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THE DEPARTMENT OF EDUCATION

TARGETED DETAILED SITE INVESTIGATION

GREENWAY PARK PUBLIC SCHOOL UPGRADE AND NEW PUBLIC PRE SCHOOL

MARCH 2025

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Targeted Detailed Site Investigation
Greenway Park Public School Upgrade and New Public Pre School

The Department of Education

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REV	DATE	DETAILS
A	20/02/2024	Draft
B	14/03/2025	Final

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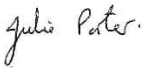
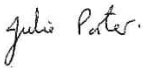
Reviewed by:	Julie Porter	14/03/2025	
Approved by:	Julie Porter	14/03/2025	

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ABBREVIATIONS

ACM	Asbestos containing material
CSM	Conceptual site model
DP	Deposited Plan
DQI	Data quality indicator
DQO	Data quality objective
DSI	Detailed site investigation
HIL	Health investigation level
HSL	Health screening level
LEP	Local environmental plan
LGA	Local government area
mAHD	Metres Australian Height Datum
mBGL	Metres below ground level
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	*National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended 2013)
NL	Non-limiting
NSW EPA	New South Wales Environment Protection Authority
LOR	Laboratory limit of reporting
PSI	Preliminary site investigation
QA/QC	Quality assurance/quality control
SAQP	Sampling, analysis and quality plan
SOP	Standard operating procedure
SWL	Standing water level

EXECUTIVE SUMMARY

WSP Australia Pty Ltd (WSP) was commissioned by NSW Department of Education (DoE) to undertake a targeted Detailed Site Investigation (DSI) at Greenway Park Public School, Wyattville Drive, West Hoxton, NSW (the 'site').

The DSI is required to assess soil conditions to inform the proposed upgrade of the site. The site compromises Lot 11 in Deposited Plan (DP) 858025 and Lot 20 in DP 867282. The intrusive investigation area comprises the proposed activity area located in the northern corner of the site. The site location is identified on Figure 1, Appendix A. The site investigation area is identified on Figures 2 and 3, Appendix A.

Based on a review of historical information, the site comprised sparsely vegetated bushland in 1930. In 1947 the northern and western portions of the site comprised agricultural land. By 1965 agricultural use had extended to the remainder of the site. Two large shed structures are noted in the north eastern portion of the site and circular pens or structures are noted to the north. Site use remained agricultural between 1975 and 1991. By 1998 construction of the school had commenced. Permanent structures and demountables occupied the southern and eastern portions of the site by 2002. Between 2002 and 2023 the site is utilised as Greenway Park Public School. Construction and removal of demountables has occurred throughout this period. The NSW DoE School Asbestos Management Plan (2025) report indicates site structures were constructed in 1999, 2004 and 2010.

The site was inspected on 15 January 2025. The site was observed to consist of a Public School. Site buildings were located in the southern and central portion of the site with grass and asphalt, concrete or softfall areas located between the buildings. The north eastern portion of the site was utilised as a carpark with access off Wyattville Drive in the eastern corner of the site. The northern portion of the site was utilised as grassed and vegetated playing fields.

A targeted intrusive investigation including advancement of a total of ten boreholes was undertaken on 15 January 2025. Locations were advanced to a maximum depth of 6.0 metres below ground level (mbgl) (i.e. into the natural soil underlying the fill).

The subsurface conditions encountered beneath the site during the WSP 2025 investigation comprised clayey sand or sandy clay topsoil to approximately 0.2 mbgl underlain by sandy silty clay fill to between 0.55 m to 1.0 m. Natural material comprising sandy or silty clay to between 2.7 m and 3.0 m underlain by siltstone.

A possible asbestos fragment was noted in HA04 at 0.2 mbgl along with brick, pavers and charcoal. Glass was observed in HA01, Brick and pavers were noted in HA02. Plastic and charcoal were noted in HA06. No other anthropogenic inclusions or potential asbestos containing material was noted.

Using the NEPM (2013) formula the ACM fragment identified at sampling location HA04 at 0.2 m bgl was considered to equate to 0.0018% w/w asbestos in soil, which is below the adopted criteria of 0.01%.

Concentrations of total recoverable hydrocarbons, polycyclic aromatic hydrocarbons, benzene, toluene, ethylbenzene, xylene and naphthalene, heavy metals, phenols, organochlorine pesticides or polychlorinated biphenyls were reported below the adopted assessment criteria for the protection of human health based on the proposed continued use of the site for a primary school. Concentrations of contaminants of concern were below the ecological criteria for urban residential and open spaces.

WSP recommend management of the asbestos on site to make the proposed development area suitable for the planned development. Management can be in the form of removal and appropriate off site disposal of fill via excavation in the vicinity of HA04, or on site encapsulation of the material, conducted in conjunction with the proposed development. Management will need to be followed by appropriate validation in the form of a visual inspection, photographs and sampling.

Based on the results of this targeted DSI it is concluded that the contamination risk at the proposed development area is high based on the presence of asbestos. The site can be made suitable for the planned development, following implementation of asbestos management and controls outlined in documents listed in Table 12.1. It should be noted contamination might be present at other areas of the site.

To manage the residual contamination risk on-site, WSP recommends the following mitigation measures, also detailed in Table 12.1:

- The WSP (2019), Asbestos in Grounds Management Plan should be updated to include the current asbestos finds.
- A Construction Environmental Management Plan including an asbestos management plan and unexpected finds protocol should be developed and followed during the proposed development works.
- The Department of Education Asbestos Management Plan for NSW Government Schools shall continue to be followed after the development works.

1 INTRODUCTION

This targeted Detailed Site Investigation (DSI) report has been prepared to accompany a Review of Environmental Factors (REF) prepared for the Department of Education (DoE) relating to upgrades to Greenway Park Public School (the development) under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI).

This document has been prepared in accordance with the Guidelines for Division 5.1 assessments – Consideration of environmental factors for health services facilities and schools, October 2024 (the Guidelines) by the Department of Planning, Housing and Infrastructure.

This report examines and takes into account the relevant environmental factors in the Guidelines and Section 170, Section 171 and Section 171A of the Environmental Planning and Assessment Regulations 2021 (EP&A Regulation) as outlined in Table 1.1.

Table 1.1 Environmental Factors

ENVIRONMENTAL FACTOR	POTENTIAL ENVIRONMENTAL IMPACT	MANAGEMENT
A) The environmental impact on the community	Contamination impact during or post construction.	Managed under the sites construction environmental management plan (CEMP)
J) Risk to the safety of the environment	Whether the development will have adverse environmental impacts (contamination leak)	Managed under the site construction CEMP
L) Pollution of the environment	Soil contamination during or post construction, impact of contamination spill.	Managed under the site construction CEMP
R) Other relevant environmental factors	Impacts of land contamination, any soil and groundwater contamination on the proposed development.	Managed under the Department of Education Asbestos Management Plan for NSW Government Schools

1.1 DOCUMENT REVIEW

The following plans/ reports have been reviewed to inform the assessment contained within this report:

- Department of Education, *School Asbestos Management Plan, Greenway Park Public School (4624),* 31 January 2025
- WSP, *Greenway Park Public School, Asbestos in Grounds Management Plan*, May 2019
- Fulton Trotter Architects, *Architectural Design Report for Review of Environmental Factors, Greenway Park Public School Upgrade and New Preschool*, 25 February 2025.

Further detail is provided in Section 4.4.

1.2 PROPOSED DEVELOPMENT DESCRIPTION

The proposed activity for the Greenway Park Public School upgrade includes:

1.2.1 DEMOLITION/ EARTHWORKS

- Demolish part of boundary fence on Chapman Street for new vehicular crossover;
- Demolish parts of boundary fence on Chapman Street for new gates;

— Demolish shade structure and associated concrete slab and footpath;

— Demolish footpaths;

— Removal of trees;

— Trenching for underground services; and

— Earthworks associated with new buildings and landscaping.

1.2.2 CONSTRUCTION

— Construction and operation of single storey classroom building with associated covered walkways;

— Construction and operation of a new preschool building, including covered walkways, new carpark (12 spaces and one (1) accessible space) and vehicular crossover to Chapman Street;

— Installation of artwork on Block H and Block J façades, as well as a preschool retaining wall;

— Laying of services within trenches;

— New pedestrian entry points;

— Fencing and gates;

— Underground OSD tanks;

— Rainwater tanks;

— Shed for preschool;

— Outdoor play equipment for the preschool;

— New fire hydrant booster & associated building services connections;

— Retaining walls associated with the preschool;

— Signage;

— Landscaping; and

— Associated earthworks

1.3 WORKS UNDER SEPARATE PLANNING PATHWAY

To enable the proposed works to proceed, the existing seven (7) portable classrooms, associated walkways, a shade structure and associated concrete slab will be removed from site and five (5) new portable classrooms and associated walkways will be installed adjacent to Block F under a separate planning pathway. A tree removal permit for the removal of three (3) trees will also be sought separately. These works do not form part of this REF development application and have not been assessed in this report.

1.4 ACTIVITY SITE

The activity site is located on Wyattville Drive, West Hoxton and is legally described as:

— Lot 11 DP 858025; and

— Lot 20 DP 867282.

Greenway Park Public School is located on the south eastern side of Chapman Street and the north eastern side of Wyattville Drive. The surrounding context of the site is predominantly low density residential as well as a childcare centre to the north.

2 SCOPE OF WORKS

2.1 DESKTOP REVIEW OF EXISTING INFORMATION

The scope of works undertaken comprised a review of background site and regional information from:

- NSW Environment Protection Authority (EPA) records
- acid sulfate soil mapping for the area
- historical aerial photographs of the site and surrounding area
- utility plans ('Dial Before You Dig' plans and any provided by Council) to identify site features
- physical site setting information including topography, geology, hydrology, hydrogeology and potential sensitive receptors on or in the vicinity of the site

2.2 SOIL CONTAMINATION ASSESSMENT

The scope of works undertaken for the DSI comprised:

- preparation of safe work method statement and job safety analysis documents for the fieldwork
- clearance of underground services within the investigation area by an accredited underground service locator
- advancement of a total ten investigation locations. Locations were advanced to a maximum depth of 6.0 metres below ground level (m bgl)
- inspection of site surface and the collection of any observed potential asbestos containing material (ACM) fragment samples
- visual inspection and logging of the soil profile
- collection of soil samples at 0.1 m bgl, 0.5 m bgl, and the base of the borehole, at a minimum, and at any evidence of contamination or change in soil type or quality
- field screening of each sample for the presence of volatile organic compounds (VOCs) using a photo-ionisation detector (PID)
- in-field assessment of ACM undertaken by passing a 10 L soil sample through a 7 mm sieve. This was undertaken on at least one depth profile for each location (targeting fill material)
- One 500ml soil sample per location was collected for asbestos (quantification/7mm sieving national Environmental Protection measure (NEPM) methodology) analysis
- analysis of selected samples (one sample per location) for primary contaminants of concern (COPCs):
    - total recoverable hydrocarbons (TRH)
    - benzene, toluene, ethylbenzene, xylene and naphthalene (BTEXN)
    - polycyclic aromatic hydrocarbons (PAHs)
    - heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc)
- Analysis of selected samples for the following additional COPCs:
    - organochlorine and organophosphorus pesticides (OCPs, OPPs)
    - phenols

- polychlorinated biphenyls (PCBs).

- preparation of this DSI report documenting the findings of the investigation.

2.3 OBJECTIVES

DoE require a DSI to identify contamination impacts and determine the suitability of the investigation area for continued primary school land use. The objectives of the DSI are to:

- determine if there are risks to site occupants, site workers, the public and environment from any potential contaminants of concern
- determine the suitability of the site for the current use and planned upgrade
- vertical delineation of the potential contamination and/or uncontrolled fill
- provide recommendations for remediation, if required.

3 SITE LOCATION AND SETTING

3.1 SITE LOCATION AND IDENTIFICATION

The general site identification details are provided in Table 3.1.

Table 3.1 Summary of general site information

Site name	Greenway Park Public School
Site address	Wyattville Drive, West Hoxton, NSW
Site identification	Lot 11 in Deposited Plan (DP) 858025 and Lot 20 in DP 867282
Site area	Approximately 2.7 hectares
Intrusive investigation area	Approximately 2,700 m^2
Current site use	Site is currently in use as a primary school (Greenway Park Public School)
Surrounding land uses	Surrounded to the north, west and east by low density residential land use. Low density residential land use and light commercial use is located to the south.
Local government area (LGA) and zoning	Liverpool Local Environmental Plan 2008, Low Density Residential (R2)
Proposed site use	Continued primary school use

3.2 SITE INSPECTION

The site was inspected on 15th January 2025 by a WSP environmental scientist. The site was observed to consist of a primary school.

Site buildings (9 permanent structures and 8 demountables) are interconnected by covered walkways and are located in the southern and central portion of the site with grass and asphalt, concrete or Softfall areas located between the buildings. The north eastern portion of the site is utilised as a carpark with access off Wyattville Drive in the eastern corner of the site. The northern portion of the site is utilised as grassed and vegetated playing fields. A basketball court is located in the north eastern portion of the site.

The intrusive investigation area comprises the northern corner of the site (illustrated in Appendix A, Figure 3).

3.3 TOPOGRAPHY AND SURFACE WATER DRAINAGE

The site slopes gently to the north west from approximately 60m Australian Height Datum (AHD) in the south east to approximately 55m AHD in the north western corner.

Site water is expected to follow topography and flow across to the north or western corner of the site.

3.4 GEOLOGY

A review of the *Penrith 1:100,000 Geological Map Series Sheet 9030* (Geological Survey of NSW, 1991) indicates that the site is underlain by Triassic Bringley Shale of the Wianamatta Group consisting of shale, carbonaceous claystone, claystone, laminate, fine to medium grained lithic sandstone, rare coal and tuff.

The NSW Soil and Land Information System Soil Essentials Report obtained through eSPADE 14 August 2023 indicated the site is underlain by soils of the Blacktown Group consisting of a friable brownish black loam to clay loam and brown clay loam to silty clay loam. The online CSIRO Australian Soil Resource Information System (ASRIS[1]) was accessed on 18 August 2023 and indicated that the site is located in an area of "extremely low probability of occurrence" of acid sulfate soils.

The subsurface conditions encountered beneath the site during the WSP 2023[2] investigation comprised of brown or grey/brown gravelly sandy silt topsoil to approximately 0.3 m bgl and grey and dark brown sandy silty clay fill to between 0.45 (BH2 and BH06) to 1.65 (BH10). Fill material was underlain by orange/grey brow clay, light brown sandy silty clay or grey/red/orange clayey sandy silt to between 2.72 (BH09) and 3.1 (BH08) underlain by siltstone.

The subsurface conditions encountered beneath the site during the WSP 2025 investigation comprised clayey sand or sandy clay topsoil to approximately 0.2 mbgl underlain by sandy silty clay fill to between 0.55 m to 1.0 m. Natural material comprising sandy or silty clay to between 2.7 m and 3.0 m underlain by siltstone.

3.5 HYDROGEOLOGY

The closest water bodies are Bayhorse Creek, located approximately 420 m to the south east of the site and Beard Creek located 480m north west of the site. Based on the geological profile of the region and the depths of recorded monitoring wells, groundwater is present within bedrock beneath the site at depths of approximately 5 -10 m below ground level (bgl). Based on site topography, groundwater flow is inferred to be toward the north west.

A search of the WaterNSW online database[3] for registered groundwater bores conducted on 17 August 2023 identified no registered bores within a 500 m radius of the site. Three monitoring bores are located 600m north east of the site. The drilled depth of the bores is listed as 8 m bgl. No other pertinent details were reported.

3.6 ACID SULFATE SOIL

The online Australian Government, Geoscience Australia Portal[4] was accessed on 22 January 2025 and indicated that the site is located in an area of "extremely low probability of occurrence" of acid sulfate soils.

1 http://www.asris/csiro.au

2 WSP, Greenway Park Public School, Targeted Detailed Site Investigation, November 2023

3 https://realtimedata.waternsw.com.au

4 https://portal.ga.gov.au/

4 SITE HISTORY REVIEW

4.1 HISTORICAL AERIAL PHOTOS

A review of historical aerial photography covering the site and surrounding area was undertaken by WSP. A summary of the features identified is presented in Table 4.1. Copies of the photographs reviewed are provided in Appendix D.

Table 4.1 Historical aerial photograph review

YEAR	SITE	SURROUNDING LAND
1930	The site comprises vegetated land.	The surrounding land is predominantly bushland. Agricultural land usage and a homestead are noted to the south west. A roadway is noted to the north of the site.
1947	The southern portion of the site comprises bushland. The northern and western portions appear to have been cleared and used for agricultural purposes.	The surrounding land is primarily agricultural to the east and west and sparsely vegetated bushland to the north and south.
1965	The site appears to be utilised for agricultural or market gardening purposes. The north eastern corner of the site is occupied by two large shed structures. Circular pens or structures are noted to the north of these.	The surrounding land to the east, west and south is predominantly agricultural land. Land to the north remains sparsely vegetated bushland.
1975	No significant changes since previous photograph.	Development has occurred to the east of the site. Land to the north is now utilised for agricultural purposes.
1978	No significant changes since previous photograph. Tracks are noted running north east to south west (1) and south west to north east (2).	No significant changes since previous photograph.
1986	The circular pens are no longer visible. Ground disturbance appears to have occurred in the south western corner of the site.	No significant changes since previous photograph.
1991	No significant changes since previous photograph.	Further agricultural development has occurred to the north and east.
1998	The site appears to be under development. Earthworks are occurring in the eastern portion of the site with a carpark noted in the north eastern corner and concrete slabs for future structures noted in the southern portion of the site.	Residential development has occurred surrounding the site to the north and east. Land immediately south and west of the site remains grassland with residential development beyond.
2002	Development of Greenway Park Primary School has occurred at the site. Structures are noted in the eastern and southern portions of the site and the northern portion remains grassed playing fields.	Residential development surrounds the site.

YEAR	SITE	SURROUNDING LAND
2005	Additional demountable structures are noted extending to the west from the structure in the central portion of the site. An additional structure is noted in the southern portion of the site.	No significant changes since previous photograph.
2009	Additional demountable structures have been constructed in the western portion of the site.	No significant changes since previous photograph.
2010	Permanent structures replace demountables in the central and western portion of the site. Additional demountables are noted in the north western portion of the site.	No significant changes since previous photograph.
2012	Demountables have been removed from the north western portion of the site.	No significant changes since previous photograph.
2014	An additional demountable structure has been constructed in the north western portion of the site. A structure has been constructed in the northern portion of the site.	No significant changes since previous photograph.
2017	Additional demountable structures have been constructed in the north western portion of the site.	No significant changes since previous photograph.
2021	Demountable structures have been removed from the southern portion of the site.	No significant changes since previous photograph.
2023	No significant changes since previous photograph.	No significant changes since previous photograph.
2024	No significant changes since previous photograph.	No significant changes since previous photograph.

4.2 EPA ONLINE NOTICE RECORDS

A search of the NSW EPA online contaminated sites database[5] conducted on 22 January 2025 did not identify the site or adjacent properties as currently being regulated by the NSW EPA, or as having been notified to NSW EPA as potentially contaminated.

No former gas works, waste management facilities, or other sites with contamination issues regulated by the EPA are located on or adjacent to the site.

A search of the online NSW EPA Protection of the Environment Operations (POEO) list of Environmental Protection Licences (EPLs)[6] was conducted on 17 August 2023. The search indicated that the site and adjacent properties are not currently licenced under the *Protection of the Environment Operations Act 1997*.

The site is not listed on the EPA PFAS Investigation Program, Defence PFAS Investigation Program, Defence PFAS Management Program or Airservices Australia National PFAS Management Program.

[5] www.epa.nsw.gov.au/prclmapp/searchregister

[6] http://www.epa.nsw.gov.au/licensing-and-regulation

4.3 PLANNING INFORMATION

The Section 10.7 planning certificate dated 16 August 2023 provided the following information.

- The site is zoned R2 low Density Residential under the Liverpool Local Environmental Plan 2008.
- The site is not located within a conservation area.
- The site is not subject to development controls relating to bushfire hazard. The site is not bushfire prone land as defined by the EP&A Act 1979.
- The site is not subject to development controls relating to Acid Sulfate Soil.
- The site is outside of flood planning area and not subject to flood related development controls for industrial/commercial and residential premises. The land is outside the extent of the probable maximum flood and not subject to flood related development controls only if the land is also outside of flood planning area.
- The site is subject to development controls under the Liverpool Development Control plan (DCP) 2008 Potentially Contaminated Land Policy. This is likely due to the sites historical land use for agricultural and horticultural activities.
- The site is subject to development controls relating to potentially saline soils under the Liverpool DCP 2008
- The site is not significantly contaminated land within the meaning of the *Contaminated Land Management Act 1997* (the Act).
- The site is not subject to a management order within the meaning of the Act.
- The site is not the subject of an approved voluntary management proposal within the meaning of the Act.
- The site is not subject to an ongoing maintenance order within the meaning of the Act.
- The site is not the subject of a site audit statement within the meaning of the Act.

No Environmental Planning Instrument heritage items are located on site or immediately surrounding the site. The site and surrounding properties are not listed on the Commonwealth Heritage List, National Heritage List or State Heritage Register.

4.4 REVIEW OF AVAILABLE REPORTS

WSP obtained the following documents from the NSW Department of Education – School Infrastructure website

- Department of Education, *School Asbestos Management Plan, Greenway Park Public School (4624),* 31 January 2025
- WSP, *Greenway Park Public School, Asbestos in Grounds Management Plan*, May 2019.

WSP was provided with the following documents relevant to the site:

- Fulton Trotter Architects, *Architectural Design Report for Review of Environmental Factors, Greenway Park Public School Upgrade and New Preschool*, 25 February 2025.

4.4.1 DEPARTMENT OF EDUCATION, SCHOOL ASBESTOS MANAGEMENT PLAN

The management plan is dated 29 November 2024. The asbestos register located within the management plan presents the results of the survey undertaken. The register notes no asbestos was identified within the permanent structures at the site, however asbestos was assumed to be present within the site demountable structures.

The report indicates site structures were constructed in 1999, 2004 and 2010.

4.4.2 *FULTON TROTTER ARCHITECTS,* ARCHITECTURAL DESIGN REPORT FOR REVIEW OF ENVIRONMENTAL FACTORS

The Architectural Design Report has been prepared to accompany a Review of Environmental Factors (REF) prepared for the Department of Education (DoE) relating to upgrades to Greenway Park Public School (the activity) under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI). The report noted an evaluation of the environmental impact related to SEPP Transport and Infrastructure 2021 is concluded as follows:

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

4.4.3 *. WSP, GREENWAY PARK PUBLIC SCHOOL, ASBESTOS IN GROUNDS MANAGEMENT PLAN*

WSP was engaged by NSW Department of Education (DoE) to produce a SSAMP for Greenway Park Public School. On 14 February 2019 asbestos was identified on the previously trenched area between the two access gates, East of Block B, along the northern portion of the eastern boundary. Non-friable fibre cement fragments were observed on the ground surface.

A sparrow pick was performed on the visibly accessible ground surface portion. An asbestos clearance certificate was provided following the successful remediation works.

Maintenance requirements include visual checks to ensure grass cover is adequate at three-monthly intervals. Periodic resting of area may be required otherwise turf will require re-laying if the surface becomes eroded. Adequate watering during drought periods (this option may not be suitable during periods of extended drought when reservoir levels drop below 40%).

4.5 SUMMARY OF SITE HISTORY

Based on a review of historical information, the site comprised sparsely vegetated bushland in 1930. In 1947 the northern and western portions of the site comprised agricultural land. By 1965 agricultural use had extended to the remainder of the site. The north eastern portion of the site was occupied by two large shed structures with circular pens or structures also noted historically to the north.

Site use remained agricultural between 1975 and 1991. By 1998 construction of the school had commenced. Permanent structures and demountables occupied the southern and eastern portions of the site by 2002. Between 2002 and 2023 the site is utilised as Greenway Park Public School. Construction and removal of demountables has occurred throughout this period.

The Greencap (2017) report indicates site structures were constructed in 1999, 2004 and 2010.

The areas surrounding the site have generally comprised agricultural properties since circa 1965, with residential properties constructed circa 1998.

4.6 PRELIMINARY CONCEPTUAL SITE MODEL

Based on the site inspection and the desktop review of site setting and historical land use information, a preliminary CSM has been prepared. This is summarised in Table 4.2.

