

REMEDIAL ACTION PLAN

Fill 18 – Hydrocarbon Impacted Material

Borrow Pit – Gate 16B

Pacific Highway, South Bound, Tomago NSW 2322



John Holland and Gamuda Joint Venture

Report No.: 53006_R01 Rev04

June 2026

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Version 1				
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Version 3				
Version 4				

Accredited Systems



EXECUTIVE SUMMARY

EnviroScience Solutions (EnviroScience Solutions) was commissioned by John Holland and Gamuda Joint Venture (JHGJV) to provide a remediation action plan following the preparation of a remediation options appraisal (ROA) for impacted soil material encountered during road works within the south-bound corridor of the Pacific Highway, Tomago, NSW 2322 between Chainages MC20 9210 and MC20 8600 (the site).

Background

JHGJV initially identified suspected coal-tar/ hydrocarbon-based binder within the road pavement layer/asphalt and surface of the subgrade road base material during milling and road upgrade activities undertaken within the south bound corridor of the Pacific Highway (CH MC209210 – MC208600).

Remediation Objectives

The remediation objectives related to the Transport for New South Wales (TfNSW) owned portion of the site (the road corridor) follow TfNSW long term objectives for site use and should ensure the effective and controlled remediation of the site for the proposed commercial/industrial (non-sensitive) redevelopment (i.e., use of site as a motorway).

The remediation objectives are outlined as follows:

- Remediate the site to a level where no unacceptable risk is posed on human health and/or the environment on- and off-site;
- Remediate the site to a level that is suitable for the proposed commercial/industrial (non-sensitive) use as the M12RT motorway within the Pacific Highway road corridor;
- Remediate the site to a level that is suitable for the proposed final land use and ongoing maintenance of the road corridor (commercial/industrial (non-sensitive) use);
- Remediate the site so that it serves to comply with the project Infrastructure Approval (and its CoA);
- Future proof areas of the site so access to residual contamination (if remaining) is minimised;
- Prevent or minimise migration of contaminants from the source, where practicable;
- Provide a resilient solution to the effects of sea level rise impacts or extreme weather events; and
- Provide an efficient method to validate the soil remedial works by demonstrating unacceptable concentrations of CoPC have been removed or residual contamination is acceptable to remain in accordance with the relevant industry accepted guidelines.



Summary of the Planned Remediation Works

The selected remediation methodology comprises the application of chemical treatment of the contaminated soils via the addition of chemical substances to alter the physicochemical properties of the soil to immobilise the contaminants and reduce leaching.

Pilot-scale immobilisation trials have been undertaken to assess which reagents perform adequately to reduce leachability to meet the target site criteria, and the dosage rates required to achieve this. Results from these trials will inform full-scale treatment of the material.

Full-scale treatment of the material will be undertaken using a specialised pugmill designed for soil immobilisation applications. The chemical treatment/immobilisation approach has been considered with reference to the National Remediation Framework, including the NRF Technology Guide: Chemical Immobilisation and Solidification. The NSW EPA Immobilisation Technical Note 1 – Process Equipment for Treatment of Contaminated Soil and Sludge Waste is noted as relevant to process equipment considerations; however, it has not been relied upon as the primary remediation guidance for the selected approach.

The treatment process will require all treated material to be stockpiled and tested (using ASLP) to confirm target site criteria have been met.

For any material which fails to meet the target site criteria, this material will either be re-processed using the same initial method or considered for waste disposal at a licenced facility following waste classification of the material. All material with compliant results will be transported and placed in the designated site location.

Validation Report

A final validation report is required to be prepared after completion of the works in accordance with the *Guidelines for consultants reporting on contaminated land* (NSW EPA, 2020) and submitted to the Client, the appointed Site Auditor, and the Council.

Statement that the site will be suitable for use

If this RAP plan is followed, then the works should meet the remediation objectives.



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1 INTRODUCTION

EnviroScience Solutions (EnviroScience Solutions) was commissioned by John Holland and Gamuda Joint Venture (JHGJV) to provide a remediation action plan following the preparation of a remediation options appraisal (ROA) for impacted soil material encountered during road works within the south-bound corridor of the Pacific Highway, Tomago, NSW 2322 between Chainages MC20 9210 and MC20 8600 (the site).

It is noted that the ROA provided remediation options for the soil excavated and removed from the original site (i.e., ex-situ/stockpiled soil) and did not incorporate options for the remediation of the primary source (i.e., in-situ soils and residual soil impact). As a result, this RAP also does not provide a plan for the remediation of the primary source.

It is noted that the current volume of material currently stockpiled has increased since the preparation of the Draft ROA, derived from material from earthworks in adjacent areas of similar impacted material.

This RAP relates to the remediation and proposed placement of hydrocarbon impacted material generated from the source area within the Pacific Highway road corridor. For clarity, this RAP distinguishes between the source area, being the location from which the material was excavated; the temporary storage and treatment area, being the Borrow Pit at Gate 16B; and the proposed placement areas, being the final locations where treated material may be placed following successful validation. The remediation strategy and conceptual site model presented in this RAP focus on the treatment and final placement scenario, while information relating to the source area is retained where relevant to understanding the nature and origin of the impacted material.

The previous ROA considered a range of remediation options, including on-site treatment/chemical treatment. At the time of the ROA, on-site encapsulation was identified as the preferred option. Following further consultation with Transport for NSW (TfNSW) and review of project constraints, chemical treatment/immobilisation has since been selected as the preferred remediation methodology. This change is discussed further in Section 11.

Version 1 and 2 of this RAP has been prepared by Sam Ramsey a suitably qualified environmental consultant with 10 years of experience in working in contaminated land assessment projects and reviewed by Certified Environmental Practitioner in Site Contamination Mark Challoner in accordance with the requirements of Schedule B(9) of the National Environmental Protection Measure 1999 (as amended 2013). Versions 3 and onwards were prepared by Tom Davelaar a suitably qualified environmental consultant with 5 years of experience in working in contaminated land assessment projects and reviewed by Sam Ramsey.

This report has been prepared in accordance with the appropriate NSW Environment Protection Authority (EPA), guidance and endorsements under the provisions of the Contaminated Land Management Act, 1997. Guidance has



been provided by the *National Environment Protection (Assessment of Site Contamination) Measure, NEPC 2013* and the *Consultants reporting on contaminated land (NSW EPA, 2020)*.



2 BACKGROUND

EnviroScience was engaged by JHGJV following initial identification of suspected coal-tar/ hydrocarbon-based binder within the road pavement layer/asphalt and surface of the subgrade road base material during milling and road upgrade activities undertaken within the south bound corridor of the Pacific Highway (CH MC209210 – MC208600).

During the milling and asphalt removal works within the site area, a naphthalene odour was noted by JHGJV staff. A JHGJV environmental scientist collected five (5) coal tar presence/absence samples and scheduled them for analysis at NATA Accredited laboratory, Eurofins. Coal tar was reported to be present within four of the five samples collected.

The existing subgrade material was in-situ at the time of the initial investigation undertaken on 21 March 2025. The asphalt and pavement layer, approximately 500 mm in depth, was excavated and stockpiled in the causeway adjacent to the south bound lane. The stockpile was temporarily stockpiled within the works zone and was approximately 1,500 m³.

EnviroScience conducted sampling at fifteen (15) locations within the site (Between chainages MC 20 8670 to MC 20 9210).

Samples were collected from the following locations as shown in Diagram 1 below:

- Stockpile (labelled SP): 0-500mm below surface level of material stockpiled after being milled;
- Surface (labelled S): 500mm below former ground level
- 100mm (labelled 100): 600mm below former ground level
- 500mm (labelled 500): 1000mm below former ground level

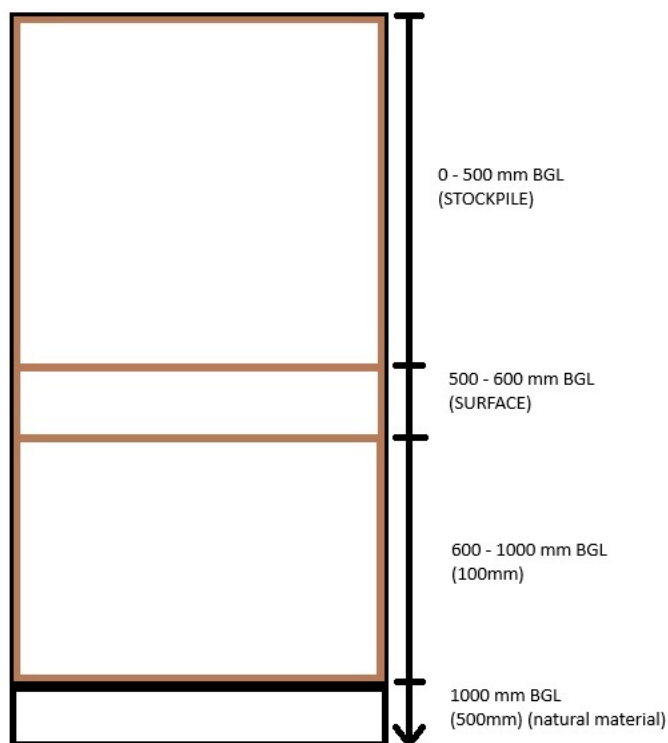


Diagram 1: Cross-section of approximate sample depths.

A total of sixty (60) samples were sent to NATA Accredited EnviroLab Services. For a comparison of laboratory methodologies, a total of sixty (60) samples were also sent to Eurofins for the same analysis.

EnviroLab sample results indicated coal tar was not present in the samples collected by EnviroScience, based on the absence of phenols. Phenols are used by EnviroLab as an indicator of coal tar presence, noting that coal tar typically contains phenolic compounds whereas bitumen does not. On this basis, the EnviroLab results did not indicate the presence of coal tar.

It is noted that the EnviroLab assessment differs from the initial Eurofins coal tar presence/absence analysis, which was based on RMS Test Method T542. The RMS Test Method T542 analysis reported coal tar to be present in four of the five initial samples collected by JHGJV. In summary, the initial coal tar screening results were mixed; however, the material has been conservatively managed as hydrocarbon/PAH impacted material requiring remediation under this RAP.

The concentrations of polycyclic aromatic hydrocarbons (PAH), total recoverable hydrocarbons (TRH), and semi-volatile hydrocarbons in several samples exceeded the adopted Health Investigation and Screening Levels for commercial/industrial properties. Samples collected from the material at depth (500 mm) were generally reported below the adopted screening criteria.



Due to time constraints of the project, the material was excavated and transported to the 'Borrow Pit' – adjacent to the south bound lane of the Pacific Highway, Tomago (Latitude: -32.813655, Longitude: 151.703980). The material was moved in accordance with the Material Movement Plan Referenced: (M1RTBH2RT-JHGM-6003-EN-PLN-000091 Revision 01, dated 1 April 2025). The material was segregated, with the stockpile, surface (500mmbgl), and 600mmbgl material being placed in a bunded and geo-fabric lined stockpiling area. Material between Chainages: MC20 9130 and MC20 8790 was excavated to an approximate depth of -1000 mm and placed in the 'contaminated material' stockpile SP2. An approximate 2,500 m³ of material is present within SP2. The material was deemed not suitable for reuse as engineering fill without further remediation or migration pathway controls. This investigation is summarised in Section 8.1 of this report.

Based on the initial segregation works, material assessed as suitable for reuse was separated into SP1, comprising approximately 1,000 m³ of material from 600 mm to 1,000 mm bgl from selected chainage intervals. Hydrocarbon impacted material requiring further management was separated into SP2, which initially comprised approximately 2,500 m³. The total volume of material currently proposed for treatment under this RAP has since increased to approximately 6,272 m³ due to the generation of additional similar hydrocarbon impacted material during subsequent works.

For clarity, SP1 and SP2 refer to temporary stockpile identifiers within the Borrow Pit storage area and do not refer to land zoning. SP1 refers to material assessed as suitable for reuse, while SP2 refers to hydrocarbon impacted material requiring further management/remediation under this RAP.

Material from 600 to 1000 mm depth between Chainages: MC20 8680 – MC20 8790, and section Chainages: MC20 9130 and MC20 9220, was stockpiled separately within the 'Borrow Pit' and placed within 'potentially contaminated material' stockpile SP1. An approximate 1,000 m³ of material is present within SP1. The material was deemed suitable to re-use as engineering fill within the road corridor. SP1 is not subject to remediation under this RAP.



3 OBJECTIVES

The objectives of this Remediation Action Plan are to:

- Design the sampling required in order to characterise any additional material;
- Clarify the proposed remediation methodology for the stockpiled material, including any pilot trials to determine the nature of the remedial works, which will be informed by environmental sustainability, project time constraints and cost effectiveness;
- Meet the requirements of CoA Condition E127 related to the preparation of a Remedial Action Plan;
- Design the remediation works that are required to make the site suitable for the intended use; and
- Design the Validation Sampling Works that are required to demonstrate that the remediation works have been successfully completed.

3.1 Remediation Objectives

The remediation objectives related to the Transport for New South Wales (TfNSW) owned portion of the site (the road corridor) follow TfNSW long term objectives for site use, and should ensure the effective and controlled remediation of the site for the proposed commercial/industrial (non-sensitive) redevelopment (i.e., use of site as a motorway). Remediation should seek to remove the source-pathway-receptor (human and ecological) linkages, render the site suitable for use.

The remediation objectives are outlined as follows:

- Remediate the site to a level where no unacceptable risk is posed on human health and/or the environment on- and off-site;
- Remediate the site to a level that is suitable for the proposed commercial/industrial (non-sensitive) use as the M12RT motorway within the Pacific Highway road corridor;
- Remediate the site to a level that is suitable for the proposed final land use and ongoing maintenance of the road corridor (commercial/industrial (non-sensitive) use);
- Remediate the site so that it serves to comply with the project Infrastructure Approval (and its CoA);
- Future proof areas of the site so access to residual contamination (if remaining) is minimised;
- Prevent or minimise migration of contaminants from the source, where practicable;
- Provide a resilient solution to the effects of sea level rise impacts or extreme weather events; and
- Provide an efficient method to validate the soil remedial works by demonstrating unacceptable concentrations of CoPC have been removed or residual contamination is acceptable to remain in accordance with the relevant industry accepted guidelines.



4 SCOPE OF WORK

To achieve these objectives, the scope of works for the remediation includes:

- Design an appropriate sampling strategy for the additional material stockpiled since the preparation of the ROA;
- Design appropriate requirements for the validation and verification of the successful implementation of the remedial strategy and the remediation acceptance criteria to be adopted;
- Design appropriate environmental safeguards required to conduct the remediation works in an environmentally acceptable manner; and
- Design appropriate Work Health and Safety procedures required to conduct the remediation works in a manner that will not pose a threat to the health of the site workers.

It should be noted that this Plan may need to be amended if further or other contaminants are identified on-site during the course of the planned works and through laboratory analysis results.

5 REVISION OF THIS PLAN

This RAP is applicable for the duration of remediation works associated with the hydrocarbon impacted material described in this report. During this time, it may be necessary to revise and re-issue the RAP in order to reflect changes in project objectives, party's responsibilities for implementation of the RAP and development, or changes to planning or statutory requirements, or environmental conditions.

If revision of the RAP is necessary, the following procedure should be followed:

- Review the RAP by an experienced environmental scientist/ engineer with reference to the changes requiring the revision;
- Update the RAP, including the document register revision number information, to address the requirements of the changed conditions; and
- Re-issue the RAP and provision of notice to the stakeholders that previous versions have been superseded.

A copy of any revised RAP should be provided to the Responsible Manager, JHGJV/TfNSW and the appointed Site Auditor for review, where required. Any revised RAP should be implemented only following completion of the relevant project review/endorsement process.



6 DEFINITION OF RESPONSIBILITIES

To ensure that the RAP is effectively implemented throughout the course of the development of the Site, it is important that a Responsible Manager is appointed as site supervisor. The RAP has been prepared for John Holland as the primary contractor of the remediation works.

A copy of the RAP should be provided to a person designated by John Holland as the Responsible Manager during the development of the Site. As a minimum requirement, the plans and procedures outlined in the RAP should be incorporated into Environmental Management Plans (EMPs) and Safe Work Method Statements (SWMS) prepared by contractor/s undertaking intrusive works associated with the remediation of the site.

The Responsible Manager is responsible for the following:

- Ensuring the timely updating of the RAP;
- Assessment, with reference to the RAP, or of any intrusive works to be carried out across the site which could encounter known or likely contamination, and to determine if the proposed works are necessary or if there is an alternative course of action;
- Ensuring that the requirements of this RAP, including the procedures for the protection of the health and safety of workers and occupants of surrounding areas are followed as excavation works are undertaken; and
- Ensuring that the development works and any contaminated material on-site that must be exposed are appropriately managed in accordance with this RAP.

The RAP will be provided to JHGJV/TfNSW and the appointed NSW EPA-accredited Site Auditor for review prior to implementation. Based on the current proposed remediation approach, formal Environmental Representative approval is not anticipated to be required unless triggered by project approval requirements or subsequent changes to the remediation methodology.

Work health and safety requirements associated with the remediation works will be addressed by JHGJV and the relevant contractor through project-specific safety documentation, including Safe Work Method Statements and other applicable WHS procedures. The appointed Site Auditor's review is limited to contaminated land matters and does not constitute a WHS review.



7 SITE DESCRIPTION

7.1 Site Identification

- Site owner: Transport for NSW/ NSW Government;
- Address: Pacific Highway, Tomago, NSW 2322;
- Location of impacted material: Latitude: -32.80366079397413; Longitude: 151.71401636508833 (i.e., south bound lane where impacted material was identified along Pacific Hwy, Tomago, NSW);
- Location of storage area: Borrow Pit, Gate 16B, Pacific Highway southbound, Tomago NSW 2322, approximately Latitude -32.813655, Longitude 151.703980.
- Location of proposed placement areas: Area 1 and Area 2, located adjacent to Bridge 6 within the Pacific Highway/M1 Pacific Motorway project corridor. Area 1 is located at approximately Latitude -32.813178, Longitude 151.700922, and Area 2 is located at approximately Latitude -32.814019, Longitude 151.700227.
- Site area: The southern most extent has been identified as the south bound fast lane to MCE0 530, the northern extent has not been delineated;
- Planned land use: In accordance with zoning – SP2 – Infrastructure – Classified Road;
- Local Government Area: Port Stephens Council.

The Site Location is presented in Figure 1, Appendix A.

7.2 Site Description

Source Site:

The contamination was identified within the road corridor on the former alignment of the Pacific Highway, predominately within southbound lanes and centre median between 2100 Pacific Highway, Heatherbrae NSW 2324 and approximately 560m south of the Old Punt Road and the Pacific Highway Tomago intersection. The source site was active roadway constructed of asphalt pavements overlaying base layers. During excavation works for the new alignment of the M1 Pacific Motorway it was identified that the upper road pavement and base layers had been laid directly over the original road pavements. The total depth of road pavement layers ranged from 1.0 – 1.5mbgl.

The source site and surrounding area generally flat, with a slight slope towards the Hunter River on the western side.

The source site is presented in Figure 1, Appendix A.

Storage Area:



Following excavation of the material from the sourced location, the material was and is currently stored within the Project site at 1940 Pacific Highway Tomago 2322 (Lots 20 & 21 DP1286735) (The Borrow Pit). The material is stored within a lined bunded area and covered for the duration of storage to prevent infiltration of rainwater and potential of leaching of the material into the underlying soils.

The storage area is currently part of the greater construction site. The currently temporary use for this site includes removal of suitable engineering soils for construction of roads and storage of topsoil and the subject contaminated material.

The treatment of the material is proposed to occur directly adjacent to the current hydrocarbon stockpiles within the Borrow Pit/storage area. For the purposes of this RAP, the treatment area is considered part of the broader Borrow Pit storage and treatment area. The treatment area will be established to allow controlled handling, mixing, treatment, temporary stockpiling and validation of the material prior to transport to the proposed placement area. The treatment area will be managed to prevent uncontrolled runoff, dust generation, off-site tracking of material and interaction with underlying soils or surface water pathways. The storage site and treatment area are presented in Figure 2, Appendix A.

Proposed placement areas:

Two locations have been proposed as potential placement areas. These areas are Area 1 and Area 2, which are located on the northern and southern side of the Pacific Highway, adjacent to Bridge 6.

- Area 1 is located at approximately -32.813178, 151.700922; and
- Area 2 is located at approximately -32.814019, 151.700227

The final placement design is to be confirmed by the project team; however, treated material is proposed to be placed within the road corridor as part of the final project landform. Placement will only occur following successful validation of the treated material against the adopted remediation acceptance criteria. The final placement configuration should be designed to minimise infiltration, erosion, direct contact exposure and migration of contaminants to groundwater or surface water. Relevant engineering details, including final placement depth, surface cover, batter profile, drainage controls and any separation from groundwater or surface water features, should be confirmed prior to placement and documented in the validation report.

The proposed placement areas are located within the gazetted road corridor and are zoned as SP2 Infrastructure (classified road), between the southbound lanes of the Pacific Highway and the future alignment of the M1 Pacific Motorway. The placement areas will include a maximum 2:1 batter with a 7.6% fall, 90% engineering compaction, terracing as per R44 into the batter below tree level, and maintenance of the designed drainage channels in



accordance with the existing design. Following placement, the area will be covered with 300 mm of topsoil and hydromulched with a grass mix.

The proposed placement areas are presented in Figure 4, Appendix A, and the design drawings are provided in Appendix E.

7.2.1 Surrounding Land Use

Source site:

The source site is surrounded by vegetation to the east and south, and the Pacific Highway and roadworks/construction to the north and west. It is located on the western edge of the Tomago Sandbeds Catchment area. The Hunter Region Botanic Garden runs on the northeastern side of the source area for approximately 150m. The surrounding land use transitions into vacant land dominated by low lying wetlands and swamp forest. There are high voltage transmission lines and a high-pressure gas main running across the source site and adjacent.

Storage Site:

The storage site is surrounded by the M1 Pacific Motorway Extension project construction works to the west, the Tomago industrial area to the south, with a 60m wide vegetation corridor including an unnamed waterway between the storage site and the industrial estate, the AGL Super Battery construction project to the east and vegetation to the north.

Placement Site:

The Hunter River is located approximately 330 m northwest (Area 1) and 385 m north (Area 2) of the site.

The surrounding land uses are summarised as follows:

- North: agricultural land/cleared land, Hunter River;
- East: bushland, Grahamstown Water Treatment Plant;
- South-east: bushland, AGL;
- South: bushland, Tomago Aluminium, North Channel Hunter River;
- South-west: Pacific Highway, JHGJV road works, industrial land uses;
- West: Pacific Highway, JHGJV road works, agricultural land/cleared land, Hunter River; and
- North-west: agricultural land/cleared land, Hunter River.



7.2.2 Site History

Source Site:

The source site has been the alignment of the road between Hexham and Heatherbrae, initially as a gravel road. It was gazetted as a main road, the North Coast Highway, in the 1920's. Post World War II, pavement layers were placed on the alignment to formalise the road. There is limited information available as to the exact timing, products used, or full extent of the formalisation in this area. The road was renamed the Pacific Highway in 1931. In 1986, a significant construction project commenced for the duplication of the Pacific Highway from Tomago through to Raymond Terrace, works were completed within 3 years. As part of the duplication, the level of the road was raised to reduce flood impacts. The raising consisted placement of "skulls" and other road pavement material over the underlying existing pavement. The road remained in this condition until works to extend the M1 Pacific Motorway lanes onto the old Pacific Highway alignment commenced in this area in March 2025.

Storage area:

Prior to the commencement of construction of the M1 Pacific Motorway Extension to Raymond Terrace Project, the storage site was a rural residential property comprising of a single residential building, septic system and a horse arena. Constructed between 1944 and 1954 (source NSW Government Historical Imagery Spatial Services)

Placement Areas:

With reference to the *AOPCR10 - Detailed Site Investigation* (Epic Environmental, 2025) and the historical aerial photographs presented in Appendix B of the report, the site history of Area 1 has been predominantly agricultural and vegetation, whereas Area 2 was previously within the eastern part of the Rutile Zircon Mine (RZM) Mineral Dry Plant facility. The site history of the RZM is documented in Section 2.2 of the *Remediation Action Plan, Former RZM Site Tomago* (WSP, 2023). This facility was demolished in c.2015.

7.2.3 Geology and Soils

Source site:

The existing environment within the source site in relation to geology has been sourced from the 1:100,000 scale regional geology map for Newcastle (Newcastle Coalfield Regional Geology, Sheet 9321, NSW Department of Mineral Resources). The mapping identifies that quaternary aged sediments (Qa and Qs) are located within the source site. The central and low lying areas of the source site include quaternary alluvium.



There are also areas of Pleistocene aged dune system (quaternary coastal sands) which forms part of the Tomago Sandbeds. The sediments predominately comprise fine to medium grained sand. The Tomago Sandbeds are locally incised by Holocene aged alluvium.

The existing environment within the source area in relation to soils on the 1:100,000 Newcastle soil landscape map identifies the soil type within the area to be Blind Harrys Swamp landscape near the creeks and swamps near the Hunter Region Botanic Gardens – The Blind Harrys Swamp landscape group comprises waterlogged swales and deflation areas on sands of the Tomago coastal plain with elevation less than 10 meters and slopes less than two per cent. Dominant soils comprise black organic fibrous peat and saturated brown mottled sand. Limitations include permanently highwater tables, foundation hazard, permanently waterlogged, ground water pollution hazard and strongly acid soils. Sands are also limited by salinity and localised potential acid sulphate soils.

Storage area:

The existing environment within the storage area in relation to geology has been sourced from the 1:100,000 scale regional geology map for Newcastle (Newcastle Coalfield Regional Geology, Sheet 9321, NSW Department of Mineral Resources). The mapping identifies that the area is underlain by the Tomago Coal Measures of late Permian age (Pt). The lithology of the Tomago Coal Measures consists of shale, siltstone, fine sandstone, coal and minor tuffaceous claystone

The region is an area of low to moderate seismicity and lies within an intra-plate tectonic region. An earthquake occurred in December 1989 ('the Newcastle Earthquake') which registered about 5.6 on the Richter Scale, and was assessed to have a return period of about 500 years (Douglas Partners, 2017).

The existing environment within the storage area in relation to soils on the 1:100,000 Newcastle soil landscape map identifies the soil type within the area to be Tea Gardens Landscape Variant Aeolian landscape – The Tea Gardens landscape group comprises Pleistocene beach ridges on the Tomago coastal plain with slopes less than five per cent, elevations between five meters to eight meters. Dominant soils comprise sandy peat, brown/black to brown /grey loamy sand (topsoil), saturated brown/black coarse sandy clay loam (topsoil), bleached sands (shallow subsoil), massive organic pan (loamy sand to sand), coarse smelly saturated sand. Limitations include permanently high water tables, seasonal waterlogging, groundwater pollution hazard, strongly to extremely acid soils of low fertility and low available water-holding capacity

Proposed Placement Areas:

The following description of geology and soils has been reproduced from the *Remediation Action Plan* (WSP, 2023), which referenced the DSI report (Jacobs, 2016) – which has not been sighted by ESS.



The Newcastle 1:250 000 Geological Series Sheet SI 56-2 (Division of Regional Geology, Geological Survey of NSW, 1966) indicates that the site is underlain by Quaternary sands composed of gravel, sand, silt, clay, “Waterloo Rock” marine and freshwater deposits.

The Newcastle 1:100,000 Soil Landscape Series Sheet 9232 (Department of Land and Water Conservation, 1995) indicates that the Site extends across three distinct soil landscapes that are described as:

- Fullerton Cove – tidal flats and creeks in tidal inlets and estuaries. Slope gradients are less than 3%, elevations are less than 3m, and local relief is less than 3m. Vegetation is characterised by mangrove scrub and salt marsh. Soils are deep, saline, saturated, flood-prone, and potentially acid sulphates soils.
- Hexham Swamp – broad, swampy, estuarine back plains on the Hunter Delta. Slopes are less than 1%, local relief is less than 2m, and elevation is less than 2m. Vegetation is characterised by sedgeland with open woodland on swamp margins. Soils are deep with the potential for seasonal water logging and flooding hazards. They are highly plastic potential acid sulphate soils of low fertility.
- Millers Forest – extensive alluvial plains on recent sediments in the Lower hunter. Elevations extend to a maximum of 6m, local relief are less than 1m, and slope gradients are less than 1%. Soils are deep with the potential for seasonal water logging and flooding hazards.

7.2.3.1 Acid Sulfate Soils

It is understood that no acid sulfate soils are present within the stockpiled material and the placement site will be above groundwater level. Therefore ASS should not impact the immobilisation of the soil during treatment and should not impact on the mobility of immobilised material after placement.

7.2.4 Topography

Source site:

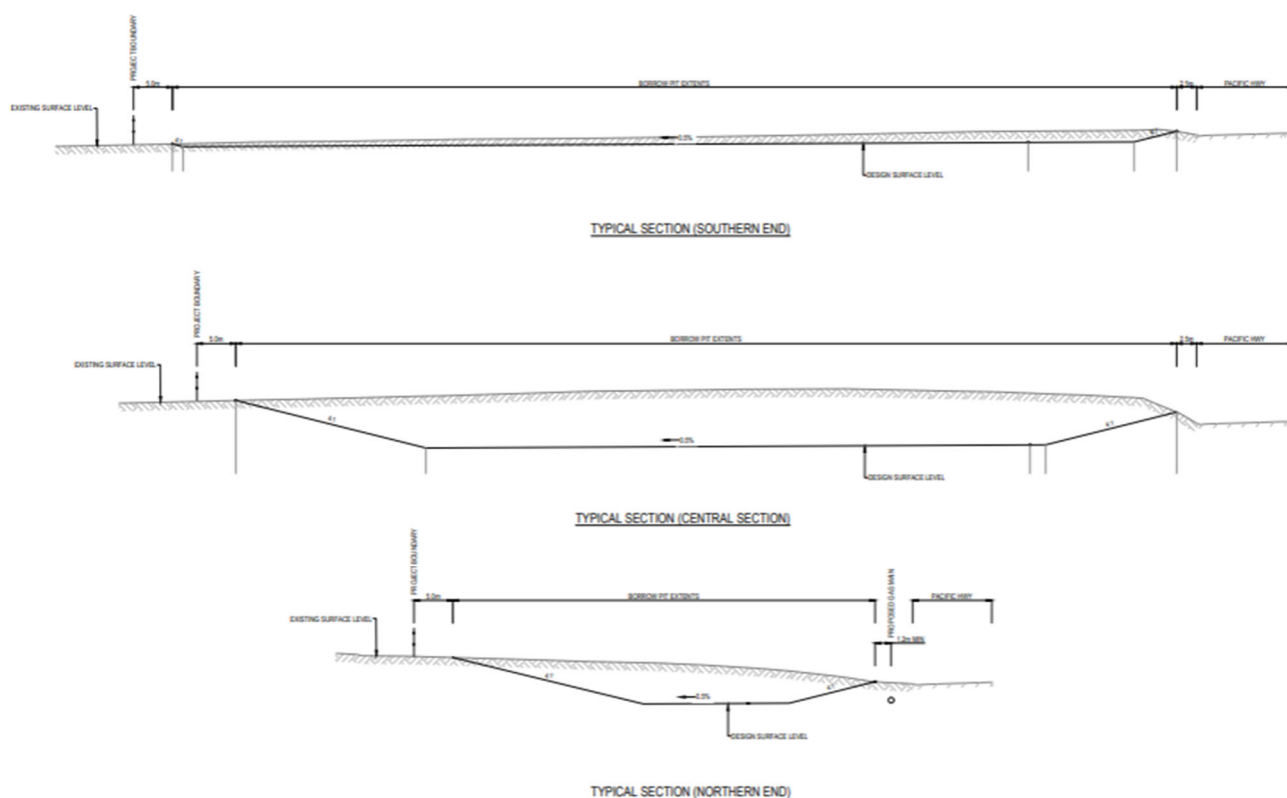
The source site generally comprises of low lying, gently undulating flood plains at below RL three metres AHD.

Storage area:

The storage area was formally an elevated ridge, formed above the existing Pacific Highway southbound lane sloping towards the south-west. A cut has occurred, up to 6 meters deep, into the ridge with the final landform below the Pacific Highway. The cut landform consists of three batters at a 4:1 grade and a floor sloping grade towards the south-west as per the existing landform, albeit at a much shallower grade. A small berm has been retained on the Pacific Highway interface side to eliminate direct line of site views into the



area, this berm has been incorporated into the final batter. Figure 5 below, shows the typical cross sections of the form of the Borrow Site.



Proposed Placement areas:

The following description of the proposed placement areas is based on information presented in the Remediation Action Plan prepared by WSP (2023), which referenced the DSI report prepared by Jacobs (2016). It is noted that construction works associated with the M1 Pacific Motorway extension have since altered parts of the local landform and drainage conditions. Therefore, the previous DSI information has been used to provide general context only.

Based on the available information, Areas 1 and 2 are located within relatively low-lying land between the Pacific Highway and the future motorway alignment, with ground levels generally falling towards lower-lying land to the north and north-west, ultimately towards the Hunter River foreshore. Final placement levels, batter profiles and drainage arrangements will be confirmed by the project team prior to placement and documented in the validation report.



7.2.5 Hydrology

Source site:

The existing environment in relation to hydrology is identified within Chapter 10 and Appendix J of the EIS, Chapters 6.8 and 7.11 and Appendix F of the Submissions Report, and Chapter 6.3 of the Assessment Report.

Surface water:

Surface water generally infiltrate into the highly permeable sandy soils of the Tomago Sandbeds Catchment Area.

There is an unnamed waterway that runs east to west under the Pacific Highway approximately 115 m south of the Hunter Regions Botanic Gardens driveway. The unnamed waterway drains into the unnamed coastal wetland through the Hunter River floodplain on the western side of the source site and eventually to the Hunter River through a formalised channel.

Groundwater:

Groundwater beneath the source site is expected to occur within the shallow unconfined aquifer associated with the permeable Quaternary sands and alluvial sediments of the Tomago Sandbeds/Hunter River floodplain setting. Given the local topography and nearby surface water features, groundwater flow is expected to be influenced by the broader hydraulic gradient toward the Hunter River and associated drainage features, although local flow conditions may be influenced by constructed drains, road embankments and project earthworks.

Available groundwater hydrocarbon monitoring data for the broader project area has been reviewed to assess whether hydrocarbon impact in groundwater has been identified in the vicinity of the source site. The available monitoring results indicate that BTEX, PAHs and TRH were generally reported below the laboratory limits of reporting, and no exceedances of the adopted groundwater assessment criteria were identified. On this basis, hydrocarbon impact to groundwater associated with the source material has not been confirmed.

However, due to the nature of the hydrocarbon/PAH impacted source material, the permeable sandy setting and the proximity of surface water and groundwater receptors, leaching and migration to groundwater have been retained as potential pathways in the CSM. The proposed remediation approach therefore includes chemical treatment, ASLP validation and, where required, groundwater monitoring to manage potential leaching risks following placement of treated material.



Storage area:

The existing environment in relation to hydrology is identified within Chapter 10 and Appendix J of the EIS, Chapters 6.8 and 7.11 and Appendix F of the Submissions Report, and Chapter 6.3 of the Assessment Report. It is noted that the storage location is fully outside of the Tomago Sandbeds Catchment Area and Tomago Sandbeds Drawdown Area.

Surface Water

The storage area is within two sub-catchments. A small part of the area drains to the north and flows into a drainage system that enters the Hunter River. The southern sub-catchment flows into a creek and under the Pacific Highway via 2x1200x450 box culverts. The flow paths from adjacent lands at the storage area have been diverted around the active construction area.

Groundwater

The finished surface level of the proposed borrow site is generally above all groundwater observations in the borrow site area, noting that fluctuations in groundwater level observed in the area will sometimes occur above the proposed surface level during high rainfall events. Under existing conditions, water seepage naturally occurs in a south-west direction from the mound towards the existing drain running along the boundary of the industrial estate. The bund around the storage area diverts all seepage water around the stockpiles.

Proposed placement areas:

Surface Water

The following description of surface water flows has been reproduced from the *Remediation Action Plan* (WSP, 2023), which referenced the DSI report (Jacobs, 2016) – which has not been sighted by ESS.

Surface water is expected to infiltrate into the highly permeable sandy soils which is supported by visual observations made during investigation of the RZM site, during heavy rainfall events on site, which indicate that surface water does not typically result in overland runoff and does not pond in the area.

There is evidence of overland surface water movement within a former unlined surface water drain that grades westward from the RZM site, then heads north and follows the western boundary of the site and connects into the northern drainage line towards the Hunter River.

As per the previous site history review from (SKM, 2013 – unsighted by ESS) a creek can be seen on the aerial photograph for the site in 1965 running along this alignment however, at present this area appears to have



been impacted by previous filling activities, as displayed on the aerial photograph for 1975 (SKM, 2013) and is now overgrown and marshy.

A second unlined surface water drain is located along the eastern boundary of the RZM site (close to Areas 1 and 2). This unlined drain discharges into an open drain (including a concrete weir and control box) that grades from the northern boundary of the site towards the foreshore of the Hunter River.

An unlined open drain exists along the eastern side of the fence line along the adjacent property Lot 51, DP 739336 (east of site), observed to begin around the property boundary at the Pacific Highway and is graded from the length of Lot 51 toward the foreshore of the Hunter River. There is an interaction between this drain and the former RZM site eastern drain near the northern drain area, with a concrete culvert connecting the two drains.

The detailed drainage design for both Area 1 and Area 2 have been designed as to direct all surface water through vegetated swales transferred through pipes into bioswales. Bioswales treat/manage hydrocarbons and other contaminants through a combination of physical filtration, chemical adsorption, and natural biological degradation.

Both the vegetated swales and bioswales have been designed to be above the groundwater table and as such would not create a potential migration pathway into the surrounding environment after placement of the treated material.

Groundwater

The exiting surface level, and the base of both Area 1 and Area 2, of 5.3 mAHD are above all groundwater observations, discussed in Section 7.2.6. Under existing conditions, overall groundwater flow direction in a north westerly direction towards the Hunter River and there is no direction connect between the placement areas and the groundwater.

7.2.6 Hydrogeology

Source Site:

Based on a search of the WaterNSW allwater data website in April 2026, there are a number of registered bores within 500m of the site. The bores are registered with Hunter Water Corporation. The intended use of these bores is to monitor groundwater conditions when water is being extracted from the Tomago Sand beds and ascertain catchment levels. No additional groundwater bores have been installed.



Available groundwater hydrocarbon monitoring data for the broader project area has been reviewed to assess whether hydrocarbon impact in groundwater has been identified in the vicinity of the source area. The available results indicate that no exceedances of the adopted groundwater assessment criteria were identified. On this basis, hydrocarbon impact to groundwater associated with the source material has not been confirmed. However, given the nature of the source material and the proximity of sensitive groundwater and surface water receptors, leaching and migration to groundwater have been retained as potential pathways in the CSM.

Storage location:

Douglas Partners installed 1 groundwater monitoring well in the south east corner of the storage site during the Submission Report phase of the environmental approval process (D-PZ-438). Under existing conditions, water seepage naturally occurs in a south-west direction from the mound towards the existing drain running along the boundary of the industrial estate.

Proposed placement areas:

Based on a search of the WaterNSW allwater data website on 25 July 2022, WSP indicated that there is one registered bore within 500 m of the site.

- Bore GW079605 is registered with Hunter Water Corporation however there are no details provided on use, date installed or licence status. The Jacobs 2016 investigation indicated that this bore appeared to be towards the northwest of the site toward the Hunter River.

The EIS (TfNSW, 2021) indicates that a paired groundwater monitoring bore exists at the site, nominated as D-PZ-324A (shallow) and D-PZ-324B (deep).

Jacobs also installed 13 groundwater monitoring wells (MW01 to MW13) across the site (Jacobs, 2016) with standing water levels ranging from 0.3 m below top of casing (btoc) to 2.2 m btoc indicating an overall groundwater flow direction in a north westerly direction towards the Hunter River.

Depending on the location on site, groundwater was identified to be present with underlying silts or sands in an unconfined shallow aquifer.

Sampling of groundwater depths has been undertaken by the Project since February 2023 on a quarterly basis. The results have shown expected fluctuation with groundwater levels during periods of drought and heavy rainfall.

During monitoring the groundwater depth for D-PZ-324A was generally in the ranges of -2.1mAHD to 1.67 mAHD. D-PZ-324B groundwater depth was generally in the ranges of -0.79mAHD 1.98mAHD.



An additional well, D-PZ-438, south - south east of the placement areas was also cross referenced and shows similar trends of 1.97mAHD to 3.5mAHD.

The variance in groundwater depth is due to periods of both drought and sustained high rainfall and flood conditions during the first half of 2025 where the Project site received over 950mm of rainfall, well above the long term average of 568mm and experienced two minor floods and one major flood.

As the placement areas were not subject to soft soil compaction treatments, it is not anticipated that that construction works associated with the M1 Pacific Motorway extension have altered the flow or depth of groundwater in this location since the completion of historical investigations. The local landform and drainage conditions have been altered but these have been addressed in Section 7.2.5.



8 PREVIOUS REPORTS SUMMARY

The following previous reports relate to the impacted material to which this RAP applies:

- EnviroScience Solutions, In-Situ Soil and Stockpiled Material Suitability for Re-use Assessment, dated 17 April 2025 (document reference: 50985_R01).

8.1 EnviroScience, In-Situ Soil and Stockpiled Material Assessment, 17 April 2025

EnviroScience was engaged by JHGJV to provide an assessment of approximately 1,500 m³ of stockpiled material and in-situ material to approximately 1,000 mm bgl located within the 'Fill 18' – south bound corridor of the Pacific Highway, Tomago, NSW, 2322 (Chainages MC20 9210 – MC20 8670).

The summary of this investigation is provided below:

- A total of fifteen (15) sampling locations were selected, with samples collected from three depths for the in-situ material, specifically, from the surface (500 mmbgl), 600 mmbgl, and 1,000 mmbgl. Samples collected from the stockpile were collected at approximately 500 mm below surface level.
- The site typically comprised approximately 500 mm of road-base material containing gravels, sandy gravels, and gravelly sands hydrocarbon-stained materials were typically within the upper 200mm of soils. Slag materials were present within the road base layer.
- There were multiple exceedances of HIL/ HSL-D and ESL-D. As a result, the in-situ soils were deemed not suitable for reuse with respect to human health. The results indicated that the material was classified as hazardous waste. It was noted that generally in-situ soils at depth 1000 mmbgl did not exceed the adopted criteria and materials from this depth were stockpiled separately within the Borrow Pit in accordance with the Material Movement Plan. The soil analytical results are presented in Appendix B.
- The following key contaminants of concern were identified:
 - Benzo(a)pyrene (PAH);
 - Total recoverable hydrocarbons (TRH); and
 - Naphthalene.

In summary, this material currently located at in the Borrow Pit (Latitude: -32.813655, Longitude: 151.703980), requires remedial action and is the subject of this RAP. The stockpiled material is characterised below in Table 1.

Table 1. Characterisation of the stockpiled/ex-situ soils.

	Summary
Volume	Approximately 5,000 m ³ – stockpiled and assessed at the time of the April 2025 assessment
Location	Stockpiled within the Borrow Pit, Gate 16B South Bound Lane of Pacific Highway
Soil characteristics	Typical in-situ stratigraphy: 0-0.4mbgl – Fill gravel: dense to very dense, medium to coarse, dry. 0.4mbgl – Natural silty sand: medium dense, fine to medium grained, moist.
Chemical characteristics	Contaminants identified: Naphthalene, benzo(a)pyrene, and total recoverable hydrocarbons The analytical results are presented in more detail in Table 1, Appendix B.
Leachability	Following the ASLP testing, several exceedances were noted for anthracene, benzo(a)pyrene, fluoranthene, naphthalene and phenanthrene. As such, identified contaminants may leach without migration pathway controls.
Human health and ecological risks	Human health risks: direct dermal contact with impacted soil, direct dermal contact with impacted water, inhalation of impacted soil particles as dust, incidental ingestion of impacted soil, incidental ingestion of impacted water, inhalation of vapours, consumption of impacted water, consumption of impacted terrestrial produce, and consumption of impacted fish. Ecological risks: leaching or migration of contaminants into surface water or groundwater sources.
Construction risks	It is recommended that an assessment of the geotechnical risk associated with the material is undertaken to inform future use of the area.

The volume assessed in the April 2025 report related to the material available at the time of that assessment. The current volume of hydrocarbon impacted material proposed for treatment under this RAP has since been updated to approximately 6,272 m³, based on subsequent stockpile volume reconciliation and additional similar material generated during ongoing works.



9 CONCEPTUAL SITE MODEL

In order to understand the potential environmental risks associated with the impacted material, it is necessary to design a conceptual site model (CSM). The conceptual site model defines the following:

- The **source** term, which includes both the identified primary sources – such as the impacted soil, and secondary sources – such as impacted soil, sediment, surface water, and groundwater;
- The identified potential migration and exposure **pathways** by which any identified contaminants can migrate, and the identified receptors that may come into contact with those contaminants; and
- The identified sensitive **receptors** – such as human health and ecological health, including both on-site and relevant off-site receptors.

The connection between the source, pathway, and receptor is referred to as the source-pathway-receptor linkage (SPR linkage). A SPR linkage is incomplete if any one of the SPR components are not identified.

For the purposes of this RAP, the CSM has been developed for the proposed final placement scenario. The source material originated from the former Pacific Highway road pavement and subgrade layers; however, the relevant long-term exposure scenario is the placement of treated material within the proposed placement areas. Source-area information has therefore been retained where relevant to understanding the nature and origin of the impacted material, while the CSM focuses on potential risks following treatment, validation and placement.

The treated material will be placed within the road corridor as part of the final landform and covered with topsoil and vegetation. The final placement configuration, including placement depth, surface cover thickness, batter profile and drainage controls, should be confirmed by the project team and documented in the validation report.

During temporary storage and treatment, the material will be managed within the Borrow Pit storage/treatment area. The treatment-area CSM is limited to the temporary handling, treatment and validation phase. The main potential pathways during this phase are surface water runoff, infiltration to underlying soil and groundwater, dust generation and direct contact by workers. These pathways will be managed through the lined and bunded storage/treatment area, separation of clean surface water from the work area, collection of contact water in a sump, dust controls, controlled access, PPE and standard construction environmental controls.

9.1 Potential Sources of Contamination Relevant to the Placement Scenario



9.1.1 Primary Sources

The primary source relevant to this RAP is treated hydrocarbon impacted material proposed for placement within Area 1 and/or Area 2 following successful validation. Prior to treatment, the material contains hydrocarbon impacts associated with historical road pavement and subgrade materials, including benzo(a)pyrene, naphthalene and TRH. Following treatment, the residual source term is expected to be limited to treated material that has met the adopted remediation acceptance criteria, including ASLP leachability criteria.

9.1.2 Potential Secondary Sources and Migration Pathways

Potential secondary sources and migration pathways relevant to the placement scenario include:

- Potential leaching from treated material to underlying soil, if treatment and validation criteria are not achieved;
- Potential migration of leachate to groundwater, where a complete pathway to groundwater is present;
- Potential surface water runoff or sediment transport from the placement areas during or following placement, if erosion and sediment controls are ineffective; and
- Potential migration of impacted sediment or runoff to nearby drainage lines and, ultimately, the Hunter River.

9.2 Groundwater Hydrocarbon Monitoring Data

Groundwater hydrocarbon monitoring data reviewed for the broader project area did not identify exceedances of the adopted groundwater assessment criteria. Groundwater impact associated with the source material has therefore not been confirmed. However, leaching and migration to groundwater have been retained in the CSM as potential pathways requiring management through treatment, validation and placement controls.

9.3 Contaminants of Potential Concern

The contaminants of potential concern (CoPC) associated with the source of contamination include the following:

- Naphthalene;
- Benzo(a)pyrene; and



- Total recoverable hydrocarbons (TRH).

9.4 Exposure Pathways

The key exposure pathways for a receptor to encounter the CoPC include:

- Direct dermal contact with impacted soil;
- Direct dermal contact with impacted water;
- Inhalation of impacted soil particles as dust;
- Incidental ingestion of impacted soil;
- Incidental ingestion of impacted water;
- Inhalation of vapours;
- Consumption of impacted water;
- Consumption of impacted terrestrial produce; and
- Consumption of impacted fish.

It is noted that the latter three exposure pathways are not relevant to the ex-situ material given the ex-situ/stockpiled material is bunded and lined, and is therefore isolated from the surrounding environment.

9.5 Migration Pathways

Potential migration pathways/transport mechanisms for contaminants include:

- Leaching of contaminants from the identified source;
- Migration of contaminants through the soil column;
- Overland flow of impacted surface water;
- Migration of contaminants in unlined drains and channels into the Hunter River;
- Transport of impacted soils and sediments (entrained sediments in water); and
- Transport of contaminants through groundwater and subsequent discharge to surface water bodies.

9.6 Human and Ecological Receptors

The human receptors include:

- JHGJV site staff and contractors (current user); and

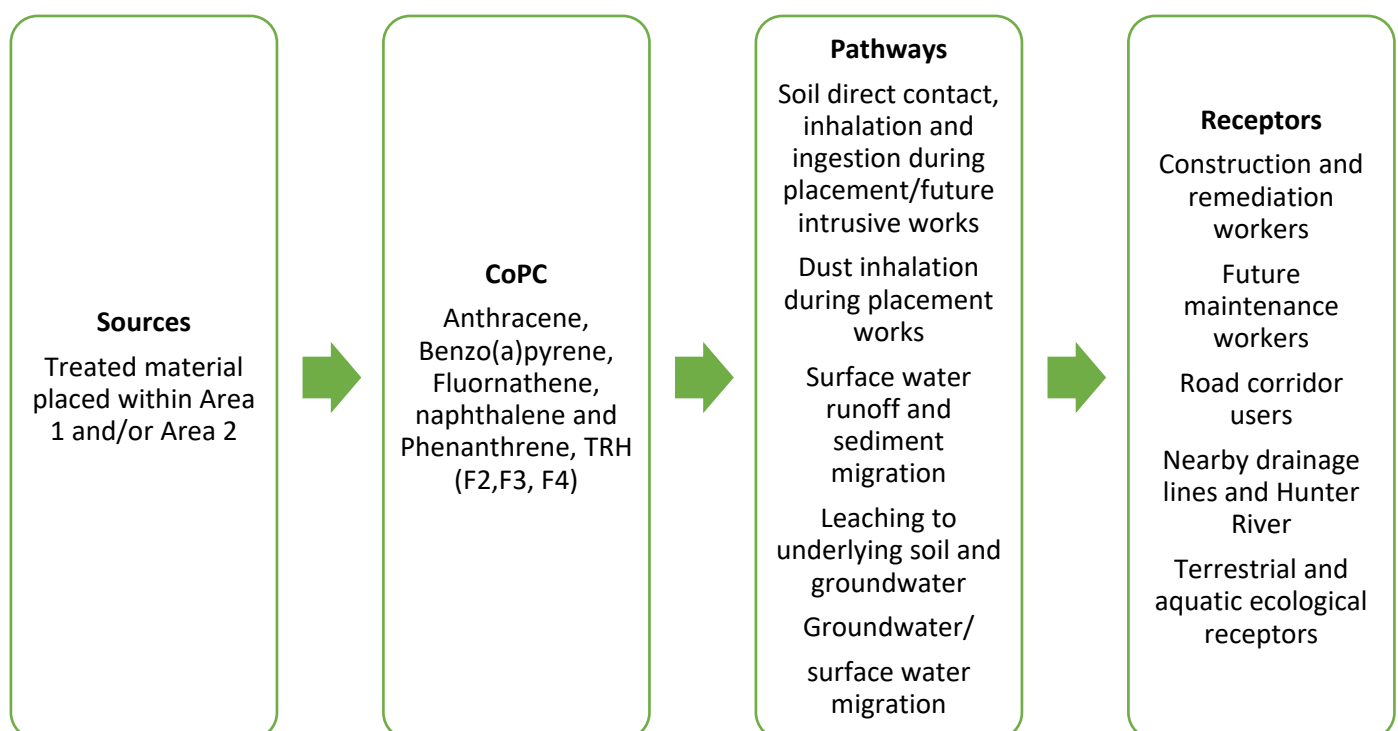


- Users of the bus bay immediately adjacent to the site, nearby the Hunter Region Botanic Gardens, and users of the pathway that is adjacent to Pacific Highway (current and future users).

The ecological receptors include:

- The vegetation to the east site;
- Unlined drainage channels/drains linking the planned Area 1 and Area 2 with the Hunter River;
- The Hunter River;
- Onsite terrestrial fauna; and
- Offsite terrestrial and aquatic fauna.

9.7 Sources to Sensitive Receptor Linkages



The source-pathway-receptor linkages relevant to the proposed placement scenario are summarised in Table 2 below. The assessment assumes that material will only be placed within Area 1 and/or Area 2 following chemical treatment and successful validation against the adopted remediation acceptance criteria. The treated material will be covered with topsoil and vegetation as part of the final landform.

Table 2 - Source, pathway, receptor linkage assessment

Source	Pathway	Receptor	Linkage assessment
Treated material placed within Area 1 and/or Area 2	Direct contact with treated material during placement works	Construction workers and remediation contractors	Potentially complete during placement works. Managed through treatment, validation, controlled placement, PPE, hygiene controls, dust suppression and site access controls.
Treated material placed within Area 1 and/or Area 2	Direct contact with treated material during future intrusive maintenance works	Future maintenance workers	Potentially complete if future intrusive works extend into the treated material. Managed through validation, topsoil and vegetation cover, and future project/site management controls.
Treated material placed within Area 1 and/or Area 2	Leaching from treated material to underlying soil	Underlying soil beneath the placement areas	Potentially complete if treatment or validation criteria are not achieved. Managed through chemical treatment, ASLP validation and placement controls.
Treated material placed within Area 1 and/or Area 2	Leaching and migration to groundwater	Groundwater beneath or downgradient of the placement areas	Potentially complete where a complete pathway to groundwater is present. Managed through chemical treatment, ASLP validation and, where required, groundwater monitoring



			downgradient of the placement areas.
Treated material placed within Area 1 and/or Area 2	Surface water runoff or sediment transport during or after placement	Nearby drainage lines and the Hunter River	Potentially complete if erosion, sediment or drainage controls are ineffective. Managed through surface water controls, erosion and sediment controls, topsoil and vegetation cover, and validation of treated material.
Treated material placed within Area 1 and/or Area 2	Inhalation of dust during placement works	Construction workers and nearby site users	Potentially complete during placement works. Managed through dust suppression, controlled handling, PPE and site management controls.
Treated material placed within Area 1 and/or Area 2	Vapour inhalation	Construction workers, future maintenance workers and nearby users	Incomplete or low risk following treatment and placement, noting the principal CoPC are PAHs/TRH and the material will be placed beneath topsoil and vegetation. Naphthalene is retained as a CoPC and will be managed through treatment, validation and site controls.



Treated material placed within Area 1 and/or Area 2	Uptake through produce, livestock, groundwater use or fish consumption	Human receptors	Incomplete for the proposed road corridor use. The placement areas will remain within infrastructure land and are not proposed for residential, agricultural or recreational harvesting use.
Treated material placed within Area 1 and/or Area 2	Ecological exposure through direct contact, runoff or leaching	Terrestrial and aquatic ecological receptors	Potentially complete. Managed through treatment, validation, placement controls, topsoil and vegetation cover, and controls to minimise migration to drainage lines and the Hunter River.

On the basis of the proposed remediation approach, the principal potentially complete linkages relate to leaching to groundwater, surface water runoff or sediment transport, direct contact during placement or future intrusive works, and ecological exposure through runoff or leaching. These linkages will be managed through chemical treatment, validation testing, controlled placement, topsoil and vegetation cover, and implementation of appropriate erosion, sediment and surface water controls.



