stabilisation).	Asbestos Not a suitable option. There is no treatment method or offsite treatment facility available for asbestos impacts. On this basis, off site treatment of impacted fill material is considered not to be a viable option. Copper Not a suitable option. As noted above copper impacted soils are co-mingled with friable asbestos which are unable to be treated.
Option 3: On-site in situ management of the soil by	Asbestos and Copper Fill materials have been found to contain concentrations of asbestos and copper that are able to be readily managed at the site. The impacted soils	Asbestos and Copper **This is the preferred option for the impacted soils.**

physical separation, an ongoing management.	are suitable for retention on the site in areas where human/ecological exposures can be restricted. Containment of asbestos requires long term management and notification on title and planning certificates which can devalue land and impose restrictions on future land use and requires to be legally enforceable. However this approach is noted to align with the ESD objectives of the project, given thea reduced requirement for material movement from the site, lower labour requirements than available treatments and the suitability of the methodology within the project timeframes.	The retention of the materials will reduce the waste generation and resource requirements of the remediation of the site, as consistent with the ESD objectives. The proposed redeveloped site will be subject to areas of buildings, carparks, and pavements which will provide areas for containment and physical separation between users of the redeveloped site and retained fill materials. Additionally, should unexpected finds be identified at the site during remediation/civil works, then this option is the preferred option.
Option 4: Removal of contaminated soil/infrastructure to an approved site or facility, followed where necessary by replacement with clean fill.	<u>Asbestos and Copper</u> There are currently suitably licensed waste facilities in the region capable of accepting the identified contaminants within fill materials.	<u>Asbestos and Copper</u> Not the preferred approach as not consistent with ESD and waste minimisation principles. If isolated unexpected finds are identified, this would be an appropriate approach if on site retention were not feasible due to the nature of contaminants.

5.4 Preferred Remedial Strategy

With consideration to the assessment of the established hierarchies for soil remediation options presented in **Section 5.3** and to the site-specific contaminants and environmental setting, the preferred strategy for remediation of the identified contamination is as follows:

- Isolated contamination by asbestos and heavy metals, and the preferred strategy for remediation is on-site in situ management of the soil by physical separation, and ongoing management (i.e. cap and contain).

This approach allows for asbestos and copper contamination/impacts to be permanently contained below a properly designed physical barrier, subject to ongoing passive management upon completion of the works via implementation of a long-term Environmental Management Plan (LTEMP). This approach is considered the most cost effective, risk adverse and is in keeping with the principles of ESD.

The LTEMP is required to be prepared following completion of the validation works. Once approved, the LTEMP is required to be provided to council for inclusion on the Section 10.7 planning certificate instrument. JBS&G understands the site owner is accepting of the LTEMP upon completion of development works.

It is noted that this remedial approach is likely to be suitable for management of unexpected finds that may be encountered during redevelopment works.

6. Remediation Plan

6.1 Site Establishment

All safety and environmental controls are to be implemented as the first stage of remediation works. These controls will include, but not be limited to:

- Locate and isolate all required utilities in the proximity of the works;
- Assess need for traffic controls;
- Work area security fencing;
- Site signage and contact numbers;
- Sediment fencing (attached to security fencing); and
- Stormwater runoff and sediment controls.

6.2 Remedial Works

The following sections outline the scope of remedial works (relevant to Table 5.1) required to address the identified contamination/impacts at the site.

6.2.1 Impacted Soils 'Cap & Contain'

A 'cap and contain' physical separation strategy is deemed appropriate for the contaminants onsite. Contaminated fill may be retained within a suitable area of the site, i.e. below sufficient capping material, hardstand or engineered slab, restricting dermal and oral contact, as well as limiting the percolation of surface waters through the materials.

The principle of the on-site containment approach is to retain materials in-situ by providing physical separation between contaminated fill/soil materials and receptors (e.g. site users, flora, fauna etc). The physical separation approach prevents direct contact via permanent pavements/minimum soil thickness arrangement (i.e. physical separation), and implementation of a long-term EMP to maintain the physical separation arrangements.

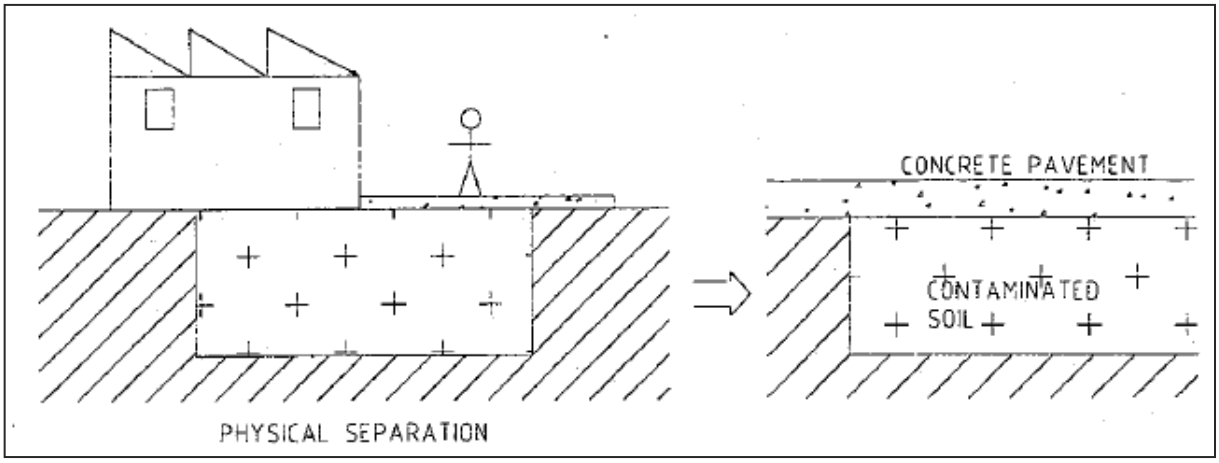
Implementation of a 'physical separation' strategy as indicated in ANZECC (1999[14]), in conjunction with appropriate control measures, are appropriate with respect to management of the health risk for contaminants at the site based on the current assumptions. However, assessment of unexpected contamination finds will be required to consider ANZECC (1999) guidelines, particularly for any contaminants that have not been identified previously at the site.

The minimum typical requirements in ANZECC (1999) for physical separation (i.e., capping layer) include:

- Permanent concrete floor slab or asphalt surfaced pavement. The pavement outside of the building/basement footprint shall be underlain by a marker layer; or
- A thickness of soil that is unlikely to be penetrated by future users of the site under the intended land use, underlain by a layer of 'marker layer' in areas of exposed site soil (i.e., landscaped beds). A minimum soil cover thickness of 0.5 m is commonly adopted however thinner soil cover may be acceptable where site constraints limit separation thickness and additional controls are implements (e.g., geogrid on top of marker layer).

[14] *Guidelines for the Assessment of On-site Containment of Contaminated Soil*. Australian and New Zealand Environment and Conservation Council, September 1999 (ANZECC 1999).

As shown schematically below:



Source: ANZECC (1999)

Given the specific development plans as understood at the time of preparation of this RAP, the proposed use of the site, the following physical separation arrangements are to be implemented within the extent of the site inclusive of accessible / open space areas:

- Where the proposed design allows material can remain where it is currently located, and a 'cap' can be placed above the material as outlined below;
- Cover of fill materials by permanent paved areas (includes concrete, asphalt, pavers and synthetic grass areas) – installation of a marker layer underlying the depth of the pavement/subgrade and overlying potentially contaminated material;
- Covering of fill materials in landscaped areas;
    - For grassed and shrub areas of the site, either:
        - Installation of the marker layer at a minimum depth of 0.3 m below final finished site levels;

          OR

        - Installation of the geogrid (geosynthetic materials that have an open grid-like appearance, and which make casual penetration more difficult) at a minimum depth of 0.2 m below final finished site levels;
    - Installation of the marker layer at a minimum depth of 0.7m below final finished site levels in areas of new tree planting (or as required for the depth of the plant's root-ball) and use of environmentally suitable materials placed above to the final levels;
    - In areas of existing plants that are to be retained, removal of at least 0.1m of impacted soils, installation of the marker layer at a minimum depth of 0.1m, and placement of wet-pour rubber or similar material to the finish level; and
- Within underground services trenches – in the event underground services are to be installed, the service infrastructure will require to be installed above a marker layer within suitable materials for potential human and/or ecological exposure. The marker layer is to be placed at the base and covering the walls of the trenches to the elevation of the surrounding area marker layer.

The marker layer shall consist of contrasting brightly coloured (e.g. orange) geofabric of suitable tensile strength and durability to ensure it remains intact upon completion of development works and into the future. The specific details of the proposed marker layer material will require to be approved by the validation consultant prior to application and the details then included in the validation report and LTEMP documents in addition to survey plans showing the extent of its application both laterally and vertically within the site.

Material above the marker layer extending to the final finished ground level will be required to be environmentally suitable material for human and/or ecological exposure (as appropriate). These physical separation arrangements shall generally comprise growing media but may potentially comprise material originating from within the site validated as suitable for reuse in accordance the requirements outlined in **Section 7.4**, imported virgin excavated natural material (VENM), excavated natural material (ENM) or other material subject to a resource recovery order (RRO)/resource recovery exemption (RRE) issued by the EPA.

Where materials are proposed to be imported for use at the site under an EPA RRO/RRE (i.e. imported to the site), fill material will need to be further assessed for land use suitability. Sampling densities and analysis for COPC will be dependent on the volume, material type, source and subject to the Environmental Consultant's endorsement and acceptance.

Installation of physical separation arrangements shall be defined by survey as completed by a registered surveyor and/or building as-built drawings sufficient to identify:

- The lateral extent and upper depth height of known environmentally impacted materials (i.e. residual fill materials underlying the cover) within each remediation area/stage;
- The lateral extent and type of cover (e.g. permanent pavement, validated fill material, etc) within the remediation area/stage; and
- Confirmation, by photos or otherwise, of the installation of the 'marker layer' underlying the cover (as required).

6.2.2 Validation of Capping Layer

Soils which are to be capped will be subject to the following data recording process for future reference purposes:

- A location plan of the placed materials with co-ordinates based on an agreed grid system (e.g., GPS or relative to the lot boundaries);
- Survey in m AHD of the following:
    - Base of the placement location(s) prior to the material placement;
    - Placement locations once all materials have been placed;
    - Marker layers:
    - Capping layers; and
    - Subsequently the total placed volume of materials.
- Visual inspection and photographic record of the capping.

6.2.3 Validation & Backfilling of Remedial Excavations

Following the advice of the supervising environmental consultant that remedial excavations have been advanced to acceptable extents validation samples will be required to confirm that contaminated material has been successfully removed.

Upon confirmation of validation, where required excavations will be reinstated using suitable materials sourced from within the site (non-contaminated), or alternatively validated imported materials. If left without reinstatement, safety controls will be required to the excavation (e.g. temporary fencing, or grading surround levels).

6.2.4 Environmental Management Plan (EMP)

In addition to the requirements of the validation report as per **Section 7.5**, the retention of contaminated soils at the site (i.e. exceeding land use criteria) will result in passive long term EMP requirements for portions of the site at the completion of the final development works, if this method is employed.

The EMP will need to be prepared with consideration to the EPA's *Site Auditor Guidelines 3rd Edition* (NSW EPA 2020a) and the *Guidelines for Consultants Reporting on Contaminated Sites* (NSW EPA 2020b) to detail the ongoing management and monitoring requirements applicable to specific portions of the broader site. The details of the nature and extent of the management requirements will not be known until remediation/management works are conducted, and the validation data obtained.

It is anticipated that the EMP will be prepared for the relevant portions of the site following the completion of the Validation Report.

The EMP will document the following elements:

- A statement of the objectives of the EMP – i.e., to ensure continued suitability of the site following remediation.
- Identification of residual environmental contamination issues at the site that require ongoing management/monitoring to meet the EMP objectives, including the type of contamination and location within the site (including a survey plan of final capping extent prepared by a registered surveyor).
- Documentation of environmental management measures which have been implemented to address the identified environmental issues at the site.
- Description of management controls to limit the exposure of site users to known impacted material to acceptable levels.
- Description of responsibilities for implementing various elements of the provisions contained in the EMP.
- Timeframes for implementing the various control/monitoring, etc. elements outlined in the EMP.
- Environmental monitoring and reporting requirements (if required) for the future management of environmental impact underlying the site including:
    - Appropriate monitoring locations and depth within and down-gradient of any residual contamination;
    - Relevant assessment criteria to be used in evaluating monitoring results;
    - Frequency of monitoring and reporting;
    - Process for reviewing monitoring data and how decisions will be made regarding the ongoing management strategy;
    - The length of time for which monitoring is expected to continue;
    - The regulatory authorities involved and the management inputs required from each;
    - The integration of environmental management and monitoring measures for soil;
    - Health and safety requirements for particular activities;
    - A program of review and audits;
    - The provisions in the EMP are feasible (i.e. able to be implemented) and able to be legally enforceable (i.e., a mechanism exists, such as development consent conditions, Section 88b instruments, etc to give the plan a basis in law); and

- The relevant consent authority (where appropriate) is satisfied that the inclusion of a development consent condition relating to the implementation of the long term EMP is acceptable.

- Corrective action procedures to be implemented where long term EMP assessment criteria are breached.

6.2.5 Off-site Disposal of Material

Any material requiring disposal, including any unexpected finds that are deemed as not suitable for on-site retention, shall be classified in accordance with *Waste Classification Guidelines* NSW EPA (2014a) and relevant waste regulations by the Remediation Consultant. Disposal of waste to licensed waste facilities in accordance with relevant waste regulations will be undertaken by the Contractor. All waste tracking documentation including disposal dockets must be maintained by the Contractor and must be provided to the Principal and the Remediation Consultant for inclusion in the validation report.

Where in-situ waste classifications have been undertaken, appropriately documented inspections of the material by the environmental consultant during excavation to confirm consistency with the classification will be required.

6.2.6 Materials Importation

In accordance with the current NSW EPA policy, only material that does not represent an environmental or health risk at the receiving site may be considered for resource recovery. Imported materials will only be accepted to the site for reinstatement of remediation excavations if they meet the restrictions placed on these materials and meet the definition of:

- VENM as defined in the Protection of the Environment Operations Act (1997) Schedule 1; or
- ENM as defined in the ENM Exemption/Order; or
- Resource recovery materials as per an EPA exemption.

All material imported onto the site for remediation excavation reinstatement are required to be accompanied by appropriate documentation that has been verified by the appointed site contamination (environmental) consultant prior to importation to the site.

It should be noted that quarried natural materials are not considered to be a 'waste' under the Protections of the Environment Act 1997 (POEO Act 1997) and therefore do not require full characterisation in accordance with the imported VENM procedure. Nonetheless, the appointed Environmental Consultant should be notified and supplied with source site documentation (i.e. VENM certificate or similar) for each quarry source site prior to importation to the site.

Reference should be made to **Section 7.2.6** for imported material characteristics, sampling densities, analytes and compliance with relevant EPA made or endorsed guidelines.

6.2.7 Asbestos Air Monitoring

During the excavation works involving asbestos impacted site fill materials, asbestos air monitoring will be conducted on the perimeter of all established asbestos works areas. It is noted that depending on the scope of asbestos works, weather conditions and the timing of works in relation to school operating hours, it may be the preference of the client to also undertake perimeter asbestos air monitoring at the boundary of the site, with particular consideration to the proximity to the adjacent learning spaces/recreational areas. Additional downwind monitoring locations will be included in the air monitoring program as required.

Air monitoring will be conducted in accordance with the requirements of the National Occupational Health and Safety Commission (NOHSC) Asbestos Code of Practice and Guidance Notes, in particular the Guidance note for the estimation of airborne asbestos dust [NOHSC 3002:2005] as detailed in **Section 9.2.2**.

6.3 Validation

Validation of the remedial works will be conducted by the Environmental Consultant to demonstrate the remediation objectives have been achieved. This will include validation analytical data as well as observation of marker layer and capping placement and client/contractor-provided survey data to confirm containment extent and thickness as described in **Section 6.2.1**. Details of the validation program are provided in **Section 7**.

7. Validation Plan

7.1 Overview

Validation data is required to be collected to verify the effectiveness of the remedial works and document the final site conditions as being suitable for the proposed future use.

The following sections establish the data quality objectives (DQOs) to be adopted during validation of the site remediation works.

7.2 State the Problem

Historical activities at the site have resulted in contamination within the fill material and surface soils that require remediation so that the site can be made suitable for the proposed ongoing secondary educational land use.

During remediation activities, sufficient validation of site activities is required to demonstrate that the identified environmental and health-based risks to site users have been adequately managed to render the site suitable for the applicable land use scenarios, as outlined in **Section 7.4**.

7.2.1 Identify the Decision

The decisions which are required to be made for validation of the site are:

- Has all identified contamination at the site been successfully remediated?
- Has off-site disposal of material (where required) been completed in accordance with relevant regulatory frameworks?
- Are imported soils (where required) suitable for their proposed use?
- Is an EMP required to address long term management of residual contamination at the site?
- Is the site suitable for the proposed uses?

7.2.2 Identify Inputs to the Decision

The inputs to the decisions are:

- Previous investigation reports (**Section 3**);
- Detailed plans (Appendix A) provided by the client appropriate to identify the design details;
- Field observations in relation to inspection of excavated fill, excavation bases, walls and stockpiles for odours, sheen, discolouration, and other indicators of potential contamination;
- Soil characterisation/validation analysis data collected from the base and walls (where accessible or present) of remedial works area excavations;
- Waste classification and/or material characterisation data obtained during assessment of fill materials/soils;
- Materials tracking records;
- Importation assessment data and criteria;
- Disposal dockets and relevant documents in relation to appropriate disposal of material to be removed from site/site as part of the remediation works (landfill dockets, beneficial reuse/recycling dockets);

- Where contaminated materials are retained as part of the remedial strategy, survey data of marker layer installation and caping extent and thickness to validate physical separation from site users to in-situ/retained fill (if required); and
- Data quality indicators as assessed by quality assurance/quality control (QA/QC).

Specifically, sufficient data needs to be collected from each of the identified potentially impacted media (e.g. fill material) across the site for associated COPC.

7.2.3 Define the Study Boundaries

The site is legally identified as Part of Lot 1 DP 1137425 and covers an area of approximately 3.3 ha.

A plan showing the location of the site is provided as **Figure 1**, and a plan showing the boundaries of the site is provided as **Figure 2**.

The vertical extent of the remediation works is anticipated to be up to approximately 0.6 m bgs to address contamination within the fill profile.

7.2.4 Develop a Decision Rule

Decision rules are provided following for each of the decisions:

- Has all identified contamination at the site been successfully remediated?
    - If assessment of field observations, analytical results and other validation inputs with site validation requirements indicates remedial works have effectively resulted in the management of identified contaminated risks in accordance with the requirements of the RAP, then the decision will be **Yes**. Otherwise, the decision will be **No**, and additional assessment and/or remediation will be required to demonstrate the objectives of the RAP have been achieved.
- Has off-site disposal of material (where required) been completed in accordance with relevant regulatory frameworks?
    - If assessment of field observations, material tracking records, survey data (as required) waste classification assessments and third-party documentation satisfies the requirements of relevant regulatory frameworks and the requirements of the RAP, the decision will be **Yes**. Otherwise, the decision will be **No**.
- Are imported soils (where required) suitable for their proposed use?
    - If imported soils are comprised of VENM, ENM or material covered by an exemption and they are used in accordance with the relevant exemptions, and analyte levels within the soils meet all the adopted validation criteria (**Section 7.4**) then the decision will be **Yes**. Otherwise, the decision will be **No**.
- Is an EMP required to address long term management of residual contamination at the site?
    - Evaluation of the presence of residual fill material will be undertaken at the completion of the works. If the evaluation identified material with elevated contaminant concentrations on site beneath the physical barrier (if required), the answer to the decision is **Yes**. Otherwise, the answer to the decision is **No**.
- Is the site suitable for the proposed uses?
    - Is the answer to any of the above decisions No? If No, can the outstanding issues be appropriately addressed by incorporation into the proposed EMP? If the answer to the above is Yes, or if the issues can be appropriately addressed by incorporation into the proposed EMP, the answer to the above decision is **Yes**, subject to implementation of the EMP. Otherwise, the answer to the decision is **No** and further remediation may be required.

7.2.5 Specify Limits of Decision Error

This step seeks to establish the decision maker's tolerable limits on decision errors, which are used to establish performance goals for limiting inherent uncertainty in the data. Data generated during this project needs to robust and reliable to facilitate decisions to be made with confidence.

Specific limits for this project were adopted in accordance with the appropriate guidance from the NSW EPA, NEPC (2013), appropriate data quality indicators (DQIs) used to assess QA/QC and standard JBS&G procedures for field sampling and handling.

To assess the useability of the data prior to making decisions, the data were assessed against pre-determined DQIs to assess precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS parameters). The acceptable limit on decision error will be 95% compliance with DQIs.

The QA/QC program is documented in Table 7.1.

- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples for chemical COPCs. For asbestos precision is assessed by whether the identification results for duplicate samples were in agreement with the original sample.
- **Accuracy** - measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards. Note only applied to chemical COPC.
- **Representativeness** –expresses the degree which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** - expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; and ensuring analysing laboratories use consistent analysis techniques; and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- **Sensitivity** – expresses the appropriateness of the chosen laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted site assessment criteria.