Table 4.2 Preliminary CSM

Likely sources of impact	Likely sources of impact at the site include: — uncontrolled fill materials potentially used historically to raise or level portions of the site — historical or recent waste dumping — potential ACM or hazardous building materials associated with imported materials or historical structures — pesticides used historically and recently to maintain the site.
Potentially impacted media	Soil: — impacts from potentially contaminated fill, building debris or waste materials — surface soil impacts from application of pesticides used on-site. Groundwater: — Vertical migration of chemicals present in soil into groundwater. This is considered unlikely given widespread soil contamination is not expected based on the historical land use at the site.
Contaminants of concern	Contaminants of concern at the site comprise: — TRH and BTEXN — PAHs — heavy metals — OCPs and OPPs — PCBs — asbestos.
Migration pathways	Potential migration pathways include: — airborne migration of contamination in dust or vapour — vertical migration of contaminants in soil from infiltration of rain water — lateral migration of contaminants through underground service trenches and other preferential pathways — run-off via surface contaminants in rain water — volatilisation of hydrocarbons in soil and/or groundwater.
Exposure pathways	Potential exposure pathways include: — inhalation of dust or vapours by site users or nearby site users — ingestion or dermal contact with contaminated surface soils or near surface soils by site users, nearby site users or excavation/maintenance workers. Exposure from contaminated groundwater has been discounted as part of the preliminary CSM due to: — the expected absence of gross soil contamination leading to groundwater contamination — the absence of groundwater extraction bores in the vicinity of the site.

Sensitive receptors	Based on the site setting, sensitive receptors potentially include: — underlying soil and groundwater ecosystems — adjacent residential land uses — current and future users of the site — on-site and off-site construction or utility workers (those working within service pit trenches).

5 DATA QUALITY OBJECTIVES

Systematic planning is critical to successful implementation of an environmental assessment and is used to define the type, quantity and quality of data needed to inform decisions. The United States Environmental Protection Agency has defined a process for establishing data quality objectives (DQOs), which has been referenced in the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM; as amended 2013).

DQOs ensure that:

— the study objectives are set

— appropriate types of data are collected (based on contemporary land use and chemicals of concern)

— the tolerance levels are set for potential decision making errors.

The DQO process is a seven-step iterative planning approach. The outputs of the DQO process are qualitative and quantitative statements which are developed in the first six steps. They define the purpose of the data collection effort, clarify what the data should represent to satisfy this purpose and specify the performance requirements for the quality of information to be obtained from the data. The output from the first six steps is then used in the seventh step to develop the data collection design that meets all performance criteria and other design requirements and constraints. The DQO process adopted for the works is outlined in Table 5.1.

Table 5.1 DQO process

STEP	DESCRIPTION	OUTCOMES
1	State the problem	The purpose of this assessment was to determine whether contaminants of concern were present at the site and, if so, assess potential risk to the future site users.
2	Identify the decisions/goal of the investigation	The decisions to be made based on the results of the investigation are as follows: — Has the soil been adequately sampled? — Were all the contaminants of concern analysed? — Is there a risk to future users of the site?
3	Identify the inputs to the decision	The inputs required to make the above decisions are as follows: — geological data — concentrations of contaminants of concern in soil — vertical delineation of chemicals in soil to preclude/include groundwater investigations. — site assessment criteria (outlined in Section 7) — observation data including presence of odours or discoloration and presence of potential hazardous materials (including asbestos) — distribution of identified contamination.
4	Define the study boundaries/ constraints on data	The boundaries of the investigation have been identified as follows: — Spatial boundaries: site investigation area and intrusive investigation area as identified in Appendix A. — Vertical boundaries: 0.5 m into the natural soil underlying the fill, maximum depth of 6.0 m bgl — Temporal boundaries: the date of the project inception to the completion of the fieldwork under the proposed investigation (January 2025).

STEP	DESCRIPTION	OUTCOMES
5	Develop a decision rule	The purpose of this step is to define the parameters of interest, specify the action levels and combine the outputs of the previous DQO steps into an 'if…then…' decision rule that defines the conditions that would cause the decision maker to choose alternative actions. The parameters of interest are concentrations of contaminants of concern in soil and evidence of uncontrolled fill material. An assessment of the concentrations of the contaminants of concern is to be undertaken to assess the suitability for recreational/open space land use. Should chemical or asbestos concentrations exceed the adopted assessment criteria, remedial options will be considered. Should vertical delineation of chemical concentrations in soil exceeding the adopted assessment criteria not be achieved, groundwater investigations will be considered.
6	Specify limits on decision errors	The acceptable limits on decision errors to be applied in the investigation and the manner of addressing possible decision errors have been developed based on the data quality indicators (DQIs) of precision, accuracy, representativeness, comparability and completeness and are presented in Table 5.2 and 5.3.
7	Optimise the design for obtaining data	The purpose of this step is to identify a resource-effective data collection design for generating data that satisfies the DQOs. This assessment has been designed considering the available information regarding the site. The resource effective data collection design that is expected to satisfy the DQOs is described in detail in Section 6. To ensure the design satisfies the DQOs, DQIs have been established to set acceptance limits on field methodologies and laboratory data collected.

DQIs for sampling techniques and laboratory analyses of collected soil samples define the acceptable level of error required for this validation assessment. The adopted field methodologies and data obtained have been assessed by reference to DQIs as follows:

— Precision: a quantitative measure of the variability (or reproducibility) of data

— Accuracy: a quantitative measure of the closeness of reported data to the true value

— Representativeness: the confidence (expressed qualitatively) that data are representative of each media present on the site

— Comparability: a qualitative parameter expressing the confidence with which one data set can be compared with another

— Completeness: a measure of the amount of useable data (expressed as a percentage) from a data collection activity.

A summary of the field and laboratory DQIs for the validation assessment are provided in Tables 5.2 and 5.3.

Table 5.2 DQIs for field techniques

DQI
Precision
Standard operating procedures (SOPs) appropriate and complied with
Collection of inter-laboratory and intra-laboratory duplicates
Accuracy
WSP SOPs appropriate and complied with
Collection of field and trip blanks and trip spikes
Representativeness
Appropriate media sampled
Comparability
Same SOPs used on each occasion
Experienced sampler
Climatic conditions (temperature, rainfall, wind)
Same type of samples collected
Completeness
SOPs appropriate and complied with
All required samples collected

Table 5.3 DQIs for laboratory

DQI	ACCEPTABLE LIMITS
Precision	
Analysis of laboratory duplicates for contaminants of concern in soil	<10 x laboratory limit of reporting (LOR) – no limit 10 to 20 x LOR – 50% relative percentage difference (RPD) >20 x LOR – 30% RPD
NATA certified laboratories	NATA accreditation for analyses performed
Accuracy	
Analysis of laboratory prepared trip blanks (one per batch)	Below LORs for contaminants analysed
Analysis of rinsate blanks (one per day)	Below LORs for contaminants analysed
Analysis of laboratory blanks	Below LORs for contaminants analysed
Analysis of laboratory matrix spikes, laboratory control samples and surrogate recoveries	70-130% inorganics/metals 60-140% organics 10-40% semi-volatile organic compounds
Analysis of laboratory duplicates for contaminants of concern in soil	<10 x LOR – no limit

	10 to 20 x LOR – 50% RPD >20 x LOR – 30% RPD
Representativeness	
All required samples analysed	As per Section 6
Comparability	
Sample analytical methods used (including clean-up)	As per NEPM (2013)
Same units	Justify/quantify if different
Same laboratories	Justify/quantify if different
Sample LORs	Less than nominated criteria
Completeness	
All critical samples analysed	As per Section 6
All required analytes analysed	As per Section 6
Appropriate methods and LORs	As per NEPM (2013)
Sample documentation complete	
Sample holding times complied with	

6 SAMPLING AND ANALYSIS PROGRAM

6.1 SAMPLING RATIONALE

The sampling plan for the DSI comprised soil sampling of boreholes advanced by hand augur and drill rig across the investigation area. Boreholes were advanced using a combination of hand augur, shovel and drill rig. Sample locations comprised the excavation of a 40cm square area to allow visual observation of the subsurface profile as well as sieving and inspection of the soil via NEPM methodology. The sampling frequency was compliant with the NSW EPA 2022, Sampling Design Guidelines.

Sample locations were chosen to provide coverage of the proposed development area.

6.2 FIELDWORK

6.2.1 PRELIMINARIES – SERVICE LOCATION

A desktop search for underground services using the 'Dial Before You Dig' service was undertaken prior to intrusive investigations. Clearance of all underground services within the investigation area was undertaken by an accredited underground service locator and sampling locations were cleared prior to the commencement of intrusive works. The service locator was provided with information/plans from the relevant asset owners.

6.2.2 INTRUSIVE INVESTIGATION WORKS AND SOIL SAMPLING

Intrusive investigation works were conducted on 15 January 2025 after all sampling locations were cleared by the service locator. The ten investigation locations were progressed to a maximum depth of between 0.68 m bgl and 6.0 m bgl. The rationale for the nominated depth was to investigate into the natural soil underlying the fill material.

Soil samples were generally collected from the surface (0.0-0.1 m bgl), 0.5-0.6 m bgl, 0.9-1.0 m bgl and where changes in lithology or evidence of contamination were observed. Duplicate samples were collected and screened with a photo-ionisation detector (PID) to analyse for volatile organic compounds (VOCs). PID readings were used to aid in selection of soil samples for laboratory analysis.

Subsurface materials were logged by an experienced environmental scientist according to AS1725: 2017 *Geotechnical Site Investigations*. Soil samples were placed in 250 mL jars, leaving minimal headspace, and closed using Teflon-coated lids.

Soil samples collected for asbestos analysis followed the sampling methodology outlined in the WA DoH 2009, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western, as referenced by the NEPM (2013). For ACM and friable asbestos (FA), a 10 L sample was collected and screened on-site through a ≤7 mm sieve. Any ACM/FA retained on the sieve (i.e. >7 mm in size) was bagged and sent to the primary laboratory for analysis. For analysis of asbestos fines (AF) a separate sample of approximately 500 mL was collected in a bag. This entire sample was sent to the laboratory for sieving and gravimetric determination of asbestos (<7 mm).

Dedicated disposable nitrile gloves were worn for each sample collected to minimise the potential for cross contamination. All soil samples were stored on ice in a cooler and transported to the laboratory under chain of custody documentation.

6.3 LABORATORY ANALYSIS

WSP submitted at least one soil sample from each borehole for laboratory analysis to a NATA accredited laboratory. Samples were selected based on field screening, including PID readings (volatiles) and sample appearance (visual and olfactory). Other samples obtained were retained for further analysis if required.

A suite of contaminants often found in fill material were analysed and included heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRHs, BTEXN, PAHs, OCPs, PCBs and asbestos.

7 SOIL ASSESSMENT CRITERIA

The purpose of this assessment is to determine the soil conditions, with respect to current potential soil contamination at the site. It is considered appropriate to assess the site based on the current and future use as an open space. Assessment criteria applicable for assessing laboratory analytical data is provided by the following:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM; as amended 2013), specifically Schedule B1, Investigation Levels for Soil and Groundwater.
- Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) *Technical Report No. 10 Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater, Part 2: Application Document* (Friebel and Nadebaum, 2011).

Schedule B1 provides a framework for the use of investigation and screening levels based on a matrix of human health and ecological risks.

7.1 HEALTH INVESTIGATION LEVELS AND HEALTH SCREENING LEVELS

To assess the presence and extent of soil contamination at a site, the NSW EPA refers to the NEPM (2013) which provides health investigation levels (HILs) and health screening levels (HSLs) for the assessment of impacted soil.

HILs provide an assessment of potential risk to human health from chronic exposure to contaminants and have been developed based on land use setting. As the purpose of this investigation is to assess the site against risk to current site users, the 'HIL A' criteria for residential with garden/accessible soil including primary schools have been adopted; these criteria are considered applicable to primary school land use.

HSLs have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via the vapour intrusion and inhalation pathway. The HSLs depend on specific soil physicochemical properties and land use scenarios. They apply to different soil types and depths. The 'HSL A' criteria have been adopted, in a subsurface comprising of clay.

HSLs are also provided for asbestos contamination in soil, for bonded ACM, FA and AF. As per the WA DoH (2009) guidelines, a 10 L sample is collected and screened manually on-site through a ≤7 mm sieve or spread out for inspection on a contrasting material for visual inspection. Any ACM/FA retained on the sieve (i.e. >7 mm in size) is then analysed in the laboratory for bonded ACM, with results quantified in per cent weight by weight (%w/w). For FA/AF a separate sample of approximately 500 mL is collected, sieved in the laboratory and gravimetric determination of asbestos (<7 mm) undertaken. The results are then compared to the NEPM HSLs. If the HSLs are not exceeded then no contamination management options are required provided the surface soil is free of visual asbestos. If results exceed the HSLs, further assessment, management and/or remediation is required.

The HSL for friable asbestos and asbestos fines (FA/AF) provided in the NEPM (2013) is 0.001% for all land use types. Current Australian methodologies for asbestos quantification, as outlined in Australian Standard AS4964 2004, *Method for Qualitative Identification of Asbestos in Bulk Samples*, indicate that the presence or absence of free (i.e. respirable) asbestos fibres can be determined with a LOR of 0.01%, an order of magnitude greater than the HSL. It is noted that laboratories typically report with a LOR of 0.001% for FA/AF, however due to the limitations with the method adopted it is possible that free respirable asbestos fibre contamination exists in samples at concentrations up to an order of magnitude greater than the reported detection limit. In the absence of a methodology with a more appropriate LOR, it is considered appropriate to compare analytical results obtained against the HSL, taking into consideration the limitations inherent in the method.

The Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) Technical Report No. 10, *Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater* (Friebel and

Nadebaum, 2011) provides HSLs for petroleum hydrocarbons specifically for vapour inhalation for intrusive maintenance workers in shallow trenches, and for direct contact. These have also been adopted.

7.2 ECOLOGICAL SCREENING LEVELS AND ECOLOGICAL INVESTIGATION LEVELS

The NEPM (2013) provides ecological screening levels (ESLs) for TRH and BTEX compounds, and ecological investigation levels (EILs) for selected metals and organic substances, for use as an initial screening risk assessment and are applicable for assessing risk to terrestrial ecosystems. The ESLs apply to different land use scenarios, and to coarse- and fine-grained soils. The EILs depend on specific soil physicochemical properties and land use scenarios. ESLs/EILs generally apply to the top 2 m of soil.

The NEPC, 2013 provides a protocol for deriving site specific Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) for a range of potential contaminants. The EILs take into consideration the physiochemical properties of soil and contaminants and the capacity of the local ecosystem to accommodate increases in the contaminant levels. Tables 1B(4) and 1B(5) of the NEPM (2013) provide generic EILs for aged arsenic and lead, and fresh DDT and naphthalene in soils (irrespective of their physiochemical properties). Aged values are applicable for contamination present in soil for at least two years which is considered appropriate. Site-specific EILs for chromium (III), copper, nickel and zinc can be calculated using the CSIRO Ecological Investigation Level Calculation Spreadsheet provided online in the ASC NEPM Toolbox (http://www.scew.gov.au/node/941). These calculations require an understanding of the cation exchange capacity (CEC), clay content and pH of the residual soil at the site. The following parameters were adopted based on measured or conservative values from sample location GPS_BH04_0.5:

- CEC of 16.5 cmolc/kg.
- pH of 6.5.
- clay content of 39%.
- organic carbon content of 1%, as a conservative approach.

Adopted ESLs and EILs are outlined in Table 7.1.

Table 7.1 Soil ecological assessment criteria

ANALYTE	ESLs[1] (mg/kg)	EILs[2] (mg/kg)
TRH/BTEXN compounds		
TRH F1	180	-
TRH >C_{10}-C_{16}	120	-
TRH >C_{16}-C_{34}	1,300	-
TRH >C_{34}-C_{40}	5,600	-
Benzene	65	-
Toluene	105	-
Ethylbenzene	125	-
Xylene (total)	45	-
Naphthalene	-	170
PAHS		

ANALYTE	ESLs[1] (mg/kg)	EILs[2] (mg/kg)
Benzo(a)pyrene	0.7	-
METALS		
Arsenic	-	100
Chromium	-	630
Copper	-	220
Lead	-	1,100
Nickel	-	240
Zinc	-	670
DDT	-	100

(1) NEPM (2013) Schedule B1 Table 1B(6) ESLs for TPH Fractions F1 to F4, BTEX and benzo(a)pyrene in soil.

(2) NEPM (2013) Schedule B1 EILs for metals, DDT and naphthalene in soils.

8 RESULTS AND DISCUSSION

8.1 SUBSURFACE CONDITIONS

The subsurface conditions encountered beneath the site mostly comprised:

— Clayey sand or sandy clay topsoil to approximately 0.2 m bgl

— Sandy silty clay fill to between 0.55 m bgl to 1.0 m bgl.

— Natural material comprising sandy or silty clay to between 2.7 m bgl and 3.0 m bgl underlain by siltstone.

A possible asbestos fragment was noted in HA04 at 0.2 m bgl along with brick, pavers and charcoal. Glass was observed in HA01 and brick and pavers were noted in HA02. Plastic and charcoal were noted in HA06. No other anthropogenic inclusions or potential asbestos containing material was noted.

Environmental borehole logs are provided in Appendix F, and sampling locations are shown in Appendix A. Photographs of the boreholes are presented in Appendix E.

8.2 SOIL RESULTS SUMMARY

Selected soil samples were analysed for contaminants of concern. Soil samples were selected based on a combination of sample location (to provide coverage) and field observations (to target areas of potential concern).

The following sections provide a summary of the results of the soil investigation. More detailed summary tables of analytical results are provided in Appendix B, and laboratory reports are provided in Appendix C.

8.2.1 HIL/HSL EXCEEDANCES

An ACM fragment was identified at sampling location HA04 at 0.2 mbgl and confirmed through laboratory analysis to contain chrysotile and amosite asbestos. The weight was converted to percentage weight by weight (% w/w) asbestos in soil using the following formula from NEPM (2013):

$$\%\, w/w\ asbestos\ in\ soil = (\%\ asbestos\ content\ x\ bonded\ ACM\ (kg))/(soil\ volume\ (L) x\ soil\ density\ (kg/L))$$

The 10L soil volume passed through a sieve on-site and as per enHealth (2005), the per cent asbestos content within the cement sheeting fragment was assumed to be 15% with soil density assumed at 1.65 kg/L. Based on this, the ACM fragment (2.03 gram) was considered to equate to 0.0018% w/w asbestos in soil, which is below the adopted criteria of 0.01%.

All results for BTEXN, TRH, PAHs, heavy metals phenols, OCPs and PCBs in soil were below the adopted human health criteria for the site.

8.2.2 ESL/EIL EXCEEDANCES

All reported concentrations of heavy metals, TRH, PAHs, BTEXN, Phenols, OPP, OCP and PCBs in soil were below the adopted ecological criteria for the site.

No vegetation stress was observed on site.

8.3 PRELIMINARY WASTE CLASSIFICATION

Material requiring off-site disposal should be assessed in accordance with the NSW EPA waste classification guidelines to determine the appropriate classification. The waste classification and disposal process in NSW involves the following six-step process:

Step 1: Determine whether the waste is special waste? (Note: asbestos is a special waste);

Step 2: Determine whether the waste is liquid waste;

Step 3: Determine whether the waste is pre-classified;

Step 4: Determine whether the waste possesses hazardous characteristics;

Step 5: Determine the waste's classification using chemical assessment; then

Step 6: Determine whether the waste is putrescible.

Waste classification criteria are presented in the NSW EPA (2014) *Waste Classification Guidelines – Part 1: Classifying waste*.

WSP has conducted a preliminary waste classification assessment based on results of the DSI, with the results outlined in the following sections. Waste classification tables are provided in Appendix B.

Concentrations of contaminants of concern were reported below the CT1 general solid waste criteria in all samples analysed. Asbestos was reported in one sample. As such, the preliminary waste classification of fill material is special waste (asbestos) within a general solid waste matrix.

WSP considers additional sampling including toxicity characteristic leaching procedure (TCLP) analysis will be required for any soil which is proposed to be removed from the site. Preparation of a waste classification letter will also be required. The letter shall be used to seek pre-approval for disposal from the selected waste facility.

Sampling may be undertaken in situ, or ex situ via excavation and temporary stockpiling. The sampling density for material to be disposed of off-site will comprise (as a minimum) one sample per 25 m^3 for less than or equal to 200 m^3 of material. If larger volumes are to be generated for a single batch, then a minimum of ten samples are to be collected for up to 2,000 m^3 to facilitate statistical analysis along with relevant quality assurance and quality control (QA/QC) samples. Waste classification samples are to be analysed for asbestos, TRH, BTEX compounds, PAHs, and heavy metals.

8.4 UPDATED CONCEPTUAL SITE MODEL

Table 8.1 provides an updated CSM, which has been revised based on the findings of the targeted DSI.

Table 8.1 Updated CSM

Likely sources of impact	Likely sources of impact at the site include: — uncontrolled fill materials used historically to raise or level portions of the site — historical or recent waste dumping — potential ACM or hazardous building materials from imported materials or demolished structures.
Potentially impacted media	Soil: — impacts from potentially contaminated fill, building debris or waste materials. Groundwater: — Vertical migration of chemicals present in soil into groundwater. This is considered unlikely given widespread soil contamination by chemical contaminants is not apparent based on the analytical results.
Contaminants of concern	Based on the soil laboratory results the revised contaminant of concerns for the site are considered to be: — Asbestos (identified in fill and previously identified on the site surface, WSP 2023 and 2019).

Migration pathways	Potential migration pathways include: — airborne migration of contamination in dust or vapour — run-off via surface contaminants in rain water.
Exposure pathways	Potential exposure pathways include: — inhalation of dust or airborne fibres by site users or nearby site users — ingestion or dermal contact with contaminated surface soils or near surface soils by site users, nearby site users or excavation/maintenance workers.
Sensitive receptors	Based on the site setting, sensitive receptors potentially include: — members of the public accessing the site, as it is currently publicly accessible — current and future users of the site — on-site and off-site maintenance, construction or utility workers.

9 DATA VALIDATION

The DQIs for sampling techniques and laboratory analyses of collected representative soil samples define the acceptable level of error required for this investigation. The DQOs have been assessed by reference to the attributes presented in Table 9.1.

Table 9.1 Data quality indicators

DQI	DESCRIPTION	APPLICABILITY
Representativeness	The confidence that the data are representative of each media present on the site. Expresses the degree to which sample data accurately and precisely represents a characteristic of a population or an environmental condition. Controlled through selecting sampling locations that exemplify site conditions and obtaining suitable samples.	Consistent and repeatable sampling techniques and methods were utilised. Shallow fill was suitably characterised at each investigation location as part of the sample and analysis program.
Precision	The quantitative measure of the variability (or reproducibility) of data. Expressed as RPDs between the original and duplicate samples tested. Validity of the data is questioned if the RPD limits are exceeded and upon further investigation a reason cannot be determined.	Work was conducted in accordance with WSP standard procedures. The precision of the data was assessed by calculating the RPDs of duplicate samples following AS 4482.1 (2005).
Accuracy	The quantitative measure of the closeness of reported data to the true values. Accuracy can be undermined by such factors as field contamination of samples, poor preservation or preparation techniques.	Accuracy was assessed by using equipment blanks and laboratory quality assurance / quality control (QA/QC) analytical results (including laboratory control samples, spikes, and reference samples).
Completeness	The measure of the amount of usable data from a data collection activity. Valid chemical data are the values that have been identified as acceptable or validated.	The completeness goal was set at there being sufficient valid data generated during the study. Measurements made were judged to be valid measurements.
Comparability	The confidence that data may be considered to be equivalent for each sampling analytical event, i.e. the confidence with which one data set can be compared with another. Achieved through qualitative assessment of QA/QC procedures, using comparable field sampling, laboratory sample preparation and analytical procedures and reporting units.	The sampling was in general accordance with the sampling and analysis procedures and as per standard industry procedures. Each sample was analysed using identical methods for each analyte and laboratory LORs were consistent over each laboratory batch. A check laboratory was used to provide data to make a comparative assessment of variability between laboratories.

Table 9.2 summarises conformance to specific QA/QC procedures.