10 LEGISLATION

The guidelines and standards that relate to contaminated land management include:

- Guideline for the Management of Contaminated Land (Roads and Maritime, 2013);
- Guidelines for Assessment and Management of Contaminated Groundwater (Department of Environment and Conservation (DEC), 2007);
- National Environment Protection (Assessment of Site Contamination) Measure April 2011 Schedule B1 Guideline on Investigation Levels for Soil and Groundwater;
- Environment Protection Authority: Sampling design part 1 - application, Contaminated Land Guidelines (NSW EPA, 2022);
- Environment Protection Authority: Sampling design part 2 - interpretation, Contaminated Land Guidelines (NSW EPA, 2022).
- Preparing Environmental Management Plans for Contaminated Land (NSW EPA, 2022)
- PFAS National Environmental Management Plan (HEPA, 2020)
- Department of Planning 1998, Managing Contaminated Land Planning Guidelines – SEPP55 Remediation of Land. (SEPP55 has been superseded by Resilience and Hazards SEPP) (NSW).
- Environmental planning and Assessment Act 1979 (EP&A Act) and the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) (NSW).
- Protection of the Environment Operations Act 1997 (NSW).
- Protection of the Environment Operations (Waste) Regulation 2005 (NSW).
- Protection of the Environment Legislation Amendment Act 2011 (NSW).
- Work Health & Safety Act 2011 and Work Health and Safety Regulations 2017 (NSW).
- WorkCover NSW requirements, guidelines and codes of practice
- Protection of the Environment Operations Act 1997
- Waste Classification Guidelines (NSW EPA, 2014).

Development Approvals

- Infrastructure approval under Section 5.19 of the Environment Planning & Assessment Act 1979 – SSI-7319

Environmental Protection License

- EPL 21808 issued under Schedule 1 of the Protection of the Environment Operations Act 1997

Section 3.2 and Section 3.3 of the SSWMP (to which the CLMP is appended) details the relevant Conditions of Approval (CoA) and the measures listed in the M12RT EIS as amended by the Submissions Report (known as the Revised Environmental Management Measures (REMMs) relevant to contamination respectively. Specific requirements relevant to development of this RAP are addressed in Table 3 below.

Table 3 - Conditions of Approval

Conditions of Approval	Ref	Commitment	Timing	Document Reference
NA	E117	A NSW EPA accredited Site Auditor(s) must be engaged before the commencement of contamination investigations until the completion of construction to ensure that any Work required in relation to contamination is appropriately managed. The Site Auditor is to be provided with all documentation relevant to the consideration of contamination risk and the management of contamination for the project, including previous site audits and site audit statements. The Site Auditor is to review all relevant documentation and provide a written opinion on the contamination risk and the appropriateness of the reports and any proposed management measures of the site, including (but not limited to):	NA	SSWMP Appendix B SSWMP Section 1.4, 6.1.6, 6.1.6.2 SSWMP Table 6 1 (SSWMP41) Unexpected Finds Procedure for Contamination
		The contamination aspects of management and monitoring plans in Conditions C7, C9, C14 including any updates or amendments to those plans;		SSWMP Section 6.1.6.2, Section 4
		Sampling and Analysis Quality Plan in Condition E119;		SSWMP Section 6.1.6.2, Section 4
		Detailed Site Investigation Report(s) in Condition E123;		SSWMP Section 6.1.6.2, Section 4
		Remedial Action Plans in Condition E127;		SSWMP Section 6.1.6.2, Section 4
		Unexpected Finds Procedure for Contamination in Condition E132; and		SSWMP Section 6.1, Unexpected Finds Procedure for Contamination
		Post-remediation validation reports.		SSWMP Sections 6.1.6.2 and 7.6, Section 4

Conditions of Approval	Ref	Commitment	Timing	Document Reference
Soil and groundwater contamination	SC01	A Contaminated Land Management Plan (CLMP) and procedures prepared in accordance with Transport's Guideline for the Management of Contamination (Roads and Maritime Services 2013c) will be developed and will include:	Prior to construction	The CLMP
		Control measures to manage identified areas of potential contamination risk (AOPCRs), where the risk has been assessed as being medium or high and is confirmed within the construction footprint		Section 3 and 4
		Procedures for managing unexpected contamination (including buried waste, illegal dumping, and asbestos)		Appendix A
		Requirements for the disposal of contaminated waste in accordance with the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Waste) Regulation 2014.		Section 4.21 and Table 5-2.



11 REMEDIATION OPTIONS APPRAISAL

The ROA presented the identified options and reviewed the relevant technologies. Since preparing the ROA, TfNSW has reviewed the cost benefit analysis and decided to proceed with immobilisation, rather than the previously preferred option of cap and contain. As a result, ESS has updated the appraisal of the in-site treatment option and included this below:

The following remedial options for the hydrocarbon impacted soils considered by the ROA were as follows:

- Do nothing;
- Off-site disposal;
- On-site capping and containment; and
- On-site treatment (including physical, chemical and biological treatment).

11.1 Reconsideration of Remediation Options

The previous Remediation Options Appraisal identified on-site encapsulation as the preferred remediation option for the hydrocarbon impacted material. Since preparation of the ROA, further consultation has been undertaken with TfNSW and the project team regarding the proposed management and final placement of the material.

Following this review, chemical treatment/immobilisation has been selected as the preferred remediation approach. The change in preferred option reflects the ability of chemical treatment to reduce contaminant leachability prior to placement, support reuse of the treated material within the project corridor, and reduce reliance on long-term engineered containment as the primary risk-control measure.

The revised preferred option remains consistent with the remediation objectives of this RAP, as it seeks to break the relevant source-pathway-receptor linkages by reducing the potential for contaminants to leach from the treated material and migrate to groundwater or surface water receptors. The suitability of the treated material for placement will be confirmed through validation testing, including ASLP testing at the adopted validation frequency.

If treated material does not meet the adopted remediation acceptance criteria, the material will be reprocessed, subject to further treatment trials, or classified and disposed of to an appropriately licensed waste facility.

11.2 Framework for remediation options for the site



The preferred hierarchy for site remediation options, as stated in the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) (NEPM, 2013) is:

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

As a result, the use of the immobilisation technique is preferable to off-site treatment if the associated risk can be reduced to an acceptable level and preferable to the following methodologies:

- Consolidation and isolation of the soil on site via containment in a suitably designed containment cell;
- Removal of contaminated material to an approved site or facility licenced to accept Hazardous Waste; and
- Implementation of an appropriate management strategy where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect.

The selected remediation approach has also been considered with reference to the National Remediation Framework approach, which considers whether remedial options treat the source, break the pathway, or control the receptor to avoid exposure. For this RAP, the active exposure and migration pathways are those associated with the proposed placement of treated material within Area 1 and/or Area 2.

- Treat the source: Chemical treatment/immobilisation is proposed to reduce the leachability of the contaminants of potential concern, including PAHs and TRH, within the impacted material. The objective of treatment is not necessarily to remove or destroy the contaminants, but to reduce their potential mobility and associated risk prior to placement.
- Break the pathway: The pathway between the treated material and receptors will be managed through validation testing, controlled placement, topsoil and vegetation cover, erosion and sediment controls, surface water management and, where required, groundwater monitoring. These controls are intended to reduce the potential for direct contact, dust generation, leaching, surface water runoff and sediment migration.
- Control the receptor: Receptor exposure will be managed during remediation works through site access controls, work health and safety procedures, PPE, dust controls and hygiene measures. Following placement, receptor exposure will be limited by the proposed road corridor land use, topsoil and vegetation cover, and future management of intrusive works within the placement areas.



On this basis, the selected remediation approach primarily addresses the source by reducing contaminant leachability, while also incorporating pathway and receptor controls relevant to the proposed placement scenario. The effectiveness of the treatment process will be confirmed through validation testing prior to placement.

11.3 Site Specific Constraints

In the process of ROA evaluation, the project considered a number of constraints at the site which include:

- Protection of groundwater and surface water receptors, including shallow groundwater, nearby drainage features and the Hunter River. The proposed placement areas are understood to be located downstream of the Tomago Sandbeds drinking water catchment; however, groundwater and surface water protection remains a key consideration due to the proximity of shallow groundwater, drainage features and the Hunter River. Leachability of the treated material must therefore be assessed prior to placement;
- Protection of the ecological value of the Hunter River and associated wetlands within the flood plain;
- Suitable and available areas for onsite placement associated with the M1 Pacific Motorway or realigned Pacific Highway, above the floodplain and with consideration of potential sea level rise. Potential placement options considered by the project include the Bridge 8 switch within an above-ground off-ramp area, Fill 18 as a constructed landscape mound between the Pacific Highway and motorway, Bridge 6 abutment/ramp widening, or other areas deemed suitable for placement of treated material. The final placement design, including levels, batter profiles, cover requirements and drainage controls, will be confirmed by the project team prior to placement;
- Available suitable waste facilities licenced to receive Hazardous Waste (should disposal off-site be selected as preferred remedial option);
- Health and Safety issues with handling/excavation of contaminated soils; and
- Project timing of remedial works to coincide with wider site work construction goals.

The site specific constraints regarding surface water flows, groundwater depths and protection of the ecological value of the Hunter River and associated wetlands within the flood plain are addressed in Section 7.2.

11.4 Chemical Treatment

Chemical treatment of contaminated soils involves the addition of chemical substances to alter the physicochemical properties of the soil to immobilise the contaminants and reduce leaching.

The feasibility of chemical immobilisation/solidification has been considered with reference to Section 3 of the NRF Technology Guide: Chemical Immobilisation and Solidification and CRC CARE Technical Report no. 39, Risk-based management and remediation guidance for benzo(a)pyrene. A summary of the key feasibility considerations is provided in Table 4.

Table 4- Feasibility Assessment of Chemical Immobilisation

Feasibility consideration	Comment
Physical properties	The material generally comprises road pavement, road base and subgrade materials, including gravels, sandy gravels and gravelly sands. Pre-screening may be required to remove oversize material prior to pugmill treatment. The material type is considered suitable for ex-situ treatment, subject to confirmation during full-scale processing.
Chemical composition and contaminants	The key contaminants of potential concern are PAHs, including benzo(a)pyrene and naphthalene, and TRH. The selected treatment approach is intended to reduce contaminant leachability rather than destroy the contaminants.
Maximum allowable concentrations	The treated material will be required to meet the adopted remediation acceptance criteria prior to placement, including ASLP leachability criteria. Material that does not meet the adopted criteria will be reprocessed, subject to further treatment assessment, or classified and disposed of to an appropriately licensed facility.
Groundwater conditions	Groundwater and surface water protection are key considerations due to shallow groundwater, nearby drainage features and the Hunter River. The proposed placement areas are understood to be downstream of the Tomago Sandbeds drinking water catchment. Leachability will be assessed using ASLP testing prior to placement.
Depth, distribution and volume of material	The material is currently present as stockpiled material within the Borrow Pit/storage area. The total volume of stockpiled material is approximately 6,272 m ³ . Additional similar material may be generated during ongoing excavation works and, if proposed for treatment and placement under this RAP, will be subject to the same assessment, treatment and validation requirements.
Regulatory requirements	The remediation works are to be undertaken in accordance with the project Infrastructure Approval, EPL requirements, relevant NSW EPA guidance, the NRF and this RAP. Validation reporting will be completed in accordance with NSW EPA reporting guidance.
Approvals and stakeholder requirements	The proposed remediation approach is subject to review by the project team, TfNSW and the appointed Site Auditor. Any additional approval or endorsement requirements are to be confirmed by JHGJV/TfNSW prior to implementation.



Based on the above considerations, chemical immobilisation/solidification is considered a feasible remediation approach, subject to successful treatment trials, full-scale treatment performance and validation testing. The approach is considered suitable because it directly addresses the key risk driver for the proposed placement scenario, being the potential for contaminants to leach from the material following placement.

The following general procedures have been provided by EnviroPacific to ESS for inclusion in the RAP:

Contamination leachability is proposed to be managed through the addition of reagent(s) to the material to reduce leachabilities of the specific contaminants of concern. The treatment approach will comprise chemical immobilisation/solidification, using reagent addition and mechanical mixing to reduce the leachability of the specific contaminants of concern.

Immobilisation trials will be undertaken to establish which reagents perform adequately to reduce leachabilities to meet the target site criteria, and the dosage rates required to achieve this. Leachabilities will be measured using the Australian Standard Leaching Procedure (ASLP). Results from these trials will dictate full-scale treatment of the material.

Full-scale treatment of the material will be undertaken using a specialised pugmill designed for soil immobilisation applications. The chemical treatment/immobilisation approach has been considered with reference to the National Remediation Framework, including the NRF Technology Guide: Chemical Immobilisation and Solidification. The NSW EPA Immobilisation Technical Note 1 – Process Equipment for Treatment of Contaminated Soil and Sludge Waste is noted as relevant to process equipment considerations; however, it is primarily waste-focused and has not been relied upon as the primary remediation guidance for the selected approach. The material may require pre-screening prior to treatment to remove any oversize (i.e. >75mm) waste from the soil prior to processing through the pugmill. The treatment process will require all treated material to be stockpiled and tested (using ASLP) to confirm target site criteria have been met. Initial validation testing will be undertaken at a frequency of one sample per 250 m³ of treated material. Subject to review of the initial validation results, and where results are consistently below the adopted remediation acceptance criteria, the validation frequency may be reduced to one sample per 500 m³ in consultation with JHGJV, TfNSW and the Site Auditor. For any material which fails to meet the target site criteria, this material will either be re-processed using the same initial method or considered for waste disposal at a licenced facility following waste classification of the material. All material with compliant results will be transported and placed in the designated site location.

Detailed treatment methodology, including reagent handling, material pre-screening, pugmill operation, batching, mixing controls, treated material stockpiling, process QA/QC and contingency procedures, will be



provided in the Enviropacific Remediation Management Plan prior to commencement of full-scale treatment. The Remediation Management Plan will be required to be consistent with this RAP, including the adopted remediation acceptance criteria, validation requirements and contingency measures for non-compliant treated material.

11.4.1 Pilot Trial

Pilot-scale immobilisation trials were undertaken by Enviropacific to assess the feasibility of chemical immobilisation/solidification for reducing contaminant leachability in hydrocarbon impacted material from the Tomago Pacific Highway project. The Enviropacific soil treatment trial report is included in Appendix C. Enviropacific plotted the treatment trial results against the draft leachate criteria provided by ESS, as presented in the graphs below.

The best results were achieved using a mix of two reagents (activated carbon and cement). As shown on the graphs below this mix easily achieved the proposed site criteria for all contaminants and is the recommended mix from an immobilisation perspective.

All mixes using only activated carbon (reagent 2) also achieved the proposed site criteria for all contaminants (although not as convincingly as the 2-reagent mix) so there is a potential option to undertake full-scale treatment using only one reagent (activated carbon). EnviroPacific understands that this approach would be advantageous to JH, since it would result in a faster treatment time (i.e. only requires one pass through the pugmill).

It is noted that the material EnviroPacific used for the trial had significantly lower contaminant concentrations than some of the results shown in the waste classification report (i.e. the stockpile has varying levels of contamination through it and the test-pitting undertaken by EnviroPacific to collect the samples which were used in the treatment trial did not encounter the most impacted material). As a result, using a single reagent (activated carbon) comes with an increased risk of failed batches (which would require retreatment).

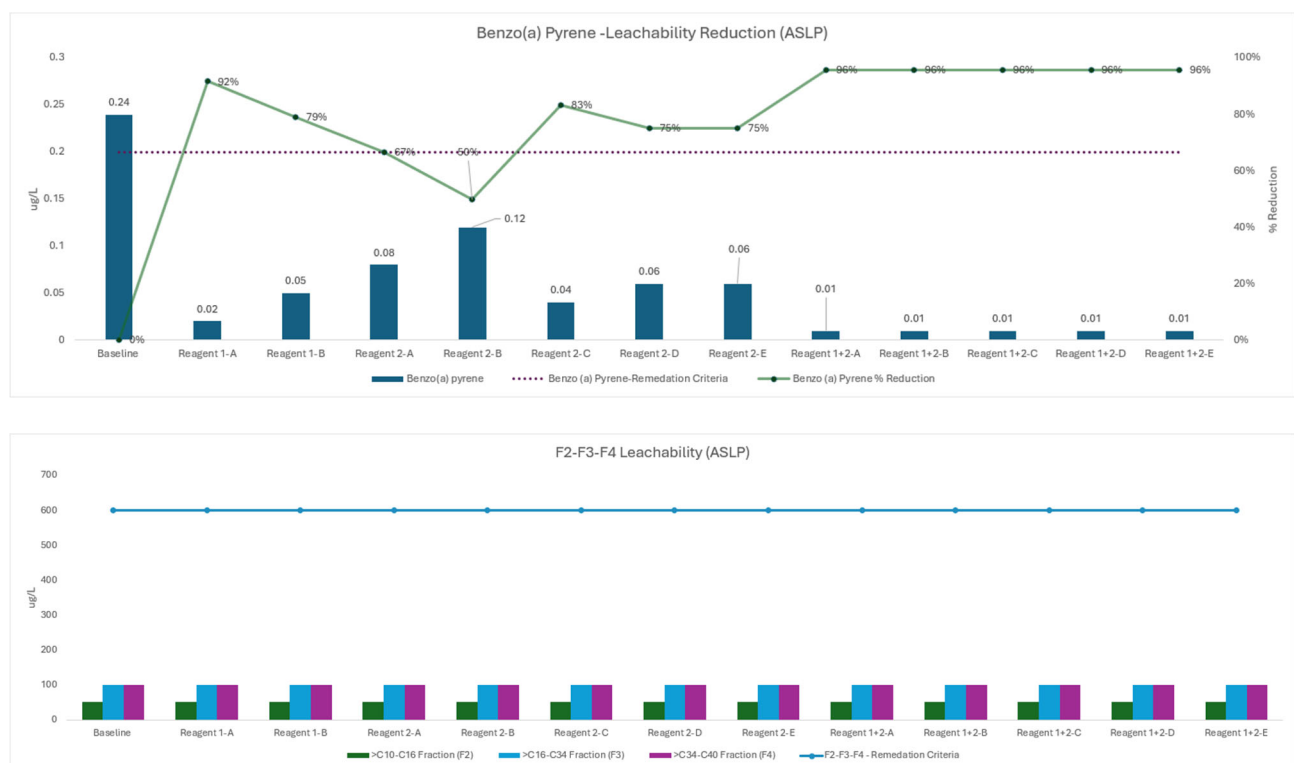
This limitation is acknowledged. The pilot and laboratory trials were undertaken using material with lower solid-phase benzo(a)pyrene concentrations than those identified in some original site characterisation samples, including discrete coal tar/hydrocarbon impacted materials. However, comparison of ASLP leachability results indicates that benzo(a)pyrene leachate concentrations were of a similar order of magnitude in the original site samples and the baseline laboratory trial samples. In the original site dataset, benzo(a)pyrene leachate concentrations of up to approximately 1.2 µg/L were reported, while the baseline laboratory trial samples exhibited benzo(a)pyrene leachate concentrations of up to approximately 0.75 µg/L.

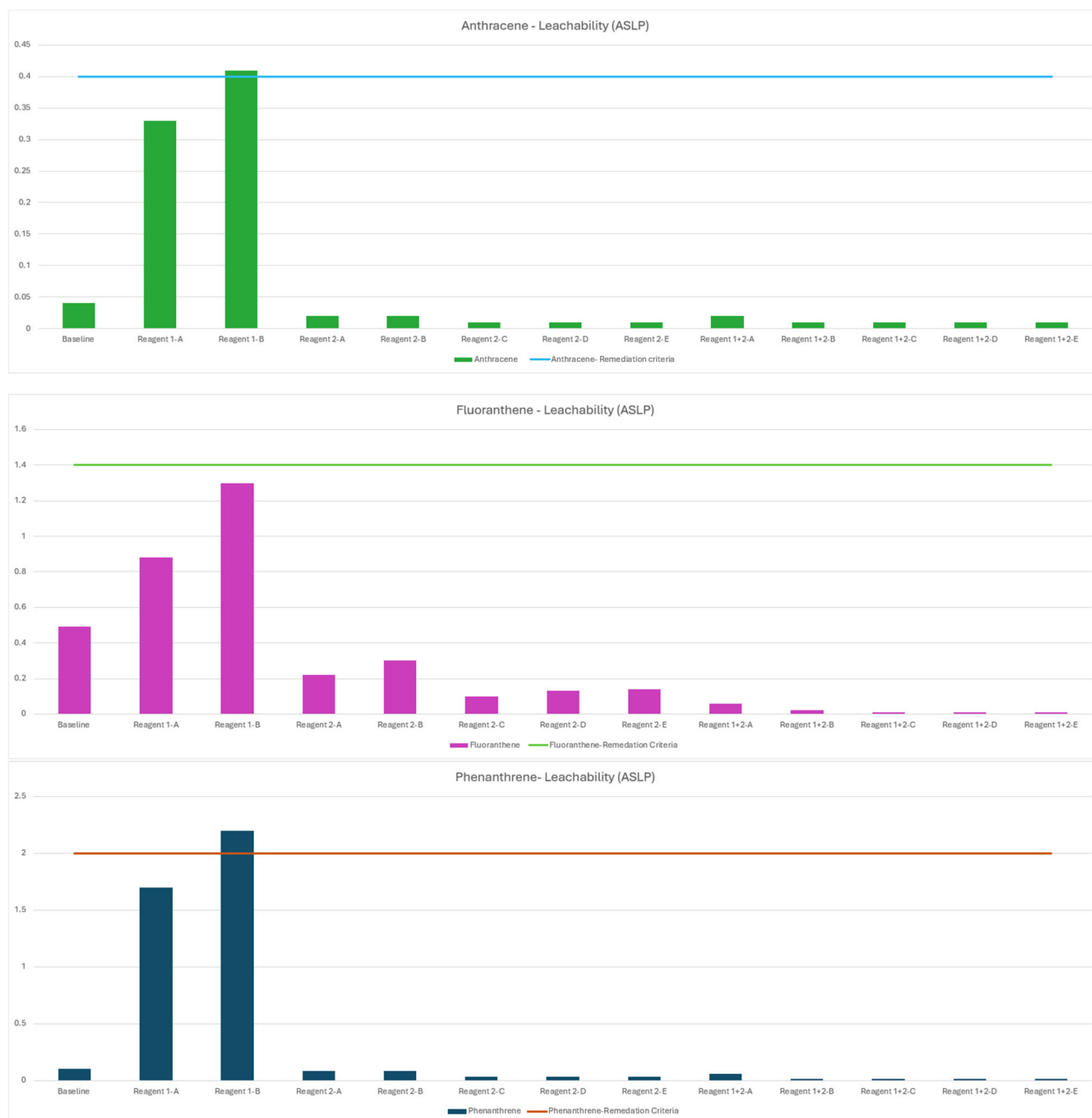


The relatively limited difference between these leachate concentrations indicates that benzo(a)pyrene leachability does not necessarily increase proportionally with increasing solid-phase benzo(a)pyrene concentration. Although the laboratory trial samples contained lower absolute benzo(a)pyrene mass than some site characterisation samples, the observed leachability was within a comparable range. On this basis, the trial material is considered suitable for informing treatment feasibility with respect to contaminant mobility.

It is recognised that the laboratory trial does not directly assess treatment performance for the most elevated solid-phase benzo(a)pyrene hotspot materials. This limitation will be managed through full-scale batch validation testing of treated material prior to placement. Where treated material does not meet the adopted remediation acceptance criteria, the relevant batch will be reprocessed, subject to further treatment assessment, or classified and disposed of to an appropriately licensed facility.

EnviroPacific is currently reviewing options to expedite treatment using two reagents, including: pre-blending the reagents; and modifying the pugmill to allow the addition of two reagents at once. The treatment trial results undertaken by EnviroPacific are presented below:





The pilot trial results support the feasibility of chemical immobilisation/solidification as a remediation approach for the material, subject to full-scale treatment performance and validation testing. The preferred reagent mix and dosing rate will be confirmed by the remediation contractor during full-scale treatment, with treated material to be validated prior to placement. If treated material does not meet the adopted remediation acceptance criteria, the relevant batch will be reprocessed, subject to further treatment assessment, or classified and disposed of to an appropriately licensed facility.



The stockpiled soils will be processed in batches of 250 m³ and subjected to the validation prescribed in Section 15 of this RAP. After successful validation the soils can be excavated and transported to the proposed placement area.



12 REMEDIATION CRITERIA

12.1 Remediation Acceptance Criteria

12.1.1 Human Health and Ecological Investigation and Screening Levels

The intended future use of the site is considered consistent with the “Commercial-industrial” due to the proposed development comprising the use of placement site as land adjacent to a roadway.

Although, the guideline criteria are not intended to be used as remediation acceptance criteria – due to their conservative (health protective) input parameters designed to minimise human health risk from the use of generic criteria being applied to a wide variety of potential land uses – the standard commercial-industrial values have been adopted to maximise the confidence, speed of implementation and likely regulatory approval by the stakeholders (including the NSW EPA Site Auditor). Health Investigation and Screening Levels and Ecological Investigation and Screening Levels, have been adopted from Table 1A(1) - Table 1A(3) and 1B(1) – 1B(6) of the National Environmental Protection (Assessment of Site Contamination) Measure 2013 (NEPM, 2013).

The guideline values will be used for all contaminants included in the selected analytical suite for the validation samples. However, based on the sampling already undertaken on the stockpiled (ex-situ) material, the key contaminants of potential concern are limited to:

- Selected polycyclic aromatic hydrocarbons, including
 - i) Naphthalene – human health and ecology
 - ii) Benzo(a)pyrene TEQ – human health
 - iii) Benzo(a)pyrene – ecology
- Total recoverable hydrocarbons (Fraction 2, 3 and 4) – human health and ecology – via the inhalation and dermal contact pathways

12.1.2 Assessment of Australian Standard Leaching Procedure (ASLP) results

Australian Standard Leaching Procedure (ASLP) results from the pilot trials and treated material validation samples will be assessed against water quality screening criteria adopted from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018).

The ASLP assessment has been adopted to assess the potential for contaminants to leach from treated material following placement. The proposed placement areas are understood to be located downstream of the Tomago Sandbeds drinking water catchment; however, potential migration to groundwater and surface



water receptors remains relevant due to the presence of shallow groundwater, nearby drainage features and the Hunter River.

Given these site-specific constraints, ASLP results will be assessed against the 95 percent species protection default guideline values. Although lower species protection levels may be applicable in some highly disturbed receiving environments, these have not been adopted as the primary screening criteria for this RAP. The 95 percent species protection values have been adopted to provide a conservative validation basis for the treated material and to maximise confidence that the remediation objectives will be achieved.

No dilution factor has been adopted for the assessment of ASLP leachate results. Pilot trial and treated material validation results will be compared directly against the adopted water quality screening criteria, without allowance for dilution or attenuation between the treated material and potential receiving environments. This provides a conservative assessment of leachability and is consistent with the CSM, which retains leaching and migration to groundwater and surface water as potential pathways requiring management. The assessment therefore relies on treatment, validation testing, controlled placement, cover/erosion controls and ongoing groundwater monitoring, rather than a modelled dilution allowance, to demonstrate protection of potential receptors.

The use of Multiple Extraction Procedure (MEP) testing was considered as an additional leachability assessment tool. Following consultation with the Site Auditor, MEP testing has not been adopted for validation of the treated material. Validation will rely on batch-based ASLP testing against the adopted remediation acceptance criteria, which is considered appropriate for confirming leachability of treated material prior to placement.

A summary of the applicable screening criteria is presented below:

Table 5 - Remediation Acceptance Criteria

Contaminant	Human Health (mg/kg)	Ecology (mg/kg)	ALSP (µg/L)
<u>Polycyclic Aromatic Hydrocarbons (PAH)</u>			
Anthracene	NA	NA	0.4
Benzo(a)pyrene	NA	172	0.2
Benzo(a)pyrene TEQ	40	NA	NA
Fluoranthene	NA	NA	1.4
Naphthalene	NA	370	16
Phenanthrene	NA	NA	2.0
Total PAHs	4000	NA	NA
<u>Total Recoverable Hydrocarbons (TRH)</u>			
Fraction 2	NL – Inhalation Direct – Com/Ind – 20,000 Direct – Intrusive – 62,000	170	TPH C ₁₀ -C ₃₆ – 600 µg/L
Fraction 3	NL – Inhalation Direct – Com/Ind – 27,000 Direct – Intrusive – 85,000	1,700	
Fraction 4	NL - Inhalation Direct – Com/Ind – 38,000 Direct – Intrusive – 120,000	3,300	



13 SUMMARY OF RESULTS

13.1 Health Criteria

The soil analytical results summarised in this section are based on the previous EnviroScience Solutions report, In-Situ Soil and Stockpiled Material Suitability for Re-use Assessment, M12RT – Black Hill to Tomago, Fill 18 – South Bound Lane, Report No. 50985_R01, dated April 2025.

The previous assessment adopted commercial/industrial land use criteria for the assessment of human health. Exceedances of the adopted criteria were identified for specific polycyclic aromatic hydrocarbons and total recoverable hydrocarbons. These exceedances are summarised in Section 13.3.

13.2 Ecological Criteria

Exceedances of the Ecological Criteria have been reported and are provided below Section 13.3.

13.3 Exceedances of the Health and Ecological Criteria

Analytical results for the hydrocarbon impacted material identified exceedances of the adopted HIL/HSL-D and ESL-D criteria for naphthalene, TRH fractions and PAHs, including benzo(a)pyrene and benzo(a)pyrene TEQ. The reported exceedances confirm that the material is not suitable for direct reuse without remediation.

The key contaminants of concern were naphthalene, TRH F2, TRH F3, TRH F4, total PAHs, benzo(a)pyrene and benzo(a)pyrene TEQ. The highest reported concentrations were generally associated with samples collected from visually impacted or hydrocarbon-impacted material, including samples with coal tar/asphaltic characteristics. The highest reported concentrations included benzo(a)pyrene TEQ of 2,000 mg/kg, total PAHs of 26,000 mg/kg, TRH F3 of 39,000 mg/kg and naphthalene of 2,000 mg/kg.

The analytical results are considered broadly representative of the stockpiled hydrocarbon impacted material for the purpose of developing this RAP, as the dataset includes primary and inter-laboratory results from material generated from the Fill 18 source area and associated stockpiled material. The results indicate a consistent pattern of hydrocarbon and PAH impact across the assessed material, with the highest concentrations associated with discrete impacted zones.

However, the material is heterogeneous, and contaminant concentrations are expected to vary within and between stockpiles. The analytical results have therefore been used to confirm the requirement for remediation rather than to rely on selective segregation alone. The suitability of treated material for placement will be confirmed through batch validation testing following treatment, with any material that



does not meet the adopted remediation acceptance criteria to be reprocessed, subject to further treatment assessment, or disposed of to an appropriately licensed facility.

Detailed analytical results are provided in Appendix B.

13.4 Management Limits

Exceedances of the management limits were reported in the previous reports. The exceedances were reported within the F2 and F3 fractions only.

13.5 Australian Standard Leaching Procedure

Australian Standard Leaching Procedure (ASLP) analysis was undertaken on selected samples that reported exceedances of the adopted soil assessment criteria. The ASLP analysis was used to assess the potential for contaminants to leach from the untreated hydrocarbon impacted material and to inform the requirement for treatment, placement controls and validation.

ASLP analysis was undertaken on selected elevated samples from the EnviroLab analytical batch. The ASLP results were compared against the adopted ANZG freshwater and marine water Toxicant Default Guideline Values for 95% species protection. The ASLP results are summarised in Table 3 and detailed analytical results are provided in Appendix B.

ASLP exceedances were reported for selected PAH compounds, including anthracene, benzo(a)pyrene, fluoranthene, naphthalene and phenanthrene. The adopted freshwater assessment criteria for these compounds were 0.4 µg/L for anthracene, 0.2 µg/L for benzo(a)pyrene, 1.4 µg/L for fluoranthene, 16 µg/L for naphthalene and 2 µg/L for phenanthrene. The adopted marine assessment criterion for naphthalene was 70 µg/L.

The maximum reported ASLP concentrations were 39 µg/L for anthracene, 1.4 µg/L for benzo(a)pyrene, 63 µg/L for fluoranthene, 1,600 µg/L for naphthalene and 230 µg/L for phenanthrene. These maximum concentrations represent exceedances of approximately 98 times the adopted criterion for anthracene, 7 times for benzo(a)pyrene, 45 times for fluoranthene, 100 times the freshwater criterion for naphthalene, 23 times the marine criterion for naphthalene, and 115 times the adopted criterion for phenanthrene.

The magnitude of the ASLP exceedances indicates that PAH compounds have the potential to leach from the untreated material at concentrations above the adopted water-quality screening criteria. The ASLP results confirm that the untreated material is not suitable for placement without remediation and migration pathway controls. Chemical treatment/immobilisation is therefore required to reduce contaminant



leachability, with treated material to be validated against the adopted remediation acceptance criteria prior to placement.

Detailed ASLP analytical results are provided in Table 2 in Appendix B.



14 SITE MANAGEMENT PLAN

It should be noted that John Holland already has comprehensive site management procedures in place for the management and remediation of contaminated land.

The remediation works have the potential to cause environmental or human health issues during the re-excavation, movement and placement of the contaminated soils. This section of the RAP discusses generic measures to lower these risks.

This Plan addresses:

- Site Access;
- Hours of Operation;
- Stormwater and Soil Management;
- Noise Control;
- Dust Control and Monitoring;
- Odour Control;
- Work Health and Safety;
- Remediation Schedule;
- Waste Management; and
- Contingency and Unexpected Finds Plan.

Each of the issues to be addressed in the site management plan is briefly discussed below.

14.1 Site Access

It is the remediation contractor's responsibility to securely fence the site to prevent unauthorised and, in particular, the remediation areas during the excavation works. Adequate fences or barriers will be placed around the excavations and potential stockpiles to prevent access of unauthorised personnel to areas where contaminated material is exposed and, also to prevent the public from the hazards of excavations. Adequate warning signs will also be placed around the area.

14.2 Stakeholder Consultation

- Relevant project stakeholders for the remediation works are anticipated to include the following: Transport for NSW, as the project proponent/asset owner;
- John Holland Gamuda Joint Venture, as the principal contractor;
- EnviroScience Solutions, as the contaminated land consultant;
- Cavanba Consulting, as the appointed NSW EPA accredited Site Auditor;



- Enviropacific, as the remediation contractor;
- the project Environmental Representative, where required under the project approval conditions;
- NSW EPA, where notification, licence or regulatory advice is required;
- relevant local council and/or landowner representatives, where required; and
- other project contractors or stakeholders responsible for design, earthworks, drainage, environmental management, WHS and long-term asset management.

Consultation will be undertaken progressively during remediation planning and implementation. The RAP and supporting remediation documentation will be provided to JHGJV, TfNSW and the appointed Site Auditor for review prior to implementation. The remediation contractor will prepare detailed remediation management documentation, including the treatment methodology, material handling controls, validation approach and environmental management controls, for review by the project team prior to commencement of full-scale treatment.

Where changes to the remediation methodology, placement location or validation approach are required, these will be discussed with JHGJV, TfNSW and the Site Auditor prior to implementation. Regulatory consultation will be undertaken where required by project approval conditions, EPL requirements, waste management requirements or other statutory obligations.

14.3 Remediation Schedule

The key dates are provided in the table below:

Table 6: Key dates of Project Milestones

Dates	Key Project Milestones
20/02/2026	Completion of pilot trials to determine the effectiveness, nature and compounds required in order to stabilise the material
TBC	Completion of treatment of the stockpiled material.
TBC	Placement of the treated stockpiled material
TBC	ongoing monitoring of existing wells
TBC	Auditor sign off on remediation and validation strategy.

14.4 Hours of Operation

Remediation hours of operation will be limited to the hours of general site works as stipulated in the Construction Environmental Management Plan (CEMP) for the project.

14.5 Stormwater & Soil Management

Adequate stormwater runoff, run-on and sediment control measures will be put in place for the remedial works. Stockpiling if required should be managed in a way to prevent harm to the environment and the general public from potentially contaminated soils within the stockpiles. The following recommendations provide guidance on managing stockpiled material:

- Access to the stockpiles of potentially contaminated material should be limited by keeping stockpiles within site perimeter fences;
- Stockpiles should be placed on level ground. If this is not possible stockpiles should not be placed on slopes greater than five degrees;
- Material should be placed on strong impermeable plastic sheeting to prevent the contamination of the underlying soils. Material should not be stockpiled more than 2m high;
- If the stockpiles are to remain in-situ overnight or for an extended period of time, the stockpiles should be covered by weighted polythene sheets or tarpaulins to prevent erosion of stockpiled materials. Heavy objects not containing sharp edges should be placed on the sheets to prevent them from being disturbed or uncovered by wind;



- Adequate straw bales and/or silt fences should be placed around the perimeter of the stockpile area to filter runoff from the stockpiles and prevent overland storm water flow from affecting the base of the stockpile, these should be installed prior to works beginning on site;
- A diversion trench should be excavated, or tightly packed sand bags placed prior to commencement of sampling, up-gradient of the stockpile to prevent storm water running into the stockpile.
- The following guidelines will be used for soil and water management during remediation; Managing Urban Stormwater: *Soils and Construction*. Landcom, (4th Edition) March 2004 (reprinted 2006) (the “Blue Book”). Volume 1 and Volume 2.

14.6 Noise

To mitigate noise impacts which may arise as a result of remedial works, the civil contractor will undertake the works in accordance with state and local noise regulations applicable to the site.

14.7 Dust Control

Dust control is required to prevent airborne dust and microbes being inhaled by human receptors. Airborne dust may be generated by wind action from loose earth left on the ground, during the re-excavation of the stockpile and placement of the material. This could cause migration of contaminated dust, as well as cause a nuisance for the surrounding area and must be controlled.

Therefore, the following dust control measures are proposed:

- Dust levels will be monitored visually during site work;
- Soil will be kept adequately moist to reduce the generation of dust using a hose to ensure that the material is kept damp, and shadow watering techniques are used on site and when required a water cart will be used for dust suppression.
- If any excess dust is visually sighted extra dust suppression will be implemented such as a full-time water cart or Fogging system.
- It is recommended that excavation and fill movement (earthworks) does not occur on windy/dry days, unless dust suppression measures can be rigorously implemented.
- It is recommended that a road-sweeper is used to control/remove any tracked dust/dirt on the affected parts of the neighbouring road network.
- Ensure a suitable decontamination/dust suppression system is employed for vehicle and implement movements, off-site.



14.8 Odour

The remediation works are not expected to generate any significant odours.

14.9 Work Health & Safety

A Health, Safety, Security and Environmental (HSSE) Plan should be prepared by the remediation contractor, in accordance with relevant NSW legislation. The HSSE Plan should include, but not be limited to, the following.

- Hazard Identification and Control;
- Dust and odour monitoring during excavation and stockpiling works;
- Chemical Hazard Control;
- Handling Procedures;
- Personal Protective Equipment;
- Work Zones;
- Decontamination procedures;
- Contingency Plans; and
- Incident Reporting.

The HSSE Plan should be periodically reviewed and updated prior to various project tasks being conducted. The contractor, supporting sub-contractors and third-party observers to the site will be required to work strictly to this plan. During site activities, only approved personnel should be allowed access to the remediation work area. The HSSE Plan will identify hazards, assess the risks posed by the hazards and recommend measures to control the hazards.

14.10 Material Movement Plan

The stockpiled soil will be moved from the current location to the proposed final placement area, after soil treatment and validation, as previously planned for the movement of hydrocarbon impacted material (Material Movement Plan, John Holland, 2025).

This is summarised below:

14.11 Site Establishment

14.11.1 Mobilisation and Site Preparation



The Site shall be secured and established in accordance with the approved Site Layout Plans and Project documentation. Site establishment will commence once all conditions have been.

The following general controls and infrastructure items will be mobilised to the work area:

- Installation of flagging delineating the removal area and disposal areas.
- Fencing will be installed at a 10m offset from the expected extents of contamination as a contingency and to provide additional buffer to the works during the removal process. At all other times fencing must be 5m from the extents of contamination.
- Erect Exclusion zone signage.
- Install/commission wheel wash area at Borrow Pit disposal location – with sump to collect all wash down water & pump and hose to direct back into the bunded disposal area – Attachment 1.
- Improve access to existing washdown bay/sump – area to be stabilised.
- Site environmental controls including upstream bunding around the disposal location to avoid infiltration of up slope water into the bund area.
- Establish equipment laydown areas and washdown area.
- Establish staff parking areas and light vehicle access protocols and parking areas – outside the load and stockpiling areas.

14.11.2 Establishment Of Working Zones

- Site establishment will involve the installation of exclusion zones and segregation of work areas using warning signage, temporary fencing, tape and/or barrier mesh. These exclusion zones will be installed and maintained at “dirty zone” entry points for the duration of remediation works in the area.
- There will be one entry and exit point for all personnel entering the active loading remediation work zone and the Borrow Pit Bunded Zone. This will allow full control of the work areas, restricting unauthorised and untrained personnel from inadvertently coming into contact with contaminated materials and exposing both themselves and other site personnel.
- Notable considerations included during the site ingress/egress control process to be implemented as follows:
 - The work Site will be clearly defined with specific WHS and environmental controls in place specific to the work practices and zonation at the time.
 - It will be the responsibility of the designated Supervisor to ensure all controls are in accordance with the WHS Management.
 - “Dirty zone” locations and access requirements will be updated and communicated daily through Pre-Start.



- Daily inspections of the clean and dirty zone interfaces to be undertaken to ensure delineation and decontamination are effective.
- Work zones will be reconfigured at the completion of removal works to allow for placement of geogrid and rock over the excavated surface.
- The layout of the handover and clean/dirty areas will be completed in conjunction with JHGA Construction and Environment personnel and any changes will be communicated to site via a site briefing and/or induction process.

14.11.3 Site Access

- A single entry and exit point to Site will be maintained for all personnel, plant and deliveries for the duration of works. Entry gates will be set back from the Pacific Hwy verge to prevent potential for back logging and any subsequent impact on north bound traffic.
- A No Stopping Zone will be enforced at the Site entrance to prevent potential for back logging of trucks during peak times. A dedicated Site radio channel will be employed and sign posted with comms requirements re-enforced daily via Pre-Start.
- Dedicated haul routes will be maintained for the duration of works, with all vehicles potentially interacting with contaminated material directed over wheel wash upon exiting Site.
- Daily inspections of the clean and dirty zone interfaces to be undertaken to ensure delineation and decontamination are effective.
- The cleanliness of vehicle tyres and bodies will be subject to routine inspection following loading and unloading ensuring adequate function the clean loading area and wheel wash following placement in the Borrow Pit bunded area.
- A brief truck driver induction will be mandatory for all delivery drivers entering the contaminated zone. Induction to covers the site-specific hazards, controls and mandatory requirements that they need to be aware of and comply with. All workers driving a truck onto the worksite must complete and sign the induction form to acknowledge their acceptance.

14.11.4 Movement Process

Work Area – Material Movement

- The hydrocarbon and benzo(a)pyrene impacted material subject to this RAP has previously been excavated from the former southbound alignment of the Pacific Highway and is currently stockpiled within the Borrow Pit/storage area.
- Historical excavation depths and impact depths are relevant to the origin and characterisation of the material only. The proposed works under this RAP relate to management, treatment, validation and placement of stockpiled material.
- Material will be transferred from the existing stockpile/storage area to the nominated treatment area in accordance with the Enviropacific Remediation Management Plan.



- Material movement will generally comprise transfer of stockpiled material to the treatment area, processing through the treatment system, temporary stockpiling of treated material for validation, and transport of validated material to the approved placement location.
- Material will be handled using suitable earthmoving plant and transported in accordance with project environmental and WHS requirements.
- Material will be kept damp during handling, loading, treatment and placement, where required, to manage dust and odour.
- Vehicles and plant will be managed to minimise the potential for tracking of impacted material outside the work area. Tyres will be inspected and cleaned where required.
- Treated material will be stockpiled separately from untreated material pending validation. Stockpiles will be clearly delineated and managed to prevent cross-contamination.
- Treated material that meets the adopted remediation acceptance criteria will be transported to the designated placement area.
- Treated material that does not meet the adopted remediation acceptance criteria will be reprocessed, subject to further treatment assessment, or classified and disposed of to an appropriately licensed facility.

Work Area – Borrow Pit Storage Area

- Untreated material will continue to be managed within the Borrow Pit/storage area prior to treatment.
- Stockpiles will be maintained within the existing controlled storage area and managed to minimise sediment, leachate, dust and odour risks.
- Stockpiles will be covered, bunded or otherwise controlled where required by the project environmental management requirements.
- Surface water and runoff controls will be maintained to reduce the potential for migration of impacted material or impacted water from the storage area.
- Final treatment area layout, material movement routes, stockpile controls and validation stockpile arrangements will be detailed in the Enviropacific Remediation Management Plan.

14.11.5 Additional material handling and stockpiling controls

The following controls are required to be implemented during material handling, treatment and stockpiling activities:

- An exclusion zone of 10m is required during the removal and stockpiling process. At all other times an exclusion zone of 5m is required.
- Dust suppression – dust should not be visible during the removal or stockpiling activities
- PID monitoring may be undertaken during material handling and treatment works. The material is not anticipated to be highly volatile; however, in the event that PID readings of >50 ppm are



detected, works will cease and advice will be requested from the remediation contractor regarding appropriate controls;

- All excavators at the removal and stockpiling site are required to have HEPA filters in the cab filters
- All trucks must have windows closed and reverse cycle air conditioning in use
- All personnel within the exclusion zone during the removal and stockpiling process are required to wear the following additional PPE:
 - Full face respirator
 - Disposable coveralls

14.11.6 Finishing works and revegetation

The proposed placement/remediation area is located within an SP2 Special Uses zoning area. The finishing works follow placement of the material would be comprise of placement of topsoil and hydromulching using a native species mix in line with approved Design and Landscaping Plan for the Project and detailed landscape design drawings and specifications. The seed mix would include native grasses and shallow rooted shrubs. The final finished landform shape and landscaping would be confirmed by TfNSW prior to completion.

14.12 Contingency/ Unexpected Finds Procedure

The purpose of the Contingency/unexpected finds procedure is to outline procedures for the identification and management of unexpected issues or events that may occur during the remediation works.

14.12.1 Hazardous Materials

If unexpected hazardous materials are discovered during the remediation activities in a 'clean' area (area believed to be free of hazardous materials) the following procedures should be followed;

- Cease work and evacuate the area of work immediately
- Erect barricades to isolate the area and ensure no one accesses the area without permission from the Environmental Consultant (EnviroScience).
- Immediately notify the Site Project Manager who is to notify the Client of the potential contaminated area
- Sampling of the suspected material is to be carried out by the Environmental Consultant to undergo laboratory testing
- The Environmental Consultant will develop a management plan for the discovered material dependent on the laboratory analysis results.
- Remedial works will need to be undertaken in the area



- Once the area has remediated only then may the barricades be removed, and work activities resumed under direction of the Environmental Consultant.

14.12.2 Other Unexpected Finds

- In the event that unexpected hydrocarbon contamination, odours, staining, coal tar, asbestos, buried waste or other potential contamination indicators are identified during remediation, treatment or placement works, works in the immediate area will cease and the area will be isolated. The environmental consultant and Site Auditor should be contacted immediately to assess the find and advise on appropriate management requirements;
- Controls for unexpected finds may include delineation and isolation of the affected area, dust and odour suppression, sediment and runoff controls, covering or containment of impacted material, inspection by a suitably qualified environmental consultant, sampling where required, and appropriate classification, treatment, disposal or management of the material prior to works recommencing. In the event that groundwater, seepage or impacted surface water is encountered during remediation, treatment or placement works, the environmental consultant and design consultant should be contacted immediately. There may be implications for material handling, dewatering, water management, treatment controls and long-term management requirements;
- The likelihood of encountering groundwater or seepage during the proposed works is considered low to moderate, noting that the material is currently stockpiled within the Borrow Pit/storage area and the works are expected to involve above-ground handling, treatment and placement rather than deep excavation. However, groundwater/seepage has been retained as an unexpected find due to the broader hydrogeological setting and the potential implications for water management if encountered.
- Heritage – Stop work immediately if you uncover anything that might be an Aboriginal tool or carving or if European heritage items are encountered and contact the project environmental representative/environmental consultant.

14.12.3 Complaints

- Complaints associated with the remediation works will be managed in accordance with the M12RT project complaints management procedure.
- If a complaint is received from on-site workers or the public regarding noise, odour, dust or other environmental nuisance, the source of the complaint will be investigated and the relevant activity temporarily stopped or modified, where required, until appropriate controls are implemented.
- The Project Manager and Environmental Consultant will be notified of complaints relevant to the remediation works.



- Corrective actions may include additional dust suppression, odour controls, covering of material, modification of work methods, additional monitoring, or other controls considered appropriate by the project team.
- Where required, the Environmental Consultant will document the complaint, investigation findings and corrective actions in accordance with the M12RT project complaints management procedure.

14.12.4 Emergency Contact Details

Table 7: Emergency Numbers and Project Contacts

Emergency Numbers and Project Contacts			
Police – Fire – RFS - Ambulance	000		
Poisons Information	131 126	Dial Before You Dig	1100
EPA	131 555	WorkSafe	13 10 50
Site Owner	Transport for New South Wales		
EPA Site Auditor Cavvanba Consulting Pty Ltd	Ben Wackett	0488 225 692	ben@cavvanba.com
Responsible Manager John Holland	Kathy Lloyd, James Douglas,		
Remediation Contractor EnviroPacific Services	Mitch Anthony, Ben Kay Lindsay Killin	0437 330 012	mitch.anthony@enviropacific.com.au
Environmental Consultant EnviroScience Solutions	Sam Ramsey Mark Challoner	0439 678 611	sam@enviroscience.com.au markc@enviroscience.com.au

15 VALIDATION PLAN

15.1 Data Quality Objectives and Indicators

The data quality objectives for the project are provided in Tables 8-13, below.

Table 8: Data Quality Objectives

Step 1: State the Problem	<i>Objective of the proposed validation sampling</i>	Determine if the treated soils are suitable for commercial/industrial use and confirm that the remediation works have been conducted and are effective in minimising human health and environmental risks.
	<i>Summary of the contamination issue</i>	Elevated PAH and TRH concentrations in the stockpile
	<i>The reason the project is being undertaken</i>	To determine if the treated soils do not represent a risk to human health or the environment.
	<i>Identification of the project team and technical support experts</i>	TfNSW – Site Owner John Holland – Principal Contractor EnviroPacific – Soil immobilisation designer and contractor EnviroScience - Environmental Consultant and sampler. Sam Ramsey - Report Preparation Mark Challoner – Certified Environmental Practitioner – Site Contamination Specialist – Report review
	<i>Budget and community concern issues</i>	ESS is not aware of any specific budget or community concerns.
	<i>Identification of the regulatory authorities and the local government area</i>	TfNSW



Step 2: Identify the decision/goal of the study	<i>Are the contaminants within the treated soils appropriately immobilised, so that they pose minimal human health and ecological risk</i>	Is there mobile contamination present within the treated soils, does the contamination present an unacceptable risk to human health and/or the environment based on the proposed use of the site
		Has the site been remediated to be suitable for use as commercial/industrial use (roadway embankment)?
Step 3: Identify the information inputs	<i>Media to be collected</i>	Soil samples from the treated soil
	<i>Other Inputs</i>	- Laboratory data for an appropriate analytical suite; - Authoritative guidelines such as the NEPM criteria, and ANZG for PAH, Airport Regulations for TPH.
	<i>Site Criteria for each medium of concern</i>	HILD / HSL D and EIL/ ESL – Commercial Industrial. ANZG for PAH – 5 compounds (anthracene, benzo(a)pyrene, fluoranthene, naphthalene and phenanthrene.) Airport Regulations for TPH C10-C36.
	<i>Analytical methods that are required for chemicals of potential concern</i>	Standard laboratory analytical methods will be used which comply with the NATA accreditation.
Step 4: Define the boundaries of the study	The study boundaries are defined by the boundaries of the site as shown in Figure 2. The treated soil will be boundary of the study, with the placement area being the final destination of the soil.	
Step 5: Develop the analytical approach	The analytical approach for chemical concentrations within the soil for HIL D/HSL-D and EIL/ESL-Commercial/industrial guidelines and the ASLP results for individual PAH compounds	



	and the Airport regulations for TPH, where individual samples exceed the criteria then further treatment may be required. The samples will be scheduled for a narrow analytical suite comprising speciated PAH and TPH. The soil analytical suite will include the following: • TRH • TPH – Silica gel cleanup • BTEX • PAH (speciated) And ASLP testing to include: • TRH • TPH – silica gel clean up • PAH – speciated – in particular anthracene, benzo(a)pyrene, fluoranthene, naphthalene and phenanthrene
Step 6: Specify performance or acceptance criteria	There are two main sources of false results which may cause decision areas: • Sampling errors, where samples collected are not representative of the conditions observed onsite; and • Measurement errors, which occur during sample collection, preparation and analysis. False results may lead the decision maker to assume the following errors: • Type 1: deciding that the site is not contaminated and therefore suitable for the continued use as a residential property; and • Type 2: deciding that the site is contaminated and therefore not suitable for continued use as a residential property. Assessment will be made as the likelihood of a Type 1 decision error using QA/QC assessment and the closeness of the data to the assessment criteria. The assessment criteria are explained in Section 10. A Type 2 error is less likely and may result in further investigation which may amend the error reported.



Step 7: Develop the plan for obtaining data	Based on the DQOs outlined within this table the methodology was derived and is outlined below: A sampling pattern will be adopted for every 250 m³ batch of treated soil. Existing monitoring wells M-PZ-324A and M-PZ-324B will be used for downgradient groundwater monitoring. Based on the inferred groundwater flow direction to the north-west and the location of the wells north/north-west of the proposed placement areas, the wells are considered suitably located. The monitoring well locations are shown on Figure 5 in Appendix A.

Table 9: QA/QC Summary of Project Completeness

Were Samples Collected from Specific Locations and at Identified Depths	Soil samples must be collected from each 250 m ³ batch. Samples should be collected using a trowel or shovel and washed down between sample locations.	
Were All Critical Locations Sampled	Soil samples should be obtained from all batches and assessed in regard to Human Health and Ecology.	
Standard Operating Practices (SOP) appropriate and compiled with Experienced Sampler	Standard Operating Practices (SOP) appropriate and complied with by experienced sampler. Validation sampling will be undertaken in accordance with the validation requirements outlined in this RAP and EnviroScience Solutions' Standard Operating Procedures. Sampling will be completed by tertiary qualified field staff with prior contaminated land experience and appropriate project inductions.	
Documentation Correct	Sample Locations should be GPS mapped to ensure correct locations. Chain of Custody	



	(COC) forms should be filled out for all samples submitted to the laboratory within holding times (see Appendix for COCs).	
All critical samples and analytes analysed by a NATA accredited Laboratory	All samples should be analysed by a NATA accredited Laboratory	
Appropriate Methods and PQLs	Appropriate methods and PQLs should be used by the NATA Accredited Laboratories undertaking the analysis.	

Table 10: QA/QC Summary of Project Comparability

Were sampling works undertaken by suitably qualified and experienced personnel?	Validation sampling will be undertaken by suitably qualified and experienced contaminated land field staff in accordance with the validation requirements outlined in this RAP. Samples will be collected, handled, stored and transported using standard environmental sampling practices and submitted to a NATA-accredited laboratory under chain of custody conditions.	
Were logs produced at each sampling location outlining the material encountered.	Soils should be logged following the Unified Soil Classification System (USCS).	