Table 7.1: Summary of Data Quality Indicators for Soil Validation Program

Data Quality Indicators	Frequency	Data Quality Criteria
Precision		
Split duplicates (intra laboratory)	1 / 20 samples	<30% RPD[1]
Blind duplicates (inter laboratory)	1 / 20 samples	<30% RPD[1]
Laboratory Duplicates	1 / 20 samples	<30% RPD[1]
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes	All samples	-[2]
Samples extracted and analysed within holding times.	All samples	Soil: organics (14 days), inorganics (6 months)
Laboratory Blanks	1 per lab batch	<LOR
Trip spike	1 per lab batch	70-130% recovery
Storage blank	1 per lab batch	<LOR
Field blank[3]	1 per lab batch	<LOR
Rinsate sample	1 per sampling event/media	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All Samples
Standard analytical methods used for all analyses	All Samples	NATA accreditation
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples[2]
Limits of reporting appropriate and consistent	All Samples	All samples[2]
Sample description and COCs completed and appropriate	All Samples	All samples[2]
Appropriate documentation	All Samples	All samples[2]
Satisfactory frequency and result for QC samples		95% compliance
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted Site assessment criteria	All samples	LOR<= Site assessment criteria

[1] If the RPD between duplicates is greater than the pre-determined data quality indicator, a judgment will be made as to whether the excess is critical in relation to the validation of the data set or unacceptable sampling error is occurring in the field.

[2] A qualitative assessment of compliance with standard procedures and appropriate sample collection methods will be completed during the DQI compliance assessment.

[3] Only applicable for Per- and Polyfluoroalkyl Substances (PFAS).

7.2.6 Optimise the Design for Obtaining Data

The purpose of this step is to identify a resource-effective field validation sampling design that generates data that are expected to satisfy the decision performance criteria, as specified in the preceding steps of the DQO

process. The output of this step is the sampling design that will guide development of the field sampling and analysis plan. This step provides a general description of the activities necessary to generate and select data collection designs that satisfy decision performance criteria.

The remediation validation and subsequent laboratory analysis program as outlined in the following sections will need to be implemented during site remediation activities to demonstrate the successful completion of works in compliance with the RAP goals. The validation/characterisation sampling and analytical program for the site is outlined in Table 7.2.

In addition to the sampling and analytical program, validation of the marker layer and capping placement is required to validate the site. Visual inspections and photographic log of the placed marker layers and survey of the marker layer and of the extent and thickness of capping layer by the Contractor are required to be included in the Validation Report.

Table 7.2: Remediation Validation Program

Item	Sampling Frequency		Analytical Suite
Removal of Contaminated Fill			
In-situ Asbestos Contaminated Material Behind Northwestern Retaining Wall			
	Excavation Floors	**Excavation Walls**	
Exposed ground surface (following excavation of non-friable asbestos contaminated fill) (Excavation less than 100 m^2 extent)	Fo ex Visual, and 1 per 25 m^2 or Minimum 1 x sample per base	1 per 5 m lineal (from each distinct horizon/material type/1 m vertical soil profile) Minimum 1 x sample per wall If excavation is shallow, i.e. wall height ≤ 0.2 m, then wall samples are not required.	Visual Inspection by JBS&G + AQ
Exposed ground surface (following excavation of non-friable asbestos contaminated fill) (Excavation greater than 100 m^2 extent)	Fo ex Visual, and 1 per 100 m^2 or Minimum 1 x sample per base	1 per 10 m lineal (from each distinct horizon/material type/1 m vertical soil profile) Minimum 1 x sample per wall If excavation is shallow, i.e. wall height ≤ 0.2 m, then wall samples are not required.	Visual Inspection by JBS&G + AQ
Block A Crawl Space Surface Soils			
	Excavation Floors	**Excavation Walls**	
Exposed ground surface (following excavation and excavation of friable and non-friable asbestos and copper contaminated surface soils)	Visual, and 1 per 100 m^2 or Minimum 1 x sample per base	1 per 10 m lineal (from each distinct horizon/material type/1 m vertical soil profile) Minimum 1 x sample per wall If excavation is shallow, i.e. wall height ≤ 0.2 m, then wall samples are not required.	Visual Inspection by JBS&G + Copper Asbestos (NEPM protocol: 500 mL)
Footprints of Temporary Relocated Asbestos Contaminated Fill Material			
	Stockpile Footprints		
Exposed Ground Surface	Visual, and 1 per 25 m^2 or		Visual Inspection by JBS&G +

(following temporary relocation, prior to final placement) (Not required where stockpiled on geofabric)	Minimum 1 x sample per base	Asbestos (NEPM protocol: 500 mL)
Footprints of Temporary Relocated Asbestos and Copper Contaminated Fill Material		
	Stockpile Footprints	
Exposed Ground Surface (following temporary relocation, prior to final placement) (Not required where stockpiled on geofabric)	Visual, and 1 per 25 m^2 or Minimum 1 x sample per base	Visual Inspection by JBS&G + Copper Asbestos (NEPM protocol: 500 mL)
Export of Materials		
Offsite Disposal		
Classified in accordance with EPA (2014a) Waste Guidelines	Soils requiring classification for off-site disposal will be sampled by JBS&G as per the sampling density for stockpiled materials in EPA (2022), including use of existing (previous) data where available.	Heavy metals PCB and OCP TRH and BTEX PAH Asbestos (presence/absence: 40 g) (Except where asbestos is already visible) Toxicity characterisation leachate procedure (TCLP) heavy metals and PAHs (if required)
Materials Importation		
Imported VENM	If adequate source site documentation is available (see **Section 7.4.2**), then no sampling is required, beyond visual inspection at the source site and when the material arrives to site. Minimum of 3 samples per source site/material type, with a subsequent frequency of one sample per 1000 m3 for volumes greater than 3,000 m3.	TRH and BTEX PAH Heavy Metals OCPs and PCBs Asbestos (NEPM protocol: 500 mL) (Sampling and analysis only required following failure to complete a source site inspection and received adequate supplier documentation)
Quarried natural materials (e.g. blue metal, sandstone, shale)	Confirmation that the material is quarried natural soil/rock product (not waste) prior to importation, and visual confirmation.	Source site inspection required
Recycled materials	Letter showing compliance with the relevant RRO and relevant waste recovery order/exemption from the source facility and supplemented with analytical data at a density of 3 samples per material type/batch up to 2,000m^3 then 1 sample per 500m^3 thereafter	TRH/BTEX PAH Heavy Metals OCPs/PCBs

		Asbestos (NEPM protocol: 500 mL)
Imported ENM	As per the ENM order/exemption (to be provided by the source site/supplier).	As per the ENM order/exemption + Asbestos (500 mL) OCPs/OPPs/PCBs
Growing Media	Minimum 1/70 m^3 with a minimum of three samples per source/end location and visual inspection at the site or when the material arrives to site.	Heavy Metals TRH/BTEX VOC PAHs OCP/PCB pH Asbestos (500 mL) Cation Exchange Capacity (CEC) Clay (%).

Unexpected Finds[1]			
	Excavation Floors	**Excavation Walls**	
Unexpected Find	1 per 25 m^2	1 per 5 m lineal	As appropriate, depending on the location and characteristics of the unexpected find

[1] The proposed sampling frequency for any unexpected find may require amendment based on observations made.
[2] Where analytical data is provided by the quarry for the imported material, this data is to be provided as part of site validation.

7.3 Sample Methodology

7.3.1 Sample Handling

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indications of contamination shall be noted on field reporting sheets/field logs.

Collected samples shall be immediately transferred to sample containers of appropriate composition. Sample labels shall record sample identification number and date and time of sampling. Sample containers shall be transferred to a chilled ice box for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form shall be completed and forwarded with the samples to the testing laboratory, containing the following information:

- Sample identification;
- Signature of sampler;
- Date of collection;
- Type of sample;
- Number and type of container;
- Inclusive dates of possession; and
- Signature of receiver.

7.3.2 Asbestos Quantification

Where AQ is required for further characterisation/validation purposes, the following methodology is required to be undertaken by the Environmental Consultant:

- Consistent with the sampling frequency outlined above, enough soil will be collected to enable the AQ sampling (minimum 10 L sample);
- At each sample location, observable bonded ACM and fibrous asbestos (FA) will be quantified using methods advised in WA DoH (2009[15]). Specifically, given that the fill-based soil is known to be fine grained, fill based soil will be quantified by spreading the material for inspection on a contrasting colour material (e.g., plastic sheeting);
- A minimum of one 10 L sample of spoil will be spread at a thickness of not more than 100 mm onto the contrasting colour material. All observable bonded ACM and FA per sample location will be collected in separate sample bags (i.e., one sample bag for bonded ACM and one sample bag for FA per each sample) for weighing to enable asbestos soil concentrations to be calculated;
- The approximate mass of the soil volume will be calculated using a soil density of 1.6 g/cm^3 16, which is based on the predominant fill type at the site being sand dominated. Should other soil types become apparent during validation works, an adjusted soil density may be applied, reflective of the soil types encountered;
- At least one discrete 500 ml sample will be collected for laboratory asbestos analysis per 1 m depth interval at each sampling location (from the 10L sample), regardless of whether bonded ACM or FA is observed or not. Where possible, soil samples will be collected in the proximity of bonded ACM or FA;
- 500 ml samples will be laboratory analysed for asbestos in accordance with AS 4964-2004: Method for the Qualitative Identification of Asbestos in Bulk Samples;
- Bonded ACM and FA collected and bagged from each depth interval will be weighed in-house/at the testing laboratory using a calibrated scale with an accuracy of 0.01 g and the measured weight recorded; and
- A test pit log for each sampling location will be recorded, noting the presence (and type) or absence of observable asbestos, soil description, dimensions of test pit, volume of spoil sampled at each depth and other observable contamination indicators such as staining, malodorous materials, ash and slag.

Calculation of Bonded ACM or FA Concentration

Asbestos percentage will be calculated as per the formula below:

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

For bonded ACM, an asbestos content of 15% will be used, in accordance with enHealth (2005). For FA, a conservative asbestos content of 100% will be used.

7.3.3 Field Photoionisation Detector (PID) Screening (if required)

Where soil validation/characterisation samples may be required for volatile contaminants (i.e., for unexpected finds relating to TRH, BTEXN, VOCs) will be screened on site during works using a PID to assess the presence of VOCs including petroleum hydrocarbons. Samples obtained for PID screening will be placed in a sealed plastic bag for a period of approximately 5 minutes to equilibrate prior to a PID being attached to the bag. Readings will then be monitored for a period of approximately 1 minute or until values stabilised and the stabilised/highest reading was recorded. PID reading will be recorded on field notes during each sampling

[15] *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia. Western Australia Department of Health*. Dated May 2009 (WA DOH 2009), as endorsed by NEPC (2013).
[16] Field Geologist' Manual (3rd Edition), The Australian Institute of Mining and Metallurgy, 1989, Table 7.3.3 (Bulking factors for expansion of common rock materials, after excavation).

event. The PID calibration will be checked prior to each sampling event and the outcome documented in field notes.

7.3.4 Field Duplicate and Triplicate Preparation and QA/QC Requirements

Field soil/groundwater/vapour duplicate and triplicate samples for the validation assessment (including for samples collected by JBS&G for imported materials characterisation) will be obtained during sampling using the procedures outlined above at a frequency of 1 in 20 primary samples for both field intra-laboratory duplicates and field inter-laboratory duplicates. The samples will be filled with no headspace to reduce the potential for loss of volatiles and separately labelled as the primary, duplicate and triplicate samples before being placed in the same chilled esky for laboratory transport. QA/QC samples will be taken for chemical contaminants but not required for asbestos.

Trip spike, storage blank, field blank and rinsate samples will be collected as per **Table 7.2**. Trip spike and storage blank samples will be analysed where primary samples require organic (volatile to semi-volatile) analysis.

7.3.5 Decontamination

Prior to the commencement of sampling activities, non-disposable sampling equipment, including sampling trowels will be cleaned with a high pressure deionized water/detergent spray, rinsed with water and then air dried. The equipment was then inspected to ensure that no soil, oil, debris or other contaminants are apparent on the equipment prior to the commencement of any sample collection works.

Representative rinsate samples will be collected from non-disposable sampling equipment (if required) following completion of each day of field sampling activities to determine the effectiveness of the decontamination procedures implemented on re-usable sampling equipment.

New nitrile gloves will be utilised for the collection of each soil sample to avoid cross contamination between samples and locations.

7.3.6 Laboratory Analyses

The testing laboratories are required to be accredited by the National Association of Testing Authorities (NATA) for the analysis they perform and must meet the data quality standards outlined in Table 7.2.

7.4 Soil Validation Criteria

7.4.1 Validation of In-Situ Soils

Given fill materials from across the site are proposed to be utilised for cut and fill across the site, analytical data from validation sampling at the lateral and vertical extents of remedial excavations shall be compared against the following criteria:

- HILs for recreational (HIL-C) land use including secondary schools;
- HSLs for direct contact with petroleum hydrocarbons for recreational land use including secondary schools;
- HSLs for Asbestos in Soil for recreational (HSL-C) land use including secondary schools;
- Ecological Screening Levels (ESLs), coarse grained soil, urban residential and public open space land use scenario and includes secondary schools; and
- Site Specific EILs urban residential and public open space land use scenario and includes secondary schools.

As noted by CRC CARE (Technical Report No.39[17]) a higher reliability ESL of 20 mg/kg for benzo(a)pyrene (B(a)P) is considered appropriate for the assessment of potential risks to ecological receptors and is consistent with NEPC (2013) guidance indicating heavier PAHs such as B(a)P are not readily taken up by plants. This ESL shall be adopted for the remedial works.

Table 7.3 below details derived soil EILs as per NEPC (2013) guidance. Note, pH and CEC are based on the average values reported as part of the DGI. All EIL values are in mg/kg unless otherwise specified.

Table 7.3: Derivation of Soil EILs

Physical Parameters	
pH (pH units)	**CEC (meq/100g)**
6.2	10.1
Investigation Levels	
Contaminant	**EIL Urban Residential and Public Open Space Land Use (mg/kg)**
Arsenic	100
Chromium (III)	190
Copper	190[1]
DDT	180
Lead	1100
Naphthalene	170
Nickel	170[2]
Zinc	400[3]

[1] Selected utilising the pH value to determine the most conservative EIL
[2] Selected based on the value for CEC.
[3] Selected based on value for pH and CEC resulting in the most conservative EIL.

7.4.1.1 Application of Soil Assessment Criteria

For soils to be considered as meeting the health/ecological based assessment criteria (i.e., not posing an unacceptable risk), the following criteria will be adopted:

Either:

- All contaminant concentrations were less than the adopted site assessment criteria,

Or:

- The upper 95% confidence limit on the average concentration for each analyte (calculated for samples collected from consistent soil horizons, stratigraphy, or material types) was below the adopted criterion;
- No single analyte concentration exceeded 250% of the adopted criterion; and
- The standard deviation of the results was less than 50% of the criterion.

7.4.2 Imported Materials

In accordance with current NSW EPA policy, only material that does not represent an environmental or health risk at the receiving site may be considered for resource recovery. Imported materials will only be accepted to

[17] CRC CARE. (2017). *Risk-based Management and Remediation Guidance for Benzo(a)pyrene.* Technical Report no. 39: Cooperative Research Centre for Contamination Assessment and Remediation of the Environment.

the site if they meet the restrictions placed on these materials and satisfy requirements outlined in **Section 6.2.6.**

All materials imported onto the site are required to be accompanied by appropriate documentation that has been verified by the appointed environmental consultant for consistency/satisfaction of the relevant resource recovery order/exemption.

Where imported material is proposed to be imported to site for growing media or general filling across large portions of the site, analytical data will also be required to be compared to site validation criteria defined in **Section 7.4.1**) to ensure they are fit for use.

VENM

It should be noted that quarried natural materials are not considered to be a 'waste' under the POEO Act, and are therefore exempt from the following protocol, with the exception that the appointed environmental consultant should be notified and supplied with source site documentation for each source site prior to importation to the site.

For VENM sourced to be imported from another site (i.e. not quarried natural material products), the environmental consultant will be required to review source site documentation with regard to the VENM definition provided to the POEO Act, prior to material being imported. Where source site documentation cannot adequately demonstrate materials comply with the definition of VENM without chemical testing, then chemical sampling will be requested. The analyses undertaken will be consistent with the COPCs anticipated from the source site historical review, with minimum analytes and sampling frequencies per Table 7.2.

Analytical data associated with VENM sampling shall comply with the following criteria:

- Heavy metals = background concentrations, as per Olszowy et. al. (1995) (background concentrations); and
- All other COPCs (except for pH an EC) = non-detect.

ENM

The analytes of OCPs/OPPs, PCBs and asbestos are required to be analysed in addition to those outlined in the ENM Order, with sampling frequencies per **Table 7.2**. Analytical data will require to be assess, against the applicable land use criteria to determine site suitability.

Recycled Materials

For recycled materials, sampling of materials as per a NSW EPA RRO/RRE is required to be undertaken by the facility in accordance with the exemption. In addition, where materials are proposed to be imported to the site under a NSW EPA RRO/RRE, the material will need to be further assessed by environmental consultant for land use suitability in accordance with the validation requirements nominated in **Section 7.4.1**. All imported materials (including recycled materials) will be required to be inspected once they arrive at the site for to ensure materials are consistent with the material documentation, and for indicators of contamination (visual/olfactory indicators of contamination).

Growing Media

Imported growing media will need to be assessed by the Environmental Consultant for land use suitability in accordance with the validation requirements nominated in **Section 7.2.6** against criteria discussed in **Section 7.4.1**.

7.4.3 Off-site Disposal of Soils

Materials shall be classified in accordance with EPA (2014a) *Waste Classification Guidelines* or an appropriate exemption as created under the *Protection of the Environment Operations (Waste) Regulation 2014* (POEO Waste Regulation) and characterised in accordance with the requirements nominated in Table 7.2.

Material will require to be removed to a facility lawfully able to receive it.

7.5 Validation Report

At the completion of remediation works, a validation report will be prepared in general accordance with EPA (2017) and *Guidelines for Consultants Reporting on Contaminated Sites* (NSW EPA 2020a), documenting the works as completed.

Validation reports can be prepared on a staged basis to enable the validation of a portion of the site or can be completed for the entire site upon completion of remediation, subject to program delivery requirements.

This report/s will contain information including:

- Details of the remediation works conducted;
- Update relevant portions of the site description and CSM as relevant to the data gap investigation;
- Present all sampling field notes and laboratory data including calibration certificates for field monitoring equipment, environmental monitoring etc.;
- Undertake an assessment of QA/QC for analytical data generated by the works and identify data that is reliable for use in characterising site;
- Sort data into data sets as required by the decision rules;
- Assess whether sufficient data has been obtained to meet required limits on decision error;
- Undertake assessment to the decision rules and identify any environmental data which causes decision rules to be failed;
- Provide a summary of waste disposal activities and volumes of waste removed from the site including supply of Integrated Waste Tracking Solution records for asbestos impacted material disposed from the site, and all waste disposal dockets confirming final waste disposal/landfill destination;
- Provide a summary of material importation activities (general fill soil/crushed rock, growing media, earthworks aggregates, drainage backfill etc), including material source, type, assessment of suitability, approximate quantities, date of importation, visual inspections upon arrival to site and final placement location;
- Document any variations to the strategy undertaken during the implementation of the remedial works;
- Results of all environmental monitoring undertaken during the course of the remedial works;
- Survey of the site development layout showing the land use boundaries;
- Survey data for any cap and contain strategy employed at the site (if required);
- Details of any environmental incidents occurring during the course of the remedial works and the actions undertaken in response to these incidents;
- Identify the requirements for the long term EMP (where appropriate) including inclusion of a survey clearly identifying the extent of the retained impacted material and associated capping (as required); and
- Provide a clear statement on the suitability of the site (or portions thereof) for the proposed use and requirements for any ongoing monitoring/management (where applicable).

The report will serve to document the remediation works for future reference.

7.6 Environmental Management Plan

Where contaminated soil above land use criteria is contained/retained on site, a long term EMP must be prepared in accordance with the requirements outlined in the NSW Environment Protection Authority *Guidelines for the NSW Site Auditor Scheme (3rd edition, EPA 2017*). The objective/purpose will be to ensure ongoing suitability of the site for the proposed land use via identification and maintenance of cap/cover measures that form a physical barrier to the underlying contaminated soil.

The EMP will detail roles and responsibilities for future site operators/owners, provide management procedures for future intrusive works, and will operate for the life of the development to protect the human health and safety of site users, and to protect the environment – both on-site and off-site.

Enforcement of the EMP will be via appropriate notation on a planning certificate issued under s.10.7(2) of the *Environmental Planning and Assessment Act*.

8. Contingency Plan

In the unforeseen event that the proposed remediation works do not meet the validation criteria, or if the selected remedial strategy is unsuccessful, the following actions will be considered to ensure firstly the safety and health of people and the environment and secondly that the overall project objectives are achieved:

- Continued controlled excavation until validation is achieved; and
- Reassessment of remedial options for excavated materials, including:
    - Current remediation approach (Cap and Contain); or
    - Offsite disposal (as per **Section 7.4.3**).

8.1 Change in Development Plans

In the event that the development plans are changed from those available at the time of preparation of this RAP, review of the suitability of the proposed remedial strategy will be required by the Environmental Consultant.