Table 9.2 Data quality assurance

ITEM	OBJECTIVES MET
Environmental consultant	The environmental consultant maintains quality assurance systems certified to AS/NZS ISO 9001:2000. Qualified and experienced environmental scientists completed field works.
Procedures	All work was conducted in accordance with relevant statutory work health and safety (WHS) and environmental sampling guidelines, as well as standard company WHS and environmental field procedures. Standard field sampling sheets were used. Details recorded included WSP staff and contractors present, time on/off-site, weather conditions, calibration records and comments.
Sampling	Collection of samples was undertaken by appropriately qualified and experienced personnel following WSP standard field procedures which are based on industry accepted standard practice. Chain of custody documentation was used to ensure the integrity of samples from collection to receipt by the laboratory.
Field equipment	Equipment was serviced and calibrated as per the manufacturer requirements.
Equipment decontamination	Undertaken after each sampling episode where equipment used was not dedicated. A rinsate blank was collected by passing deionised water over decontaminated field equipment (trowel) and collecting it for analysis of contaminants of concern. All analytes in the rinsate blank were below LORs. Field sampling procedures conformed to WSP QA/QC protocols to prevent cross-contamination, preserve sample integrity, and allow for collection of a suitable data set from which to make technically sound and justifiable decisions with data of satisfactory usability. QA/QC sample results are presented in in Appendix B and C.
Transportation	Samples were stored in chilled coolers on-site and during transport via courier to the laboratory. A chain of custody form was completed on-site and sent with the samples. The laboratory confirmed receipt of the samples and specified the condition on delivery and the scheduled analyses. All analytes in the trip blank were below LORs. Appropriate holding times were met.
Field QA/QC	QA/QC sampling was undertaken to industry standard procedures including collection and analysis of intra-laboratory. Field and laboratory acceptable limits are as stated by AS 4482.1-1997. Non-compliances have been documented in Section 10 of this report.
Laboratory analysis	Analysis was carried out by laboratories with NATA certification for the required analyses with the exception of asbestos quantification. Detection limits were sufficient to enable comparison against the appropriate guidelines. All LORs were less than the adopted assessment criteria.
Acceptable limits for QA/QC samples	Primary laboratory QA/QC acceptance limits for recovery of surrogates, control samples and matrix spikes to be 70% to 130% for organics and 80% to 120% recovery for inorganics and waters. All method blanks to be less than LORs.
Reporting	Report generally complies with the NEPM (2013).

10 FIELD QA/QC

The following sections discuss the field QA/QC program. Summary tables of QA/QC results are provided in Appendix B, and the results for internal and external QA/QC procedures are provided within the laboratory analysis reports in Appendix C.

10.1 FIELD RESULTS

10.1.1 BLIND DUPLICATES

The field QA/QC soil sampling program for the sample batch comprised collection and analysis of intra laboratory duplicate QC101 and inter laboratory duplicate QC101A of primary sample DPS_HA03_0.1, for TRH and BTEXN compounds, PAHs and heavy metals.

No field duplicate analysis was undertaken for asbestos quantification. The purpose of collecting duplicate samples is to measure the potential for inaccuracy in sample results due to field or laboratory procedures. Analysis of anonymised duplicate samples by the primary and secondary laboratories serves to determine the degree to which sample analyses which should provide identical results do, in fact, provide them. The way this is measured is through the calculation of RPDs.

For contaminants which are discrete within the matrix being sampled, such as asbestos in bonded or fibre form in soil, the duplication of a particular sample does not logically support the objective of duplicate sampling. Chemical contaminants tend, through a variety of processes, to diffuse towards homogeneous concentrations. However, as asbestos contamination represents foreign bodies present in the soil which do not diffuse except through mechanical mixing there is no logical expectation of similar quantities in any two discrete samples, even two samples split from one larger one. Therefore, the results of the analyses of two such samples should not be expected to adhere to the same RPD criteria by which chemical contaminants are measured.

10.1.1.1 RPDs

RPDs were calculated for the primary and duplicate samples for assessment of the data quality, in particular for assessment of the reproducibility of the analytical data measurements or ‘precision’ given the adopted field and laboratory methods.

The RPDs were calculated using the formula below, and the results are presented in Appendix B.

$$RPD\% = \frac{|Ro - Rd|}{|(Ro + Rd)/2|} \times 100\%$$

Where Ro is the primary sample and Rd is the primary duplicate.

The RPD values were compared to the RPD acceptance criterion outlined in Table 9.2 and in general accordance with Australian Standard AS 4482.1 (for non- and semi-volatiles in soil) and NEPM (2013) Schedule B3. For volatile compounds no published RPD acceptance criteria exists, however RPDs of <100% are considered acceptable where concentrations are at least 10 times the LOR. RPDs for results less than the LOR were not calculated. In instances where results were greater than the LOR for the one sample, but below LOR for the corresponding primary or duplicate sample, a result equal to the LOR was adopted in order to calculate an RPD.

RPD exceedances were reported as follows:

- copper for primary sample DPS_HA03_0.1 and intra-laboratory duplicate (QA01)
- lead for primary sample DPS_HA03_0.1 and intra-laboratory duplicate (QA01)

— nickel for primary sample DPS_HA03_0.1 and intra-laboratory duplicate (QA01)

— nickel for primary sample DPS_HA03_0.1 and inter-laboratory duplicate (QA01A)

— zinc for primary sample DPS_HA03_0.1 and intra-laboratory duplicate (QA01)

All other RPDs were considered to be acceptable.

It is considered that the RPD exceedances listed above are attributable to the heterogeneous nature of the fill encountered. Results were all in the same order of magnitude and none of the concentrations detected in either the primary or duplicate samples analysed exceeded the adopted assessment criteria. The degree of variance shown in the duplicate results would not indicate potential exceedances for other samples in the dataset. The elevated RDPs are, therefore, not considered to affect the conclusions of this report.

10.1.2 RINSATE

A rinsate blank was collected and analysed for TRH, BTEXN and PAHs. These analytes were not detected in the samples, suggesting the sampling protocol did not result in cross-contamination of the samples.

Results for the rinsate samples are presented in Appendix B.

10.1.3 TRIP SPIKE AND TRIP BLANK

A trip blank sample accompanied samples to the laboratory and analysed for TRH and BTEXN. These analytes were not detected in the trip blank, suggesting no cross contamination occurred during transportation.

Trip spike recovery indicated loss of volatiles occurred at an acceptably low level.

10.2 SUMMARY OF QA/QC RESULTS

WSP considers that the sample collection, documentation, handling, storage and transportation procedures utilised are of an acceptable standard and the analytical results provided by the laboratories are deemed reliable and complete, therefore the data are considered fit for purpose.

It is considered that the QA/QC procedures and results were acceptable and that the conclusions of the report have not been significantly affected by the sampling or analytical procedures. Based on the results of laboratory QA/QC samples and the sampling and handling procedures used for the collection and analysis of soil, the data were considered representative and appropriate for use in this assessment.

11 CONCLUSIONS

This targeted DSI report has been prepared to accompany a REF prepared for the DoE relating to upgrades to Greenway Park Public School (the development) under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI). The targeted DSI was undertaken to assess soil conditions to inform proposed upgrade of the site involving temporary relocation of four demountable teaching spaces, removal of four to eight demountable teaching spaces and construction of four to eight new permanent teaching classrooms in the north western portion of the site. As such, the intrusive investigation targeted this proposed upgrade area.

The objectives of the DSI were to identify impacts from potential contaminants of concern and provide recommendations for management of those impacts if required. Site is currently in use as a primary school and will continue to be utilised as a primary school.

The results of the investigation indicated the following:

- The site was utilised for agricultural use since 1947 including the construction of two large shed structures in the north eastern portion of the site and circular pens or structures to the north. Site use remained agricultural between 1975 and 1991. By 1998 construction of the school had commenced. Permanent structures and demountables occupied the southern and eastern portions of the site by 2002. Between 2002 and 2023 the site is utilised as Greenway Park Public School. Construction and removal of demountables has occurred throughout this period. Site structures were constructed in 1999, 2004 and 2010.
- The subsurface conditions encountered beneath the site during the WSP 2025 investigation comprised clayey sand or sandy clay topsoil to approximately 0.2 mbgl underlain by sandy silty clay fill to between 0.55 m to 1.0 m. Natural material comprising sandy or silty clay to between 2.7 m and 3.0 m underlain by siltstone. An asbestos fragment was noted in HA04 at 0.2 mbgl along with brick, pavers and charcoal. Glass was observed in HA01, brick and pavers were noted in HA02. Plastic and charcoal were noted in HA06. No other anthropogenic inclusions or potential asbestos containing material was noted.
- The ACM fragment identified at sampling location HA04 at 0.2 m was considered to equate to 0.0018% w/w asbestos in soil, which is below the adopted criteria of 0.01%.
- No concentrations of TRH, PAH, BTEXN, OCPs, heavy metals, phenols or PCBs were reported above the adopted assessment criteria for the protection of human health based on the proposed continued use of the site for a primary school. Concentrations of contaminants of concern were below the ecological criteria for urban residential and open spaces.

Based on the results of this targeted DSI it is concluded that the contamination risk at the proposed development area is high due the presence of asbestos. The site can be made suitable for the planned development, following implementation of asbestos management controls. It should be noted contamination might be present at other areas of the site.

12 RECOMMENDATIONS

WSP recommend management of the asbestos on site to make the proposed development area suitable for the planned development. Management can be in the form of removal and appropriate off site disposal of fill via excavation in the vicinity of HA04, or on site encapsulation of the material, conducted in conjunction with the proposed development. Management will need to be followed by appropriate validation in the form of a visual inspection, photographs and sampling.

Based on the findings of this assessment WSP recommends the following:

- The WSP (2019), Asbestos in Grounds Management Plan (AGMP) should be updated to include the current asbestos finds and shall continue to be followed after the completion of development.
- A Construction Environmental Management Plan (CEMP) including an asbestos management plan and unexpected finds protocol should be developed and followed during the proposed development works.
- The Department of Education Asbestos Management Plan (AMP) for NSW Government Schools shall continue to be followed after the development works.

12.1 MITIGATION MEASURES

Required mitigation measures are detailed in Table 12.1.

Table 12.1 Mitigation Measures

Mitigation Name	When is Mitigation Measure to be complied with	Mitigation Measure	Reason for Mitigation Measure
AGMP	Prior to, during and following development works.	Compliance with existing AMP	Provide guidance during works near or with potential ACM.
CEMP	During development works	Preparation and compliance with CEMP and unexpected finds protocol	Provide guidance in the event of an unexpected find.
AMP	Prior to, during and following development works.	Compliance with existing AMP	Provide guidance during works near or with potential ACM.
Waste Classification	If soil is to be removed from site	Additional waste classification assessment is required if soil is to be removed from site (including TCLP analysis).	Assess material in accordance with the NSW EPA waste classification guidelines.

12.2 EVALUATION OF ENVIRONMENTAL IMPACTS

The impacts of the activity can be adequately mitigated or minimised through the required mitigation measures such that the activity will not have a significant effect on the environment.

13 LIMITATIONS

This Report is provided by WSP Australia Pty Limited (WSP) for School Infrastructure NSW (Client) in response to specific instructions from the Client and in accordance with WSP's proposal dated 13 November 2024 and agreement with the Client dated 13 December 2024 (Agreement).

13.1 PERMITTED PURPOSE

This Report is provided by WSP for the purpose described in the Agreement and no responsibility is accepted by WSP for the use of the Report in whole or in part, for any other purpose (*Permitted Purpose*).

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The services undertaken by WSP in preparing this Report were limited to those specifically detailed in the Report and are subject to the scope, qualifications, assumptions and limitations set out in the Report or otherwise communicated to the Client.

Except as otherwise stated in the Report and to the extent that statements, opinions, facts, conclusion and / or recommendations in the Report (*Conclusions*) are based in whole or in part on information provided by the Client and other parties identified in the report (*Information)*, those Conclusions are based on assumptions by WSP of the reliability, adequacy, accuracy and completeness of the Information and have not been verified. WSP accepts no responsibility for the Information.

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- NSW EPA 1995, Sampling Design Guidelines.
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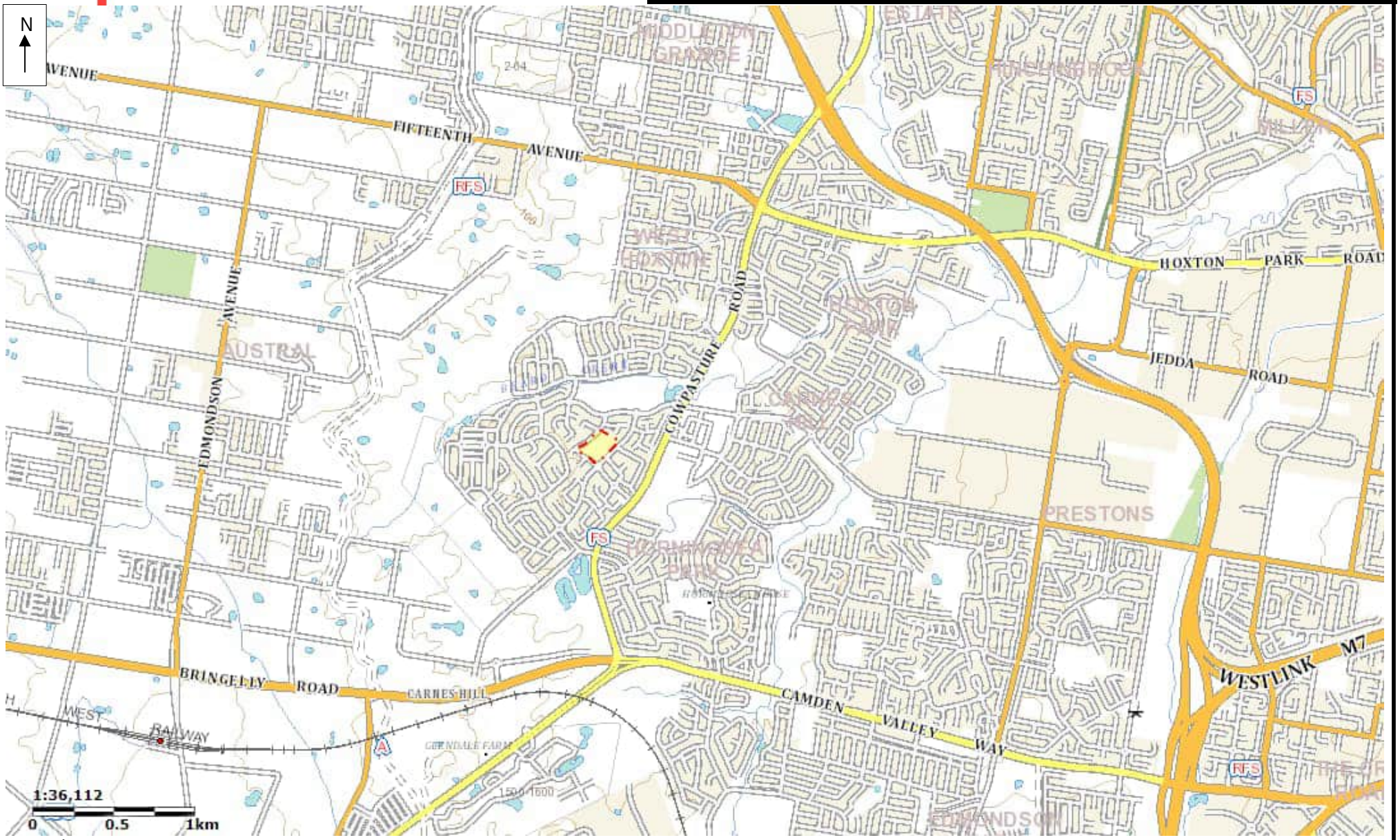
- WSP, Greenway Park Public School, Asbestos in Grounds Management Plan, May 2019
- WSP, Greenway Park Public School, Targeted Detailed Site Investigation, November 2023

APPENDIX A

FIGURES



Legend
Site boundary

Image Source – Six Maps 2023

Figure 1
Site location plan

Figure 2
Sample Location Plan

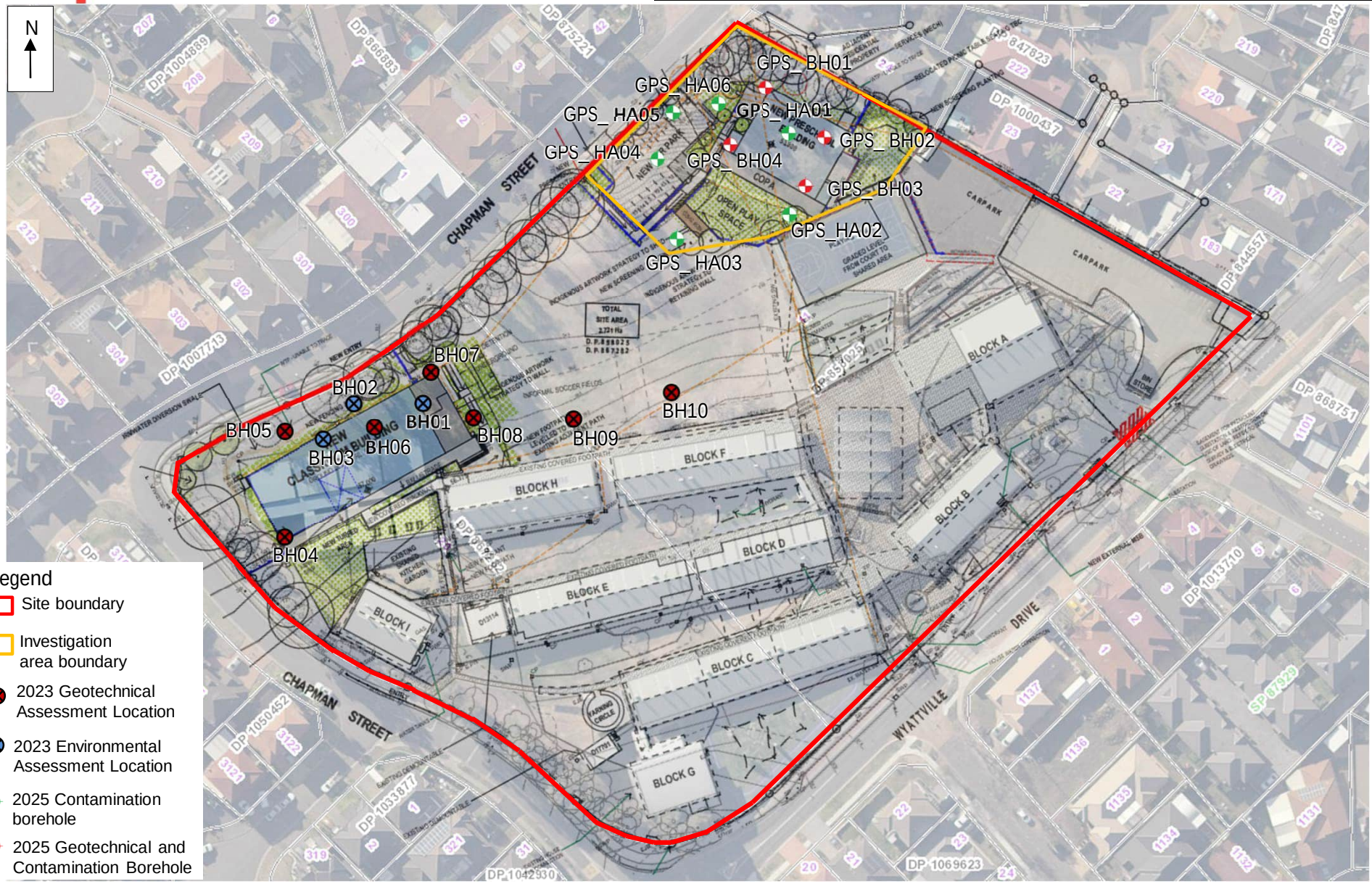


Image Source – Masterplan Validation Report, Fulton Trotter Architects 2024

Figure 3
Development Overlay

APPENDIX B

ANALYSIS SUMMARY TABLES

Table 1 - Analytical results

				Total Petroleum Hydrocarbons											BTEXN														
				TRH C6 - C9 Fraction	TRH C10 - C14 Fraction	TRH C15 - C28 Fraction	TRH C29 - C36 Fraction	TRH>C10 - C36 (Sum of total) (Lab Reported)	TRH>C10 - C40 (Sum of total) (Lab Reported)	TRH C6 - C10 Fraction F1	TRH C6 - C10 Fraction Less BTEX F1	TRH >C10 - C16 Fraction F2	TRH >C10 - C16 Fraction Less Naphthalene F2	TRH >C16 - C34 Fraction F3	TRH >C34 - C40 Fraction F4	Benzene	Toluene	Ethylbenzene	Xylenes (m & p)	Xylene (o)	Xylenes (Sum of total) (Lab Reported)	Naphthalene (VOC)	Total BTEX	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*
				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				10	20	50	50	50	50	10	10	50	50	100	100	0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
AUS CRCCARE 2011 HSLs Intrusive Maintenance Worker Direct Contact										82,000		62,000		85,000	120,000	1,100	120,000	85,000			130,000	29,000								
AUS CRCCARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY																														
>=0m, <2m																350														
NEPM 2013 Table 1A(1) HILs Res A Soil																													3	3
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																														
>=0m, <1m											50		280			0.7	480				110	5								
>=1m, <2m											90					1					310									
>=2m, <4m											150					2														
>=4m											290					3														
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																						170								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																														
>=0m, <2m											180	120	120	1300	5,600	65	105	125			45							0.7		
Field ID	Depth	Date	Lab Report Number																											
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	<10	<50	<100	100	100	100	<10	<10	<50	<50	<100	100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
AsbestosFragments	0.2	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	<10	<50	<100	<100	<50	100	<10	<10	<50	<50	100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
QA/QC Samples																														
DPS_HA03_0.1	2	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
QC101	0.1	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
QC101	0.1	14/01/2025	1181226	<20	<20	62	66	128	110	<20	<20	<50	<50	110	<100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 1 - Analytical results

				Polycyclic aromatic hydrocarbons													Heavy Metals								Phenolics					
				Benzo(a)pyrene TEQ (upper bound)*	Benzo(b&j)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	PAH (Sum of Common 16 PAHs - Lab Reported)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	2,4-Dimethylphenol	2,4-Dinitrophenol	2-Methylphenol	2-Nitrophenol	3- & 4 - Methylphenol	Cresols (Sum of 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
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	2	0.4	2	5	5	0.1	2	5	0.5	5	0.5	1	1	0.5
AUS CRCCARE 2011 HSLs Intrusive Maintenance Worker Direct Contact													29,000																
AUS CRCCARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY																													
>=0m, <2m																													
NEPM 2013 Table 1A(1) HILs Res A Soil				3												300	100	20		6,000	300	40	400	7,400			400		400	400
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay													5																
>=0m, <1m													5																
>=1m, <2m																													
>=2m, <4m																													
>=4m																													
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space													170				100		630	220	1,100		240	670						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																														
>=0m, <2m																														
Field ID	Depth	Date	Lab Report Number																											
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	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	10	<1	16	21	16	<0.1	5	26	<0.5	<5	<0.5	<1	<1	<0.5
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	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	<5	<1	8	17	45	<0.1	6	80	-	-	-	-	-	-
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	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	6	<1	13	17	46	<0.1	7	62	<0.5	<5	<0.5	<1	<1	<0.5
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	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	11	<1	22	27	25	<0.1	12	69	-	-	-	-	-	-
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	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	7	<1	13	23	16	<0.1	5	30	-	-	-	-	-	-
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	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	<5	<1	7	16	43	<0.1	5	50	-	-	-	-	-	-
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	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	7	<1	12	20	46	<0.1	6	65	-	-	-	-	-	-
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	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	6	<1	10	16	37	<0.1	6	53	-	-	-	-	-	-
AsbestosFragments	0.2	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	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	10	<1	25	17	26	<0.1	8	36	-	-	-	-	-	-
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	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	6	<1	13	24	26	<0.1	14	81	-	-	-	-	-	-
QA/QC Samples																														
DPS_HA03_0.1	2	14/01/2025	ES2502103	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	7	<1	18	29	20	<0.1	14	64	-	-	-	-	-	-
QC101	0.1	14/01/2025	ES2502103	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	<5	<1	12	14	11	<0.1	6	35	-	-	-	-	-	-
QC101	0.1	14/01/2025	1181226	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	6.2	<0.4	15	21	15	<0.1	8.4	49	-	-	-	-	-	-