Table 11: QA/QC Summary of Project Representativeness

Was the appropriate media relative to the RAP validation requirements sampled during field investigations?	Samples will be collected and analysed in accordance with the validation requirements outlined in this RAP by suitably qualified and experienced contaminated land field staff. Samples will be transported to NATA-accredited laboratories	



	for analysis under chain of custody conditions.	
Were SOPs appropriate to the project and complied with.	ESS's SOPs should be implemented. Sample location should be recorded with hand-held GPS. Site conditions should be recorded during sampling and the COC forms should be filled out correctly. Duplicate and triplicate samples should be analysed for the appropriate analysis.	
Were sampling and subsampling techniques, containers and preservation appropriate?	Validation samples will be collected using appropriate sampling and subsampling techniques to obtain representative samples of treated material. Samples will be placed into laboratory-supplied containers, preserved where required, stored on ice and transported to a NATA-accredited laboratory under chain of custody conditions.	
Were duplicate/ triplicate samples collected at an appropriate rate.	eld duplicate samples will be collected at a minimum rate of 1 per 20 primary samples, where practicable. Inter-laboratory duplicate/triplicate samples may also be collected where required, based on the validation sampling program and final number of samples collected. QA/QC results will be assessed as part of the validation report to confirm the reliability of the validation dataset.	



Table 12: QA/QC Summary of Project Precision

Did the laboratory carry out internal quality control procedures.	Internal laboratory duplicates, control spikes, matrix spikes and method blanks. These should be reported within acceptable control limits.	
Were field duplicate/ triplicate analysis within Relative Percentage Difference limits. (30% for concentrations more than 10 times the LOR and 50% for concentrations less than 10 times the LOR).	TBC	

Table 13: QA/QC Summary of Project Accuracy

Were sampling works undertaken by suitably qualified and experienced personnel?	Validation sampling will be undertaken by suitably qualified and experienced contaminated land field staff in accordance with the validation requirements outlined in this RAP. Samples will be collected, handled, stored and transported using standard environmental sampling practices and submitted to a NATA-accredited laboratory under chain of custody conditions.	
Was reusable sampling equipment decontaminated between sampling locations	Shovel should be washed in a solution of detergents and potable water between sampling locations to ensure cross contamination is limited.	
Were field blanks and trip blanks used to establish QA/QC procedures	Due to the absence of volatile CoPCs trip blanks and trip spikes do not need to be collected	This may vary should the Data Gap Analysis determine volatile contamination is present.



15.2 Records

Records are to be kept of all activities to be undertaken on the site in accordance with this RAP including any inspections, sampling, monitoring, any soil excavation in contaminated areas, and if necessary, waste disposal dockets, VENM classification certificates, ENM classification reports, unexpected finds and compliance actions in accordance with this RAP.

15.3 Sampling Methodology

Validation samples will be collected from every 250 m³ following treatment of the soils. The material should be processed in 250 m³ batches, to allow segregation, sampling, analysis and subsequent assessment. Site observations will assess the potential for preferential pathways and additional validation samples will be collected where more permeable material is encountered.

Field QA/QC duplicate sampling will consist of one (1) blind sample for at least 5% of the total samples (i.e., 1 in 20 samples) and a secondary duplicate submitted to a secondary laboratory for at least 5% of the total samples (i.e., 1 in 20 samples) also.

15.3.1 Method of Sample Collection

Care will be taken to ensure that representative samples are obtained from the material and that the integrity is maintained. Specific sampling procedures for each method of collection are provided below in following sections.

Samples will be collected using either a decontaminated stainless-steel trowel or by using new latex or nitrile gloves for each sample and placing the soil directly into laboratory supplied jars.

15.3.2 Decontamination Procedures

The following decontamination procedures will be adopted for sampling equipment.

Sampling equipment, such as trowels, will be washed between sampling events using Decon 90 (or similar laboratory grade detergent) initially followed by adequate rinsing with clean potable and de-ionised water.

Soil sample jars will comprise glass with a Teflon lined lid and be supplied by either the primary or secondary laboratory. The jars will be filled with soil, labelled with the job number, date, unique sampling point identification and initials of the project environmental scientist.



15.3.3 Method of Sample Storage and Handling

The soil jars, once filled with sample, will immediately be placed in an esky / cool box in which ice has been added, to keep the samples below a temperature of approximately 4°C. At the end of each day, the samples in the cool box will be transported to laboratory (within holding times).

15.3.4 QA/QC Documentation

While on site, the supervising engineer/scientist will be required to fill out a copy of a 'sample register', which will document:

- Time of sample collection;
- Weather;
- Unique sample identification number; and
- Sample location and depth.

All samples will be classified in the field based on soil/fill characteristics and obvious signs of contamination such as discolouration or odour will be noted on a log.

All samples, including QC samples, will be transported to the primary and check laboratories under Chain-of-Custody (COC) procedures and maintained in an ice-filled cooler. The following details will be recorded on the COC form:

- Site identification;
- The sampler;
- Nature of the sample;
- Collection time and date;
- Analyses to be performed;
- Sample preservation method;
- Departure time from site; and
- Dispatch courier(s).

15.4 Sampling Frequency

Initial validation of the treated material will be undertaken at a frequency of one sample per 250 m³ of treated material. Validation samples will be collected progressively from each treated batch and submitted to the laboratory as batches are completed. Untreated material, treated material awaiting validation, compliant treated material and non-compliant treated material will be stockpiled separately and clearly identified to prevent cross-contamination. Each 250 m³ batch will be segregated and held pending receipt



and assessment of laboratory results against the adopted remediation acceptance criteria. Based on an estimated treated material volume of approximately 6,272 m³, this would require a minimum of 26 primary validation samples during the initial validation phase.

Subject to review of the initial validation results, and where results are consistently below the adopted remediation acceptance criteria, the validation frequency may be reduced to one sample per 500 m³ in consultation with JHGJV, TfNSW and the Site Auditor. If the validation frequency is reduced to one sample per 500 m³, each 500 m³ batch will be segregated and held pending receipt and assessment of compliant laboratory results.

Where treated material does not meet the adopted remediation acceptance criteria, the relevant batch will be reprocessed, subject to further treatment assessment, or classified and disposed of to an appropriately licensed facility. Following any reprocessing, the batch must be revalidated before placement.

15.5 Groundwater Validation and Monitoring

In addition to validation of the treated material by batch sampling and ASLP analysis, groundwater monitoring will be undertaken to assess whether the placement of treated material has resulted in unacceptable impacts to groundwater downgradient of the proposed placement areas.

Groundwater monitoring will utilise existing monitoring wells M-PZ-324A and M-PZ-324B to monitor groundwater quality downgradient of the proposed placement area. Based on the current proposed placement areas, the inferred groundwater flow direction to the north-west, and the location of M-PZ-324A and M-PZ-324B north/north-west of the proposed placement areas, the wells are considered suitably located for downgradient groundwater monitoring. The monitoring well locations are shown on Figure 5, Appendix A.

Groundwater monitoring should be undertaken following placement of the treated material. The monitoring suite should include the contaminants of potential concern associated with the treated material, including PAHs, TRH, BTEX and naphthalene, together with field parameters including pH, electrical conductivity, dissolved oxygen, oxidation-reduction potential and temperature.

Groundwater results should be compared against the adopted groundwater/surface water assessment criteria relevant to the receiving environmental values. The results should be presented in the validation report and/or ongoing operational monitoring reports. If groundwater monitoring identifies concentrations of the contaminants of potential concern above the adopted criteria and attributable to the placed treated



material, further assessment and/or contingency measures should be implemented in consultation with JHGJV, TfNSW and the Site Auditor.

16 REPORTING REQUIREMENTS

16.1 Validation Report

A final validation report is required to be prepared in accordance with the *Guidelines for consultants reporting on contaminated land* (NSW EPA, 2020) and submitted to the Client, the appointed Site Auditor, and the Council.

The validation report shall document the remediation methods and results to ensure that the objectives stated in the RAP have been achieved. The report must confirm statistically that the treated soil complies with the clean-up criteria set for the site. Where targets have not been achieved, reasons must be stated and additional site work proposed to achieve the remediation goals outlined in this RAP.

The validation report will also include information confirming that all NSW EPA/ SafeWork NSW and other regulatory authorities' licence conditions and approvals have been met. In particular, documentary evidence is needed to confirm that any disposal of soil off-site has been undertaken in accordance with this RAP.

16.2 Environmental Management Plan

The Environmental Management Plan for the remediation works should address construction-phase environmental controls associated with treatment, validation and placement of the treated material, including:

- material handling and stockpile management;
- dust and odour controls;
- sediment, erosion and surface water controls;
- material tracking and vehicle/plant hygiene controls;
- segregation of untreated, treated, compliant and non-compliant material;
- validation hold points prior to placement; and
- unexpected finds and complaints management procedures.

Where validation confirms that treated material meets the adopted remediation acceptance criteria, residual contamination requiring ongoing management is not anticipated. Post-placement monitoring, where required, will be undertaken using existing monitoring wells M-PZ-324A and M-PZ-324B as part of the ongoing project monitoring framework.



17 SUMMARY

This remediation action plan was prepared for impacted soil material encountered during road works within the south-bound corridor of the Pacific Highway, Tomago, NSW 2322 between Chainages MC20 9210 and MC20 8600 (the site).

The suspected coal-tar/ hydrocarbon-based binder was identified by JHGA within the road pavement layer/asphalt and surface of the subgrade road base material during milling and road upgrade activities.

The remediation objectives outlined in this report comprise:

- Remediate the site to a level where no unacceptable risk is posed on human health and/or the environment on- and off-site;
- Remediate the site to a level that is suitable for the proposed commercial/industrial (non-sensitive) use as the M12RT motorway within the Pacific Highway road corridor;
- Remediate the site to a level that is suitable for the proposed final land use and ongoing maintenance of the road corridor (commercial/industrial (non-sensitive) use);
- Remediate the site so that it serves to comply with the project Infrastructure Approval (and its CoA);
- Future proof areas of the site so access to residual contamination (if remaining) is minimised;
- Prevent or minimise migration of contaminants from the source, where practicable;
- Provide a resilient solution to the effects of sea level rise impacts or extreme weather events; and
- Provide an efficient method to validate the soil remedial works by demonstrating unacceptable concentrations of CoPC have been removed or residual contamination is acceptable to remain in accordance with the relevant industry accepted guidelines.

The selected remediation methodology comprises the application of chemical treatment of the contaminated soils via the addition of chemical substances to alter the physicochemical properties of the soil to immobilise the contaminants and reduce leaching.

A final validation report is required to be prepared after completion of the works in accordance with the *Guidelines for consultants reporting on contaminated land* (NSW EPA, 2020) and submitted to the Client, the appointed Site Auditor, and the Council.

The final placement area will be managed by TfNSW in accordance with their ISO 14001 Environmental Management System. As per TfNSW requirements, the area will be included in the Asset Acceptance Information for Asset Management as part of the Project completions process.

If this RAP plan is followed, then the works should meet the remediation objectives.



18 LIMITATIONS

The recommendations and assessment have been undertaken by EnviroScience has been based on provided documentation and subsequent investigations undertaken onsite to date.

To the extent permitted by law, EnviroScience will not be responsible in tort, contract or otherwise for any loss or damage, including for any personal injuries or death, or any consequential loss, loss of markets and pure economic loss, suffered by the Customer, whether or not the loss or damage occurs in the course of performance by EnviroScience Solutions Pty Ltd of this contract or in events which are in the contemplation of EnviroScience Solutions Pty Ltd and/or the Customer or in events which are foreseeable by EnviroScience Solutions Pty Ltd and/or the Customer.

To the extent that liability has not been effectively excluded by the preceding clause, then EnviroScience Solutions Pty Ltd limits its liability to: -

- (a) The supply of services again; or
- (b) The payment of the cost of supplying the services again, at the election of EnviroScience Solutions Pty Ltd.

19 REFERENCES

Cooperative Research Centre for Contamination Assessment and Remediation of the Environment, Technical Report Series No. 39, CRC CARE January 2017

NEPC, National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013, National Environment Protection Council

NSW EPA, Waste Classification Guidelines: Part 1 Classifying Waste (2014)

NSW EPA, Excavated Natural Material Order (2014)

NSW EPA (2020), Contaminated Land Guidelines: Consultants reporting on contaminated land

NSW EPA (2015) Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997

Western Australia, Department of Health, *'Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia. 2009*

National Remediation Framework (NRF), Technology Guide: Chemical Immobilisation and Solidification.



APPENDIX A

FIGURES



Hunter River

2100 Pacific Highway
Heatherbrae

Source site: Former Pacific Highway alignment

Old Punt Road

info@enviroscience.com.au

P: 1300 372 436
F:

Figure 1 - Source Location

Client No:

Job No: 53006

Client: John Holland Gamuda Joint Venture

Project: Fill 18 - Hydrocarbon Impacted Material
Remedial Action Plan

Address: Pacific Highway, Tomago NSW 2322, Australia

Legend:

 Indicative Source Location

Image Source: Google Maps

Viewed: 2026-05-15

Drawn By:
Tom Davelaar

Checked By:
Sam Ramsey

Date:
2026-05-15

Figure:
1



info@enviroscience.com.au

P: 1300 372 436

F:

Figure 2 - Storage Location

Client No:

Job No: 53006

Client: John Holland Gamuda Joint Venture

Project: Fill 18 - Hydrocarbon Impacted Material
Remedial Action Plan

Address: Pacific Highway, Tomago NSW 2322, Australia

Legend:

 Storage Area

 Stockpile Area



Image Source: Google Maps

Viewed: 2026-05-15

Drawn By:
Tom Davelaar

Checked By:
Sam Ramsey

Date:
2026-05-15

Figure:
2



info@enviroscience.com.au
F:

P: 1300 372 436

Figure 3 - Treatment Area Location

Client No:

Job No: 53006

Client: John Holland Gamuda Joint Venture

Project: Fill 18 - Hydrocarbon Impacted Material
Remedial Action Plan

Address: Pacific Highway, Tomago NSW 2322, Australia

Legend:

 Treatment Area Location

 Stockpile Location

Treatment Area

Hydrocarbon Stockpiles

Image Source: Google Maps

Viewed: 2026-05-15

Drawn By:
Tom Davelaar

Checked By:
Sam Ramsey

Date:
2026-05-15

Figure:
3



info@enviroscience.com.au P: 1300 372 436
F:

Figure 4 - Overarching Figure

Client No: Job No: 53006

Client: John Holland Gamuda Joint Venture

Project: Fill 18 - Hydrocarbon Impacted Material
Remedial Action Plan

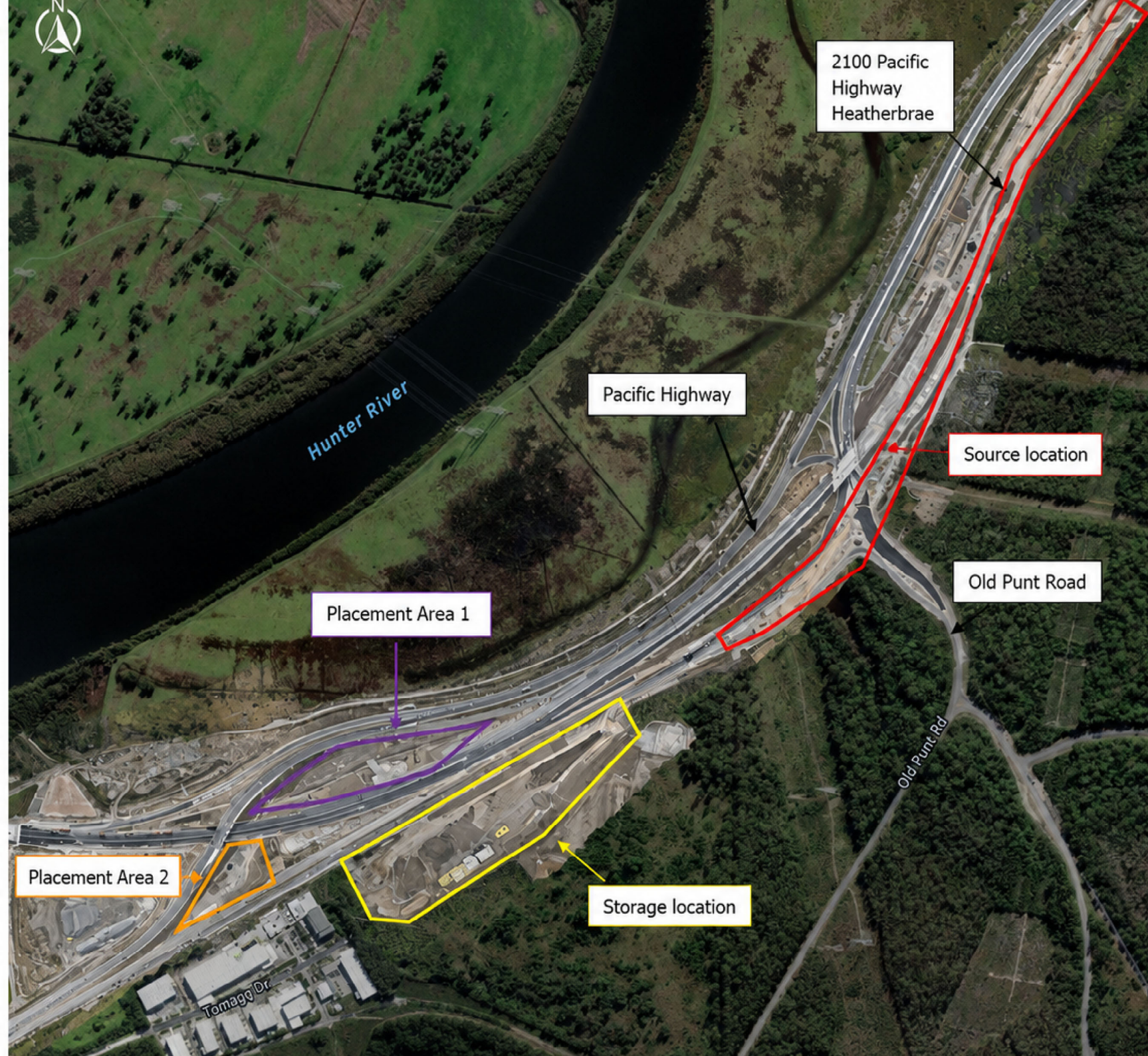
Address: Pacific Highway, Tomago NSW 2322, Australia

Legend:

-  Placement Area 2
-  Placement Area 1
-  Source location
-  Storage location

Image Source: Google Maps Viewed: 2026-05-15

Drawn By:	Checked By:	Date:	Figure:
Tom Davelaar	Sam Ramsey	2026-05-15	4





info@enviroscience.com.au P: 1300 372 436
F:

Figure 5 - Groundwater Monitoring Well Locations

Client No: Job No: 53006

Client: John Holland Gamuda Joint Venture

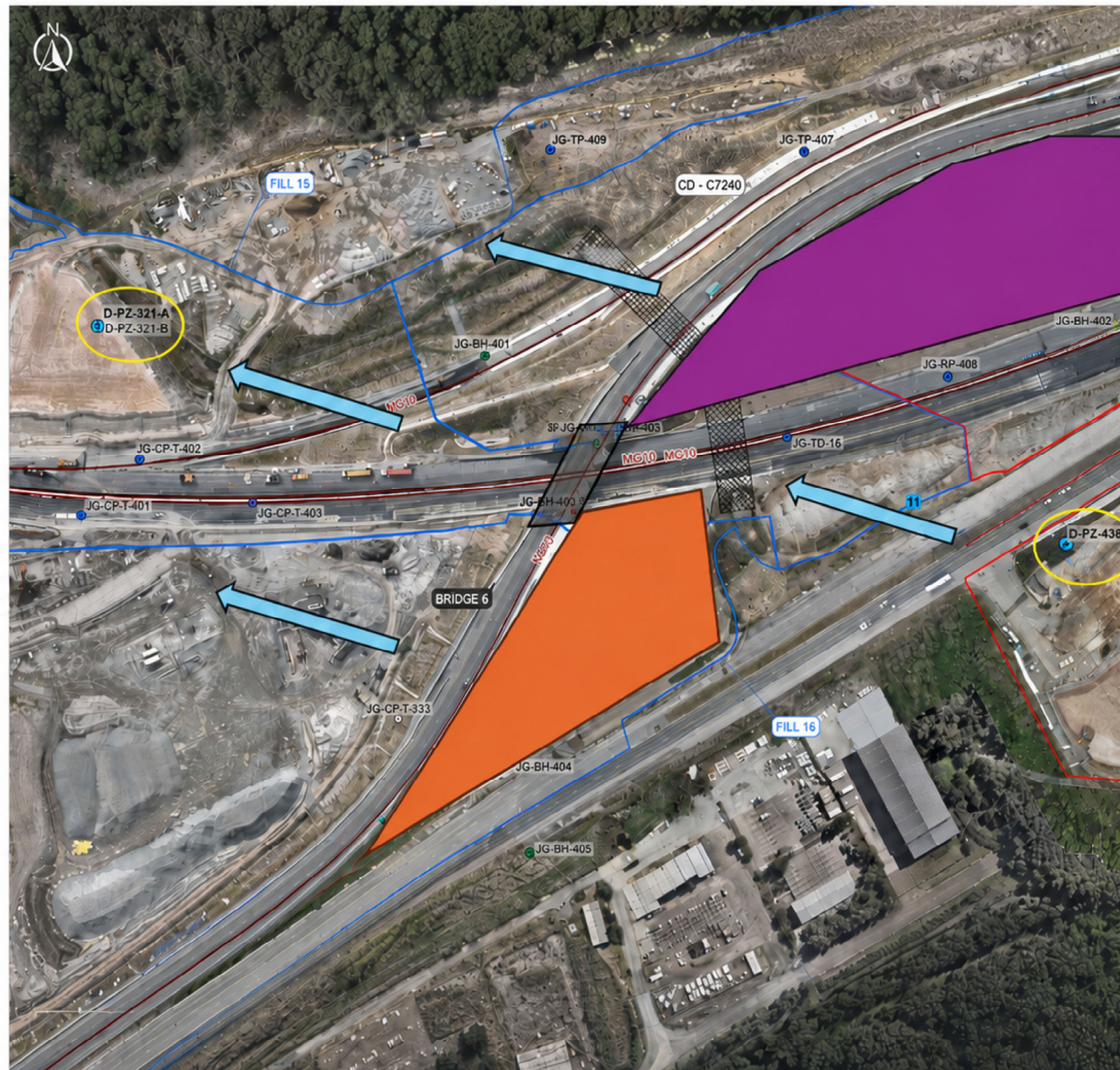
Project: Fill 18 - Hydrocarbon Impacted Material
Remedial Action Plan

Address: Pacific Highway, Tomago NSW 2322, Australia

Legend:

-  Existing monitoring wells
-  Inferred groundwater flow direction
-  Placement Area 1
-  Placement Area 2

Drawn By: Tom Davelaar	Checked By: Sam Ramsey	Date: 05/06/2026	Figure: 5





APPENDIX B

SUMMARY RESULTS TABLES

Table 1
Fill 18 - Hydrocarbon Impacted Material
Health Ecological Investigation and Screening (Commercial/Industrial)

	Asbestos	NA	BTEX							Other	TRH						Phenols	Halogenated Benzenes	Inorganics	Metals										Atmospheric methyl	Isomorphous ethyl	Chlorophenols	Chlorophenyls-methyl		
			Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total		6-Cl-D Fraction (F1)	6-Cl-D	>Cl-D-Cl6 Fraction (F2)	>Cl-D-Cl6 Fraction (F2 minus Naphthalene)	>Cl-D-Cl6 Fraction (F3)	>Cl-D-Cl6 Fraction (F4)				>Cl-D-Cl6 Fraction (Sum)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc							
COL	Detect	- Coal Tar	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 Table 18(7) Management Limits Comm / Ind, Coarse Soil			1	0.2	0.5	1	2	1	1	0.1	700	260 370 630	1,000	3,500	10,000																				
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																																			
NEPM 2013 Table 18(5) Generic EIL - Comm/Ind			370						230													160		325	137	1800		62	350						
NEPM 2013 Table 18(6) EILs for Comm/Ind, Coarse Soil				75	135	165			180			215	170	170	1,700	3,300																			
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																		80			3,000	900		240,000	1,500	730	6,000	400,000				2,000			

Field ID	Date	Depth	Matrix Type	Sample Type	Lab Report Number	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	8.0	8	<0.4	6	13	7	<0.1	7	51	<0.1	<0.1	<0.1	<0.1		
MC208680_100	21 Mar 2025	100	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	7.7	4	<0.4	7	<1	6	<0.1	<1	2	<0.1	<0.1	<0.1	<0.1		
MC208680_500	21 Mar 2025	500	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	7.7	4	<0.4	7	<1	6	<0.1	<1	2	<0.1	<0.1	<0.1	<0.1		
MC208680_S	21 Mar 2025	0	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	6.1	9	<0.4	16	17	13	<0.1	<1	10	51	<0.1	<0.1	<0.1	<0.1	
MC208680_SP	21 Mar 2025		Soil	Normal	376250	0	0	2	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	550	620	1,200	<5	<0.1	5.5	<4	<0.4	36	4	6	<0.1	3	13	<0.1	<0.1	<0.1	<0.1		
MC208680_SP - [TRIPLICA]	21 Mar 2025		Soil	Normal	376250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
MC208720_100	21 Mar 2025	100	Soil	Normal	376250	0	0	2	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	5.4	8	<0.4	5	15	8	<0.1	9	52	<0.1	<0.1	<0.1	<0.1		
MC208720_500	21 Mar 2025	500	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	9.3	<4	<0.4	2	<1	<1	<0.1	<1	1	<0.1	<0.1	<0.1	<0.1		
MC208720_S	21 Mar 2025	0	Soil	Normal	376250	0	0	5	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<180	<180	<50	<100	<380	<1,700	<5	<0.1	6.2	7	<0.4	50	11	6	<0.1	4	21	<0.1	<0.1	<0.1	<0.1	
MC208720_SP	21 Mar 2025		Soil	Normal	376250	0	0	1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	520	570	1,100	<5	<0.1	6.8	<4	<0.4	29	3	3	<0.1	3	20	<0.1	<0.1	<0.1	<0.1		
MC208760_100	21 Mar 2025	100	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	7.6	7	<0.4	6	13	8	<0.1	8	41	<0.1	<0.1	<0.1	<0.1		
MC208760_500	21 Mar 2025	500	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	11	<4	<0.4	1	<1	<1	<0.1	<1	1	<0.1	<0.1	<0.1	<0.1		
MC208760_S	21 Mar 2025	0	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	5.7	8	<0.4	5	13	6	<0.1	5	36	<0.1	<0.1	<0.1	<0.1		
MC208760_SP	21 Mar 2025		Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	300	120	420	<5	<0.1	5.3	7	<0.4	53	15	11	<0.1	11	45	<0.1	<0.1	<0.1	<0.1		
MC208790_100	21 Mar 2025	100	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	7.7	15	<0.4	6	16	7	<0.1	8	76	<0.1	<0.1	<0.1	<0.1		
MC208790_500	21 Mar 2025	500	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	16	<4	<0.4	<1	<1	<1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1		
MC208790_S	21 Mar 2025	0	Soil	Normal	376250	0	0	14	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	96	82	<2,300	<1,300	<3,800	<5	<0.1	7.8	<4	<0.4	33	15	46	<0.1	3	48	<0.1	<0.1	<0.1	<0.1		
MC208790_SP	21 Mar 2025		Soil	Normal	376250	0	0	1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	620	690	1,300	<5	<0.1	7.6	<4	<0.4	31	8	8	<0.1	2	60	<0.1	<0.1	<0.1	<0.1		
MC208820_100	21 Mar 2025	100	Soil	Normal	376250	0	0	<710	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	860	150	<5,300	<2,400	<8,600	<5	<0.1	3.7	11	<0.4	6	14	13	0.1	8	40	<0.1	<0.1	<0.1	<0.1		
MC208820_500	21 Mar 2025	500	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	14	<4	<0.4	2	<1	2	<0.1	<1	3	<0.1	<0.1	<0.1	<0.1		
MC208820_S	21 Mar 2025	0	Soil	Normal	376250	0	0	4	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	97	93	<2,600	<1,100	<3,900	<5	<0.1	3.4	<4	<0.4	140	8	11	<0.1	7	16	<0.1	<0.1	<0.1	<0.1		
MC208820_SP	21 Mar 2025		Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	420	530	940	<5	<0.1	4.7	<4	<0.4	20	2	3	<0.1	1	6	<0.1	<0.1	<0.1	<0.1		
MC208850_100	21 Mar 2025	100	Soil	Normal	376250	0	0	1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	300	120	420	<5	<0.1	5.3	7	<0.4	53	15	11	<0.1	11	45	<0.1	<0.1	<0.1	<0.1		
MC208850_500	21 Mar 2025	500	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	8.7	<4	<0.4	2	<1	<1	<0.1	<1	1	<0.1	<0.1	<0.1	<0.1		
MC208850_S	21 Mar 2025	0	Soil	Normal	376250	0	0	7	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<190	<180	<3,500	<1,000	<4,700	<5	<0.1	4.9	6	<0.4	25	16	17	<0.1	10	40	<0.1	<0.1	<0.1	<0.1		
MC208850_SP	21 Mar 2025		Soil	Normal	376250	0	0	22	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	69	<50	720	680	1,500	<5	<0.1	7.4	<4	<0.4	10	4	6	<0.1	3	16	<0.1	<0.1	<0.1	<0.1		
MC208850_SP - [TRIPLICA]	21 Mar 2025		Soil	Normal	376250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	-	810	620	1,500	<5	-	-	<4	<0.4	28	6	11	<0.1	4	26	-	-	-	-
MC208890_100	21 Mar 2025	100	Soil	Normal	376250	0	0	14	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	240	220	<4,400	<1,100	<5,800	<5	<0.1	4.6	<4	<0.4	24	9	15	<0.1	4	28	<0.1	<0.1	<0.1	<0.1		
MC208890_500	21 Mar 2025	500	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	11	<4	<0.4	1	<1	<1	<0.1	<1	<1	<0.1	<0.1	<0.1	<0.1		
MC208890_S	21 Mar 2025	0	Soil	Normal	376250	0	0	8	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<280	<280	<5,600	<1,500	<7,400	<5	<0.1	3.6	<4	<0.4	120	8	11	<0.1	8	18	<0.1	<0.1	<0.1	<0.1		
MC208890_SP	21 Mar 2025		Soil	Normal	376250	0	0	230	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<4,100	<3,900	<24,000	<4,400	<33,000	<5	<1	1.7	<4	<0.4	4	3	30	<0.1	<1	20	<1	<1	<1	<1		
MC208930_100	21 Mar 2025	100	Soil	Normal	376250	0	0	42	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	320	280	<5,000	<1,800	<7,100	<5	<0.1	4.1	5	<0.4	47	12	14	<0.1	6	37	<0.1	<0.1	<0.1	<0.1		
MC208930_100 - [TRIPLICA]	21 Mar 2025		Soil	Normal	376250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
MC208930_500	21 Mar 2025	500	Soil	Normal	376250	0	0	<1	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	<100	<100	<50	<5	<0.1	8.9	<4	<0.4	1	<1	<1	<0.1	<1	1	<0.1	<0.1	<0.1	<0.1		
MC208930_S	21 Mar 2025	0	Soil	Normal	376250	0	0	15	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<470	<450	<6,800	<1,800	<9,100	<5	<0.1	6.1	4	<0.4	44	10	11	<0.1	6	32	<0.1	<0.1	<0.1	<0.1		
MC208930_SP	21 Mar 2025		Soil	Normal	376250	0	0	4	<0.2	<0.5	<1	<2	<1	<1	<0.1	<25	<25	<50	<50	350	400	740	<5	<0.1	4.3	<4	<0.4	13	3	4	<0.1	2	11	<0.1	<0.1	<0.1	<0.1		
MC208970_100	21 Mar 2025	100	Soil	Normal	3762																																		

ID	Date	Depth	Matrix Type	Sample Type	Lab Report Number
MC208680_100	21 Mar 2025	100	Soil	Normal	376250
MC208680_500	21 Mar 2025	500	Soil	Normal	376250
MC208680_S	21 Mar 2025	0	Soil	Normal	376250
MC208680_SP	21 Mar 2025		Soil	Normal	376250
MC208680_SP - [TRIPLUCAT]	21 Mar 2025		Soil	Normal	376250
MC208720_100	21 Mar 2025	100	Soil	Normal	376250
MC208720_500	21 Mar 2025	500	Soil	Normal	376250
MC208720_S	21 Mar 2025	0	Soil	Normal	376250
MC208720_SP	21 Mar 2025		Soil	Normal	376250
MC208760_100	21 Mar 2025	100	Soil	Normal	376250
MC208760_500	21 Mar 2025	500	Soil	Normal	376250
MC208760_S	21 Mar 2025	0	Soil	Normal	376250
MC208760_SP	21 Mar 2025		Soil	Normal	376250
MC208790_100	21 Mar 2025	100	Soil	Normal	376250
MC208790_500	21 Mar 2025	500	Soil	Normal	376250
MC208790_S	21 Mar 2025	0	Soil	Normal	376250
MC208790_SP	21 Mar 2025		Soil	Normal	376250
MC208820_100	21 Mar 2025	100	Soil	Normal	376250
MC208820_500	21 Mar 2025	500	Soil	Normal	376250
MC208820_S	21 Mar 2025	0	Soil	Normal	376250
MC208820_SP	21 Mar 2025		Soil	Normal	376250
MC208850_100	21 Mar 2025	100	Soil	Normal	376250
MC208850_500	21 Mar 2025	500	Soil	Normal	376250
MC208850_S	21 Mar 2025	0	Soil	Normal	376250
MC208850_SP	21 Mar 2025		Soil	Normal	376250
MC208850_SP - [TRIPLUCAT]	21 Mar 2025		Soil	Normal	376250
MC208890_100	21 Mar 2025	100	Soil	Normal	376250
MC208890_500	21 Mar 2025	500	Soil	Normal	376250
MC208890_S	21 Mar 2025	0	Soil	Normal	376250
MC208890_SP	21 Mar 2025		Soil	Normal	376250
MC208930_100	21 Mar 2025	100	Soil	Normal	376250
MC208930_100 - [TRIPLUCAT]	21 Mar 2025		Soil	Normal	376250
MC208930_500	21 Mar 2025	500	Soil	Normal	376250
MC208930_S	21 Mar 2025	0	Soil	Normal	376250
MC208930_SP	21 Mar 2025		Soil	Normal	376250
MC208970_100	21 Mar 2025	100	Soil	Normal	376250
MC208970_500	21 Mar 2025	500	Soil	Normal	376250
MC208970_S	21 Mar 2025	0	Soil	Normal	376250
MC208970_SP	21 Mar 2025		Soil	Normal	376250
MC209010_100	21 Mar 2025	100	Soil	Normal	376250
MC209010_500	21 Mar 2025	500	Soil	Normal	376250
MC209010_S	21 Mar 2025	0	Soil	Normal	376250
MC209010_SP	21 Mar 2025		Soil	Normal	376250
MC209040_100	21 Mar 2025	100	Soil	Normal	376250
MC209040_500	21 Mar 2025	500	Soil	Normal	376250
MC209040_S	21 Mar 2025	0	Soil	Normal	376250
MC209040_SP	21 Mar 2025		Soil	Normal	376250
MC209040_SP - [TRIPLUCAT]	21 Mar 2025		Soil	Normal	376250
MC209090_100	21 Mar 2025	100	Soil	Normal	376250
MC209090_500	21 Mar 2025	500	Soil	Normal	376250
MC209090_S	21 Mar 2025	0	Soil	Normal	376250
MC209090_SP	21 Mar 2025		Soil	Normal	376250
MC209130_100	21 Mar 2025	100	Soil	Normal	376250
MC209130_500	21 Mar 2025	500	Soil	Normal	376250
MC209130_S	21 Mar 2025	0	Soil	Normal	376250
MC209130_SP	21 Mar 2025		Soil	Normal	376250
MC209170_100	21 Mar 2025	100	Soil	Normal	376250
MC209170_500	21 Mar 2025	500	Soil	Normal	376250
MC209170_S	21 Mar 2025	0	Soil	Normal	376250
MC209170_SP	21 Mar 2025		Soil	Normal	376250
MC209210_100	21 Mar 2025	100	Soil	Normal	376250
MC209210_500	21 Mar 2025	500	Soil	Normal	376250
MC209210_S	21 Mar 2025	0	Soil	Normal	376250
MC209210_SP	21 Mar 2025		Soil	Normal	376250

[illegible]

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil
2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand
2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil
2013, NEPM 2013 Table 1A(1) HLLs Comm/Ind D Soil
2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil * CRC Care Technical Report 39

Table 1
Fill 18 - Hydrocarbon Impacted Material
Health Ecological Investigation and Screening (Commercial/Industrial)

	PAH																	Pesticides			TPH						
	Benzo(b+h)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(b)pyrene TEQ cat. (µm)	Benzo(b)pyrene TEQ (LOQ)	Benzo(a)pyrene TEQ cat. (Zero)	PAHs (sum of positives)	Fenamiphos	Mirex	Parathion	GC-9 Fraction	Cl4-Cl4 Fraction	Cl5-Cl8 Fraction	Cl9-Cl6 Fraction	Cl10-Cl6 Fraction (Sum)
EQ1	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil	0.2	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5	0.05	0.1	0.1	0.1	25	50	100	100	50
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																											
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind													370														
NEPM 2013 Table 1B(6) EILs for Comm/Ind, Coarse Soil						172**																					
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																40	40	40	4000		100						

Field ID	Date	Depth	Matrix Type	Sample Type	Lab Report Number	<0.2	<0.1	<0.1	<0.1	<0.1	0.07	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	0.1	<0.1	0.1	<0.5	<0.5	<0.5	0.50	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208680_100	21 Mar 2025	100	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.50	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208680_500	21 Mar 2025	500	Soil	Normal	376250	7.5	0.8	0.2	4.7	4.3	6.1	3.8	4.7	0.7	36	1.1	2.7	0.7	18	33	8.4	8.4	8.4	120	<0.1	<0.1	<0.1	<25	<50	150	130	280
MC208680_S	21 Mar 2025	0	Soil	Normal	376250	20	0.9	0.2	4.1	11	16	6.9	12	0.8	36	1.1	4.8	0.9	16	21	21	21	21	160	<0.1	<0.1	<0.1	<25	<50	270	530	800
MC208680_SP - [TRIPLICA	21 Mar 2025		Soil	Normal	376250	14	1.0	0.3	2.7	7.8	16	8.8	7.8	1	27	1.4	9.5	1	21	26	20	20	20	150	-	-	-	-	-	-	-	-
MC208720_100	21 Mar 2025	100	Soil	Normal	376250	<0.2	0.1	<0.1	<0.1	<0.1	0.06	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	1.2	0.2	0.1	<0.5	<0.5	<0.5	1.9	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208720_500	21 Mar 2025	500	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208720_S	21 Mar 2025	0	Soil	Normal	376250	65	13	1.2	27	40	52	38	38	5.7	92	29	29	40	110	80	72	72	72	660	<0.1	<0.1	<0.1	<25	90	970	480	1,500
MC208720_SP	21 Mar 2025		Soil	Normal	376250	15	1.3	0.4	4.3	9.1	12	4.0	9.1	0.8	39	2.2	2.8	0.9	18	35	16	16	16	150	<0.1	<0.1	<0.1	<25	<50	270	480	750
MC208760_100	21 Mar 2025	100	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	0.09	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	<0.5	0.55	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208760_500	21 Mar 2025	500	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208760_S	21 Mar 2025	0	Soil	Normal	376250	0.2	<0.1	<0.1	0.1	0.1	0.2	0.1	0.1	<0.1	0.4	<0.1	<0.1	0.2	0.5	0.4	<0.5	<0.5	<0.5	2.3	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208760_SP	21 Mar 2025		Soil	Normal	376250	2.9	0.2	0.1	0.8	1.8	2.2	1.7	1.8	0.3	7.3	0.4	1.2	0.2	3.6	10.0	3.1	3.1	3.1	33	<0.1	<0.1	<0.1	<25	<50	160	380	540
MC208790_100	21 Mar 2025	100	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	0.1	0.3	0.3	0.2	<0.1	0.5	<0.1	0.2	<0.1	0.2	0.4	<0.5	<0.5	<0.5	2.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208790_500	21 Mar 2025	500	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208790_S	21 Mar 2025	0	Soil	Normal	376250	68	4.5	3.2	16	36	53	46	35	6.5	120	5.7	34	12	60	120	74	74	74	620	<0.1	<0.1	<0.1	<25	<50	1,400	1,700	3,100
MC208790_SP	21 Mar 2025		Soil	Normal	376250	13	1	0.4	5.0	6.7	10	38	7.3	1.1	24	1.3	12	0.7	20	23	15	15	15	160	<0.1	<0.1	<0.1	<25	<50	310	580	900
MC208820_100	21 Mar 2025	100	Soil	Normal	376250	160	30	9.5	91	73	170	83	76	16	360	66	100	230	420	330	220	220	220	2,200	<0.1	<0.1	<0.1	<25	520	3,900	3,100	7,500
MC208820_500	21 Mar 2025	500	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208820_S	21 Mar 2025	0	Soil	Normal	376250	110	8.6	3.8	26	46	100	100	53	15	180	11	75	5.4	110	170	140	140	140	1,000	<0.1	<0.1	<0.1	<25	<50	1,800	1,600	3,300
MC208820_SP	21 Mar 2025		Soil	Normal	376250	5.1	0.9	0.2	2.0	3.6	3.8	2.6	3.3	0.6	14	1	2.0	0.3	13	14	5.5	5.5	5.5	66	<0.1	<0.1	<0.1	<25	<50	200	410	610
MC208850_100	21 Mar 2025	100	Soil	Normal	376250	17	1.9	0.6	6.7	9.2	13	11	9.2	1.1	31	1.2	7.9	0.2	26	29	18	18	18	160	<0.1	<0.1	<0.1	<25	<50	220	160	370
MC208850_500	21 Mar 2025	500	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208850_S	21 Mar 2025	0	Soil	Normal	376250	160	15	3.6	59	74	150	81	85	32	310	44	100	7.3	200	280	220	220	220	1,600	<0.1	<0.1	<0.1	<25	<50	2,700	1,700	4,300
MC208850_SP	21 Mar 2025		Soil	Normal	376250	23	3.3	0.8	27	15	19	15	13	1.5	95	9.2	11	12	110	90	26	26	26	440	<0.1	<0.1	<0.1	<25	<50	440	600	1,000
MC208850_SP - [TRIPLICA	21 Mar 2025		Soil	Normal	376250	33	4.2	0.9	15	19	25	21	19	3.3	70	7.5	15	10	65	64	35	35	35	370	-	-	-	-	-	520	570	1,100
MC208890_100	21 Mar 2025	100	Soil	Normal	376250	290	29	3.8	170	180	210	170	170	24	650	82	130	10	490	590	300	300	300	3,200	<0.1	<0.1	<0.1	<25	60	3,300	2,100	5,400
MC208890_500	21 Mar 2025	500	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208890_S	21 Mar 2025	0	Soil	Normal	376250	300	28	540	100	180	210	190	190	42	690	53	190	18	580	620	320	320	320	4,000	<0.1	<0.1	<0.1	<25	79	4,100	2,700	6,900
MC208890_SP	21 Mar 2025		Soil	Normal	376250	1,200	250	34	890	740	1,000	750	710	92	3,300	910	560	790	4,700	3,000	1,400	1,400	1,400	19,000	<1	<1	<1	<25	2,000	21,000	9,500	32,000
MC208930_100	21 Mar 2025	100	Soil	Normal	376250	200	43	4.8	110	200	160	110	200	45	470	100	82	33	410	660	260	260	260	2,800	<0.1	<0.1	<0.1	<25	120	3,500	2,800	6,400
MC208930_100 - [TRIPLICA	21 Mar 2025		Soil	Normal	376250	310	44	7.4	150	270	250	250	32	1,100	82	150	28	950	1,100	360	360	360	5,000	-	-	-	-	-	-	-	-	
MC208930_500	21 Mar 2025	500	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208930_S	21 Mar 2025	0	Soil	Normal	376250	350	71	5.2	240	220	260	200	200	34	1,100	140	150	26	790	940	370	370	370	4,800	<0.1	<0.1	<0.1	<25	110	5,200	3,100	8,400
MC208930_SP	21 Mar 2025		Soil	Normal	376250	4.4	1.1	0.4	6.5	2.8	3.2	1.8	3.2	0.4	15	1.4	1.4	1.4	28	13	4.5	4.5	4.5	84	<0.1	<0.1	<0.1	<25	<50	170	320	500
MC208970_100	21 Mar 2025	100	Soil	Normal	376250	19	1	0.6	5.2	10	15	16	11	2.0	35	1.2	13	0.3	27	32	21	21	21	190	<0.1	<0.1	<0.1	<25	<50	260	290	490
MC208970_500	21 Mar 2025	500	Soil	Normal	376250	<0.2	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	0.3	<0.5	<0.5	<0.5	1.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50
MC208970_S	21 Mar 2025	0	Soil	Normal	376250	13	0.6	0.5	5.5	7.7	9.5	7.7	6.8	0.6	23	1	5.7	0.2	26	22	13	13	13	130	<0.1	<0.1	<0.1	<25	<50	210	300	510
MC208970_SP	21 Mar 2025		Soil	Normal	376250	4.0	0.9	0.4	1.9	2.7	2.9	1.5	2.9	0.3	16	1.4	1.2	1.7	17	15	4.1	4.1	4.1	70	<0.1	<0.1	<0.1	<25	<50	180	250	430
MC209010_100	21 Mar 2025	100	Soil	Normal	376250	160	4.5	3.7	29	70	95	75	71	27	180	9.8	89	55	180	180	150	150	150	1,900	<0.1	<0.1	&					

Table 2
Fill 18 Hydrocarbon Impacted Area
ASLP Analysis of Exceedances

SOLUTIONS

	Leaching Preparation	BTEX						TRH				
		Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)
	pH (Final)	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.1	0.001	1	1	1	2	1	10	10	50	100	100
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)		0.016	950	180	80		350					
ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)		0.07	700	180	80							

Field ID	Date	Matrix Type												
MC208680_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC208680_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC208720_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	67	<100	<100	<100
MC208720_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC208760_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC208790_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC208790_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC208820_100	21 Mar 2025	Water	8.1	1.6	<100	<100	<100	<200	<100	<1,000	<10	2,200	2,000	<100
MC208820_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	68	160	<100	<100
MC208820_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC208850_100	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC208850_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	110	380	<100	<100
MC208850_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	95	130	<100	<100
MC208890_100	21 Mar 2025	Water	-	-	-	-	-	-	-	-	230	660	<100	<100
MC208890_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	170	460	<100	<100
MC208890_SP	21 Mar 2025	Water	8.4	0.02	<1	<1	<1	<2	<1	<10	<10	1,800	1,100	<100
MC208930_100	21 Mar 2025	Water	-	-	-	-	-	-	-	-	400	1,000	<100	<100
MC208930_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	370	720	<100	<100
MC208930_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	51	140	<100	<100
MC208970_100	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC208970_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC208970_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC209010_100	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC209010_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC209010_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC209040_100	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC209040_500	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC209040_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC209040_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	74	<100	<100	<100
MC209090_100	21 Mar 2025	Water	-	-	-	-	-	-	-	-	280	850	<100	<100
MC209090_500	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC209090_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	310	870	<100	<100
MC209090_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC209130_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC209130_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	<50	<100	<100	<100
MC209170_100	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC209170_500	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC209210_100	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-
MC209210_S	21 Mar 2025	Water	8.6	5.3	<100	<100	<100	<200	<100	<1,000	<10	6,000	2,500	<100
MC209210_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	<50	<100	<100

Statistics													
Number of Results	3	3	3	3	3	3	3	3	3	3	27	27	27
Number of Detects	3	3	0	0	0	0	0	0	0	0	15	13	0
Minimum Concentration	8.1	0.02	<1	<1	<1	<2	<1	<10	<10	<50	<100	<100	<100
Minimum Detect	8.1	0.02	ND	ND	ND	ND	ND	ND	ND	51	130	ND	ND
Maximum Concentration	8.6	5.3	<100	<100	<100	<200	<100	<1,000	<10	6,000	2,500	<100	<100
Maximum Detect	8.6	5.3	ND	ND	ND	ND	ND	ND	ND	6,000	2,500	ND	ND
Average Concentration *	8.4	2.3	34	34	34	67	34	335	5	464	432	50	50
Median Concentration *	8.4	1.6	50	50	50	100	50	500	5	67	50	50	50
Standard Deviation *	0.25	2.7	29	29	29	57	29	286	0	1,223	629	0	0
95% UCL (Student's-t) *	8.791	6.875	81.68	81.68	81.68	163.4	81.68	816.8	5	865.2	638.8	50	50
Number of Env Standard Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Env Standard Exceedances (Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Detects	100	100	0	0	0	0	0	0	0	56	48	0	0
% of Non-Detects	0	0	100	100	100	100	100	100	100	44	52	100	100
% of Detects at or above Env Standards	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Results Below Env Standards or Non-Detect	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards
ANZG, July 2023, ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)
ANZG, July 2023, ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)

Table 2
Fill 18 Hydrocarbon Impacted Area
ASLP Analysis of Exceedances

EQL	PAH															TPH			
	Benzo(b+j+k)fluoranthene (filtered)	Acenaphthene (filtered)	Acenaphthylene (filtered)	Anthracene (filtered)	Benzo(a)anthracene (filtered)	Benzo(a)pyrene (filtered)	Benzo(b)perylene (filtered)	Chrysene (filtered)	Dibenz(a,h)anthracene (filtered)	Fluoranthene (filtered)	Fluorene (filtered)	Indeno(1,2,3-c,d)pyrene (filtered)	Naphthalene (filtered)	Phenanthrene (filtered)	Pyrene (filtered)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)	0.0002	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	10	50	100	100
ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)				0.4		0.2				1.4			16	2					

Field ID	Date	Matrix Type																		
MC208680_S	21 Mar 2025	Water	0.00045	1.4	<0.1	<0.5	0.24	0.17	<0.1	0.25	<0.1	3.2	0.44	<0.1	0.19	0.41	2.6	-	-	-
MC208680_SP	21 Mar 2025	Water	<0.0002	0.75	<0.1	0.55	<0.1	<0.1	<0.1	<0.1	<0.1	0.64	0.60	<0.1	3.1	2.2	0.49	-	-	-
MC208720_S	21 Mar 2025	Water	<0.0002	5.0	<0.1	3.3	0.11	0.56	<0.1	0.11	<0.1	3.5	4.7	<0.1	0.72	14	2.5	-	<50	110
MC208720_SP	21 Mar 2025	Water	<0.0002	2.4	0.14	1.5	<0.1	<0.1	<0.1	<0.1	<0.1	1.8	2.3	<0.1	5.9	6.3	1.3	-	<50	<100
MC208760_SP	21 Mar 2025	Water	<0.0002	0.64	<0.1	0.49	<0.1	<0.1	<0.1	<0.1	<0.1	0.75	0.56	<0.1	1.3	2.1	0.54	-	<50	<100
MC208790_S	21 Mar 2025	Water	0.00050	1.6	<0.1	0.97	0.21	<0.1	<0.1	0.37	<0.1	5.2	1.0	<0.1	1.1	2.5	4.5	-	<50	<100
MC208790_SP	21 Mar 2025	Water	<0.0002	2.5	<0.1	0.77	<0.1	<0.1	<0.1	<0.1	<0.1	1.2	1.5	<0.1	8.9	3.9	0.88	-	<50	<100
MC208820_100	21 Mar 2025	Water	0.0039	39	1.5	39	2.1	0.44	0.43	2.2	<0.1	63	58	0.27	1,000	190	54	<1,000	1,600	2,600
MC208820_S	21 Mar 2025	Water	0.00095	5.7	<0.1	4.3	0.45	0.19	<0.1	0.63	<0.1	11	6.6	<0.1	14	19	9.6	-	<50	190
MC208820_SP	21 Mar 2025	Water	<0.0002	0.84	<0.1	0.41	<0.1	<0.1	<0.1	<0.1	<0.1	0.94	0.41	<0.1	0.46	1.8	0.73	-	<50	<100
MC208850_100	21 Mar 2025	Water	0.00090	16	0.36	2.6	0.81	0.33	0.11	0.90	<0.1	16	2.9	<0.1	1.4	8.0	16	-	-	-
MC208850_S	21 Mar 2025	Water	0.0026	12	0.15	7.8	1.6	0.39	0.45	1.6	<0.1	35	11	0.28	7.9	32	30	-	<50	430
MC208850_SP	21 Mar 2025	Water	0.00049	5.4	<0.1	<0.5	0.39	0.16	<0.1	0.34	<0.1	6.7	2.7	<0.1	6.1	2.2	5.2	-	<50	170
MC208890_100	21 Mar 2025	Water	0.0024	72	0.47	11	1.4	0.26	0.26	1.7	<0.1	57	46	0.19	0.81	160	47	-	<50	850
MC208890_S	21 Mar 2025	Water	0.00099	20	0.12	10	0.78	<0.1	<0.1	0.92	<0.1	28	23	<0.1	24	74	22	-	69	580
MC208890_SP	21 Mar 2025	Water	0.0010	50	0.58	34	0.78	0.11	0.14	0.82	<0.1	35	58	<0.1	770	140	28	<10	1,400	1,600
MC208930_100	21 Mar 2025	Water	0.0021	37	0.22	13	1.3	0.25	0.20	1.7	<0.1	34	26	0.13	51	89	28	-	200	1,200
MC208930_S	21 Mar 2025	Water	0.0015	37	0.19	11	0.99	0.17	0.13	1.1	<0.1	28	27	<0.1	69	85	23	-	180	900
MC208930_SP	21 Mar 2025	Water	<0.0002	2.2	<0.1	1.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.6	1.8	<0.1	9.8	5.6	1.1	-	<50	110
MC208970_100	21 Mar 2025	Water	<0.0002	2.0	<0.1	1.7	0.14	<0.1	<0.1	<0.1	<0.1	1.3	5.5	<0.1	9.2	5.5	0.16	-	-	-
MC208970_S	21 Mar 2025	Water	<0.0002	1.7	<0.1	2.0	0.20	<0.1	<0.1	0.22	<0.1	6.2	2.0	<0.1	0.37	10	4.8	-	<50	<100
MC208970_SP	21 Mar 2025	Water	<0.0002	2.2	<0.1	1.5	<0.1	<0.1	<0.1	0.12	<0.1	2.3	2.2	<0.1	16	6.0	1.7	-	-	-
MC209010_100	21 Mar 2025	Water	<0.0002	2.4	0.13	0.52	0.23	<0.1	<0.1	0.26	<0.1	3.9	0.96	<0.1	1.6	1.1	3.0	-	-	-
MC209010_S	21 Mar 2025	Water	0.00042	0.45	<0.1	0.35	0.43	0.27	0.27	0.52	<0.1	4.4	0.17	0.17	<0.1	1.8	3.8	-	<50	<100
MC209010_SP	21 Mar 2025	Water	<0.0002	1.2	<0.1	0.79	0.15	<0.1	<0.1	0.14	<0.1	1.8	1.4	<0.1	2.6	4.4	1.3	-	<50	<100
MC209040_100	21 Mar 2025	Water	0.00049	0.77	<0.1	0.27	0.73	0.29	0.15	0.69	<0.1	7.0	0.18	<0.1	0.95	0.78	6.2	-	-	-
MC209040_500	21 Mar 2025	Water	<0.0002	0.22	<0.1	<0.1	0.17	<0.1	<0.1	0.17	<0.1	1.9	<0.1	<0.1	<0.1	0.49	1.6	-	-	-
MC209040_S	21 Mar 2025	Water	<0.0002	1.8	<0.1	1.1	0.17	<0.1	<0.1	0.14	<0.1	2.2	1.8	<0.1	5.0	6.1	1.7	-	-	-
MC209040_SP	21 Mar 2025	Water	<0.0002	3.0	<0.1	1.7	0.22	<0.1	<0.1	0.18	<0.1	3.0	3.5	<0.1	15	8.4	2.2	-	55	<100
MC209090_100	21 Mar 2025	Water	0.0019	44	0.25	25	3.2	1.4	0.62	2.4	<0.1	49	54	0.48	1.9	180	40	-	66	1,100
MC209090_500	21 Mar 2025	Water	0.00066	1.4	<0.1	1.3	0.79	0.38	0.16	0.94	<0.1	8.3	2.2	0.13	<0.1	3.8	6.4	-	-	-
MC209090_S	21 Mar 2025	Water	0.00070	35	0.18	29	1.5	0.49	0.19	1.9	<0.1	31	41	0.15	38	140	23	-	120	1,100
MC209090_SP	21 Mar 2025	Water	<0.0002	1.4	<0.1	1.1	0.25	0.11	<0.1	0.28	<0.1	3.0	1.3	<0.1	0.65	5.6	2.3	-	<50	<100
MC209130_S	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100
MC209130_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100
MC209170_100	21 Mar 2025	Water	<0.0002	0.39	<0.1	0.43	0.18	0.10	0.11	0.22	<0.1	2.8	0.28	<0.1	0.37	2.2	2.4	-	-	-
MC209170_500	21 Mar 2025	Water	<0.0002	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.43	<0.1	<0.1	<0.1	0.19	0.38	-	-	-
MC209210_100	21 Mar 2025	Water	0.00043	20	0.20	4.3	0.94	0.28	<0.1	0.79	<0.1	13	5.3	<0.1	0.52	1.3	11	-	-	-
MC209210_S	21 Mar 2025	Water	0.0016	330	0.11	33	3.4	1.2	0.36	2.1	<0.1	40	110	0.28	1,600	230	31	<1,000	4,800	4,000
MC209210_SP	21 Mar 2025	Water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	<100

Statistics																				
Number of Results	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	3	27	27	27	
Number of Detects	19	36	14	33	29	20	14	29	0	37	35	9	33	37	37	0	9	14	0	
Minimum Concentration	<0.0002	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.43	<0.1	<0.1	<0.1	0.19	0.16	<10	<50	<100	<100	
Minimum Detect	0.00042	0.22	0.11	0.27	0.11	0.1	0.11	0.11	ND	0.43	0.17	0.13	0.19	0.19	0.16	ND	55	110	ND	
Maximum Concentration	0.0039	330	1.5	39	3.4	1.4	0.62	2.4	<0.1	63	110	0.48	1,600	230	54	<1,000	4,800	4,000	<100	
Maximum Detect	0.0039	330	1.5	39	3.4	1.4	0.62	2.4	ND	63	110	0.48	1,600	230	54	ND	4,800	4,000	ND	
Average Concentration *	0.0007	21	0.16	6.7	0.66	0.23	0.13	0.65	0.05	14	14	0.094	99	39	11	335	331	577	50	
Median Concentration *	0.00042	2.4	0.05	1.5	0.24	0.11	0.05	0.28	0.05	4.4	2.2	0.05	2.6	5.6	3.8	500	25	110	50	
Standard Deviation *	0.00089	55	0.26	11	0.83	0.3	0.14	0.71	0	18	24	0.095	325	65	15	286	975	927	0	
95% UCL (Student's-t) *	0.00094453	35.85	0.227	9.673	0.885	0.31	0.166	0.849	0.05	18.77	20.37	0.12	189.3	57.13	15.4	816.8	651.1	881.8	50	
Number of Env Standard Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Env Standard Exceedances (Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% of Detects	51	97	38	89	78	54	38	78	0	100	95	24	89	100	100	0	33	52	0	
% of Non-Detects	49	3	62	11	22	46	62	22	100	0	5	76	11	0	0	100	67	48	100	
% of Detects at or above Env Standards	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% of Results Below Env Standards or Non-Detect	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

ANZG, July 2023, ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)
ANZG, July 2023, ANZG Marine Water Toxicant DGVs LOSP 95% (July 2023)



APPENDIX C

ENVIROPACIFIC PILOT TRIAL REPORT



JOHN HOLLAND

M1 - SOIL TREATMENT TRIAL

Prepared by: Alfredo Munoz
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Date: 20/02/2026

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1.INTRODUCTION

EnviroPacIFIC has been engaged by John Holland (the Client) to design and evaluate a soil-remediation treatment methodology for material impacted during road-upgrade works along the Pacific Highway at Tomago, NSW. A previous waste classification assessment conducted by EnviroScience Solutions identified that approximately 6,000 m³ of stockpiled and in-situ soil within the Fill-18 corridor contained elevated concentrations of Polycyclic Aromatic Hydrocarbons (PAHs) and Total Recoverable Hydrocarbons (TRH), with several samples exceeding NSW EPA Restricted Solid Waste thresholds. These exceedances were primarily associated with hydrocarbon-impacted fill material encountered within the road corridor.