8.2 Unexpected Finds Protocol

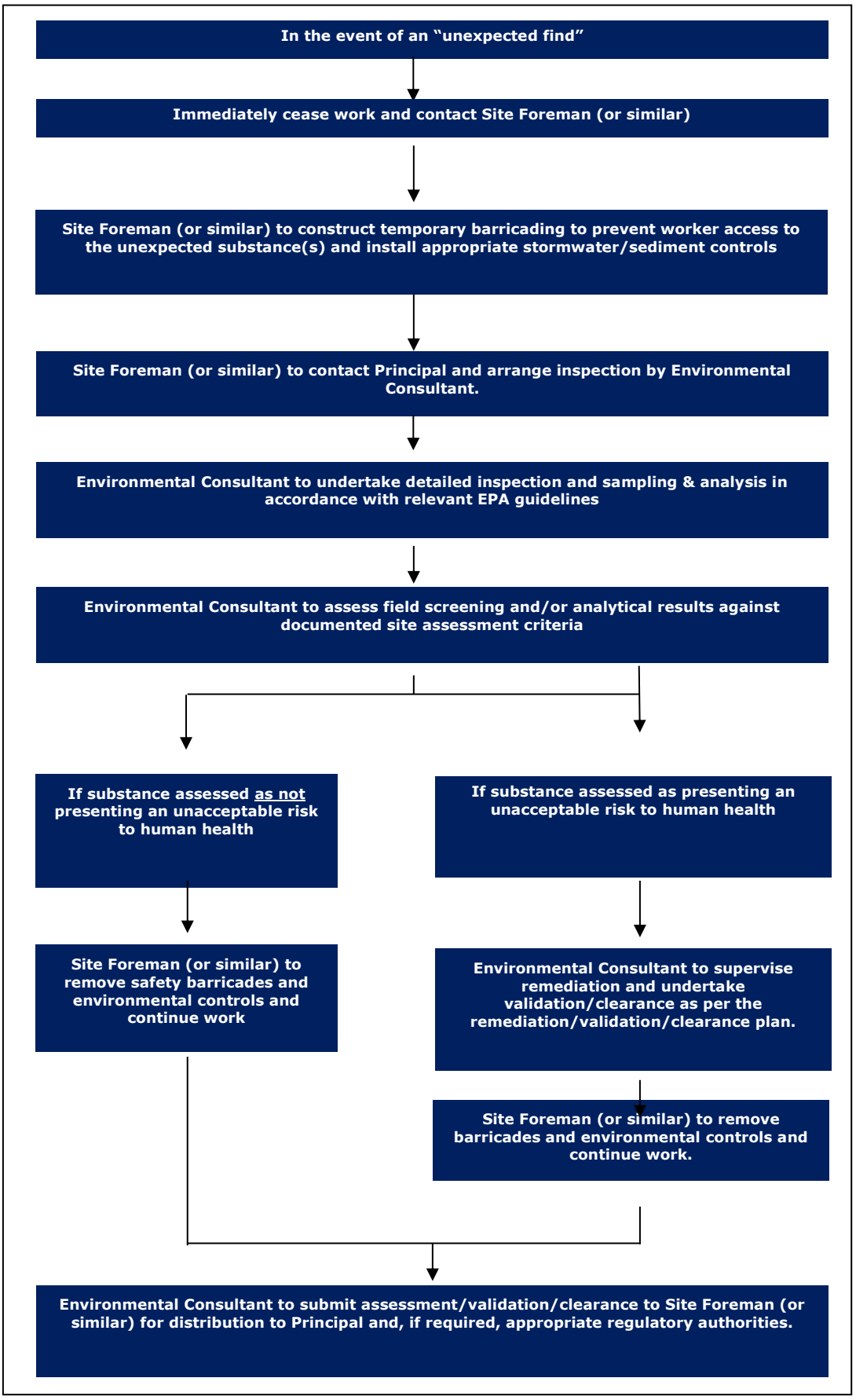
Ground conditions between sampling points may vary, and further hazards may arise from unexpected sources and / or in unexpected locations during remediation. The nature of any residual hazards which may be present at the site are generally detectable through visual or olfactory means, for example:

- Bottles / containers of chemicals (visible);
- Tar contaminated soils / fill materials (visible); and
- VOC contaminated soils (odorous) and vapours.

As a precautionary measure to ensure the protection of the workforce and surrounding community, should any of the abovementioned substances be identified (or any other unexpected potentially hazardous substance), the procedure summarised in **Flowchart 8.1** is to be followed.

An enlarged version of the unexpected finds protocol, suitable for use on-site, should be posted in the site office and referred to during the site-specific induction by the remedial / principal contractor.

Flowchart 8.1 – Unexpected Finds Protocol



9. Other Remediation Documents

9.1 Environmental Management

9.1.1 Preparation of a Remediation Environmental Management Plan (REMP)

Prior to commencement of remediation works, a REMP shall be prepared by the Principal Contractor or the Principal Contractor's Remediation Contractor, which documents the environmental monitoring and management measures required to be implemented during the remediation and construction related activities associated with the construction of the site.

The REMP shall address each of the nominated items in **Section 6.2** and shall include the Contingency Plan, referred to in **Section 8**, above. Additional environmental management requirements may be required as part of development consent.

9.1.2 Required Elements/Procedures

An assessment of the proposed activities and the associated elements required to be incorporated into the REMP is provided in Table 9.1. The REMP is required to address each of the required elements and procedures in full detail and to include detailed monitoring processes and procedures, corrective actions and reporting requirements.

Table 9.1: Required Elements of the REMP

Element	Specific Minimum Requirements to be included in REMP
1. Dust Control	Provisions for dust control if required.
2. Flora and Fauna	N/A
3. Heritage/Archaeological	N/A
4. Visual Impacts	N/A
5. Emergency Response	As appropriate. Procedures required for spill incident response including material storage breach.
6. Noise Control	Hours of operation. Boundary monitoring at commencement of work site activities with potential for environmental noise emissions. Potential noise monitoring at nearest receptors. Procedures for control and management of noise emissions, as appropriate (e.g., restricted hours).
7. Traffic	Controls on vehicle movements on public roads. Controls on transport in asbestos exclusion zones (if required)
8. Protection of Adjoining Structures	N/A
9. Odour Control	Procedures for management of potentially odorous works.
10. Handling of Contaminated Soil and Groundwater	Soil and water (if encountered) management (stockpiling, site access, excavation pump out, reinstatement).
11. Soil Storage/Placement Areas	Soil and water management (stockpiling, site access, excavation pump out, reinstatement). Bunding. Heavy vehicle/personnel decontamination. Interim storage requirements for materials requiring later treatment.

Element	Specific Minimum Requirements to be included in REMP
	Site drainage requirements, incorporating clean/dirty areas and modifications to existing surface water and drainage controls beneath retained pavements. Monitoring as required.
12. Sediment Control	Bunding. Collection/treatment/handling impacted sediments.
13. Operation of Site Office	As appropriate.
14. Asbestos Works	Required notifications, permits, signage and exclusion zones. Required personal (e.g. Class A or B removalist). PPE and decontamination. Staging of asbestos and non-asbestos works.
15. Environmental Monitoring	Monitoring of dusts, noise, odour and fibres (if required). Monitoring as required for vibration and water releases. Inspection checklists and field forms.
16. Environmental Criteria	Soil criteria as sourced from RAP.
17. Material Classification	As detailed in this RAP.
18. Waste Management	All waste materials classified in accordance with the RAP are required to be disposed of at a licensed waste facility that are lawfully able to accept such materials. Material tracking in the form of disposal dockets will be required for the purposes of satisfying the validation report.
19. Community Relations Plan	Client to provide project specific communication protocols, incorporating nomination of specific contact persons & details and requirements for communications/response register.
20. Incident Reporting	As appropriate, including standard form/checklist.
21. Security and Signage	Secure site perimeter. Site boundary signage. Remediation exclusion zone signage where required.
22. EMP Review	As appropriate.
23. Training	As appropriate. Contamination awareness training for all workers.
24. Contact Details	Company/personnel details, including names/phone numbers for: - Principal Contractor - Site Auditor (if involved) - Environmental Consultant - Contractor - OH&S Compliance - Environmental Compliance

9.2 Health and Safety

9.2.1 Work Health and Safety Management Plan

A work health and safety management plan (WHSP) shall be prepared by the Remediation Contractor prior to commencement of remediation works. The plan shall contain procedures and requirements that are to be implemented as a minimum during the works, in addition to the Contingency Plan, referred to in **Section 8**.

The objectives of the WHSP are:

- To apply standard procedures that minimises risks resulting from the works;
- To ensure all employees are provided with appropriate training, equipment and support to consistently perform their duties in a safe manner; and
- To have procedures to protect other site workers and the general public.

These objectives will be achieved by:

- Assignment of responsibilities;
- An evaluation of hazards;
- Establishment of personal protection standards, mandatory safety practices and procedures;
- Monitoring of potential hazards and implementation of corrective measures; and
- Provision for contingencies that may arise while operations are being conducted within the site.

9.2.2 Asbestos Works

All asbestos associated works shall be undertaken in accordance with the *Work Health and Safety Regulation 2014* (WHS Regulation), SafeWork NSW (2022) *Code of Practice: How to Safely Remove Asbestos*, and SafeWork NSW (2022) *How to Manage and Control Asbestos in the Workplace*.

During the remedial works and only following the positive detection of asbestos impact present in site soils, perimeter asbestos in air monitoring will be conducted at each applicable remedial works area boundary when soil with asbestos is being disturbed. Air monitoring will be conducted on a daily basis at relevant locations whilst disturbance of asbestos contaminated areas takes place.

Air monitoring will be conducted during any ground disturbance activities within (asbestos) impacted soil within the site to verify that implementation of appropriate control measures have been successful at managing the risk of airborne fibre generation. Air monitoring will be undertaken in accordance with the requirements of the NOHSC Asbestos Code of Practice and Guidance Notes, in particular the *Guidance note for the estimation of airborne asbestos dust* [NOHSC 3002:2005].

Class A Asbestos Removalist are required to be present when working within the contaminated material at the site given the identification of friable asbestos. If fill containing friable asbestos is required to be relocated a Class A Licensed Asbestos Removalist will be required to undertake the works.

It will be the requirement of the appointed remedial contractor to obtain the appropriate approvals and prepare an asbestos management plan (AMP).

9.2.3 Additional Consideration of Chemical Contaminants

In addition to general assessment of the potential for exposure to chemical contaminants the WHSP should also include specific consideration of additional contaminants may be encountered in fill materials.

As a precautionary measure, the WHSP should include the requirement for the plan to be revised in the event of an unexpected find of contaminated material during remediation and/or construction.

When working with contaminated materials in general, care needs to be taken to ensure that the contamination is not introduced to the worker via ingestion, inhalation or absorption. The WHSP must detail the PPE and decontamination requirements to be followed to control the risks posed by potential exposure to chemical contaminants at/within the site.

10. Regulatory Approvals/Licensing

Environment Planning and Assessment Act 1979/SEPP (Resilience and Hazards) 2021

With consideration to *Liverpool Local Environmental Plan 2008*, the site and/or the remedial works are not considered to be:

- Designated development;
- On land declared to be a critical habitat;
- Likely to have a significant effect on a critical habitat or a threatened species, population or ecological community, or
- Development for which another State environmental planning policy or a regional environmental plan requires development consent, or
- In an area or zone to which any classifications to the following effect apply under an environmental planning instrument, including:
    - coastal protection,
    - conservation or heritage conservation,
    - habitat area, habitat protection area, habitat or wildlife corridor,
    - environment protection,
    - escarpment, escarpment protection or escarpment preservation,
    - floodway,
    - littoral rainforest,
    - nature reserve,
    - scenic area or scenic protection,
    - wetland, or
- Proposed to be completed in a manner that does not comply with a policy made under the contaminated land planning guidelines by the council for any local government area in which the land is situated (or if the land is within the unincorporated area, the Minister).

As such, the remediation works are classified as Category 2 Remediation Works as per the meaning provided Chapter 4 Remediation of land in the R&H SEPP. Remediation will not require development consent under the *Environmental Planning and Assessment Act 1997*.

Notification of remediation works will be required to be given to Council at least 30 days prior to commencement, and Council requires notification within 30 days from completion of remediation works, consistent with R&H SEPP requirements.

The nature of remediation works is relatively straight forward, and it is considered most appropriate that remediation works is included with construction earthworks as ancillary to other development.

Environment Planning and Assessment Regulation 2000 – Schedule 3 Designated Development

It is not anticipated that the proposed remediation works will trigger the application of the regulation given that the works will not entail the treatment or storage of materials not originating from the site. Further, the proposed scope of works will not incinerate more than 1,000 m^3 per year, will not treat and store more than 30,000 m^3 of contaminated soil, and will not disturb an aggregate area of 3 ha of contaminated soil.

Protection of the Environment Operations Act 1997

All potential discharges from the remediation works will require to be maintained below applicable assessment criteria/threshold guidelines during the remediation works. This would apply to potential emissions in air and water. Levels of discharges are typically assessed at a site boundary.

Site specific environmental management plans, as prepared and maintained by remedial contractors, will require to ensure appropriate controls and monitoring criteria to assess compliance with these aspects.

The proposed remediation/validation activities are not required to be licensed under the POEO Act. The remediation area is less than 3 ha in area, does not propose handling of greater than 30,000 m^3 of contaminated fill and hence does not trigger the licensing requirements.

Protection of the Environment Operations (Waste) Regulation 2014

The regulations make requirements relating to non-licensed waste activities and waste transporting. The proposed works on site will not require to be licensed. Section 48 of the Reg. requires that wastes be stored in an environmentally safe manner. It is also stipulated that vehicles used to transport waste must be covered when loaded.

Provision is provided in the POEO Waste Regulation and EPA (2014a) guidelines for the EPA to approve the immobilisation of contaminants in waste (if required with unexpected finds).

Waste Classification Guidelines (EPA 2014a)

All wastes generated and proposed to be disposed off-site shall be assessed, classified and managed in accordance with this guideline. Where wastes require immobilisation prior to off-site disposal (to reduce the waste classification) an immobilisation approval shall be sought in accordance with Part 2 of this guideline. Immobilisations are only anticipated to be required with unexpected finds.

Asbestos Licensing requirements

Due to asbestos impacted fill at the site a Class A Asbestos Removalist is required to be present when working within the contaminated fill given the identification of friable asbestos.

A SafeWork notification regarding the scope of the removal works is required. It will be the requirement of the appointed remedial contractor to obtain the appropriate approvals and prepare an AMP.

11. Conclusions

11.1 Conclusions

Overall, it is considered that the proposed actions outlined in this RAP conform to the requirements of the *Contaminated Land Management Guidelines for the NSW Site Auditor Scheme (3rd Edition)* (EPA 2017) because they are: technically feasible; environmentally justifiable; and consistent with relevant laws policies and guidelines endorsed by NSW EPA.

Subject to the successful implementation of the measures described in this RAP and with consideration to the Limitations presented in **Section 12**, it is considered that the site can be made suitable for the intended uses and that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment.

11.2 Recommendations

It is recommended that the processes outlined in this RAP be implemented and that the following documentation be developed and implemented to ensure the risks and impacts during remediation works are controlled in an appropriate manner:

- A REMP, to document the monitoring and management measures required to control the environmental impacts of the works and ensure the validation protocols are being addressed; and
- A WHSP to document the procedures to be followed to manage the risks posed to the health of the remediation workforce.

Upon completion of the remediation works, the Validation Report/s are required to be prepared to verify remedial works were completed in accordance with this RAP.

11.3 Statement of Significance

Based on the identification of potential issues, and an assessment of the nature and extent of the impacts of the proposed development, it is determined that:

- The extent and nature of potential impacts are low, and will not have significant adverse effects on the locality, community and the environment; and
- Potential impacts can be appropriately mitigated or managed to ensure that there is minimal effect on the locality, community.

The mitigation measures required and relevant to the current investigation are included in **Appendix D**.

12. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties. The report has been prepared specifically for the client for the purposes of the commission, and no warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. This report should not be amended in any way without prior approval by JBS&G, or reproduced other than in full including all attachments as originally provided to the client by JBS&G.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements or agreed scope of work.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Legend

- Approximate Site Boundary
- Approximate SINSW Boundary

JBS&G

Job No: 68150	
Client: Meinhardt	
Version: R02 Rev A	Date 4/02/2025
Drawn By: EP	Checked By: IL

Scale 1:10,000

0 90 180

metres

Coord. Sys. GDA2020 MGA Zone 56

Liverpool Boys and Girls High School

18 Forbes Street,
Liverpool, NSW

SITE LOCATION

FIGURE 1

File Name: 68150_LiverpoolHS-DGI_R02_RevA

Legend

- Approximate Site Boundary
- Approximate SINSW Boundary
- NSW Cadastre

Current Site Features

- Building A

Proposed Site Features

- Proposed Building Footprint

JBS&G

Job No: 68150	
Client: Meinhardt	
Version: R02 Rev A	Date 4/02/2025
Drawn By: EP	Checked By: IL
Scale 1:1,750	

0 10 20
metres

Coord. Sys. GDA2020 MGA Zone 56

Liverpool Boys and Girls High School

18 Forbes Street,
Liverpool, NSW

SITE LAYOUT

FIGURE 2

File Name: 68150_LiverpoolHS-DGI_R02_RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 23/11/2024)

Legend

- Approximate Site Boundary
- Approximate SINSW Boundary
- NSW Cadastre

Current Site Features

- Building A

Proposed Site Features

- Proposed Building Footprint

Historical Sample Locations (Coffey 2019a)

- Test Pit
- Borehole
- Hand Auger
- Sub Floor Grab Sample

JBS&G

Job No: 68150	
Client: Meinhardt	
Version: R02 Rev A	Date 4/02/2025
Drawn By: EP	Checked By: IL
Scale 1:1,750	

0 10 20
metres

Coord. Sys. GDA2020 MGA Zone 56

Liverpool Boys and Girls High School

18 Forbes Street,
Liverpool, NSW

HISTORICAL SAMPLE LOCATIONS

FIGURE 3

File Name: 68150_LiverpoolHS-DGI_R02_RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 23/11/2024)

Legend

- Approximate Site Boundary
- Approximate SINSW Boundary
- NSW Cadastre

Current Site Features

- Building A

Proposed Site Features

- Proposed Building Footprint

Historical Sample Locations (Coffey 2019a)

- Test Pit
- Borehole
- Hand Auger
- Sub Floor Grab Sample

Sample Locations (JBS&G 2025)

- Test Pit
- Borehole
- Sub Floor Grab Sample

JBS&G

Job No: 68150	
Client: Meinhardt	
Version: R02 Rev A	Date 4/02/2025
Drawn By: EP	Checked By: IL
Scale 1:1,750	

0 10 20
metres

Coord. Sys. GDA2020 MGA Zone 56

Liverpool Boys and Girls High School

18 Forbes Street,
Liverpool, NSW

SAMPLE LOCATIONS

FIGURE 4

File Name: 68150_LiverpoolHS-DGI_R02_RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 23/11/2024)

Legend

- Approximate Site Boundary
- Approximate SINSW Boundary
- NSW Cadastre

Current Site Features

- Building A
- ACM observed on Surface Soils

Proposed Site Features

- Proposed Building Footprint

Historical Sample Locations (Coffey 2019)

- Test Pit
- Borehole
- Hand Auger
- Sub Floor Grab Sample

Sample Locations (JBS&G 2025)

- Test Pit
- Borehole
- Sub Floor Grab Sample

JBS&G

Job No: 68150	
Client: Meinhardt	
Version: R02 Rev A	Date 4/02/2025
Drawn By: EP	Checked By: IL
Scale 1:1,750	

0 10 20
metres

Coord. Sys. GDA2020 MGA Zone 56

Liverpool Boys and Girls High School

18 Forbes Street,
Liverpool, NSW

EXCEEDANCES

FIGURE 5

File Name: 68150_LiverpoolHS-DGI_R02_RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 23/11/2024)

Legend

- Approximate Site Boundary
- Approximate SINSW Boundary
- NSW Cadastre

Current Site Features

- Building A

Remedial Extents

- Remedial Extent (Copper and Asbestos)
- Remedial Extent (Asbestos)

Proposed Site Features

- Proposed Building Footprint

JBS&G

Job No: 68150	
Client: Meinhardt	
Version: R02 Rev A	Date 4/02/2025
Drawn By: EP/HW	Checked By: IL
Scale 1:1,750	

0 10 20
metres

Coord. Sys. GDA2020 MGA Zone 56

Liverpool Boys and Girls High School

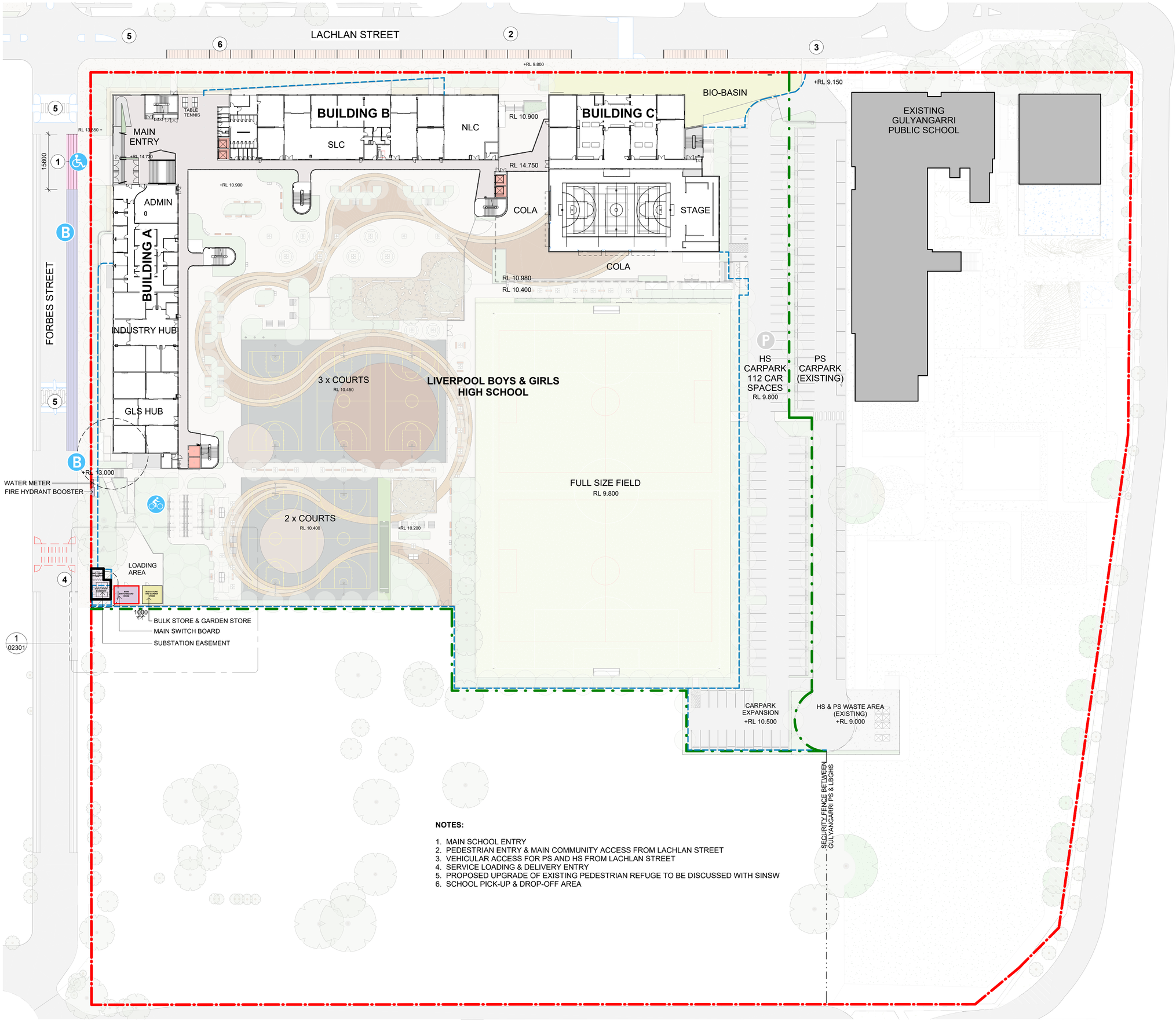
18 Forbes Street,
Liverpool, NSW

REMEDIAL EXTENTS

FIGURE 6

File Name: 68150_LiverpoolHS-DGI_R02_RevA
Reference: Nearmap - www.nearmap.com (Capture Date: 23/11/2024)