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 1 - Analytical results

				Organochlorine Pesticides																									
				Phenol	Non-Halogenated Phenols (Sum of total)	4,4'-DDD	4,4'-DDE	4,4'-DDT	a-HCH	Aldrin	Aldrin and Dieldrin (Total)*	b-HCH	Chlordanes - Total	DDT + DDE + DDD (Total)*	d-HCH	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-HCH (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Dichlorvos	Demeton-S-methyl	Monocrotophos	Dimethoate
				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	20	0.05	0.05	0.2	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	0.2	0.05	0.05	0.2	0.05
AUS CRCCARE 2011 HSLs Intrusive Maintenance Worker Direct Contact																														
AUS CRCCARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY																														
>=0m, <2m																														
NEPM 2013 Table 1A(1) HILs Res A Soil				3,000						6			50	240		6	270	270		10				6		300				
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																														
>=0m, <1m																														
>=1m, <2m																														
>=2m, <4m																														
>=4m																														
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space														180																
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																														
>=0m, <2m																														
Field ID	Depth	Date	Lab Report Number																											
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	<0.5	<20	< 0.05	< 0.05	<0.2	< 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	<0.2	-	-	-	-
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	<0.5	<20	< 0.05	< 0.05	<0.2	< 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	<0.2	-	-	-	-
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	-	-	<0.05	<0.05	<0.2	<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	<0.2	<0.05	<0.05	<0.2	<0.05
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	-	-	<0.05	<0.05	<0.2	<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	<0.2	<0.05	<0.05	<0.2	<0.05
AsbestosFragments	0.2	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA/QC Samples																														
DPS_HA03_0.1	2	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	1181226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 1 - Analytical results

				Organophosphorus Pesticides															Polychlorinated Biphenyls	Halogenated Benzenes	Phenolics-Halogenated							
				Diazinon	Chlorpyrifos-methyl	Parathion-methyl	Malathion	Fenthion	Chlorpyrifos	Parathion	Pirimiphos-ethyl	Chlorfenvinphos	Bromophos-ethyl	Fenamiphos	Prothiofos	Ethion	Carbophenothion	Azinphos Methyl	PCB (Sum of Total-Lab Reported)	Hexachlorobenzene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol	2-Chlorophenol	4-Chloro-3-methylphenol	Pentachlorophenol	Halogenated Phenols (Sum of 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
EQL				0.05	0.05	0.2	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	1	1	0.5	0.5	0.5	1	1	1
AUS CRCCARE 2011 HSLs Intrusive Maintenance Worker Direct Contact																												
AUS CRCCARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY																												
>=0m, <2m																												
NEPM 2013 Table 1A(1) HILs Res A Soil																			1	10							100	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																												
>=0m, <1m																												
>=1m, <2m																												
>=2m, <4m																												
>=4m																												
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																												
>=0m, <2m																												
Field ID	Depth	Date	Lab Report Number																									
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	< 0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	< 0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	< 0.05	-	-	-	-	-	-	-	-	-
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	< 0.05	-	-	-	-	-	-	-	-	-
AsbestosFragments	0.2	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA/QC Samples																												
DPS_HA03_0.1	2	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	1181226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 1 - Analytical results

	Asbestos								
	Asbestos Containing Material (ie 15% Asbestos in ACM >7mm)	Asbestos (Fines and Fibrous <7mm)	Asbestos (Fines and Fibrous FA+AF)	Weight Used for % Calculation	Fibrous Asbestos >7mm	Asbestos Containing Material	Asbestos Detected	Asbestos Type	Sample weight (dry)
	% (w/w)	g	% (w/w)	kg	g	g	g/kg	-	g
EQL	0.01	0.0004	0.001	0.0001	0.0004	0.1	0.1	-	0.01
AUS CRCCARE 2011 HSLs Intrusive Maintenance Worker Direct Contact									
AUS CRCCARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY									
>=0m, <2m									
NEPM 2013 Table 1A(1) HILs Res A Soil	0.01		0.001						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay									
>=0m, <1m									
>=1m, <2m									
>=2m, <4m									
>=4m									
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil									
>=0m, <2m									
Field ID	Depth	Date	Lab Report Number								
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.139	<0.0004	<0.1	-	-	-
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.225	<0.0004	<0.1	-	-	-
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.296	<0.0004	<0.1	-	-	-
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.200	<0.0004	<0.1	-	-	-
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.295	<0.0004	<0.1	-	-	-
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.188	<0.0004	<0.1	-	-	-
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.107	<0.0004	<0.1	-	-	-
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.288	<0.0004	<0.1	-	-	-
AsbestosFragments	0.2	15/01/2025	ES2502103	0.0018	-	-	-	-	-	Yes	Ch + Am	2.03
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.324	<0.0004	<0.1	-	-	-
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.176	<0.0004	<0.1	-	-	-
QA/QC Samples												
DPS_HA03_0.1	2	14/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.257	<0.0004	<0.1	-	-	-
QC101	0.1	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	1181226	-	-	-	-	-	-	-	-	-

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 2 - Waste Classification

				Total Petroleum Hydrocarbons												BTEXN												
				TRH C6 - C9 Fraction	TRH C10 - C14 Fraction	TRH C15 - C28 Fraction	TRH C29 - C36 Fraction	TRH>C10 - C36 (Sum of total) (Lab Reported)	TRH>C10 - C40 (Sum of total) (Lab Reported)	TRH C6 - C10 Fraction F1	TRH C6 - C10 Fraction Less BTEX F1	TRH >C10 - C16 Fraction F2	TRH >C10 - C16 Fraction Less Naphthalene F2	TRH >C16 - C34 Fraction F3	TRH >C34 - C40 Fraction F4	Benzene	Toluene	Ethylbenzene	Xylenes (m & p)	Xylene (o)	Xylenes (Sum of total) (Lab Reported)	Naphthalene (VOC)	Total BTEX	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				10	20	50	50	50	50	10	10	50	50	100	100	0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.2	0.5	0.5	0.5	0.5	0.5
General Soild Waste CT1				650				10000								10	288	600			1000							0.8
Restricted Solid Waste CT2				2600				40000								40	1152	2400			4000							3.2
Field ID	Depth	Date	Lab Report Number																									
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	<10	<50	<100	100	100	100	<10	<10	<50	<50	<100	100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
AsbestosFragments	0.2	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	<10	<50	<100	<100	<50	100	<10	<10	<50	<50	100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2 - Waste Classification

				Polycyclic aromatic hydrocarbons															Heavy Metals									
				Benzo(a)pyrene TEQ (lower bound)*	Benzo(a)pyrene TEQ (medium bound)*	Benzo(a)pyrene TEQ (upper bound)*	Benzo(b)&(j)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	PAH (Sum of Common 16 PAHs - Lab Reported)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	2,4-Dimethylphenol	2,4-Dinitrophenol
				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	0.5	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	2	0.4	2	5	5	0.1	2	5	0.5	5
General Soild Waste CT1																		200	100	20	100		100	4	40			
Restricted Solid Waste CT2																		800	400	80	400		400	16	160			
Field ID	Depth	Date	Lab Report Number																									
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	<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	10	<3	16	21	16	<0.1	5	26	<0.5	<5
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	<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	<5	<3	8	17	45	<0.1	6	80	-	-
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	<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	6	<3	13	17	46	<0.1	7	62	<0.5	<5
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	<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	11	<3	22	27	25	<0.1	12	69	-	-
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	<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	7	<3	13	23	16	<0.1	5	30	-	-
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	<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	<5	<3	7	16	43	<0.1	5	50	-	-
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	<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	7	<3	12	20	46	<0.1	6	65	-	-
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	<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	6	<3	10	16	37	<0.1	6	53	-	-
AsbestosFragments	0.2	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	<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	10	<3	25	17	26	<0.1	8	36	-	-
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	<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	6	<3	13	24	26	<0.1	14	81	-	-

Table 2 - Waste Classification

				Phenolics						Organochlorine Pesticides																			
				2-Methylphenol	2-Nitrophenol	3- & 4- Methylphenol	Cresols (Sum of total)	Phenol	Non-Halogenated Phenols (Sum of total)	4,4'-DDD	4,4'-DDE	4,4'-DDT	a-HCH	Aldrin	Aldrin and Dieldrin (Total)*	b-HCH	Chlordanes - Total	DDT + DDE + DDD (Total)*	d-HCH	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-HCH (Lindane)	Heptachlor
				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	1	1	0.5	0.5	20	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
General Soild Waste CT1							4,000		288												60	60	60						
Restricted Solid Waste CT2							16,000		1,152												240	240	240						
Field ID	Depth	Date	Lab Report Number																										
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	<0.5	<1	<1	<0.5	<0.5	<20	<0.05	<0.05	<0.2	< 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
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	<0.5	<1	<1	<0.5	<0.5	<20	<0.05	<0.05	<0.2	< 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
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	<0.05	<0.05	<0.2	< 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
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	-	-	-	-	-	-	<0.05	<0.05	<0.2	< 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
AsbestosFragments	0.2	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2 - Waste Classification

														Organophosphorus Pesticides														Polychlorinated Biphenyls	Halogenated Benzenes
				Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Dichlorvos	Demeton-S-methyl	Monocrotophos	Dimethoate	Diazinon	Chlorpyrifos-methyl	Parathion-methyl	Malathion	Fenthion	Chlorpyrifos	Parathion	Pirimphos-ethyl	Chlorfenvinphos	Bromophos-ethyl	Fenamiphos	Prothiofos	Ethion	Carbophenothion	Azinphos Methyl	PCB (Sum of Total-Lab Reported)	Hexachlorobenzene
				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	0.2	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05
General Soild Waste CT1																										<50	
Restricted Solid Waste CT2																										<50	
Field ID	Depth	Date	Lab Report Number																									
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.05
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.05
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	<0.05	<0.05	<0.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	<0.05	<0.05	<0.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
AsbestosFragments	0.2	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Phenolics-Halogenated								Asbestos
	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol	2-Chlorophenol	4-Chloro-3-methylphenol	Pentachlorophenol	Halogenated Phenols (Sum of total)	Asbestos (Fines and Fibrous FA+AF)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	% (w/w)
EQL	1	1	0.5	0.5	0.5	1	1	1	
General Soild Waste CT1	8,000	40							
Restricted Solid Waste CT2	2,400	160							

Field ID	Depth	Date	Lab Report Number									
GPS_BH01_0.5	0.5	15/01/2025	ES2502103	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	N
GPS_BH02_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	N
GPS_BH03_0.1	0.1	15/01/2025	ES2502103	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	N
GPS_BH04_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	N
GPS_HA01_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	N
GPS_HA02_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	N
GPS_HA03_0.1	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	N
GPS_HA04_0.1	0.1	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	N
AsbestosFragments	0.2	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	Y
GPS_HA05_0.1	0.1	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	N
GPS_HA06_0.1	0.3	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	N

Table 3 - Duplicate results

		Field ID	DPS_HA03_0.1	QA01		DPS_HA03_0.1	QA01A		
		Matrix Type	Soil	Soil		Soil	Soil		
		Date	14 Jan 2025	14 Jan 2025		14 Jan 2025	14 Jan 2025		
		Lab Report Number	ES2502103	ES2502103	RPD	ES2502103	1181226	RPD	
	Unit	EQL							
BTEXN									
Benzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.2	0	
Toluene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0	
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0	
Xylenes (m & p)	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.5	0	
Xylene (o)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0	
Xylenes (Sum of total) (Lab Reported)	mg/kg	0.3	<0.3	<0.3	0	<0.3	<0.5	0	
Naphthalene (VOC)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<1	0	
Total BTEX	mg/kg	0.2	-	-	-	-	<0.2	-	
Total Petroleum Hydrocarbons									
TRH C6 - C9 Fraction	mg/kg	10	<20	<20	0	<20	<10	0	
TRH C10 - C14 Fraction	mg/kg	20	<20	<20	0	<20	<50	0	
TRH C15 - C28 Fraction	mg/kg	50	<50	<50	0	<50	62	-	
TRH C29 - C36 Fraction	mg/kg	50	<50	<50	0	<50	66	-	
TRH+C10 - C36 (Sum of total) (Lab Reported)	mg/kg	50	<50	<50	0	<50	128	-	
TRH+C10 - C40 (Sum of total) (Lab Reported)	mg/kg	50	<100	<100	0	<100	110	-	
TRH C6 - C10 Fraction F1	mg/kg	10	<20	<20	0	<20	<10	0	
TRH C6 - C10 Fraction Less BTEX F1	mg/kg	10	<20	<20	0	<20	<10	0	
TRH >C10 - C16 Fraction F2	mg/kg	50	<50	<50	0	<50	<50	0	
TRH >C10 - C16 Fraction Less Naphthalene F2	mg/kg	50	<50	<50	0	<50	<50	0	
TRH >C16 - C34 Fraction F3	mg/kg	100	<100	<100	0	<100	110	-	
TRH >C34 - C40 Fraction F4	mg/kg	100	<100	<100	0	<100	<100	0	
Polycyclic aromatic hydrocarbons									
Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Benzo(a)pyrene TEQ (lower bound)*	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Benzo(a)pyrene TEQ (medium bound)*	mg/kg	0.5	0.6	0.6	0	0.6	0.6	0	
Benzo(a)pyrene TEQ (upper bound)*	mg/kg	0.5	1.2	1.2	0	1.2	1.2	0	
Benzo(b)&(j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Chrysene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Fluorene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Naphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Phenanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
PAH (Sum of Common 16 PAHs - Lab Reported)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	
Heavy Metals									
Arsenic	mg/kg	2	7	<5	-	7	6.2	12	
Cadmium	mg/kg	0.4	<1	<1	0	<1	< 0.4	0	
Chromium	mg/kg	2	18	12	40	18	15	18	
Copper	mg/kg	5	29	14	70	29	21	32	
Lead	mg/kg	5	20	11	58	20	15	28.5	
Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	< 0.1	0	
Nickel	mg/kg	2	14	6	80	14	8.4	50	
Zinc	mg/kg	5	64	35	59	64	49	27	

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 50 (1 - 10 x EQL); 50 (10 - 30 x EQL); 50 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table 4 - Trip blank and trip spike

				BTEXN								Total Petroleum Hydrocarbons		
				Benzene	Toluene	Ethylbenzene	Xylenes (m & p)	Xylene (o)	Xylenes (Sum of total) (Lab Reported)	Sum of BTEX	Naphthalene (VOC)	TRH C6 - C9 Fraction	TRH C6 - C10 Fraction F1	TRH C6 - C10 Fraction Less BTEX F1
				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	0.5	0.5	0.5	0.5	0.5	0.2	1	20	20	20
Field ID	Matrix Type	Date	Lab Report Number											
Trip Blank	Soil	14 Jan 2025	ES2502103	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<10	<10	<10
Trip Spike	Soil	14 Jan 2025	ES2502103	<0.2	2.3	3.4	3.8	1.7	5.5	11.2	<1	-	-	-
Trip Spike Control	Soil	14 Jan 2025	ES2502103	<0.2	2.3	3.3	3.7	1.6	5.3	10.9	<1	-	-	-
Recovery	Soil	14 Jan 2025	ES2502103	-	100%	97%	97%	94%	96%	97%	-	-	-	-

Table 5 - Rinsate Bank

				Total Petroleum Hydrocarbons												Heavy Metals							
				TRH C6 - C9 Fraction	TRH C10 - C14 Fraction	TRH C15 - C28 Fraction	TRH C29 - C36 Fraction	TRH>C10 - C36 (Sum of total) (Lab Reported)	TRH>C10 - C40 (Sum of total) (Lab Reported)	TRH C6 - C10 Fraction F1	TRH C6 - C10 Fraction Less BTEX F1	TRH >C10 - C16 Fraction F2	TRH >C10 - C16 Fraction Less Naphthalene F2	TRH >C16 - C34 Fraction F3	TRH >C34 - C40 Fraction F4	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.02	0.05	0.1	0.1	0.1	0.1	0.02	0.02	0.05	0.05	0.1	0.1	0.001	0.0002	0.001	0.001	0.001	0.0001	0.001	0.005
Field ID	Matrix Type	Date	Lab Report Number																				
RINSATE_1	Water	15 Jan 2025	ES2502103	<0.02	<0.05	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005

APPENDIX C

LABORATORY RESULTS

CERTIFICATE OF ANALYSIS

Work Order	: **ES2502103**	Page	: 1 of 33
Amendment	: **2**		
Client	: **WSP Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MELINDA COLLIER	Contact	: Sepan Mahamad
Address	: LEVEL 27 680 GEORGE STREET SYDNEY 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9272 5183	Telephone	: +61 2 8784 8555
Project	: PS206292 School of Infrastructure NSW	Date Samples Received	: 15-Jan-2025 17:21
Order number	: PS206292	Date Analysis Commenced	: 28-Jan-2025
C-O-C number	: ----	Issue Date	: 18-Feb-2025 11:13
Sampler	: GRACE BENDALL-PEASE, MACKENZIE WEEKS		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 84		
No. of samples analysed	: 25		

Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Team Leader - Asbestos	Newcastle - Inorganics, Mayfield West, NSW
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ALS is not NATA accredited for the analysis of Exchangeable Cations on Alkaline Soils when performed under ALS Method ED006.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- **EA200 Legend**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Analysis of asbestos from swabs and tapes is not covered under the current scope of NATA accreditation.
- EP080: Samples not received in a suitable time frame to conduct the analysis within the recommended holding time.
- Amendment (06/02/2025): This report has been amended and re-released to allow the reporting of additional analytical data for sample #57 to match the CoC.
- Amendment (13/02/2025): This report has been amended and re-released to allow the reporting of additional analytical data, specifically method EA200N for sample 020, 042, 051.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.
- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
  Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
  The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
  Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
  All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres

- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of the 2013 NEPM for Assessment of Site Contamination
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- ED007 and ED008: When Exchangeable Al is reported from these methods, it should be noted that Rayment & Lyons (2011) suggests Exchange Acidity by 1M KCl - Method 15G1 (ED005) is a more suitable method for the determination of exchange acidity (H+ + Al3+).
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- EA200: N/A - Not Applicable

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
			Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	7.4	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	19.0	15.0	16.6	17.2	11.2
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	51	----	----	----	----
EA152: Soil Particle Density								
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3	2.46	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No
Sample weight (dry)	----	0.01	g	252	196	331	256	296
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No
Organic Fibre	----	-	--	No	No	No	No	No
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	B.SCHRADER
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	<0.1	<0.1	<0.1	<0.1
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
ø Weight Used for % Calculation	----	0.0001	kg	0.252	0.196	0.331	0.256	0.296
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ED006: Exchangeable Cations on Alkaline Soils								
ø Exchangeable Calcium	----	0.2	meq/100g	5.4	----	----	----	----
ø Exchangeable Magnesium	----	0.2	meq/100g	3.8	----	----	----	----
ø Exchangeable Potassium	----	0.2	meq/100g	<0.2	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
			Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
				Result	Result	Result	Result	Result
ED006: Exchangeable Cations on Alkaline Soils - Continued								
ø Exchangeable Sodium	----	0.2	meq/100g	**0.9**	----	----	----	----
ø Cation Exchange Capacity	----	0.2	meq/100g	**10.1**	----	----	----	----
ø Exchangeable Sodium Percent	----	0.2	%	**8.6**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**8**	**5**	**7**	**11**	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**24**	**13**	**17**	**20**	**9**
Copper	7440-50-8	5	mg/kg	**37**	**25**	**22**	**44**	**13**
Lead	7439-92-1	5	mg/kg	**26**	**16**	**20**	**22**	**11**
Nickel	7440-02-0	2	mg/kg	**12**	**10**	**11**	**13**	**6**
Zinc	7440-66-6	5	mg/kg	**57**	**59**	**95**	**65**	**49**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	<0.1	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
				Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	<0.2	----	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	<0.05	----	<0.05
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	<0.2	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
			Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
				Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	**150**	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	**160**	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	**310**	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	**60**	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	**220**	<100	<100

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
				Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	**280**	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	**60**	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**81.8**	----	**99.4**	----	**72.6**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**136**	----	**87.6**	----	**133**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**122**	----	**87.7**	----	**123**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**122**	**103**	**111**	**107**	**108**
2-Chlorophenol-D4	93951-73-6	0.5	%		**115**	**96.9**	**106**	**102**	**103**
2.4.6-Tribromophenol	118-79-6	0.5	%		**66.6**	**76.9**	**80.5**	**80.4**	**81.0**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**109**	**109**	**108**	**106**	**108**
Anthracene-d10	1719-06-8	0.5	%		**104**	**103**	**100**	**103**	**102**
4-Terphenyl-d14	1718-51-0	0.5	%		**108**	**108**	**104**	**105**	**106**
EP080S: TPH(V)/BTEX Surrogates									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
				Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**76.8**	**86.3**	**84.3**	**75.5**	**85.3**
Toluene-D8	2037-26-5	0.2	%		**76.2**	**89.4**	**85.4**	**71.4**	**88.5**
4-Bromofluorobenzene	460-00-4	0.2	%		**100.0**	**108**	**107**	**91.8**	**107**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
			Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	13.8	17.2	9.6	24.0	13.0
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	----
Asbestos Type	1332-21-4	-	--	-	-	-	-	----
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	----
Sample weight (dry)	----	0.01	g	257	308	327	401	----
Synthetic Mineral Fibre	----	-	--	No	No	No	No	----
Organic Fibre	----	-	--	No	No	No	No	----
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	<0.001	----
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	<0.1	<0.1	<0.1	----
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	<0.01	<0.01	<0.01	----
ø Weight Used for % Calculation	----	0.0001	kg	0.257	0.308	0.327	0.401	----
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	9	13	7	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	18	20	28	14	12
Copper	7440-50-8	5	mg/kg	29	28	19	41	14
Lead	7439-92-1	5	mg/kg	20	26	25	29	11
Nickel	7440-02-0	2	mg/kg	14	11	9	14	6
Zinc	7440-66-6	5	mg/kg	64	51	34	80	35
EG035T: Total Recoverable Mercury by FIMS								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
			Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
				Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS - Continued								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	----	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
			Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg	----	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
				Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
				Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	77.0	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	138	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	125	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		97.5	102	101	107	108
2-Chlorophenol-D4	93951-73-6	0.5	%		99.9	101	99.0	99.2	97.9
2.4.6-Tribromophenol	118-79-6	0.5	%		69.8	67.4	71.0	67.5	81.3
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		105	107	108	107	107
Anthracene-d10	1719-06-8	0.5	%		101	101	103	103	102

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
			Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
4-Terphenyl-d14	1718-51-0	0.5	%	104	104	106	106	106
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	78.0	70.2	80.5	76.0	71.3
Toluene-D8	2037-26-5	0.2	%	82.2	71.1	87.1	77.0	74.3
4-Bromofluorobenzene	460-00-4	0.2	%	99.4	96.3	111	100	88.6

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
			Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	----	----	----	6.5	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	15.9	13.1	7.7	8.7	22.1
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	----	----	----	39	----
EA152: Soil Particle Density								
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3	----	----	----	2.46	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No
Sample weight (dry)	----	0.01	g	139	225	200	497	295
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No
Organic Fibre	----	-	--	No	No	No	No	No
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	J. WILLIAMS	B.SCHRADER	J. WILLIAMS	J. WILLIAMS
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	<0.1	<0.1	<0.1	<0.1
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
ø Weight Used for % Calculation	----	0.0001	kg	0.139	0.225	0.200	0.497	0.295
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	----	8.4	----
Exchangeable Magnesium	----	0.1	meq/100g	----	----	----	7.0	----
Exchangeable Potassium	----	0.1	meq/100g	----	----	----	0.6	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
			Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
				Result	Result	Result	Result	Result
ED007: Exchangeable Cations - Continued								
Exchangeable Sodium	----	0.1	meq/100g	**----**	**----**	**----**	**0.5**	**----**
Cation Exchange Capacity	----	0.1	meq/100g	**----**	**----**	**----**	**16.5**	**----**
Exchangeable Sodium Percent	----	0.1	%	**----**	**----**	**----**	**3.1**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**10**	<5	**6**	**11**	**7**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**16**	**8**	**13**	**22**	**13**
Copper	7440-50-8	5	mg/kg	**21**	**17**	**17**	**27**	**23**
Lead	7439-92-1	5	mg/kg	**16**	**45**	**46**	**25**	**16**
Nickel	7440-02-0	2	mg/kg	**5**	**6**	**7**	**12**	**5**
Zinc	7440-66-6	5	mg/kg	**26**	**80**	**62**	**69**	**30**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	**----**	<0.1	**----**	**----**
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
beta-BHC	319-85-7	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
delta-BHC	319-86-8	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
Heptachlor	76-44-8	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
Aldrin	309-00-2	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	**----**	<0.05	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
				Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	<0.05	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	----	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	<0.2	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	<0.05	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	<0.05	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	----	<0.5	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	----	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	----	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	----	<1	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	----	<0.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	----	<0.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	----	<0.5	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	----	<0.5	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	----	<0.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	----	<0.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
			Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	<2	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	**100**	<100	<100	<100