The broader site history indicates the area has long functioned as a road corridor and nature strip, with current earthworks undertaken as part of major highway upgrade construction. The presence of elevated PAHs and TRH required classification of sections of the soil mass as Restricted Solid Waste, necessitating controlled management and presenting significant disposal-related costs and carbon impacts.

EnviroPacIFIC has undertaken a bench-scale immobilisation trial to assess the feasibility of on-site reuse through contaminant immobilisation. The trial evaluated the performance of 2 different reagents, both individually and combined, with the objective of reducing contaminant leachability to meet relevant reuse criteria and eliminate the need for off-site disposal and reducing landfill demand, minimising transport emissions, and enabling beneficial reuse of site-won material.

The purpose of this report is to present the methodology, results, and interpretation of this bench-scale treatment trial and to provide recommendations on the applicability of each reagent for full-scale implementation at the Tomago Pacific Highway site.

2.DEFINITIONS

- ASLP-DI water – water leachable concentration assessed by Australian Standard Leaching Procedure (AS4439-1997).
- LOR – limit of reporting.
- NATA – National Association of Testing Authorities.
- PAH – Poly aromatic hydrocarbons
- TRH - Total Recoverable Hydrocarbons
- D – Duplicate
- RAP – Remedial Action Plan

3.TRIAL OBJECTIVES

The primary objective of this investigation is to assess the feasibility of stabilising hydrocarbon-impacted soil from the Tomago Pacific Highway project to enable compliant on-site reuse.

The specific objectives of this programme are to:

1. Evaluate the immobilisation performance of each reagent in reducing the leachability of PAHs and TRH in the impacted soil.
2. Determine whether immobilisation treatments can reduce contaminant leachate concentrations to levels compliant with on-site reuse criteria, thereby enabling its ability to remain on site.
3. Compare the relative effectiveness of each treatment approach to identify the most suitable immobilisation amendment for full-scale application.
4. Provide evidence-based recommendations to the Client which reagent(s) may be implemented at scale to enable safe and cost-effective reuse of the impacted soil within the Tomago highway-upgrade works.

4. TRIAL METHODOLOGY

4.1. BASELINE SAMPLES

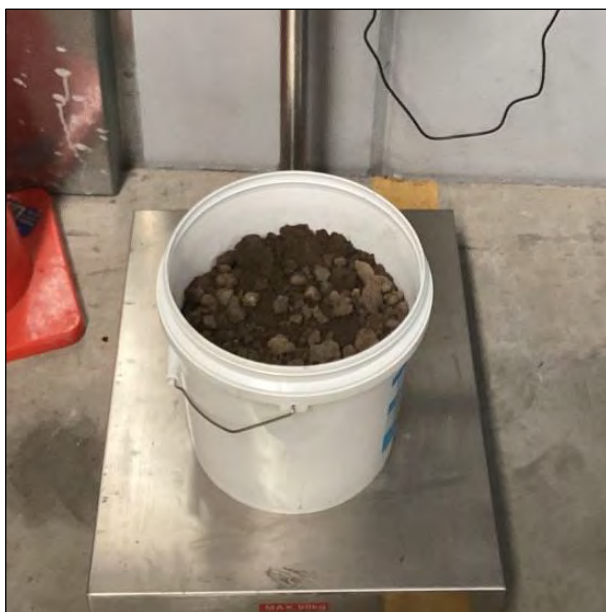
Samples were collected by an Enviropacific Engineer on 21 January 2026. A total of six 10-litre buckets were collected. Buckets were labelled S1 to S6. Samples S2 & S3 were collected using an excavator. All other samples by hand digging.

TABLE 1: BASELINE SAMPLES

Bucket ID	Samples ID	Bucket Weight (kg)	Soil Characteristics	Field Moisture	Comments
S1	Baseline 1	11.94	Dark-brown, Gravelly, Silty SAND	Moist	Trace 20 to 50mm cobbles
S2	Baseline 2	12.36	Brown, Gravelly Silty SAND	Dry to Moist	Trace 20 to 50mm cobbles
S3	Baseline 3	13.42	Dark-brown, Gravelly, Silty SAND	Moist	Trace 20 to 50mm cobbles
S4	Baseline 4	11.94	Brown, Gravelly, Silty SAND	Moist	Trace 20 to 50mm cobbles
S5	Baseline 5	11.68	Brown, Gravelly Silty SAND	Dry to Moist	Trace 20 to 50mm cobbles
S6	Baseline 6	12.64	Brown, Gravelly Silty SAND	Moist	Trace 20 to 50mm cobbles

A 250 ml jar was collected from each bucket and sent for testing at a NATA-credited laboratory for baseline analysis.

TEMPLATE 1: SOIL – S1



TEMPLATE 2: SOIL – S2



TEMPLATE 3: SOIL – S3



TEMPLATE 5: SOIL – S4



TEMPLATE 4: SOIL – S5



TEMPLATE 6: SOIL – S6



4.2. BASELINE SAMPLES HOMOGENISATION

Results from baseline testing indicated materials within each bucket were relatively uniform from a contaminant concentration perspective, and therefore no bucket was required to be excluded (for the purpose of testing the highest-concentrated material). A homogenised soil batch was subsequently prepared using material collected from the six baseline buckets. Approximately 3 kg of soil from each bucket (S1–S6) was subsampled and combined to form a single composite sample representative of the broader impacted soil mass to create a homogenised baseline material for the lab trials.

The combined soil was passed through a 5 mm sieve to remove oversized material and ensure uniform particle size prior to reagent addition. Following sieving, approximately 10 kg of homogenised soil was obtained. This prepared material was used both for:

1. Creation of a new baseline material, representing the sieved and standardised soil matrix prior to treatment, and
2. Reagent-addition phase of the immobilisation trials.

4.3. TRIAL MIXES

Mixes used in the trials are shown below in Table 2.

TABLE 2: TRIAL MIX REAGENTS

Mix	Reagent 1 (%)	Reagent 2 (%)
Baseline	Nil	Nil
Reagent 1-A	4	Nil
Reagent 1-B	8	Nil
Reagent 2-A	Nil	1
Reagent 2-A-Duplicate	Nil	1
Reagent 2-B	Nil	2
Reagent 2-B-Duplicate	Nil	2
Reagent 2-C	Nil	3
Reagent 2-C-Duplicate	Nil	3
Reagent 2-D	Nil	4
Reagent 2-D-Duplicate	Nil	4
Reagent 2-E	Nil	5
Reagent 2-E-Duplicate	Nil	5
Reagent 1+2-A	4	1
Reagent 1+2-B	4	2
Reagent 1+2-C	4	3
Reagent 1+2-D	4	5
Reagent 1+2-E	4	5

4.3.1. REAGENT 1

Two (2) samples were prepared for the Reagent 1 trial set. Refer to Table 2. Each mix was prepared using the following procedure:

1. 500 grams of homogenised soil was weighed into a mixing container.
2. The designated percentage of Reagent 1 was added to the soil.
3. The soil and reagent were thoroughly hand-mixed to ensure even distribution of the amendment throughout the entire sample mass.

TEMPLATE 7: A REAGENT 1 MIX



4.3.2. REAGENT 2

A total of ten (10) samples were prepared for the Reagent 2 trial set. This consisted of five primary mixes, each produced using a different percentage dosage of Reagent 2, along with one duplicate prepared for every primary mix to allow assessment of reproducibility. The same preparation procedure described in Section 4.3.1 was followed. However, each mix was produced using a one-kilogram subsample of the homogenised soil instead of 500 grams, with each soil subsample thoroughly hand-mixed to ensure uniform distribution of the reagent throughout the material. Refer to Table 2

TEMPLATE 8: A REAGENT 2 MIX



4.3.3. COMBINATION REAGENT 1 & 2

Five (5) samples were prepared using a combination of Reagent 1 and Reagent 2. For each mix, a 500-gram subsample of the homogenised soil was used. The percentage dosages of Reagent 1 and Reagent 2 were selected based on the individual reagent percentages applied in previous steps, ensuring consistency across all treatment sets. Refer to Table 2

The preparation method followed the same procedure outlined in Section 4.3.1, whereby each soil subsample was combined with the designated amounts of both reagents and thoroughly hand-mixed to ensure uniform distribution throughout the material.

TEMPLATE 9: A REAGENT 1 & 2 MIX



5. LABORATORY ANALISYS

All laboratory analyses were conducted by Envirolab, a NATA-accredited laboratory. The analytical program was divided into two components:

- Baseline Analysis – undertaken on the un-homogenised soil to establish initial contaminant concentrations and leachability characteristics.
- Post-Treatment Analysis – undertaken on the reagent-amended samples to assess the effectiveness of each immobilisation mix in reducing contaminant leachability.

All analyses were performed in accordance with the laboratory's accredited methods and followed strict chain-of-custody and quality assurance and control procedures.

5.1. BASELINE

During Phase 1 of the assessment, six baseline soil samples (Baseline 1 through Baseline 6) were analysed to establish the initial contaminant profile prior to treatment. Each of these samples underwent the full suite of analytical testing, including TRH, PAH, pH, measuring both totals and leachates (using ASLP). These results

were used to determine if any particular bucket should be excluded from homogenisation due to its excessively low contamination levels.

5.2. REAGENT MIXES

Phase 2 of the trial program used the combined (homogenised) baseline material for reagent addition (including duplicates) and then sent for analytical testing. All samples were consistently analysed for TRH and PAH (totals and ASLP) and pH ensuring a uniform dataset for comparison across treatment types.

5.3. QUALITY ASSURANCE AND CONTROL

Strict Quality Assurance and Quality Control (QA/QC) measures were implemented throughout the trial to ensure the integrity and reliability of all results. Cross-contamination was prevented by maintaining strict segregation during all mixing and testing activities. Personnel wore clean nitrile gloves during each mixing task and changed gloves between samples. Hands and arms were washed routinely, and all utensils, hand tools, and mixing equipment were thoroughly cleaned or replaced between trial batches.

All chemical analyses were undertaken by Envirolab Services Pty Ltd, a NATA-accredited laboratory, ensuring all baseline and post-treatment analytical results complied with nationally recognised technical and quality standards. Laboratory QA/QC procedures—such as surrogate recoveries, laboratory control samples (LCS), method blanks, matrix spikes, and duplicate analyses—were applied in accordance with Envirolab's accredited methods and acceptance criteria.

A total of four duplicate samples were analysed as part of the QA program: two duplicates from Reagent 1 mixes and two duplicates from Reagent 2 mixes. All duplicates met the industry-standard acceptance criteria of 30–50% Relative Percent Difference (RPD).

6.RESULTS

The results presented in this section focus on the remediation criteria in the *Draft Remedial Action Plan* (RAP), February 2026 provided by EnviroScience Solutions, rather than the full suite of analytes listed in the previous sections 5.1 and 5.2. The majority of these results were either below the laboratory LOR or not significantly relevant to the RAP site reuse criteria.

Accordingly, this section focuses on contaminants that directly affect the soil's suitability for reuse at the M1 Project. Based on the RAP, the key contaminants of concern are:

TABLE 3: RAP REMEDIATION ACCEPTANCE CRITERIA

Contaminant	ASLP Remediation Leachability Criteria (µg/L)	Human Health (mg/kg)	Ecology (mg/kg)
Benzo(a)pyrene	0.2	N/A	172
Benzo(a)pyrene TEQ	40	N/A	N/A
Naphthalene	16	N/A	370
Anthracene	0.4	N/A	N/A
Fluoranthene	1.4	N/A	N/A
Phenanthrene	2.0	N/A	N/A
Total PAHs	N/A	4000	N/A
TRH-F2	600	Com/Ind (20,000) – Intrusive (62,000)	170

THR-F3	600	Com/Ind (27,000) – Intrusive (85,000)	1,700
THR-F4	600	Com/Ind (38,000) – Intrusive (120,000)	3,300

6.1. BASELINE

6.1.1. TOTALS

Results for total concentrations of contaminants of concern are presented in the tables and charts below.

TABLE 4: INDIVIDUAL AND COMBINED BASELINE TOTAL RESULTS

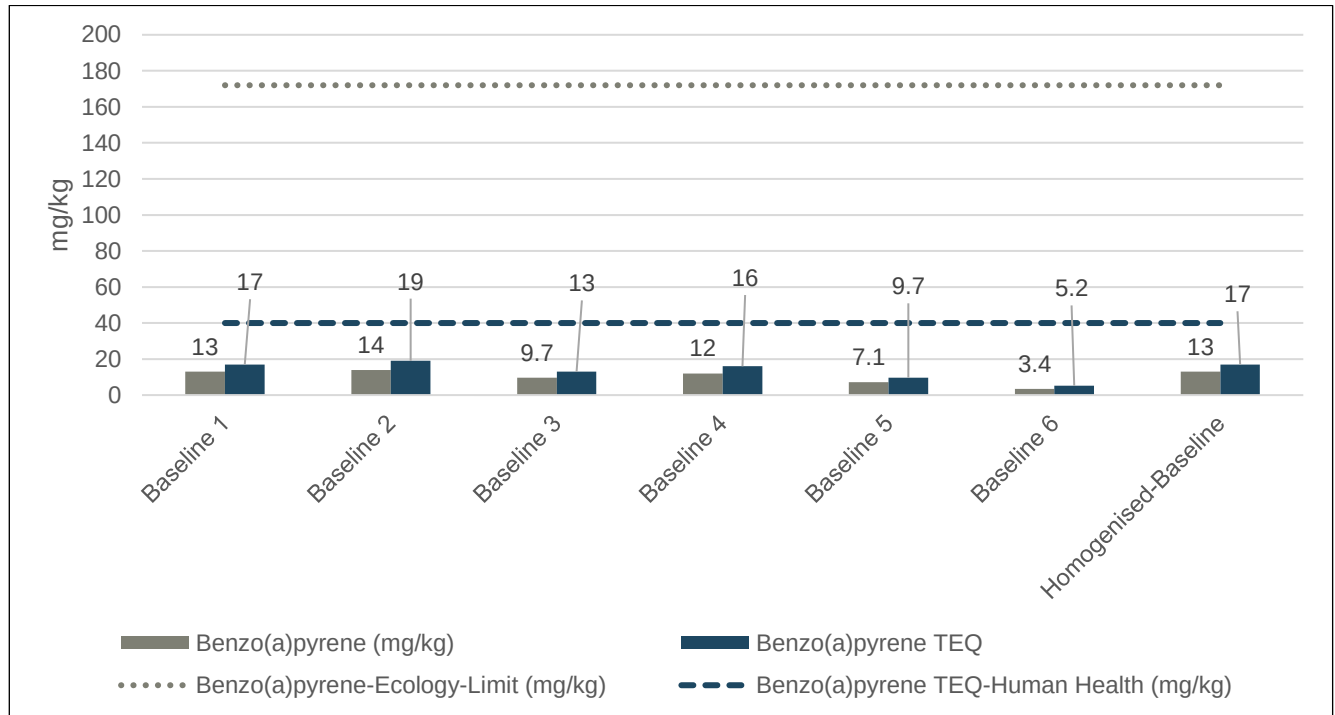
Sample ID	Benzo(a) pyrene (mg/kg)	Naphthalene (mg/kg)	Anthracene (mg/kg)	Fluoranthene (mg/kg)	Phenanthrene (mg/kg)
Baseline 1	13	0.2	1.4	20	8.2
Baseline 2	14	0.3	2.3	25	12
Baseline 3	9.7	0.2	1.1	15	6.2
Baseline 4	12	0.4	1.6	19	8.9
Baseline 5	7.1	0.1	1	14	6.8
Baseline 6	3.4	0.1	0.7	6.3	2.5
Homogenised- Baseline	13	0.3	2.4	23	9.6

TABLE 5: INDIVIDUAL AND COMBINED BASELINES TOTALS RESULTS - CONTINUED

Sample ID	Total PAHs	>C10-C16 Fraction (F2) (mg/kg)	>C16-C34 Fraction (F3) (mg/kg)	>C34-C40 Fraction (F4) (mg/kg)
Baseline 1	110	50	330	190
Baseline 2	130	50	290	120
Baseline 3	86	50	320	210
Baseline 4	110	50	390	250
Baseline 5	71	50	260	220
Baseline 6	39	50	140	140
Homogenised- Baseline	120	50	370	210

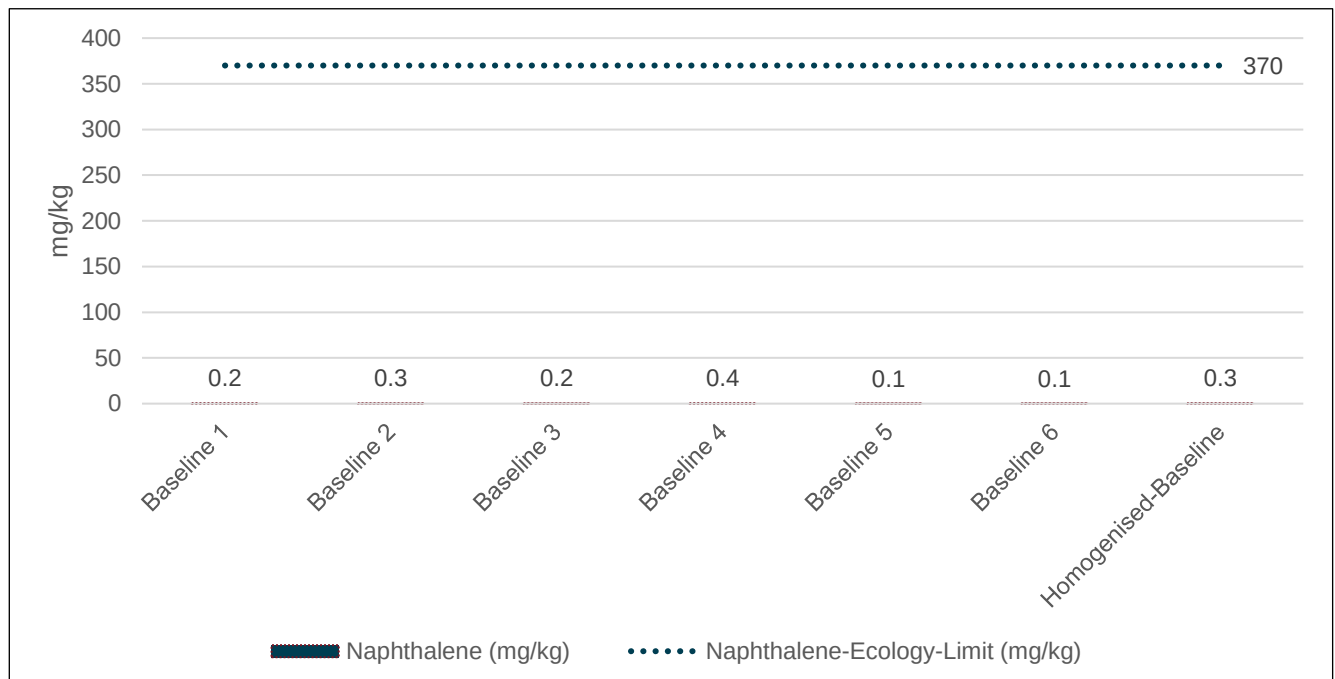
BENZO(A)PYRENE & BENZO(A)PYRENE TEQ

CHART 1: REMEDIATION CRITERIA - BENZO(A)PYRENE & BENZO(A)PYRENE TEQ – BASELINE TOTALS



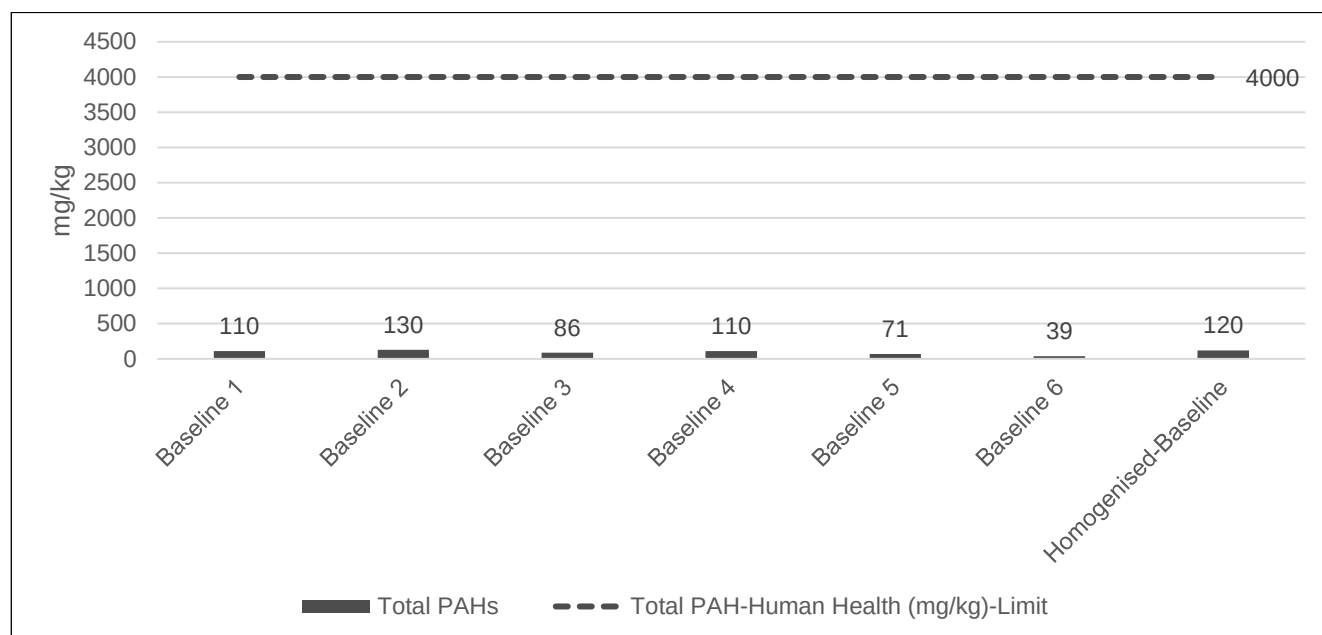
NAPHTHALENE

CHART 2: REMEDIATION CRITERIA – NAPHTHALENE – BASELINE TOTALS



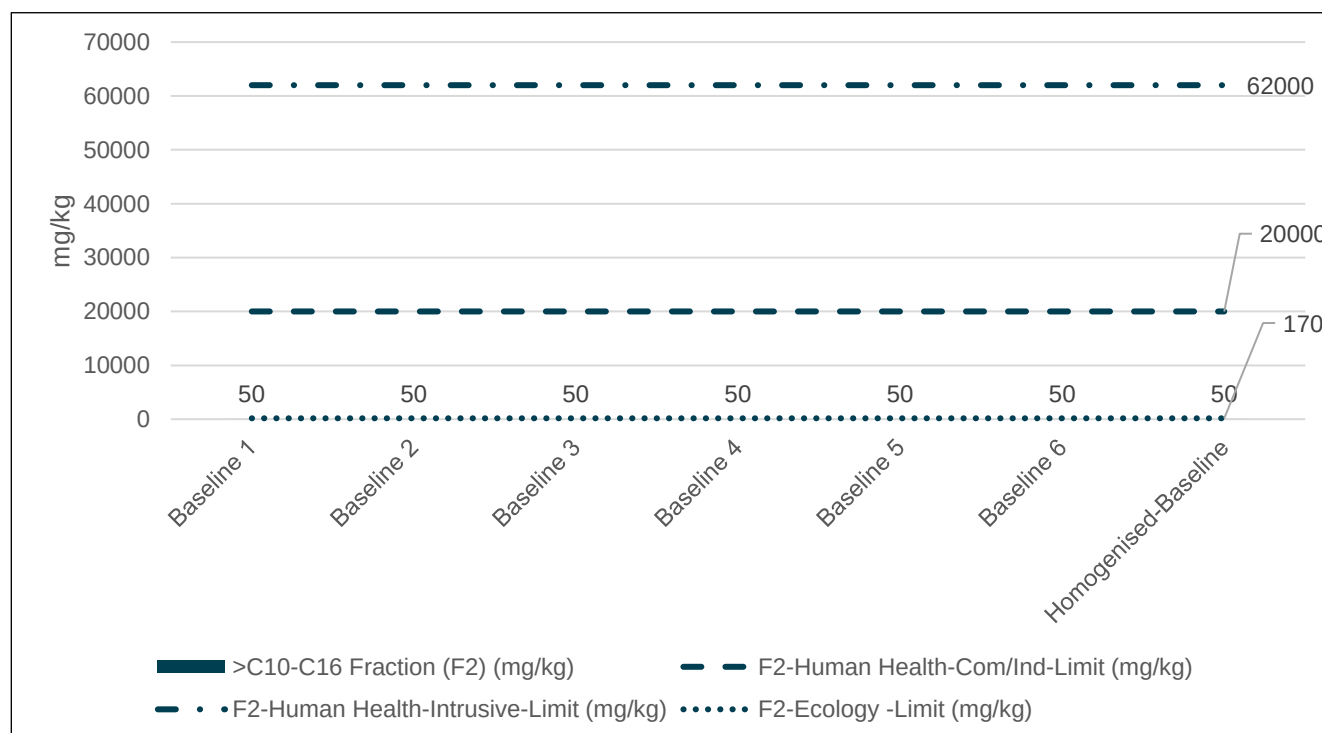
TOTAL PAH

CHART 3: REMEDIATION CRITERIA – PAH – BASELINE TOTAL



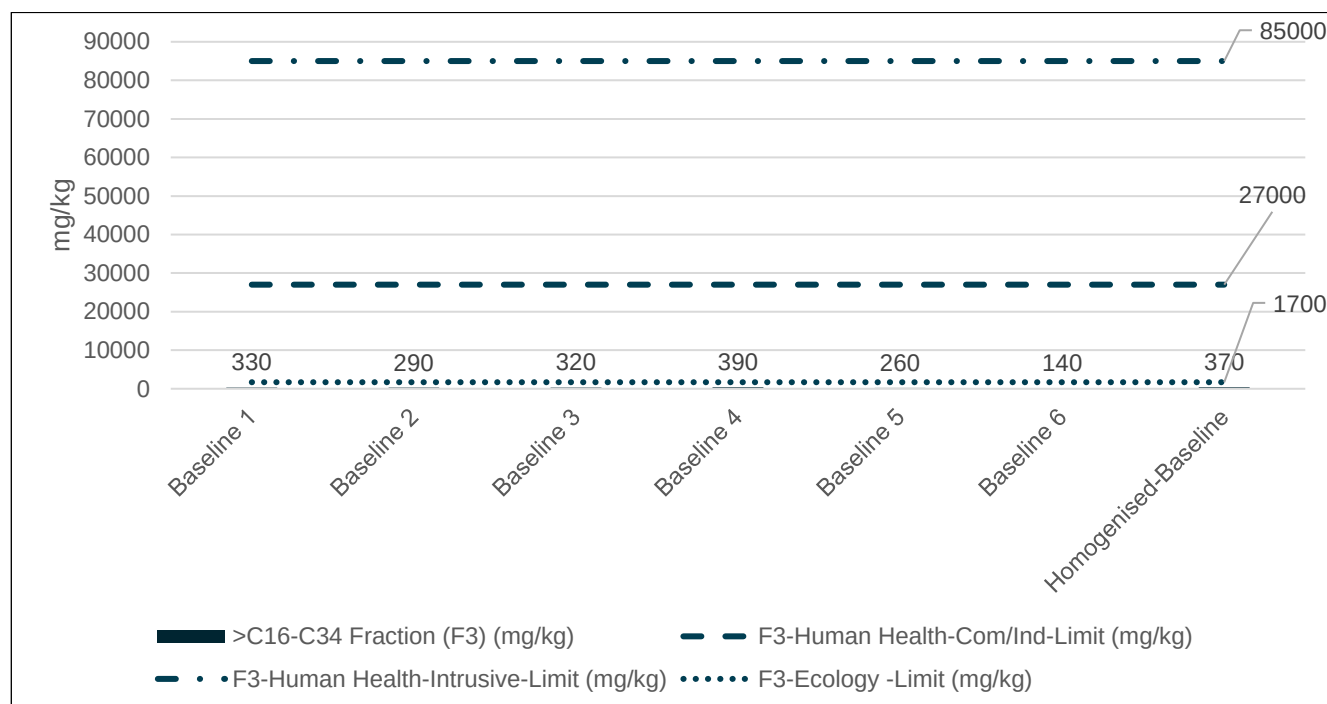
TRH – F2

CHART 4: REMEDIATION CRITERIA – F2 – BASELINE TOTALS



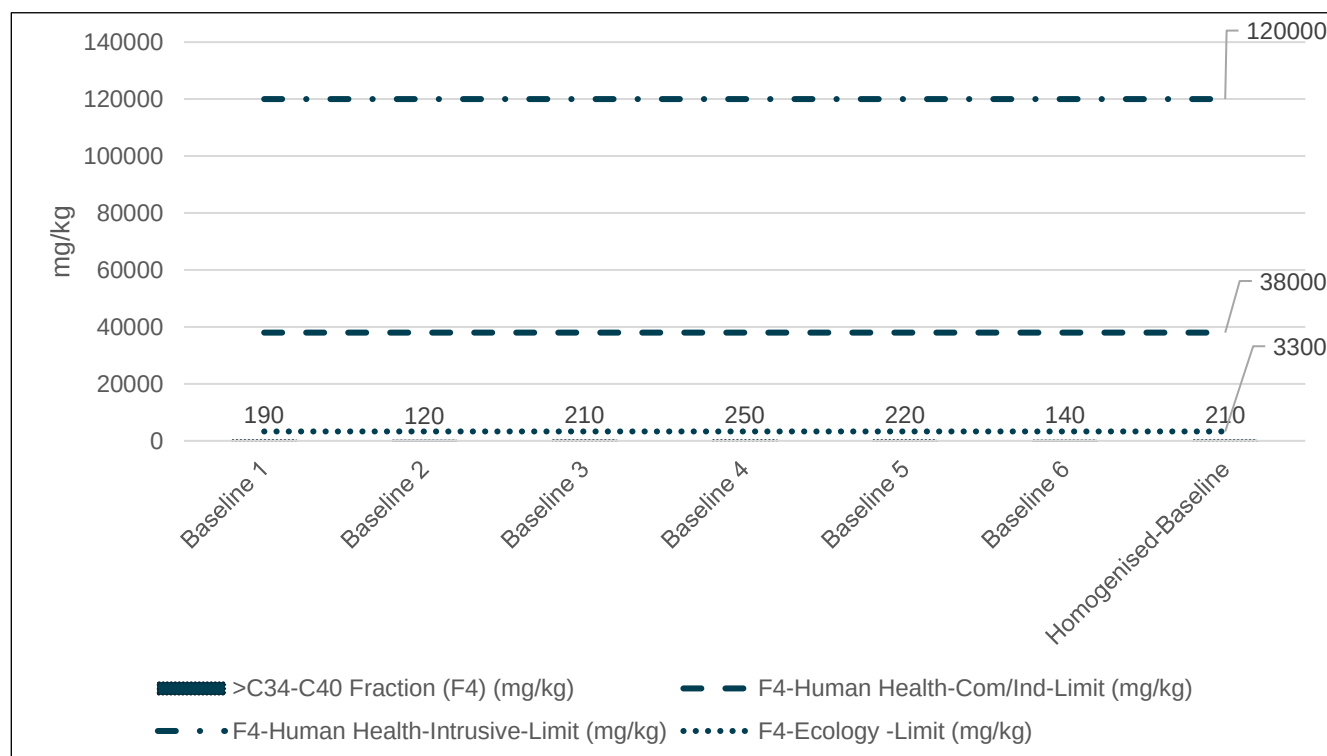
TRH – F3

CHART 5: REMEDIATION CRITERIA – F3 – BASELINE TOTALS



TRH – F4

CHART 6: REMEDIATION CRITERIA – F4 – BASELINE TOTALS



6.1.2. ASLP LEACHABILITY

The ASLP method was applied to all leachability results utilising deionised water (DI) to accurately simulate the future transfer of contaminants. This approach effectively mirrors the environmental conditions in which the material is expected to be placed.

TABLE 6: BASELINE LEACHABILITY RESULTS

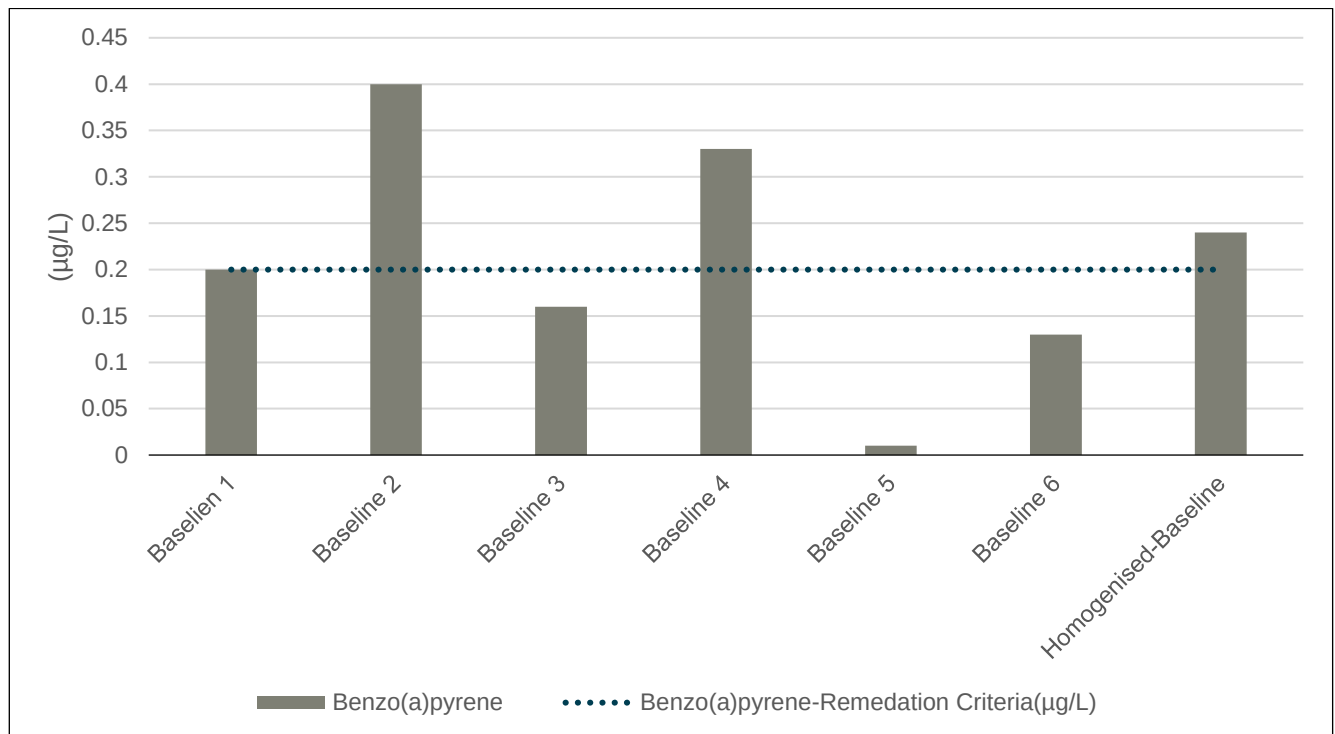
Sample ID	Benzo(a)pyrene (µg/L)	Naphthalene (µg/L)	Anthracene (µg/L)	Phenanthrene (µg/L)
Baseline 1	0.2	0.02	0.1	0.15
Baseline 2	0.4	0.06	0.92	4.7
Baseline 3	0.16	0.02	0.1	0.22
Baseline 4	0.33	0.02	0.1	0.19
Baseline 5	0.01	0.02	0.1	0.11
Baseline 6	0.13	0.02	0.1	0.27
Homogenised-Baseline	0.24	0.02	0.04	0.1

TABLE 7: BASELINE LEACHABILITY RESULTS – CONTINUED

Sample ID	Fluoranthene (µg/L)	>C10-C16 Fraction (F2) (µg/L)	>C16-C34 Fraction (F3) (µg/L)	>C34-C40 Fraction (F4) (µg/L)
Baseline 1	0.56	50	100	100
Baseline 2	3.2	50	100	100
Baseline 3	0.56	50	100	100
Baseline 4	0.75	50	100	100
Baseline 5	0.27	50	100	100
Baseline 6	0.32	50	100	100
Homogenised-Baseline	0.01	50	100	100

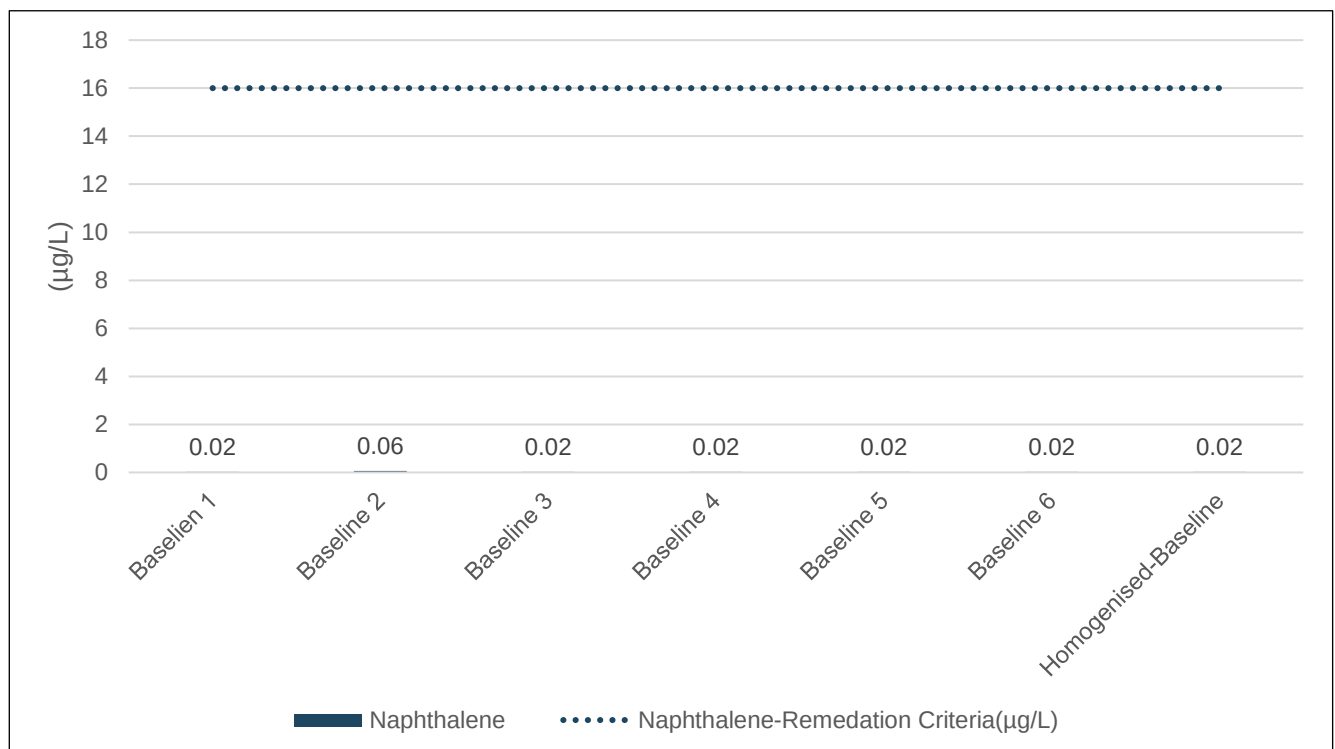
BENZO(A)PYRENE

CHART 7 REMEDIATION CRITERIA – BENZO(A)PYRENE – BASELINE LEACHABILITY



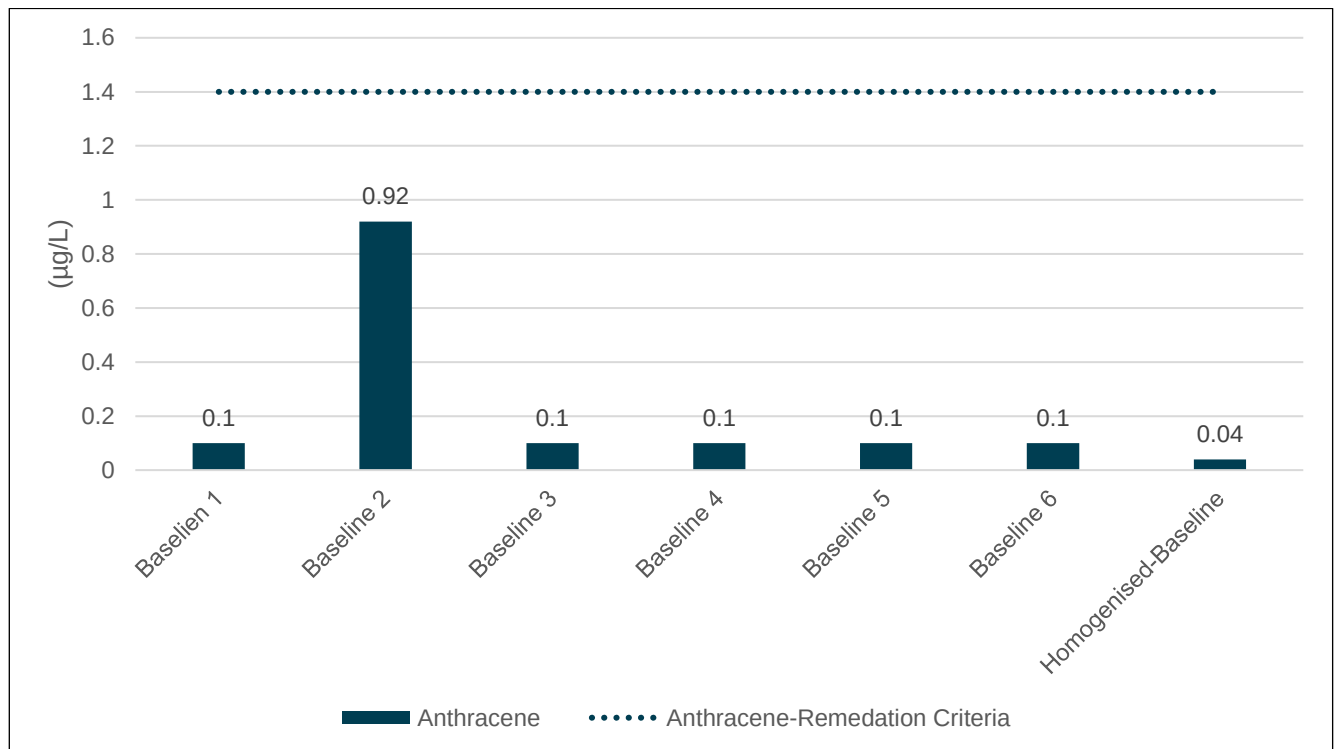
NAPHTHALENE

CHART 8: REMEDIATION CRITERIA – NAPHTHALENE – BASELINE LEACHABILITY



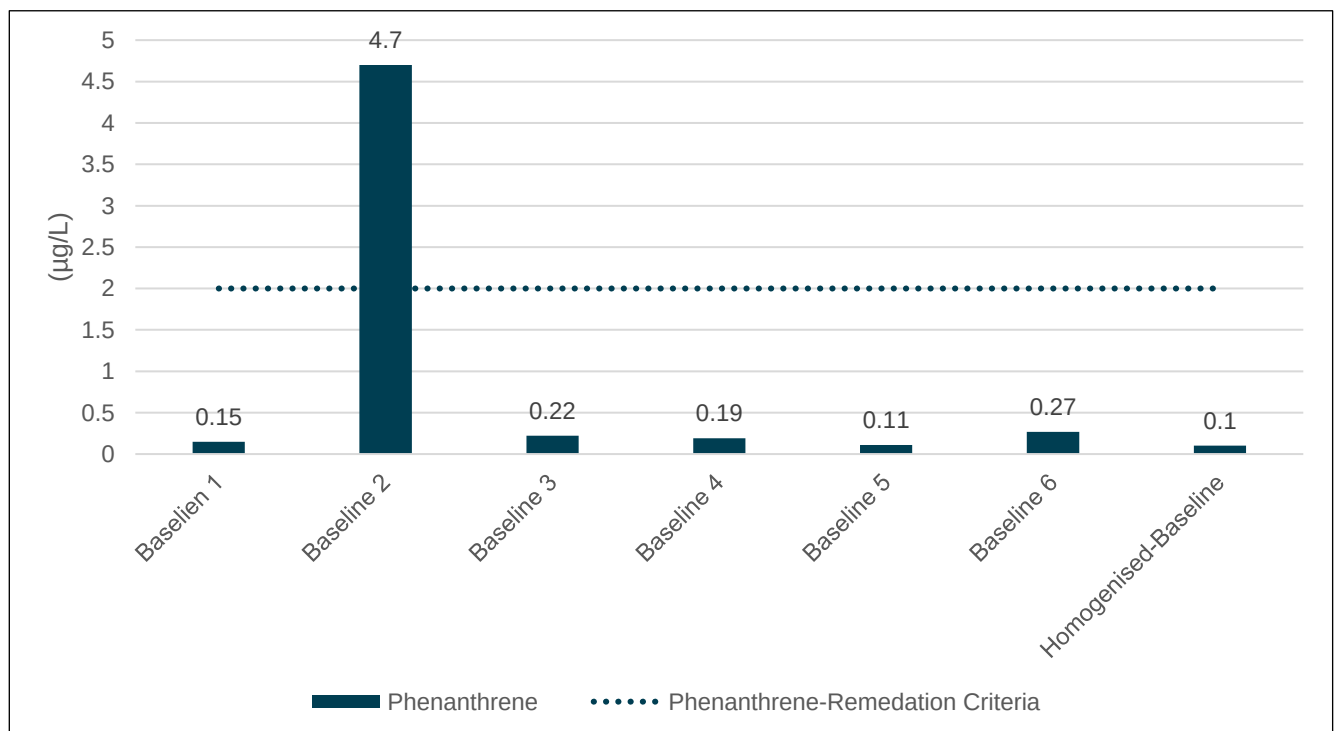
ANTHRACENE

CHART 9: REMEDIATION CRITERIA – ANTHRACENE – BASELINE LEACHABILITY



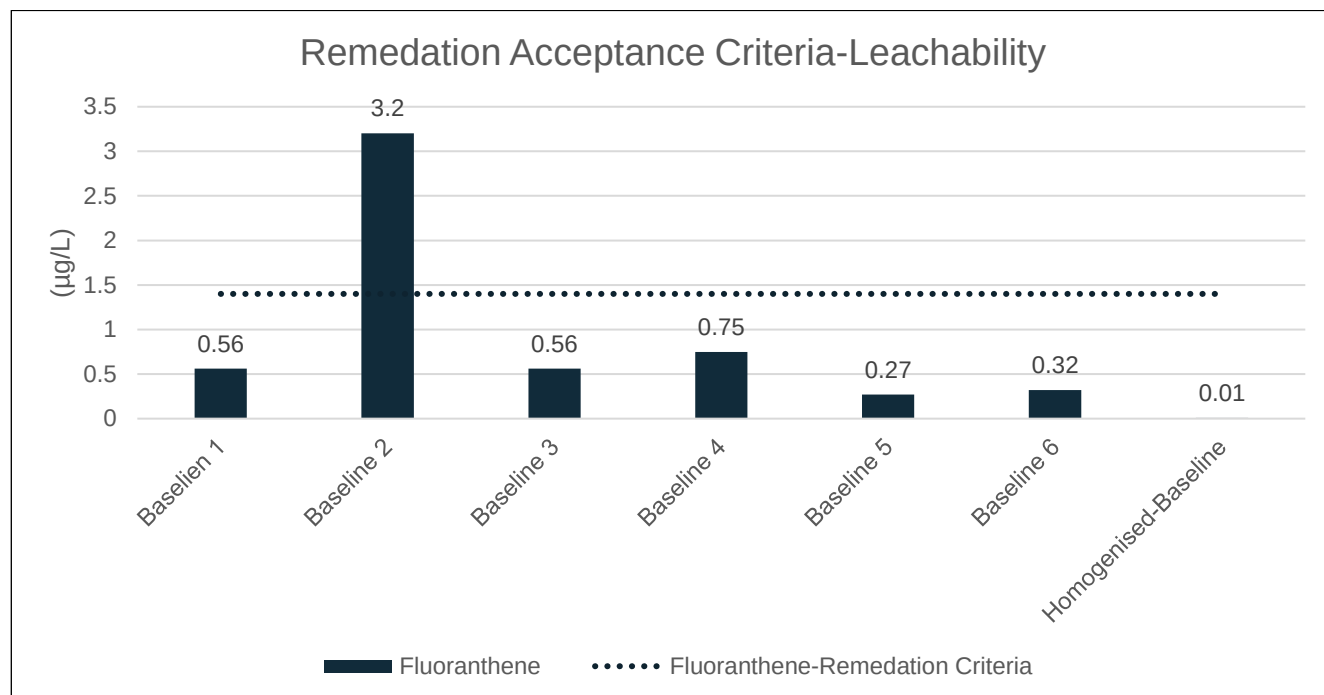
PHENANTHRENE

CHART 10: REMEDIATION CRITERIA – PHENANTHRENE – BASELINE LEACHABILITY



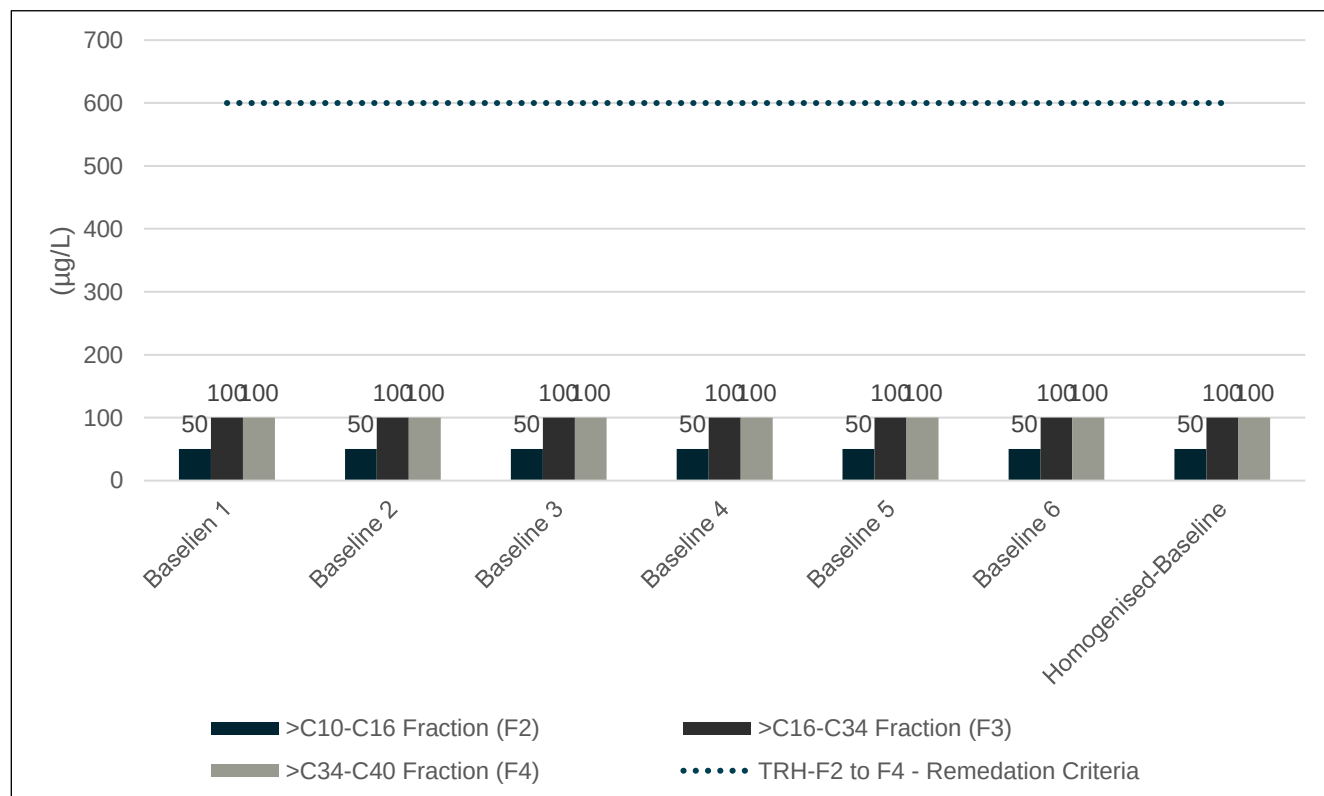
FLUORANTHENE

CHART 11: REMEDIATION CRITERIA – FLUORANTHENE – BASELINE LEACHABILITY



TRH

CHART 12: REMEDIATION CRITERIA – TRH – BASELINE LEACHABILITY



6.2. ADDITIVE MIXING

This section presents the results obtained from the combined homogenised baseline sample following treatment with the various reagent mixes.