Appendix A Concept Plans



NOTES:

1. MAIN SCHOOL ENTRY
2. PEDESTRIAN ENTRY & MAIN COMMUNITY ACCESS FROM LACHLAN STREET
3. VEHICULAR ACCESS FOR PS AND HS FROM LACHLAN STREET
4. SERVICE LOADING & DELIVERY ENTRY
5. PROPOSED UPGRADE OF EXISTING PEDESTRIAN REFUGE TO BE DISCUSSED WITH SINSW
6. SCHOOL PICK-UP & DROP-OFF AREA

NBRS

LEGEND

- BUS STOP
- CAR PARKING
- BICYCLE PARKING
- PROPOSED PEDESTRIAN CROSSING
- EXISTING PEDESTRIAN CROSSING
- DEMOLISHED PEDESTRIAN CROSSING
- PROPOSED HIGH SCHOOL SITE
- EXISTING BOUNDARY
- PROPOSED FENCE
- RAIL LINE
- PICK UP AND DROP OFF
- ACCESSIBLE PICK UP AND DROP OFF
- POTENTIAL BUS ZONE
- EXISTING PICK UP AND DROP OFF
- EXISTING EASEMENT INGROUND SERVICES
- 2.5m STORMWATER EASEMENT
- SUBSTATION EASEMENT
- MAIN SWITCHBOARD
- LIFTS
- MAIN ACCESS
- SECONDARY ACCESS
- SELU ACCESS
- VEHICLE ACCESS
- STUDENT ACCESS
- PRIMARY SCHOOL ACCESS
- DELIVERY ACCESS
- AFTER HOURS COMMUNITY ACCESS

SLC SENSORY LEARNING COMMONS

NLC NATURAL LEARNING COMMONS

SCHEMATIC

Issue

No.	Date	Description	Chkd
5	04.10.2024	Issue for Coordination	EK
6	10.10.2024	Issue for Coordination	EK
7	18.10.2024	Issue for Coordination	EK
8	24.10.2024	75% Schematic Design	EK
9	21.11.2024	Issue for Coordination	EK

Changes to this Revision

NBRS
+61 2 9922 2344 nbrs.com.au
Nominated Architects:
Andrew Duffin NSW 5602
Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197 ABN 16 002 247 565

Project
Liverpool Boys and Girls High School

at
Forbes St Liverpool

for
SINSW

Drawing Title
PROPOSED SITE PLAN

Date 20/11/2024 10:32:56 PM
Scale 1:500 @ A1
NBRS Project # 24089
Drawing Reference LBGHS-NBRS-00-ZZ-DR-A-01000
Revision 9

0 5m 10m 15m 20m 25m 30m 35m 40m 1:500

Appendix B Soil Analytical Data

TABLE A: Soil Analytical Summary
Project Name: 68150 Liverpool HS DGI + RAP, 18 Forbes Street , Meinhardt

JBS&G

			Metals & Metalloids								TPHs (NEPC 1999)						TRHs (NEPC 2013)					TRHs (NEPC 2013)									
			Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C9 Fraction		C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum of Total)	C6-C10		C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	F1 (C6-C10 minus BTEX)	F2 (C10-C16 less Naphthalene)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene_VOC
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	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
			2	0.4	1	1	1	0.1	1	1	0.02	20	20	50	50	50	0.02	20	50	100	100	50	20	50	0.1	0.1	0.1	0.1	0.2	0.3	0.5
CRC Care 2011 Table A4 Direct Contact HSL-C Recreational / Open Space																		5,100	3,800	5,300	7,400				120	18,000	5,300			15,000	1,900
CRC Care 2011 Table A4 Direct Contact Intrusive Maintenance Worker																		82,000	62,000	85,000	120,000				1,100	120,000	85,000			130,000	29,000
NEPM 2013 Table 1A(1) HILs Rec C Soil			300	90	300	17,000	600	80	1,200	30,000																					
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																							45 | 70 | 110 | 200	110 | 240 | 440	0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55			40 | 60 | 95 | 170	3
NEPM 2013 Table 1B(6) Site Specific EIL - Urban Residential and Public Open Space Aged Soil			100		190	190	1,100		170	400																					170
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				1,300	5,600		180	120	65	105	125			45	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																		700	1,000	2,500	10,000										
Field ID	**Da**																														
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			<2	<0.4	7.1	<5	13	<0.1	<5	13	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
			11	<0.4	25	9.2	19	<0.1	<5	7.4	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			6.7	<0.4	71	27	<5	<0.1	63	45	-	<20	21	660	1,900	2,581	-	<20	<50	1,900	2,100	4,000	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			6.4	<0.4	36	57	42	0.3	130	100	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		85	4.2	<0.4	12	7.8	40	<0.1	<5	23	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
		585	9.3	<0.4	23	12	14	<0.1	<5	5.5	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
		6585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		76585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		370401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	<2	<0.4	14	22	9.2	<0.1	29	18	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
		1176585	7.5	<0.4	21	12	15	<0.1	<5	5.3	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	11	<0.4	21	60	<5	<0.1	180	78	-	<20	<20	200	150	350	-	<20	<50	330	<100	330	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	6.9	<0.4	20	8.9	16	<0.1	<5	<5	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		1176585	11	<0.4	31	21	65	<0.1	<5	73	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	5	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	n 2025	1176585	15	<0.4	39	5.3	17	<0.1	<5	5.9	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	an 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jan 2025	1176585	13	<0.4	27	17	27	<0.1	6.4	26	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	9 Jan 2025	370401	10	<0.4	23	20	19	<0.1	4	16	-	<25	<50	<100	<100	<50	-	<25	<50	<100	<100	<50	<25	<50	<0.2	<0.5	<1	<1	<2	<1	<1
	09 Jan 2025	1176585	12	<0.4	28	16	27	<0.1	8.3	26	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	07 Jan 2025	1176585	13	<0.4	25	21	110	0.3	5.1	95	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	07 Jan 2025	1176585	14	<0.4	33	19	25	<0.1	<5	24	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	07 Jan 2025	1176585	19	<0.4	39	50	29	<0.1	5.6	41	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	07 Jan 2025	1176585	14	<0.4	14	100	49	0.1	7.0	59	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	07 Jan 2025	1176585	8.0	1.0	22	110	110	0.3	18	380	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	07 Jan 2025	1176585	11	<0.4	24	7.2	22	<0.1	<5	20	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.5	07 Jan 2025	1176585	12	<0.4	25	12	23	<0.1	<5	42	-	<20	<20	<50	<50	<50	-	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.5
4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5_FRAG02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105_FRAG03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P105_FRAG04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A: Soil Analytical Summary
Project Name: 68150 Liverpool HS DGI + RAP, 18 Forbes Street , Meinhardt

JBS&G

												PAH												
							e TEQ (LOR)	rene TEQ calc (Half)	)pyrene TEQ calc (Zero)	zo[b+j]fluoranthene	Benzo[b+j+k]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-c,d]pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)
			µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			50	0.1	0.1	0.1	0.1	0.05	0.5	0.5	0.5	0.5	0.2	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5
CRC Care 2011 Table A4 Direct Contact HSL-C Recreational / Open Space																					1,900			
CRC Care 2011 Table A4 Direct Contact Intrusive Maintenance Worker																					29,000			
NEPM 2013 Table 1A(1) HILs Rec C Soil							3	3	3															300
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																					3			
NEPM 2013 Table 1B(6) Site Specific EIL - Urban Residential and Public Open Space Aged Soil																					170			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil						0.7																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																								
Field ID	**Date**	**Lab Report Number**																						
BH101_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101_0.2-0.3	09 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH102_0.0-0.1	08 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH102_0.0-0.3	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH103_0.0-0.1	08 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH103_0.1-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH104_0.0-0.1	08 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH104_0.0-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.0-0.1	08 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH105_0.2-0.3	08 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH105_0.2-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_2.9-3.0	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.0-0.4	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	09 Jan 2025	370401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.2-0.3	09 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH106_0.4-0.5	09 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH106_2.9-3.0	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_0.0-0.1	09 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH107_0.1-0.5	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_2.9-3.0	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH108_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH108_0.2-0.3	09 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH108_2.9-3.0	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS05	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP101_0.0-0.1	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP101_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP101_0.3-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_0.4-0.5	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP102_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP103_0.0-0.1	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA01	09 Jan 2025	370401	<50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5	<0.5	<0.5	-	<0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
QC01	09 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP103_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.4-0.5	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP105_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.1-0.6	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.2-0.3	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP105_0.4-0.5	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP106_0.1-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.2-0.3	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP107_0.0-0.1	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP107_0.0-0.2	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_0.1-1.0	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_0.2-0.3	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP108_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP109_0.2-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP109_0.4-0.5	07 Jan 2025	1176585	-	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP109_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS-01_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A: Soil Analytical Summary
Project Name: 68150 Liverpool HS DGI + RAP, 18 Forbes Street , Meinhardt

			Organochlorine Pesticides																										
										n		e (cis)	ane (trans)	T	DDD	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	Mirex	Toxaphene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.5
CRC Care 2011 Table A4 Direct Contact HSL-C Recreational / Open Space																													
CRC Care 2011 Table A4 Direct Contact Intrusive Maintenance Worker																													
NEPM 2013 Table 1A(1) HILs Rec C Soil									10	70						400					20			10		10	400	20	30
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																													
NEPM 2013 Table 1B(6) Site Specific EIL - Urban Residential and Public Open Space Aged Soil														180															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																													
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																													
Field ID	**Date**	**Lab Report Number**																											
BH101_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101_0.2-0.3	09 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
BH102_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102_0.0-0.3	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH103_0.0-0.1	08 Jan 2025	1176585	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<10
BH103_0.1-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH104_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH104_0.0-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.2-0.3	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.2-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_2.9-3.0	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.0-0.4	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	09 Jan 2025	370401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.2-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.4-0.5	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_2.9-3.0	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_0.0-0.1	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_0.1-0.5	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_2.9-3.0	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH108_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH108_0.2-0.3	09 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
BH108_2.9-3.0	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS05	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP101_0.0-0.1	07 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
TP101_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP101_0.3-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP103_0.0-0.1	07 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
QA01	09 Jan 2025	370401	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
QC01	09 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
TP103_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.4-0.5	07 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
TP105_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.1-0.6	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.2-0.3	07 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
TP105_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.1-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.2-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.0-0.1	07 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
TP107_0.0-0.2	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_0.1-1.0	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_0.2-0.3	07 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
TP108_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP109_0.2-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP109_0.4-0.5	07 Jan 2025	1176585	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.5
TP109_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS-01_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A: Soil Analytical Summary
Project Name: 68150 Liverpool HS DGI + RAP, 18 Forbes Street , Meinhardt

JBS&G

			Organophosphorus Pesticides																																					
																			rop	Ditrothion	ensulfothion	Fenthion	Malathion	Merphos	Methidathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Tetrachlorvinphos	Tokuthion	Trichloronate	Fenamiphos	Parathion
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	2	0.2	2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1
CRC Care 2011 Table A4 Direct Contact HSL-C Recreational / Open Space																																								
CRC Care 2011 Table A4 Direct Contact Intrusive Maintenance Worker																																								
NEPM 2013 Table 1A(1) HILs Rec C Soil					250																																			
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																																								
NEPM 2013 Table 1B(6) Site Specific EIL - Urban Residential and Public Open Space Aged Soil																																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																																								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																																								
Field ID	**Date**	**Lab Report Number**																																						
BH101_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101_0.2-0.3	09 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
BH102_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102_0.0-0.3	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH103_0.0-0.1	08 Jan 2025	1176585	<0.5	<0.5	-	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
BH103_0.1-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH104_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH104_0.0-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.2-0.3	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.2-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_2.9-3.0	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.0-0.4	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	09 Jan 2025	370401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.2-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.4-0.5	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_2.9-3.0	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_0.0-0.1	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_0.1-0.5	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_2.9-3.0	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH108_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH108_0.2-0.3	09 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
BH108_2.9-3.0	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS05	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP101_0.0-0.1	07 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
TP101_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP101_0.3-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP103_0.0-0.1	07 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
QA01	09 Jan 2025	370401	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	-	-	-	<0.1	<0.1
QC01	09 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
TP103_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.4-0.5	07 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
TP105_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.1-0.6	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.2-0.3	07 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
TP105_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.1-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.2-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.0-0.1	07 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
TP107_0.0-0.2	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_0.1-1.0	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_0.2-0.3	07 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
TP108_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP109_0.2-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP109_0.4-0.5	07 Jan 2025	1176585	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
TP109_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS-01_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A: Soil Analytical Summary
Project Name: 68150 Liverpool HS DGI + RAP, 18 Forbes Street , Meinhardt

			Acid Sulphate Soils										Acid Sulphate Soils - Other															
						ur			l Acidity	oxide Acidity	Sulfidic Acidity		Reacted Calcium	cid Reacted Magnesium	Acidity - Acid Reacted Calcium	Acidity - Acid Reacted Magnesium	Acidity - Peroxide Oxidisable Sulfur	ANC Fineness Factor	Calcium in Peroxide	HCl Extractable Sulfur	KCl Extractable Calcium	KCl Extractable Magnesium	Magnesium in Peroxide	Net Acid Soluble Sulfur (in acid units)	Net Acid Soluble Sulfur (in sulfur units)	sulfidic - Acid Reacted Magnesium	sulfidic - Titratable Actual Acidity	sulfidic - Titratable Peroxide Acidity
			%	kg CaCO3/t	mol H+/t	%S	%	pH Unit	%	mol H+/t	mole H+/t	mole H+/t	pH Unit	%	% Mg	mol H+/t	mol H+/t	mol H+/t	FACTOR	%	%S	%	%	%	mol H+/t	%S	%S	%S	%S
EQL			0.005	1	10	0.02	0.005	0.1	0.005	2	2	2	0.1	0.005	0.005	0.005	0.005	2		0.005	0.005	0.005	0.005	0.005	2	0.005	0.005	0.003	0.02
CRC Care 2011 Table A4 Direct Contact HSL-C Recreational / Open Space																												
CRC Care 2011 Table A4 Direct Contact Intrusive Maintenance Worker																												
NEPM 2013 Table 1A(1) HILs Rec C Soil																												
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																												
NEPM 2013 Table 1B(6) Site Specific EIL - Urban Residential and Public Open Space Aged Soil																												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																												
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																												
Field ID	**Date**	**Lab Report Number**																										
BH101_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101_0.2-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102_0.0-0.3	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH103_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH103_0.1-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH104_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH104_0.0-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.2-0.3	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_0.2-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH105_2.9-3.0	08 Jan 2025	1176585	0.030	2.0	27	0.04	0.010	5.0	0.040	21	<2	<2	5.4	0.007	<0.005	3.3	<0.005	6.2	1.5	0.050	-	0.050	0.14	0.14	-	-	<0.005	0.030	<0.02
BH106_0.0-0.4	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	09 Jan 2025	370401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.2-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_0.4-0.5	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH106_2.9-3.0	09 Jan 2025	1176585	0.030	5.0	68	0.11	0.008	4.3	0.040	56	42	<2	5.1	0.006	<0.005	2.8	<0.005	5.1	1.5	0.010	0.040	<0.005	0.10	0.11	7.0	0.011	<0.005	0.090	0.07
BH107_0.0-0.1	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_0.1-0.5	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH107_2.9-3.0	09 Jan 2025	1176585	0.020	6.0	82	0.13	0.010	4.1	0.030	69	56	<2	4.9	<0.005	0.005	<0.005	4.3	6.1	1.5	0.010	0.030	0.010	0.090	0.10	7.1	0.011	0.007	0.11	0.09
BH108_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH108_0.2-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH108_2.9-3.0	09 Jan 2025	1176585	0.010	1.0	<10	<0.02	<0.005	5.9	0.010	8.0	<2	<2	6.3	<0.005	<0.005	<0.005	<0.005	<2	1.5	0.030	-	0.020	0.050	0.050	-	-	<0.005	0.010	<0.02
SS01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS05	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP101_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP101_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP101_0.3-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP102_1.4-1.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP103_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	09 Jan 2025	370401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP103_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP104_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.1-0.6	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.2-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.1-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP106_0.2-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.0-0.2	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_0.1-1.0	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_0.2-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP108_1.4-1.5	07 Jan 2025	1176585	0.020	7.0	90	0.14	0.006	4.3	0.030	83	76	<2	4.4	<0.005	0.009	<0.005	7.1	4.0	1.5	0.010	0.020	0.010	0.080	0.090	3.4	0.005	0.011	0.13	0.12
TP109_0.2-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP109_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP109_1.4-1.5	07 Jan 2025	1176585	0.020	5.0	63	0.10	0.008	4.3	0.030	53	40	<2	5.0	<0.005	0.014	<0.005	11	5.1	1.5	<0.005	0.030	<0.005	0.10	0.11	5.5	0.009	0.018	0.080	0.06
SS-01_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP105_FRAG04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP107_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A: Soil Analytical Summary
Project Name: 68150 Liverpool HS DGI + RAP, 18 Forbes Street , Meinhardt