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
				Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	**100**	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	**100**	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	**100**	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**72.1**	**----**	**88.7**	**----**	**----**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**139**	**----**	**137**	**----**	**----**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**116**	**----**	**103**	**----**	**----**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**116**	**109**	**98.3**	**88.0**	**106**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
				Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
					Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	0.5	%		107	103	102	90.4	106
2.4.6-Tribromophenol	118-79-6	0.5	%		80.9	75.8	74.2	81.2	83.3
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		108	107	105	96.1	108
Anthracene-d10	1719-06-8	0.5	%		104	100	99.8	94.1	105
4-Terphenyl-d14	1718-51-0	0.5	%		107	104	103	97.7	106
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		81.8	77.0	92.6	84.6	69.5
Toluene-D8	2037-26-5	0.2	%		87.3	84.4	99.0	90.3	73.4
4-Bromofluorobenzene	460-00-4	0.2	%		111	96.0	113	106	94.2

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
			Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	29.3	19.5	15.9	12.8	9.5
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No
Sample weight (dry)	----	0.01	g	188	197	298	324	176
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No
Organic Fibre	----	-	--	No	No	No	No	No
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	<0.1	<0.1	<0.1	<0.1
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
ø Weight Used for % Calculation	----	0.0001	kg	0.188	0.197	0.298	0.324	0.176
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	7	6	10	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	7	12	10	25	13
Copper	7440-50-8	5	mg/kg	16	20	16	17	24
Lead	7439-92-1	5	mg/kg	43	46	37	26	26
Nickel	7440-02-0	2	mg/kg	5	6	6	8	14
Zinc	7440-66-6	5	mg/kg	50	65	53	36	81
EG035T: Total Recoverable Mercury by FIMS								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
			Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
				Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS - Continued								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	----	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
				Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	<0.05	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
				Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
				Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	**100**	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	**100**	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**64.8**	----	**70.5**	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**131**	----	**110**	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**82.7**	----	**70.7**	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**111**	**117**	**110**	**115**	**104**
2-Chlorophenol-D4	93951-73-6	0.5	%		**99.5**	**107**	**96.8**	**102**	**100**
2.4.6-Tribromophenol	118-79-6	0.5	%		**72.8**	**70.9**	**78.5**	**70.2**	**78.6**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**106**	**106**	**105**	**105**	**106**
Anthracene-d10	1719-06-8	0.5	%		**101**	**101**	**99.3**	**99.9**	**102**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
			Sampling date / time	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
4-Terphenyl-d14	1718-51-0	0.5	%	102	105	104	104	104
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	81.9	73.1	85.5	83.4	83.8
Toluene-D8	2037-26-5	0.2	%	82.2	79.3	95.8	79.3	84.9
4-Bromofluorobenzene	460-00-4	0.2	%	103	95.4	113	93.9	98.9

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	Trip Blank	Trip Spike	Trip Spike Control	----	----
			Sampling date / time	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2502103-081	ES2502103-082	ES2502103-083	--------	--------
				Result	Result	Result	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	2.3	2.3	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	3.4	3.3	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	3.8	3.7	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1.7	1.6	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	11.2	10.9	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	5.5	5.3	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	91.6	85.2	85.4	----	----
Toluene-D8	2037-26-5	0.2	%	98.9	93.0	97.2	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	122	111	115	----	----

Analytical Results

Sub-Matrix: SOLID (Matrix: SOLID)				Sample ID	AsbestosFragments	----	----	----	----
				Sampling date / time	15-Jan-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2502103-073	--------	--------	--------	--------
					Result	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg		**Yes**	----	----	----	----
Asbestos Type	1332-21-4	-	--		**Ch + Am**	----	----	----	----
Asbestos (Trace)	1332-21-4	-	-		**N/A**	----	----	----	----
Sample weight (dry)	----	0.01	g		**2.03**	----	----	----	----
Synthetic Mineral Fibre	----	-	-		**No**	----	----	----	----
Organic Fibre	----	-	-		**Yes**	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		**B.SCHRADER**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RINSATE_1	----	----	----	----
				Sampling date / time	15-Jan-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2502103-080	--------	--------	--------	--------	
				Result	----	----	----	----	
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----	
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----	
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----	
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----	
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	
EP071: Total Petroleum Hydrocarbons									
C10 - C14 Fraction	----	50	µg/L	<50	----	----	----	----	
C15 - C28 Fraction	----	100	µg/L	<100	----	----	----	----	
C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----	
^ **C10 - C36 Fraction (sum)**	----	50	µg/L	<50	----	----	----	----	
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
>C10 - C16 Fraction	----	100	µg/L	<100	----	----	----	----	
>C16 - C34 Fraction	----	100	µg/L	<100	----	----	----	----	
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----	
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L	<100	----	----	----	----	

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	DPS_BH01_0.5 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_BH02_0.1 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_BH03_0.1 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA01_0.5 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA02_0.1 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA03_0.1 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA04_0.5 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA05_0.5 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA06_0.5 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_BH01_0.5 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_BH02_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_BH03_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_BH04_0.5 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA01_0.5 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA02_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA03_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA04_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA05_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA06_0.1 - 15-Jan-2025 00:00	A soil sample.

Sub-Matrix: **SOLID**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	AsbestosFragments - 15-Jan-2025 00:00	A collection of asbestos cement sheeting debris.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

(SOIL) EA200N: Asbestos Quantification (non-NATA)

(SOIL) EA150: Soil Classification based on Particle Size

(SOIL) EA152: Soil Particle Density

(SOLID) EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples

QUALITY CONTROL REPORT

Work Order	: **ES2502103**	Page	: 1 of 25
Amendment	: **2**		
Client	: **WSP Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MELINDA COLLIER	Contact	: Sepan Mahamad
Address	: LEVEL 27 680 GEORGE STREET SYDNEY 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9272 5183	Telephone	: +61 2 8784 8555
Project	: PS206292 School of Infrastructure NSW	Date Samples Received	: 15-Jan-2025
Order number	: PS206292	Date Analysis Commenced	: 28-Jan-2025
C-O-C number	: ----	Issue Date	: 18-Feb-2025
Sampler	: GRACE BENDALL-PEASE, MACKENZIE WEEKS		
Site	: ----		
Quote number	: EN/000		
No. of samples received	: 84		
No. of samples analysed	: 25		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Team Leader - Asbestos	Newcastle - Inorganics, Mayfield West, NSW
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6338253)									
ES2502148-003	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	9	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	3	3	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	13	21	46.8	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	84	73	14.9	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	122	118	3.8	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	1180	1120	5.1	0% - 20%
EN2501187-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	21	21	0.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	11	13	16.9	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	18	7.4	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	6	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	145	160	9.7	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6339051)									
ES2501620-001	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	261	316	18.9	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	604	635	5.1	0% - 20%
ES2501620-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	19	21	11.8	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	37	24	40.6	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	9	9	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6339051) - continued									
ES2501620-001	Anonymous	EG005T: Copper	7440-50-8	5	mg/kg	307	286	6.9	0% - 20%
ES2502253-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	33	37	10.4	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	48	50	4.7	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	5	31.4	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	19	19	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	11	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	109	120	9.5	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6339635)									
ES2502004-001	Anonymous	EG005T: Cadmium	7440-43-9	1 (2)*	mg/kg	50	52	4.7	0% - 20%
		EG005T: Chromium	7440-47-3	2	mg/kg	10	11	9.6	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	20	21	8.4	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	387	408	5.2	0% - 20%
		EG005T: Copper	7440-50-8	5	mg/kg	10600	11200	5.1	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	25900	27200	5.0	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	30300	31800	4.8	0% - 20%
ES2502103-067	GPS_HA03_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	15	25.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	6	8	16.2	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	8	22.7	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	20	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	46	43	6.3	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	65	63	3.0	0% - 50%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6339764)									
ES2501067-011	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	12	21.8	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	11	8	33.4	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	8	13.4	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	17	18	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	17	13	31.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	43	34	23.6	No Limit
ES2502036-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	3	4	38.6	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	18	11.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	58	71	19.3	0% - 50%

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6339764) - continued									
ES2502036-009	Anonymous	EG005T: Zinc	7440-66-6	5	mg/kg	37	44	16.5	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6363394)									
ES2502103-057	GPS_BH04_0.5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	24	8.4	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	12	12	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	11	12	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	27	27	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	25	29	14.4	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	69	64	7.0	0% - 50%
EA002: pH 1:5 (Soils) (QC Lot: 6338246)									
EN2501153-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	9.2	9.2	0.0	0% - 20%
ES2501827-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	9.2	9.3	1.2	0% - 20%
EA002: pH 1:5 (Soils) (QC Lot: 6363391)									
ES2502103-057	GPS_BH04_0.5	EA002: pH Value	----	0.1	pH Unit	6.5	6.6	2.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6336795)									
ES2502062-037	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	32.0	31.4	2.1	0% - 20%
ES2502062-045	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	36.6	35.8	2.1	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6336796)									
ES2502103-029	DPS_HA04_0.5	EA055: Moisture Content	----	0.1 (1.0)*	%	17.2	17.0	0.9	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6336926)									
ES2501620-001	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	7.8	10.4	29.1	0% - 50%
ES2501825-019	Anonymous	EA055: Moisture Content	----	0.1	%	31.1	29.8	4.1	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6338257)									
ES2502103-002	DPS_BH01_0.5	EA055: Moisture Content	----	0.1 (1.0)*	%	19.0	16.5	14.2	0% - 50%
ES2502148-006	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	20.8	21.0	0.6	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6338757)									
ES2501067-011	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	12.1	12.9	6.6	0% - 50%
ES2502036-011	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	49.3	54.7	10.3	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6339637)									
ES2501827-005	Anonymous	EA055: Moisture Content	----	0.1	%	26.2	25.2	3.7	0% - 20%
ES2502081-003	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	6.5	6.7	3.3	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6363401)									
ES2502103-057	GPS_BH04_0.5	EA055: Moisture Content	----	0.1 (1.0)*	%	8.7	8.6	1.9	No Limit
ED006: Exchangeable Cations on Alkaline Soils (QC Lot: 6343253)									
ES2501611-002	Anonymous	ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	<0.2	0.0	No Limit
		ED006: Exchangeable Calcium	----	0.2	meq/100g	2.0	1.8	7.6	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
ED006: Exchangeable Cations on Alkaline Soils (QC Lot: 6343253) - continued									
ES2501611-002	Anonymous	ED006: Exchangeable Magnesium	----	0.2	meq/100g	<0.2	<0.2	0.0	No Limit
		ED006: Exchangeable Potassium	----	0.2	meq/100g	<0.2	<0.2	0.0	No Limit
		ED006: Exchangeable Sodium	----	0.2	meq/100g	<0.2	<0.2	0.0	No Limit
		ED006: Cation Exchange Capacity	----	0.2	meq/100g	2.0	1.8	7.6	No Limit
ED007: Exchangeable Cations (QC Lot: 6366702)									
ES2502103-057	GPS_BH04_0.5	ED007: Exchangeable Sodium Percent	----	0.1	%	3.1	3.1	0.0	0% - 20%
		ED007: Exchangeable Calcium	----	0.1	meq/100g	8.4	8.5	0.0	0% - 20%
		ED007: Exchangeable Magnesium	----	0.1	meq/100g	7.0	7.0	0.0	0% - 20%
		ED007: Exchangeable Potassium	----	0.1	meq/100g	0.6	0.6	0.0	No Limit
		ED007: Exchangeable Sodium	----	0.1	meq/100g	0.5	0.5	0.0	No Limit
		ED007: Cation Exchange Capacity	----	0.1	meq/100g	16.5	16.6	0.0	0% - 20%
ES2503179-008	Anonymous	ED007: Exchangeable Sodium Percent	----	0.1	%	3.4	3.4	0.0	0% - 20%
		ED007: Exchangeable Calcium	----	0.1	meq/100g	7.7	7.8	0.0	0% - 20%
		ED007: Exchangeable Magnesium	----	0.1	meq/100g	4.1	4.1	0.0	0% - 20%
		ED007: Exchangeable Potassium	----	0.1	meq/100g	0.4	0.4	0.0	No Limit
		ED007: Exchangeable Sodium	----	0.1	meq/100g	0.4	0.4	0.0	No Limit
		ED007: Cation Exchange Capacity	----	0.1	meq/100g	12.6	12.7	0.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6338252)									
ES2502148-009	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EN2501187-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6339052)									
ES2501620-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.4	0.4	0.0	No Limit
ES2502253-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6339636)									
ES2502004-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	2.2	2.1	0.0	0% - 20%
ES2502103-067	GPS_HA03_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6339765)									
ES2501067-011	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2502036-009	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6363395)									
ES2502103-057	GPS_BH04_0.5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6336801)									
ES2502103-002	DPS_BH01_0.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6336802)									
ES2502103-002	DPS_BH01_0.5	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6336802) - continued									
ES2502103-002	DPS_BH01_0.5	EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6336802)									
ES2502103-002	DPS_BH01_0.5	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6336802) - continued									
ES2502103-002	DPS_BH01_0.5	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 6336799)									
ES2502103-042	GPS_BH01_0.5	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES2502103-002	DPS_BH01_0.5	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 6358736)									
ES2503272-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)A: Phenolic Compounds (QC Lot: 6358736) - continued									
ES2503272-001	Anonymous	EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES2502763-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6336799)									
ES2502103-042	GPS_BH01_0.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2502103-002	DPS_BH01_0.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6336799) - continued									
ES2502103-002	DPS_BH01_0.5	EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6358736)									
ES2503272-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.6	26.8	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.5	0.7	38.8	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	0.5	1.8	113	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6358736) - continued									
ES2502763-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6336639)									
ES2502103-002	DPS_BH01_0.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2502103-042	GPS_BH01_0.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6336651)									
ES2502039-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2501836-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6336800)									
ES2502103-042	GPS_BH01_0.5	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2502103-002	DPS_BH01_0.5	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6358737)									
ES2502763-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6360848)									
ES2503208-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2503208-015	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6336639)									
ES2502103-002	DPS_BH01_0.5	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2502103-042	GPS_BH01_0.5	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6336651)									
ES2502039-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2501836-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6336800)									
ES2502103-042	GPS_BH01_0.5	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2502103-002	DPS_BH01_0.5	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6358737)									
ES2502763-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6360848)									
ES2503208-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2503208-015	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 6336639)									
ES2502103-002	DPS_BH01_0.5	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2502103-042	GPS_BH01_0.5	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080: BTEXN (QC Lot: 6336651)									
ES2502039-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2501836-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 6360848)									
ES2503208-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2503208-015	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020T: Total Metals by ICP-MS (QC Lot: 6344562)									
ES2502357-001	Anonymous	EG020A-T: Copper	7440-50-8	0.001	mg/L	0.005	0.004	0.0	No Limit
EN2501560-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG020T: Total Metals by ICP-MS (QC Lot: 6344562) - continued									
EN2501560-001	Anonymous	EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.013	0.012	0.0	No Limit
ES2502357-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.012	0.012	0.0	0% - 50%
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.009	0.009	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6344569)									
EN2501560-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6338253)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	95.3	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	85.1	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	108	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	102	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	93.6	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	97.0	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	88.7	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339051)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	107	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	106	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	117	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	107	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	101	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	101	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	97.1	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339635)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	106	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	87.0	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	99.3	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	110	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	97.9	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	89.3	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	124	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339764)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	92.8	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	95.1	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	106	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	97.1	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	93.8	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	93.2	80.0	120

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339764) - continued								
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	90.0	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6363394)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	89.3	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	75.5	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	101	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	97.4	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	92.2	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	88.1	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	87.5	66.0	133
EA002: pH 1:5 (Soils) (QCLot: 6338246)								
EA002: pH Value	----	----	pH Unit	----	4 pH Unit	101	98.8	101
				----	7 pH Unit	100	98.8	101
EA002: pH 1:5 (Soils) (QCLot: 6363391)								
EA002: pH Value	----	----	pH Unit	----	4 pH Unit	101	98.8	101
				----	7 pH Unit	100	98.8	101
ED006: Exchangeable Cations on Alkaline Soils (QCLot: 6343253)								
ED006: Exchangeable Calcium	----	0.2	meq/100g	<0.2	2.5 meq/100g	106	80.0	110
ED006: Exchangeable Magnesium	----	0.2	meq/100g	<0.2	4.17 meq/100g	103	80.0	110
ED006: Exchangeable Potassium	----	0.2	meq/100g	<0.2	1.28 meq/100g	105	80.0	110
ED006: Exchangeable Sodium	----	0.2	meq/100g	<0.2	2.17 meq/100g	106	80.0	110
ED006: Cation Exchange Capacity	----	0.2	meq/100g	<0.2	----	----	----	----
ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	----	----	----	----
ED007: Exchangeable Cations (QCLot: 6366702)								
ED007: Exchangeable Calcium	----	0.1	meq/100g	<0.1	1 meq/100g	99.2	75.8	120
ED007: Exchangeable Magnesium	----	0.1	meq/100g	<0.1	1.67 meq/100g	103	74.9	115
ED007: Exchangeable Potassium	----	0.1	meq/100g	<0.1	0.51 meq/100g	104	80.0	120
ED007: Exchangeable Sodium	----	0.1	meq/100g	<0.1	0.87 meq/100g	108	80.0	120
ED007: Cation Exchange Capacity	----	0.1	meq/100g	<0.1	----	----	----	----
ED007: Exchangeable Sodium Percent	----	0.1	%	<0.1	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6338252)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	93.1	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339052)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	93.7	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339636)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339636) - continued								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	95.8	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339765)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	89.1	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6363395)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	75.9	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6336801)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	87.6	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 6336802)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.7	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	77.3	67.0	119
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.9	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	76.6	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.3	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	87.2	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	81.6	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.5	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	79.6	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.8	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	88.1	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.4	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	79.9	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6336802)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	98.0	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.4	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	75.7	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	67.0	119

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6336802) - continued								
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	84.7	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.0	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.6	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	81.3	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.0	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	74.2	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	103	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.7	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	54.1	41.0	123
EP075(SIM)A: Phenolic Compounds (QCLot: 6336799)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	103	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	85.4	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	105	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	112	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	67.8	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	105	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	100	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	108	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	92.9	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	99.1	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	88.0	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	38.0	10.0	80.0
EP075(SIM)A: Phenolic Compounds (QCLot: 6358736)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	88.8	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	94.5	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	89.5	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	89.7	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	89.9	54.0	114

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report		
					Spike	Spike Recovery (%)	Acceptable Limits (%)
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 6358736) - continued								
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	101	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	86.8	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	91.2	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	88.1	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	86.2	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	88.1	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	41.8	10.0	80.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6336799)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	110	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	108	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	104	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	109	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	111	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	83.5	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	102	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	110	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	100	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	107	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	92.3	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	96.5	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	104	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	97.7	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	102	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6358736)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	92.2	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	96.7	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	94.7	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	97.2	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	96.4	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	95.4	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	99.9	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	98.0	74.0	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6358736) - continued								
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	97.1	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	98.0	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	94.2	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	101	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	90.9	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	92.7	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	90.2	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	92.0	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336639)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	97.4	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336651)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	80.4	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336800)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	103	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	94.7	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	93.0	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6358737)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	108	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	108	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	111	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6360848)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	77.9	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336639)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	88.4	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336651)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	82.4	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336800)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	102	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	92.6	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	85.1	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6358737)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	108	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	109	74.0	138

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6358737) - continued								
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	115	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6360848)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	72.6	72.4	133
EP080: BTEXN (QCLot: 6336639)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	87.6	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	93.2	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	93.1	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	101	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	99.7	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	103	78.8	122
EP080: BTEXN (QCLot: 6336651)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	95.8	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	98.2	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	101	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	103	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	100	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	92.0	78.8	122
EP080: BTEXN (QCLot: 6360848)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	80.6	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	85.2	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	84.7	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	88.9	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	88.6	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	81.6	78.8	122

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 6344562)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	94.7	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	93.4	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	96.3	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	92.4	83.0	118

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 6344562) - continued								
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	92.1	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	92.3	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	92.5	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6344569)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	88.9	77.0	111
EP071: Total Petroleum Hydrocarbons (QCLot: 6336860)								
EP071-SV: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	62.1	51.5	96.4
EP071-SV: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	85.9	62.3	107
EP071-SV: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	96.3	57.2	122
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336860)								
EP071-SV: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	69.6	53.3	93.7
EP071-SV: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	65.0	54.9	115
EP071-SV: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	55.0	50.0	118

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6338253)							
EN2501187-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	98.9	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	93.6	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	93.9	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	101	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	94.8	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	95.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	93.3	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339051)							
ES2501620-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	95.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.1	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	101	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	90.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	130	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	89.4	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	78.9	66.0	133

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339635)							
ES2502004-001	Anonymous	EG005T: Arsenic	7440-38-2	500 mg/kg	98.2	70.0	130
		EG005T: Cadmium	7440-43-9	500 mg/kg	96.0	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	94.1	68.0	132
		EG005T: Copper	7440-50-8	2500 mg/kg	# Not Determined	70.0	130
		EG005T: Lead	7439-92-1	2500 mg/kg	# Not Determined	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	92.4	70.0	130
		EG005T: Zinc	7440-66-6	2500 mg/kg	# Not Determined	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339764)							
ES2501067-011	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	94.5	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.7	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	98.3	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	102	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.3	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	93.9	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	94.5	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6363394)							
ES2502103-057	GPS_BH04_0.5	EG005T: Arsenic	7440-38-2	50 mg/kg	87.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	98.9	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	87.0	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	98.0	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	90.9	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	89.4	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	82.9	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6338252)							
EN2501187-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	94.7	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339052)							
ES2501620-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	96.7	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339636)							
ES2502004-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	88.6	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339765)							
ES2501067-011	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	98.8	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6363395)							
ES2502103-057	GPS_BH04_0.5	EG035T: Mercury	7439-97-6	5 mg/kg	85.5	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6336801)							
ES2502103-002	DPS_BH01_0.5	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	105	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 6336802)							
ES2502103-002	DPS_BH01_0.5	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	98.7	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	105	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	118	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	109	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	98.1	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	71.6	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6336802)							
ES2502103-002	DPS_BH01_0.5	EP068: Diazinon	333-41-5	0.5 mg/kg	125	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	125	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	95.7	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	110	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	105	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 6336799)							
ES2502103-002	DPS_BH01_0.5	EP075(SIM): Phenol	108-95-2	10 mg/kg	108	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	83.7	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	98.0	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	95.0	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	97.6	20.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 6358736)							
ES2502763-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	93.9	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	102	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	101	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	95.8	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	52.0	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6336799)							
ES2502103-002	DPS_BH01_0.5	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	100	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	120	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6358736)							
ES2502763-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	103	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	107	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336639)							
ES2502103-002	DPS_BH01_0.5	EP080: C6 - C9 Fraction	----	32.5 mg/kg	104	60.4	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336651)							
ES2502039-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	87.3	60.4	142

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336800)							
ES2502103-002	DPS_BH01_0.5	EP071: C10 - C14 Fraction	----	480 mg/kg	132	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	126	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	125	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6358737)							
ES2502763-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	136	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	117	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	113	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6360848)							
ES2503208-002	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	77.3	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336639)							
ES2502103-002	DPS_BH01_0.5	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	102	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336651)							
ES2502039-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	85.8	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336800)							
ES2502103-002	DPS_BH01_0.5	EP071: >C10 - C16 Fraction	----	860 mg/kg	116	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	126	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	128	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6358737)							
ES2502763-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	114	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	117	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	114	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6360848)							
ES2503208-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	78.5	61.1	142
EP080: BTEXN (QCLot: 6336639)							
ES2502103-002	DPS_BH01_0.5	EP080: Benzene	71-43-2	2.5 mg/kg	101	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	105	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	107	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	119	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	115	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	104	61.1	115
EP080: BTEXN (QCLot: 6336651)							
ES2502039-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	89.6	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	96.0	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	99.6	67.4	123

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 6336651) - continued							
ES2502039-001	Anonymous	EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	101	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	99.0	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	90.9	61.1	115
EP080: BTEXN (QCLot: 6360848)							
ES2503208-002	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	87.9	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	88.3	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	84.2	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	106	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	89.3	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	83.0	61.1	115