The purpose of this evaluation is to determine the extent to which each reagent—or combination of reagents—effectively reduces the mobility of the key contaminants of concern adopted in the RAP.

6.2.1. TOTALS

Results for total concentrations of contaminants of concern are presented in the tables and charts below.

TABLE 8: ADDITIVE MIXING – TOTALS RESULTS

Mix	Benzo(a)pyrene (mg/kg)	Benzo(a)pyrene TEQ (mg/kg)	Naphthalene (mg/kg)	Total PAHs (mg/kg)
Reagent 1-A	14	20	0.6	190
Reagent 1-B	10	14	0.4	110
Reagent 2-A	1	10	2	10
Reagent 2-A-D	1.3	2.3	3.9	86
Reagent 2-B	5	50	10	5
Reagent 2-B-D	5	50	10	5
Reagent 2-C	5	50	10	5
Reagent 2-C-D	5	50	10	5
Reagent 2-D	5	50	10	5
Reagent 2-D-D	5	50	10	5
Reagent 2-E	5	50	10	5
Reagent 2-E-D	5	50	10	5
Reagent 1+2-A	1	1	2	2.1
Reagent 1+2-B	5	50	10	5
Reagent 1+2-C	5	50	10	5
Reagent 1+2-D	5	50	10	5
Reagent 1+2-E	5	50	10	5

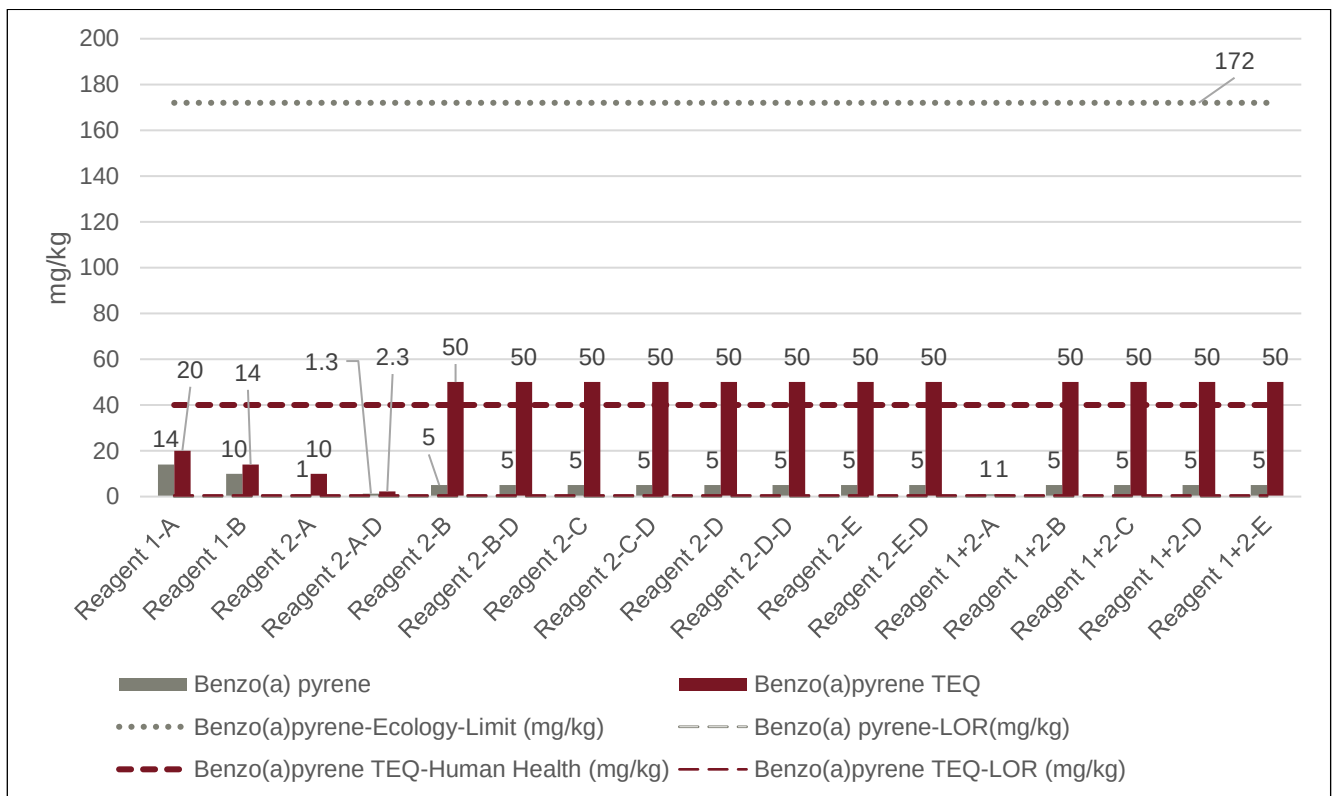
TABLE 9: ADDITIVE MIXING – TOTALS RESULTS – CONTINUATION

Mix	>C10-C16 Fraction (F2) (mg/kg)	>C16-C34 Fraction (F3) (mg/kg)	>C34-C40 Fraction (F4) (mg/kg)
Reagent 1-A	50	370	160
Reagent 1-B	50	310	170
Reagent 2-A	50	100	100
Reagent 2-A-D	50	250	110
Reagent 2-B	100	200	200
Reagent 2-B-D	100	200	200
Reagent 2-C	100	200	200
Reagent 2-C-D	100	200	200
Reagent 2-D	250	500	500
Reagent 2-D-D	250	500	500

Reagent 2-E	250	500	500
Reagent 2-E-D	250	500	500
Reagent 1+2-A	50	100	100
Reagent 1+2-B	50	110	100
Reagent 1+2-C	100	200	200
Reagent 1+2-D	250	500	500
Reagent 1+2-E	250	500	500

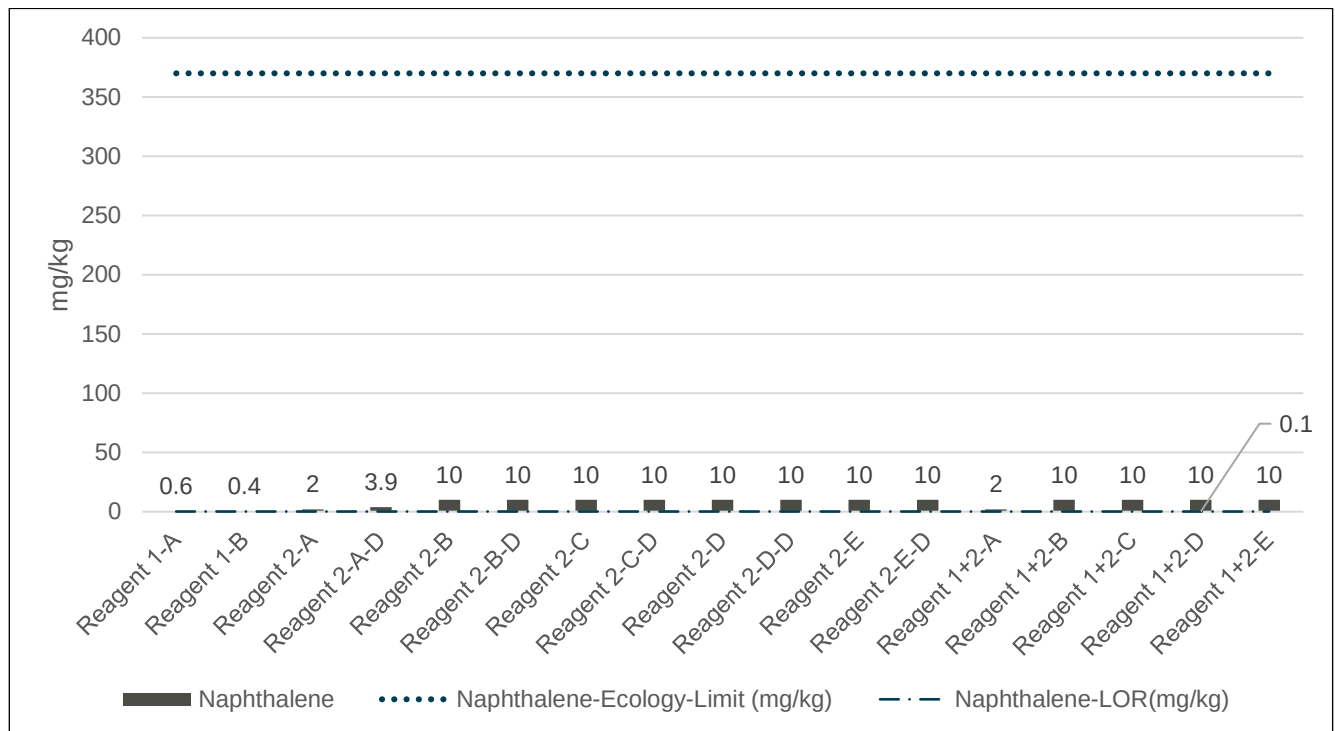
BENZO(A)PYRENE & BENZO(A)PYRENE TEQ

CHART 13: REMEDIATION CRITERIA - BENZO(A)PYRENE & BENZO(A)PYRENE TEQ – ADDITIVE MIXING - TOTALS



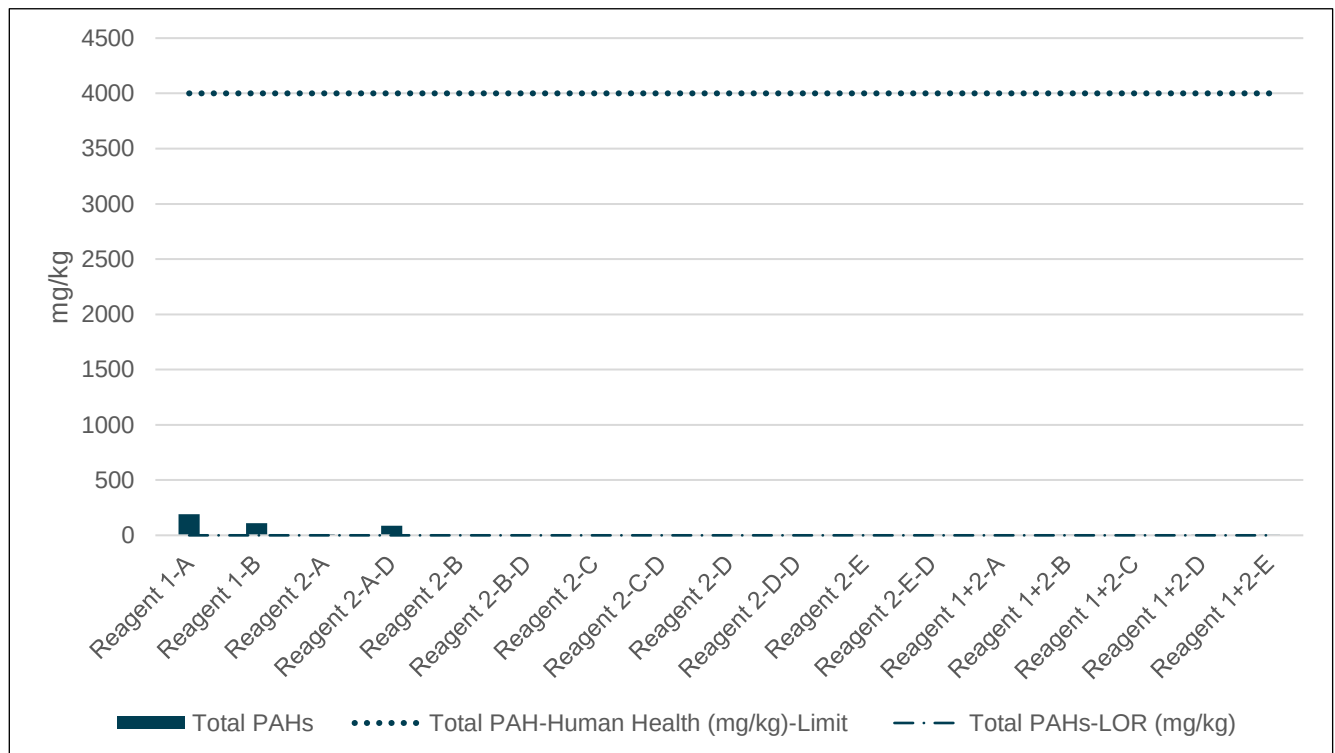
NAPHTHALENE

CHART 14: REMEDIATION CRITERIA – NAPHTHALENE – ADDITIVE MIXING - TOTALS



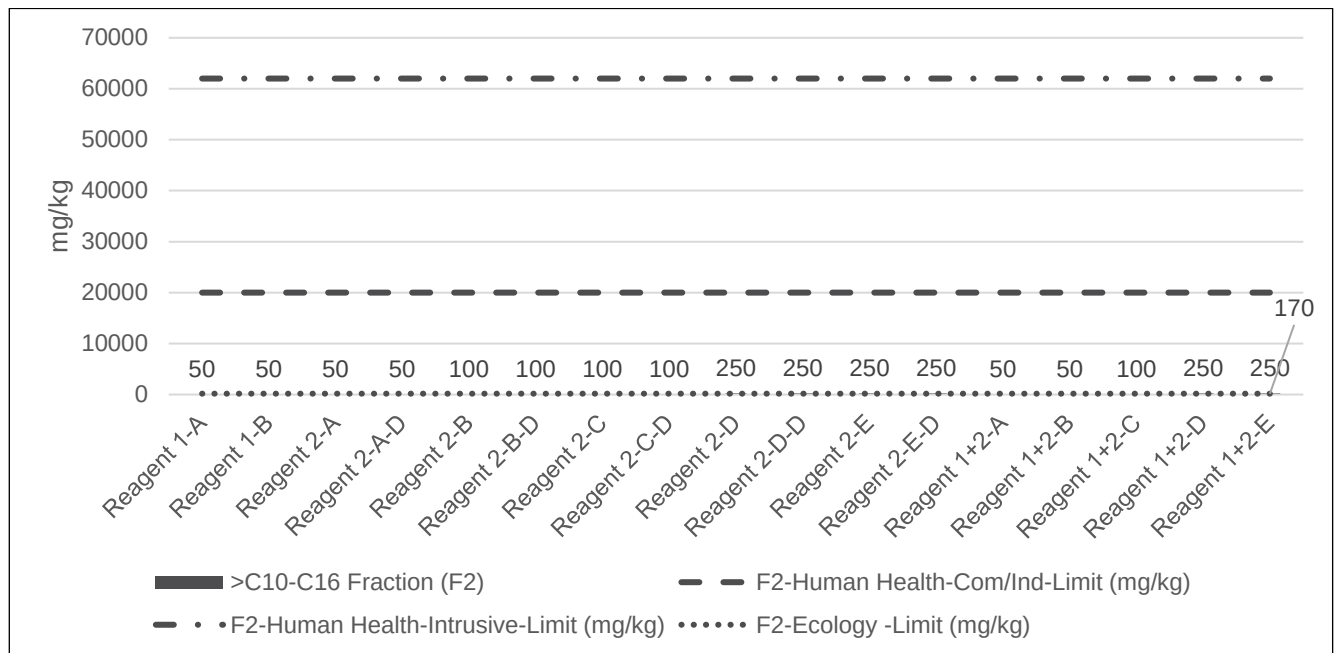
TOTAL PAH

CHART 15: REMEDIATION CRITERIA – PAH – ADDITIVE MIXING TOTALS



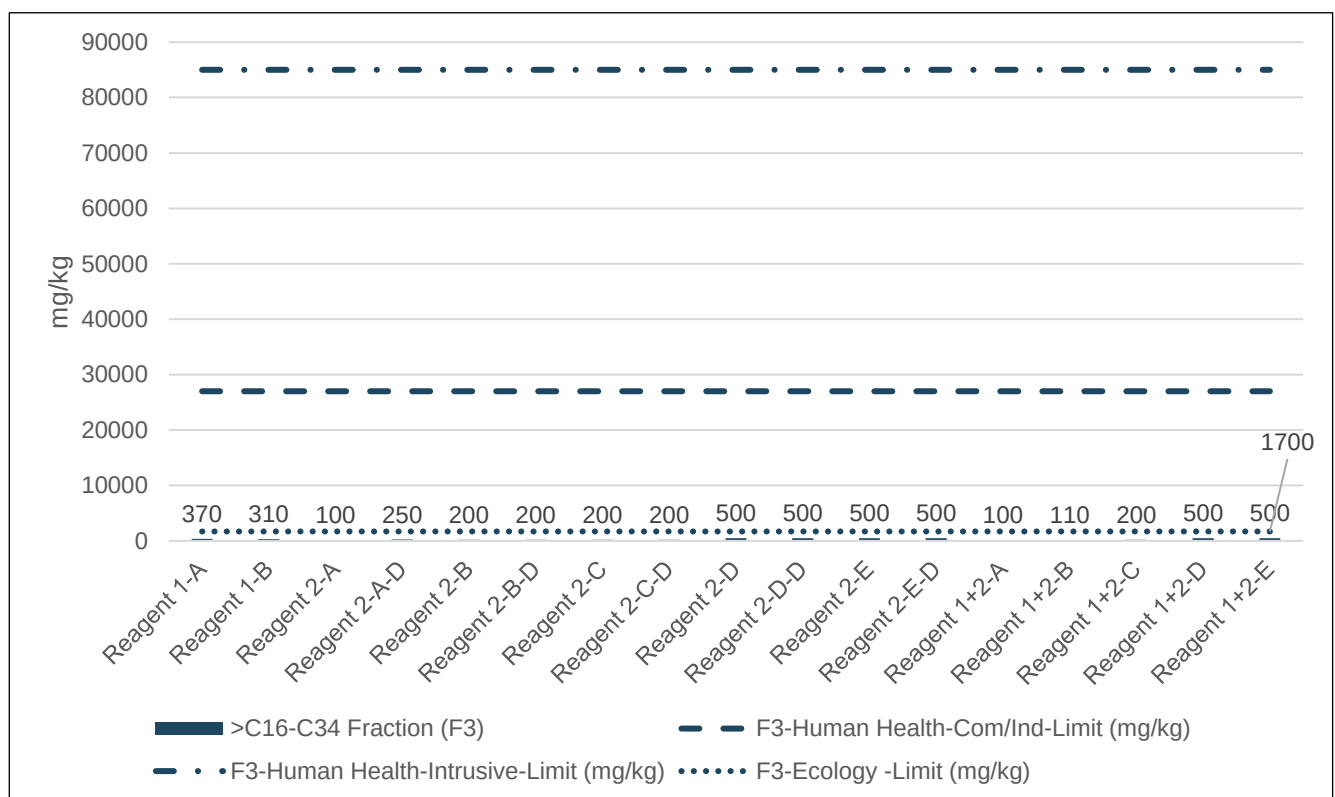
TRH – F2

CHART 16: REMEDIATION CRITERIA – F2 – ADDITIVES MIXING TOTALS



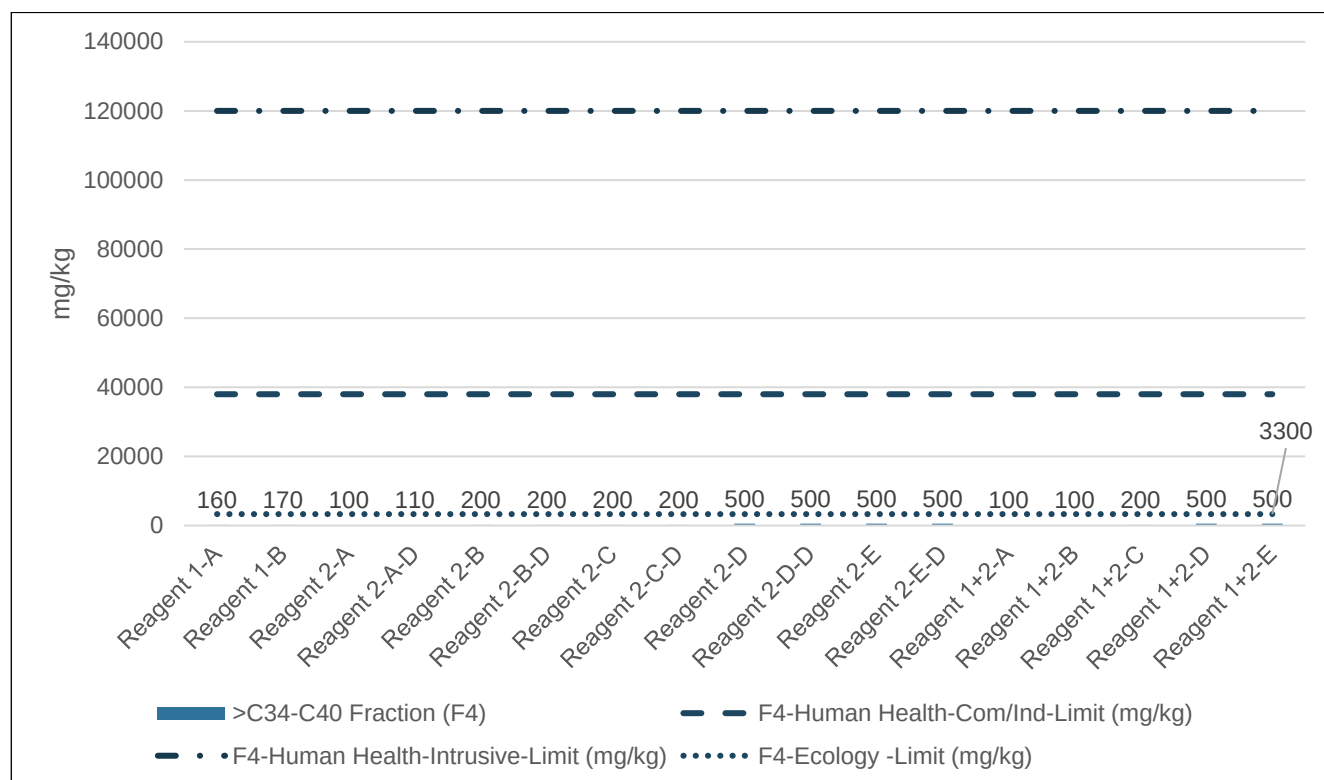
TRH – F3

CHART 17: REMEDIATION CRITERIA – F3 – ADDITIVES MIXING TOTALS



TRH – F4

CHART 18: REMEDIATION CRITERIA – F4 – ADDITIVES MIXING - TOTALS



6.2.2. ASLP LEACHABILITY

The performance of both Reagent 1, Reagent 2, and the combined Reagent 1 & 2 formulations has been assessed against the onsite leachability criteria adopted in the RAP by EnviroScience Solutions.

The ASLP method was applied to all leachability results utilising deionised water (DI) to accurately simulate the transfer of contaminants. This approach effectively mirrors the environmental conditions in which the material is expected to be placed.

TABLE 10: ADDITIVE MIXING – LEACHABILITY RESULTS

Mix	Benzo(a)pyrene	Naphthalene	Anthracene	Phenanthrene	Fluoranthene
Reagent 1-A	0.02	0.2	0.33	1.7	0.88
Reagent 1-B	0.05	0.27	0.41	2.2	1.3
Reagent 2-A	0.08	0.02	0.02	0.08	0.22
Reagent 2-A-D	0.01	0.02	<0.01	<0.01	<0.01
Reagent 2-B	0.12	0.02	0.02	0.08	0.3
Reagent 2-B-D	0.06	0.02	<0.01	0.03	0.14
Reagent 2-C	0.04	0.02	<0.01	0.03	0.1
Reagent 2-C-D	0.04	0.02	<0.01	0.03	0.11
Reagent 2-D	0.06	0.02	<0.01	0.03	0.13
Reagent 2-D-D	0.03	0.02	<0.01	0.02	0.08
Reagent 2-E	0.06	0.02	<0.01	0.03	0.14

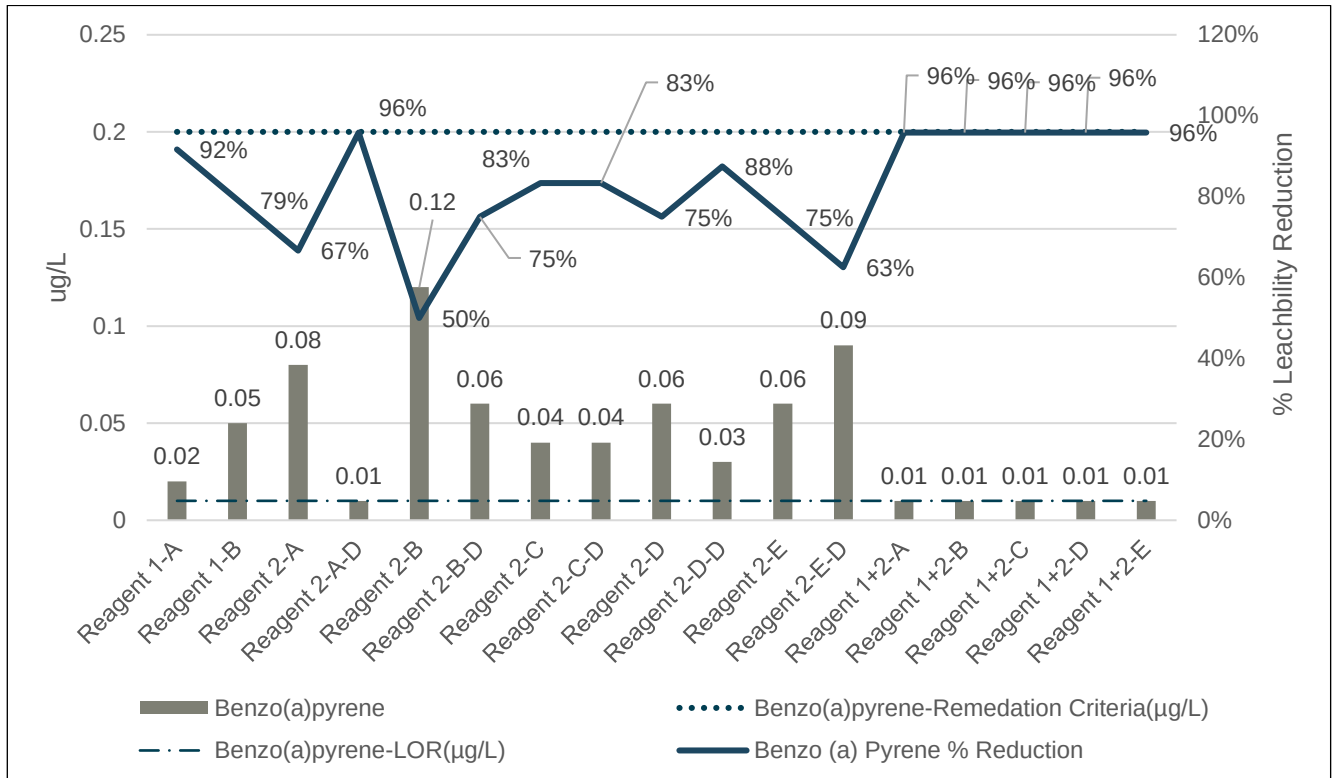
Reagent 2-E-D	0.09	0.02	0.01	0.06	0.25
Reagent 1+2-A	0.01	0.02	0.02	0.06	0.06
Reagent 1+2-B	0.01	0.02	<0.01	0.01	0.02
Reagent 1+2-C	0.01	0.02	<0.01	<0.01	0.01
Reagent 1+2-D	0.01	0.02	<0.01	<0.01	0.01
Reagent 1+2-E	0.01	0.02	<0.01	<0.01	<0.01

TABLE 11: ADDITIVE MIXING – LEACHABILITY RESULTS - CONTINUED

Mix	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)
Reagent 1-A	50	100	100
Reagent 1-B	50	100	100
Reagent 2-A	50	100	100
Reagent 2-A-D	50	100	100
Reagent 2-B	50	100	100
Reagent 2-B-D	50	100	100
Reagent 2-C	50	100	100
Reagent 2-C-D	50	100	100
Reagent 2-D	50	100	100
Reagent 2-D-D	50	100	100
Reagent 2-E	50	100	100
Reagent 2-E-D	50	100	100
Reagent 1+2-A	50	100	100
Reagent 1+2-B	50	100	100
Reagent 1+2-C	50	100	100
Reagent 1+2-D	50	100	100
Reagent 1+2-E	50	100	100

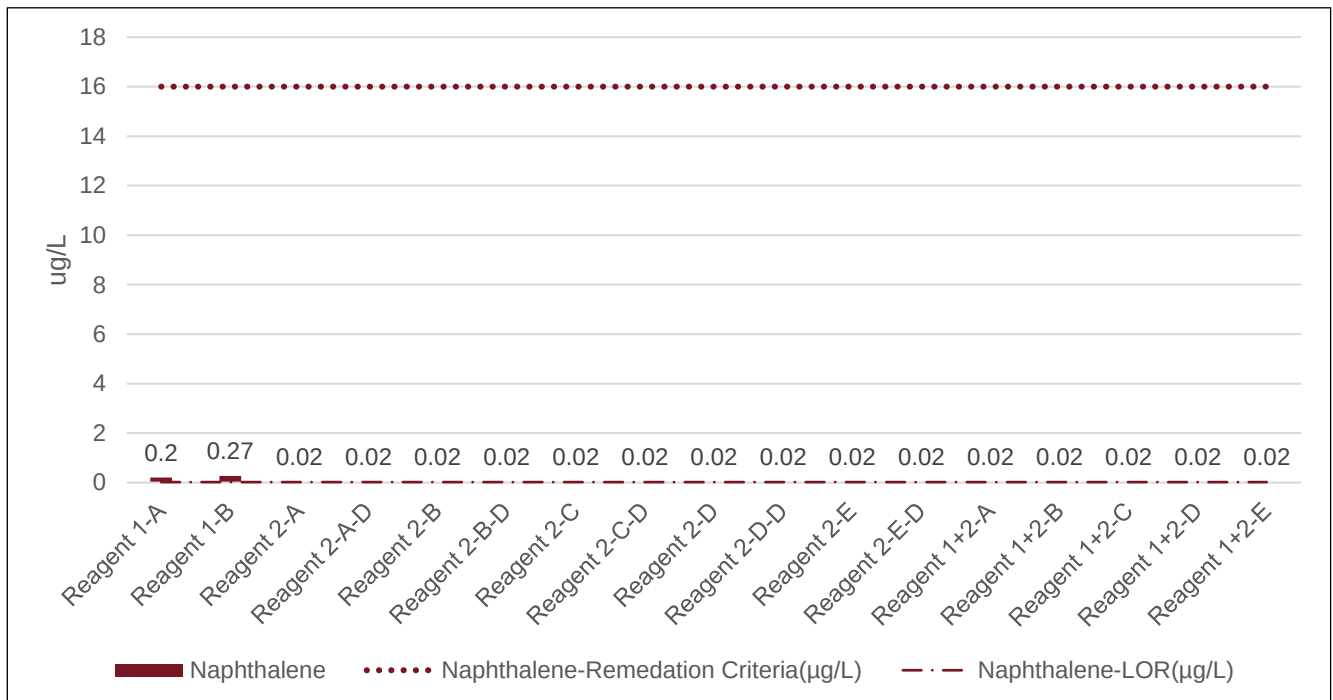
BENZO(A)PYRENE

CHART 19: REMEDIATION CRITERIA – BENZO(A)PYRENE – ADDITIVES MIXING LEACHABILITY



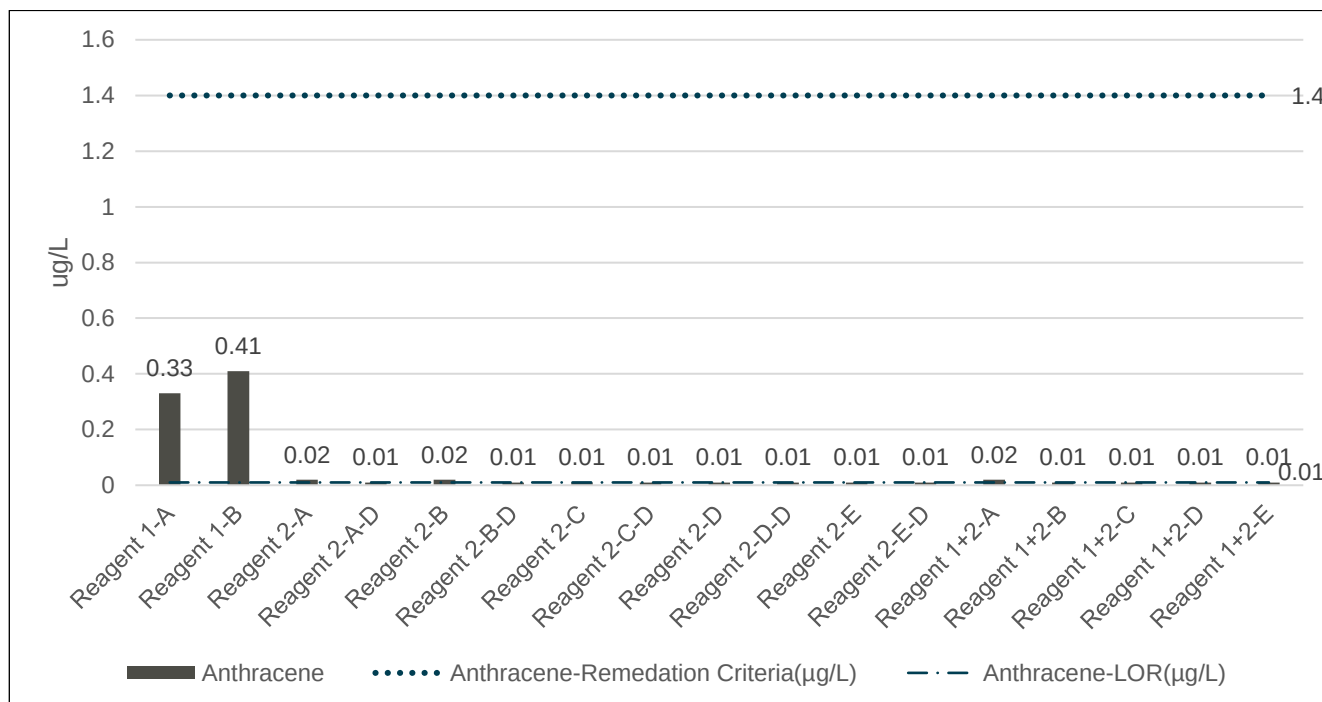
NAPHTHALENE

CHART 20: REMEDIATION CRITERIA – NAPHTHALENE – ADDITIVES MIXING LEACHABILITY



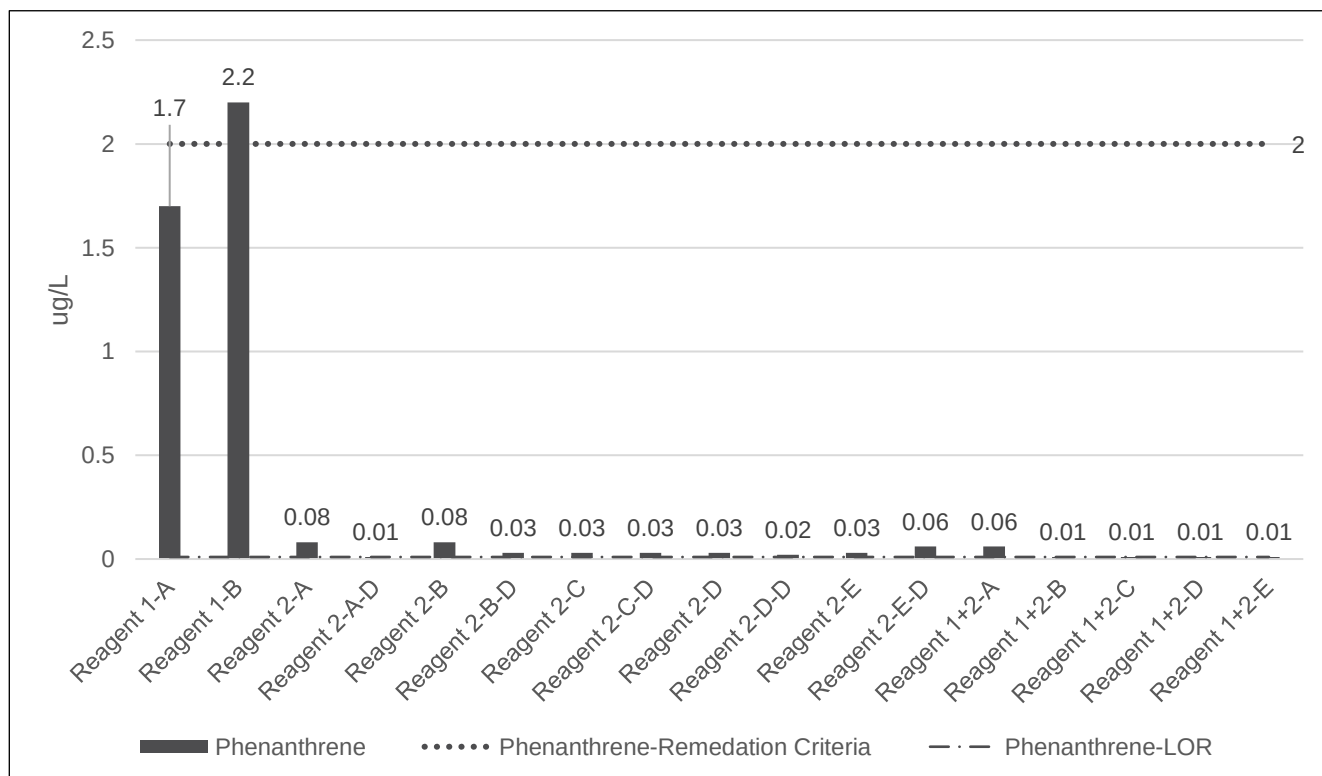
ANTHRACENE

CHART 21: REMEDIATION CRITERIA – ANTHRACENE – ADDITIVES MIXING LEACHABILITY



PHENANTHRENE

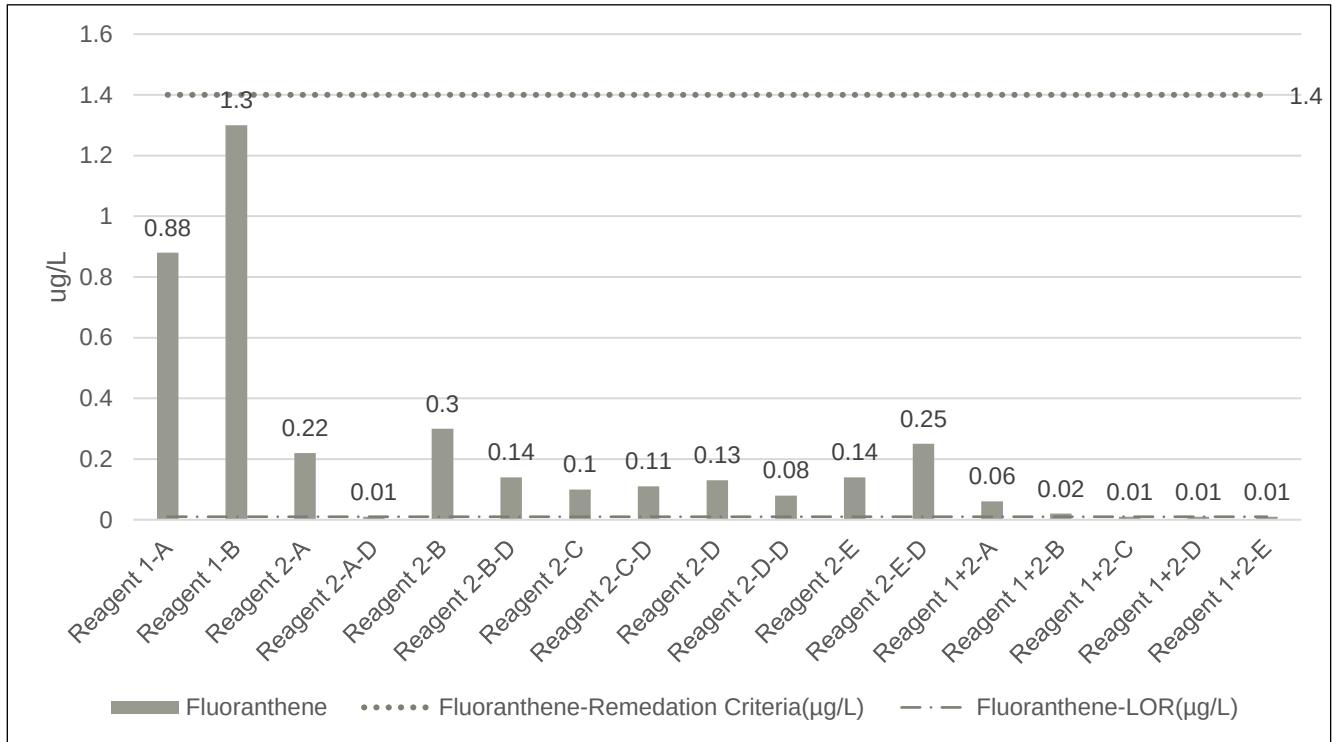
CHART 22: REMEDIATION CRITERIA – PHENANTHRENE – ADDITIVES MIXING LEACHABILITY



FLUORANTHENE

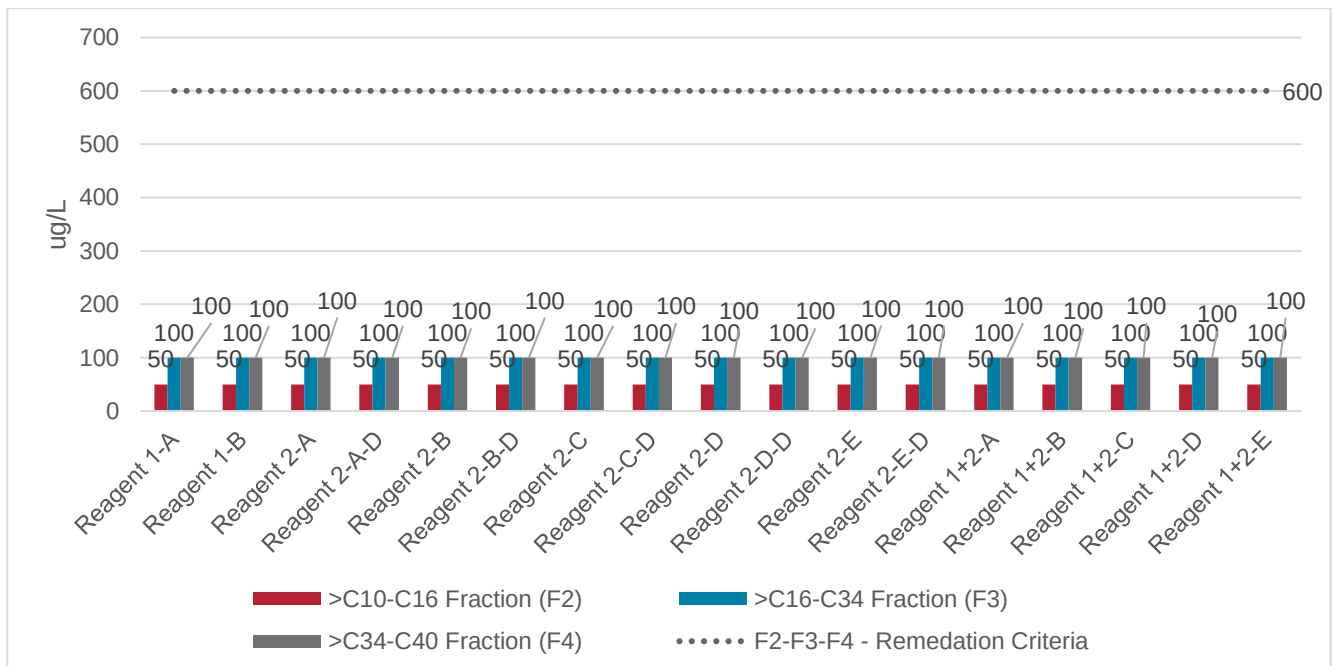
All sample results were below the adopted onsite leachability criterion for Fluoranthene, indicating no exceedances and minimal mobility of this compound across the tested soil matrix.

CHART 23: REMEDIATION CRITERIA – FLUORANTHENE – ADDITIVES MIXING LEACHABILITY



TRH

CHART 24: REMEDIATION CRITERIA – TRH – ADDITIVES MIXING LEACHABILITY



7.SUMMARY

A comprehensive bench-scale immobilisation program was conducted to evaluate the effectiveness of various reagent formulations in reducing the leachability of key contaminants of concern adopted in the RAP for the Tomago Pacific Highway project. The contaminants driving remediation requirements—primarily Benzo(a)pyrene, Naphthalene, and selected PAH and TRH fractions—were assessed against the adopted onsite leachability criteria established by EnviroScience Solutions.

Across the full suite of treatments, the immobilisation trials demonstrated strong overall performance, with the majority of reagent mixes achieving substantial reductions in contaminant mobility.

Based on the collective analytical results, EnviroPacific recommends the adoption of the combined reagent mix **Reagent 1 + Reagent 2 – Mix A as the preferred immobilisation treatment** for full-scale application. Mix Reagent 1+2-A consistently delivered the most effective reduction in leachability across all contaminants of concern, achieving results well below the adopted onsite criteria established by EnviroScience Solutions.

This performance confirms the suitability of immobilisation as a practical and environmentally beneficial pathway to enable onsite reuse of the impacted soil and avoid the significant cost and carbon impact associated with offsite disposal.

LABORATORY **CERTIFICATES OF** **ANALYSIS**

[SUBTITLE]



SAMPLE RECEIPT ADVICE

Client Details

Client	Enviropacific Services Pty Ltd
Attention	Alfredo Munoz

Sample Login Details

Your reference	JH-M1-105152
Envirolab Reference	400335
Date Sample Received	22/01/2026
Date Instructions Received	22/01/2026
Date Results Expected to be Reported	27/01/2026

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	6 Soil
Turnaround Time Requested	2 days
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	svTRH (C10-C40) In Soil	PAHs in Soil	Misc Inorg - Soil	ASLP Preparation - Neutral	s TRH In water leach	PAHs in Water Leach
Baselien 1	✓	✓	✓	✓	✓	✓
Baseline 2	✓	✓	✓	✓	✓	✓
Baseline 3	✓	✓	✓	✓	✓	✓
Baseline 4	✓	✓	✓	✓	✓	✓
Baseline 5	✓	✓	✓	✓	✓	✓
Baseline 6	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

We acknowledge receipt of your samples and Purchase Order (PO) (if provided). If a PO includes your terms & conditions, Envirolab hereby expressly rejects and will not be bound by any external or third-party terms and conditions, including those referenced or attached to a PO.

All services to be performed by Envirolab will be governed exclusively by Envirolab's General Terms and Conditions attached to this acknowledgement ([Envirolab Terms](#)) via hyperlink or found on our websites.

If you do not object in writing within two (2) business days of the date of this acknowledgement, you will be deemed to have accepted the Envirolab Terms. In addition, your provision of further instructions, additional samples, payment of any invoice, or acceptance of services or results from Envirolab will constitute acceptance of the Envirolab Terms. For clarity, Envirolab's commencement or continuation of work following receipt of the PO is performed solely under the Envirolab Terms and does not constitute acceptance of any external terms. All rights are expressly reserved.