JBS&G

			nce			SPOCAS			Particle Size		Asbestos - Eurofins								Asbestos - Envirolab				Moisture Content	Other				
							um	c			ple Mass	e Dimensions	m ACM in Soil	A & AF in Soil	c Fibres - Comment	Respirable Fibres - Comment	Synthetic Fibres - Comment	Asbestos Reported Result	Asbestos ID in Soil	Total Asbestos	Asbestos (ACM >7mm) Estimation	Asbestos in soil (<2mm AF/FA) (%w/w)	Moisture Content	Moisture Content (dried @ 103°C)	TOC	Analysed Material	Extraneous Material	Phosalone
			MEQ/100G	US/CM	pH Units	FACTOR	%S	%S	%	%	g	Comment	% (w/w)	% (w/w)	Comment	Comment	Comment	Comment	g/kg	g/kg	% (w/w)	% (w/w)	%	%	%	%	%	mg/kg
EQL			0.5	10	0.1	1	0.005	0.02	0.005	0.005													0.1	1	0.1	0.1	0.1	0.1
CRC Care 2011 Table A4 Direct Contact HSL-C Recreational / Open Space																												
CRC Care 2011 Table A4 Direct Contact Intrusive Maintenance Worker																												
NEPM 2013 Table 1A(1) HILs Rec C Soil																												
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																												
NEPM 2013 Table 1B(6) Site Specific EIL - Urban Residential and Public Open Space Aged Soil																												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																												
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																												
Field ID	**Date**	**Lab Report Number**																										
BH101_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	856	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
BH101_0.2-0.3	09 Jan 2025	1176585	2.7	13	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	0.1	-	-	-
BH102_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-
BH102_0.0-0.3	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	844	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
BH103_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4	-	-	-	-
BH103_0.1-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	807	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
BH104_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-
BH104_0.0-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	770	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
BH105_0.0-0.1	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-
BH105_0.2-0.3	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-
BH105_0.2-0.4	08 Jan 2025	1176585	-	-	-	-	-	-	-	-	634	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
BH105_2.9-3.0	08 Jan 2025	1176585	-	-	-	2.0	0.005	<0.02	93	<0.005		-	-	-	-	-	-	-	-	-	-	-	-	14	-	100	<0.1	-
BH106_0.0-0.4	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	861	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
QA02	09 Jan 2025	370401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	<0.1	<0.01	<0.001	-	-	-	-	-	-
QC02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	853	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	0	-	-	-	-	-	-
BH106_0.2-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-	-	-	-
BH106_0.4-0.5	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	-
BH106_2.9-3.0	09 Jan 2025	1176585	16	140	5.7	2.0	0.005	<0.02	90	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	17	0.1	100	<0.1	-
BH107_0.0-0.1	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7	-	-	-	-
BH107_0.1-0.5	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	949	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
BH107_2.9-3.0	09 Jan 2025	1176585	-	-	-	2.0	<0.005	<0.02	49	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	100	<0.1	-
BH108_0.0-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	792	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
BH108_0.2-0.3	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-
BH108_2.9-3.0	09 Jan 2025	1176585	-	-	-	2.0	<0.005	<0.02	140	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	97	2.7	-
SS01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	660	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
SS02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	774	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
SS03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	893	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
SS04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	724	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
SS05	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	741	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP101_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-
TP101_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	813	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP101_0.3-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	944	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP102_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	713	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP102_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.0	-	-	-	-
TP102_1.4-1.5	07 Jan 2025	1176585	8.7	110	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	<0.1	-	-	-
TP103_0.0-0.1	07 Jan 2025	1176585	13	22	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	1.7	-	-	-
QA01	09 Jan 2025	370401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	<0.1	<0.01	<0.001	18	-	-	-	-	<0.1
QC01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	738	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	17	-	-	-	-
TP103_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	792	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP104_0.0-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	821	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP104_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	-	-	-
TP105_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	1,004	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP105_0.1-0.6	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	773	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP105_0.2-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-
TP105_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-
TP106_0.1-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	832	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP106_0.2-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	-	-	-	-
TP107_0.0-0.1	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.0	-	-	-	-
TP107_0.0-0.2	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	664	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP107_0.2-0.4	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	745	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP108_0.1-1.0	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	806	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP108_0.2-0.3	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-
TP108_1.4-1.5	07 Jan 2025	1176585	-	-	-	2.0	<0.005	<0.02	49	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	100	<0.1	-
TP109_0.2-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	853	-	0.0000	0.0000	Organic fibre detected	No trace asbestos detected	Nil	No asbestos detected	-	-	-	-	-	-	-	-	-	-
TP109_0.4-0.5	07 Jan 2025	1176585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-
TP109_1.4-1.5	07 Jan 2025	1176585	-	-	-	2.0	<0.005	<0.02	59	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	100	<0.1	-
SS-01_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	18	60x51x4	0.0000	0.0000	-	-	-	Chrysotile asbestos detected	-	-	-	-	-	-	-	-	-	-
TP105_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	22	82x26x5	0.0000	0.0000	-	-	-	Chrysotile and amosite asbestos detected	-	-	-	-	-	-	-	-	-	-
TP105_FRAG02	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	27	61x35x5	0.0000	0.0000	-	-	-	Chrysotile and amosite asbestos detected	-	-	-	-	-	-	-	-	-	-
TP105_FRAG03	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	89	96x72x5	0.0000	0.0000	-	-	-	Chrysotile and amosite asbestos detected	-	-	-	-	-	-	-	-	-	-
TP105_FRAG04	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	26	38x32x6	0.0000	0.0000	-	-	-	Chrysotile and amosite asbestos detected	-	-	-	-	-	-	-	-	-	-
TP107_FRAG01	09 Jan 2025	1176585	-	-	-	-	-	-	-	-	12	39x35x4	0.0000	0.0000	-	-	-	rysotile, amosite and crocidolite asbestos dete	-	-	-	-	-	-	-	-	-	-

TABLE B: Soil Asbestos Quantification Results
Project Name: 68150 Liverpool HS DGI + RAP, 18 Forbes Street , Meinhardt

			Field AQ Results				Laboratory Result		Combined Result			NEPC HSL-C		
AQ ID	Depth Interval	Stratum	AQ Weight	ACM Weight	Asbestos Weight [1]	w/w%	ACM	AF/FA	ACM	AF/FA	Visible asbestos in surface	Bonded ACM	AF/FA	Result
			grams	grams	grams		w/w%	w/w%						
Liverpool Boys and Girl Redevelopment Site														
TP101	0.0-0.3	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0.001	Below HSL
TP101	0.3-0.5	Subsurface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0.001	Below HSL
TP102	0.2-0.4	Subsurface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0.001	Below HSL
TP103	0.0-0.3	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0.001	Below HSL
TP104	0.0-0.3	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0.001	Below HSL
TP105	0.0-0.1	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0.00	Below HSL
TP105	0.1-0.6	Subsurface	20000	164	24.6	0.123	0.0	0.000	**0.123**	0.000	No	0.02	0.00	**HSL Exceedance**
TP106	0.1-0.5	Subsurface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0.0	Below HSL
TP107	0.0-0.2	Surface	20000	12	1.8	0.009	0.0	0.000	0.009	0.000	**Yes**	0.02	0.0	**HSL Exceedance**
TP107	0.2-0.4	Subsurface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0.0	Below HSL
TP108	0.1-1.0	Subsurface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0.	Below HSL
TP109	0.2-0.5	Subsurface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0	Below HSL
BH101	0.0-0.3	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02	0	Below HSL
BH102	0.0-0.3	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02		Below HSL
BH103	0.1-0.4	Subsurface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02		Below HSL
BH104	0.0-0.4	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02		Below HSL
BH105	0.2-0.4	Subsurface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02		Below HSL
BH106	0.0-0.4	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02		Below HSL
BH107	0.1-0.5	Subsurface	20000	0	0	0.000	0.0	0.000	0.000	0.000	No	0.02		Below HSL
BH108	0.0-0.3	Surface	20000	0	0	0.000	0.0	0.000					0.001	Below HSL
SS01	0.0-0.1	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	**Yes**	0.01	0.001	**HSL Exceedance**
SS02	0.0-0.1	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	**Yes**	0.01	0.001	**HSL Exceedance**
SS03	0.0-0.1	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	**Yes**	0.01	0.001	**HSL Exceedance**
SS04	0.0-0.1	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	**Yes**	0.01	0.001	**HSL Exceedance**
SS05	0.0-0.1	Surface	20000	0	0	0.000	0.0	0.000	0.000	0.000	**Yes**	0.01	0.001	**HSL Exceedance**

Table D - Acid Sulfate Soil Sample Results
Project Name: 68150 Liverpool HS DGI + RAP, 18 Forbes Street , Meinhardt

Soil Sample ID	pH_{KCl}	pH_{ox}	TAA (mol H+/tonne)	TPA (mol H^+/tonne)	TSA (mol H+/tonne)	S_{POS}%	a-ANC_E (mol H^+/tonne)	SPOCAS-Net Acidity (mol H+/tonne)	Liming Rate
ASSMAC Assessment Guidleines (1 - 1000 tonne disturbed, fine texture)				**62**	**62**	**>0.1**			
BH105_2.9-3.0	5.0	5.4	21	<2	<2	0.010	N/A	27	2
BH106_2.9-3.0	4.3	5.1	56	42	<2	0.008	N/A	68	5
BH107_2.9-3.0	4.1	4.9	69	56	<2	0.010	N/A	82	6
BH108_2.9-3.0	5.9	6.3	8	<2	<2	<0.005	N/A	<10	1
TP108_1.4-1.5	4.3	4.4	83	**76**	<2	0.006	N/A	90	7
TP109_1.4-1.5	4.3	5.0	53	40	<2	0.008	N/A	63	5

	Asbestos	Heavy Metal									Inorganic	OCP																									
	Asbestos	Arsenic	Cadmium	Chromium (III+VI)	Hexavalent Chromium	Copper	Lead	Mercury	Nickel	Zinc	Moisture Content (dried @ 103°C)	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin aldehyde	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor
	g/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		2	0.4	5	5	5	5	0.1	5	5	1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
HSL-A Residential (Low Desnity) Direct Contact																																					
HSL-D Commercial/Industrial Intrusive Maintenance Worker																																					
NEPM 2013 Table 1A(1) HILs Res A Soil		100	20	100^	100	6000	300	40	400	7400							6		50				240							10		6		10	300
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand 0-1m																																					
NEPM 2013 EILs Urban residential and public open space Aged Soil		100		250		220	1100		350	400												180														
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																					
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																																					

Field_ID	Sampled_Date_Time	Matrix_TYPE	Lab_Report_Number																																			
A08507	02-Oct-19	SOIL	681511	NAD	12	<0.4	13	-	13	23	<0.1	<5	54	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08508	02-Oct-19	SOIL	681511	NAD	14	<0.4	30	-	110	95	0.2	6.9	240	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08509	02-Oct-19	SOIL	681511	NAD	9.1	<0.4	23	-	52	88	<0.1	19	1800	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08526	02-Oct-19	SOIL	681511	NAD	14	<0.4	26	-	28	23	0.4	<5	34	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08570	02-Oct-19	SOIL	681511	NAD	22	0.6	34	-	410	140	0.7	12	270	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17_0.1-0.2	03-Oct-19	SOIL	681511	NAD	13	<0.4	44	-	39	120	0.2	27	130	14	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH18_0.1-0.2	03-Oct-19	SOIL	681511	NAD	8.1	<0.4	76	-	23	38	0.1	52	58	9.7	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH18_0.4-0.5	03-Oct-19	SOIL	681511	-	6.3	<0.4	28	-	14	23	<0.1	7.6	18	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_0.1-0.2	03-Oct-19	SOIL	681511	-	7.3	<0.4	42	-	31	17	<0.1	6.9	30	20	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH19_0.5-0.6	03-Oct-19	SOIL	681511	-	4.3	<0.4	20	-	7.9	28	<0.1	7.7	9.8	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.1-0.2	03-Oct-19	SOIL	681511	-	7.8	<0.4	45	-	38	67	<0.1	39	93	19	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH21_0.2-0.3	04-Oct-19	SOIL	681511	NAD	12	<0.4	22	-	21	59	0.1	6.2	62	18	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH22_0.0-0.1	03-Oct-19	SOIL	681511	NAD	24	<0.4	39	-	10	30	<0.1	6.9	19	12	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH22_0.4-0.5	03-Oct-19	SOIL	681511	-	21	<0.4	56	-	14	22	<0.1	<5	10	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.3-0.4	03-Oct-19	SOIL	681511	-	8.3	<0.4	22	-	12	18	<0.1	<5	8.5	16	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH24_0.1-0.2	04-Oct-19	SOIL	681511	NAD	10	<0.4	18	-	16	86	0.4	<5	32	26	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH24_0.4-0.5	04-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	24	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH25_0.1-0.2	03-Oct-19	SOIL	681511	-	2.4	<0.4	120	-	33	<5	<0.1	120	66	9.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH25_0.4-0.5	03-Oct-19	SOIL	681511	-	7.4	<0.4	20	-	7.6	15	<0.1	8.7	8.1	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.1-0.2	03-Oct-19	SOIL	681511	NAD	2.5	<0.4	150	<1	33	10	<0.1	110	55	17	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH26_0.7-0.8	03-Oct-19	SOIL	681511	-	7.4	<0.4	19	-	12	18	<0.1	<5	6.4	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27_0.2-0.3	03-Oct-19	SOIL	681511	NAD	7.3	<0.4	25	-	30	39	0.2	24	55	16	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH27_0.6-0.7	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	27	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH28_0.2-0.3	03-Oct-19	SOIL	681511	-	5.7	<0.4	22	-	15	54	<0.1	12	280	24	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP07_0.0-0.1	03-Oct-19	SOIL	681511	NAD	230	<0.4	<5	-	12	7	0.1	6.3	8.7	17	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP07_0.4-0.5	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	18	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP08_0.0-0.1	03-Oct-19	SOIL	683170	-	55	<0.4	6.8	-	7.7	12	<0.1	7.7	21	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09_0.0-0.1	03-Oct-19	SOIL	683170	-	16	<0.4	22	-	12	20	<0.1	<5	12	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09_0.4-0.5	03-Oct-19	SOIL	683170	-	6.3	<0.4	20	-	6.8	14	<0.1	<5	<5	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10_0.0-0.1	03-Oct-19	SOIL	681511	-	20	<0.4	10	-	14	24	<0.1	5.1	45	26	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP10_0.9-1.0	03-Oct-19	SOIL	681511	-	5.8	<0.4	24	-	9.8	18	<0.1	<5	9	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11_0.0-0.1	04-Oct-19	SOIL	681511	NAD	5.2	<0.4	7.2	-	12	23	<0.1	<5	44	8.7	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP12_0.0-0.1	04-Oct-19	SOIL	681511	-	56	<0.4	<5	-	11	11	<0.1	6.9	15	16	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP12_0.4-0.5	04-Oct-19	SOIL	681511	-	5.1	<0.4	23	-	11	16	<0.1	6.8	13	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13_0.0-0.1	04-Oct-19	SOIL	681511	NAD	3.7	<0.4	5.8	-	22	17	<0.1	17	19	17	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP13_0.4-0.5	04-Oct-19	SOIL	681511	-	4.1	<0.4	22	-	10	19	<0.1	5.1	11	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14_0.0-0.1	04-Oct-19	SOIL	681511	-	<2	<0.4	5.1	-	<5	11	<0.1	<5	11	7	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP15_0.0-0.1	04-Oct-19	SOIL	681511	NAD	3	<0.4	6.5	-	7.2	16	<0.1	<5	20	7.3	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP15_0.4-0.5	04-Oct-19	SOIL	681511	-	6.4	<0.4	21	-	<5	27	<0.1	7	8	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP16_0.0-0.1	04-Oct-19	SOIL	681511	-	5.9	<0.4	13	-	11	26	<0.1	<5	38	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP29_0.0-0.1	04-Oct-19	SOIL	681511	NAD	8.6	<0.4	20	-	72	150	<0.1	<5	87	12	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP29_0.4-0.5	04-Oct-19	SOIL	681511	-	15	<0.4	28	-	8.9	25	<0.1	7.5	22	8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP30_0.0-0.1	04-Oct-19	SOIL	681511	NAD	10	<0.4	32	-	16	18	<0.1	9.8	20	17	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

				OPP																																				
				Toxaphene	Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethoprop	Ethion	Fenitrothion	Fensulfothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	C6-C9	C10-C16
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				1	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	20	50
HSL-A Residential (Low Desnity) Direct Contact																																								3300
HSL-D Commercial/Industrial Intrusive Maintenance Worker																																								62000
NEPM 2013 Table 1A(1) HILs Res A Soil				20					160																															
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand 0-1m																																								
NEPM 2013 EILs Urban residential and public open space Aged Soil																																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																																								1000
Field_ID	**Sampled_Date_Time**	**Matrix_TYPE**	**Lab_Report_Number**																																					
A08507	02-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
A08508	02-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
A08509	02-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
A08526	02-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
A08570	02-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
BH17_0.1-0.2	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH18_0.1-0.2	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH18_0.4-0.5	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
BH19_0.1-0.2	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH19_0.5-0.6	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
BH20_0.1-0.2	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH21_0.2-0.3	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH22_0.0-0.1	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH22_0.4-0.5	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
BH23_0.3-0.4	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH24_0.1-0.2	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH24_0.4-0.5	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-
BH25_0.1-0.2	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH25_0.4-0.5	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
BH26_0.1-0.2	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH26_0.7-0.8	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
BH27_0.2-0.3	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
BH27_0.6-0.7	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-
BH28_0.2-0.3	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
TP07_0.0-0.1	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
TP07_0.4-0.5	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-
TP08_0.0-0.1	03-Oct-19	SOIL	683170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
TP09_0.0-0.1	03-Oct-19	SOIL	683170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
TP09_0.4-0.5	03-Oct-19	SOIL	683170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
TP10_0.0-0.1	03-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
TP10_0.9-1.0	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
TP11_0.0-0.1	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
TP12_0.0-0.1	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
TP12_0.4-0.5	04-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
TP13_0.0-0.1	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
TP13_0.4-0.5	04-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
TP14_0.0-0.1	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
TP15_0.0-0.1	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
TP15_0.4-0.5	04-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
TP16_0.0-0.1	04-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
TP29_0.0-0.1	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50
TP29_0.4-0.5	04-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<50
TP30_0.0-0.1	04-Oct-19	SOIL	681511	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<50

coffey

				Organic							PAH																												
				C16-C34	C34-C40	C6-C10	C10-C40 (Sum of total)	C10-C16 (F2 minus Naphthalene)	Naphthalene	C6-C10 (F1 minus BTEX)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(g,h,i)perylene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4-Dinitrophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				100	100	20	100	50	0.5	20	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	5	1	1	0.5	0.5	0.5	0.5	0.2
HSL-A Residential (Low Desnity) Direct Contact				4500	6300				1400	4400																													
HSL-D Commercial/Industrial Intrusive Maintenance Worker				85000	120000				29000	82000																													
NEPM 2013 Table 1A(1) HILs Res A Soil																3	3						3							300									
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand 0-1m								110	3	45																	3												
NEPM 2013 EILs Urban residential and public open space Aged Soil																											170												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil				1300	5600			120		180					0.7																								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil				2500	10000	700																																	
Field_ID	Sampled_Date_Time	Matrix_TYPE	Lab_Report_Number																																				
A08507	02-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
A08508	02-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
A08509	02-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
A08526	02-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
A08570	02-Oct-19	SOIL	681511	110	<100	<20	110	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH17_0.1-0.2	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH18_0.1-0.2	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH18_0.4-0.5	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH19_0.1-0.2	03-Oct-19	SOIL	681511	<100	150	<20	150	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH19_0.5-0.6	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH20_0.1-0.2	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH21_0.2-0.3	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH22_0.0-0.1	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH22_0.4-0.5	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH23_0.3-0.4	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH24_0.1-0.2	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH24_0.4-0.5	04-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.1-0.2	03-Oct-19	SOIL	681511	220	310	<20	530	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH25_0.4-0.5	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH26_0.1-0.2	03-Oct-19	SOIL	681511	<100	130	<20	130	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH26_0.7-0.8	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH27_0.2-0.3	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
BH27_0.6-0.7	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28_0.2-0.3	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP07_0.0-0.1	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP07_0.4-0.5	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08_0.0-0.1	03-Oct-19	SOIL	683170	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP09_0.0-0.1	03-Oct-19	SOIL	683170	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP09_0.4-0.5	03-Oct-19	SOIL	683170	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP10_0.0-0.1	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP10_0.9-1.0	03-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP11_0.0-0.1	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP12_0.0-0.1	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP12_0.4-0.5	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP13_0.0-0.1	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP13_0.4-0.5	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP14_0.0-0.1	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP15_0.0-0.1	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP15_0.4-0.5	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP16_0.0-0.1	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP29_0.0-0.1	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP29_0.4-0.5	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2
TP30_0.0-0.1	04-Oct-19	SOIL	681511	<100	<100	<20	<100	<50	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2

				SVOC											TPH				Volatile					
				2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	4-chloro-3-methylphenol	Dinoseb	Pentachlorophenol	Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	C10-C14	C15-C28	C29-C36	+C10-C36 (Sum of total)	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				1	5	20	5	1	20	1	0.5	10	1	20	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3
HSL-A Residential (Low Desnity) Direct Contact																			100	450	14000			12000
HSL-D Commercial/Industrial Intrusive Maintenance Worker																			1100	8500	120000			130000
NEPM 2013 Table 1A(1) HILs Res A Soil										100	3000													
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand 0-1m																			0.5	55	160			40
NEPM 2013 EILs Urban residential and public open space Aged Soil																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																			50	70	85			105
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																								
Field_ID	**Sampled_Date_Time**	**Matrix_TYPE**	**Lab_Report_Number**																					
A08507	02-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A08508	02-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A08509	02-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	57	64	121	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A08526	02-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A08570	02-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	58	67	125	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH17_0.1-0.2	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH18_0.1-0.2	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH18_0.4-0.5	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH19_0.1-0.2	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	72	72	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH19_0.5-0.6	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH20_0.1-0.2	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH21_0.2-0.3	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH22_0.0-0.1	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH22_0.4-0.5	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH23_0.3-0.4	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH24_0.1-0.2	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH24_0.4-0.5	04-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.1-0.2	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	77	250	327	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH25_0.4-0.5	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH26_0.1-0.2	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	100	100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH26_0.7-0.8	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH27_0.2-0.3	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH27_0.6-0.7	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28_0.2-0.3	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP07_0.0-0.1	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP07_0.4-0.5	03-Oct-19	SOIL	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08_0.0-0.1	03-Oct-19	SOIL	683170	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP09_0.0-0.1	03-Oct-19	SOIL	683170	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP09_0.4-0.5	03-Oct-19	SOIL	683170	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP10_0.0-0.1	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP10_0.9-1.0	03-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP11_0.0-0.1	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP12_0.0-0.1	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP12_0.4-0.5	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP13_0.0-0.1	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP13_0.4-0.5	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP14_0.0-0.1	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP15_0.0-0.1	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP15_0.4-0.5	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP16_0.0-0.1	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP29_0.0-0.1	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP29_0.4-0.5	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP30_0.0-0.1	04-Oct-19	SOIL	681511	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