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 6344562)							
ES2502103-080	RINSATE_1	EG020A-T: Arsenic	7440-38-2	1 mg/L	91.2	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	91.2	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	97.5	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	89.9	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	88.5	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	91.1	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	90.6	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6344569)							
ES2502103-080	RINSATE_1	EG035T: Mercury	7439-97-6	0.01 mg/L	89.2	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2502103**	Page	: 1 of 17
Amendment	: **2**		
Client	: **WSP Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MELINDA COLLIER	Telephone	: +61 2 8784 8555
Project	: PS206292 School of Infrastructure NSW	Date Samples Received	: 15-Jan-2025
Site	: ----	Issue Date	: 18-Feb-2025
Sampler	: GRACE BENDALL-PEASE, MACKENZIE WEEKS	No. of samples received	: 84
Order number	: PS206292	No. of samples analysed	: 25

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005(ED093)T: Total Metals by ICP-AES	ES2502004--001	Anonymous	**Copper**	7440-50-8	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EG005(ED093)T: Total Metals by ICP-AES	ES2502004--001	Anonymous	**Lead**	7439-92-1	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EG005(ED093)T: Total Metals by ICP-AES	ES2502004--001	Anonymous	**Zinc**	7440-66-6	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA002: pH 1:5 (Soils)						
Soil Glass Jar - Unpreserved						
DPS_BH01_0.5	29-Jan-2025	21-Jan-2025	**8**	----	----	----
Soil Glass Jar - Unpreserved						
GPS_BH04_0.5	10-Feb-2025	22-Jan-2025	**19**	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)						
Soil Glass Jar - Unpreserved						
GPS_BH04_0.5	----	----	----	10-Feb-2025	29-Jan-2025	**12**
EP066: Polychlorinated Biphenyls (PCB)						
Soil Glass Jar - Unpreserved						
DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5	31-Jan-2025	28-Jan-2025	**3**	----	----	----
Soil Glass Jar - Unpreserved						
GPS_BH01_0.5, GPS_BH03_0.1, GPS_HA02_0.1, GPS_HA04_0.1	31-Jan-2025	29-Jan-2025	**2**	----	----	----
EP068A: Organochlorine Pesticides (OC)						
Soil Glass Jar - Unpreserved						
DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5	31-Jan-2025	28-Jan-2025	**3**	----	----	----
Soil Glass Jar - Unpreserved						
GPS_BH01_0.5, GPS_BH03_0.1, GPS_HA02_0.1, GPS_HA04_0.1	31-Jan-2025	29-Jan-2025	**2**	----	----	----
EP068B: Organophosphorus Pesticides (OP)						

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP068B: Organophosphorus Pesticides (OP) - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
DPS_BH01_0.5,	DPS_BH03_0.1,	31-Jan-2025	28-Jan-2025	**3**	----	----	----
DPS_HA04_0.5							
Soil Glass Jar - Unpreserved							
GPS_HA02_0.1,	GPS_HA04_0.1	31-Jan-2025	29-Jan-2025	**2**	----	----	----
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved							
DPS_HA02_0.1		31-Jan-2025	28-Jan-2025	**3**	----	----	----
Soil Glass Jar - Unpreserved							
GPS_BH01_0.5,	GPS_BH03_0.1	31-Jan-2025	29-Jan-2025	**2**	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved							
DPS_BH01_0.5,	DPS_BH02_0.1,	31-Jan-2025	28-Jan-2025	**3**	----	----	----
DPS_BH03_0.1,	DPS_HA01_0.5,						
DPS_HA02_0.1,	DPS_HA03_0.1,						
DPS_HA04_0.5,	DPS_HA05_0.5,						
QC101							
Soil Glass Jar - Unpreserved							
GPS_BH04_0.5		07-Feb-2025	29-Jan-2025	**9**	----	----	----
Soil Glass Jar - Unpreserved							
DPS_HA06_0.5,	GPS_BH01_0.5,	31-Jan-2025	29-Jan-2025	**2**	----	----	----
GPS_BH02_0.1,	GPS_BH03_0.1						
Soil Glass Jar - Unpreserved							
GPS_HA01_0.5,	GPS_HA02_0.1,	31-Jan-2025	29-Jan-2025	**2**	----	----	----
GPS_HA03_0.1,	GPS_HA04_0.1,						
GPS_HA05_0.1,	GPS_HA06_0.1						
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved							
Trip Blank		----	----	----	29-Jan-2025	28-Jan-2025	**1**
Soil Glass Jar - Unpreserved							
DPS_BH01_0.5,	DPS_BH02_0.1,	31-Jan-2025	28-Jan-2025	**3**	----	----	----
DPS_BH03_0.1,	DPS_HA01_0.5,						
DPS_HA02_0.1,	DPS_HA03_0.1,						
DPS_HA04_0.5,	DPS_HA05_0.5,						
QC101							
Soil Glass Jar - Unpreserved							
GPS_BH04_0.5		07-Feb-2025	29-Jan-2025	**9**	07-Feb-2025	29-Jan-2025	**9**
Soil Glass Jar - Unpreserved							
GPS_BH04_0.5		07-Feb-2025	29-Jan-2025	**9**	----	----	----

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP080/071: Total Petroleum Hydrocarbons - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved						
GPS_BH01_0.5	31-Jan-2025	29-Jan-2025	**2**	----	----	----
Soil Glass Jar - Unpreserved						
DPS_HA06_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	31-Jan-2025	29-Jan-2025	**2**	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions						
Soil Glass Jar - Unpreserved						
Trip Blank	----	----	----	29-Jan-2025	28-Jan-2025	**1**
Soil Glass Jar - Unpreserved						
DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5, QC101	31-Jan-2025	28-Jan-2025	**3**	----	----	----
Soil Glass Jar - Unpreserved						
GPS_BH04_0.5	07-Feb-2025	29-Jan-2025	**9**	07-Feb-2025	29-Jan-2025	**9**
Soil Glass Jar - Unpreserved						
GPS_BH04_0.5	07-Feb-2025	29-Jan-2025	**9**	----	----	----
Soil Glass Jar - Unpreserved						
GPS_BH01_0.5	31-Jan-2025	29-Jan-2025	**2**	----	----	----
Soil Glass Jar - Unpreserved						
DPS_HA06_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	31-Jan-2025	29-Jan-2025	**2**	----	----	----
EP080: BTEXN						
Soil Glass Jar - Unpreserved						
Trip Blank, Trip Spike, Trip Spike Control	----	----	----	29-Jan-2025	28-Jan-2025	**1**
Soil Glass Jar - Unpreserved						
GPS_BH04_0.5	07-Feb-2025	29-Jan-2025	**9**	07-Feb-2025	29-Jan-2025	**9**

Matrix: **WATER**

Method / Container / Client Sample ID(s)	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP071: Total Petroleum Hydrocarbons						

Matrix: **WATER**

Method / Container / Client Sample ID(s)	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP071: Total Petroleum Hydrocarbons - Analysis Holding Time Compliance						
Amber Glass Bottle - Unpreserved						
RINSATE_1	28-Jan-2025	22-Jan-2025	**6**	----	----	----
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions						
Amber Glass Bottle - Unpreserved						
RINSATE_1	28-Jan-2025	22-Jan-2025	**6**	----	----	----

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Analytical Methods	Method	Count: QC	Count: Regular	Rate (%): Actual	Rate (%): Expected	Quality Control Specification
Laboratory Duplicates (DUP)						
TRH - Semivolatile Fractions Only	EP071-SV	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
TRH - Semivolatile Fractions Only	EP071-SV	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EA002: pH 1:5 (Soils)							
Soil Glass Jar - Unpreserved (EA002)							
DPS_BH01_0.5	**14-Jan-2025**	**29-Jan-2025**	21-Jan-2025	×	**29-Jan-2025**	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EA002)							
GPS_BH04_0.5	**15-Jan-2025**	**10-Feb-2025**	22-Jan-2025	×	**10-Feb-2025**	10-Feb-2025	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5, QC101	**14-Jan-2025**	**----**	----	----	**28-Jan-2025**	28-Jan-2025	✓
Soil Glass Jar - Unpreserved (EA055) GPS_BH01_0.5	**15-Jan-2025**	**----**	----	----	**28-Jan-2025**	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EA055) DPS_HA06_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**----**	----	----	**29-Jan-2025**	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EA055) GPS_BH04_0.5	**15-Jan-2025**	**----**	----	----	**10-Feb-2025**	29-Jan-2025	×
EA150: Soil Classification based on Particle Size							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA150H) DPS_BH01_0.5	**14-Jan-2025**	**----**	----	----	**05-Feb-2025**	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA150H) GPS_BH04_0.5	**15-Jan-2025**	**----**	----	----	**13-Feb-2025**	14-Jul-2025	✓
EA152: Soil Particle Density							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA152) DPS_BH01_0.5	**14-Jan-2025**	**----**	----	----	**05-Feb-2025**	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA152) GPS_BH04_0.5	**15-Jan-2025**	**----**	----	----	**13-Feb-2025**	14-Jul-2025	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) DPS_HA02_0.1	**14-Jan-2025**	**----**	----	----	**18-Feb-2025**	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5	**14-Jan-2025**	**----**	----	----	**29-Jan-2025**	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) GPS_BH04_0.5	**15-Jan-2025**	**----**	----	----	**10-Feb-2025**	14-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) GPS_BH01_0.5, GPS_BH03_0.1	**15-Jan-2025**	**----**	----	----	**18-Feb-2025**	14-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) DPS_HA06_0.5, GPS_BH02_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**----**	----	----	**29-Jan-2025**	14-Jul-2025	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200N: Asbestos Quantification (non-NATA)							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)							
DPS_HA02_0.1	**14-Jan-2025**	**----**	----	----	**18-Feb-2025**	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)							
DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5	**14-Jan-2025**	**----**	----	----	**29-Jan-2025**	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)							
GPS_BH04_0.5	**15-Jan-2025**	**----**	----	----	**10-Feb-2025**	14-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)							
GPS_BH01_0.5, GPS_BH03_0.1	**15-Jan-2025**	**----**	----	----	**18-Feb-2025**	14-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)							
DPS_HA06_0.5, GPS_BH02_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**----**	----	----	**29-Jan-2025**	14-Jul-2025	✓
ED006: Exchangeable Cations on Alkaline Soils							
Soil Glass Jar - Unpreserved (ED006)							
DPS_BH01_0.5	**14-Jan-2025**	**30-Jan-2025**	11-Feb-2025	✓	**30-Jan-2025**	11-Feb-2025	✓
ED007: Exchangeable Cations							
Soil Glass Jar - Unpreserved (ED007)							
GPS_BH04_0.5	**15-Jan-2025**	**11-Feb-2025**	12-Feb-2025	✓	**11-Feb-2025**	12-Feb-2025	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
DPS_BH01_0.5	**14-Jan-2025**	**28-Jan-2025**	13-Jul-2025	✓	**29-Jan-2025**	13-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T)							
DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5	**14-Jan-2025**	**29-Jan-2025**	13-Jul-2025	✓	**29-Jan-2025**	13-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T)							
DPS_HA05_0.5, QC101	**14-Jan-2025**	**29-Jan-2025**	13-Jul-2025	✓	**30-Jan-2025**	13-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T)							
GPS_BH04_0.5	**15-Jan-2025**	**10-Feb-2025**	14-Jul-2025	✓	**10-Feb-2025**	14-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T)							
DPS_HA06_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**29-Jan-2025**	14-Jul-2025	✓	**29-Jan-2025**	14-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T)							
GPS_BH01_0.5	**15-Jan-2025**	**29-Jan-2025**	14-Jul-2025	✓	**30-Jan-2025**	14-Jul-2025	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
DPS_BH01_0.5		**14-Jan-2025**	**28-Jan-2025**	11-Feb-2025	✓	**29-Jan-2025**	11-Feb-2025	✓
Soil Glass Jar - Unpreserved (EG035T)								
DPS_BH02_0.1,	DPS_BH03_0.1,	**14-Jan-2025**	**29-Jan-2025**	11-Feb-2025	✓	**29-Jan-2025**	11-Feb-2025	✓
DPS_HA01_0.5,	DPS_HA02_0.1,							
DPS_HA03_0.1,	DPS_HA04_0.5							
Soil Glass Jar - Unpreserved (EG035T)								
DPS_HA05_0.5,	QC101	**14-Jan-2025**	**29-Jan-2025**	11-Feb-2025	✓	**30-Jan-2025**	11-Feb-2025	✓
Soil Glass Jar - Unpreserved (EG035T)								
GPS_BH04_0.5		**15-Jan-2025**	**10-Feb-2025**	12-Feb-2025	✓	**11-Feb-2025**	12-Feb-2025	✓
Soil Glass Jar - Unpreserved (EG035T)								
DPS_HA06_0.5,	GPS_BH01_0.5,	**15-Jan-2025**	**29-Jan-2025**	12-Feb-2025	✓	**30-Jan-2025**	12-Feb-2025	✓
GPS_BH02_0.1,	GPS_BH03_0.1,							
GPS_HA01_0.5,	GPS_HA02_0.1,							
GPS_HA03_0.1,	GPS_HA04_0.1,							
GPS_HA05_0.1,	GPS_HA06_0.1							
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
DPS_BH01_0.5,	DPS_BH03_0.1,	**14-Jan-2025**	**31-Jan-2025**	28-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓
DPS_HA02_0.1,	DPS_HA04_0.5							
Soil Glass Jar - Unpreserved (EP066)								
GPS_BH01_0.5,	GPS_BH03_0.1,	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓
GPS_HA02_0.1,	GPS_HA04_0.1							
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
DPS_BH01_0.5,	DPS_BH03_0.1,	**14-Jan-2025**	**31-Jan-2025**	28-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓
DPS_HA02_0.1,	DPS_HA04_0.5							
Soil Glass Jar - Unpreserved (EP068)								
GPS_BH01_0.5,	GPS_BH03_0.1,	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓
GPS_HA02_0.1,	GPS_HA04_0.1							
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)								
DPS_BH01_0.5,	DPS_BH03_0.1,	**14-Jan-2025**	**31-Jan-2025**	28-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓
DPS_HA04_0.5								
Soil Glass Jar - Unpreserved (EP068)								
GPS_HA02_0.1,	GPS_HA04_0.1	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM))								
DPS_HA02_0.1		**14-Jan-2025**	**31-Jan-2025**	28-Jan-2025	×	**03-Feb-2025**	12-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP075(SIM))								
GPS_BH01_0.5,	GPS_BH03_0.1	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**03-Feb-2025**	12-Mar-2025	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5, QC101	**14-Jan-2025**	**31-Jan-2025**	28-Jan-2025	×	**03-Feb-2025**	12-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
GPS_BH04_0.5	**15-Jan-2025**	**07-Feb-2025**	29-Jan-2025	×	**10-Feb-2025**	19-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
DPS_HA06_0.5, GPS_BH01_0.5, GPS_BH02_0.1, GPS_BH03_0.1	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**03-Feb-2025**	12-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5, QC101	**14-Jan-2025**	**28-Jan-2025**	28-Jan-2025	✓	**28-Jan-2025**	28-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP080) Trip Blank	**14-Jan-2025**	**28-Jan-2025**	28-Jan-2025	✓	**29-Jan-2025**	28-Jan-2025	×
Soil Glass Jar - Unpreserved (EP071) DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5, QC101	**14-Jan-2025**	**31-Jan-2025**	28-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP071) GPS_BH04_0.5	**15-Jan-2025**	**07-Feb-2025**	29-Jan-2025	×	**10-Feb-2025**	19-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP080) GPS_BH04_0.5	**15-Jan-2025**	**07-Feb-2025**	29-Jan-2025	×	**07-Feb-2025**	29-Jan-2025	×
Soil Glass Jar - Unpreserved (EP080) DPS_HA06_0.5, GPS_BH01_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**28-Jan-2025**	29-Jan-2025	✓	**28-Jan-2025**	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP080) GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1	**15-Jan-2025**	**28-Jan-2025**	29-Jan-2025	✓	**29-Jan-2025**	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP071) GPS_BH01_0.5	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**03-Feb-2025**	12-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP071) DPS_HA06_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5, QC101	**14-Jan-2025**	**28-Jan-2025**	28-Jan-2025	✓	**28-Jan-2025**	28-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP080) Trip Blank	**14-Jan-2025**	**28-Jan-2025**	28-Jan-2025	✓	**29-Jan-2025**	28-Jan-2025	×
Soil Glass Jar - Unpreserved (EP071) DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5, QC101	**14-Jan-2025**	**31-Jan-2025**	28-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP071) GPS_BH04_0.5	**15-Jan-2025**	**07-Feb-2025**	29-Jan-2025	×	**10-Feb-2025**	19-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP080) GPS_BH04_0.5	**15-Jan-2025**	**07-Feb-2025**	29-Jan-2025	×	**07-Feb-2025**	29-Jan-2025	×
Soil Glass Jar - Unpreserved (EP080) DPS_HA06_0.5, GPS_BH01_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**28-Jan-2025**	29-Jan-2025	✓	**28-Jan-2025**	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP080) GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1	**15-Jan-2025**	**28-Jan-2025**	29-Jan-2025	✓	**29-Jan-2025**	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP071) GPS_BH01_0.5	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**03-Feb-2025**	12-Mar-2025	✓
Soil Glass Jar - Unpreserved (EP071) DPS_HA06_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**31-Jan-2025**	29-Jan-2025	×	**04-Feb-2025**	12-Mar-2025	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5, QC101	**14-Jan-2025**	**28-Jan-2025**	28-Jan-2025	✓	**28-Jan-2025**	28-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP080) Trip Blank, Trip Spike, Trip Spike Control	**14-Jan-2025**	**28-Jan-2025**	28-Jan-2025	✓	**29-Jan-2025**	28-Jan-2025	×
Soil Glass Jar - Unpreserved (EP080) GPS_BH04_0.5	**15-Jan-2025**	**07-Feb-2025**	29-Jan-2025	×	**07-Feb-2025**	29-Jan-2025	×
Soil Glass Jar - Unpreserved (EP080) DPS_HA06_0.5, GPS_BH01_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA05_0.1, GPS_HA06_0.1	**15-Jan-2025**	**28-Jan-2025**	29-Jan-2025	✓	**28-Jan-2025**	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP080) GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1	**15-Jan-2025**	**28-Jan-2025**	29-Jan-2025	✓	**29-Jan-2025**	29-Jan-2025	✓

Matrix: **SOLID**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) AsbestosFragments	**15-Jan-2025**	**----**	----	----	**29-Jan-2025**	14-Jul-2025	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Natural (EG020A-T) RINSATE_1	**15-Jan-2025**	**31-Jan-2025**	14-Jul-2025	✓	**31-Jan-2025**	14-Jul-2025	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Natural (EG035T) RINSATE_1	**15-Jan-2025**	**----**	----	----	**03-Feb-2025**	12-Feb-2025	✓
EP071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071-SV) RINSATE_1	**15-Jan-2025**	**28-Jan-2025**	22-Jan-2025	×	**31-Jan-2025**	09-Mar-2025	✓
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071-SV) RINSATE_1	**15-Jan-2025**	**28-Jan-2025**	22-Jan-2025	×	**31-Jan-2025**	09-Mar-2025	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Exchangeable Cations	ED007	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	12	87	**13.79**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	34	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	3	26	**11.54**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	9	69	**13.04**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	10	73	**13.70**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	3	29	**10.34**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	6	51	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Exchangeable Cations	ED007	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	34	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	4	26	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	5	69	**7.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	6	73	**8.22**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	51	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Exchangeable Cations	ED007	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	34	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	5	69	**7.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	5	73	**6.85**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	51	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	34	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Total Mercury by FIMS	EG035T	5	69	**7.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	5	73	**6.85**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	51	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	3	20	**15.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	0	1	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH (1:5)	EA002	SOIL	In house: Referenced to Rayment and Lyons 4A1 and APHA 4500H+. pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM Schedule B(3).
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Particle Size Analysis by Hydrometer	EA150H	SOIL	Particle Size Analysis by Hydrometer according to AS1289.3.6.3
Soil Particle Density	EA152	SOIL	Soil Particle Density by AS 1289.3.5.1: Methods of testing soils for engineering purposes - Soil classification tests - Determination of the soil particle density of a soil - Standard method
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM with Confirmation of Identification by AS 4964 - Gravimetric determination of Asbestos Containing Material, Fibrous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and Fibrous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
Exchangeable Cations on Alkaline Soils	* ED006	SOIL	In house: Referenced to Soil Survey Test Method C5. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with alcoholic ammonium chloride at pH 8.5. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil.
Exchangeable Cations	ED007	SOIL	In house: Referenced to Rayment & Lyons Method 15A1. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).

Analytical Methods	Method	Matrix	Method Descriptions
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Asbestos Identification in Bulk Solids	EA200	SOLID	In house: Referenced to AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fractions Only	EP071-SV	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM Schedule B(3).

Preparation Methods	Method	Matrix	Method Descriptions
Exchangeable Cations Preparation Method (Alkaline Soils)	* ED006PR	SOIL	In house: Referenced to Rayment and Lyons method 15C1.
Exchangeable Cations Preparation Method	ED007PR	SOIL	In house: Referenced to Rayment & Lyons method 15A1. A 1M NH4Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

ADELAIDE: 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com

BRISBANE: 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com

MACKAY: 79 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com

NEWCASTLE: 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com

PERTH: 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: perth@alsglobal.com

SYDNEY: 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

TOWNSVILLE: 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville@alsglobal.com

WOLLONGONG: 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: WSP	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: L27 680 George St Sydney 2600		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: PS206292	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: -		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: +61 2 8925 6767	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks	SAMPLER MOBILE: 0439525947	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default): Default	GBP	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME:	DATE/TIME: 20/1/25 11:30
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		15/1/2025 5:15 pm	

RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB	pH, CEC, clay content								Please forward to Eurofins	Comments
1	DPS_BH01_0.1	14/01/2025	SOIL			X													
2	DPS_BH01_0.5	14/01/2025	SOIL				X	X	X	x									
3	DPS_BH01_1.0	14/01/2025	SOIL			X													
4	DPS_BH01_1.5	14/01/2025	SOIL			X													
5	DPS_BH01_2.0	14/01/2025	SOIL			X													
6	DPS_BH02_0.1	14/01/2025	SOIL				X	X											
7	DPS_BH02_0.5	14/01/2025	SOIL			X													
8	DPS_BH02_1.0	14/01/2025	SOIL			X													
9	DPS_BH02_1.5	14/01/2025	SOIL			X													
10	DPS_BH02_2.0	14/01/2025	SOIL			X													
11	DPS_BH03_0.1	14/01/2025	SOIL				X	X	X										
12	DPS_BH03_0.5	14/01/2025	SOIL			X													
13	DPS_BH03_1.0	14/01/2025	SOIL			X													
				TOTAL	0	10	3	3	2	1	0	0	0	0	0	0	0	0	

Subcon / Forward Lab / Split WO: ALS Newcastle/Eurofins

Lab / Analysis:

Organised By / Date:

Relinquished By / Date:

Consote / Courier: Asbestos/QC FWD

WO No: ES2502103

Attached By PO / Internal Sheet:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Environmental Division
Sydney
Work Order Reference
ES2502103

Telephone : +61-2-8784 8555

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

CLIENT: WSP	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☒ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: L27 680 George St Sydney 2600		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: PS206292	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: -		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: +61 2 8925 6767	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks	SAMPLER MOBILE: 0439525947	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default): Default	GBP	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME:	DATE/TIME: 20/1/25 11:30
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		15/1/2025 5:15 pm	

RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	HOLD	TRH, BTEX, PAH, 8 Heavy Metals	Asbestos (NEPM)	OCP, PCB and phenols								Please forward to Eurofins	HOLD	Comments
14	DPS_BH03_1.5	14/01/2025	SOIL		2	X													
15	DPS_BH03_2.0	14/01/2025	SOIL		2	X													
16	DPS_HA01_0.1	14/01/2025	SOIL		2	X													
17	DPS_HA01_0.5	14/01/2025	SOIL		2		X	X											
18	DPS_HA01_1.0	14/01/2025	SOIL		2	X													
19	DPS_HA01_1.5	14/01/2025	SOIL		2	X													
20	DPS_HA02_0.1	14/01/2025	SOIL		2		X	X	X										
21	DPS_HA02_0.5	14/01/2025	SOIL		2	X													
22	DPS_HA02_1.0	14/01/2025	SOIL		2	X													
23	DPS_HA02_1.5	14/01/2025	SOIL		2	X													
24	DPS_HA03_0.1	14/01/2025	SOIL		2		X	X											
25	DPS_HA03_0.5	14/01/2025	SOIL		2	X													
26	DPS_HA03_1.0	14/01/2025	SOIL		2	X													
				TOTAL	0	10	3	3	1	0	0	0	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