CERTIFICATE OF ANALYSIS 400335

Client Details

Client	Enviropacific Services Pty Ltd
Attention	Alfredo Munoz
Address	PO Box 295, Wickam, NSW, 2293

Sample Details

Your Reference	<u>JH-M1-105152</u>
Number of Samples	6 Soil
Date samples received	22/01/2026
Date completed instructions received	22/01/2026

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	27/01/2026
Date of Issue	27/01/2026

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By

Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Jack Wallis, Senior Chemist
Timothy Toll, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

svTRH (C10-C40) in Soil

Our Reference		400335-1	400335-2	400335-3	400335-4	400335-5
Your Reference	UNITS	Baselien 1	Baseline 2	Baseline 3	Baseline 4	Baseline 5
Date Sampled		22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Date analysed	-	23/01/2026	23/01/2026	24/01/2026	24/01/2026	24/01/2026
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	170	170	160	200	130
TRH C ₂₉ - C ₃₆	mg/kg	220	180	230	270	200
Total +ve TRH (C10-C36)	mg/kg	390	340	380	470	330
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	330	290	320	390	260
TRH >C ₃₄ -C ₄₀	mg/kg	190	120	210	250	220
Total +ve TRH (>C10-C40)	mg/kg	520	410	520	640	490
Surrogate o-Terphenyl	%	89	94	86	91	88

svTRH (C10-C40) in Soil

Our Reference		400335-6
Your Reference	UNITS	Baseline 6
Date Sampled		22/01/2026
Type of sample		Soil
Date extracted	-	22/01/2026
Date analysed	-	24/01/2026
TRH C ₁₀ - C ₁₄	mg/kg	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100
TRH C ₂₉ - C ₃₆	mg/kg	140
Total +ve TRH (C10-C36)	mg/kg	140
TRH >C ₁₀ -C ₁₆	mg/kg	<50
TRH >C ₁₆ -C ₃₄	mg/kg	140
TRH >C ₃₄ -C ₄₀	mg/kg	140
Total +ve TRH (>C10-C40)	mg/kg	280
Surrogate o-Terphenyl	%	82

PAHs in Soil						
Our Reference		400335-1	400335-2	400335-3	400335-4	400335-5
Your Reference	UNITS	Baselien 1	Baseline 2	Baseline 3	Baseline 4	Baseline 5
Date Sampled		22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Date analysed	-	23/01/2026	23/01/2026	23/01/2026	23/01/2026	23/01/2026
Naphthalene	mg/kg	0.2	0.3	0.2	0.4	0.1
Acenaphthylene	mg/kg	0.6	0.7	0.5	0.8	0.5
Acenaphthene	mg/kg	0.4	0.7	0.4	0.5	0.3
Fluorene	mg/kg	0.5	0.9	0.5	0.6	0.4
Phenanthrene	mg/kg	8.2	12	6.2	8.9	6.8
Anthracene	mg/kg	1.4	2.3	1.1	1.6	1
Fluoranthene	mg/kg	20	25	15	19	14
Pyrene	mg/kg	19	25	15	19	13
Benzo(a)anthracene	mg/kg	6.7	7.5	5.0	6.7	4.2
Chrysene	mg/kg	8.0	8.8	6.1	7.8	5.1
Benzo(b,j+k)fluoranthene	mg/kg	16	17	12	15	9.1
Benzo(a)pyrene	mg/kg	13	14	9.7	12	7.1
Indeno(1,2,3-c,d)pyrene	mg/kg	6.4	7.4	5.6	5.8	3.6
Dibenzo(a,h)anthracene	mg/kg	1.2	1.2	1	1.2	0.8
Benzo(g,h,i)perylene	mg/kg	8.9	11	7.9	8.8	5.3
Total +ve PAH's	mg/kg	110	130	86	110	71
Benzo(a)pyrene TEQ calc (zero)	mg/kg	17	19	13	16	9.7
Benzo(a)pyrene TEQ calc(half)	mg/kg	17	19	13	16	9.7
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	17	19	13	16	9.7
Surrogate p-Terphenyl-d14	%	91	90	85	89	88

PAHs in Soil		
Our Reference		400335-6
Your Reference	UNITS	Baseline 6
Date Sampled		22/01/2026
Type of sample		Soil
Date extracted	-	22/01/2026
Date analysed	-	23/01/2026
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	0.2
Acenaphthene	mg/kg	0.1
Fluorene	mg/kg	0.2
Phenanthrene	mg/kg	2.5
Anthracene	mg/kg	0.7
Fluoranthene	mg/kg	6.3
Pyrene	mg/kg	6.2
Benzo(a)anthracene	mg/kg	2.4
Chrysene	mg/kg	2.0
Benzo(b,j+k)fluoranthene	mg/kg	9.1
Benzo(a)pyrene	mg/kg	3.4
Indeno(1,2,3-c,d)pyrene	mg/kg	2.1
Dibenzo(a,h)anthracene	mg/kg	0.4
Benzo(g,h,i)perylene	mg/kg	3.0
Total +ve PAH's	mg/kg	39
Benzo(a)pyrene TEQ calc (zero)	mg/kg	5.2
Benzo(a)pyrene TEQ calc(half)	mg/kg	5.2
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	5.2
Surrogate <i>p</i> -Terphenyl-d14	%	88

Moisture						
Our Reference		400335-1	400335-2	400335-3	400335-4	400335-5
Your Reference	UNITS	Baselien 1	Baseline 2	Baseline 3	Baseline 4	Baseline 5
Date Sampled		22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Date analysed	-	23/01/2026	23/01/2026	23/01/2026	23/01/2026	23/01/2026
Moisture	%	9.7	7.2	11	8.3	6.0

Moisture		
Our Reference		400335-6
Your Reference	UNITS	Baseline 6
Date Sampled		22/01/2026
Type of sample		Soil
Date prepared	-	22/01/2026
Date analysed	-	23/01/2026
Moisture	%	9.9

Misc Inorg - Soil						
Our Reference		400335-1	400335-2	400335-3	400335-4	400335-5
Your Reference	UNITS	Baselien 1	Baseline 2	Baseline 3	Baseline 4	Baseline 5
Date Sampled		22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/01/2026	27/01/2026	27/01/2026	27/01/2026	27/01/2026
Date analysed	-	27/01/2026	27/01/2026	27/01/2026	27/01/2026	27/01/2026
pH 1:5 soil:water	pH Units	8.3	8.5	8.5	8.4	8.9

Misc Inorg - Soil		
Our Reference		400335-6
Your Reference	UNITS	Baseline 6
Date Sampled		22/01/2026
Type of sample		Soil
Date prepared	-	27/01/2026
Date analysed	-	27/01/2026
pH 1:5 soil:water	pH Units	8.9

ASLP Preparation - Neutral

Our Reference		400335-1	400335-2	400335-3	400335-4	400335-5
Your Reference	UNITS	Baselien 1	Baseline 2	Baseline 3	Baseline 4	Baseline 5
Date Sampled		22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	8.2	8.4	8.4	8.4	8.8

ASLP Preparation - Neutral

Our Reference		400335-6
Your Reference	UNITS	Baseline 6
Date Sampled		22/01/2026
Type of sample		Soil
pH of final Leachate	pH units	8.9

sTRH in water leach						
Our Reference	UNITS	400335-1	400335-2	400335-3	400335-4	400335-5
Your Reference		Baselien 1	Baseline 2	Baseline 3	Baseline 4	Baseline 5
Date Sampled		22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/01/2026	23/01/2026	23/01/2026	23/01/2026	23/01/2026
Date analysed	-	24/01/2026	24/01/2026	24/01/2026	24/01/2026	24/01/2026
TRH C ₁₀ - C ₁₄	µg/L	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	<50	<50	<50	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100	<100	<100	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	77	93	77	80	77

sTRH in water leach		
Our Reference	UNITS	400335-6
Your Reference		Baseline 6
Date Sampled		22/01/2026
Type of sample		Soil
Date extracted	-	23/01/2026
Date analysed	-	24/01/2026
TRH C ₁₀ - C ₁₄	µg/L	<50
TRH C ₁₅ - C ₂₈	µg/L	<100
TRH C ₂₉ - C ₃₆	µg/L	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100
Surrogate o-Terphenyl	%	78

PAHs in Water Leach						
Our Reference	UNITS	400335-1	400335-2	400335-3	400335-4	400335-5
Your Reference		Baselien 1	Baseline 2	Baseline 3	Baseline 4	Baseline 5
Date Sampled		22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/01/2026	23/01/2026	23/01/2026	23/01/2026	23/01/2026
Date analysed	-	27/01/2026	27/01/2026	27/01/2026	27/01/2026	27/01/2026
Naphthalene in ASLP	µg/L	<0.1	0.66	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	0.12	<0.1
Acenaphthene in ASLP	µg/L	<0.1	2.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	1.9	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	0.15	4.7	0.22	0.19	0.11
Anthracene in ASLP	µg/L	<0.1	0.92	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	0.56	3.2	0.56	0.75	0.27
Pyrene in ASLP	µg/L	0.64	3.0	0.59	0.84	0.29
Benzo(a)anthracene in ASLP	µg/L	0.17	0.57	0.18	0.34	<0.1
Chrysene in ASLP	µg/L	0.34	0.72	0.32	0.55	0.18
Benzo(bjk)fluoranthene in ASLP	µg/L	0.59	0.95	0.58	0.95	0.21
Benzo(a)pyrene in ASLP	µg/L	0.39	0.75	0.44	0.73	0.13
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.25	0.32	0.29	0.48	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	0.10	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	0.43	0.56	0.46	0.69	0.14
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	85	89	73	91	82

PAHs in Water Leach		
Our Reference		400335-6
Your Reference	UNITS	Baseline 6
Date Sampled		22/01/2026
Type of sample		Soil
Date extracted	-	23/01/2026
Date analysed	-	27/01/2026
Naphthalene in ASLP	µg/L	<0.1
Acenaphthylene in ASLP	µg/L	<0.1
Acenaphthene in ASLP	µg/L	<0.1
Fluorene in ASLP	µg/L	<0.1
Phenanthrene in ASLP	µg/L	0.27
Anthracene in ASLP	µg/L	<0.1
Fluoranthene in ASLP	µg/L	0.32
Pyrene in ASLP	µg/L	0.32
Benzo(a)anthracene in ASLP	µg/L	<0.1
Chrysene in ASLP	µg/L	0.15
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2
Benzo(a)pyrene in ASLP	µg/L	0.14
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	0.13
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	85

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-022/025 ASLP	ASLP Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	400335-2
Date extracted	-			22/01/2026	1	22/01/2026	22/01/2026		22/01/2026	22/01/2026
Date analysed	-			22/01/2026	1	23/01/2026	23/01/2026		22/01/2026	22/01/2026
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	1	<50	<50	0	88	111
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	1	170	140	19	91	#
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	1	220	220	0	100	#
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	1	<50	<50	0	88	111
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	1	330	300	10	91	#
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	1	190	200	5	100	#
Surrogate o-Terphenyl	%		Org-020	88	1	89	86	3	87	103

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	400335-2
Date extracted	-			22/01/2026	1	22/01/2026	22/01/2026		22/01/2026	22/01/2026
Date analysed	-			23/01/2026	1	23/01/2026	23/01/2026		23/01/2026	23/01/2026
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.2	0	86	82
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	0.6	0.6	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	0.4	0.4	0	96	82
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.4	22	88	128
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	8.2	6.9	17	92	96
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	1.4	1.2	15	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	20	16	22	88	#
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	19	16	17	88	#
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	6.7	5.7	16	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	8.0	6.5	21	78	#
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	16	13	21	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	13	10	26	90	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	6.4	5.4	17	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	1.2	1.1	9	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	8.9	7.5	17	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	90	1	91	93	2	87	85

QUALITY CONTROL: Misc Inorg - Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	[NT]
Date prepared	-			27/01/2026	[NT]	[NT]	[NT]	[NT]	27/01/2026	[NT]
Date analysed	-			27/01/2026	[NT]	[NT]	[NT]	[NT]	27/01/2026	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: sTRH in water leach					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	400335-2
Date extracted	-			23/01/2026	1	23/01/2026	23/01/2026		23/01/2026	23/01/2026
Date analysed	-			24/01/2026	1	24/01/2026	24/01/2026		24/01/2026	24/01/2026
TRH C ₁₀ - C ₁₄	µg/L	50	Org-020	<50	1	<50	<50	0	67	92
TRH C ₁₅ - C ₂₈	µg/L	100	Org-020	<100	1	<100	<100	0	73	103
TRH C ₂₉ - C ₃₆	µg/L	100	Org-020	<100	1	<100	<100	0	86	98
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-020	<50	1	<50	<50	0	67	92
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-020	<100	1	<100	<100	0	73	103
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-020	<100	1	<100	<100	0	86	98
Surrogate o-Terphenyl	%		Org-020	81	1	77	79	3	88	93

QUALITY CONTROL: PAHs in Water Leach					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	400335-2
Date extracted	-			23/01/2026	1	23/01/2026	23/01/2026		23/01/2026	23/01/2026
Date analysed	-			27/01/2026	1	27/01/2026	27/01/2026		27/01/2026	27/01/2026
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.1	0.12	18	72	106
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.1	<0.1	0	68	110
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.1	<0.1	0	71	123
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	0.15	0.20	29	78	#
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	0.56	0.71	24	73	105
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	0.64	0.77	18	73	95
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	0.17	0.24	34	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	0.34	0.36	6	70	79
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	<0.2	1	0.59	0.58	2	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	0.39	0.43	10	72	98
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	0.25	0.28	11	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	0.43	0.46	7	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-022/025 ASLP	91	1	85	91	7	77	88

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates can be downloaded from the [Envirolab Resources website](#) or obtained directly by contacting the laboratory.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

PAHs in Soil - # Percent recovery for the surrogate/matrix spike is not possible to report as the high concentration of analytes in sample 400335-2ms have caused interference.

PAHs in Water Leach - # Percent recovery for the matrix spike is not possible to report as the high concentration of analytes in sample 400335-2 have caused interference.

TRH Soil C10-C40 NEPM - # Percent recovery for the surrogate/matrix spike is not possible to report as the high concentration of analytes in sample/s 400335-2ms have caused interference.

Anna Bui

From: Greta Petzold
Sent: Thursday, 29 January 2026 10:49 AM
To: Alfredo Munoz; Envirolab Sydney Sample Receipt
Subject: RE: Results for Registration 400335 JH-M1-105152

No worries.

@Envirolab Sydney Sample Receipt A- job please

Kind Regards,

Greta Petzold | Assistant Laboratory Manager | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E GPetzold@envirolab.com.au | W www.envirolab.com.au

Follow us on: [LinkedIn](#) | [Facebook](#) | [Twitter](#)

Samples will be analysed per our T&C's.

From: Alfredo Munoz <alfredo.munoz@enviropacific.com.au>
Sent: Thursday, 29 January 2026 10:13 AM
To: Greta Petzold <GPetzold@envirolab.com.au>
Subject: RE: Results for Registration 400335 JH-M1-105152

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Greta,

Please proceed with the trace level for all samples in this work order as discussed below.

Cheers

Alfredo Munoz

Site Engineer

M 0488 186 844 W www.enviropacific.com.au



From: Greta Petzold <GPetzold@envirolab.com.au>
Sent: Wednesday, 28 January 2026 3:27 PM
To: Alfredo Munoz <alfredo.munoz@enviropacific.com.au>
Subject: RE: Results for Registration 400335 JH-M1-105152

Hi Alfredo,

EU REF: 400335-A
M: STANDARD
DE: 5/2/26
AB.

\$120.93/per sample for PAHs Trace Level
\$36.29/per sample for ASLP Prep
+\$40 admin/job
+GST

Kind Regards,

Greta Petzold | Assistant Laboratory Manager | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E GPetzold@envirolab.com.au | W www.envirolab.com.au

Follow us on: [LinkedIn](#) | [Facebook](#) | [Twitter](#)

Samples will be analysed per our T&C's.

From: Alfredo Munoz <alfredo.munoz@enviropacific.com.au>
Sent: Wednesday, 28 January 2026 12:32 PM
To: Greta Petzold <GPetzold@envirolab.com.au>
Subject: Re: Results for Registration 400335 JH-M1-105152

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Greta,

Before we proceed. Could you please provide cost per sample

Cheers

Get [Outlook for iOS](#)

Alfredo Munoz

Site Engineer

M 0488 186 844 W www.enviropacific.com.au



From: Greta Petzold <GPetzold@envirolab.com.au>
Sent: Wednesday, January 28, 2026 12:22
To: Alfredo Munoz <alfredo.munoz@enviropacific.com.au>; SydneyMailbox <Sydney@envirolab.com.au>
Subject: RE: Results for Registration 400335 JH-M1-105152

Hi Alfredo,

Yes, we have a trace level method, PQLs below. We would need to re prep/analyse to achieve this.
Did you want to go ahead?

Analyte Info	Analysis Info	Analyte Aliases	Comments
Naphthalene		Nap	
Acenaphthylene		Acy	
Acenaphthene		Ace	
Fluorene		Fle	
Phenanthrene		Ph	
Anthracene		An	
Fluoranthene		Fla	
Pyrene			
Benzo(a)anthracene		B[a]A	
Chrysene		Chr	
Benzo(b,j,k)fluoranthene			
Benzo(a)pyrene		B[a]P	
Indeno(1,2,3-c,d)pyrene		Ind	
Dibenzo(a,h)anthracene		D[ah]A	
Benzo(g,h,i)perylene		B[ghi]P	

Kind Regards,

Greta Petzold | Assistant Laboratory Manager | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067

T 612 9910 6200

E GPetzold@envirolab.com.au | W www.envirolab.com.au

Follow us on: [LinkedIn](#) | [Facebook](#) | [Twitter](#)

Samples will be analysed per our T&C's.

From: Alfredo Munoz <alfredo.munoz@enviropacific.com.au>

Sent: Wednesday, 28 January 2026 11:45 AM

To: Greta Petzold <GPetzold@envirolab.com.au>; SydneyMailbox <Sydney@envirolab.com.au>

Subject: RE: Results for Registration 400335 JH-M1-105152

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Greta & team,

Can Envirolab provide a lower LOR for the ASLP analyses tested in this request?

For instance, a lower LOR than 0.1 µg/L for Benzo(a) pyrene

Thank you,

Regards

Alfredo Munoz

Site Engineer

SAMPLE RECEIPT ADVICE

Client Details

Client	Enviropacific Services Pty Ltd
Attention	Alfredo Munoz

Sample Login Details

Your reference	JH-M1-105152
Envirolab Reference	400335-A
Date Sample Received	22/01/2026
Date Instructions Received	29/01/2026
Date Results Expected to be Reported	05/02/2026

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:

Sample ID	PAHs - ASLP Trace Level
Baselien 1	✓
Baseline 2	✓
Baseline 3	✓
Baseline 4	✓
Baseline 5	✓
Baseline 6	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

We acknowledge receipt of your samples and Purchase Order (PO) (if provided). If a PO includes your terms & conditions, Envirolab hereby expressly rejects and will not be bound by any external or third-party terms and conditions, including those referenced or attached to a PO.

All services to be performed by Envirolab will be governed exclusively by Envirolab's General Terms and Conditions attached to this acknowledgement ([Envirolab Terms](#)) via hyperlink or found on our websites.

If you do not object in writing within two (2) business days of the date of this acknowledgement, you will be deemed to have accepted the Envirolab Terms. In addition, your provision of further instructions, additional samples, payment of any invoice, or acceptance of services or results from Envirolab will constitute acceptance of the Envirolab Terms. For clarity, Envirolab's commencement or continuation of work following receipt of the PO is performed solely under the Envirolab Terms and does not constitute acceptance of any external terms. All rights are expressly reserved.

CERTIFICATE OF ANALYSIS 400335-A

Client Details

Client	Enviropacific Services Pty Ltd
Attention	Alfredo Munoz
Address	PO Box 295, Wickam, NSW, 2293

Sample Details

Your Reference	<u>JH-M1-105152</u>
Number of Samples	Additional analysis
Date samples received	22/01/2026
Date completed instructions received	29/01/2026

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	05/02/2026
Date of Issue	05/02/2026

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By

Dragana Tomas, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

PAHs - ASLP Trace Level						
Our Reference		400335-A-1	400335-A-2	400335-A-3	400335-A-4	400335-A-5
Your Reference	UNITS	Baseline 1	Baseline 2	Baseline 3	Baseline 4	Baseline 5
Date Sampled		22/01/2026	22/01/2026	22/01/2026	22/01/2026	22/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Date analysed	-	05/02/2026	05/02/2026	05/02/2026	05/02/2026	05/02/2026
pH of final Leachate	pH units	6.7	7.0	7.2	7.2	7.6
Naphthalene	µg/L	<0.02	0.06	<0.02	<0.02	<0.02
Acenaphthylene	µg/L	0.02	0.03	0.02	0.04	<0.01
Acenaphthene	µg/L	0.02	0.60	0.03	0.02	<0.01
Fluorene	µg/L	0.01	0.18	0.02	0.02	<0.01
Phenanthrene	µg/L	0.14	0.25	0.08	0.16	<0.01
Anthracene	µg/L	0.05	0.24	0.04	0.05	<0.01
Fluoranthene	µg/L	0.49	1.3	0.39	0.65	<0.01
Pyrene	µg/L	0.54	1.2	0.42	0.74	<0.01
Benzo(a)anthracene	µg/L	0.16	0.51	0.13	0.25	<0.01
Chrysene	µg/L	0.16	0.39	0.13	0.24	<0.01
Benzo(b,j+k)fluoranthene	µg/L	0.63	1.2	0.48	1.0	<0.02
Benzo(a)pyrene	µg/L	0.20	0.40	0.16	0.33	<0.01
Dibenzo(a,h)anthracene	µg/L	0.03	0.03	0.02	0.05	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.16	0.18	0.12	0.25	<0.01
Benzo(g,h,i)perylene	µg/L	0.20	0.22	0.15	0.29	<0.01
Benzo(a)pyrene TEQ	µg/L	0.32	0.63	0.25	0.54	<0.05
Total +ve PAH's	µg/L	2.8	6.8	2.2	4.1	NIL (+)VE
Surrogate p-Terphenyl-d14	%	94	95	95	85	78

PAHs - ASLP Trace Level		
Our Reference		400335-A-6
Your Reference	UNITS	Baseline 6
Date Sampled		22/01/2026
Type of sample		Soil
Date extracted	-	02/02/2026
Date analysed	-	05/02/2026
pH of final Leachate	pH units	7.7
Naphthalene	µg/L	<0.02
Acenaphthylene	µg/L	<0.01
Acenaphthene	µg/L	<0.01
Fluorene	µg/L	<0.01
Phenanthrene	µg/L	0.05
Anthracene	µg/L	0.02
Fluoranthene	µg/L	0.29
Pyrene	µg/L	0.36
Benzo(a)anthracene	µg/L	0.14
Chrysene	µg/L	0.13
Benzo(b,j+k)fluoranthene	µg/L	0.41
Benzo(a)pyrene	µg/L	0.13
Dibenzo(a,h)anthracene	µg/L	0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.06
Benzo(g,h,i)perylene	µg/L	0.09
Benzo(a)pyrene TEQ	µg/L	0.2
Total +ve PAH's	µg/L	1.7
Surrogate <i>p</i> -Terphenyl-d14	%	100

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.

QUALITY CONTROL: PAHs - ASLP Trace Level					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	400335-A-2
Date extracted	-			02/02/2026	1	02/02/2026	02/02/2026		02/02/2026	02/02/2026
Date analysed	-			05/02/2026	1	05/02/2026	05/02/2026		03/02/2026	03/02/2026
Naphthalene	µg/L	0.02	Org-022/025	<0.02	1	<0.02	0.02	0	61	68
Acenaphthylene	µg/L	0.01	Org-022/025	<0.01	1	0.02	0.02	0	[NT]	[NT]
Acenaphthene	µg/L	0.01	Org-022/025	<0.01	1	0.02	0.05	86	76	92
Fluorene	µg/L	0.01	Org-022/025	<0.01	1	0.01	0.02	67	76	96
Phenanthrene	µg/L	0.01	Org-022/025	<0.01	1	0.14	0.16	13	86	109
Anthracene	µg/L	0.01	Org-022/025	<0.01	1	0.05	0.04	22	[NT]	[NT]
Fluoranthene	µg/L	0.01	Org-022/025	<0.01	1	0.49	0.42	15	86	130
Pyrene	µg/L	0.01	Org-022/025	<0.01	1	0.54	0.47	14	82	136
Benzo(a)anthracene	µg/L	0.01	Org-022/025	<0.01	1	0.16	0.14	13	[NT]	[NT]
Chrysene	µg/L	0.01	Org-022/025	<0.01	1	0.16	0.14	13	74	104
Benzo(b,j+k)fluoranthene	µg/L	0.02	Org-022/025	<0.02	1	0.63	0.56	12	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.01	Org-022/025	<0.01	1	0.20	0.17	16	86	109
Dibenzo(a,h)anthracene	µg/L	0.01	Org-022/025	<0.01	1	0.03	0.02	40	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	Org-022/025	<0.01	1	0.16	0.14	13	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.01	Org-022/025	<0.01	1	0.20	0.18	11	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	65	1	94	83	12	63	85

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates can be downloaded from the [Envirolab Resources website](#) or obtained directly by contacting the laboratory.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.



CHAIN OF CUSTODY FORM - Client

[Copyright and Confidential]

Company:	Enviropacific		Client Project Name/Number/Site etc (ie report title):
Contact Person:	Alfredo Munoz		JH-M1- 105152
Project Mgr:	Ben Kay		PO No. (if applicable):
Sampler:	Liam Doroty		Envirolab Quote No. :
Address:	Ingleburn Unit 3, 27 Williamson Road NSW 2565		Date results required: ☒ Or choose: ☐ Standard ☐ Same Day ☐ 1 day ☐ 2 day ☐ 3 day
Phone:		Mob: 0488 186 844	Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Email Results to:	alfredo.munoz@enviropacific.com.au- ben.kay@enviropacific.com.au		Additional report format: Esdat ☒ Equis ☐ Datanest ☐
Email Invoice to:	ben.kay@enviropacific.com.au, alfredo.munoz@enviropacific.com.au, payments@enviropacific.com.au		Lab Comments:

ENVIROLAB GROUP

National phone number 1300 424 344
Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
☎ 02 9910 6200 | ✉ sydney@envirolab.com.au

Perth Lab - MPL Laboratories
7-11 Catalano Rd, Canning Vale, WA 6155
☎ 08 9317 2505 | ✉ lab@mpl.com.au

Melbourne Lab - Envirolab Services
25 Research Drive, Croydon South, VIC 3136
☎ 03 9763 2500 | ✉ melbourne@envirolab.com.au

Newcastle Lab - Envirolab Services
92 Hill Street, Carrington Newcastle, NSW 2294
☎ 02 4902 9231 | ✉ newcastle@envirolab.com.au

Darwin Lab - Envirolab Services
55 Export Drive, East Arm, NT 0822
☎ 08 8967 1201 | ✉ darwin@envirolab.com.au

Adelaide Office - Envirolab Services
7a The Parade, Norwood, SA 5067
☎ 08 7087 6800 | ✉ adelaide@envirolab.com.au

Brisbane Office - Envirolab Services
20a, 10-20 Depot St, Banyo, QLD 4014
☎ 07 3266 9532 | ✉ brisbane@envirolab.com.au

Sample information					Tests Required														Comments
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample	PAH-E08310	TRH(C10-C40)-E07220	ASLP(E0832LA-RW) PAH & TRH	pH-E00100											Provide as much information about the sample as you can
1	Baseline All Mix	N/A	28/01/2026	Soil	X	X	X	X											
2	JH-M1-PAC1	N/A	28/01/2026	Soil	X	X	X	X											
3	JH-M1-PAC2	N/A	28/01/2026	Soil	X	X	X	X											
4	JH-M1-PAC3	N/A	28/01/2026	Soil	X	X	X	X											
5	JH-M1-PAC4	N/A	28/01/2026	Soil	X	X	X	X											
6	JH-M1-PAC5	N/A	28/01/2026	Soil	X	X	X	X											
7	JH-M1-PAC1-D	N/A	28/01/2026	Soil	X	X	X	X											
8	JH-M1-PAC2-D	N/A	28/01/2026	Soil	X	X	X	X											
9	JH-M1-PAC3-D	N/A	28/01/2026	Soil	X	X	X	X											
10	JH-M1-PAC4-D	N/A	28/01/2026	Soil	X	X	X	X											
11	JH-M1-PAC5-D	N/A	28/01/2026	Soil	X	X	X	X											

☐ Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company): Enviropacific	Received by (Company): ELS JMD	Lab Use Only	
Print Name: Alfredo Munoz	Print Name: Richard Henry	Job number: 400773	Cooling: Ice (ice pack) / None
Date & Time: 28.01.2026-1:00pm	Date & Time: 29/1/26 1440	Temperature: 10°C	Security seal: Intact / Broken / None
Signature:	Signature:	TAT Req - SAME day / 1 / 2 / 3 / 4 / (STD)	

SAMPLE RECEIPT ADVICE

Client Details

Client	Enviropacific Services Pty Ltd
Attention	Alfredo Munoz

Sample Login Details

Your reference	JH-M1-105152
Envirolab Reference	400775
Date Sample Received	29/01/2026
Date Instructions Received	29/01/2026
Date Results Expected to be Reported	05/02/2026

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	18 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	svTRH (C10-C40) in Soil	PAHs in Soil	Misc Inorg - Soil	ASLP Preparation - Neutral	sTRH in water leach	PAHs in Water Leach
Baseline All Mix	✓	✓	✓	✓	✓	✓
JH-M1-PAC1	✓	✓	✓	✓	✓	✓
JH-M1-PAC2	✓	✓	✓	✓	✓	✓
JH-M1-PAC3	✓	✓	✓	✓	✓	✓
JH-M1-PAC4	✓	✓	✓	✓	✓	✓
JH-M1-PAC5	✓	✓	✓	✓	✓	✓
JH-M1-PAC1-D	✓	✓	✓	✓	✓	✓
JH-M1-PAC2-D	✓	✓	✓	✓	✓	✓
JH-M1-PAC3-D	✓	✓	✓	✓	✓	✓
JH-M1-PAC4-D	✓	✓	✓	✓	✓	✓
JH-M1-PAC5-D	✓	✓	✓	✓	✓	✓
JH-M1-C4	✓	✓	✓	✓	✓	✓
JH-M1-C8	✓	✓	✓	✓	✓	✓
JH-M1-PAC1-C4	✓	✓	✓	✓	✓	✓
JH-M1-PAC2-C4	✓	✓	✓	✓	✓	✓
JH-M1-PAC3-C4	✓	✓	✓	✓	✓	✓
JH-M1-PAC4-C4	✓	✓	✓	✓	✓	✓
JH-M1-PAC5-C4	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

We acknowledge receipt of your samples and Purchase Order (PO) (if provided). If a PO includes your terms & conditions, Envirolab hereby expressly rejects and will not be bound by any external or third-party terms and conditions, including those referenced or attached to a PO.

All services to be performed by Envirolab will be governed exclusively by Envirolab's General Terms and Conditions attached to this acknowledgement ([Envirolab Terms](#)) via hyperlink or found on our websites.

If you do not object in writing within two (2) business days of the date of this acknowledgement, you will be deemed to have accepted the Envirolab Terms. In addition, your provision of further instructions, additional samples, payment of any invoice, or acceptance of services or results from Envirolab will constitute acceptance of the Envirolab Terms. For clarity, Envirolab's commencement or continuation of work following receipt of the PO is performed solely under the Envirolab Terms and does not constitute acceptance of any external terms. All rights are expressly reserved.

CERTIFICATE OF ANALYSIS 400775

Client Details

Client	Enviropacific Services Pty Ltd
Attention	Alfredo Munoz
Address	PO Box 295, Wickam, NSW, 2293

Sample Details

Your Reference	<u>JH-M1-105152</u>
Number of Samples	18 Soil
Date samples received	29/01/2026
Date completed instructions received	29/01/2026

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	05/02/2026
Date of Issue	06/02/2026

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By

Dragana Tomas, Senior Chemist
 Nick Sarlamis, Assistant Operation Manager
 Steven Luong, Senior Chemist
 Timothy Toll, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

svTRH (C10-C40) in Soil

Our Reference		400775-1	400775-2	400775-3	400775-4	400775-5
Your Reference	UNITS	Baseline All Mix	JH-M1-PAC1	JH-M1-PAC2	JH-M1-PAC3	JH-M1-PAC4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/01/2026	30/01/2026	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	01/02/2026	01/02/2026	31/01/2026	31/01/2026	31/01/2026
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<100	<100	<250
TRH C ₁₅ - C ₂₈	mg/kg	190	<100	<200	<200	<500
TRH C ₂₉ - C ₃₆	mg/kg	270	<100	<200	<200	<500
Total +ve TRH (C10-C36)	mg/kg	460	<50	<100	<100	<250
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<100	<100	<250
TRH >C ₁₆ -C ₃₄	mg/kg	370	<100	<200	<200	<500
TRH >C ₃₄ -C ₄₀	mg/kg	210	<100	<200	<200	<500
Total +ve TRH (>C10-C40)	mg/kg	580	<50	<100	<100	<250
Surrogate o-Terphenyl	%	95	78	#	#	#

svTRH (C10-C40) in Soil

Our Reference		400775-6	400775-7	400775-8	400775-9	400775-10
Your Reference	UNITS	JH-M1-PAC5	JH-M1-PAC1-D	JH-M1-PAC2-D	JH-M1-PAC3-D	JH-M1-PAC4-D
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/01/2026	30/01/2026	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	31/01/2026	01/02/2026	31/01/2026	31/01/2026	31/01/2026
TRH C ₁₀ - C ₁₄	mg/kg	<250	<50	<100	<100	<250
TRH C ₁₅ - C ₂₈	mg/kg	<500	200	<200	<200	<500
TRH C ₂₉ - C ₃₆	mg/kg	<500	120	<200	<200	<500
Total +ve TRH (C10-C36)	mg/kg	<250	320	<100	<100	<250
TRH >C ₁₀ -C ₁₆	mg/kg	<250	<50	<100	<100	<250
TRH >C ₁₆ -C ₃₄	mg/kg	<500	250	<200	<200	<500
TRH >C ₃₄ -C ₄₀	mg/kg	<500	110	<200	<200	<500
Total +ve TRH (>C10-C40)	mg/kg	<250	360	<100	<100	<250
Surrogate o-Terphenyl	%	#	90	#	#	#

svTRH (C10-C40) in Soil

Our Reference		400775-11	400775-12	400775-13	400775-14	400775-15
Your Reference	UNITS	JH-M1-PAC5-D	JH-M1-C4	JH-M1-C8	JH-M1-PAC1-C4	JH-M1-PAC2-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/01/2026	30/01/2026	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	31/01/2026	01/02/2026	01/02/2026	01/02/2026	31/01/2026
TRH C ₁₀ - C ₁₄	mg/kg	<250	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<500	210	160	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<500	230	220	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<250	450	380	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<250	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<500	370	310	<100	110
TRH >C ₃₄ -C ₄₀	mg/kg	<500	160	170	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<250	530	480	<50	110
Surrogate o-Terphenyl	%	#	88	87	69	65

svTRH (C10-C40) in Soil

Our Reference		400775-16	400775-17	400775-18
Your Reference	UNITS	JH-M1-PAC3-C4	JH-M1-PAC4-C4	JH-M1-PAC5-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil
Date extracted	-	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	31/01/2026	01/02/2026	01/02/2026
TRH C ₁₀ - C ₁₄	mg/kg	<100	<250	<250
TRH C ₁₅ - C ₂₈	mg/kg	<200	<500	<500
TRH C ₂₉ - C ₃₆	mg/kg	<200	<500	<500
Total +ve TRH (C10-C36)	mg/kg	<100	<250	<250
TRH >C ₁₀ -C ₁₆	mg/kg	<100	<250	<250
TRH >C ₁₆ -C ₃₄	mg/kg	<200	<500	<500
TRH >C ₃₄ -C ₄₀	mg/kg	<200	<500	<500
Total +ve TRH (>C10-C40)	mg/kg	<100	<250	<250
Surrogate o-Terphenyl	%	#	#	#

PAHs in Soil						
Our Reference		400775-1	400775-2	400775-3	400775-4	400775-5
Your Reference	UNITS	Baseline All Mix	JH-M1-PAC1	JH-M1-PAC2	JH-M1-PAC3	JH-M1-PAC4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/01/2026	30/01/2026	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Naphthalene	mg/kg	0.3	<2	<10	<10	<10
Acenaphthylene	mg/kg	0.9	<2	<10	<10	<10
Acenaphthene	mg/kg	0.5	<2	<10	<10	<10
Fluorene	mg/kg	0.6	<2	<10	<10	<10
Phenanthrene	mg/kg	9.6	2.4	<10	<10	<10
Anthracene	mg/kg	2.4	<2	<10	<10	<10
Fluoranthene	mg/kg	23	4.0	<10	<10	<10
Pyrene	mg/kg	22	3.6	<10	<10	<10
Benzo(a)anthracene	mg/kg	7.9	<2	<10	<10	<10
Chrysene	mg/kg	8.6	<2	<10	<10	<10
Benzo(b,j+k)fluoranthene	mg/kg	18	<4	<20	<20	<20
Benzo(a)pyrene	mg/kg	13	<1	<5	<5	<5
Indeno(1,2,3-c,d)pyrene	mg/kg	5.9	<2	<10	<10	<10
Dibenzo(a,h)anthracene	mg/kg	1.2	<2	<10	<10	<10
Benzo(g,h,i)perylene	mg/kg	9.0	<2	<10	<10	<10
Total +ve PAH's	mg/kg	120	10	<5	<5	<5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	17	<10	<50	<50	<50
Benzo(a)pyrene TEQ calc(half)	mg/kg	17	<10	<50	<50	<50
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	17	<10	<50	<50	<50
Surrogate <i>p</i> -Terphenyl-d14	%	108	#	#	#	#

PAHs in Soil						
Our Reference		400775-6	400775-7	400775-8	400775-9	400775-10
Your Reference	UNITS	JH-M1-PAC5	JH-M1-PAC1-D	JH-M1-PAC2-D	JH-M1-PAC3-D	JH-M1-PAC4-D
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/01/2026	30/01/2026	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Naphthalene	mg/kg	<10	3.9	<10	<10	<10
Acenaphthylene	mg/kg	<10	0.9	<10	<10	<10
Acenaphthene	mg/kg	<10	5.4	<10	<10	<10
Fluorene	mg/kg	<10	6.6	<10	<10	<10
Phenanthrene	mg/kg	<10	24	<10	<10	<10
Anthracene	mg/kg	<10	3.5	<10	<10	<10
Fluoranthene	mg/kg	<10	19	<10	<10	<10
Pyrene	mg/kg	<10	15	<10	<10	<10
Benzo(a)anthracene	mg/kg	<10	1.9	<10	<10	<10
Chrysene	mg/kg	<10	1.7	<10	<10	<10
Benzo(b,j+k)fluoranthene	mg/kg	<20	2.4	<20	<20	<20
Benzo(a)pyrene	mg/kg	<5	1.3	<5	<5	<5
Indeno(1,2,3-c,d)pyrene	mg/kg	<10	<0.5	<10	<10	<10
Dibenzo(a,h)anthracene	mg/kg	<10	<0.5	<10	<10	<10
Benzo(g,h,i)perylene	mg/kg	<10	0.8	<10	<10	<10
Total +ve PAH's	mg/kg	<5	86	<5	<5	<5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<50	1.8	<50	<50	<50
Benzo(a)pyrene TEQ calc(half)	mg/kg	<50	2.0	<50	<50	<50
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<50	2.3	<50	<50	<50
Surrogate <i>p</i> -Terphenyl-d14	%	#	#	#	#	#

PAHs in Soil						
Our Reference		400775-11	400775-12	400775-13	400775-14	400775-15
Your Reference	UNITS	JH-M1-PAC5-D	JH-M1-C4	JH-M1-C8	JH-M1-PAC1-C4	JH-M1-PAC2-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/01/2026	30/01/2026	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Naphthalene	mg/kg	<10	0.6	0.4	<2	<10
Acenaphthylene	mg/kg	<10	1.1	0.8	<2	<10
Acenaphthene	mg/kg	<10	2.2	0.6	<2	<10
Fluorene	mg/kg	<10	3.1	0.8	<2	<10
Phenanthrene	mg/kg	<10	26	10	<2	<10
Anthracene	mg/kg	<10	5.5	2.4	<2	<10
Fluoranthene	mg/kg	<10	38	21	2.1	<10
Pyrene	mg/kg	<10	34	19	<2	<10
Benzo(a)anthracene	mg/kg	<10	11	7.2	<2	<10
Chrysene	mg/kg	<10	11	7.8	<2	<10
Benzo(b,j+k)fluoranthene	mg/kg	<20	23	17	<4	<20
Benzo(a)pyrene	mg/kg	<5	14	10	<1	<5
Indeno(1,2,3-c,d)pyrene	mg/kg	<10	7.2	5.5	<2	<10
Dibenzo(a,h)anthracene	mg/kg	<10	1.5	0.8	<2	<10
Benzo(g,h,i)perylene	mg/kg	<10	11	8.4	<2	<10
Total +ve PAH's	mg/kg	<5	190	110	2.1	<5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<50	20	14	<1	<50
Benzo(a)pyrene TEQ calc(half)	mg/kg	<50	20	14	<1	<50
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<50	20	14	<1	<50
Surrogate p-Terphenyl-d14	%	#	96	106	#	#

PAHs in Soil				
Our Reference		400775-16	400775-17	400775-18
Your Reference	UNITS	JH-M1-PAC3-C4	JH-M1-PAC4-C4	JH-M1-PAC5-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil
Date extracted	-	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	02/02/2026	02/02/2026	02/02/2026
Naphthalene	mg/kg	<10	<10	<10
Acenaphthylene	mg/kg	<10	<10	<10
Acenaphthene	mg/kg	<10	<10	<10
Fluorene	mg/kg	<10	<10	<10
Phenanthrene	mg/kg	<10	<10	<10
Anthracene	mg/kg	<10	<10	<10
Fluoranthene	mg/kg	<10	<10	<10
Pyrene	mg/kg	<10	<10	<10
Benzo(a)anthracene	mg/kg	<10	<10	<10
Chrysene	mg/kg	<10	<10	<10
Benzo(b,j+k)fluoranthene	mg/kg	<20	<20	<20
Benzo(a)pyrene	mg/kg	<5	<5	<5
Indeno(1,2,3-c,d)pyrene	mg/kg	<10	<10	<10
Dibenzo(a,h)anthracene	mg/kg	<10	<10	<10
Benzo(g,h,i)perylene	mg/kg	<10	<10	<10
Total +ve PAH's	mg/kg	<5	<5	<5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<50	<50	<50
Benzo(a)pyrene TEQ calc(half)	mg/kg	<50	<50	<50
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<50	<50	<50
Surrogate p-Terphenyl-d14	%	#	#	#

Moisture						
Our Reference	UNITS	400775-1	400775-2	400775-3	400775-4	400775-5
Your Reference		Baseline All Mix	JH-M1-PAC1	JH-M1-PAC2	JH-M1-PAC3	JH-M1-PAC4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	30/01/2026	30/01/2026	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Moisture	%	9.5	9.2	9.0	8.8	8.3

Moisture						
Our Reference	UNITS	400775-6	400775-7	400775-8	400775-9	400775-10
Your Reference		JH-M1-PAC5	JH-M1-PAC1-D	JH-M1-PAC2-D	JH-M1-PAC3-D	JH-M1-PAC4-D
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	30/01/2026	30/01/2026	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Moisture	%	9.1	9.1	8.8	9.0	8.6

Moisture						
Our Reference	UNITS	400775-11	400775-12	400775-13	400775-14	400775-15
Your Reference		JH-M1-PAC5-D	JH-M1-C4	JH-M1-C8	JH-M1-PAC1-C4	JH-M1-PAC2-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	30/01/2026	30/01/2026	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Moisture	%	8.8	8.5	7.9	8.0	8.1

Moisture				
Our Reference	UNITS	400775-16	400775-17	400775-18
Your Reference		JH-M1-PAC3-C4	JH-M1-PAC4-C4	JH-M1-PAC5-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil
Date prepared	-	30/01/2026	30/01/2026	30/01/2026
Date analysed	-	02/02/2026	02/02/2026	02/02/2026
Moisture	%	8.4	7.8	7.8

Misc Inorg - Soil

Our Reference		400775-1	400775-2	400775-3	400775-4	400775-5
Your Reference	UNITS	Baseline All Mix	JH-M1-PAC1	JH-M1-PAC2	JH-M1-PAC3	JH-M1-PAC4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/02/2026	03/02/2026	03/02/2026	03/02/2026	03/02/2026
Date analysed	-	03/02/2026	03/02/2026	03/02/2026	03/02/2026	03/02/2026
pH 1:5 soil:water	pH Units	8.2	8.5	8.6	8.7	8.7

Misc Inorg - Soil

Our Reference		400775-6	400775-7	400775-8	400775-9	400775-10
Your Reference	UNITS	JH-M1-PAC5	JH-M1-PAC1-D	JH-M1-PAC2-D	JH-M1-PAC3-D	JH-M1-PAC4-D
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/02/2026	03/02/2026	03/02/2026	03/02/2026	03/02/2026
Date analysed	-	03/02/2026	03/02/2026	03/02/2026	03/02/2026	03/02/2026
pH 1:5 soil:water	pH Units	8.7	8.6	8.7	8.7	8.1

Misc Inorg - Soil

Our Reference		400775-11	400775-12	400775-13	400775-14	400775-15
Your Reference	UNITS	JH-M1-PAC5-D	JH-M1-C4	JH-M1-C8	JH-M1-PAC1-C4	JH-M1-PAC2-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/02/2026	03/02/2026	03/02/2026	03/02/2026	03/02/2026
Date analysed	-	03/02/2026	03/02/2026	03/02/2026	03/02/2026	03/02/2026
pH 1:5 soil:water	pH Units	8.6	11.9	12.2	11.7	11.7

Misc Inorg - Soil

Our Reference		400775-16	400775-17	400775-18
Your Reference	UNITS	JH-M1-PAC3-C4	JH-M1-PAC4-C4	JH-M1-PAC5-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil
Date prepared	-	03/02/2026	03/02/2026	03/02/2026
Date analysed	-	03/02/2026	03/02/2026	03/02/2026
pH 1:5 soil:water	pH Units	11.7	11.8	12.0

ASLP Preparation - Neutral

Our Reference		400775-1	400775-2	400775-3	400775-4	400775-5
Your Reference	UNITS	Baseline All Mix	JH-M1-PAC1	JH-M1-PAC2	JH-M1-PAC3	JH-M1-PAC4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	6.6	6.7	6.9	7.0	7.1

ASLP Preparation - Neutral

Our Reference		400775-6	400775-7	400775-8	400775-9	400775-10
Your Reference	UNITS	JH-M1-PAC5	JH-M1-PAC1-D	JH-M1-PAC2-D	JH-M1-PAC3-D	JH-M1-PAC4-D
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	7.2	7.3	7.3	7.6	7.2

ASLP Preparation - Neutral

Our Reference		400775-11	400775-12	400775-13	400775-14	400775-15
Your Reference	UNITS	JH-M1-PAC5-D	JH-M1-C4	JH-M1-C8	JH-M1-PAC1-C4	JH-M1-PAC2-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	7.8	11.6	11.8	11.6	11.6

ASLP Preparation - Neutral

Our Reference		400775-16	400775-17	400775-18
Your Reference	UNITS	JH-M1-PAC3-C4	JH-M1-PAC4-C4	JH-M1-PAC5-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil
pH of final Leachate	pH units	11.6	11.6	11.6

sTRH in water leach						
Our Reference		400775-1	400775-2	400775-3	400775-4	400775-5
Your Reference	UNITS	Baseline All Mix	JH-M1-PAC1	JH-M1-PAC2	JH-M1-PAC3	JH-M1-PAC4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Date analysed	-	04/02/2026	04/02/2026	04/02/2026	04/02/2026	04/02/2026
TRH C ₁₀ - C ₁₄	µg/L	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	<50	<50	<50	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100	<100	<100	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	91	92	92	99	98

sTRH in water leach						
Our Reference		400775-6	400775-7	400775-8	400775-9	400775-10
Your Reference	UNITS	JH-M1-PAC5	JH-M1-PAC1-D	JH-M1-PAC2-D	JH-M1-PAC3-D	JH-M1-PAC4-D
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Date analysed	-	04/02/2026	04/02/2026	03/02/2026	03/02/2026	03/02/2026
TRH C ₁₀ - C ₁₄	µg/L	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	<50	<50	<50	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100	<100	<100	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	89	72	88	88	110

sTRH in water leach

Our Reference		400775-11	400775-12	400775-13	400775-14	400775-15
Your Reference	UNITS	JH-M1-PAC5-D	JH-M1-C4	JH-M1-C8	JH-M1-PAC1-C4	JH-M1-PAC2-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Date analysed	-	03/02/2026	03/02/2026	03/02/2026	04/02/2026	04/02/2026
TRH C ₁₀ - C ₁₄	µg/L	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	<50	<50	<50	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100	<100	<100	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	90	88	94	60	88

sTRH in water leach

Our Reference		400775-16	400775-17	400775-18
Your Reference	UNITS	JH-M1-PAC3-C4	JH-M1-PAC4-C4	JH-M1-PAC5-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil
Date extracted	-	02/02/2026	02/02/2026	02/02/2026
Date analysed	-	04/02/2026	04/02/2026	04/02/2026
TRH C ₁₀ - C ₁₄	µg/L	<50	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	<50	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100
Surrogate o-Terphenyl	%	82	78	98

PAHs - ASLP Trace Level						
Our Reference		400775-1	400775-2	400775-3	400775-4	400775-5
Your Reference	UNITS	Baseline All Mix	JH-M1-PAC1	JH-M1-PAC2	JH-M1-PAC3	JH-M1-PAC4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Date analysed	-	05/02/2026	05/02/2026	05/02/2026	05/02/2026	05/02/2026
pH of final Leachate	pH units	6.7	6.7	6.9	7.0	7.1
Naphthalene	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	µg/L	0.02	<0.01	<0.01	<0.01	<0.01
Acenaphthene	µg/L	0.01	0.02	<0.01	<0.01	<0.01
Fluorene	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Phenanthrene	µg/L	0.10	0.08	0.08	0.03	0.03
Anthracene	µg/L	0.04	0.02	0.02	<0.01	<0.01
Fluoranthene	µg/L	0.49	0.22	0.30	0.1	0.13
Pyrene	µg/L	0.58	0.24	0.34	0.10	0.18
Benzo(a)anthracene	µg/L	0.20	0.08	0.11	0.04	0.05
Chrysene	µg/L	0.17	0.06	0.09	0.03	0.05
Benzo(b,j+k)fluoranthene	µg/L	0.75	0.26	0.36	0.1	0.2
Benzo(a)pyrene	µg/L	0.24	0.08	0.12	0.04	0.06
Dibenzo(a,h)anthracene	µg/L	0.03	<0.01	0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.17	0.05	0.07	0.02	0.03
Benzo(g,h,i)perylene	µg/L	0.23	0.07	0.10	0.03	0.04
Benzo(a)pyrene TEQ	µg/L	0.39	0.1	0.2	0.06	0.09
Total +ve PAH's	µg/L	3.0	1.2	1.6	0.51	0.75
Surrogate p-Terphenyl-d14	%	90	86	90	94	89

PAHs - ASLP Trace Level						
Our Reference		400775-6	400775-7	400775-8	400775-9	400775-10
Your Reference	UNITS	JH-M1-PAC5	JH-M1-PAC1-D	JH-M1-PAC2-D	JH-M1-PAC3-D	JH-M1-PAC4-D
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Date analysed	-	05/02/2026	05/02/2026	05/02/2026	05/02/2026	05/02/2026
pH of final Leachate	pH units	7.2	7.3	7.3	7.6	7.2
Naphthalene	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthene	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Fluorene	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Phenanthrene	µg/L	0.03	<0.01	0.03	0.03	0.02
Anthracene	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	µg/L	0.14	<0.01	0.14	0.11	0.08
Pyrene	µg/L	0.16	<0.01	0.15	0.12	0.09
Benzo(a)anthracene	µg/L	0.05	<0.01	0.05	0.05	0.04
Chrysene	µg/L	0.05	<0.01	0.05	0.04	0.03
Benzo(b,j+k)fluoranthene	µg/L	0.2	<0.02	0.2	0.1	0.1
Benzo(a)pyrene	µg/L	0.06	<0.01	0.06	0.04	0.03
Dibenzo(a,h)anthracene	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.03	<0.01	0.03	0.02	0.02
Benzo(g,h,i)perylene	µg/L	0.04	<0.01	0.04	0.03	0.02
Benzo(a)pyrene TEQ	µg/L	0.09	<0.05	0.08	0.06	0.05
Total +ve PAH's	µg/L	0.75	NIL (+)VE	0.73	0.58	0.46
Surrogate p-Terphenyl-d14	%	96	60	90	85	89

PAHs - ASLP Trace Level						
Our Reference		400775-11	400775-12	400775-13	400775-14	400775-15
Your Reference	UNITS	JH-M1-PAC5-D	JH-M1-C4	JH-M1-C8	JH-M1-PAC1-C4	JH-M1-PAC2-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2026	02/02/2026	02/02/2026	02/02/2026	02/02/2026
Date analysed	-	05/02/2026	05/02/2026	05/02/2026	05/02/2026	05/02/2026
pH of final Leachate	pH units	7.8	11.6	11.8	11.6	11.6
Naphthalene	µg/L	<0.02	0.2	0.27	<0.02	<0.02
Acenaphthylene	µg/L	<0.01	0.01	0.02	<0.01	<0.01
Acenaphthene	µg/L	<0.01	0.25	0.31	<0.01	<0.01
Fluorene	µg/L	<0.01	0.28	0.40	<0.01	<0.01
Phenanthrene	µg/L	0.06	1.7	2.2	0.06	0.01
Anthracene	µg/L	0.01	0.33	0.41	0.02	<0.01
Fluoranthene	µg/L	0.25	0.88	1.3	0.06	0.02
Pyrene	µg/L	0.27	0.69	1.0	0.05	0.02
Benzo(a)anthracene	µg/L	0.08	0.07	0.1	<0.01	<0.01
Chrysene	µg/L	0.07	0.06	0.08	<0.01	<0.01
Benzo(b,j+k)fluoranthene	µg/L	0.2	0.08	0.2	<0.02	<0.02
Benzo(a)pyrene	µg/L	0.09	0.02	0.05	<0.01	<0.01
Dibenzo(a,h)anthracene	µg/L	<0.01	0.01	0.03	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.05	<0.01	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L	0.07	0.01	0.04	<0.01	<0.01
Benzo(a)pyrene TEQ	µg/L	0.1	0.05	0.1	<0.05	<0.05
Total +ve PAH's	µg/L	1.1	4.5	6.4	0.18	0.059
Surrogate p-Terphenyl-d14	%	62	65	76	77	71

PAHs - ASLP Trace Level				
Our Reference		400775-16	400775-17	400775-18
Your Reference	UNITS	JH-M1-PAC3-C4	JH-M1-PAC4-C4	JH-M1-PAC5-C4
Date Sampled		28/01/2026	28/01/2026	28/01/2026
Type of sample		Soil	Soil	Soil
Date extracted	-	02/02/2026	02/02/2026	02/02/2026
Date analysed	-	05/02/2026	05/02/2026	05/02/2026
pH of final Leachate	pH units	11.6	11.6	11.6
Naphthalene	µg/L	<0.02	<0.02	<0.02
Acenaphthylene	µg/L	<0.01	<0.01	<0.01
Acenaphthene	µg/L	<0.01	<0.01	<0.01
Fluorene	µg/L	<0.01	<0.01	<0.01
Phenanthrene	µg/L	<0.01	<0.01	<0.01
Anthracene	µg/L	<0.01	<0.01	<0.01
Fluoranthene	µg/L	0.01	0.01	<0.01
Pyrene	µg/L	<0.01	<0.01	<0.01
Benzo(a)anthracene	µg/L	<0.01	<0.01	<0.01
Chrysene	µg/L	<0.01	<0.01	<0.01
Benzo(b,j+k)fluoranthene	µg/L	<0.02	<0.02	<0.02
Benzo(a)pyrene	µg/L	<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	µg/L	<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L	<0.01	<0.01	<0.01
Benzo(a)pyrene TEQ	µg/L	<0.05	<0.05	<0.05
Total +ve PAH's	µg/L	0.010	0.010	NIL (+)VE
Surrogate p-Terphenyl-d14	%	74	67	72

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	400775-2
Date extracted	-			30/01/2026	1	30/01/2026	30/01/2026		30/01/2026	30/01/2026
Date analysed	-			31/01/2026	1	01/02/2026	01/02/2026		31/01/2026	01/02/2026
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	1	<50	<50	0	108	78
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	1	190	190	0	99	70
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	1	270	270	0	114	#
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	1	<50	<50	0	108	78
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	1	370	360	3	99	70
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	1	210	190	10	114	#
Surrogate o-Terphenyl	%		Org-020	90	1	95	96	1	94	77

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	12	30/01/2026	30/01/2026		[NT]	[NT]
Date analysed	-			[NT]	12	01/02/2026	01/02/2026		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	12	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	12	210	160	27	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	12	230	240	4	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	12	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	12	370	320	14	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	12	160	190	17	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	12	88	90	2	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	400775-2
Date extracted	-			30/01/2026	1	30/01/2026	30/01/2026		30/01/2026	30/01/2026
Date analysed	-			02/02/2026	1	02/02/2026	02/02/2026		02/02/2026	02/02/2026
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	0.3	0.3	0	104	84
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	0.9	1	11	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.6	18	98	78
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	0.6	0.8	29	98	#
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	9.6	11	14	104	#
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	2.4	3.0	22	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	23	23	0	102	#
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	22	22	0	102	#
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	7.9	7.8	1	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	8.6	8.7	1	92	#
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	18	18	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	13	13	0	118	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	5.9	5.7	3	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	1.2	0.8	40	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	9.0	9.0	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	106	1	108	105	3	105	#

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	12	30/01/2026	30/01/2026		[NT]	[NT]
Date analysed	-			[NT]	12	02/02/2026	02/02/2026		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	12	0.6	0.3	67	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	12	1.1	0.8	32	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	12	2.2	0.5	126	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	12	3.1	0.7	126	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	12	26	8.3	103	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	12	5.5	2.1	89	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	12	38	19	67	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	12	34	18	62	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	12	11	6.9	46	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	12	11	7.2	42	[NT]	[NT]
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	12	23	16	36	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	12	14	9.8	35	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	12	7.2	5.4	29	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	12	1.5	0.8	61	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	12	11	8.0	32	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	12	96	104	8	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			03/02/2026	8	03/02/2026	03/02/2026		03/02/2026	[NT]
Date analysed	-			03/02/2026	8	03/02/2026	03/02/2026		03/02/2026	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	8	8.7	8.7	0	100	[NT]

QUALITY CONTROL: Misc Inorg - Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	18	03/02/2026	03/02/2026		[NT]	[NT]
Date analysed	-			[NT]	18	03/02/2026	03/02/2026		[NT]	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	18	12.0	11.9	1	[NT]	[NT]

QUALITY CONTROL: sTRH in water leach					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W5	[NT]
Date extracted	-			02/02/2026	12	02/02/2026	02/02/2026		02/02/2026	[NT]
Date analysed	-			04/02/2026	12	03/02/2026	03/02/2026		04/02/2026	[NT]
TRH C ₁₀ - C ₁₄	µg/L	50	Org-020	<50	12	<50	<50	0	85	[NT]
TRH C ₁₅ - C ₂₈	µg/L	100	Org-020	<100	12	<100	<100	0	90	[NT]
TRH C ₂₉ - C ₃₆	µg/L	100	Org-020	<100	12	<100	<100	0	100	[NT]
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-020	<50	12	<50	<50	0	85	[NT]
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-020	<100	12	<100	<100	0	90	[NT]
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-020	<100	12	<100	<100	0	100	[NT]
Surrogate o-Terphenyl	%		Org-020	66	12	88	64	32	69	[NT]

QUALITY CONTROL: PAHs - ASLP Trace Level					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			02/02/2026	12	02/02/2026	02/02/2026		02/02/2026	[NT]
Date analysed	-			05/02/2026	12	05/02/2026	05/02/2026		05/02/2026	[NT]
Naphthalene	µg/L	0.02	Org-022/025	<0.02	12	0.2	0.24	18	61	[NT]
Acenaphthylene	µg/L	0.01	Org-022/025	<0.01	12	0.01	0.01	0	[NT]	[NT]
Acenaphthene	µg/L	0.01	Org-022/025	<0.01	12	0.25	0.31	21	76	[NT]
Fluorene	µg/L	0.01	Org-022/025	<0.01	12	0.28	0.39	33	76	[NT]
Phenanthrene	µg/L	0.01	Org-022/025	<0.01	12	1.7	2.3	30	86	[NT]
Anthracene	µg/L	0.01	Org-022/025	<0.01	12	0.33	0.46	33	[NT]	[NT]
Fluoranthene	µg/L	0.01	Org-022/025	<0.01	12	0.88	1.2	31	86	[NT]
Pyrene	µg/L	0.01	Org-022/025	<0.01	12	0.69	0.97	34	82	[NT]
Benzo(a)anthracene	µg/L	0.01	Org-022/025	<0.01	12	0.07	0.08	13	[NT]	[NT]
Chrysene	µg/L	0.01	Org-022/025	<0.01	12	0.06	0.07	15	74	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.02	Org-022/025	<0.02	12	0.08	0.06	29	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.01	Org-022/025	<0.01	12	0.02	0.02	0	86	[NT]
Dibenzo(a,h)anthracene	µg/L	0.01	Org-022/025	<0.01	12	0.01	<0.01	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	Org-022/025	<0.01	12	<0.01	<0.01	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.01	Org-022/025	<0.01	12	0.01	<0.01	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	65	12	65	66	2	63	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates can be downloaded from the [Envirolab Resources website](#) or obtained directly by contacting the laboratory.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

PAHs in Soil - # Percent recovery for the surrogate spike is not possible to report due to interference from analytes (other than those being tested) in samples 400775-2,3,4,5,6,7,8,9,10,11,14,15,16,17,18.

Percent recovery for the matrix spike is not possible to report due to interference from analytes (other than those being tested) in sample 400775-2.

The PQL has been raised due to interferences from analytes (other than those being tested) in samples 400775-2,3,4,5,6,7,8,9,10,11,14,15,16,17,18.