			Asbestos	Heavy Metal								Inorganic
			Asbestos	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Moisture Content (dried @ 103°C)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%
EQL				2	0.4	5	5	5	0.1	5	5	1
NSW 2014 General Solid Waste CT1 (No Leaching)				100	20			100	4	40		
NSW 2014 Restricted Solid Waste CT2 (No Leaching)				400	80			400	16	160		
Field_ID	Sampled_Date_Time	Lab_Report_Number										
A08507	02-Oct-19	681511	NAD	12	<0.4	13	13	23	<0.1	<5	54	12
A08508	02-Oct-19	681511	NAD	14	<0.4	30	110	95	0.2	6.9	240	9.7
A08509	02-Oct-19	681511	NAD	9.1	<0.4	23	52	88	<0.1	19	1800	3.2
A08526	02-Oct-19	681511	NAD	14	<0.4	26	28	23	0.4	<5	34	6.5
A08570	02-Oct-19	681511	NAD	22	0.6	34	410	140	0.7	12	270	7.3
BH17_0.1-0.2	03-Oct-19	681511	NAD	13	<0.4	44	39	120	0.2	27	130	14
BH18_0.1-0.2	03-Oct-19	681511	NAD	8.1	<0.4	76	23	38	0.1	52	58	9.7
BH18_0.4-0.5	03-Oct-19	681511	-	6.3	<0.4	28	14	23	<0.1	7.6	18	24
BH19_0.1-0.2	03-Oct-19	681511	-	7.3	<0.4	42	31	17	<0.1	6.9	30	20
BH19_0.5-0.6	03-Oct-19	681511	-	4.3	<0.4	20	7.9	28	<0.1	7.7	9.8	19
BH20_0.1-0.2	03-Oct-19	681511	-	7.8	<0.4	45	38	67	<0.1	39	93	19
BH21_0.2-0.3	04-Oct-19	681511	NAD	12	<0.4	22	21	59	0.1	6.2	62	18
BH22_0.0-0.1	03-Oct-19	681511	NAD	24	<0.4	39	10	30	<0.1	6.9	19	12
BH22_0.4-0.5	03-Oct-19	681511	-	21	<0.4	56	14	22	<0.1	<5	10	26
BH23_0.3-0.4	03-Oct-19	681511	-	8.3	<0.4	22	12	18	<0.1	<5	8.5	16
BH24_0.1-0.2	04-Oct-19	681511	NAD	10	<0.4	18	16	86	0.4	<5	32	26
BH24_0.4-0.5	04-Oct-19	681511	-	-	-	-	-	-	-	-	-	24
BH25_0.1-0.2	03-Oct-19	681511	-	2.4	<0.4	120	33	<5	<0.1	120	66	9.1
BH25_0.4-0.5	03-Oct-19	681511	-	7.4	<0.4	20	7.6	15	<0.1	8.7	8.1	12
BH26_0.1-0.2	03-Oct-19	681511	NAD	2.5	<0.4	150	33	10	<0.1	110	55	17
BH26_0.7-0.8	03-Oct-19	681511	-	7.4	<0.4	19	12	18	<0.1	<5	6.4	20
BH27_0.2-0.3	03-Oct-19	681511	NAD	7.3	<0.4	25	30	39	0.2	24	55	16
BH27_0.6-0.7	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	27
BH28_0.2-0.3	03-Oct-19	681511	-	5.7	<0.4	22	15	54	<0.1	12	280	24
TP01_0.0-0.1	03-Oct-19	681511	NAD	4	<0.4	7	8.3	19	<0.1	<5	10	24
TP07_0.0-0.1	03-Oct-19	681511	NAD	230	<0.4	<5	12	7	0.1	6.3	8.7	17
TP07_0.4-0.5	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	18
TP08_0.0-0.1	03-Oct-19	683170	-	55	<0.4	6.8	7.7	12	<0.1	7.7	21	11
TP09_0.0-0.1	03-Oct-19	683170	-	16	<0.4	22	12	20	<0.1	<5	12	15
TP09_0.4-0.5	03-Oct-19	683170	-	6.3	<0.4	20	6.8	14	<0.1	<5	<5	15
TP10_0.0-0.1	03-Oct-19	681511	-	20	<0.4	10	14	24	<0.1	5.1	45	26
TP10_0.9-1.0	03-Oct-19	681511	-	5.8	<0.4	24	9.8	18	<0.1	<5	9	17
TP11_0.0-0.1	04-Oct-19	681511	NAD	5.2	<0.4	7.2	12	23	<0.1	<5	44	8.7
TP12_0.0-0.1	04-Oct-19	681511	-	56	<0.4	<5	11	11	<0.1	6.9	15	16
TP12_0.4-0.5	04-Oct-19	681511	-	5.1	<0.4	23	11	16	<0.1	6.8	13	20
TP13_0.0-0.1	04-Oct-19	681511	NAD	3.7	<0.4	5.8	22	17	<0.1	17	19	17
TP13_0.4-0.5	04-Oct-19	681511	-	4.1	<0.4	22	10	19	<0.1	5.1	11	16
TP14_0.0-0.1	04-Oct-19	681511	-	<2	<0.4	5.1	<5	11	<0.1	<5	11	7
TP15_0.0-0.1	04-Oct-19	681511	NAD	3	<0.4	6.5	7.2	16	<0.1	<5	20	7.3
TP15_0.4-0.5	04-Oct-19	681511	-	6.4	<0.4	21	<5	27	<0.1	7	8	8.4
TP16_0.0-0.1	04-Oct-19	681511	-	5.9	<0.4	13	11	26	<0.1	<5	38	13
TP29_0.0-0.1	04-Oct-19	681511	NAD	8.6	<0.4	20	72	150	<0.1	<5	87	12
TP29_0.4-0.5	04-Oct-19	681511	-	15	<0.4	28	8.9	25	<0.1	7.5	22	8.6
TP30_0.0-0.1	04-Oct-19	681511	NAD	10	<0.4	32	16	18	<0.1	9.8	20	17

	OCP																																					
Field_ID	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin aldehyde	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2
NSW 2014 General Solid Waste CT1 (No Leaching)																														4								
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																														16								
A08507	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08508	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17_0.1-0.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH18_0.1-0.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH18_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_0.1-0.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH19_0.5-0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.1-0.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH21_0.2-0.3	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH22_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH22_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.3-0.4	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH24_0.1-0.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH24_0.4-0.5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH25_0.1-0.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH25_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.1-0.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH26_0.7-0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27_0.2-0.3	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH27_0.6-0.7	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH28_0.2-0.3	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP01_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP07_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP07_0.4-0.5	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP08_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP10_0.9-1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP12_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP12_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP13_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP15_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP15_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP16_0.0-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP29_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP29_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP30_0.0-0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

OPP

Field_ID	Sampled_Date_Time	Lab_Report_Number	Ethoprop	Ethion	Fenitrothion	Fensulfothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NSW 2014 General Solid Waste CT1 (No Leaching)																							
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																							
A08507	02-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08508	02-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08509	02-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08526	02-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A08570	02-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17_0.1-0.2	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH18_0.1-0.2	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH18_0.4-0.5	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_0.1-0.2	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH19_0.5-0.6	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20_0.1-0.2	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH21_0.2-0.3	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH22_0.0-0.1	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH22_0.4-0.5	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.3-0.4	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH24_0.1-0.2	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH24_0.4-0.5	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH25_0.1-0.2	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH25_0.4-0.5	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26_0.1-0.2	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH26_0.7-0.8	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27_0.2-0.3	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH27_0.6-0.7	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH28_0.2-0.3	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP01_0.0-0.1	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP07_0.0-0.1	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP07_0.4-0.5	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP08_0.0-0.1	03-Oct-19	683170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09_0.0-0.1	03-Oct-19	683170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09_0.4-0.5	03-Oct-19	683170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10_0.0-0.1	03-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP10_0.9-1.0	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11_0.0-0.1	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP12_0.0-0.1	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP12_0.4-0.5	04-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13_0.0-0.1	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP13_0.4-0.5	04-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14_0.0-0.1	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP15_0.0-0.1	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP15_0.4-0.5	04-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP16_0.0-0.1	04-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP29_0.0-0.1	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP29_0.4-0.5	04-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP30_0.0-0.1	04-Oct-19	681511	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Organic

Field_ID	C6-C9	C10-C16	C16-C34	C34-C40	C6-C10	C10-C40 (Sum of total)	C10-C16 (F2 minus Naphthalene)	Naphthalene	C6-C10 (F1 minus BTEX)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	20	50	100	100	20	100	50	0.5	20
NSW 2014 General Solid Waste CT1 (No Leaching)	650								
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	2600								
A08507	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
A08508	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
A08509	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
A08526	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
A08570	<20	<50	110	<100	<20	110	<50	<0.5	<20
BH17_0.1-0.2	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH18_0.1-0.2	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH18_0.4-0.5	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH19_0.1-0.2	<20	<50	<100	150	<20	150	<50	<0.5	<20
BH19_0.5-0.6	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH20_0.1-0.2	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH21_0.2-0.3	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH22_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH22_0.4-0.5	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH23_0.3-0.4	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH24_0.1-0.2	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH24_0.4-0.5	-	-	-	-	-	-	-	-	-
BH25_0.1-0.2	<20	<50	220	310	<20	530	<50	<0.5	<20
BH25_0.4-0.5	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH26_0.1-0.2	<20	<50	<100	130	<20	130	<50	<0.5	<20
BH26_0.7-0.8	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH27_0.2-0.3	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
BH27_0.6-0.7	-	-	-	-	-	-	-	-	-
BH28_0.2-0.3	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP01_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP07_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP07_0.4-0.5	-	-	-	-	-	-	-	-	-
TP08_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP09_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP09_0.4-0.5	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP10_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP10_0.9-1.0	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP11_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP12_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP12_0.4-0.5	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP13_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP13_0.4-0.5	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP14_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP15_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP15_0.4-0.5	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP16_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP29_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP29_0.4-0.5	<20	<50	<100	<100	<20	<100	<50	<0.5	<20
TP30_0.0-0.1	<20	<50	<100	<100	<20	<100	<50	<0.5	<20

PAH

Field_ID	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(g,h,i)perylene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NSW 2014 General Solid Waste CT1 (No Leaching)					0.8														
NSW 2014 Restricted Solid Waste CT2 (No Leaching)					3.2														
A08507	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A08508	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A08509	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A08526	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A08570	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH17_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH18_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH18_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH19_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH19_0.5-0.6	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH20_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH21_0.2-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH22_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH22_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH23_0.3-0.4	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH24_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH24_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH25_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH26_0.1-0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH26_0.7-0.8	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH27_0.2-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH27_0.6-0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28_0.2-0.3	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP01_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP07_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP07_0.4-0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP09_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP09_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10_0.9-1.0	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP11_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP12_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP12_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP13_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP13_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP14_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP15_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP15_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP16_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP29_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP29_0.4-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP30_0.0-0.1	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

			SVOC																						TPH				Volatile						
			PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4-Dinitrophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	4-chloro-3-methylphenol	Dinoseb	Pentachlorophenol	Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	C10-C14	C15-C28	C29-C36	+C10-C36 (Sum of total)	3/4-Methylphenol (m/p-cresol)	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.4	5	1	1	0.5	0.5	0.5	0.5	0.2	1	5	20	5	1	20	1	0.5	10	1	20	20	50	50	50	0.2	0.1	0.1	0.1	0.2	0.1	0.3
NSW 2014 General Solid Waste CT1 (No Leaching)			200			8000	40					4000															10000		10	600	288			1000
NSW 2014 Restricted Solid Waste CT2 (No Leaching)			800			32000	160					16000															40000		40	2400	1152			4000
Field_ID	Sampled_Date_Time	Lab_Report_Number																																	
A08507	02-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A08508	02-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A08509	02-Oct-19	681511	<0.5	<0.5	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	57	64	121	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A08526	02-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
A08570	02-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	58	67	125	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH17_0.1-0.2	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH18_0.1-0.2	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH18_0.4-0.5	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH19_0.1-0.2	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	72	72	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH19_0.5-0.6	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH20_0.1-0.2	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH21_0.2-0.3	04-Oct-19	681511	0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH22_0.0-0.1	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH22_0.4-0.5	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH23_0.3-0.4	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH24_0.1-0.2	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH24_0.4-0.5	04-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25_0.1-0.2	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	77	250	327	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH25_0.4-0.5	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH26_0.1-0.2	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	100	100	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH26_0.7-0.8	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH27_0.2-0.3	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH27_0.6-0.7	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28_0.2-0.3	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP01_0.0-0.1	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP07_0.0-0.1	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP07_0.4-0.5	03-Oct-19	681511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08_0.0-0.1	03-Oct-19	683170	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP09_0.0-0.1	03-Oct-19	683170	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP09_0.4-0.5	03-Oct-19	683170	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP10_0.0-0.1	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP10_0.9-1.0	03-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP11_0.0-0.1	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP12_0.0-0.1	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP12_0.4-0.5	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP13_0.0-0.1	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP13_0.4-0.5	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP14_0.0-0.1	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP15_0.0-0.1	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP15_0.4-0.5	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP16_0.0-0.1	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP29_0.0-0.1	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP29_0.4-0.5	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
TP30_0.0-0.1	04-Oct-19	681511	<0.5	<0.4	<5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<5	<20	<5	<1	<20	<1	<0.5	<10	<1	<20	<20	<50	<50	<50	<0.2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

Appendix C Logs

SOIL BOREHOLE BH101

PROJECT NUMBER 68150
PROJECT NAME 68150 Liverpool HS DGI + RAP
CLIENT Meinhardt
ADDRESS 18 Forbes Street
DRILLING DATE 09 Jan 2025

DRILLING COMPANY Legion Drilling
DRILL RIG GeoProbe
DRILLING METHOD Push Tube/Solid Flight Auge
DIAMETER 50 mm

EASTING 308719.7491
NORTHING 6245175.3955
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 3.00 m bgl
LOGGED BY E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT		0.2		Fill - Silty SAND, grey-yellow, heterogeneous, damp, poorly graded, medium sand, sub-angular, loose, with no inclusions	DP	BH101_0.00-0.10 BH101_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (BH101_0.0-0.3).
		0.4 0.6 0.8 1		CL-ML-SM Natural - Sandy Silty CLAY, brown-orange, heterogeneous, dry-damp, non-plastic, stiff, with no inclusions	DP	BH101_0.40-0.50 BH101_0.90-1.00		No odours, staining, or asbestos observed.
		1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3		CL-ML-SM Natural - Sandy Silty CLAY, grey-white, heterogeneous, dry, non-plastic, very stiff, with no inclusions Becomes light red at 2.0 m bgs	DR	BH101_1.40-1.50 BH101_1.90-2.00 BH101_2.40-2.50 BH101_2.90-3.00		No odours, staining, or asbestos observed.
		3.2 3.4		Termination Depth at:3.00 m.				

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 27 Jan 2025

SOIL BOREHOLE BH102

PROJECT NUMBER 68150
PROJECT NAME 68150 Liverpool HS DGI + RAP
CLIENT Meinhardt
ADDRESS 18 Forbes Street
DRILLING DATE 08 Jan 2025

DRILLING COMPANY Legion Drilling
DRILL RIG GeoProbe
DRILLING METHOD Push Tube/Solid Flight Auge
DIAMETER 50 mm

EASTING 308754.7094
NORTHING 6245160.5604
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 3.00 m bgl
LOGGED BY E Piccinin

COMMENTS Asphalt was present at the site with an observed thickness of 0.05m.
Underlying soils were sampled from 0.0 mbgs which is reported as commencing from directly below the Asphalt.

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT		0.2		Fill - Silty SAND, dark brown, heterogeneous, dry, poorly graded, medium sand, sub-angular, loose, with inclusions of weathered shale gravels, roots, and rootlets	DR	BH102_0.00-0.10 BH102_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (BH102_0.0-0.3).
		0.4		CL-ML Natural - Silty CLAY, brown, heterogeneous, dry-damp, non-low plasticity, stiff, with inclusions of weathered shale gravels, roots, and rootlets	DP	BH102_0.40-0.50		No odours, staining, or asbestos observed.
		0.6		Becomes orange-red at 0.7 m bgs				
		0.8						
		1				BH102_0.90-1.00		
		1.2						
		1.4		CL-ML Natural - Silty CLAY, grey-yellow, heterogeneous, dry, low plasticity, stiff, with inclusions of weathered shale gravels	DR	BH102_1.40-1.50		No odours, staining, or asbestos observed.
		1.6						
		1.8						
		2				BH102_1.90-2.00		
		2.2		Becomes grey-white at 2.3 m bgs				
		2.4				BH102_2.40-2.50		
		2.6		CL-ML-SM Natural - Sandy Silty CLAY, grey-yellow, heterogeneous, dry, non-plastic, stiff, with inclusions of weathered shale gravels	DR			No odours, staining, or asbestos observed.
		2.8						
		3				BH102_2.90-3.00		
				Termination Depth at:3.00 m.				
		3.2						
		3.4						

SOIL BOREHOLE BH103

PROJECT NUMBER 68150	**DRILLING COMPANY** Legion Drilling	**EASTING** 308792.7748
PROJECT NAME 68150 Liverpool HS DGI + RAP	**DRILL RIG** GeoProbe	**NORTHING** 6245173.2105
CLIENT Meinhardt	**DRILLING METHOD** Push Tube/Solid Flight Auge	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**DIAMETER** 50 mm	**TOTAL DEPTH** 3.00 m bgl
DRILLING DATE 08 Jan 2025		**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT		0.2		Fill - Sandy GRAVEL, black-grey, heterogeneous, moist, poorly graded, medium gravel, sub-angular, loose, with no inclusions	M	BH103_0.00-0.10		No odours or staining observed.
					DP			No asbestos observed in 10L AQ (BH103_0.0-0.1).
		0.4		Fill - Sandy Silty CLAY, brown-orange, heterogeneous, dry-damp, non-plastic, stiff, with inclusions of weathered shale gravels		BH103_0.20-0.30		No odours or staining observed.
				CL-ML Natural - Silty CLAY, brown, heterogeneous, dry-damp, non-low plasticity, stiff, with inclusions of rootlets	DP	BH103_0.40-0.50		No asbestos observed in 10L AQ (BH103_0.1-0.4).
		0.6						No odours, staining, or asbestos observed.
		0.8						
		1				BH103_0.90-1.00		
		1.2						
		1.4				BH103_1.40-1.50		
		1.6		CH-MH Natural - Silty CLAY, grey-red-yellow, heterogeneous, damp, low-medium plasticity, firm-stiff, with inclusions of weathered shale gravels	DP			No odours, staining, or asbestos observed.
		1.8						
		2				BH103_1.90-2.00		
		2.2						
		2.4				BH103_2.40-2.50		
		2.6						
		2.8						
		3				BH103_2.90-3.00		
		3.2		Termination Depth at:3.00 m.				
		3.4						

produced by ESlog.ESdat.net on 27 Jan 2025

SOIL BOREHOLE BH104

PROJECT NUMBER 68150	**DRILLING COMPANY** Legion Drilling	**EASTING** 308806.5749
PROJECT NAME 68150 Liverpool HS DGI + RAP	**DRILL RIG** GeoProbe	**NORTHING** 6245154.6953
CLIENT Meinhardt	**DRILLING METHOD** Push Tube/Solid Flight Auge	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**DIAMETER** 50 mm	**TOTAL DEPTH** 3.30 m bgl
DRILLING DATE 08 Jan 2025		**LOGGED BY** E Piccinin

COMMENTS Asphalt was present at the site with an observed thickness of 0.05m.
Underlying soils were sampled from 0.0 mbgs which is reported as commencing from directly below the Asphalt.

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT		0.2		Fill - Sandy Silty CLAY, brown-orange, heterogeneous, dry-damp, non-plastic, stiff, with no inclusions	DP	BH104_0.00-0.10 BH104_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (BH104_0.0-0.4).
		0.4		CL-ML Natural - Silty CLAY, brown-orange, heterogeneous, dry-damp, low plasticity, firm, with inclusions of weathered shale gravels	DP	BH104_0.40-0.50		No odours, staining, or asbestos observed.
		0.6						
		0.8						
		1		Becomes grey-yellow at 1.0 m bgs		BH104_0.90-1.00		
		1.2						
		1.4				BH104_1.40-1.50		
		1.6						
		1.8						
		2				BH104_1.90-2.00		
		2.2						
		2.4				BH104_2.40-2.50		
		2.6						
		2.8						
		3		Becomes grey-red-yellow with weathered shale gravels at 2.9 m bgs		BH104_2.90-3.00		
		3.2						
		3.4		Termination Depth at:3.30 m.				

produced by ESlog.ESdat.net on 27 Jan 2025

SOIL BOREHOLE BH105

PROJECT NUMBER 68150	**DRILLING COMPANY** Legion Drilling	**EASTING** 308847.4003
PROJECT NAME 68150 Liverpool HS DGI + RAP	**DRILL RIG** GeoProbe	**NORTHING** 6245147.6803
CLIENT Meinhardt	**DRILLING METHOD** Push Tube/Solid Flight Auge	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**DIAMETER** 50 mm	**TOTAL DEPTH** 3.10 m bgl
DRILLING DATE 08 Jan 2025		**LOGGED BY** E Piccinin

COMMENTS Asphalt was present at the site with an observed thickness of 0.05m.
Underlying soils were sampled from 0.0 mbgs which is reported as commencing from directly below the Asphalt.

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT		0.2		Fill - Sandy GRAVEL, black-grey, heterogeneous, damp, poorly graded, medium gravel, sub-angular, loose, with no inclusions	DP	BH105_0.00-0.10		No odours or staining observed. No asbestos observed in 10L AQ (BH105_0.0-0.2).
		0.4		Fill - Silty Gravelly CLAY, grey, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of ash	DP	BH105_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (BH105_0.2-0.4).
		0.6		CH-MH Natural - Silty CLAY, brown-orange, heterogeneous, damp, low-medium plasticity , firm-stiff, with inclusions of organic matter	DP	BH105_0.40-0.50		No odours, staining, or asbestos observed.
		0.8		CH-MH Natural - Silty CLAY, grey-red-yellow, heterogeneous, damp, low-medium plasticity, firm, with inclusions of weathered shale gravels	DP			No odours, staining, or asbestos observed.
		1				BH105_0.90-1.00		
		1.2						
		1.4				BH105_1.40-1.50		
		1.6						
		1.8						
		2				BH105_1.90-2.00		
		2.2						
		2.4				BH105_2.40-2.50		
		2.6						
		2.8						
		3				BH105_2.90-3.00		
		3.2		Termination Depth at:3.10 m.				
		3.4						

SOIL BOREHOLE BH106

PROJECT NUMBER 68150	**DRILLING COMPANY** Legion Drilling	**EASTING** 308887.4207
PROJECT NAME 68150 Liverpool HS DGI + RAP	**DRILL RIG** GeoProbe	**NORTHING** 6245148.8303
CLIENT Meinhardt	**DRILLING METHOD** Push Tube/Solid Flight Auge	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**DIAMETER** 50 mm	**TOTAL DEPTH** 3.00 m bgl
DRILLING DATE 09 Jan 2025		**LOGGED BY** E Piccinin

COMMENTS Concrete was present at the site with an observed thickness of 0.14m.
Underlying soils were sampled from 0.0 mbgs which is reported as commencing from directly below the Concrete.