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ORDER NUMBER: -		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
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SAMPLER: Grace Bendall-Pease and Mackenzie Weeks	SAMPLER MOBILE: 0439525947	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default): Default	GBP	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME: 15/1/2025 5:15 pm	DATE/TIME: 20/1/25 11:3[illegible]
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			

RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required)														
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB									Please forward to Eurofins	Comments
27	DPS_HA03_1.5	14/01/2025	SOIL		2	X													
28	DPS_HA04_0.1	14/01/2025	SOIL		2	X													
29	DPS_HA04_0.5	14/01/2025	SOIL		2		X	X	X										
30	DPS_HA04_1.0	14/01/2025	SOIL		2	X													
31	DPS_HA04_1.5	14/01/2025	SOIL		2	X													
32	DPS_HA05_0.1	14/01/2025	SOIL		2	X													
33	DPS_HA05_0.5	14/01/2025	SOIL		2		X	X											
34	DPS_HA05_1.0	14/01/2025	SOIL		2	X													
35	DPS_HA05_1.5	14/01/2025	SOIL		2	X													
36	DPS_HA06_0.1	15/01/2025	SOIL		2	X													
37	DPS_HA06_0.5	15/01/2025	SOIL		2		X	X											
38	DPS_HA06_1.0	15/01/2025	SOIL		2	X													
39	DPS_HA06_1.5	15/01/2025	SOIL		2	X													
				TOTAL	0	10	3	3	1	0	0	0	0	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

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PROJECT: PS206292	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: -		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: +61 2 8925 6767	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks	SAMPLER MOBILE: 0439525947	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default): Default	GBP	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME:	DATE/TIME: 20/1/25 11:3
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		15/1/2025 5:15 pm	

RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	HOLD	TRH, BTEX, PAH, 8 Heavy Metals	Asbestos (NEPM)	OCP, PCB and phenols								Please forward to Eurofins	HOLD	Comments
40	QC101	14/01/2025	SOIL		1		X	X											
–	QC101A	14/01/2025	SOIL		1												X		
41	GPS_BH01_0.1	15/01/2025	SOIL		2	X													
42	GPS_BH01_0.5	15/01/2025	SOIL		2		X	X	X										
43	GPS_BH01_1.0	15/01/2025	SOIL		2	X													
44	GPS_BH01_1.5	15/01/2025	SOIL		2	X													
45	GPS_BH01_2.0	15/01/2025	SOIL		2	X													
46	GPS_BH02_0.1	15/01/2025	SOIL		2		X	X											
47	GPS_BH02_0.5	15/01/2025	SOIL		2	X													
48	GPS_BH02_1.0	15/01/2025	SOIL		2	X													
49	GPS_BH02_1.5	15/01/2025	SOIL		2	X													
50	GPS_BH02_2.0	15/01/2025	SOIL		2	X													
51	GPS_BH03_0.1	15/01/2025	SOIL		2		X	X	X										
				TOTAL	0	8	4	4	2	0	0	0	0	0	0	0	1	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic; V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

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ORDER NUMBER: -		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: +61 2 8925 6767	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks	SAMPLER MOBILE: 0439525947	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default): Default	GBP	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME:	DATE/TIME: 20/1/25 11:3
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		15/1/2025 5:15 pm	

RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).															
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB	ph, CEC, clay content									Please forward to Eurofins	Comments
52	GPS_BH03_0.5	15/01/2025	SOIL		2	X														
53	GPS_BH03_1.0	15/01/2025	SOIL		2	X														
54	GPS_BH03_1.5	15/01/2025	SOIL		2	X														
55	GPS_BH03_2.0	15/01/2025	SOIL		2	X														
56	GPS_BH04_0.1	15/01/2025	SOIL		2	X														
57	GPS_BH04_0.5	15/01/2025	SOIL		2		X	X		x										
58	GPS_BH04_1.0	15/01/2025	SOIL		2	X														
59	GPS_BH04_1.5	15/01/2025	SOIL		2	X														
60	GPS_BH04_2.0	15/01/2025	SOIL		2	X														
61	GPS_HA01_0.1	15/01/2025	SOIL		2	X														
62	GPS_HA01_0.5	15/01/2025	SOIL		2		X	X												
63	GPS_HA01_1.0	15/01/2025	SOIL		2	X														
64	GPS_HA02_0.1	15/01/2025	SOIL		2		X	X	X											
				TOTAL	0	10	3	3	1	1	0	0	0	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

CLIENT: WSP	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: L27 680 George St Sydney 2600		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: PS206292	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: -		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: +61 2 8925 6767	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks	SAMPLER MOBILE: 0439525947	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default): Default	GBP	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME:	DATE/TIME: 29/1/25 11:30
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		15/1/2025 5:15 pm	

RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB	Asbestos presence/absence							Please forward to Eurofins	Comments
65	DPS_HA02_0.75	15/01/2025	SOIL		2	X												
66	DPS_HA02_1.25	15/01/2025	SOIL		2	X												
67	DPS_HA03_0.1	15/01/2025	SOIL		2		X	X										
68	DPS_HA03_0.5	15/01/2025	SOIL		2	X												
69	DPS_HA03_1.0	15/01/2025	SOIL		2	X												
70	DPS_HA03_1.3	15/01/2025	SOIL		2	X												
71	DPS_HA04_0.1	15/01/2025	SOIL		2		X	X	X									
72	DPS_HA04_0.5	15/01/2025	SOIL		2	X												
73	Asbestos Fragments	15/01/2025	SOIL		1					X								
74	DPS_HA05_0.1	15/01/2025	SOIL		2		X	X										
75	DPS_HA05_0.5	15/01/2025	SOIL		2	X												
76	DPS_HA05_0.9	15/01/2025	SOIL		2	X												
77	DPS_HA06_0.1	15/01/2025	SOIL		2		X	X										
				TOTAL	0	8	4	4	1	1	0	0	0	0	0	0	0	0

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

CLIENT: WSP	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☒ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: L27 680 George St Sydney 2600		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: PS206292	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: -		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: +61 2 8925 6767	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks	SAMPLER MOBILE: 0439525947	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default): Default	GBP	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME: 15/1/2025 5:15 pm	DATE/TIME: 20/1/25 11:30
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			

RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).														
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB	Asbestos presence/absence	TRH, BTEXN, Metals, PAH	TRH, BTEXN						Please forward to Eurofins	Comments
78	DPS_HA06_0.75	15/01/2025	SOIL		2	X													
79	DPS_HA02_1.1	15/01/2025	SOIL		2	X													
80	RINSATE_1	15/01/2025	WATER		2						X								
81	Trip Blank	14/01/2025	SOIL		1							x							
82	Trip Spike	14/01/2025	SOIL		1							x							
83	TSC																		
Extra 84	DPS_HA02_0.5																		
				TOTAL	0	2	0	0	0	0	1	2	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag

CHAIN OF CUSTODY

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☐BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600
☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
☐NOWRA 4/13 Geary Place North Nowra NSW 2541 E: nowra@alsglobal.com
☐NEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
☐MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐PERTH 10 Hod Way Malaga WA 6090
☐MELBOURNE
☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com
☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: WSP

OFFICE: L27 680 George St, Sydney

PROJECT: School of Infrastructure NSW

ORDER NUMBER: PS206292

PROJECT MANAGER: Melinda Collier   CONTACT PH: 04 4897 7033

SAMPLER: Grace Bendall-Pease   SAMPLER MOBILE: 0439525947

COC emailed to ALS? (YES / NO)   EDD FORMAT (or default): Default

Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com

Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com

TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)

☒ Standard TAT (List due date):

☐ Non Standard or urgent TAT (List due date):

ALS QUOTE NO.:

COC SEQUENCE NUMBER (Circle)

COC: 1 2 3 4 5 6 7 8 9

OF: 1 2 3 4 5 6 7 8 9

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
GBP	[signature]		
DATE/TIME: 5:15pm 15/1/25	DATE/TIME: 15/1/25 1721	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS													HOLD	Comments
	DPS_BH01_1.5	14/1/25	SOIL		2													X	
	DPS_BH01_2.0																		
	DPS_BH02_0.1																		
	DPS_BH02_0.5																		
	DPS_BH02_1.0																		
	DPS_BH02_1.5																		
	DPS_BH02_2.0																		
	DPS_BH01_1.0																		
	DPS_BH03_0.1																		
	DPS_BH03_0.5																		
	DPS_BH03_1.0																		
	DPS_B403_1.5																		
	DPS_BH03_2.0																		
				TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

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☐BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com

☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600

☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com

☐NEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: newcastle@alsglobal.com

☐PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: perth@alsglobal.com

☐NOWRA 4/5 Bolong Place North Nowra NSW 2541 Ph: 02 4421 0300 E: nowra@alsglobal.com

☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com

☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: WSP	TURNAROUND REQUIREMENTS : ☒ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: L27 680 George St, Sydney	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: School of Infrastructure NSW	ALS QUOTE NO.:	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: PS206292	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melinda Collier CONTACT PH: 04 4897 7033	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease SAMPLER MOBILE: 0439525947		
COC emailed to ALS? (YES / NO) EDD FORMAT (or default): Default		
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
GBP			
DATE/TIME: 15/1/25 5:15 PM	DATE/TIME: 15/1/25 1721	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price)
Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION																
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS												HOLD	Comments
	DPS_HA01_0.1	14/1/25	SOIL		2												X	
	DPS_HA01_0.5																	
	DPS_HA01_1.0																	
	DPS_HA01_1.5																	
	DPS_HA02_0.1																	
	DPS_HA02_0.5																	
	DPS_HA02_1.0																	
	DPS_HA02_1.5																	
	DPS_HA03_0.1																	
	DPS_HA03_0.5																	
	DPS_HA03_1.0																	
	DPS_HA03_1.5																	
	DPS_HA04_0.1																	
				TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

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MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com

NEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: newcastle@alsglobal.com

PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: perth@alsglobal.com

NOWRA 4/92-98 Kinghorne Street Nowra NSW 2541 Ph: 02 4422 2200 E: nowra@alsglobal.com

SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com

WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: WSP	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	FOR LABORATORY USE ONLY (Circle)	
OFFICE: L27 680 George St, Sydney	☒ Standard TAT (List due date):	Custody Seal Intact?	Yes / No / N/A
PROJECT: School of Infrastructure NSW	☐ Non Standard or urgent TAT (List due date):	Free ice / frozen ice bricks present upon receipt?	Yes / No / N/A
ORDER NUMBER: PS206292	ALS QUOTE NO.:	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER: Melinda Collier	CONTACT PH: 04 4897 7033	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 8 9 OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease	SAMPLER MOBILE: 0439525947		
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default): Default		
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
GBP			
DATE/TIME: 5:15pm 15/1/25	DATE/TIME: 15/1/25 1721	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price)
Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION															
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS												HOLD	Comments
	DPS_HA04_0.5	14/1/25	SOIL		2												X	
	DPS_HA04_1.0																	
	DPS_HA04_1.5																	
	DPS_HA05_0.1																	
	DPS_HA05_0.5																	
	DPS_HA05_1.0																	
	DPS_HA05_1.5																	
	DPS_HA06_0.1																	
	DPS_HA06_0.5																	
	DPS_HA06_1.0																	
	DPS_HA06_1.5																	
	DPS_BH01_0.1																	
	DPS_BH01_0.5																	
				TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

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PERTH 10 Hod Way Malaga WA 6090

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CLIENT: WSP	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: L27 680 George St, Sydney		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: School of Infrastructure NSW	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: PS206292		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: 04 4897 7033	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease	SAMPLER MOBILE: 0439525947		
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default): Default		
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
GBP			
DATE/TIME: 15/1/25 5:15pm	DATE/TIME:	DATE/TIME:	DATE/TIME: 15/1/25 1721

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).												
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS												HOLD	Comments
	GPS_BH01_0.1	15/1/25	SOIL		2												X	
	GPS_BH01_0.5																	
	GPS_BH01_1.0																	
	GPS_BH01_1.5																	
	GPS_BH01_2.0																	
	GPS_BH02_0.1																	
	GPS_BH02_0.5																	
	GPS_BH02_1.0																	
	GPS_BH02_1.5																	
	GPS_BH02_2.0																	
	GPS_BH03_0.1																	
	GPS_BH03_0.5																	
	GPS_BH03_1.0	↓	↓		↓												↓	
				TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

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☐BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600
☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
☐NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 02 4423 2063 E: nowra@alsglobal.com
☐NEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
☐MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐PERTH 10 Hod Way Malaga WA 6090
☐MELBOURNE E: samples.melbourne@alsglobal.com
☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com
☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: WSP

OFFICE: L27 680 George St, Sydney

PROJECT: School of Infrastructure NSW

ORDER NUMBER: PS206292

PROJECT MANAGER: Melinda Collier — CONTACT PH: 04 4897 7033

SAMPLER: Grace Bendall-Pease — SAMPLER MOBILE: 0439525947

COC emailed to ALS? (YES / NO) — EDD FORMAT (or default): Default

Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com

Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)

☐ Standard TAT (List due date):

☐ Non Standard or urgent TAT (List due date):

ALS QUOTE NO.:

COC SEQUENCE NUMBER (Circle)

COC: 1 2 3 4 5 6 7 8 9

OF: 1 2 3 4 5 6 7 8 9

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:	°C		
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
			[signature]
DATE/TIME: 15/1/25 5:15pm	DATE/TIME:	DATE/TIME:	DATE/TIME: 15/1/25 1721

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS													HOLD	Comments
	GPS_BH03_1.5	15/1/25	SOIL		2													X	
	GPS_BH03-2.0	↓	↓		↓													↓	
	GPS_BH04-0.1																		
	GPS_BH04_0.5																		
	GPS_BH04_1.0																		
	GPS_BH04-1.5																		
	GPS_BH04-2.0																		
	GPS_HA01-0.1																		
	GPS_HA01_0.5																		
	GPS_HA01-1.0																		
	GPS_HA02-0.1																		
	GPS_HA02-0.5																		
	GPS_HA02-0.75	↓	↓		↓													↓	
					TOTAL 0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

☐ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com

☐BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com

☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600

☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com

☐NEWCASTLE 5585 Mayfield Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com

☐NOWRA 4/92-94 Kinghorne Street Nowra NSW 2541 Ph: 02 4225 3125 E: nowra@alsglobal.com

☐PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: perth@alsglobal.com

☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com

☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: WSP	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: L27 680 George St, Sydney		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: School of Infrastructure NSW	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: PS206292		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: 04 4897 7033	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease	SAMPLER MOBILE: 0439525947		
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default): Default		
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 15/1/25 5:15pm	DATE/TIME:	DATE/TIME:	DATE/TIME: 15/1/25 17:21

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS												HOLD	Comments
	GPS-HA02-1.25	15/1/25	SOIL		2												X	
	GPS-HA03-6.1																	
	GPS-HA03-0.5																	
	GPS-HA03-1.0																	
	GPS-HA03-1.3																	
	GPS-HA04-0.1																	
	GPS-HA04-0.5																	
	ACM Fragments				1													
	GPS-HA05-0.1																	
	GPS-HA05-0.5																	
	GPS-HA05-0.9																	
	GPS-HA06-0.1																	
	GPS-HA06-0.75																	
				TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

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CLIENT: WSP	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: L27 680 George St, Sydney		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: School of Infrastructure NSW	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: PS206292		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: 04 4897 7033	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease	SAMPLER MOBILE: 0439525947		
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default): Default		
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 15/1/25 5:15pm	DATE/TIME:	DATE/TIME:	DATE/TIME: 15/1/25 1721

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS												HOLD	Comments
	GPS-HA06-1.1	15/1/25	SOIL		2												X	
				TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
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WSP Australia P/L NSW
Level 27, Ernst & Young Centre
Sydney
NSW 2001

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Melinda Collier**

Report **1181226-S**
Project name PS206292
Project ID PS206292
Received Date Jan 28, 2025

Client Sample ID			**QC101**
Sample Matrix			**Soil**
Eurofins Sample No.			**S25-Ja0042580**
Date Sampled			**Jan 15, 2025**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	62
TRH C29-C36	50	mg/kg	66
TRH C10-C36 (Total)	50	mg/kg	128
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	110
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	110
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5

Client Sample ID			QC101
Sample Matrix			**Soil**
Eurofins Sample No.			**S25-Ja0042580**
Date Sampled			**Jan 15, 2025**
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	105
p-Terphenyl-d14 (surr.)	1	%	120
Heavy Metals			
Arsenic	2	mg/kg	6.2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	15
Copper	5	mg/kg	21
Lead	5	mg/kg	15
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	8.4
Zinc	5	mg/kg	49
Sample Properties			
% Moisture	1	%	10

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jan 31, 2025	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 31, 2025	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 31, 2025	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jan 31, 2025	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Sydney	Jan 31, 2025	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jan 31, 2025	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Jan 28, 2025	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins

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Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Project Name: PS206292
Project ID: PS206292

Order No.:
Report #: 1181226
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Jan 28, 2025 12:30 PM
Due: Feb 4, 2025
Priority: 5 Day
Contact Name: Melinda Collier

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	QC101	Jan 15, 2025		Soil	S25-Ja0042580	X	X	X	X	X
Test Counts						1	1	1	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	118			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	%	74			70-130	Pass	
TRH C6-C10	%	116			70-130	Pass	
TRH >C10-C16	%	73			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	92			70-130	Pass	
Toluene	%	95			70-130	Pass	
Ethylbenzene	%	78			70-130	Pass	
m&p-Xylenes	%	78			70-130	Pass	
o-Xylene	%	77			70-130	Pass	
Xylenes - Total*	%	78			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	86			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	98			70-130	Pass	
Anthracene	%	108			70-130	Pass	
Benz(a)anthracene	%	101			70-130	Pass	
Benzo(a)pyrene	%	106			70-130	Pass	
Benzo(b&j)fluoranthene	%	103			70-130	Pass	
Benzo(g.h.i)perylene	%	102			70-130	Pass	
Benzo(k)fluoranthene	%	112			70-130	Pass	
Chrysene	%	109			70-130	Pass	
Dibenz(a.h)anthracene	%	105			70-130	Pass	
Fluoranthene	%	105			70-130	Pass	
Fluorene	%	107			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	106			70-130	Pass	
Naphthalene	%	102			70-130	Pass	
Phenanthrene	%	109			70-130	Pass	
Pyrene	%	110			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	100			80-120	Pass	
Cadmium	%	103			80-120	Pass	
Chromium	%	100			80-120	Pass	
Copper	%	99			80-120	Pass	
Lead	%	103			80-120	Pass	
Mercury	%	104			80-120	Pass	
Nickel	%	101			80-120	Pass	
Zinc	%	100			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S25-Ja0042213	NCP	%	100			70-130	Pass	
TRH C10-C14	S25-Fe0002121	NCP	%	71			70-130	Pass	
TRH C6-C10	S25-Ja0042213	NCP	%	100			70-130	Pass	
TRH >C10-C16	S25-Fe0002121	NCP	%	74			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S25-Ja0042213	NCP	%	86			70-130	Pass	
Toluene	S25-Ja0042213	NCP	%	90			70-130	Pass	
Ethylbenzene	S25-Ja0042213	NCP	%	96			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	S25-Ja0042213	NCP	%	95			70-130	Pass	
o-Xylene	S25-Ja0042213	NCP	%	91			70-130	Pass	
Xylenes - Total*	S25-Ja0042213	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S25-Ja0042213	NCP	%	86			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S25-Ja0043712	NCP	%	102			70-130	Pass	
Acenaphthylene	S25-Ja0043712	NCP	%	95			70-130	Pass	
Anthracene	S25-Ja0043712	NCP	%	108			70-130	Pass	
Benz(a)anthracene	S25-Ja0043712	NCP	%	102			70-130	Pass	
Benzo(a)pyrene	S25-Ja0043712	NCP	%	109			70-130	Pass	
Benzo(b&j)fluoranthene	S25-Ja0043712	NCP	%	109			70-130	Pass	
Benzo(g.h.i)perylene	S25-Ja0043712	NCP	%	91			70-130	Pass	
Benzo(k)fluoranthene	S25-Ja0043712	NCP	%	113			70-130	Pass	
Chrysene	S25-Ja0043712	NCP	%	111			70-130	Pass	
Dibenz(a.h)anthracene	S25-Ja0043712	NCP	%	106			70-130	Pass	
Fluoranthene	S25-Ja0043712	NCP	%	117			70-130	Pass	
Fluorene	S25-Ja0043712	NCP	%	108			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S25-Ja0043712	NCP	%	101			70-130	Pass	
Naphthalene	S25-Ja0043712	NCP	%	100			70-130	Pass	
Phenanthrene	S25-Ja0043712	NCP	%	109			70-130	Pass	
Pyrene	S25-Ja0043712	NCP	%	116			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S25-Ja0041337	NCP	%	91			75-125	Pass	
Cadmium	S25-Ja0041337	NCP	%	91			75-125	Pass	
Chromium	S25-Ja0041337	NCP	%	89			75-125	Pass	
Copper	S25-Ja0041337	NCP	%	89			75-125	Pass	
Lead	S25-Ja0041337	NCP	%	91			75-125	Pass	
Mercury	S25-Ja0041337	NCP	%	88			75-125	Pass	
Nickel	S25-Ja0041337	NCP	%	90			75-125	Pass	
Zinc	S25-Ja0041337	NCP	%	89			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S25-Fe0002119	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S25-Ja0043767	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S25-Ja0043767	NCP	mg/kg	100	100	2.0	30%	Pass	
TRH C29-C36	S25-Ja0043767	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S25-Fe0002119	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S25-Ja0043767	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S25-Ja0043767	NCP	mg/kg	110	110	1.0	30%	Pass	
TRH >C34-C40	S25-Ja0043767	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S25-Fe0002119	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S25-Ja0042211	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S25-Fe0002119	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S25-Fe0002119	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S25-Fe0002119	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S25-Fe0002119	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S25-Fe0002119	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S25-Ja0041336	NCP	mg/kg	2.1	2.3	9.0	30%	Pass	
Cadmium	S25-Ja0041336	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S25-Ja0041336	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S25-Ja0041336	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S25-Ja0041336	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	S25-Ja0041336	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S25-Ja0041336	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S25-Ja0041336	NCP	mg/kg	19	18	6.0	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	N25-Ja0042371	NCP	%	13	14	7.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Nileshni Goundar	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Ryan Phillips	Senior Analyst-Sample Properties
Raymond Siu	Senior Analyst-Volatile
Roopesh Rangarajan	Senior Analyst-Organic

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: WSP	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☒ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: L27 680 George St Sydney 2600		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: PS206292	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: -		COC: 1 2 3 4 5 6 7 8 9	Random Sample Temperature on Receipt: 16.3 °C
PROJECT MANAGER: Melinda Collier	CONTACT PH: +61 2 8925 6767	OF: 1 2 3 4 5 6 7 8 9	Other comment:
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks	SAMPLER MOBILE: 0439525947	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default): Default	GBP	DATE/TIME: 20/1/25 11:3
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME:	RELINQUISHED BY:
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		15/1/2025 5:15 pm	DATE/TIME:
			RECEIVED BY: Brandon
			DATE/TIME: 28/1 12:33

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).														
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB	Asbestos presence/absence								Please forward to Eurofins	Comments
	QC101	15/01/2025	SOIL		1			x											
	PLEASE FORWARD TO EUROFINS																		
TOTAL					0	0	0	1	0	0	0	0	0	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

#1181226

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Eurofins ARL Pty Ltd

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Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: WSP Australia P/L NSW
Contact name: Melinda Collier
Project name: PS206292
Project ID: PS206292
Turnaround time: 5 Day
Date/Time received Jan 28, 2025 12:30 PM
Eurofins reference 1181226

Sample Information

✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

✓ Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 16.3 degrees Celsius.

✓ All samples have been received as described on the above COC.

✓ COC has been completed correctly.

✓ Attempt to chill was evident.

✓ Appropriately preserved sample containers have been used.

✓ All samples were received in good condition.

✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

✓ Appropriate sample containers have been used.

✓ Sample containers for volatile analysis received with zero headspace.

X Split sample sent to requested external lab.

X Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Bonnie Pu on phone : or by email: Bonnie.Pu@eurofinsanz.com

Results will be delivered electronically via email to Melinda Collier - Melinda.Collier@wsp.com.

Note: A copy of these results will also be delivered to the general WSP Australia P/L NSW email address.