The RPD for duplicate results is accepted due to the non homogenous nature of sample 400775-12.

TRH_S_NEPM:# Percent recovery for the surrogate spike is not possible to report due to interference from analytes (other than those being tested) in samples 400775-3,4,5,6,8,9,10,11,15,16,17,18.

The PQL has been raised due to interferences from analytes (other than those being tested) in samples 400775-3,4,5,6,8,9,10,11,15,16,17,18.

Percent recovery for the matrix spike is not possible to report due to interference from analytes (other than those being tested) in sample 400775-2.



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APPENDIX D

LABORATORY CERTIFICATES



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ENVIROLAB GROUP

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Unit 20/119 Reichardt Road, Winnellie, NT 0820

08 8967 1201 | darwin@envirolab.com.au

Company:	ENVIROSCIENCE SOLUTIONS		Client Project Name/Number/Site etc (ie report title):	SO985 - Fill 18 COAL TAIL ASSESSMENT	
Contact Person:	SAM RAMSEY		PO No. (if applicable):		
Project Mgr:	SAM RAMSEY		Envirolab Quote No.:		
Sampler:	SR / TD		Date results required:		
Address:	320 CAMBTON ROAD, NEW CAMBTON NSW 2305		Or choose:	☐ Standard ☒ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Phone:		Mob:	0479678611		
Email Results to:	sam@enviroscience.com.au		Note: Inform lab in advance if urgent turnaround is required - surcharges apply		
Email Invoice to:	peamy@enviroscience.com.au		Additional report format:	☒ Esdat ☐ Equis	
			Lab Comments:	ss as per SR Combobeta Phenols Presence/Absence Coal Tail	

Sample Information					Tests Required										Comments
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample	Combobeta	Phenols	Presence/Absence Coal Tail	ASLP/Prep							Provide as much information about the sample as you can
1	MC20 8680-SP		21/3	S	✓	✓	✓	✓							ASLP for
2	MC20 8680-S		21/3	S	✓	✓	✓	✓							ALL ANALYTES
3	MC20 8680-100		21/3	S	✓	✓	✓	✓							
4	MC20 8680-500		21/3	S	✓	✓	✓	✓							
5	MC20 8720-SP		21/3	S	✓	✓	✓	✓							PAM
6	MC20 8720-S		21/3	S	✓	✓	✓	✓							TRM / BTEX Metals
7	MC20 8720-100		21/3	S	✓	✓	✓	✓							
8	MC20 8720-500		21/3	S	✓	✓	✓	✓							
9	MC20 8760-SP		21/3	S	✓	✓	✓	✓							
10	MC20 8760-S		21/3	S	✓	✓	✓	✓							
11	MC20 8760-100		21/3	S	✓	✓	✓	✓							

☐ Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company):	Received by (Company):	Lab Use Only:	
Print Name:	Print Name: Danni	Job number: 376250	Cooling: ☒ Ice pack / None
Date & Time:	Date & Time: 21/03/25 16:15	Temperature: 6°C	Security seal: ☒ Intact / Broken / None
Signature:	Signature: M. P.	TAT Req - SAME day / ☒ 2 / 3 / 4 / STD	

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Company:	ENVIROSCIENCE SOLUTIONS		Client Project Name/Number/Site etc (ie report title):	SO985 - Fill 18 COAL TAIL ASSESSMENT	
Contact Person:	SAM RAMSEY		PO No. (if applicable):		
Project Mgr:	SAM RAMSEY		Envirolab Quote No.:		
Sampler:	SR / TD		Date results required:		
Address:	820 LAMBTON ROAD, NEW LAMBTON NSW 2305		Or choose:	☐ Standard ☒ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Phone:		Mob:	0479678611		
Email Results to:	sam@enviroscience.com.au		Note: Inform lab in advance if urgent turnaround is required - surcharges apply		
Email Invoice to:	peamy@enviroscience.com.au		Additional report format:	☒ Esdat ☐ Equis	
			Lab Comments:		

Sample information					Tests Required										Comments		
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample	Combed	Phenols	Presence of asbestos	COAL TAIL	ASLP								Provide as much information about the sample as you can
12	MC20 8670-500		21/3	S	✓	✓	✓	✓	✓								ASLP for ALL ANALYTES
13	MC20 8790-SP		21/3	S	✓	✓	✓	✓	✓								
14	MC20 8790-B		21/3	S	✓	✓	✓	✓	✓								
15	MC20 8740-100		21/3	S	✓	✓	✓	✓	✓								
16	MC20 8790-500		21/3	S	✓	✓	✓	✓	✓								
17	MC20 8820-SP		21/3	S	✓	✓	✓	✓	✓								
18	MC20 8820-SP		21/3	S	✓	✓	✓	✓	✓								
19	MC20 8820-100		21/3	S	✓	✓	✓	✓	✓								
20	MC20 8820-500		21/3	S	✓	✓	✓	✓	✓								
21	MC20 8880-SP		21/3	S	✓	✓	✓	✓	✓								
22	MC20 8850-S		21/3	S	✓	✓	✓	✓	✓								

☐ Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company):		Received by (Company):		Lab Use Only	
Print Name:		Print Name:		Job number:	Cooling: Ice / Ice pack / None
Date & Time:		Date & Time:		Temperature:	Security seal: Intact / Broken / None
Signature:		Signature:		TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

#778250
21/03/25
Duff



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Company:	ENVIROSCIENCE SOLUTIONS		Client Project Name/Number/Site etc (ie report title):	SO985 - FILL IS COAL TAIL ASSESSMENT	
Contact Person:	SAM RAMSEY		PO No. (if applicable):		
Project Mgr:	SAM RAMSEY		Envirolab Quote No.:		
Sampler:	SR / TD		Date results required:	☐ Standard ☒ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Address:	8220 LAMBTON ROAD, NEW LAMBTON NSW 2305		Note: Inform lab in advance if urgent turnaround is required - surcharges apply		
Phone:		Mob:	0479678611		
Email Results to:	sam@envirolab.com.au		Additional report format:	☒ Esdat ☐ Equis	
Email Invoice to:	sam@envirolab.com.au		Lab Comments:		

Sample information					Tests Required										Comments	
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample	Combed	Phenols	Presence of asbestos	ASLP								Provide as much information about the sample as you can
23	MC20 8850-100		21/3	S	✓	✓	✓	✓								ASLP for ALL ANALYTES
24	MC20 8850-500		21/3	S	✓	✓	✓	✓								
25	MC20 8840-SP		21/3	S	✓	✓	✓	✓								
26	MC20 8840-S		21/3	S	✓	✓	✓	✓								
27	MC20 8840-100		21/3	S	✓	✓	✓	✓								
28	MC20 8840-500		21/3	S	✓	✓	✓	✓								
29	MC20 8930-SP		21/3	S	✓	✓	✓	✓								
30	MC20 8930-S		21/3	S	✓	✓	✓	✓								
31	MC20 8930-SP		21/3	S	✓	✓	✓	✓								
32	MC20 8930-100		21/3	S	✓	✓	✓	✓								
33	MC20 8930-500		21/3	S	✓	✓	✓	✓								



Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company):		Received by (Company):		Lab Use Only	
Print Name:		Print Name:		Job number:	Cooling: Ice / Ice pack / None
Date & Time:		Date & Time:		Temperature:	Security seal: Intact / Broken / None
Signature:		Signature:		TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

#376250
21/03/18
DLH



CHAIN OF CUSTODY FORM - Client

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Company:	ENVIROSCIENCE SOLUTIONS		Client Project Name/Number/Site etc (ie report title):	50985 - Fill 18 COAL TAIL ASSESSMENT	
Contact Person:	SAM RAMSEY		PO No. (if applicable):		
Project Mgr:	SAM RAMSEY		Envirolab Quote No.:		
Sampler:	SR / TD		Date results required:	☐ Standard ☒ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Address:	320 CAMBTON ROAD, NEW CAMBTON NSW 2305		Or choose:		
Phone:		Mob:	0479678611		
Email Results to:	sam@envirolab.com.au		Note: Inform lab in advance if urgent turnaround is required - surcharges apply		
Email Invoice to:	sam@envirolab.com.au		Additional report format:	☒ Esdat ☐ Equis	
			Lab Comments:		

ENVIROLAB GROUP

National phone number 1300 424 344

Sydney Lab - Envirolab Services

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02 9910 6200 | sydney@envirolab.com.au

Perth Lab - MPL Laboratories

16-18 Hayden Crt, Myaree, WA 6154

08 9317 2505 | lab@mpl.com.au

Melbourne Lab - Envirolab Services

25 Research Drive, Croydon South, VIC 3136

03 9763 2500 | melbourne@envirolab.com.au

Adelaide Office - Envirolab Services

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08 7087 6800 | adelaide@envirolab.com.au

Brisbane Office - Envirolab Services

20a, 10-20 Depot St, Banyo, QLD 4014

07 3266 9532 | brisbane@envirolab.com.au

Darwin Office - Envirolab Services

Unit 20/119 Reichardt Road, Winnellie, NT 0820

08 8967 1201 | darwin@envirolab.com.au

Sample information					Tests Required										Comments	
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample	Combed	Shovel	Presence / absence of tail	ASLP								Provide as much information about the sample as you can
33	MC208970-SP		21/3	S	x	x	x	x								ASLP for ALL ANALYTES
34	MC208970-S		21/3	S												
35	MC208970-100		21/3	S												
36	MC208970-500		21/3	S												
37	MC209010-SP		21/3	S												
38	MC209010-S		21/3	S												
39	MC209010-400		21/3	S												
40	MC209010-500		21/3	S												
41	MC209040-SP		21/3	S												
42	MC209040-S		21/3	S												
43	MC209040-100		21/3	S												



Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company):	Received by (Company):	Lab Use Only	
Print Name:	Print Name:	Job number:	Cooling: Ice / Ice pack / None
Date & Time:	Date & Time:	Temperature:	Security seal: Intact / Broken / None
Signature:	Signature:	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

#376250
21/03/21
PRL

CHAIN OF CUSTODY FORM - Client

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Company:	ENVIROSCIENCE SOLUTIONS		Client Project Name/Number/Site etc (ie report title):	SO985 - Fill 18 COAL TAIL ASSESSMENT	
Contact Person:	SAM RAMSEY		PO No. (if applicable):		
Project Mgr:	SAM RAMSEY		Envirolab Quote No.:		
Sampler:	SR / TD		Date results required:	☐ Standard ☒ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Address:	820 CAMPTON ROAD, NEW CAMPTON NSW 2305		Or choose:		
Phone:		Mob:	0479678611		
Email Results to:	sam@enviroscience.com.au		Note: Inform lab in advance if urgent turnaround is required - surcharges apply		
Email Invoice to:	peamy@enviroscience.com.au		Additional report format:	☒ Esdat ☐ Equis	
			Lab Comments:		

ENVIROLAB GROUP

National phone number 1300 424 344

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Melbourne Lab - Envirolab Services

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☎ 03 9763 2500 | ✉ melbourne@envirolab.com.au

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Darwin Office - Envirolab Services

Unit 20/119 Reichardt Road, Winnellie, NT 0820

☎ 08 8967 1201 | ✉ darwin@envirolab.com.au

Sample information					Tests Required										Comments		
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample	Combed	Phenols	Presence of bacteria	COAL TAIL	ASLP								Provide as much information about the sample as you can
44	MC20 9040-500		21/3	S	✓	✓	✓	✓	✓								ASLP for
45	MC20 9090-SP		21/3	S	✓	✓	✓	✓	✓								ALL ANALYTES
46	MC20 9090-S		21/3	S	✓	✓	✓	✓	✓								
47	MC20 9090-100		21/3	S	✓	✓	✓	✓	✓								
48	MC20 9090-500		21/3	S	✓	✓	✓	✓	✓								
49	MC 20 9130-SP		21/3	S	✓	✓	✓	✓	✓								
50	MC20 9130-S		21/3	S	✓	✓	✓	✓	✓								
51	MC20 9130-100		21/3	S	✓	✓	✓	✓	✓								
52	MC 20 9130-500		21/3	S	✓	✓	✓	✓	✓								
53	MC 20 9170-SP		21/3	S	✓	✓	✓	✓	✓								
54	MC 20 9170-S		21/3	S	✓	✓	✓	✓	✓								

☐ Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company):	Received by (Company):	Lab Use Only	
Print Name:	Print Name:	Job number:	Cooling: Ice / Ice pack / None
Date & Time:	Date & Time:	Temperature:	Security seal: Intact / Broken / None
Signature:	Signature:	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

#376280
21/03/18
DLH



CHAIN OF CUSTODY FORM - Client

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ENVIROLAB GROUP

National phone number 1300 424 344

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☎ 08 9317 2505 | ✉ lab@mpl.com.au

Melbourne Lab - Envirolab Services

25 Research Drive, Croydon South, VIC 3136

☎ 03 9763 2500 | ✉ melbourne@envirolab.com.au

Adelaide Office - Envirolab Services

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☎ 07 3266 9532 | ✉ brisbane@envirolab.com.au

Darwin Office - Envirolab Services

Unit 20/119 Reichardt Road, Winnellie, NT 0820

☎ 08 8967 1201 | ✉ darwin@envirolab.com.au

Company:	ENVIROSCIENCE SOLUTIONS		Client Project Name/Number/Site etc (ie report title):	50985 - Fill 18 COAL TAIL ASSESSMENT	
Contact Person:	SAM RAMSEY		PO No. (if applicable):		
Project Mgr:	SAM RAMSEY		Envirolab Quote No.:		
Sampler:	SR / TD		Date results required:	☐ Standard ☒ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Address:	320 LAMBTON ROAD, NEW LAMBTON NSW 2305		Note: Inform lab in advance if urgent turnaround is required - surcharges apply		
Phone:		Mob:	0479678611		
Email Results to:	sam@envirosience.com.au		Additional report format:	☒ Esdat ☐ Equis	
Email Invoice to:	perry@envirosience.com.au		Lab Comments:		

Sample information					Tests Required												Comments	
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample	Combed	Phenols	Residue / Lab source	ASLP										Provide as much information about the sample as you can
S5	MC209170-100		21/3	S	✓	✓	✓	✓										ASLP for
S6	MC209170-500		21/3	S	✓	✓	✓	✓										ALL ANALYTES
S7	MC209210-SP		21/3	S	✓	✓	✓	✓										
S8	MC209210-S		21/3	S	✓	✓	✓	✓										
S9	MC209210-100		21/3	S	✓	✓	✓	✓										
S60	MC209210-500		21/3	S	✓	✓	✓	✓										



Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company):		Received by (Company):		Lab Use Only	
Print Name:		Print Name:		Job number:	Cooling: Ice / Ice pack / None
Date & Time:		Date & Time:		Temperature:	Security seal: Intact / Broken / None
Signature:		Signature:		TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

#376280
21/03/21
PLP

SAMPLE RECEIPT ADVICE

Client Details

Client	EnviroScience Solutions (Newcastle)
Attention	Sam Ramsey

Sample Login Details

Your reference	50985-Fill 18 Coal Tar Assessment
Envirolab Reference	376250
Date Sample Received	21/03/2025
Date Instructions Received	21/03/2025
Date Results Expected to be Reported	24/03/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	60 Soil
Turnaround Time Requested	Same day
Temperature on Receipt (°C)	6
Cooling Method	Ice
Sampling Date Provided	YES

Comments

ASLP prep only

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

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ph 02 9910 6200 fax 02 9910 6201

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Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils	Coal Tar	ASLP Preparation - Neutral
MC208680_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208680_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208680_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208680_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208720_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208720_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208720_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208720_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208760_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208760_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208760_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208670_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208790_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208790_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208790_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208790_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208820_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208820_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208820_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208820_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208850_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208850_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208850_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208850_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208890_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208890_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208890_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208890_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208930_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208930_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208930_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208930_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



EnviroLab Services Pty Ltd

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Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils	Coal Tar	ASLP Preparation - Neutral
MC208970_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208970_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208970_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC208970_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209010_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209010_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209010_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209010_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209040_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209040_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209040_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209040_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209090_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209090_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209090_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209090_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209130_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209130_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209130_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209130_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209170_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209170_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209170_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209170_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209210_SP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209210_S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209210_100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MC209210_500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

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Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 376250

Client Details

Client	EnviroScience Solutions (Newcastle)
Attention	Sam Ramsey
Address	220 Lambton Road, NEW LAMBTON, NSW, 2305

Sample Details

Your Reference	<u>50985-Fill 18 Coal Tar Assessment</u>
Number of Samples	60 Soil
Date samples received	21/03/2025
Date completed instructions received	21/03/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	24/03/2025
Date of Issue	24/03/2025
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Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Lucy Zhu
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Diego Bigolin, Inorganics Supervisor
 Dragana Tomas, Senior Chemist
 Giovanni Agosti, Group Technical Manager
 Lucy Zhu, Asbestos Supervisor
 Steven Luong, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference	UNITS	MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	2	1	<1	<1	1
Surrogate aaa-Trifluorotoluene	%	99	94	91	83	86

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference	UNITS	MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	5	2	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	96	99	96	90

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference	UNITS	MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	1	14	<1
Surrogate aaa-Trifluorotoluene	%	97	90	100	88	97

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference	UNITS	MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	4	710	<1
Surrogate aaa-Trifluorotoluene	%	87	96	92	104	75

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	22	7	1	<1	230
Surrogate aaa-Trifluorotoluene	%	79	94	90	91	98

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference	UNITS	MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	8	14	<1	4	15
Surrogate aaa-Trifluorotoluene	%	96	81	88	93	79

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference	UNITS	MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	42	<1	4	<1	<1
Surrogate aaa-Trifluorotoluene	%	98	103	95	99	96

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference	UNITS	MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	89	96	103	104

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference	UNITS	MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	4	<1	<1	<1	2
Surrogate aaa-Trifluorotoluene	%	109	90	100	89	100

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference	UNITS	MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	6	18	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	105	96	96	104	98

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	102	97	97	103

vTRH(C6-C10)/BTEXN in Soil

Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	3,300	10	<1
Surrogate aaa-Trifluorotoluene	%	96	95	129	93	103

svTRH (C10-C40) in Soil						
Our Reference		376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference	UNITS	MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	22/03/2025	22/03/2025	22/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	270	150	<100	<100	270
TRH C ₂₉ - C ₃₆	mg/kg	530	130	<100	<100	480
Total +ve TRH (C10-C36)	mg/kg	800	280	<50	<50	750
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	550	210	<100	<100	520
TRH >C ₃₄ -C ₄₀	mg/kg	620	110	<100	<100	570
Total +ve TRH (>C10-C40)	mg/kg	1,200	330	<50	<50	1,100
Surrogate o-Terphenyl	%	88	83	76	75	86

svTRH (C10-C40) in Soil						
Our Reference		376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference	UNITS	MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	22/03/2025	22/03/2025	23/03/2025	22/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	90	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	970	<100	<100	160	<100
TRH C ₂₉ - C ₃₆	mg/kg	480	<100	<100	380	<100
Total +ve TRH (C10-C36)	mg/kg	1,500	<50	<50	540	<50
TRH >C ₁₀ -C ₁₆	mg/kg	180	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	180	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	1,100	<100	<100	360	<100
TRH >C ₃₄ -C ₄₀	mg/kg	380	<100	<100	490	<100
Total +ve TRH (>C10-C40)	mg/kg	1,700	<50	<50	860	<50
Surrogate o-Terphenyl	%	114	75	73	81	75

svTRH (C10-C40) in Soil

Our Reference		376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference	UNITS	MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	23/03/2025	23/03/2025	22/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	310	1,400	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	580	1,700	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	900	3,100	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	96	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	82	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	620	2,300	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	690	1,300	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	1,300	3,800	<50
Surrogate o-Terphenyl	%	76	73	89	120	79

svTRH (C10-C40) in Soil

Our Reference		376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference	UNITS	MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	23/03/2025	23/03/2025	23/03/2025	22/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	520	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	200	1,800	3,900	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	410	1,600	3,100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	610	3,300	7,500	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	97	860	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	93	150	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	420	2,600	5,300	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	530	1,100	2,400	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	940	3,900	8,600	<50
Surrogate o-Terphenyl	%	73	86	#	#	72

svTRH (C10-C40) in Soil

Our Reference		376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	22/03/2025	22/03/2025	24/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	2,000
TRH C ₁₅ - C ₂₈	mg/kg	440	2,700	220	<100	21,000
TRH C ₂₉ - C ₃₆	mg/kg	600	1,700	160	<100	9,500
Total +ve TRH (C10-C36)	mg/kg	1,000	4,300	370	<50	32,000
TRH >C ₁₀ -C ₁₆	mg/kg	69	190	<50	<50	4,100
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	180	<50	<50	3,900
TRH >C ₁₆ -C ₃₄	mg/kg	720	3,500	300	<100	24,000
TRH >C ₃₄ -C ₄₀	mg/kg	680	1,000	120	<100	4,400
Total +ve TRH (>C10-C40)	mg/kg	1,500	4,700	420	<50	33,000
Surrogate o-Terphenyl	%	94	#	85	74	#

svTRH (C10-C40) in Soil

Our Reference		376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference	UNITS	MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	22/03/2025	23/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	79	60	<50	<50	110
TRH C ₁₅ - C ₂₈	mg/kg	4,100	3,300	<100	170	5,200
TRH C ₂₉ - C ₃₆	mg/kg	2,700	2,100	<100	320	3,100
Total +ve TRH (C10-C36)	mg/kg	6,900	5,400	<50	500	8,400
TRH >C ₁₀ -C ₁₆	mg/kg	280	240	<50	<50	470
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	280	220	<50	<50	450
TRH >C ₁₆ -C ₃₄	mg/kg	5,600	4,400	<100	350	6,800
TRH >C ₃₄ -C ₄₀	mg/kg	1,500	1,100	<100	400	1,800
Total +ve TRH (>C10-C40)	mg/kg	7,400	5,800	<50	740	9,100
Surrogate o-Terphenyl	%	#	#	72	78	#

svTRH (C10-C40) in Soil

Our Reference		376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference	UNITS	MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	120	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	3,500	<100	180	210	260
TRH C ₂₉ - C ₃₆	mg/kg	2,800	<100	250	300	230
Total +ve TRH (C10-C36)	mg/kg	6,400	<50	430	510	490
TRH >C ₁₀ -C ₁₆	mg/kg	320	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	280	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	5,000	<100	300	370	390
TRH >C ₃₄ -C ₄₀	mg/kg	1,800	<100	350	360	220
Total +ve TRH (>C10-C40)	mg/kg	7,100	<50	640	730	610
Surrogate o-Terphenyl	%	#	78	81	82	82

svTRH (C10-C40) in Soil

Our Reference		376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference	UNITS	MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	280	1,500	1,500	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	500	1,100	1,100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	780	2,600	2,600	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	76	90	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	76	90	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	550	2,100	2,200	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	580	660	640	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	1,100	2,900	2,900	<50
Surrogate o-Terphenyl	%	77	81	129	136	74

svTRH (C10-C40) in Soil

Our Reference		376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference	UNITS	MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	400	160	290	210	560
TRH C ₂₉ - C ₃₆	mg/kg	460	230	290	240	610
Total +ve TRH (C10-C36)	mg/kg	860	390	580	450	1,200
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	60
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	58
TRH >C ₁₆ -C ₃₄	mg/kg	650	290	450	330	880
TRH >C ₃₄ -C ₄₀	mg/kg	480	290	260	260	530
Total +ve TRH (>C10-C40)	mg/kg	1,100	580	710	590	1,500
Surrogate o-Terphenyl	%	90	78	88	83	99

svTRH (C10-C40) in Soil

Our Reference		376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference	UNITS	MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	120	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	1,800	3,300	120	230	150
TRH C ₂₉ - C ₃₆	mg/kg	1,100	1,700	110	680	310
Total +ve TRH (C10-C36)	mg/kg	2,800	5,200	230	910	460
TRH >C ₁₀ -C ₁₆	mg/kg	120	340	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	120	320	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	2,300	4,100	180	600	310
TRH >C ₃₄ -C ₄₀	mg/kg	700	1,000	<100	880	390
Total +ve TRH (>C10-C40)	mg/kg	3,100	5,500	180	1,500	700
Surrogate o-Terphenyl	%	#	#	76	82	82

svTRH (C10-C40) in Soil

Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	130	<100	<100	120
TRH C ₂₉ - C ₃₆	mg/kg	<100	150	260	<100	150
Total +ve TRH (C10-C36)	mg/kg	<50	280	260	<50	270
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	210	190	<100	200
TRH >C ₃₄ -C ₄₀	mg/kg	<100	160	360	<100	160
Total +ve TRH (>C10-C40)	mg/kg	<50	370	560	<50	360
Surrogate o-Terphenyl	%	78	80	75	74	80

svTRH (C10-C40) in Soil

Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	23/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	5,100	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	180	230	29,000	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	180	630	9,900	<100	<100
Total +ve TRH (C10-C36)	mg/kg	360	860	44,000	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	8,800	<50	<50
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	5,500	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	280	580	31,000	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	150	770	5,500	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	430	1,400	45,000	<50	<50
Surrogate o-Terphenyl	%	81	78	#	82	77

svTRH (C10-C40) in Soil		
Our Reference		376250-61
Your Reference	UNITS	MC208850_SP - [TRIPLICATE]
Date Sampled		21/03/2025
Type of sample		Soil
Date extracted	-	21/03/2025
Date analysed	-	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	<50
TRH C ₁₅ - C ₂₈	mg/kg	520
TRH C ₂₉ - C ₃₆	mg/kg	570
Total +ve TRH (C10-C36)	mg/kg	1,100
TRH >C ₁₀ -C ₁₆	mg/kg	74
TRH >C ₁₀ -C ₁₆ less Naphthalene (F2)	mg/kg	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	810
TRH >C ₃₄ -C ₄₀	mg/kg	620
Total +ve TRH (>C10-C40)	mg/kg	1,500
Surrogate o-Terphenyl	%	93

PAHs in Soil						
Our Reference		376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference	UNITS	MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	0.9	0.7	0.1	<0.1	0.9
Acenaphthylene	mg/kg	0.2	0.2	<0.1	<0.1	0.4
Acenaphthene	mg/kg	0.9	0.8	<0.1	<0.1	1.3
Fluorene	mg/kg	1.1	1.1	<0.1	<0.1	2.2
Phenanthrene	mg/kg	16	18	<0.1	<0.1	18
Anthracene	mg/kg	4.1	4.7	<0.1	<0.1	4.3
Fluoranthene	mg/kg	36	36	0.2	<0.1	39
Pyrene	mg/kg	26	33	0.1	<0.1	35
Benzo(a)anthracene	mg/kg	11	4.3	<0.1	<0.1	9.1
Chrysene	mg/kg	12	4.7	<0.1	<0.1	9.1
Benzo(b,j+k)fluoranthene	mg/kg	20	7.5	<0.2	<0.2	15
Benzo(a)pyrene	mg/kg	16	6.1	0.07	<0.05	12
Indeno(1,2,3-c,d)pyrene	mg/kg	4.8	2.7	<0.1	<0.1	2.8
Dibenzo(a,h)anthracene	mg/kg	0.8	0.7	<0.1	<0.1	0.8
Benzo(g,h,i)perylene	mg/kg	6.9	3.8	<0.1	<0.1	4.0
Total +ve PAH's	mg/kg	160	120	0.50	<0.05	150
Benzo(a)pyrene TEQ calc (zero)	mg/kg	21	8.4	<0.5	<0.5	16
Benzo(a)pyrene TEQ calc(half)	mg/kg	21	8.4	<0.5	<0.5	16
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	21	8.4	<0.5	<0.5	16
Surrogate p-Terphenyl-d14	%	78	75	84	80	89

PAHs in Soil						
Our Reference		376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference	UNITS	MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	40	1.2	<0.1	0.2	0.2
Acenaphthylene	mg/kg	1.2	<0.1	<0.1	0.1	<0.1
Acenaphthene	mg/kg	13	0.1	<0.1	0.2	<0.1
Fluorene	mg/kg	29	<0.1	<0.1	0.4	<0.1
Phenanthrene	mg/kg	110	0.2	<0.1	3.6	0.5
Anthracene	mg/kg	27	<0.1	<0.1	0.8	0.1
Fluoranthene	mg/kg	92	0.2	<0.1	7.3	0.4
Pyrene	mg/kg	80	0.1	<0.1	8.0	0.4
Benzo(a)anthracene	mg/kg	40	<0.1	<0.1	1.8	0.1
Chrysene	mg/kg	38	<0.1	<0.1	1.8	0.1
Benzo(b,j,k)fluoranthene	mg/kg	65	<0.2	<0.2	2.9	0.2
Benzo(a)pyrene	mg/kg	52	0.06	<0.05	2.2	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	29	<0.1	<0.1	1.2	<0.1
Dibenzo(a,h)anthracene	mg/kg	5.7	<0.1	<0.1	0.3	<0.1
Benzo(g,h,i)perylene	mg/kg	38	<0.1	<0.1	1.7	0.1
Total +ve PAH's	mg/kg	660	1.9	<0.05	33	2.3
Benzo(a)pyrene TEQ calc (zero)	mg/kg	72	<0.5	<0.5	3.1	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	72	<0.5	<0.5	3.1	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	72	<0.5	<0.5	3.1	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	83	68	84	88	81

PAHs in Soil						
Our Reference		376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference	UNITS	MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	<0.1	<0.1	0.7	12	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.4	3.2	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	1	4.5	<0.1
Fluorene	mg/kg	<0.1	<0.1	1.3	5.7	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	20	60	0.2
Anthracene	mg/kg	<0.1	<0.1	5.0	16	<0.1
Fluoranthene	mg/kg	0.2	<0.1	24	120	0.5
Pyrene	mg/kg	0.2	<0.1	23	120	0.4
Benzo(a)anthracene	mg/kg	<0.1	<0.1	6.7	36	0.1
Chrysene	mg/kg	<0.1	<0.1	7.3	35	0.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	13	68	<0.2
Benzo(a)pyrene	mg/kg	0.09	<0.05	10	53	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	12	34	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	1.1	6.5	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	38	46	0.3
Total +ve PAH's	mg/kg	0.55	<0.05	160	620	2.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	15	74	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	15	74	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	15	74	<0.5
Surrogate p-Terphenyl-d14	%	90	79	82	90	92

PAHs in Soil						
Our Reference		376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference	UNITS	MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	<0.1	0.3	5.4	230	<0.1
Acenaphthylene	mg/kg	<0.1	0.2	3.8	9.5	<0.1
Acenaphthene	mg/kg	<0.1	0.9	8.6	30	<0.1
Fluorene	mg/kg	<0.1	1	11	66	<0.1
Phenanthrene	mg/kg	<0.1	13	110	420	<0.1
Anthracene	mg/kg	<0.1	2.0	26	91	<0.1
Fluoranthene	mg/kg	<0.1	14	180	360	<0.1
Pyrene	mg/kg	<0.1	14	170	330	<0.1
Benzo(a)anthracene	mg/kg	<0.1	3.6	46	73	<0.1
Chrysene	mg/kg	<0.1	3.3	53	76	<0.1
Benzo(b,j,k)fluoranthene	mg/kg	<0.2	5.1	110	160	<0.2
Benzo(a)pyrene	mg/kg	<0.05	3.8	100	170	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	2.0	75	100	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.6	15	16	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	2.6	100	83	<0.1
Total +ve PAH's	mg/kg	<0.05	66	1,000	2,200	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	5.5	140	220	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	5.5	140	220	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	5.5	140	220	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	91	86	86	101	73

PAHs in Soil						
Our Reference		376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	12	7.3	0.2	<0.1	790
Acenaphthylene	mg/kg	0.8	3.6	0.6	<0.1	34
Acenaphthene	mg/kg	3.3	15	1.9	<0.1	250
Fluorene	mg/kg	9.2	44	1.2	<0.1	910
Phenanthrene	mg/kg	110	200	26	<0.1	4,700
Anthracene	mg/kg	27	59	6.7	<0.1	890
Fluoranthene	mg/kg	95	310	31	<0.1	3,300
Pyrene	mg/kg	90	280	29	<0.1	3,000
Benzo(a)anthracene	mg/kg	15	74	9.2	<0.1	740
Chrysene	mg/kg	13	85	9.2	<0.1	710
Benzo(b,j+k)fluoranthene	mg/kg	23	160	17	<0.2	1,200
Benzo(a)pyrene	mg/kg	19	150	13	<0.05	1,000
Indeno(1,2,3-c,d)pyrene	mg/kg	11	100	7.9	<0.1	560
Dibenzo(a,h)anthracene	mg/kg	1.5	32	1.1	<0.1	92
Benzo(g,h,i)perylene	mg/kg	15	81	11	<0.1	750
Total +ve PAH's	mg/kg	440	1,600	160	<0.05	19,000
Benzo(a)pyrene TEQ calc (zero)	mg/kg	26	220	18	<0.5	1,400
Benzo(a)pyrene TEQ calc(half)	mg/kg	26	220	18	<0.5	1,400
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	26	220	18	<0.5	1,400
Surrogate p-Terphenyl-d14	%	86	80	77	60	110

PAHs in Soil						
Our Reference		376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference	UNITS	MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	18	10	<0.1	1.4	26
Acenaphthylene	mg/kg	540	3.8	<0.1	0.4	5.2
Acenaphthene	mg/kg	28	29	<0.1	1.1	71
Fluorene	mg/kg	53	82	<0.1	1.4	140
Phenanthrene	mg/kg	580	490	<0.1	28	790
Anthracene	mg/kg	100	170	<0.1	6.5	240
Fluoranthene	mg/kg	690	650	<0.1	15	1,100
Pyrene	mg/kg	620	590	<0.1	13	940
Benzo(a)anthracene	mg/kg	180	180	<0.1	2.8	220
Chrysene	mg/kg	190	170	<0.1	3.2	200
Benzo(b,j+k)fluoranthene	mg/kg	300	290	<0.2	4.4	350
Benzo(a)pyrene	mg/kg	210	210	<0.05	3.2	260
Indeno(1,2,3-c,d)pyrene	mg/kg	190	130	<0.1	1.4	150
Dibenzo(a,h)anthracene	mg/kg	42	24	<0.1	0.4	34
Benzo(g,h,i)perylene	mg/kg	290	170	<0.1	1.8	200
Total +ve PAH's	mg/kg	4,000	3,200	<0.05	84	4,800
Benzo(a)pyrene TEQ calc (zero)	mg/kg	320	300	<0.5	4.5	370
Benzo(a)pyrene TEQ calc(half)	mg/kg	320	300	<0.5	4.5	370
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	320	300	<0.5	4.5	370
Surrogate <i>p</i> -Terphenyl-d14	%	82	81	112	72	91

PAHs in Soil						
Our Reference		376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference	UNITS	MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	33	<0.1	1.7	0.2	0.3
Acenaphthylene	mg/kg	4.8	<0.1	0.4	0.5	0.6
Acenaphthene	mg/kg	43	<0.1	0.9	0.6	1
Fluorene	mg/kg	100	<0.1	1.4	1	1.2
Phenanthrene	mg/kg	410	<0.1	17	26	27
Anthracene	mg/kg	110	<0.1	1.9	5.5	5.2
Fluoranthene	mg/kg	470	<0.1	16	23	35
Pyrene	mg/kg	660	<0.1	15	22	32
Benzo(a)anthracene	mg/kg	200	<0.1	2.7	7.0	10
Chrysene	mg/kg	200	<0.1	2.9	6.8	11
Benzo(b,j+k)fluoranthene	mg/kg	200	<0.2	4.0	13	19
Benzo(a)pyrene	mg/kg	160	<0.05	2.9	9.5	15
Indeno(1,2,3-c,d)pyrene	mg/kg	82	<0.1	1.2	5.7	13
Dibenzo(a,h)anthracene	mg/kg	45	<0.1	0.3	0.6	2.0
Benzo(g,h,i)perylene	mg/kg	110	<0.1	1.5	7.7	16
Total +ve PAH's	mg/kg	2,800	<0.05	70	130	190
Benzo(a)pyrene TEQ calc (zero)	mg/kg	260	<0.5	4.1	13	21
Benzo(a)pyrene TEQ calc(half)	mg/kg	260	<0.5	4.1	13	21
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	260	<0.5	4.1	13	21
Surrogate <i>p</i> -Terphenyl-d14	%	73	87	69	67	68

PAHs in Soil						
Our Reference		376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference	UNITS	MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	<0.1	0.8	1.5	1.8	<0.1
Acenaphthylene	mg/kg	<0.1	0.4	3.4	3.7	<0.1
Acenaphthene	mg/kg	<0.1	0.6	5.7	4.5	<0.1
Fluorene	mg/kg	<0.1	0.8	9.8	9.6	<0.1
Phenanthrene	mg/kg	0.1	26	130	120	<0.1
Anthracene	mg/kg	<0.1	5.6	38	29	<0.1
Fluoranthene	mg/kg	0.4	21	300	180	0.1
Pyrene	mg/kg	0.3	19	280	160	0.1
Benzo(a)anthracene	mg/kg	<0.1	6.7	66	70	<0.1
Chrysene	mg/kg	0.1	6.7	69	71	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	12	120	160	<0.2
Benzo(a)pyrene	mg/kg	0.1	9.3	87	95	0.07
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	5.1	93	89	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.6	20	22	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	7.2	120	55	<0.1
Total +ve PAH's	mg/kg	1.1	120	1,300	1,100	0.3
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	12	140	150	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	12	140	150	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	12	140	150	<0.5
Surrogate p-Terphenyl-d14	%	71	68	77	69	67

PAHs in Soil						
Our Reference		376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference	UNITS	MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	2.4	0.6	0.3	0.1	1.7
Acenaphthylene	mg/kg	0.6	0.4	0.6	0.3	1.0
Acenaphthene	mg/kg	1.6	0.6	0.9	0.9	1.6
Fluorene	mg/kg	5.2	0.8	0.8	0.8	4.3
Phenanthrene	mg/kg	36	21	29	24	55
Anthracene	mg/kg	8.4	5.0	6.4	5.1	12
Fluoranthene	mg/kg	43	23	37	33	94
Pyrene	mg/kg	39	23	35	22	86
Benzo(a)anthracene	mg/kg	14	5.0	11	6.5	24
Chrysene	mg/kg	13	5.4	12	6.7	25
Benzo(b,j+k)fluoranthene	mg/kg	34	9.2	22	11	31
Benzo(a)pyrene	mg/kg	26	6.6	17	8.3	24
Indeno(1,2,3-c,d)pyrene	mg/kg	19	1.7	14	1.8	14
Dibenzo(a,h)anthracene	mg/kg	4.1	0.5	1.1	0.5	2.9
Benzo(g,h,i)perylene	mg/kg	24	2.1	24	2.1	19
Total +ve PAH's	mg/kg	270	100	210	120	400
Benzo(a)pyrene TEQ calc (zero)	mg/kg	37	8.8	23	11	34
Benzo(a)pyrene TEQ calc(half)	mg/kg	37	8.8	23	11	34
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	37	8.8	23	11	34
Surrogate p-Terphenyl-d14	%	64	66	68	63	70

PAHs in Soil						
Our Reference		376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference	UNITS	MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	6.8	35	0.5	0.1	0.5
Acenaphthylene	mg/kg	2.2	3.8	0.8	0.4	0.2
Acenaphthene	mg/kg	8.9	26	0.8	0.3	0.3
Fluorene	mg/kg	27	49	1.7	0.4	0.4
Phenanthrene	mg/kg	230	460	3.6	6.1	8.6
Anthracene	mg/kg	52	100	1.7	0.9	0.8
Fluoranthene	mg/kg	270	420	9.2	11	11
Pyrene	mg/kg	250	380	8.2	9.9	10
Benzo(a)anthracene	mg/kg	100	110	2.7	2.1	1.6
Chrysene	mg/kg	94	110	3.4	2.2	1.7
Benzo(b,j,k)fluoranthene	mg/kg	200	170	5.1	2.9	2.3
Benzo(a)pyrene	mg/kg	140	140	5.3	1.9	1.6
Indeno(1,2,3-c,d)pyrene	mg/kg	56	120	1.6	0.8	0.6
Dibenzo(a,h)anthracene	mg/kg	11	35	0.5	0.2	0.2
Benzo(g,h,i)perylene	mg/kg	71	150	1.9	1	0.8
Total +ve PAH's	mg/kg	1,500	2,300	47	40	41
Benzo(a)pyrene TEQ calc (zero)	mg/kg	190	220	6.8	2.8	2.2
Benzo(a)pyrene TEQ calc(half)	mg/kg	190	220	6.8	2.8	2.2
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	190	220	6.8	2.8	2.2
Surrogate <i>p</i> -Terphenyl-d14	%	78	75	61	65	64

PAHs in Soil						
Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	0.1	0.8	<0.1	<0.1	0.1
Acenaphthylene	mg/kg	0.2	0.4	0.1	0.2	0.3
Acenaphthene	mg/kg	<0.1	0.7	<0.1	<0.1	0.1
Fluorene	mg/kg	<0.1	1.5	<0.1	<0.1	0.1
Phenanthrene	mg/kg	0.3	8.5	0.1	1.7	2.5
Anthracene	mg/kg	<0.1	1.1	<0.1	0.3	0.5
Fluoranthene	mg/kg	0.4	8.5	0.4	6.5	16
Pyrene	mg/kg	0.4	8.8	0.4	6.3	16
Benzo(a)anthracene	mg/kg	0.2	1.8	0.1	2.0	3.7
Chrysene	mg/kg	0.2	1.9	0.1	2.2	4.2
Benzo(b,j+k)fluoranthene	mg/kg	0.2	2.6	0.2	3.1	8.3
Benzo(a)pyrene	mg/kg	0.1	1.7	0.1	2.0	5.9
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.7	<0.1	0.8	3.5
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.2	<0.1	0.3	1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.8	<0.1	1.0	5.5
Total +ve PAH's	mg/kg	2.1	40	1.7	26	68
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	2.4	<0.5	2.8	8.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	2.4	<0.5	2.8	8.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	2.4	<0.5	2.8	8.5
Surrogate p-Terphenyl-d14	%	80	63	73	63	85

PAHs in Soil						
Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	<0.1	0.1	2,100	5.5	0.3
Acenaphthylene	mg/kg	0.7	<0.1	11	0.2	0.2
Acenaphthene	mg/kg	0.1	0.1	850	2.4	0.2
Fluorene	mg/kg	0.2	0.2	1,300	2.4	0.5
Phenanthrene	mg/kg	7.9	2.2	5,500	18	2.7
Anthracene	mg/kg	1.9	0.4	2,400	5.5	0.5
Fluoranthene	mg/kg	17	4.0	3,300	12	4.0
Pyrene	mg/kg	16	3.7	2,900	10	3.6
Benzo(a)anthracene	mg/kg	6.5	1.1	1,300	2.7	1.3
Chrysene	mg/kg	7.4	1.4	1,200	3.1	1.6
Benzo(b,j+k)fluoranthene	mg/kg	13	2.1	1,800	4.0	2.6
Benzo(a)pyrene	mg/kg	9.5	1.4	970	3.0	1.6
Indeno(1,2,3-c,d)pyrene	mg/kg	5.6	0.8	720	1.5	0.8
Dibenzo(a,h)anthracene	mg/kg	1.2	0.2	150	0.4	0.3
Benzo(g,h,i)perylene	mg/kg	7.4	1.2	890	2.2	1.2
Total +ve PAH's	mg/kg	94	19	25,000	73	22
Benzo(a)pyrene TEQ calc (zero)	mg/kg	13	2.1	1,500	4.2	2.4
Benzo(a)pyrene TEQ calc(half)	mg/kg	13	2.1	1,500	4.2	2.4
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	13	2.1	1,500	4.2	2.4
Surrogate <i>p</i> -Terphenyl-d14	%	81	86	80	85	86

PAHs in Soil					
Our Reference		376250-61	376250-62	376250-63	376250-64
Your Reference	UNITS	MC208850_SP - [TRIPLICATE]	MC209040_SP - [TRIPLICATE]	MC208680_SP - [TRIPLICATE]	MC208930_100 - [TRIPLICATE]
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Naphthalene	mg/kg	10	2.1	1	28
Acenaphthylene	mg/kg	0.9	0.4	0.3	7.4
Acenaphthene	mg/kg	4.2	1	1.0	44
Fluorene	mg/kg	7.5	1.4	1.4	82
Phenanthrene	mg/kg	65	18	21	950
Anthracene	mg/kg	15	5.9	2.7	150
Fluoranthene	mg/kg	70	16	27	1,100
Pyrene	mg/kg	64	15	26	1,100
Benzo(a)anthracene	mg/kg	19	4.9	7.8	270
Chrysene	mg/kg	19	5.6	7.8	250
Benzo(b,j+k)fluoranthene	mg/kg	33	9.8	14	310
Benzo(a)pyrene	mg/kg	25	7.5	16	250
Indeno(1,2,3-c,d)pyrene	mg/kg	15	6.8	9.5	150
Dibenzo(a,h)anthracene	mg/kg	3.3	0.6	1	32
Benzo(g,h,i)perylene	mg/kg	21	7.8	8.8	200
Total +ve PAH's	mg/kg	370	100	150	5,000
Benzo(a)pyrene TEQ calc (zero)	mg/kg	35	10	20	360
Benzo(a)pyrene TEQ calc(half)	mg/kg	35	10	20	360
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	35	10	20	360
Surrogate p-Terphenyl-d14	%	76	63	82	69

Organochlorine Pesticides in soil						
Our Reference		376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference	UNITS	MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	100	99	94	93	98

Organochlorine Pesticides in soil						
Our Reference		376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference	UNITS	MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	95	97	98	100	94

Organochlorine Pesticides in soil						
Our Reference		376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference	UNITS	MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	97	96	94	97	94

Organochlorine Pesticides in soil						
Our Reference		376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference	UNITS	MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	99	99	93	102	95

Organochlorine Pesticides in soil						
Our Reference		376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Surrogate 4-Chloro-3-NBTF	%	110	98	97	94	80

Organochlorine Pesticides in soil						
Our Reference		376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference	UNITS	MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	99	99	99	98	101

Organochlorine Pesticides in soil						
Our Reference		376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference	UNITS	MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	90	115	100	105	101

Organochlorine Pesticides in soil						
Our Reference		376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference	UNITS	MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	108	100	111	96	91

Organochlorine Pesticides in soil						
Our Reference		376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference	UNITS	MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	85	103	96	92	98

Organochlorine Pesticides in soil						
Our Reference		376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference	UNITS	MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	104	101	84	92	95

Organochlorine Pesticides in soil						
Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	102	93	94	90	86

Organochlorine Pesticides in soil						
Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
alpha-BHC	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	82	80	80	89	78

Organophosphorus Pesticides in Soil						
Our Reference		376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference	UNITS	MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	100	99	94	93	98

Organophosphorus Pesticides in Soil						
Our Reference		376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference	UNITS	MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	95	97	98	100	94

Organophosphorus Pesticides in Soil						
Our Reference		376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference	UNITS	MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	97	96	94	97	94

Organophosphorus Pesticides in Soil						
Our Reference		376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference	UNITS	MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	99	99	93	102	95

Organophosphorus Pesticides in Soil						
Our Reference		376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Surrogate 4-Chloro-3-NBTF	%	110	98	97	94	80

Organophosphorus Pesticides in Soil						
Our Reference		376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference	UNITS	MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	99	99	99	98	101

Organophosphorus Pesticides in Soil						
Our Reference		376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference	UNITS	MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	90	115	100	105	101

Organophosphorus Pesticides in Soil						
Our Reference		376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference	UNITS	MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	108	100	111	96	91

Organophosphorus Pesticides in Soil						
Our Reference		376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference	UNITS	MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	85	103	96	92	98

Organophosphorus Pesticides in Soil						
Our Reference		376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference	UNITS	MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	104	101	84	92	95

Organophosphorus Pesticides in Soil						
Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	102	93	94	90	86

Organophosphorus Pesticides in Soil						
Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Dichlorvos	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	82	80	80	89	78

PCBs in Soil						
Our Reference		376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference	UNITS	MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	76	77	76	74	80

PCBs in Soil						
Our Reference		376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference	UNITS	MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	77	76	74	79	74

PCBs in Soil						
Our Reference		376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference	UNITS	MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	73	70	72	78	74

PCBs in Soil						
Our Reference		376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference	UNITS	MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	74	75	75	82	68

PCBs in Soil						
Our Reference		376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Surrogate 2-Fluorobiphenyl	%	77	71	70	65	90

PCBs in Soil						
Our Reference		376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference	UNITS	MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	68	69	67	68	68

PCBs in Soil						
Our Reference		376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference	UNITS	MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	63	79	72	71	70

PCBs in Soil						
Our Reference		376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference	UNITS	MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	75	66	75	64	64

PCBs in Soil						
Our Reference		376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference	UNITS	MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	61	67	64	63	65

PCBs in Soil						
Our Reference		376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference	UNITS	MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	71	67	62	63	63

PCBs in Soil						
Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	70	61	66	62	87

PCBs in Soil						
Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	23/03/2025	23/03/2025	23/03/2025	23/03/2025	23/03/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	87	85	90	92	85

Misc Soil - Inorg

Our Reference		376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference	UNITS	MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference	UNITS	MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference	UNITS	MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference	UNITS	MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Client Reference: 50985-Fill 18 Coal Tar Assessment

Misc Soil - Inorg						
Our Reference	UNITS	376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference		MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference	UNITS	376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference		MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference	UNITS	376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference		MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference	UNITS	376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference		MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference	UNITS	376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference		MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Acid Extractable metals in soil						
Our Reference		376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference	UNITS	MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	<4	9	8	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	36	16	6	7	29
Copper	mg/kg	4	17	13	<1	3
Lead	mg/kg	6	13	7	6	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	10	7	<1	3
Zinc	mg/kg	13	51	51	2	20

Acid Extractable metals in soil						
Our Reference		376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference	UNITS	MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	7	8	<4	<4	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	50	5	2	13	5
Copper	mg/kg	11	15	<1	3	13
Lead	mg/kg	6	8	<1	4	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	9	<1	3	5
Zinc	mg/kg	21	52	1	13	36

Acid Extractable metals in soil

Our Reference		376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference	UNITS	MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	7	<4	<4	<4	15
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	1	31	33	6
Copper	mg/kg	13	<1	8	15	16
Lead	mg/kg	8	<1	8	46	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	<1	2	3	8
Zinc	mg/kg	41	1	60	48	76

Acid Extractable metals in soil

Our Reference		376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference	UNITS	MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	<4	<4	<4	11	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	20	140	6	2
Copper	mg/kg	<1	2	8	14	<1
Lead	mg/kg	<1	3	11	13	2
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	<1	1	7	8	<1
Zinc	mg/kg	<1	6	16	40	3

Acid Extractable metals in soil

Our Reference		376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	<4	6	7	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	25	53	2	4
Copper	mg/kg	4	16	15	<1	3
Lead	mg/kg	6	17	11	<1	30
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	10	11	<1	<1
Zinc	mg/kg	16	40	45	1	20

Acid Extractable metals in soil

Our Reference		376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference	UNITS	MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	<4	<4	<4	<4	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	120	24	1	13	44
Copper	mg/kg	8	9	<1	3	10
Lead	mg/kg	11	15	<1	4	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	4	<1	2	6
Zinc	mg/kg	18	28	<1	11	32

Acid Extractable metals in soil

Our Reference		376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference	UNITS	MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	5	<4	<4	<4	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	47	1	8	120	31
Copper	mg/kg	12	<1	7	5	16
Lead	mg/kg	14	<1	8	6	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	<1	3	5	10
Zinc	mg/kg	37	1	29	12	69

Acid Extractable metals in soil

Our Reference		376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference	UNITS	MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	<4	4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	2	13	13	8	8
Copper	mg/kg	<1	12	17	13	3
Lead	mg/kg	2	7	36	34	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	7	10	8	3
Zinc	mg/kg	5	34	58	67	3

Acid Extractable metals in soil

Our Reference		376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference	UNITS	MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	23	12	48	70	40
Copper	mg/kg	10	2	12	8	7
Lead	mg/kg	6	4	25	32	10
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	1	6	4	4
Zinc	mg/kg	25	8	34	28	24

Acid Extractable metals in soil

Our Reference		376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference	UNITS	MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	<4	4	<4	<4	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	55	24	4	6	26
Copper	mg/kg	7	15	3	3	15
Lead	mg/kg	11	36	7	2	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	6	2	1	6
Zinc	mg/kg	18	47	16	8	37

Acid Extractable metals in soil

Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	7	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	4	3	4	16	92
Copper	mg/kg	12	2	3	3	6
Lead	mg/kg	4	4	8	7	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	1	<1	<1	4
Zinc	mg/kg	36	9	23	20	14

Acid Extractable metals in soil

Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Arsenic	mg/kg	<4	<4	<4	8	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	4	4	5	6	3
Copper	mg/kg	4	19	2	16	2
Lead	mg/kg	26	6	21	8	4
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	2	<1	<1	11	<1
Zinc	mg/kg	15	20	27	51	8

Acid Extractable metals in soil			
Our Reference		376250-61	376250-62
Your Reference	UNITS	MC208850_SP - [TRIPLICATE]	MC209040_SP - [TRIPLICATE]
Date Sampled		21/03/2025	21/03/2025
Type of sample		Soil	Soil
Date prepared	-	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	28	12
Copper	mg/kg	6	4
Lead	mg/kg	11	4
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	4	2
Zinc	mg/kg	26	13

Client Reference: 50985-Fill 18 Coal Tar Assessment

Moisture						
Our Reference	UNITS	376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference		MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	5.5	6.1	8.0	7.7	6.8

Moisture						
Our Reference	UNITS	376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference		MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	6.2	5.4	9.3	5.8	5.7

Moisture						
Our Reference	UNITS	376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference		MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	7.6	11	7.6	7.8	7.7

Moisture						
Our Reference	UNITS	376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference		MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	16	4.7	3.4	3.7	14

Moisture						
Our Reference	UNITS	376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference		MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	7.4	4.9	5.3	8.7	1.7

Client Reference: 50985-Fill 18 Coal Tar Assessment

Moisture						
Our Reference	UNITS	376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference		MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	3.6	4.6	11	4.3	6.1

Moisture						
Our Reference	UNITS	376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference		MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	4.1	8.9	8.2	6.2	3.1

Moisture						
Our Reference	UNITS	376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference		MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	8.4	8.0	15	16	12

Moisture						
Our Reference	UNITS	376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference		MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	7.9	7.2	11	14	8.1

Moisture						
Our Reference	UNITS	376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference		MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	10	7.0	12	12	7.3

Client Reference: 50985-Fill 18 Coal Tar Assessment

Moisture						
Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	8.4	9.8	7.6	12	6.2

Moisture						
Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Date analysed	-	22/03/2025	22/03/2025	22/03/2025	22/03/2025	22/03/2025
Moisture	%	8.3	8.9	4.7	5.4	6.5

Asbestos ID - soils						
Our Reference	UNITS	376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference		MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 25g	Approx. 30g	Approx. 30g	Approx. 25g	Approx. 30g
Sample Description	-	Grey clayey soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown sandy soil & rocks	Grey clayey soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference		MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 25g	Approx. 30g
Sample Description	-	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown sandy soil & rocks	Grey clayey soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference		MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 30g	Approx. 25g	Approx. 25g	Approx. 30g	Approx. 25g
Sample Description	-	Brown clayey soil & rocks	Brown sandy soil & rocks	Grey clayey soil & rocks	Grey coarse-grained soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference		MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 25g	Approx. 40g	Approx. 30g	Approx. 40g	Approx. 30g
Sample Description	-	Brown sandy soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown sandy soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference		MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 25g
Sample Description	-	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown clayey soil & rocks	Brown sandy soil & rocks	Black bituminous material
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference		MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 45g	Approx. 35g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown sandy soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference		MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 40g	Approx. 30g	Approx. 25g	Approx. 40g	Approx. 35g
Sample Description	-	Grey coarse-grained soil & rocks	Brown sandy soil & rocks	Grey sandy soil & rocks	Grey coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference		MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 25g	Approx. 25g
Sample Description	-	Brown sandy soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown sandy soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference		MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 35g	Approx. 30g	Approx. 30g
Sample Description	-	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference		MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 30g	Approx. 35g	Approx. 25g	Approx. 35g	Approx. 30g
Sample Description	-	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey sandy soil & rocks	Grey coarse-grained soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference		MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 35g	Approx. 25g	Approx. 30g	Approx. 30g	Approx. 35g
Sample Description	-	Brown clayey soil & rocks	Grey sandy soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference		MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Sample mass tested	g	Approx. 25g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 35g
Sample Description	-	Brown sandy soil & rocks	Grey coarse-grained soil & rocks	Black bituminous material	Brown clayey soil & rocks	Brown sandy soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

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Coal Tar						
Our Reference	UNITS	376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference		MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Coal Tar						
Our Reference	UNITS	376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference		MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Coal Tar						
Our Reference	UNITS	376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference		MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Coal Tar						
Our Reference	UNITS	376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference		MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Coal Tar						
Our Reference	UNITS	376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference		MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

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Coal Tar						
Our Reference	UNITS	376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference		MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Coal Tar						
Our Reference	UNITS	376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference		MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Coal Tar						
Our Reference	UNITS	376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference		MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Coal Tar						
Our Reference	UNITS	376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference		MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Coal Tar						
Our Reference	UNITS	376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference		MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Client Reference: 50985-Fill 18 Coal Tar Assessment

Coal Tar						
Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Coal Tar						
Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Date analysed	-	24/03/2025	24/03/2025	24/03/2025	24/03/2025	24/03/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent	Absent

Client Reference: 50985-Fill 18 Coal Tar Assessment

ASLP Preparation - Neutral

Our Reference		376250-1	376250-2	376250-3	376250-4	376250-5
Your Reference	UNITS	MC208680_SP	MC208680_S	MC208680_100	MC208680_500	MC208720_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	10.6	9.8	9.4	9.2	10.8

ASLP Preparation - Neutral

Our Reference		376250-6	376250-7	376250-8	376250-9	376250-10
Your Reference	UNITS	MC208720_S	MC208720_100	MC208720_500	MC208760_SP	MC208760_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	10.0	8.2	8.3	10.6	9.7

ASLP Preparation - Neutral

Our Reference		376250-11	376250-12	376250-13	376250-14	376250-15
Your Reference	UNITS	MC208760_100	MC208670_500	MC208790_SP	MC208790_S	MC208790_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	9.2	8.2	10.6	9.9	9.3

ASLP Preparation - Neutral

Our Reference		376250-16	376250-17	376250-18	376250-19	376250-20
Your Reference	UNITS	MC208790_500	MC208820_SP	MC208820_S	MC208820_100	MC208820_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	8.9	10.8	9.8	9.4	9.0

ASLP Preparation - Neutral

Our Reference		376250-21	376250-22	376250-23	376250-24	376250-25
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208850_500	MC208890_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	10.2	8.4	7.4	7.8	8.7

ASLP Preparation - Neutral

Our Reference		376250-26	376250-27	376250-28	376250-29	376250-30
Your Reference	UNITS	MC208890_S	MC208890_100	MC208890_500	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	8.8	7.7	7.9	9.7	8.8

Client Reference: 50985-Fill 18 Coal Tar Assessment

ASLP Preparation - Neutral

Our Reference		376250-31	376250-32	376250-33	376250-34	376250-35
Your Reference	UNITS	MC208930_100	MC208930_500	MC208970_SP	MC208970_S	MC208970_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	8.5	7.9	8.4	6.7	7.9

ASLP Preparation - Neutral

Our Reference		376250-36	376250-37	376250-38	376250-39	376250-40
Your Reference	UNITS	MC208970_500	MC209010_SP	MC209010_S	MC209010_100	MC209010_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	7.8	8.5	8.0	8.1	7.7

ASLP Preparation - Neutral

Our Reference		376250-41	376250-42	376250-43	376250-44	376250-45
Your Reference	UNITS	MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	9.1	8.9	8.6	8.1	8.4

ASLP Preparation - Neutral

Our Reference		376250-46	376250-47	376250-48	376250-49	376250-50
Your Reference	UNITS	MC209090_S	MC209090_100	MC209090_500	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	8.7	8.2	8.0	8.0	8.6

ASLP Preparation - Neutral

Our Reference		376250-51	376250-52	376250-53	376250-54	376250-55
Your Reference	UNITS	MC209130_100	MC209130_500	MC209170_SP	MC209170_S	MC209170_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	8.2	8.0	8.8	8.6	8.2

ASLP Preparation - Neutral

Our Reference		376250-56	376250-57	376250-58	376250-59	376250-60
Your Reference	UNITS	MC209170_500	MC209210_SP	MC209210_S	MC209210_100	MC209210_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	8.4	9.8	9.0	8.4	8.0

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stoichiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).