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT		0.2		Fill - Sandy GRAVEL, black-grey, heterogeneous, damp-wet, poorly graded, medium gravel, sub-angular, loose, with no inclusions	DP	BH106_0.00-0.10 BH106_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (BH106_0.0-0.4).
		0.4		CH-MH Natural - Silty CLAY, brown-yellow, heterogeneous, moist-wet, medium-high plasticity, firm, with inclusions of rootlets	M	BH106_0.40-0.50 BH106_0.90-1.00		No odours, staining, or asbestos observed.
		1.2		CH-MH Natural - Silty CLAY, grey-red, heterogeneous, moist, medium-high plasticity, firm, with inclusions of weathered shale gravels	M	BH106_1.40-1.50 BH106_1.90-2.00 BH106_2.40-2.50 BH106_2.90-3.00		No odours, staining, or asbestos observed.
		3		Termination Depth at:3.00 m.				

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 27 Jan 2025

SOIL BOREHOLE BH107

PROJECT NUMBER 68150
PROJECT NAME 68150 Liverpool HS DGI + RAP
CLIENT Meinhardt
ADDRESS 18 Forbes Street
DRILLING DATE 09 Jan 2025

DRILLING COMPANY Legion Drilling
DRILL RIG GeoProbe
DRILLING METHOD Push Tube/Solid Flight Auge
DIAMETER 50 mm

EASTING 308893.0288
NORTHING 6245096.5484
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 3.10 m bgl
LOGGED BY E Piccinin

COMMENTS Asphalt was present at the site with an observed thickness of 0.05m.
Underlying soils were sampled from 0.0 mbgs which is reported as commencing from directly below the Asphalt.

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT		0.2		Fill - Sandy GRAVEL, black-grey, heterogeneous, damp, poorly graded, medium gravel, sub-angular, loose, with no inclusions	DP	BH107_0.00-0.10		No odours or staining observed.
					DP			No asbestos observed in 10L AQ (BH107_0.0-0.1).
		0.4		Fill - Silty Gravelly CLAY, dark brown-grey, heterogeneous, damp-moist, medium-high plasticity, firm, with inclusions of weathered shale gravels and rootlets		BH107_0.20-0.30		
						BH107_0.40-0.50		No odours or staining observed.
		0.6		CH-MH Natural - Silty CLAY, grey-yellow, heterogeneous, moist, medium-high plasticity, firm, with inclusions of rootlets	M			No asbestos observed in 10L AQ (BH107_0.1-0.5).
		0.8						No odours, staining, or asbestos observed.
		1				BH107_0.90-1.00		
		1.2						
		1.4		CH-MH Natural - Silty CLAY, grey-red, heterogeneous, moist, medium-high plasticity, firm, with inclusions of weathered shale gravels and rootlets	M	BH107_1.40-1.50		No odours, staining, or asbestos observed.
		1.6						
		1.8						
		2				BH107_1.90-2.00		
		2.2						
		2.4				BH107_2.40-2.50		
		2.6						
		2.8						
		3				BH107_2.90-3.00		
		3.2		Termination Depth at:3.10 m.				
		3.4						

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 27 Jan 2025

SOIL BOREHOLE BH108

PROJECT NUMBER 68150
PROJECT NAME 68150 Liverpool HS DGI + RAP
CLIENT Meinhardt
ADDRESS 18 Forbes Street
DRILLING DATE 09 Jan 2025

DRILLING COMPANY Legion Drilling
DRILL RIG GeoProbe
DRILLING METHOD Push Tube/Solid Flight Auge
DIAMETER 50 mm

EASTING 308830.5656
NORTHING 6245082.574
COORD SYS GDA2020_MGA_zone_56
TOTAL DEPTH 3.00 m bgl
LOGGED BY E Piccinin

COMMENTS Asphalt was present at the site with an observed thickness of 0.05m.
Underlying soils were sampled from 0.0 mbgs which is reported as commencing from directly below the Asphalt.

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
PT		0.2		Fill - Sandy GRAVEL, black-grey, heterogeneous, damp, poorly graded, medium gravel, sub-angular, loose, with no inclusions	DP	BH108_0.00-0.10 BH108_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (BH108_0.0-0.3).
		0.4		CH-MH Natural - Silty CLAY, brown-grey, heterogeneous, damp-moist, medium plasticity, firm, with inclusions of organic matter	DP	BH108_0.40-0.50		No odours, staining, or asbestos observed.
		0.6		CH-MH Natural - Silty CLAY, grey-red, heterogeneous, damp-moist, medium plasticity, firm, with inclusions of rootlets	DP			No odours, staining, or asbestos observed.
		0.8						
		1				BH108_0.90-1.00		
		1.2						
		1.4				BH108_1.40-1.50		
		1.6		CH-MH Natural - Silty CLAY, grey-red-yellow, heterogeneous, damp-moist, medium plasticity, firm, with inclusions of weathered shale gravels	DP			No odours, staining, or asbestos observed.
		1.8						
		2				BH108_1.90-2.00		
		2.2						
		2.4				BH108_2.40-2.50		
		2.6						
		2.8		SP Natural - SAND, white-yellow, homogenous, damp, poorly graded, medium sand, sub-angular, loose, with no inclusions	DP			No odours, staining, or asbestos observed.
		3				BH108_2.90-3.00		
		3.2		Termination Depth at:3.00 m.				
		3.4						

produced by ESlog.ESdat.net on 27 Jan 2025

SOIL BOREHOLE BH109

PROJECT NUMBER 68150	**DRILLING COMPANY** Legion Drilling	**EASTING** 308752.2934
PROJECT NAME 68150 Liverpool HS DGI + RAP	**DRILL RIG** GeoProbe	**NORTHING** 6245131.9647
CLIENT Meinhardt	**DRILLING METHOD** Solid Flight Auger	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**DIAMETER** 50 mm	**TOTAL DEPTH** 1.60 m bgl
DRILLING DATE 09 Jan 2025		**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA		0.2		Fill - Silty Gravelly SAND, grey, heterogeneous, damp, poorly graded, medium sand, sub-angular, loose, with inclusions of roots and rootlets	DP			No odours, staining, or asbestos observed.
		0.4		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of ash, brick, concrete, roots, and rootlets	DP			No odours, staining, or asbestos observed.
		0.6		CL Natural - CLAY, orange-red, homogenous, damp, low-medium plasticity, firm-stiff, with inclusions of rootlets	DP			No odours, staining, or asbestos observed.
		0.8						
		1		Becomes grey-red at 1.0 m bgs				
		1.2						
		1.4						
		1.6		Termination Depth at:1.60 m.				
		1.8						
		2						
		2.2						
		2.4						
		2.6						
		2.8						
		3						
		3.2						
		3.4						

produced by ESlog.ESdat.net on 28 Jan 2025

SOIL BOREHOLE BH110

PROJECT NUMBER 68150	**DRILLING COMPANY** Legion Drilling	**EASTING** 308747.418
PROJECT NAME 68150 Liverpool HS DGI + RAP	**DRILL RIG** GeoProbe	**NORTHING** 6245060.4131
CLIENT Meinhardt	**DRILLING METHOD** Solid Flight Auger	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**DIAMETER** 50 mm	**TOTAL DEPTH** 1.40 m bgl
DRILLING DATE 09 Jan 2025		**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
SFA		0.2		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of ash, leaf litter, roots and rootlets	DP			No odours, staining, or asbestos observed.
		0.4		Fill - Silty CLAY, brown-grey-red, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of ash, weathered shale gravels, roots and rootlets	DP			No odours, staining, or asbestos observed.
		0.6		CL Natural - CLAY, brown-red, homogenous, damp, low plasticity, firm-stiff, with inclusions of rootlets	DP			No odours, staining, or asbestos observed.
		0.8						
		1						
		1.2						
		1.4		Termination Depth at:1.40 m.				
		1.6						
		1.8						
		2						
		2.2						
		2.4						
		2.6						
		2.8						
		3						
		3.2						
		3.4						

produced by ESlog.ESdat.net on 28 Jan 2025

TEST PIT TP101

PROJECT NUMBER 68150	**DRILLING COMPANY** Ken Coles	**EASTING** 308708.5971
PROJECT NAME 68150 Liverpool HS DGI + RAP	**PLANT TYPE** Excavator	**NORTHING** 6245091.6463
CLIENT Meinhardt	**METHOD** Test Pit	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**TP LENGTH (m)** m	**TOTAL DEPTH** 1.00 m bgl
DRILLING DATE 07 Jan 2025	**TP WIDTH (m)** m	**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.1		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of roots and rootlets	DP	TP101_0.00-0.10		No odours or staining observed. No asbestos observed in 10L AQ (TP101_0.0-0.3).
		0.2				TP101_0.20-0.30		
		0.3		Fill - Clayey SILT, light brown, heterogeneous, dry-damp, non-plastic, soft-firm, with no inclusions	DP			No odours or staining observed. No asbestos observed in 10L AQ (TP101_0.3-0.5).
		0.4				TP101_0.40-0.50		
		0.5		CL Natural - CLAY, brown-red, homogenous, dry-damp, low plasticity, firm-stiff, with no inclusions	DP			No odours, staining, or asbestos observed.
		0.6						
		0.7						
		0.8						
		0.9				TP101_0.90-1.00		
		1		Termination Depth at:1.00 m.				
		1.1						
		1.2						
		1.3						
		1.4						
		1.5						
		1.6						
		1.7						
		1.8						
		1.9						

produced by ESlog.ESdat.net on 27 Jan 2025

TEST PIT TP102

PROJECT NUMBER 68150	**DRILLING COMPANY** Ken Coles	**EASTING** 308752.2498
PROJECT NAME 68150 Liverpool HS DGI + RAP	**PLANT TYPE** Excavator	**NORTHING** 6245088.0588
CLIENT Meinhardt	**METHOD** Test Pit	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**TP LENGTH (m)** m	**TOTAL DEPTH** 1.40 m bgl
DRILLING DATE 07 Jan 2025	**TP WIDTH (m)** m	**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.1		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of ash, leaf litter, roots and rootlets	DP	TP102_0.00-0.10		No odours or staining observed. No asbestos observed in 10L AQ (TP102_0.0-0.2).
		0.2		Fill - Silty CLAY, brown-grey-red, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of ash, weathered shale gravels, roots and rootlets	DP	TP102_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (TP102_0.2-0.4).
		0.4		Fill - Clayey SILT, light brown, heterogeneous, dry-damp, non-plastic, soft-firm, with no inclusions	DP	TP102_0.40-0.50		No odours or staining observed. No asbestos observed in 10L AQ (TP102_0.4-0.7).
		0.7		CL Natural - CLAY, brown-red, homogenous, damp, low plasticity, firm-stiff, with inclusions of rootlets	DP	TP102_0.90-1.00		No odours, staining, or asbestos observed.
		1.4		Termination Depth at:1.40 m.				

TEST PIT TP103

PROJECT NUMBER 68150	**DRILLING COMPANY** Ken Coles	**EASTING** 308710.8526
PROJECT NAME 68150 Liverpool HS DGI + RAP	**PLANT TYPE** Excavator	**NORTHING** 6245057.3584
CLIENT Meinhardt	**METHOD** Test Pit	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**TP LENGTH (m)** m	**TOTAL DEPTH** 0.80 m bgl
DRILLING DATE 07 Jan 2025	**TP WIDTH (m)** m	**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.1 0.2 0.3		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, soft, with inclusions of roots and rootlets	DP	TP103_0.00-0.10 TP103_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (TP103_0.0-0.3).
		0.4 0.5 0.6 0.7 0.8		CL Natural - CLAY, brown-red, homogenous, damp, low plasticity, firm-stiff, with inclusions of roots and rootlets	DP	TP103_0.40-0.50		No odours, staining, or asbestos observed.
		0.9 1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9		Termination Depth at:0.80 m.				

TEST PIT TP104

PROJECT NUMBER 68150	**DRILLING COMPANY** Ken Coles	**EASTING** 308734.4048
PROJECT NAME 68150 Liverpool HS DGI + RAP	**PLANT TYPE** Excavator	**NORTHING** 6245048.2319
CLIENT Meinhardt	**METHOD** Test Pit	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**TP LENGTH (m)** m	**TOTAL DEPTH** 1.20 m bgl
DRILLING DATE 07 Jan 2025	**TP WIDTH (m)** m	**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.1 0.2 0.3		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of roots and rootlets	DP	TP104_0.00-0.10 TP104_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (TP104_0.0-0.3).
		0.4 0.5 0.6 0.7		Fill - Silty CLAY, brown-orange, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of ash, glass, roots and rootlets	DP	TP104_0.40-0.50		No odours or staining observed. No asbestos observed in 10L AQ (TP104_0.3-0.7).
		0.8 0.9 1 1.1 1.2		CL Natural - CLAY, brown-red, homogenous, damp, low plasticity, firm-stiff, with inclusions of rootlets	DP	TP104_0.90-1.00		No odours, staining, or asbestos observed.
		1.3 1.4 1.5 1.6 1.7 1.8 1.9		Termination Depth at:1.20 m.				

produced by ESlog.ESdat.net on 27 Jan 2025

TEST PIT TP105

PROJECT NUMBER 68150	**DRILLING COMPANY** Ken Coles	**EASTING** 308749.4022
PROJECT NAME 68150 Liverpool HS DGI + RAP	**PLANT TYPE** Excavator	**NORTHING** 6245114.7457
CLIENT Meinhardt	**METHOD** Test Pit	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**TP LENGTH (m)** m	**TOTAL DEPTH** 1.60 m bgl
DRILLING DATE 07 Jan 2025	**TP WIDTH (m)** m	**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.1		Fill - Silty Gravelly SAND, grey, heterogeneous, damp, poorly graded, medium sand, sub-angular, loose, with inclusions of roots and rootlets	DP	TP105_0.00-0.10		No odours or staining observed. No asbestos observed in 10L AQ (TP105_0.0-0.1).
		0.2		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of ash, brick, concrete, roots, rootlets and asbestos fragments	DP	TP105_0.20-0.30		No odours or staining observed. Four asbestos fragments (TP105-FRAG01 to TP105-FRAG04) observed in 10L AQ (TP105_0.1-0.6).
		0.3						
		0.4				TP105_0.40-0.50		
		0.5						
		0.6		CL Natural - CLAY, orange-red, homogenous, damp, low-medium plasticity, firm-stiff, with inclusions of rootlets	DP			No odours, staining, or asbestos observed.
		0.7						
		0.8						
		0.9				TP105_0.90-1.00		
		1		Becomes grey-red at 1.0 m bgs				
		1.1						
		1.2						
		1.3						
		1.4				TP105_1.40-1.50		
		1.5						
		1.6						
		1.7		Termination Depth at:1.60 m.				
		1.8						
		1.9						

produced by ESlog.ESdat.net on 27 Jan 2025

TEST PIT TP106

PROJECT NUMBER 68150	**DRILLING COMPANY** Ken Coles	**EASTING** 308736.1683
PROJECT NAME 68150 Liverpool HS DGI + RAP	**PLANT TYPE** Excavator	**NORTHING** 6245146.0708
CLIENT Meinhardt	**METHOD** Test Pit	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**TP LENGTH (m)** m	**TOTAL DEPTH** 1.00 m bgl
DRILLING DATE 07 Jan 2025	**TP WIDTH (m)** m	**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.1		Fill - Silty Gravelly SAND, grey, heterogeneous, damp, poorly graded, medium sand, sub-angular, loose, with inclusions of ash, ceramic, roots, and rootlets	DP	TP106_0.00-0.10		No odours or staining observed. No asbestos observed in 10L AQ (TP106_0.0-0.1).
		0.2		Fill - Silty CLAY, brown-orange, heterogeneous, damp, low plasticity, firm-stiff, with inclusions of weathered shale gravels	DP	TP106_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (TP106_0.1-0.5).
		0.3						
		0.4				TP106_0.40-0.50		
		0.5		CL Natural - CLAY, orange-red, homogenous, damp, low-medium plasticity, firm-stiff, with inclusions of weathered shale gravels	DP			No odours, staining, or asbestos observed.
		0.6						
		0.7						
		0.8						
		0.9				TP106_0.90-1.00		
		1		Termination Depth at:1.00 m.				
		1.1						
		1.2						
		1.3						
		1.4						
		1.5						
		1.6						
		1.7						
		1.8						
		1.9						

produced by ESlog.ESdat.net on 27 Jan 2025

TEST PIT TP107

PROJECT NUMBER 68150	**DRILLING COMPANY** Ken Coles	**EASTING** 308853.741
PROJECT NAME 68150 Liverpool HS DGI + RAP	**PLANT TYPE** Excavator	**NORTHING** 6245124.5912
CLIENT Meinhardt	**METHOD** Test Pit	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**TP LENGTH (m)** m	**TOTAL DEPTH** 1.50 m bgl
DRILLING DATE 07 Jan 2025	**TP WIDTH (m)** m	**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.1		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, soft, with inclusions of ash, glass, metal, roots, rootlets, tile and an asbestos fragment	DP	TP107_0.00-0.10		No odours or staining observed. One asbestos fragment (TP107-FRAG01) observed in 10L AQ (TP107_0.0-0.2).
		0.2						
		0.3		Fill - Silty CLAY, brown-grey, heterogeneous, dry-damp, low plasticity, stiff, with inclusions of ash, glass, metal, roots, rootlets, and tile	DP	TP107_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (TP107_0.2-0.4).
		0.4						
		0.5		Fill - Sandy SILT, light brown, heterogeneous, damp, non-low plasticity, soft, with no inclusions	DP	TP107_0.40-0.50		No odours or staining observed. No asbestos observed in 10L AQ (TP107_0.4-0.6).
		0.6		CL Natural - CLAY, red, homogenous, damp, low-medium plasticity, firm-stiff, with no inclusions	DP			No odours, staining, or asbestos observed.
		0.7						
		0.8						
		0.9				TP107_0.90-1.00		
		1						
		1.1						
		1.2						
		1.3						
		1.4				TP107_1.40-1.50		
		1.5		Termination Depth at:1.50 m.				
		1.6						
		1.7						
		1.8						
		1.9						

produced by ESlog.ESdat.net on 27 Jan 2025

TEST PIT TP108

PROJECT NUMBER 68150	**DRILLING COMPANY** Ken Coles	**EASTING** 308879.5362
PROJECT NAME 68150 Liverpool HS DGI + RAP	**PLANT TYPE** Excavator	**NORTHING** 6245029.4315
CLIENT Meinhardt	**METHOD** Test Pit	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**TP LENGTH (m)** m	**TOTAL DEPTH** 1.50 m bgl
DRILLING DATE 07 Jan 2025	**TP WIDTH (m)** m	**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.1		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, soft, with inclusions of roots and rootlets	DP	TP108_0.00-0.10		No odours or staining observed. No asbestos observed in 10L AQ (TP108_0.0-0.1).
		0.2		Fill - Silty CLAY, brown-grey, heterogeneous, damp, low plasticity, stiff, with inclusions of ash, glass, weathered shale gravels, and rootlets	DP	TP108_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (TP108_0.1-1.0).
		0.3						
		0.4				TP108_0.40-0.50		
		0.5						
		0.6						
		0.7						
		0.8						
		0.9				TP108_0.90-1.00		
		1		CL Natural - CLAY, brown-orange, homogenous, damp, low-medium plasticity, firm-stiff, with no inclusions	DP			No odours, staining, or asbestos observed.
		1.1						
		1.2						
		1.3						
		1.4				TP108_1.40-1.50		
		1.5		Termination Depth at:1.50 m.				
		1.6						
		1.7						
		1.8						
		1.9						

produced by ESlog.ESdat.net on 27 Jan 2025

TEST PIT TP109

PROJECT NUMBER 68150	**DRILLING COMPANY** Ken Coles	**EASTING** 308834.6306
PROJECT NAME 68150 Liverpool HS DGI + RAP	**PLANT TYPE** Excavator	**NORTHING** 6245030.7242
CLIENT Meinhardt	**METHOD** Test Pit	**COORD SYS** GDA2020_MGA_zone_56
ADDRESS 18 Forbes Street	**TP LENGTH (m)** m	**TOTAL DEPTH** 1.50 m bgl
DRILLING DATE 07 Jan 2025	**TP WIDTH (m)** m	**LOGGED BY** E Piccinin

COMMENTS

Drilling Method	Water (m bgl)	Depth (m bgl)	Graphic Log	Lithological Description	Moisture	Samples	PID	Additional Observations
Test Pit		0.1		Fill - Silty CLAY, brown, heterogeneous, damp, low plasticity, soft, with inclusions of roots and rootlets	DP	TP109_0.00-0.10		No odours or staining observed. No asbestos observed in 10L AQ (TP109_0.0-0.2).
		0.2		Fill - Silty CLAY, brown-grey, heterogeneous, dry-damp, low plasticity, stiff, with inclusions of ash, glass, roots, rootlets, and tile	DP	TP109_0.20-0.30		No odours or staining observed. No asbestos observed in 10L AQ (TP109_0.2-0.5).
		0.3						
		0.4				TP109_0.40-0.50		
		0.5		Fill - Sandy SILT, grey-white, heterogeneous, damp, non-low plasticity, soft, with no inclusions	DP			No odours or staining observed. No asbestos observed in 10L AQ (TP109_0.5-0.8).
		0.6						
		0.7				TP109_0.70-0.80		
		0.8		CL Natural - CLAY, red, homogenous, damp, low-medium plasticity , firm-stiff, with no inclusions	DP			No odours, staining, or asbestos observed.
		0.9						
		1						
		1.1						
		1.2						
		1.3						
		1.4				TP109_1.40-1.50		
		1.5						
		1.6		Termination Depth at:1.50 m.				
		1.7						
		1.8						
		1.9						

produced by ESlog.ESdat.net on 27 Jan 2025

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH17**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
PT	Not Encountered	E: BH17_0.0-0.1	3.1					**TOPSOIL: SAND**: fine grained, brown, trace small sub-angular gravels.	D	L	no ACM / stains / odours observed Topsoil
		E: BH17_0.1-0.2	1.2					**FILL: Gravelly SAND**: fine to medium grained, brown, medium sub-angular gravels.	D	L	Fill
		E: BH17_0.3-0.4	0.3				CH	**CLAY**: high plasticity, red, grey mottled.	D	MD	Natural
					0.5						
		E: BH17_1.0-1.1	0.2		1.0						
								Borehole BH17 terminated at 1.30 m Target depth			
					1.5						