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Project Name: PS206292
Project ID: PS206292

Order No.:
Report #: 1181226
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Jan 28, 2025 12:30 PM
Due: Feb 4, 2025
Priority: 5 Day
Contact Name: Melinda Collier

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	QC101	Jan 15, 2025		Soil	S25-Ja0042580	X	X	X	X	X
Test Counts						1	1	1	1	1

APPENDIX D

HISTORICAL AERIAL PHOTOS

Legend

Site boundary

Historical Aerial – November 2024

Legend

Site boundary

Historical Aerial – July 2023

Legend Site boundary

Historical Aerial – February 2021

Legend Site boundary

Historical Aerial – July 2017

Legend Site boundary

Historical Aerial – May 2014

Legend

Site boundary

Historical Aerial – September 2012

Legend

Site boundary

Historical Aerial – July 2010

Legend

Site boundary

Historical Aerial – November 2009

Legend Site boundary

Historical Aerial – 2005

Legend Site boundary

Historical Aerial – 2002

Legend Site boundary

Historical Aerial – 1998

Legend Site boundary

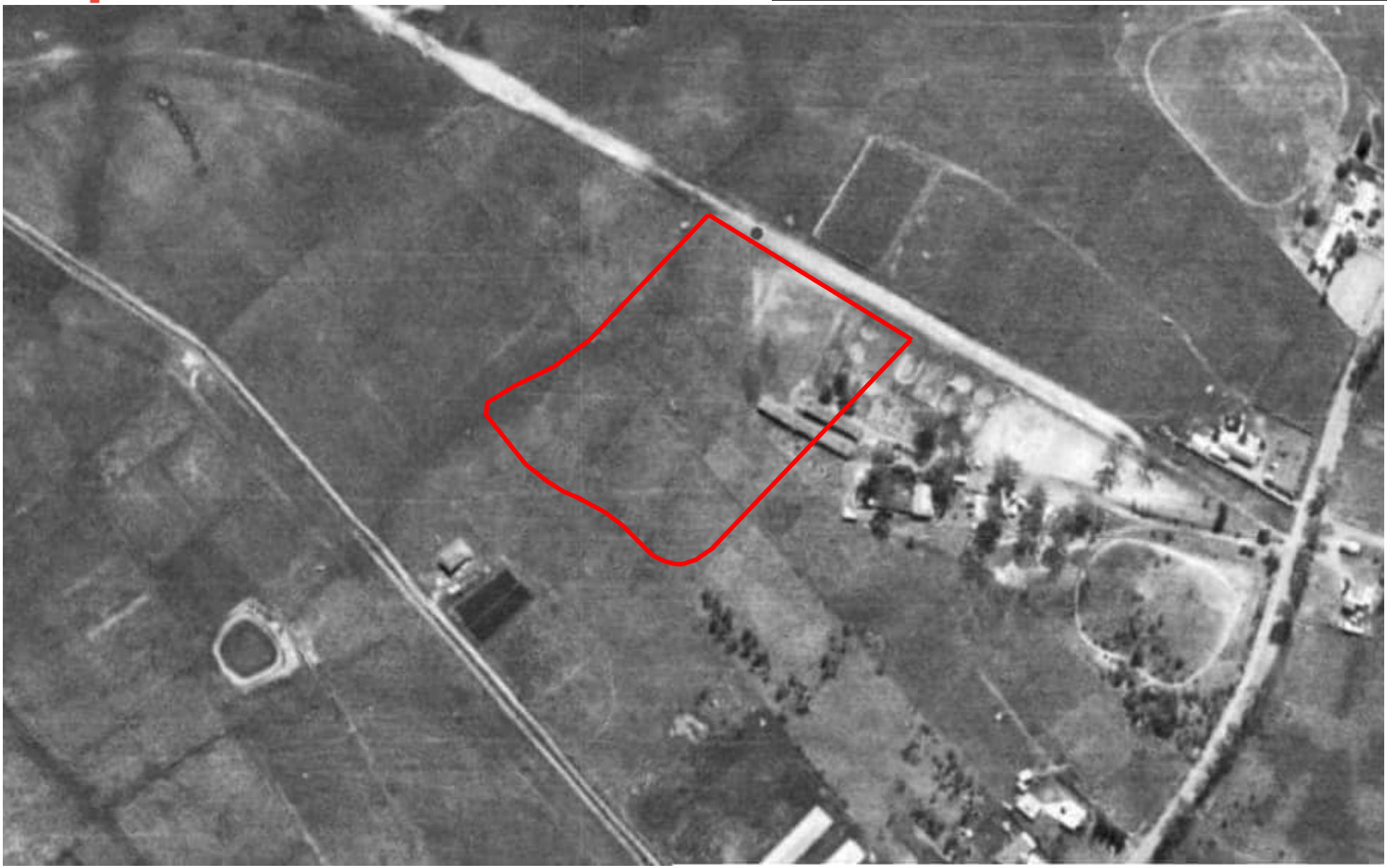
Historical Aerial – 1991

Legend Site boundary

Historical Aerial – 1986

Legend Site boundary

Historical Aerial – 1978



Legend

Site boundary

Historical Aerial – 1975

Legend Site boundary

Historical Aerial – 1965

Legend

Site boundary

Historical Aerial – 1947

Legend Site boundary

Historical Aerial – 1930

APPENDIX E

PHOTOGRAPHIC LOG

	Photographic Log	
	Greenway Park Public School	PS206292

Photo No.	Date
1	15/1/2025

Description
HA01 soil profile

Photo No.	Date
2	15/1/2025

Description
HA03 soil profile

Photo No.	Date
3	15/1/2025

Description

Asbestos fragment was noted in HA04 at 0.2 mbgl

Photo No.	Date
4	15/1/2025

Description

HA06 soil profile

Photo No.	Date
5	15/1/2025

Description
BH04 soil profile

Photo No.	Date
6	15/1/2025

Description
BH02 soil profile

APPENDIX F

BORE LOGS

HAND AUGER: HA01

Sheet 1 of 1

Project: Greenway Park Primary School Upgrade

Location: Greenway Park Primary School, Wyattville Dr, Carnes Hill NSW 2171

Client: School Infrastructure NSW

Job No.: PS206292

Contractor: Stratacore Drill Rig:

Inclination: -90°

Date Started: 15/01/2025

Date Completed: 15/01/2025

Logged: GBP

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0						TOPSOIL Sandy CLAY: low to medium plasticity, brown to dark brown, sand is fine to medium grained; trace fine to medium grained, subangular to angular gravel.	w<PL		TOPSOIL glass and rootlets observed
				0.20	ES 0.10 m GPS_HA01_0.1 PID 0.0 ppm				FILL Silty Sandy CLAY: medium plasticity, brown, sand is fine to medium grained; trace fine to medium grained, subangular to subrounded gravel.			FILL
			0.2									
			0.4							w<PL		
					ES 0.50 m GPS_HA01_0.5 PID 0.50 m 0.0 ppm							
				0.60					Sandy CLAY: brown mottled red brown, trace fine to medium grained sand sand; trace fine grained gravel.			ALLUVIAL SOIL
			0.6							w<PL		
			0.8									
				1.00								
			1.0		ES 1.00 m GPS_HA01_1.0 PID 0.0 ppm				Sandy CLAY: medium plasticity, red brown, sand is fine to medium grained.			RESIDUAL SOIL
				1.10					Hole Terminated at 1.10 m			
			1.2							w<PL	VSt	
			1.4									

Comments

Checked

Date

HAND AUGER: HA02

Sheet 1 of 1

Project: Greenway Park Primary School Upgrade

Location: Greenway Park Primary School, Wyattville Dr, Carnes Hill NSW 2171 — Date Started 15/01/2025:

Client: School Infrastructure NSW — Contractor: Stratacore — Drill Rig: — Date Completed: 15/01/2025

Job No.: PS206292 — Inclination: -90° — Logged: GBP

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0						TOPSOIL Silty Sandy CLAY: low to medium plasticity, brown to dark brown, sand is fine to medium grained.	w<PL		TOPSOIL organics and rootlets observed.
				0.20	ES 0.10 m GPS_HA02_0.1 PID 1.5 ppm				FILL Silty Sandy CLAY: medium plasticity, brown, sand is fine to medium grained; with fine to coarse grained up to 30mm, subangular gravel.			FILL organic material observed
			0.2									
			0.4							w<PL		
					ES 0.50 m GPS_HA02_0.5 PID 2.1 ppm							
			0.6									
				0.65					Sandy CLAY: medium plasticity, red brown and brown, sand is fine to medium grained.			
					ES 0.75 m GPS_HA02_0.75 PID 0.2 ppm							
			0.8							w<PL		
			1.0									
				1.10					Silty CLAY: medium to high plasticity, grey mottled red brown, trace fine to medium grained sand; trace grained subangular siltstone gravel.			
			1.2									
					ES 1.25 m GPS_HA02_1.25 PID 0.2 ppm							
				1.30						w<PL		
									Hole Terminated at 1.30 m			
			1.4									

Comments

Checked

Date

HAND AUGER: HA03

Sheet 1 of 1

Project: Greenway Park Primary School Upgrade

Location: Greenway Park Primary School, Wyattville Dr, Carnes Hill NSW 2171

Client: School Infrastructure NSW

Job No.: PS206292

Contractor: Stratacore Drill Rig:

Inclination: -90°

Date Started: 15/01/2025

Date Completed: 15/01/2025

Logged: GBP

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0						TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low to medium plasticity.	D		TOPSOIL rootlets, brick/paver fragments observed.
					ES 0.10 m GPS_HA03_0.1 PID 0.1 ppm							
			0.2	0.20					FILL Silty Sandy CLAY: low to medium plasticity, brown, sand is fine to medium grained; trace fine to medium grained, subangular to subrounded gravel gravel.			FILL
			0.4							w<PL		
					ES 0.50 m GPS_HA03_0.5 PID 0.0 ppm							
			0.6	0.60					Silty CLAY: medium plasticity, grey mottled red, trace fine grained sand.			ALLUVIAL SOIL Organics observed.
			0.8							w<PL	St	
			1.0		ES 1.00 m GPS_HA03_1.0 PID 0.0 ppm							
			1.2									
					ES 1.30 m GPS_HA03_1.3 PID 0.0 ppm							
				1.30					Hole Terminated at 1.30 m			
			1.4									

Comments

Checked

Date

HAND AUGER: HA04

Sheet 1 of 1

Project: Greenway Park Primary School Upgrade

Location: Greenway Park Primary School, Wyattville Dr, Carnes Hill NSW 2171

Client: School Infrastructure NSW

Job No.: PS206292

Contractor: Stratacore Drill Rig:

Inclination: -90°

Date Started: 15/01/25

Date Completed: 15/01/25

Logged: GBP

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0						TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low to medium plasticity.			TOPSOIL rootlets, charcoal fragments, gravel and brick/paver pieces observed.
				0.15	ES 0.10 m GPS_HA04_0.1 PID 0.1 ppm				FILL Silty Sandy CLAY: low to medium plasticity, brown, sand is fine to medium grained; trace fine to medium grained, subangular to subrounded gravel.			FILL suspected ACM identified.
			0.2		ES 0.20 m ACM fragment sample							
			0.4									
				0.55	ES 0.50 m GPS_HA04_0.5 PID 0.0 ppm				Silty CLAY: medium plasticity, grey mottled red, trace fine grained sand.			ALLUVIAL SOIL
			0.6	0.68								
									Hole Terminated at 0.68 m			
			0.8									
			1.0									
			1.2									
			1.4									

Comments

Checked

Date

HAND AUGER: HA05

Sheet 1 of 1

Project: Greenway Park Primary School Upgrade

Location: Greenway Park Primary School, Wyattville Dr, Carnes Hill NSW 2171

Client: School Infrastructure NSW

Contractor: Stratacore Drill Rig:

Job No.: PS206292

Inclination: -90°

Date Started: 15/01/2025

Date Completed: 15/01/2025

Logged: GBP

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0						TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low to medium plasticity.			TOPSOIL
					ES 0.10 m GPS_HA05_0.1 PID 0.1 ppm							
			0.2	0.20					FILL Silty Sandy CLAY: low to medium plasticity, brown, sand is fine to medium grained; trace fine to medium grained, subangular to subrounded gravel.			FILL
			0.4									
					ES 0.50 m GPS_HA05_0.5 PID 0.0 ppm							
			0.6	0.60					Silty CLAY: medium plasticity, grey mottled red, trace fine grained sand..			ALLUVIAL SOIL trace organics observed.
			0.8									
					ES 0.90 m GPS_HA05_0.9 GPS_HA05_0.9							0.90: GPS_HA05_0.9
				0.95					Hole Terminated at 0.95 m			
			1.0									
			1.2									
			1.4									

Comments

Checked

Date

HAND AUGER: HA06

Sheet 1 of 1

Project: Greenway Park Primary School Upgrade

Location: Greenway Park Primary School, Wyattville Dr, Carnes Hill NSW 2171

Client: School Infrastructure NSW

Contractor: Stratacore Drill Rig:

Job No.: PS206292

Inclination: -90°

Date Started: 15/01/2025

Date Completed: 15/01/2025

Logged: GBP

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0						TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low to medium plasticity; trace rootlets, plastic sheeting/ rootlets, charcoal fragments.	w<PL		TOPSOIL
			0.2	0.20	ES 0.10 m GPS_HA06_0.1 PID 0.10 m 0.0 ppm				FILL Silty Sandy CLAY: low to medium plasticity, brown, sand is fine to medium grained; trace fine to medium grained, subangular to subrounded gravel.			FILL
			0.4							w<PL		
			0.6	0.60					Silty CLAY: medium plasticity, grey mottled red, trace fine grained sand; trace rootlets.	w<PL	St to VSt	ALLUVIAL SOIL
				0.75	ES 0.75 m GPS_HA06_0.75 PID 0.75 m 0.0 ppm							
			0.8									
			1.0									
					ES 1.10 m GPS_HA06_1.1 PID 0.0 ppm							
			1.2						Hole Terminated at 1.20 m			
			1.4									

Comments

Checked

Date

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : GPS-BH01

FILE / JOB NO : PS206292
SHEET : 1 OF 1

CLIENT : SINSW
LOCATION : Greenway Park Public School
PROJECT : SINSW UPS T23-24

POSITION : E: 300146.0, N: 6242695.0 (MGA2020-56) SURFACE ELEVATION : 55.00 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Commachio 300 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : RM

DATE STARTED : 15/1/2025 DATE COMPLETED : 15/1/2025 DATE LOGGED : 15/1/2025 LOGGED BY : TD CHECKED BY :

DRILLING						MATERIAL						
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		E	Not Encountered	ES 0.10m	0.0 55.0			TOPSOIL Sandy CLAY: low to medium plasticity, brown to dark brown, sand is fine to medium grained; trace fine to medium grained, subangular to subrounded gravel; with rootlets.	w<PL		TOPSOIL GPS_BH01_0.1: PID = 0.6
				0.40m ES 0.50m	0.30m			FILL Sandy Silty CLAY: medium plasticity, brown, sand is fine to medium grained; trace fine to medium grained, subangular to subrounded gravel.	w<PL		FILL GPS_BH01_0.5: PID = 0.9
		F			0.50m			FILL CLAY: medium plasticity, brown mottled red brown, trace fine to medium grained sand; trace fine grained gravel.	w<PL		GPS_BH01_1.0: PID = 1.5
				0.90m ES 1.00m	1.0 54.0			Sandy CLAY: medium plasticity, red brown, sand is fine to medium grained.	w<PL	VSt	ALLUVIAL SOIL
				1.40m ES	1.00m		CI				
		H		SPT 4,6,14 N=20	1.50m			Silty CLAY: medium to high plasticity, grey mottled red brown, trace fine to medium grained, subangular siltstone gravel.			RESIDUAL SOIL 1.60: PP >600 kPa GPS_BH01_1.5: PID = 1.5
				1.95m ES 2.00m	2.0 53.0				w<PL	VSt	GPS_BH01_2.0: PID = 0.9
AD/T							CI-CH				
					3.00m						
				SPT 7,21/130mm N=R 3.28m	3.0 52.0			SILTSTONE, pale grey to dark grey, inferred very low strength, extremely weathered, recovered as Gravelly Silty CLAY, medium to high plasticity, gravel is fine grained, sub-angular to angular.			INFERRED WEATHERED ROCK 3.10: PP >600 kPa
		VH			4.0 51.0						
				SPT 10/115mm HB N=R 4.62m	5.0 50.0						
					6.00m						
					6.0 49.0			Hole Terminated at 6.00 m Target depth Target depth reached			
					7.0 48.0						
					8.0 47.0						

See Explanatory Notes for details of abbreviations & basis of descriptions.

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : GPS-BH02

FILE / JOB NO : PS206292
SHEET : 1 OF 1

CLIENT : SINSW
PROJECT : SINSW UPS T23-24
LOCATION : Greenway Park Public School

POSITION : E: 300153.0, N: 6242687.0 (MGA2020-56) SURFACE ELEVATION : 55.00 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Commachio 300 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : RM

DATE STARTED : 15/1/2025 DATE COMPLETED : 15/1/2025 DATE LOGGED : 15/1/2025 LOGGED BY : KC CHECKED BY :

DRILLING						MATERIAL						
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		E	Not Encountered	ES 0.10m	0.0 55.0			TOPSOIL Clayey SAND: fine to medium grained, brown, clay is low plasticity; trace fine grained gravel; with rootlets.	D		TOPSOIL GPS_BH02_0.1: PID = 2.0
		F		0.40m ES 0.50m	0.20m			FILL Sandy CLAY: medium to high plasticity, brown, red-brown and grey, sand is fine to medium grained; trace fine to medium grained gravel.	w<PL		FILL GPS_BH02_0.5: PID = 3.3
				0.90m ES 1.00m	0.60m 1.0 54.0		CI-CH	Sandy Silty CLAY: medium to high plasticity, red-brown, sand is fine grained; trace fine to medium grained, subangular to subrounded gravel.	w<PL to w≈PL	St	ALLUVIAL SOIL GPS_BH02_1.0: PID = 1.8
				1.40m ES SPT 4,10,11 N=21 1.90m ES 2.00m	1.30m 2.0 53.0		CI-CH	Silty CLAY: medium to high plasticity, pale grey mottled red. 2.00m Increasing sand content	w<PL	VSt	RESIDUAL SOIL GPS_BH02_1.5: PID = 3.8 1.60: PP >600 kPa 1.70: PP >600 kPa
AD/T		H		SPT 7,20/130mm HB N=R 3.28m	3.00m 3.0 52.0			2.80m: with fine to medium grained, subangular to angular siltstone fragments SILTSTONE, pale grey to dark grey, inferred very low strength, extremely weathered, recovered as Gravelly Silty CLAY, medium to high plasticity, gravel is fine grained, sub-angular to angular.			INFERRED WEATHERED ROCK 3.10: PP >600 kPa 3.20: PP >600 kPa
				SPT 15/20mm HB N=R 4.52m	4.0 51.0 5.0 50.0			4.25m: becoming yellow brown with iron staining			
					5.60m			SILTSTONE: grey and brown mottled orange brown, very fine grained, extremely to highly weathered, very low to low strength, Iron staining.			ROCK
					5.80m 6.0 49.0 7.0 48.0 8.0 47.0			Hole Terminated at 5.80 m Refusal Terminated upon TC-bit auger refusal			

See Explanatory Notes for details of abbreviations & basis of descriptions.

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : GPS-BH03

FILE / JOB NO : PS206292
SHEET : 1 OF 1

CLIENT : SINSW
LOCATION : Greenway Park Public School
PROJECT : SINSW UPS T23-24

POSITION : E: 300163.0, N: 6242674.0 (MGA2020-56) SURFACE ELEVATION : 55.00 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Commachio 300 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : RM

DATE STARTED : 15/1/2025 DATE COMPLETED : 15/1/2025 DATE LOGGED : 15/1/2025 LOGGED BY : TD CHECKED BY :

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		E	Not Encountered	ES 0.10m	0.0 55.0			TOPSOIL Sandy CLAY: low to medium plasticity, brown to dark brown, sand is fine to medium grained.	w<PL		TOPSOIL, glass observed GPS_BH03_0.1: PID = 5.9
				0.40m	0.20m			FILL Sandy CLAY: low to medium plasticity, brown, sand is fine to medium grained; with fine to coarse grained up to 30mm, subangular gravel.			FILL
		F		ES 0.50m					w<PL		GPS_BH03_0.5: PID = 2.9
					0.70m						
				0.90m				Sandy CLAY: medium plasticity, red brown and brown, sand is fine to medium grained.	w<PL	St	ALLUVIAL SOIL
				ES 1.00m	1.0 54.0		CI				GPS_BH03_1.0: PID = 1.8
					1.10m						
				1.40m				Silty CLAY: medium to high plasticity, grey mottled red brown, trace fine to medium grained sand; trace fine to medium grained, subangular siltstone gravel.			RESIDUAL SOIL
				ES							GPS_BH03_1.5: PID = 1.3
				SPT 3,7,15 N=22							1.60: PP >600 kPa 1.70: PP >600 kPa
		H		1.90m							
				ES 2.00m	2.0 53.0		CI-CH		w<PL	St to VSt	GPS_BH03_2.0: PID = 1.3
					3.00m						
AD/T				SPT 7,20/110mm N=R 3.26m	3.0 52.0			SILTSTONE, grey mottled red brown, inferred very low strength, extremely weathered, recovered as Gravelly Silty CLAY, medium to high plasticity, gravel is fine grained, sub-angular to angular.			INFERRED WEATHERED ROCK 3.05: PP >600 kPa 3.10: PP >600 kPa
		VH		SPT 5,9/110mm N=R 4.76m	4.0 51.0						
					5.0 50.0						
					6.00m						
					6.0 49.0			Hole Terminated at 6.00 m Target depth Target depth reached			
					7.0 48.0						
					8.0 47.0						

See Explanatory Notes for details of abbreviations & basis of descriptions.

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : GPS-BH04

FILE / JOB NO : PS206292
SHEET : 1 OF 1

CLIENT : SINSW
LOCATION : Greenway Park Public School
PROJECT : SINSW UPS T23-24

POSITION : E: 300134.0, N: 6262682.0 (MGA2020-56) SURFACE ELEVATION : 55.00 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Commachio 300 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : RM

DATE STARTED : 15/1/2025 DATE COMPLETED : 15/1/2025 DATE LOGGED : 15/1/2025 LOGGED BY : KC CHECKED BY :

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		E	Not Encountered	ES 0.10m	0.0 55.0			TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low plasticity.	D		TOPSOIL GPS_BH04_0.1: PID = 2.6
		F		0.40m ES 0.50m	0.20m			FILL Sandy Silty CLAY: low to medium plasticity, brown, sand is fine to medium grained; trace fine grained, subrounded gravel.	w<PL		FILL GPS_BH04_0.5: PID = 5.8
				0.90m ES 1.00m	0.60m 1.0 54.0		CI	Silty CLAY: medium plasticity, pale grey to red brown, with fine grained sand; trace rootlets.	w<PL	St	ALLUVIAL SOIL GPS_BH04_1.0: PID = 5.1
AD/T		H		1.40m ES SPT 7,7,16 N=23	1.20m			Silty CLAY: medium to high plasticity, pale grey mottled red brown, with fine to medium grained sand; trace fine to coarse grained, subangular to subrounded siltstone and sandstone gravels with fissuring.			RESIDUAL SOIL GPS_BH04_1.5: PID = 5.0 GPS_BH04_2.0: PID = 0.7 1.60: PP >600 kPa 1.70: PP >600 kPa 1.80: PP >600 kPa
				1.90m ES 2.00m	2.0 53.0		CI-CH		w<PL	VSt	
								2.50m: with sub-rounded to sub-angular siltstone fragments			
		VH		SPT 4,9,15/110mm HB N=R 3.41m	2.70m 3.0 52.0			SILTSTONE, pale grey to dark grey mottled red brown, inferred very low strength, extremely weathered, recovered as Gravelly Silty CLAY, medium to high plasticity, gravel is fine grained, sub-angular to angular.			INFERRED WEATHERED ROCK 3.00: PP >600 kPa 3.10: PP >600 kPa
				SPT 10/5mm N=R 4.51m	4.0 51.0 4.50m			Hole Terminated at 4.50 m Target depth Terminated upon TC-bit auger and SPT refusal			
					5.0 50.0						
					6.0 49.0						
					7.0 48.0						
					8.0 47.0						

See Explanatory Notes for details of abbreviations & basis of descriptions.