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:50

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH18**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description (SOIL NAME: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	structure and additional observations
SS								**ASPHALT**.	D	L	no ACM / stains / odours observed
		E: BH18_0.1-0.2	1.1					**FILL: Gravelly SAND**: fine to medium grained, brown, small sub-angular gravels.	D		Fill
			1				CI	**CLAY**: medium plasticity, red, yellow and grey mottled.			Natural
		E: BH18_0.4-0.5			0.5						
		E: BH18_1.0-1.1	0.8		1.0						
PT	Not Encountered				1.5						
			0.7		2.0						
			0.1		2.5						
								Borehole BH18 terminated at 2.60 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube
	solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH19**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description (SOIL NAME: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	structure and additional observations
SS								**ASPHALT**.	D	L	no ACM / stains / odours observed
		E: BH19_0.1-0.2	1.5					**FILL: Gravelly SAND**: fine to medium grained, brown, medium sub-angular gravels.	D		Fill
			0.2				CH-MH	**Silty CLAY**: high plasticity, black, high plasticity silt.	M	L / S	Natural
		E: BH19_0.3-0.4									
		E: BH19_0.5-0.6			0.5						
			0.2				CH	**CLAY**: high plasticity, red to grey, yellow mottled.	M	MD	
PT	Not Encountered	E: BH19_1.0-1.1	0.2		1.0						
					1.5						
		E: BH19_2.0-2.1	0.2		2.0						
					2.5						
								Borehole BH19 terminated at 2.60 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube
	solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH20**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description (SOIL NAME: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	structure and additional observations
SS								**ASPHALT**.	D	L	no ACM / stains / odours observed
		E: BH20_0.1-0.2	1.1					**FILL: Gravelly SAND**: fine to medium grained, grey to brown.	D		Fill
							CI	**Silty CLAY**: medium plasticity, black.	M	L / S	Natural
		E: BH20_0.5-0.6	0.6		0.5		CH	**CLAY**: high plasticity, red, grey mottled.	M	MD	
PT	Not Encountered	E: BH20_1.0-1.1	0.5		1.0						
					1.5			Borehole BH20 terminated at 1.30 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube
- solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH21**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**04 Oct 2019**
date completed:	**04 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description (SOIL NAME: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	structure and additional observations
HA	Not Encountered	E: BH21_0.0-0.2	3.7					**FILL: Gravelly SAND**: fine to medium grained, grey, fine grained grey gravels.	D	L	no ACM / stains / odours observed Fill
		E: BH21_0.2-0.3	0.9					**FILL: CLAYEY SAND**: fine to medium grained, brown, medium plasticity red, grey clay, with some medium size sub-angular gravels.	D	L	
			0.5				CI	**CLAY**: medium plasticity, red, yellow mottled.	D	MD	Natural
		E: BH21_0.5-0.6			0.5						
		E: BH21_1.0-1.1	0.6		1.0						
					1.5			Borehole BH21 terminated at 1.20 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube
	solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH22**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description (SOIL NAME: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	structure and additional observations
PT	Not Encountered	E: BH22_0.0-0.1	2.3					**FILL: SAND**: fine to medium grained, brown, with some sub-angular medium sized black gravels.	D	L	no ACM / stains / odours observed Fill
			0.3				CL	**CLAY**: low plasticity, red, yellow mottled.	D	MD	Natural
		E: BH22_0.4-0.5			0.5						
		E: BH22_1.0-1.1	0.1		1.0						
								Borehole BH22 terminated at 1.30 m Target depth			
					1.5						

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH23**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description (SOIL NAME: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	structure and additional observations
SS								**ASPHALT**.	D	L	no ACM / stains / odours observed
PT	Not Encountered	E: BH23_0.1-0.2	0.8					**FILL: Gravelly SAND**: fine to medium grained, grey, medium sized sub-angular grey gravels.	D		Fill
			0.5				CI	**CLAY**: medium plasticity, red, trace medium sized sub-angular gravels.	D	MD	Reworked natural
		E: BH23_0.3-0.4									
		E: BH23_0.4-0.5	0.5		0.5			**FILL: Sandy GRAVEL**: fine grained, brown, fine to medium grained brown sand, with traces of medium plasticity clay.	D	MD	Fill
		E: BH23_0.6-0.7	0.1				CL	**CLAY**: low plasticity, red, yellow and grey mottled.	D	MD	Natural
		E: BH23_1.2-1.3	0.2		1.0						
								Borehole BH23 terminated at 1.30 m Target depth			
					1.5						

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH24**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**04 Oct 2019**
date completed:	**04 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description (SOIL NAME: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	structure and additional observations
HA	Not Encountered	E: BH24_0.0-0.1	1.7					**FILL: Gravelly SAND**: fine to medium grained, grey, fine grained white gravels, traces of plastic.	D	L	no ACM / stains / odours observed Fill
		E: BH24_0.1-0.2	1.1					**FILL: SAND**: fine grained, brown, trace glass and medium plasticity grey clay.			
							Cl	**CLAY**: medium plasticity, grey to yellow, red mottled.	D	MD	Natural
		E: BH24_0.4-0.5	0.1		0.5						
		E: BH24_1.0-1.1	0.1		1.0						
					1.5			Borehole BH24 terminated at 1.10 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH25**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
SS								**ASPHALT**.	D	L	no ACM / stains / odours observed
		E: BH25_0.1-0.2	1.7					**FILL: Gravelly SAND**: fine to medium grained, grey to brown, medium sub-angular grey gravels.	D		FIll
			0.1				CL	**CLAY**: low plasticity, red to grey.	D	MD	Natural
		E: BH25_0.4-0.5			0.5						
PT	Not Encountered	E: BH25_1.0-1.1	0.2		1.0						
			0.3		1.5						
		E: BH25_2.0-2.1	0.2		2.0						
					2.5			Borehole BH25 terminated at 2.60 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube
	solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH26**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description (SOIL NAME: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	structure and additional observations
SS								**ASPHALT**.	D	L	no ACM / stains / odours observed
		E: BH26_0.1-0.2	14.6					**FILL: Gravelly SAND**: medium grained, brown, medium sized sub-angular gravels, some asphalt pieces.	D		FIll
		E: BH26_0.2-0.3									
			0.2				Cl	**CLAY**: medium plasticity, red to grey to yellow.	M	S / MD	Natural
PT	Not Encountered		0.3		0.5						
		E: BH26_0.7-0.8	0.2					becoming low plasticity at 0.7m bgs			
			0.3		1.0						
								Borehole BH26 terminated at 1.30 m Target depth			
					1.5						

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube
	solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH27**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
PT	Not Encountered	E: BH27_0.0-0.1	2.1					**FILL: Gravelly SAND**: fine to medium grained, brown, small sub-angular gravels.	D	L	no ACM / stains / odours observed Fill
		E: BH27_0.2-0.3	0.9					**FILL: CLAYEY SAND**: fine to medium grained, red, yellow.	D	MD	
		E: BH27_0.4-0.5	1.7					**FILL: ASH**: fine grained, blue, some small sub-angular gravels.	D	L	
					0.5		SC	**FILL: CLAYEY SAND**: fine to medium grained, brown, medium plasticity red, yellow clay.	D	MD	
		E: BH27_0.6-0.7	0.2				CL	**CLAY**: low plasticity, red, grey and yellow mottled.			Natural
			0.3		1.0						
								Borehole BH27 terminated at 1.30 m Target depth			
					1.5						

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Borehole

Hole ID.	**BH28**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AL**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | angle from horizontal: 90°

equipment type: , Truck mounted | drilling fluid: | hole diameter : 50 mm

drilling information						material substance					
method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
HA	Not Encountered	E: BH28_0.0-0.1						**FILL: Gravelly SAND**: fine to medium grained, brown, small sub-angular gravels.	D	L	no ACM / stains / odours observed Fill
		E: BH28_0.2-0.3						**FILL: CLAYEY SAND**: fine to medium grained, brown, medium plasticity red, yellow clay.	D	MD	
		E: BH28_0.5-0.6			0.5		Cl	**CLAY**: medium plasticity, red, grey and yellow mottled.	D		Natural
					1.0						
					1.5			Borehole BH28 terminated at 1.30 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	***TP07***
sheet:	1 of 1
project no.	***754-SYDEN231101***
date started:	***03 Oct 2019***
date completed:	***03 Oct 2019***
logged by:	***AC***
checked by:	***DM***

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP07_0.0-0.1						**TOPSOIL: SAND**: fine to medium grained.	M		no ACM / stains / odours observed Topsoil
			0.8					**FILL: CLAY**: with some ash.	M		Fill
		E: TP07_0.4-0.5	0.9				CI	**CLAY**: orange, brown, white.	M		Natural
					0.5						
		E: TP07_0.9-1.0	0.7								
					1.0			Test pit TP07 terminated at 1.00 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	**TP08**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AC**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information						material substance					
method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP08_0.0-0.1	1.1					**FILL: CLAYEY SAND**: fine to medium grained, brown, low plasticity clay.	D		no ACM / stains / odours observed Fill
			0.9		0.5		CL	**CLAY**: brown, orange mottled, with some ironstone fragments.	D	St	Natural
		E: TP08_0.6-0.7									
					1.0			Test pit TP08 terminated at 0.70 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	**TP09**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**03 Oct 2019**
date completed:	**03 Oct 2019**
logged by:	**AC**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP09_0.0-0.1	0.8				CL	**CLAY**: brown, orange.	D		no ACM / stains / odours observed Reworked clay
		E: TP09_0.4-0.5	0.9		0.5		CL	**CLAY**: orange.	D		Natural
		E: TP09_0.9-1.0	0.9		1.0			Test pit TP09 terminated at 1.00 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	***TP10***
sheet:	1 of 1
project no.	***754-SYDEN231101***
date started:	***03 Oct 2019***
date completed:	***03 Oct 2019***
logged by:	***AC***
checked by:	***DM***

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information						material substance					
method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP10_0.0-0.1						**TOPSOIL: SAND**.	M		no ACM / stains / odours observed Topsoil
			0.8				CI	**CLAY**: brown, grey, orange.	M		Reworked clay
		E: TP10_0.4-0.5	0.9		0.5		CI	**CLAY**: orange, brown mottled.	D		Natural
		E: TP10_0.9-1.0	0.8								
					1.0			Test pit TP10 terminated at 1.00 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube
	solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	***TP11***
sheet:	1 of 1
project no.	***754-SYDEN231101***
date started:	***04 Oct 2019***
date completed:	***04 Oct 2019***
logged by:	***AC***
checked by:	***DM***

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP11_0.0-0.1	0.5					**TOPSOIL: Sandy GRAVEL**: blue, some low plasticity clay.	D		no ACM / stains / odours observed Topsoil
		E: TP11_0.4-0.5	0.5		0.5			**FILL: CLAY**: medium plasticity, red, brown.	M		Reworked clay
		E: TP11_0.9-1.0	0.5				Cl	**CLAY**: white, grey mottled.	D		Natural
					1.0			Test pit TP11 terminated at 1.00 m Target depth			

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	**TP12**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**04 Oct 2019**
date completed:	**04 Oct 2019**
logged by:	**AC**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP12_0.0-0.1	0.7					**TOPSOIL: SAND**: brown, with some ash.	M		no ACM / stains / odours observed Topsoil
							CI	**CLAY**: orange, brown.	M		Reworked clay
		E: TP12_0.4-0.5	0.7		0.5		CI	**CLAY**: medium plasticity, brown.			Natural
		E: TP12_0.9-1.0	0.8		1.0			Test pit TP12 terminated at 1.00 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
AD auger drilling*
AS auger screwing*
HA hand auger
MR mud rotary
W washbore
PT hand auger
SS push tube
solid stem flight auger
* bit shown by suffix
e.g. AD/T
B blank bit
T TC bit
V V bit

support
M mud
C casing
N nill

water
10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests
ALT air lift test
B bulk disturbed sample
D disturbed sample
E environmental sample
SS split spoon sample
U## undisturbed sample ##mm diameter
WS water sample
HB hammer bouncing
N standard penetration test (SPT)
N* SPT - sample recovered
Nc SPT with solid cone
PID photoionization detector
R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
D dry
M moist
W wet
Wp plastic limit
Wl liquid limit

consistency / relative density
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Fb friable
VL very loose
L loose
MD medium dense
D dense
VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	**TP13**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**04 Oct 2019**
date completed:	**04 Oct 2019**
logged by:	**AC**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP13_0.0-0.1	0.7					**ASH-SLAG**: black, grey.			no ACM / stains / odours observed
		E: TP13_0.4-0.5	0.6		0.5		CI	**CLAY**: medium plasticity, brown, orange.			Natural
		E: TP13_0.9-1.0	0.8		1.0			Test pit TP13 terminated at 1.00 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	**TP14**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**04 Oct 2019**
date completed:	**04 Oct 2019**
logged by:	**AC**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP14_0.0-0.1	0.8					**TOPSOIL: SILTY SAND**: fine to medium grained, brown.	M		no ACM / stains / odours observed Topsoil
								FILL: Sandy CLAY: medium plasticity, red, orange.	M		Reworked clay
		E: TP14_0.4-0.5	0.7		0.5		CI	**CLAY**: medium plasticity, white, orange, brown.	M		Natural
		E: TP14_0.9-1.0	0.6								
					1.0			Test pit TP14 terminated at 1.00 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	***TP15***
sheet:	1 of 1
project no.	***754-SYDEN231101***
date started:	***04 Oct 2019***
date completed:	***04 Oct 2019***
logged by:	***AC***
checked by:	***DM***

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP15_0.0-0.1	0.7					**TOPSOIL: Sandy GRAVEL**: brown.	M		no ACM / stains / odours observed Topsoil
		E: TP15_0.4-0.5	0.8		0.5		CL	**CLAY**: low plasticity, white, grey, brown.	M		Natural
		E: TP15_0.9-1.0	0.8		1.0			Test pit TP15 terminated at 1.00 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	**TP16**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**04 Oct 2019**
date completed:	**04 Oct 2019**
logged by:	**AC**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP16_0.0-0.1	0.7					**TOPSOIL: Gravelly SAND**: fine to medium grained, blue.	M		no ACM / stains / odours observed Topsoil
		E: TP16_0.4-0.5	0.6		0.5		CI	**CLAY**: medium plasticity, brown.	M		Natural
		E: TP16_0.9-1.0	0.6		1.0			Test pit TP16 terminated at 1.00 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	***TP29***
sheet:	1 of 1
project no.	***754-SYDEN231101***
date started:	***04 Oct 2019***
date completed:	***04 Oct 2019***
logged by:	***AC***
checked by:	***DM***

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information | **material substance**

method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP29_0.0-0.1						**TOPSOIL: SAND**: blue.			no ACM / stains / odours observed Topsoil
			0.8					**FILL: CLAY**: medium plasticity, brown.	M		Reworked clay
		E: TP29_0.4-0.5	0.9		0.5		CI	**CLAY**: medium plasticity, orange, brown.	M		Natural
		E: TP29_0.9-1.0	0.9								
					1.0			Test pit TP29 terminated at 1.00 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method
- AD auger drilling*
- AS auger screwing*
- HA hand auger
- MR mud rotary
- W washbore
- PT hand auger
- SS push tube solid stem flight auger
- * bit shown by suffix
- e.g. AD/T
- B blank bit
- T TC bit
- V V bit

support
- M mud
- C casing
- N nill

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- ALT air lift test
- B bulk disturbed sample
- D disturbed sample
- E environmental sample
- SS split spoon sample
- U## undisturbed sample ##mm diameter
- WS water sample
- HB hammer bouncing
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- PID photoionization detector
- R refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition
- D dry
- M moist
- W wet
- Wp plastic limit
- Wl liquid limit

consistency / relative density
- VS very soft
- S soft
- F firm
- St stiff
- VSt very stiff
- H hard
- Fb friable
- VL very loose
- L loose
- MD medium dense
- D dense
- VD very dense

coffey
A TETRA TECH COMPANY

Environmental Log - Test pit

Hole ID.	**TP30**
sheet:	1 of 1
project no.	**754-SYDEN231101**
date started:	**04 Oct 2019**
date completed:	**04 Oct 2019**
logged by:	**AC**
checked by:	**DM**

client: ***Department of Education School Infrastructure NSW (SINSW)***

principal:

project: ***Site and Building Contamination Assessment***

location: ***Liverpool Boys and Girls High School, Lachlan Street Liverpool NSW***

position: Not Specified | surface elevation: Not Specified | pit orientation:

equipment type: 3.3t Excavator | excavation method: | excavation dimensions: 1.0 m long 0.3 m wide

drilling information						material substance					
method & support	water	samples & field tests	photoionization detector (ppmv)	RL (m)	depth (m)	graphic log	soil group symbol	material description **SOIL NAME**: plasticity or particle characteristic, colour, secondary and minor components	moisture condition	consistency / relative density	structure and additional observations
E	Not Encountered	E: TP30_0.0-0.1	0.8					**TOPSOIL: SAND**.	D		no ACM / stains / odours observed Topsoil
		E: TP30_0.3-0.4	0.9		0.5		Cl	**CLAY**: orange, brown mottled.	M		Natural
		E: TP30_0.8-0.9	0.8								
					1.0			Test pit TP30 terminated at 0.90 m Target depth			

CDF_0_9_07_LIBRARY.GLB rev:AU Log COF BOREHOLE: ENVIRONMENTAL LIVERPOOL BOYS AND GIRLS HIGH SCHOOL.GPJ <<DrawingFile>> 28/10/2019 09:51

method

AD	auger drilling*
AS	auger screwing*
HA	hand auger
MR	mud rotary
W	washbore
PT	hand auger
SS	push tube solid stem flight auger
*	bit shown by suffix
e.g.	AD/T
B	blank bit
T	TC bit
V	V bit

support

M	mud
C	casing
N	nill

water

10-Oct-12 water level on date shown
water inflow
water outflow

samples & field tests

ALT	air lift test
B	bulk disturbed sample
D	disturbed sample
E	environmental sample
SS	split spoon sample
U##	undisturbed sample ##mm diameter
WS	water sample
HB	hammer bouncing
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
PID	photoionization detector
R	refusal

soil group symbol & soil description
based on AS 1726:2017

moisture condition

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

consistency / relative density

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

Appendix D Mitigation Measures

Table D.1: Mitigation Measures

Project Stage Design (D), Construction (C), Operation (O)	Mitigation Measures	Relevant Section of Report
C	The unexpected finds protocol should be adhered to during redevelopment works where any unexpected contaminants are encountered.	**Section 8.2**.
D	An asbestos management plan should be developed to outline the required controls and protocols for the appropriate management of all asbestos impacted materials during the construction phase.	**Section 9.2.2**
O	An LTEMP should be prepared following the completion of remedial works to detail the ongoing management of contained asbestos impacted materials at the site.	**Section 6.2.4** and **Section 7.6**

1.1.1.1 Document Distribution

Rev No.	Copies	Recipient	Date
A	1 x Electronic	Joshua De Angelis (joshua.deangelis@colliers.com)	10/02/2025
0	1 x Electronic Copy	Joshua De Angelis (joshua.deangelis@colliers.com)	14/02/2025

1.1.1.2 Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
A	Isaac Lee	Matthew Bennett	Matthew Bennett	Draft for Client Review	10/02/2025
0	Isaac Lee	Matthew Bennett	Matthew Bennett		14/02/2025

www.jbsg.com.au

JBS&G

Adelaide
Kaurna Country | 100 Hutt St,
Adelaide, SA 5000
T: 08 8431 7113

Brisbane
Turrbal/Yuggera Country | Level 37,
123 Eagle Street, Brisbane, QLD 4000
T: 07 3211 5350

Bunbury
Wardandi Country | 177 Spencer
Street Bunbury, WA 6230
T: 08 9792 4797

Canberra
Ngunnawal Country | Level 1, The Realm
18 National Circuit Barton, ACT 2600
T: 02 6198 3278

Darwin
Larrakia Country | Suite G1, Level 1,
48-50 Smith Street, Darwin NT 0800
T: 08 8943 0600

Hobart
Muwununa/Nuenon Country | Level 2,
137 Liverpool Street, Hobart TAS 7000
T: 03 6208 3700

Melbourne
Wurundjeri Country | Level 19,
31 Queen Street, Melbourne VIC 3000
T: 03 9642 0599

Newcastle
Awabakal/Worimi Country | 61 / 63
Parry Street Newcastle West, NSW 2302
T: 02 8245 0300

Perth
Whadjuk Country | Allendale Square,
Level 9, 77 St Georges Terrace, WA 6000
T: 08 9380 3100

Sydney
Gadigal Country | Level 8,
179 Elizabeth Street, Sydney, NSW 2000
T: 02 8245 0300

Wollongong
Dharawal Country | Suite 1A, 280 - 286
Keira Street, Wollongong, NSW 2500
T: 02 4225 2647