Method ID	Methodology Summary
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
RTA T542	Determination of Phenol in core samples as per RTA test method T542. This procedure gives an indication of whether a sample of asphalt has been made with coal tar. The coal tar method gives an approximate result with a high degree of uncertainty.

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	376250-2
Date extracted	-			21/03/2025	1	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			23/03/2025	1	23/03/2025	23/03/2025		23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	1	<25	<25	0	106	106
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	1	<25	<25	0	106	106
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	92	93
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	106	103
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	108	110
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	113	112
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	115	115
Naphthalene	mg/kg	1	Org-023	<1	1	2	1	67	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	109	1	99	95	4	115	101

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	376250-22
Date extracted	-			[NT]	11	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	11	23/03/2025	23/03/2025		23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	11	<25	<25	0	98	97
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	11	<25	<25	0	98	97
Benzene	mg/kg	0.2	Org-023	[NT]	11	<0.2	<0.2	0	85	87
Toluene	mg/kg	0.5	Org-023	[NT]	11	<0.5	<0.5	0	96	95
Ethylbenzene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	100	100
m+p-xylene	mg/kg	2	Org-023	[NT]	11	<2	<2	0	104	102
o-Xylene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	106	104
Naphthalene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	11	97	99	2	107	97

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	376250-42
Date extracted	-			[NT]	21	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	21	23/03/2025	23/03/2025		23/03/2025	23/03/2025
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	21	<25	<25	0	95	95
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	21	<25	<25	0	95	95
Benzene	mg/kg	0.2	Org-023	[NT]	21	<0.2	<0.2	0	84	83
Toluene	mg/kg	0.5	Org-023	[NT]	21	<0.5	<0.5	0	92	92
Ethylbenzene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	98	98
m+p-xylene	mg/kg	2	Org-023	[NT]	21	<2	<2	0	100	100
o-Xylene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	102	102
Naphthalene	mg/kg	1	Org-023	[NT]	21	22	18	20	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	21	79	95	18	106	103

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QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	31	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	31	23/03/2025	23/03/2025		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	31	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	31	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	31	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	31	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	31	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	31	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	31	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	31	42	20	71	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	31	98	96	2	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	41	23/03/2025	23/03/2025		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	41	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	41	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	41	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	41	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	41	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	41	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	41	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	41	4	3	29	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	41	109	82	28	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	51	23/03/2025	23/03/2025		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	51	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	51	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	51	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	51	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	51	96	100	4	[NT]	[NT]

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QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	376250-2
Date extracted	-			21/03/2025	1	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			22/03/2025	1	23/03/2025	23/03/2025		22/03/2025	22/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	1	<50	<50	0	99	119
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	1	270	210	25	95	136
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	1	530	500	6	100	#
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	1	<50	<50	0	99	119
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	1	550	470	16	95	136
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	1	620	580	7	100	#
Surrogate o-Terphenyl	%		Org-020	74	1	88	85	3	90	83

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	376250-22
Date extracted	-			[NT]	11	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	11	22/03/2025	22/03/2025		23/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	11	<50	<50	0	118	95
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	11	<100	<100	0	111	67
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	11	<100	<100	0	100	#
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	11	<50	<50	0	118	95
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	11	<100	<100	0	111	67
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	11	<100	<100	0	100	#
Surrogate o-Terphenyl	%		Org-020	[NT]	11	76	75	1	101	#

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	376250-42
Date extracted	-			[NT]	21	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	21	23/03/2025	23/03/2025		23/03/2025	23/03/2025
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	21	<50	59	17	114	112
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	21	440	810	59	104	100
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	21	600	810	30	100	123
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	21	69	110	46	114	112
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	21	720	1200	50	104	100
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	21	680	740	8	100	123
Surrogate o-Terphenyl	%		Org-020	[NT]	21	94	105	11	95	95

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QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	31	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	31	23/03/2025	23/03/2025		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	31	120	120	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	31	3500	4900	33	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	31	2800	3600	25	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	31	320	400	22	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	31	5000	7000	33	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	31	1800	2000	11	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	31	#	#		[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	41	24/03/2025	24/03/2025		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	41	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	41	400	260	42	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	41	460	330	33	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	41	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	41	650	440	39	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	41	480	360	29	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	41	90	84	7	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	51	23/03/2025	23/03/2025		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	51	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	51	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	51	78	76	3	[NT]	[NT]

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QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	376250-2
Date extracted	-			21/03/2025	1	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			23/03/2025	1	23/03/2025	23/03/2025		23/03/2025	23/03/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	0.9	0.8	12	82	77
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.2	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	0.9	0.6	40	72	#
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	1.1	0.8	32	80	#
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	16	10	46	82	#
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	4.1	1.5	93	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	36	13	94	86	#
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	26	13	67	90	#
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	11	2.9	117	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	12	3.0	120	98	#
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	20	5.0	120	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	16	3.7	125	76	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	4.8	2.0	82	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.8	0.6	29	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	6.9	2.9	82	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	93	1	78	78	0	81	89

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	376250-22
Date extracted	-			[NT]	11	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	11	23/03/2025	23/03/2025		23/03/2025	23/03/2025
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	80	#
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	74	#
Fluorene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	80	#
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	84	#
Anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	11	0.2	0.3	40	88	#
Pyrene	mg/kg	0.1	Org-022/025	[NT]	11	0.2	0.3	40	90	#
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	0.1	0	96	#
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	11	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	11	0.09	0.1	11	80	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	11	90	87	3	87	85

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QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	376250-42
Date extracted	-			[NT]	21	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	21	23/03/2025	23/03/2025		23/03/2025	23/03/2025
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	21	12	23	63	102	81
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	21	0.8	1.3	48	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	21	3.3	5.7	53	90	#
Fluorene	mg/kg	0.1	Org-022/025	[NT]	21	9.2	12	26	94	#
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	21	110	65	51	110	#
Anthracene	mg/kg	0.1	Org-022/025	[NT]	21	27	27	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	21	95	68	33	110	#
Pyrene	mg/kg	0.1	Org-022/025	[NT]	21	90	62	37	112	#
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	15	16	6	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	21	13	18	32	116	#
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	21	23	35	41	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	21	19	32	51	90	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	21	11	24	74	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	1.5	3.1	70	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	21	15	17	12	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	21	86	87	1	96	80

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	31	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	31	23/03/2025	23/03/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	31	33	33	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	31	4.8	6.7	33	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	31	43	55	24	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	31	100	93	7	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	31	410	930	78	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	31	110	180	48	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	31	470	770	48	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	31	660	700	6	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	31	200	200	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	31	200	200	0	[NT]	[NT]
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	31	200	340	52	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	31	160	270	51	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	31	82	140	52	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	31	45	35	25	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	31	110	200	58	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	31	73	75	3	[NT]	[NT]

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QUALITY CONTROL: PAHs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	41	23/03/2025	23/03/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	41	2.4	1.8	29	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	41	0.6	0.5	18	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	41	1.6	1	46	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	41	5.2	2.6	67	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	41	36	26	32	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	41	8.4	6.9	20	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	41	43	33	26	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	41	39	30	26	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	41	14	9.9	34	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	41	13	10	26	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	41	34	17	67	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	41	26	14	60	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	41	19	7.3	89	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	41	4.1	1.2	109	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	41	24	10	82	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	41	64	68	6	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	51	23/03/2025	23/03/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	51	0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	51	0.2	0.1	67	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	51	0.3	0.3	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	51	0.4	0.3	29	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	51	0.4	0.2	67	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	51	0.2	0.1	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	51	0.2	0.2	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	51	0.2	0.3	40	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	51	0.1	0.1	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	51	80	64	22	[NT]	[NT]

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QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	376250-2
Date extracted	-			21/03/2025	1	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			23/03/2025	1	23/03/2025	23/03/2025		23/03/2025	23/03/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	82
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	80
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	80
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	82
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	84
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	80
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	86
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	82
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	94
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	88
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	85	1	100	98	2	111	107

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	376250-22
Date extracted	-			[NT]	11	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	11	23/03/2025	23/03/2025		23/03/2025	23/03/2025
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	84	87
HCB	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	86	90
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	72	93
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	94	63
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	94	100
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	76	71
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	98	113
Endrin	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	62	120
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	86	97
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	74	98
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	11	97	97	0	112	106

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	376250-42
Date extracted	-			[NT]	21	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	21	23/03/2025	23/03/2025		23/03/2025	23/03/2025
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	100	92
HCB	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	96	92
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	108	102
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	104	60
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	106	112
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	100	98
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	111	117
Endrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	107	102
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	87	97
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	98	102
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	21	110	104	6	102	121

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	31	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	31	23/03/2025	23/03/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	31	90	93	3	[NT]	[NT]

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	41	23/03/2025	23/03/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	41	85	95	11	[NT]	[NT]

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	51	23/03/2025	23/03/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	51	102	90	12	[NT]	[NT]

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	376250-2
Date extracted	-			21/03/2025	1	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			23/03/2025	1	23/03/2025	23/03/2025		23/03/2025	23/03/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	86
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	78
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	124	116
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	90
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	82
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	100
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	90
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	85	1	100	98	2	111	107

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	376250-22
Date extracted	-			[NT]	11	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	11	23/03/2025	23/03/2025		23/03/2025	23/03/2025
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	88	74
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	86	66
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	124	98
Malathion	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	98	74
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	94	84
Fenthion	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	108	98
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	80	86
Phosalone	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	11	97	97	0	112	106

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	376250-42
Date extracted	-			[NT]	21	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	21	23/03/2025	23/03/2025		23/03/2025	23/03/2025
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	104	76
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	98	70
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	102	98
Malathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	114	78
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	112	84
Fenthion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	88	92
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	90	86
Phosalone	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	21	110	104	6	102	121

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	31	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	31	23/03/2025	23/03/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	31	90	93	3	[NT]	[NT]

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QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	41	23/03/2025	23/03/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	41	85	95	11	[NT]	[NT]

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QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	51	23/03/2025	23/03/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	51	102	90	12	[NT]	[NT]

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QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	376250-2
Date extracted	-			21/03/2025	1	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			23/03/2025	1	23/03/2025	23/03/2025		23/03/2025	23/03/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	104	60
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	85	1	76	77	1	85	85

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	376250-22
Date extracted	-			[NT]	11	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	11	23/03/2025	23/03/2025		23/03/2025	23/03/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	11	<0.1	<0.1	0	91	60
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	11	73	77	5	86	76

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	376250-42
Date extracted	-			[NT]	21	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	21	23/03/2025	23/03/2025		23/03/2025	23/03/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	21	<0.1	<0.1	0	112	60
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	21	77	73	5	101	81

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QUALITY CONTROL: PCBs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	31	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	31	23/03/2025	23/03/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	31	63	62	2	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	41	23/03/2025	23/03/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	41	61	65	6	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	51	23/03/2025	23/03/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	51	70	61	14	[NT]	[NT]

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QUALITY CONTROL: Misc Soil - Inorg						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	376250-2
Date prepared	-			21/03/2025	1	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			24/03/2025	1	24/03/2025	24/03/2025		24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	103	97

QUALITY CONTROL: Misc Soil - Inorg						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	376250-22
Date prepared	-			[NT]	11	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	11	24/03/2025	24/03/2025		24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	11	<5	<5	0	93	93

QUALITY CONTROL: Misc Soil - Inorg						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	376250-42
Date prepared	-			[NT]	21	21/03/2025	21/03/2025		21/03/2025	21/03/2025
Date analysed	-			[NT]	21	24/03/2025	24/03/2025		24/03/2025	24/03/2025
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	21	<5	<5	0	95	87

QUALITY CONTROL: Misc Soil - Inorg						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	31	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	31	24/03/2025	24/03/2025		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	31	<5	<5	0	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	41	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	41	24/03/2025	24/03/2025		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	41	<5	<5	0	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	51	21/03/2025	21/03/2025		[NT]	[NT]
Date analysed	-			[NT]	51	24/03/2025	24/03/2025		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	51	<5	<5	0	[NT]	[NT]

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	376250-2
Date prepared	-			24/03/2025	1	24/03/2025	24/03/2025		24/03/2025	24/03/2025
Date analysed	-			24/03/2025	1	24/03/2025	24/03/2025		24/03/2025	24/03/2025
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	108	101
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	98	88
Chromium	mg/kg	1	Metals-020	<1	1	36	33	9	103	92
Copper	mg/kg	1	Metals-020	<1	1	4	5	22	100	100
Lead	mg/kg	1	Metals-020	<1	1	6	5	18	104	95
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	101	100
Nickel	mg/kg	1	Metals-020	<1	1	3	3	0	106	99
Zinc	mg/kg	1	Metals-020	<1	1	13	14	7	104	88

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	376250-22
Date prepared	-			[NT]	11	24/03/2025	24/03/2025		24/03/2025	24/03/2025
Date analysed	-			[NT]	11	24/03/2025	24/03/2025		24/03/2025	24/03/2025
Arsenic	mg/kg	4	Metals-020	[NT]	11	7	9	25	103	100
Cadmium	mg/kg	0.4	Metals-020	[NT]	11	<0.4	<0.4	0	95	85
Chromium	mg/kg	1	Metals-020	[NT]	11	6	6	0	100	98
Copper	mg/kg	1	Metals-020	[NT]	11	13	15	14	97	101
Lead	mg/kg	1	Metals-020	[NT]	11	8	10	22	101	94
Mercury	mg/kg	0.1	Metals-021	[NT]	11	<0.1	<0.1	0	98	100
Nickel	mg/kg	1	Metals-020	[NT]	11	8	9	12	102	94
Zinc	mg/kg	1	Metals-020	[NT]	11	41	53	26	100	84

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	376250-42
Date prepared	-			[NT]	21	24/03/2025	24/03/2025		24/03/2025	24/03/2025
Date analysed	-			[NT]	21	24/03/2025	24/03/2025		24/03/2025	24/03/2025
Arsenic	mg/kg	4	Metals-020	[NT]	21	<4	<4	0	110	103
Cadmium	mg/kg	0.4	Metals-020	[NT]	21	<0.4	<0.4	0	99	82
Chromium	mg/kg	1	Metals-020	[NT]	21	10	29	97	104	99
Copper	mg/kg	1	Metals-020	[NT]	21	4	11	93	101	107
Lead	mg/kg	1	Metals-020	[NT]	21	6	15	86	105	93
Mercury	mg/kg	0.1	Metals-021	[NT]	21	<0.1	<0.1	0	98	97
Nickel	mg/kg	1	Metals-020	[NT]	21	3	5	50	107	94
Zinc	mg/kg	1	Metals-020	[NT]	21	16	36	77	104	90

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	31	24/03/2025	24/03/2025		[NT]	[NT]
Date analysed	-			[NT]	31	24/03/2025	24/03/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	31	5	5	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	31	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	31	47	47	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	31	12	11	9	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	31	14	15	7	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	31	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	31	6	7	15	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	31	37	43	15	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	41	24/03/2025	24/03/2025		[NT]	[NT]
Date analysed	-			[NT]	41	24/03/2025	24/03/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	41	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	41	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	41	23	34	39	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	41	10	6	50	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	41	6	7	15	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	41	4	4	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	41	25	17	38	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	51	24/03/2025	24/03/2025		[NT]	[NT]
Date analysed	-			[NT]	51	24/03/2025	24/03/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	51	7	10	35	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	51	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	51	4	5	22	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	51	12	17	34	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	51	4	5	22	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	51	5	8	46	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	51	36	48	29	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

vTRH & BTEXN in Soil NEPM - The RPD for duplicate results is accepted due to the non homogenous nature of sample 376250-31.

TRH Soil C10-C40 NEPM - # Percent recovery for the surrogate and matrix spike is not possible to report as the high concentration of analytes in samples 376250-2,18,19,22,25,26,27,30,31,46,47 and 58 have caused interference.

The laboratory RPD acceptance criteria has been exceeded for 376250-21. Therefore a triplicate result has been issued as laboratory sample number 376250-61.

PAHs in Soil - The laboratory RPD acceptance criteria has been exceeded for 376250-1. Therefore a triplicate result has been issued as laboratory sample number 376250-63.

The laboratory RPD acceptance criteria has been exceeded for 376250-21. Therefore a triplicate result has been issued as laboratory sample number 376250-61.

The laboratory RPD acceptance criteria has been exceeded for 376250-31. Therefore a triplicate result has been issued as laboratory sample number 376250-64.

The laboratory RPD acceptance criteria has been exceeded for 376250-41. Therefore a triplicate result has been issued as laboratory sample number 376250-62.

Percent recovery for the matrix spike is not possible to report as the high concentration of analytes in samples 376250-2,22 and 42 have caused interference.

OC's in Soil - The PQL has been raised due to interferences from analytes (other than those being tested) in samples 376250-25 and 58.

OP's in Soil - The PQL has been raised due to interferences from analytes (other than those being tested) in samples 376250-25 and 58.

PCBs in Soil - The PQL has been raised due to interferences from analytes (other than those being tested) in samples 376250-25 and 58.

Acid Extractable Metals in Soil:

- The laboratory RPD acceptance criteria has been exceeded for 376250-21 for Cr,Cu,Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 376250-61.

- The laboratory RPD acceptance criteria has been exceeded for 376250-41 for Cu. Therefore a triplicate result has been issued as laboratory sample number 376250-62.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.

Note: Samples requested for asbestos testing were sub-sampled from jars provided by the client.

Anna Bui

From: Sam Ramsey - Newcastle Manager <sam@enviroscience.com.au>
Sent: Tuesday, 25 March 2025 2:30 PM
To: Steven Luong; 'ESdat_AU+enviroscience@ESdatLabSync.net'; Mark Challoner CEnvP: Site Contamination Specialist; Tom Davelaar; Customer Service
Subject: Re: Results for Registration 376250 50985-Fill 18 Coal Tar Assessment

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Hi Steven,

Yes the pH 7 will be fine.

You can just send the results to us and we will forward them through to James.

Thank you appreciate the help,

Sam Ramsey - Newcastle Manager

Occupational Health and Environmental Consultant

Enviroscience Solutions Pty Ltd

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ABN - 12 157 918 262

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ELS REF: 376250-A

TMT: 1 DAY

DUE: 26/3/25

AB.

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If you as intended recipient have received this email incorrectly, please notify the sender (via email) immediately.



From: Steven Luong <SLuong@envirolab.com.au>

Sent: Tuesday, 25 March 2025 2:21 PM

To: Sam Ramsey - Newcastle Manager <sam@envirosience.com.au>; 'ESdat_AU+envirosience@ESdatLabSync.net' <ESdat_AU+envirosience@ESdatLabSync.net>; Mark Challoner CEnvP: Site Contamination Specialist <markc@envirosience.com.au>; Tom Davelaar <tom@envirosience.com.au>; Customer Service <CustomerService@envirolab.com.au>

Subject: RE: Results for Registration 376250 50985-Fill 18 Coal Tar Assessment

Hi Sam,

Please note that the Naphthalene VOC leachates will need to be extracted/tumbled overnight as it is a separate extraction compared to the svTRH/PAH. Also confirming the VOC will be a ASLP pH7 leachate?

We will get it started on it today/tonight and try out best to report the final COA by tomorrow. However, given that the soils was very impacted and required lots of dilutions to bring into calibration range, we may need to extend the final due date in order to accommodate any dilutions/repeats which need to be carried out in order to confirm results.

As with the soils, we will send preliminary reports as required and keep you apprised of any issues.

Also to confirm, will James Epstein still require a copy of the results?

@Customer Service, can we book in an A-job for the request below please?

Kind Regards,

Steven Luong | Senior Chemist | Envirolab Services

(Monday to Friday 8:30am to 2:30pm & 4:30am to 6:00pm)

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Samples will be analysed per our T&C's.

From: Sam Ramsey - Newcastle Manager <sam@envirosience.com.au>

Sent: Tuesday, 25 March 2025 1:46 PM

To: Steven Luong <SLuong@envirolab.com.au>; 'ESdat_AU+envirosience@ESdatLabSync.net' <ESdat_AU+envirosience@ESdatLabSync.net>; Mark Challoner CEnvP: Site Contamination Specialist <markc@envirosience.com.au>; Tom Davelaar <tom@envirosience.com.au>

Subject: Re: Results for Registration 376250 50985-Fill 18 Coal Tar Assessment

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Hi Steven,

We would like to proceed with ASLP analysis of the following, fastest TAT possible please.

Naphthalene VOC:

19 MC208820_100
25 MC208890_SP
58 MC209210_S

TRH:

6 MC208720_S
5 MC208720_SP
9 MC208760_SP
14 MC208790_S
13 MC208790_SP
19 MC208820_100
18 MC208820_S
17 MC208820_SP
22 MC208850_S
21 MC208850_SP
27 MC208890_100
26 MC208890_S
25 MC208890_SP
31 MC208930_100
30 MC208930_S
29 MC208930_SP
34 MC208970_S
38 MC209010_S
37 MC209010_SP
41 MC209040_SP
47 MC209090_100
46 MC209090_S
45 MC209090_SP
50 MC209130_S
49 MC209130_SP
58 MC209210_S
57 MC209210_SP

PAHs for samples;

2 MC208680_S
1 MC208680_SP
6 MC208720_S
5 MC208720_SP
9 MC208760_SP
14 MC208790_S
13 MC208790_SP
19 MC208820_100
18 MC208820_S
17 MC208820_SP
23 MC208850_100
22 MC208850_S
21 MC208850_SP
27 MC208890_100
26 MC208890_S
25 MC208890_SP

31 MC208930_100
30 MC208930_S
29 MC208930_SP
35 MC208970_100
34 MC208970_S
33 MC208970_SP
39 MC209010_100
38 MC209010_S
37 MC209010_SP
43 MC209040_100
44 MC209040_500
42 MC209040_S
41 MC209040_SP
47 MC209090_100
48 MC209090_500
46 MC209090_S
45 MC209090_SP
55 MC209170_100
56 MC209170_500
59 MC209210_100
58 MC209210_S

Thank you,

Sam Ramsey - Newcastle Manager

Occupational Health and Environmental Consultant

Enviroscience Solutions Pty Ltd

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ABN - 12 157 918 262

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SAMPLE RECEIPT ADVICE

Client Details

Client	EnviroScience Solutions (Newcastle)
Attention	Sam Ramsey

Sample Login Details

Your reference	50985-Fill 18 Coal Tar Assessment
Envirolab Reference	376250-A
Date Sample Received	21/03/2025
Date Instructions Received	25/03/2025
Date Results Expected to be Reported	26/03/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	6
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Final report may have delays due to dilutions

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



EnviroLab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN Zero Headspace ASLP	sTRH in water leach	PAHs in Water Leach	On Hold
MC208680_SP			✓	
MC208680_S			✓	
MC208680_100				✓
MC208680_500				✓
MC208720_SP		✓	✓	
MC208720_S		✓	✓	
MC208720_100				✓
MC208720_500				✓
MC208760_SP		✓	✓	
MC208760_S				✓
MC208760_100				✓
MC208670_500				✓
MC208790_SP		✓	✓	
MC208790_S		✓	✓	
MC208790_100				✓
MC208790_500				✓
MC208820_SP		✓	✓	
MC208820_S		✓	✓	
MC208820_100	✓	✓	✓	
MC208820_500				✓
MC208850_SP		✓	✓	
MC208850_S		✓	✓	
MC208850_100			✓	
MC208850_500				✓
MC208890_SP	✓	✓	✓	
MC208890_S		✓	✓	
MC208890_100		✓	✓	
MC208890_500				✓
MC208930_SP		✓	✓	
MC208930_S		✓	✓	
MC208930_100		✓	✓	
MC208930_500				✓



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ABN 37 112 535 645

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Sample ID	VTRH(C6-C10)/BTEXN Zero Headspace ASLP	sTRH in water leach	PAHs in Water Leach	On Hold
MC208970_SP			✓	
MC208970_S		✓	✓	
MC208970_100			✓	
MC208970_500				✓
MC209010_SP		✓	✓	
MC209010_S		✓	✓	
MC209010_100			✓	
MC209010_500				✓
MC209040_SP		✓	✓	
MC209040_S			✓	
MC209040_100			✓	
MC209040_500			✓	
MC209090_SP		✓	✓	
MC209090_S		✓	✓	
MC209090_100		✓	✓	
MC209090_500			✓	
MC209130_SP		✓		
MC209130_S		✓		
MC209130_100				✓
MC209130_500				✓
MC209170_SP				✓
MC209170_S				✓
MC209170_100			✓	
MC209170_500			✓	
MC209210_SP		✓		
MC209210_S	✓	✓	✓	
MC209210_100			✓	
MC209210_500				✓
MC208850_SP - [TRIPLICATE]				✓
MC209040_SP - [TRIPLICATE]				✓
MC208680_SP - [TRIPLICATE]				✓
MC208930_100 - [TRIPLICATE]				✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**



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Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 376250-A

Client Details

Client	EnviroScience Solutions (Newcastle)
Attention	Sam Ramsey
Address	220 Lambton Road, NEW LAMBTON, NSW, 2305

Sample Details

Your Reference	<u>50985-Fill 18 Coal Tar Assessment</u>
Number of Samples	Additional analysis
Date samples received	21/03/2025
Date completed instructions received	25/03/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	26/03/2025
Date of Issue	27/03/2025
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Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Steven Luong, Senior Chemist
 Timothy Toll, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN Zero Headspace ASLP				
Our Reference		376250-A-19	376250-A-25	376250-A-58
Your Reference	UNITS	MC208820_100	MC208890_SP	MC209210_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil
pH of final Leachate	pH units	8.1	8.4	8.6
Date extracted	-	26/03/2025	26/03/2025	26/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025
TRH C ₆ - C ₉	µg/L	<1000	<10	<1000
TRH C ₆ - C ₁₀	µg/L	<1000	<10	<1000
TRH C ₆ - C ₁₀ less BTEX (F1)	µg/L	<10	<10	<10
Benzene	µg/L	<100	<1	<100
Toluene	µg/L	<100	<1	<100
Ethylbenzene	µg/L	<100	<1	<100
m+p-xylene	µg/L	<200	<2	<200
o-xylene	µg/L	<100	<1	<100
Naphthalene	µg/L	1,600	20	5,300
Surrogate Dibromofluoromethane	%	90	91	90
Surrogate Toluene-d8	%	99	99	98
Surrogate 4-Bromofluorobenzene	%	99	99	99

Client Reference: 50985-Fill 18 Coal Tar Assessment

sTRH in water leach						
Our Reference	UNITS	376250-A-5	376250-A-6	376250-A-9	376250-A-13	376250-A-14
Your Reference		MC208720_SP	MC208720_S	MC208760_SP	MC208790_SP	MC208790_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
TRH C ₁₀ - C ₁₄	µg/L	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	110	<100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	67	<50	<50	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100	<100	<100	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	105	76	82	101	60

sTRH in water leach						
Our Reference	UNITS	376250-A-17	376250-A-18	376250-A-19	376250-A-21	376250-A-22
Your Reference		MC208820_SP	MC208820_S	MC208820_100	MC208850_SP	MC208850_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
TRH C ₁₀ - C ₁₄	µg/L	<50	<50	1,600	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	190	2,600	170	430
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	68	2,200	95	110
TRH >C ₁₆ - C ₃₄	µg/L	<100	160	2,000	130	380
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	100	73	90	105	74

sTRH in water leach						
Our Reference	UNITS	376250-A-25	376250-A-26	376250-A-27	376250-A-29	376250-A-30
Your Reference		MC208890_SP	MC208890_S	MC208890_100	MC208930_SP	MC208930_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
TRH C ₁₀ - C ₁₄	µg/L	1,400	69	<50	<50	180
TRH C ₁₅ - C ₂₈	µg/L	1,600	580	850	110	900
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	1,800	170	230	51	370
TRH >C ₁₆ - C ₃₄	µg/L	1,100	460	660	140	720
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	124	77	82	96	92

sTRH in water leach						
Our Reference	UNITS	376250-A-31	376250-A-34	376250-A-37	376250-A-38	376250-A-41
Your Reference		MC208930_100	MC208970_S	MC209010_SP	MC209010_S	MC209040_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
TRH C ₁₀ - C ₁₄	µg/L	200	<50	<50	<50	55
TRH C ₁₅ - C ₂₈	µg/L	1,200	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	400	<50	<50	<50	74
TRH >C ₁₆ - C ₃₄	µg/L	1,000	<100	<100	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	103	85	104	87	95

sTRH in water leach						
Our Reference		376250-A-45	376250-A-46	376250-A-47	376250-A-49	376250-A-50
Your Reference	UNITS	MC209090_SP	MC209090_S	MC209090_100	MC209130_SP	MC209130_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
TRH C ₁₀ - C ₁₄	µg/L	<50	120	66	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	1,100	1,100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	310	280	<50	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100	870	850	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	64	119	82	78	63

sTRH in water leach			
Our Reference		376250-A-57	376250-A-58
Your Reference	UNITS	MC209210_SP	MC209210_S
Date Sampled		21/03/2025	21/03/2025
Type of sample		Soil	Soil
Date extracted	-	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025
TRH C ₁₀ - C ₁₄	µg/L	<50	4,800
TRH C ₁₅ - C ₂₈	µg/L	<100	4,000
TRH C ₂₉ - C ₃₆	µg/L	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	6,000
TRH >C ₁₆ - C ₃₄	µg/L	<100	2,500
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100
Surrogate o-Terphenyl	%	76	#

PAHs in Water Leach						
Our Reference	UNITS	376250-A-1	376250-A-2	376250-A-5	376250-A-6	376250-A-9
Your Reference		MC208680_SP	MC208680_S	MC208720_SP	MC208720_S	MC208760_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	3.1	0.19	5.9	0.72	1.3
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	0.14	<0.1	<0.1
Acenaphthene in ASLP	µg/L	0.75	1.4	2.4	5.0	0.64
Fluorene in ASLP	µg/L	0.60	0.44	2.3	4.7	0.56
Phenanthrene in ASLP	µg/L	2.2	0.41	6.3	14	2.1
Anthracene in ASLP	µg/L	0.55	<0.5	1.5	3.3	0.49
Fluoranthene in ASLP	µg/L	0.64	3.2	1.8	3.5	0.75
Pyrene in ASLP	µg/L	0.49	2.6	1.3	2.5	0.54
Benzo(a)anthracene in ASLP	µg/L	<0.1	0.24	<0.1	0.11	<0.1
Chrysene in ASLP	µg/L	<0.1	0.25	<0.1	0.11	<0.1
Benzo(b,j,k)fluoranthene in ASLP	µg/L	<0.2	0.45	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	0.17	<0.1	0.56	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	73	101	84	85	79

PAHs in Water Leach						
Our Reference		376250-A-13	376250-A-14	376250-A-17	376250-A-18	376250-A-19
Your Reference	UNITS	MC208790_SP	MC208790_S	MC208820_SP	MC208820_S	MC208820_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	8.9	1.1	0.46	14	1,000
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	1.5
Acenaphthene in ASLP	µg/L	2.5	1.6	0.84	5.7	39
Fluorene in ASLP	µg/L	1.5	1.0	0.41	6.6	58
Phenanthrene in ASLP	µg/L	3.9	2.5	1.8	19	190
Anthracene in ASLP	µg/L	0.77	0.97	0.41	4.3	39
Fluoranthene in ASLP	µg/L	1.2	5.2	0.94	11	63
Pyrene in ASLP	µg/L	0.88	4.5	0.73	9.6	54
Benzo(a)anthracene in ASLP	µg/L	<0.1	0.21	<0.1	0.45	2.1
Chrysene in ASLP	µg/L	<0.1	0.37	<0.1	0.63	2.2
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	0.50	<0.2	0.95	3.9
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	0.19	0.44
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	0.27
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	0.43
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	85	60	76	86	66

PAHs in Water Leach						
Our Reference		376250-A-21	376250-A-22	376250-A-23	376250-A-25	376250-A-26
Your Reference	UNITS	MC208850_SP	MC208850_S	MC208850_100	MC208890_SP	MC208890_S
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	6.1	7.9	1.4	770	24
Acenaphthylene in ASLP	µg/L	<0.1	0.15	0.36	0.58	0.12
Acenaphthene in ASLP	µg/L	5.4	12	16	50	20
Fluorene in ASLP	µg/L	2.7	11	2.9	58	23
Phenanthrene in ASLP	µg/L	2.2	32	8.0	140	74
Anthracene in ASLP	µg/L	<0.5	7.8	2.6	34	10
Fluoranthene in ASLP	µg/L	6.7	35	16	35	28
Pyrene in ASLP	µg/L	5.2	30	16	28	22
Benzo(a)anthracene in ASLP	µg/L	0.39	1.6	0.81	0.78	0.78
Chrysene in ASLP	µg/L	0.34	1.6	0.90	0.82	0.92
Benzo(bjk)fluoranthene in ASLP	µg/L	0.49	2.6	0.90	1.0	0.99
Benzo(a)pyrene in ASLP	µg/L	0.16	0.39	0.33	0.11	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	0.28	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	0.45	0.11	0.14	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	109	79	94	61	66

PAHs in Water Leach						
Our Reference		376250-A-27	376250-A-29	376250-A-30	376250-A-31	376250-A-33
Your Reference	UNITS	MC208890_100	MC208930_SP	MC208930_S	MC208930_100	MC208970_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	0.81	9.8	69	51	16
Acenaphthylene in ASLP	µg/L	0.47	<0.1	0.19	0.22	<0.1
Acenaphthene in ASLP	µg/L	72	2.2	37	37	2.2
Fluorene in ASLP	µg/L	46	1.8	27	26	2.2
Phenanthrene in ASLP	µg/L	160	5.6	85	89	6.0
Anthracene in ASLP	µg/L	11	1.1	11	13	1.5
Fluoranthene in ASLP	µg/L	57	1.6	28	34	2.3
Pyrene in ASLP	µg/L	47	1.1	23	28	1.7
Benzo(a)anthracene in ASLP	µg/L	1.4	<0.1	0.99	1.3	<0.1
Chrysene in ASLP	µg/L	1.7	<0.1	1.1	1.7	0.12
Benzo(bjk)fluoranthene in ASLP	µg/L	2.4	<0.2	1.5	2.1	<0.2
Benzo(a)pyrene in ASLP	µg/L	0.26	<0.1	0.17	0.25	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.19	<0.1	<0.1	0.13	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	0.26	<0.1	0.13	0.20	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	63	80	67	62	74

PAHs in Water Leach						
Our Reference		376250-A-34	376250-A-35	376250-A-37	376250-A-38	376250-A-39
Your Reference	UNITS	MC208970_S	MC208970_100	MC209010_SP	MC209010_S	MC209010_100
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	0.37	9.2	2.6	<0.1	1.6
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	0.13
Acenaphthene in ASLP	µg/L	1.7	2.0	1.2	0.45	2.4
Fluorene in ASLP	µg/L	2.0	5.5	1.4	0.17	0.96
Phenanthrene in ASLP	µg/L	10	5.5	4.4	1.8	1.1
Anthracene in ASLP	µg/L	2.0	1.7	0.79	0.35	0.52
Fluoranthene in ASLP	µg/L	6.2	1.3	1.8	4.4	3.9
Pyrene in ASLP	µg/L	4.8	0.16	1.3	3.8	3.0
Benzo(a)anthracene in ASLP	µg/L	0.20	0.14	0.15	0.43	0.23
Chrysene in ASLP	µg/L	0.22	<0.1	0.14	0.52	0.26
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	0.42	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	0.27	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	0.17	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	0.27	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	89	68	72	68	73

PAHs in Water Leach						
Our Reference		376250-A-41	376250-A-42	376250-A-43	376250-A-44	376250-A-45
Your Reference	UNITS	MC209040_SP	MC209040_S	MC209040_100	MC209040_500	MC209090_SP
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	15	5.0	0.95	<0.1	0.65
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	3.0	1.8	0.77	0.22	1.4
Fluorene in ASLP	µg/L	3.5	1.8	0.18	<0.1	1.3
Phenanthrene in ASLP	µg/L	8.4	6.1	0.78	0.49	5.6
Anthracene in ASLP	µg/L	1.7	1.1	0.27	<0.1	1.1
Fluoranthene in ASLP	µg/L	3.0	2.2	7.0	1.9	3.0
Pyrene in ASLP	µg/L	2.2	1.7	6.2	1.6	2.3
Benzo(a)anthracene in ASLP	µg/L	0.22	0.17	0.73	0.17	0.25
Chrysene in ASLP	µg/L	0.18	0.14	0.69	0.17	0.28
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	0.49	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	0.29	<0.1	0.11
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	0.15	<0.1	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	73	76	72	70	61

PAHs in Water Leach						
Our Reference		376250-A-46	376250-A-47	376250-A-48	376250-A-55	376250-A-56
Your Reference	UNITS	MC209090_S	MC209090_100	MC209090_500	MC209170_100	MC209170_500
Date Sampled		21/03/2025	21/03/2025	21/03/2025	21/03/2025	21/03/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/03/2025	25/03/2025	25/03/2025	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025	26/03/2025	26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	38	1.9	<0.1	0.37	<0.1
Acenaphthylene in ASLP	µg/L	0.18	0.25	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	35	44	1.4	0.39	<0.1
Fluorene in ASLP	µg/L	41	54	2.2	0.28	<0.1
Phenanthrene in ASLP	µg/L	140	180	3.8	2.2	0.19
Anthracene in ASLP	µg/L	29	25	1.3	0.43	<0.1
Fluoranthene in ASLP	µg/L	31	49	8.3	2.8	0.43
Pyrene in ASLP	µg/L	23	40	6.4	2.4	0.38
Benzo(a)anthracene in ASLP	µg/L	1.5	3.2	0.79	0.18	<0.1
Chrysene in ASLP	µg/L	1.9	2.4	0.94	0.22	<0.1
Benzo(b,k)fluoranthene in ASLP	µg/L	0.70	1.9	0.66	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	0.49	1.4	0.38	0.10	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.15	0.48	0.13	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	0.19	0.62	0.16	0.11	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	91	70	66	66	74

PAHs in Water Leach			
Our Reference		376250-A-58	376250-A-59
Your Reference	UNITS	MC209210_S	MC209210_100
Date Sampled		21/03/2025	21/03/2025
Type of sample		Soil	Soil
Date extracted	-	25/03/2025	25/03/2025
Date analysed	-	26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	1,600	0.52
Acenaphthylene in ASLP	µg/L	0.11	0.20
Acenaphthene in ASLP	µg/L	330	20
Fluorene in ASLP	µg/L	110	5.3
Phenanthrene in ASLP	µg/L	230	1.3
Anthracene in ASLP	µg/L	33	4.3
Fluoranthene in ASLP	µg/L	40	13
Pyrene in ASLP	µg/L	31	11
Benzo(a)anthracene in ASLP	µg/L	3.4	0.94
Chrysene in ASLP	µg/L	2.1	0.79
Benzo(b,k)fluoranthene in ASLP	µg/L	1.6	0.43
Benzo(a)pyrene in ASLP	µg/L	1.2	0.28
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.28	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	0.36	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	68	60

Method ID	Methodology Summary
Inorg-004	Zero Headspace Extraction (zHE) using AS4439 and USEPA 1311.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-022/025 ASLP	ASLP Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: vTRH(C6-C10)/BTEXN Zero Headspace ASLP						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			26/03/2025	[NT]	[NT]	[NT]	[NT]	26/03/2025	[NT]
Date analysed	-			26/03/2025	[NT]	[NT]	[NT]	[NT]	26/03/2025	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	101	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	101	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	100	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	91	[NT]	[NT]	[NT]	[NT]	96	[NT]
Surrogate Toluene-d8	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	99	[NT]	[NT]	[NT]	[NT]	105	[NT]

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: sTRH in water leach					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	376250-A-18
Date extracted	-			25/03/2025	6	25/03/2025	25/03/2025		25/03/2025	25/03/2025
Date analysed	-			26/03/2025	6	26/03/2025	26/03/2025		26/03/2025	26/03/2025
TRH C ₁₀ - C ₁₄	µg/L	50	Org-020	<50	6	<50	<50	0	111	103
TRH C ₁₅ - C ₂₈	µg/L	100	Org-020	<100	6	110	<100	10	94	97
TRH C ₂₉ - C ₃₆	µg/L	100	Org-020	<100	6	<100	<100	0	100	105
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-020	<50	6	67	<50	29	111	103
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-020	<100	6	<100	<100	0	94	97
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-020	<100	6	<100	<100	0	100	105
Surrogate o-Terphenyl	%		Org-020	94	6	76	61	22	95	85

QUALITY CONTROL: sTRH in water leach					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	376250-A-34
Date extracted	-			[NT]	17	25/03/2025	25/03/2025		25/03/2025	25/03/2025
Date analysed	-			[NT]	17	26/03/2025	26/03/2025		26/03/2025	26/03/2025
TRH C ₁₀ - C ₁₄	µg/L	50	Org-020	[NT]	17	<50	<50	0	124	95
TRH C ₁₅ - C ₂₈	µg/L	100	Org-020	[NT]	17	<100	<100	0	124	96
TRH C ₂₉ - C ₃₆	µg/L	100	Org-020	[NT]	17	<100	<100	0	100	96
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-020	[NT]	17	<50	<50	0	124	95
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-020	[NT]	17	<100	<100	0	124	96
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-020	[NT]	17	<100	<100	0	100	96
Surrogate o-Terphenyl	%		Org-020	[NT]	17	100	70	35	121	82

QUALITY CONTROL: sTRH in water leach					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	19	25/03/2025	25/03/2025		[NT]	[NT]
Date analysed	-			[NT]	19	26/03/2025	26/03/2025		[NT]	[NT]
TRH C ₁₀ - C ₁₄	µg/L	50	Org-020	[NT]	19	1600	760	71	[NT]	[NT]
TRH C ₁₅ - C ₂₈	µg/L	100	Org-020	[NT]	19	2600	1300	67	[NT]	[NT]
TRH C ₂₉ - C ₃₆	µg/L	100	Org-020	[NT]	19	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-020	[NT]	19	2200	1100	67	[NT]	[NT]
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-020	[NT]	19	2000	1000	67	[NT]	[NT]
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-020	[NT]	19	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	19	90	74	20	[NT]	[NT]

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QUALITY CONTROL: sTRH in water leach						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	30	25/03/2025	25/03/2025		[NT]	[NT]
Date analysed	-			[NT]	30	26/03/2025	26/03/2025		[NT]	[NT]
TRH C ₁₀ - C ₁₄	µg/L	50	Org-020	[NT]	30	180	71	87	[NT]	[NT]
TRH C ₁₅ - C ₂₈	µg/L	100	Org-020	[NT]	30	900	760	17	[NT]	[NT]
TRH C ₂₉ - C ₃₆	µg/L	100	Org-020	[NT]	30	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-020	[NT]	30	370	180	69	[NT]	[NT]
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-020	[NT]	30	720	640	12	[NT]	[NT]
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-020	[NT]	30	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	30	92	76	19	[NT]	[NT]

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: PAHs in Water Leach					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	376250-A-18
Date extracted	-			25/03/2025	6	25/03/2025	25/03/2025		25/03/2025	25/03/2025
Date analysed	-			26/03/2025	6	26/03/2025	26/03/2025		26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	0.72	11	175	66	#
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	5.0	4.5	11	70	#
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	4.7	3.5	29	80	#
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	14	11	24	70	#
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	3.3	2.6	24	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	3.5	3.0	15	66	#
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	2.5	2.2	13	72	#
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	0.11	<0.1	10	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	0.11	0.12	9	64	80
Benzo(b)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	<0.2	6	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	0.56	<0.1	139	114	83
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-022/025 ASLP	78	6	85	64	28	102	69

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: PAHs in Water Leach					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	376250-A-34
Date extracted	-			[NT]	17	25/03/2025	25/03/2025		25/03/2025	25/03/2025
Date analysed	-			[NT]	17	26/03/2025	26/03/2025		26/03/2025	26/03/2025
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	0.46	0.78	52	71	73
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	0.84	0.73	14	73	88
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	0.41	0.47	14	68	98
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	1.8	2.0	11	63	#
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	0.41	0.39	5	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	0.94	0.85	10	60	100
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	0.73	0.69	6	68	96
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	<0.1	<0.1	0	64	62
Benzo(b)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	[NT]	17	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	<0.1	<0.1	0	69	65
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-022/025 ASLP	[NT]	17	76	64	17	72	67

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: PAHs in Water Leach						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	19	25/03/2025	25/03/2025		[NT]	[NT]
Date analysed	-			[NT]	19	26/03/2025	26/03/2025		[NT]	[NT]
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	1000	540	60	[NT]	[NT]
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	1.5	0.52	97	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	39	38	3	[NT]	[NT]
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	58	44	27	[NT]	[NT]
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	190	170	11	[NT]	[NT]
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	39	30	26	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	63	71	12	[NT]	[NT]
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	54	62	14	[NT]	[NT]
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	2.1	3.1	38	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	2.2	2.6	17	[NT]	[NT]
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	[NT]	19	3.9	1.5	89	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	0.44	1.1	86	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	0.27	<0.1	92	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	19	0.43	0.29	39	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-022/025 ASLP	[NT]	19	66	64	3	[NT]	[NT]

Client Reference: 50985-Fill 18 Coal Tar Assessment

QUALITY CONTROL: PAHs in Water Leach						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	30	25/03/2025	25/03/2025		[NT]	[NT]
Date analysed	-			[NT]	30	26/03/2025	26/03/2025		[NT]	[NT]
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	69	17	121	[NT]	[NT]
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	0.19	0.13	38	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	37	15	85	[NT]	[NT]
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	27	15	57	[NT]	[NT]
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	85	43	66	[NT]	[NT]
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	11	14	24	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	28	14	67	[NT]	[NT]
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	23	11	71	[NT]	[NT]
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	0.99	1.1	11	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	1.1	0.12	161	[NT]	[NT]
Benzo(b)k)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	[NT]	30	1.5	0.89	51	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	0.17	0.65	117	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	<0.1	0.51	134	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	30	0.13	0.28	73	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-022/025 ASLP	[NT]	30	67	60	11	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

PAHs in Water Leach - The PQL has been raised due to interferences from analytes (other than those being tested) in samples 376250-A-2 and 21.

Percent recovery for the matrix spike is not possible to report as the high concentration of analytes in sample 376250-A-34ms and 376250-a-18 has caused interference.

The RPD for duplicate results is accepted due to the non homogenous nature of sample 376250-A-6, 17, 19 and 30.

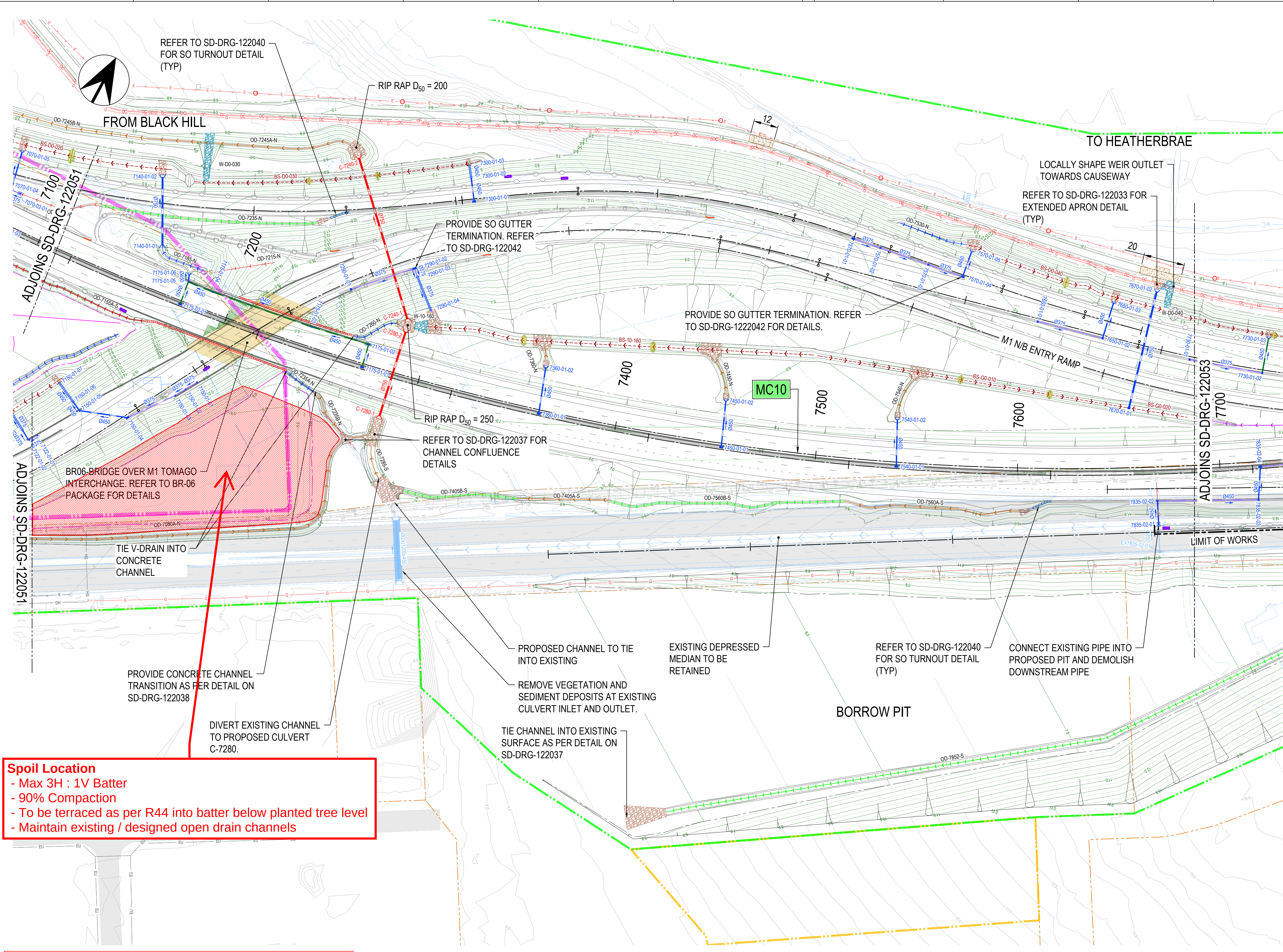
sTRH in water leach - The RPD for duplicate results is accepted due to the non homogenous nature of sample 376250-A-19 and 30.

Percent recovery for the surrogate is not possible to report as the high concentration of analytes in sample 376250-A-58 has caused interference.



APPENDIX E

DESIGN



LEGEND
PROPOSED DRAINAGE

PAVEMENT DRAINAGE, HEADWALL, SIZE, FLOW ARROW AND STRUCTURE

RC PIPE

HDPE PIPE**EXISTING DRAINAGE****MISCELLANEOUS**

Spoil Location

- Max 3H : 1V Batter
- 90% Compaction
- To be terraced as per R44 into batter below planted tree level
- Maintain existing / designed open drain channels

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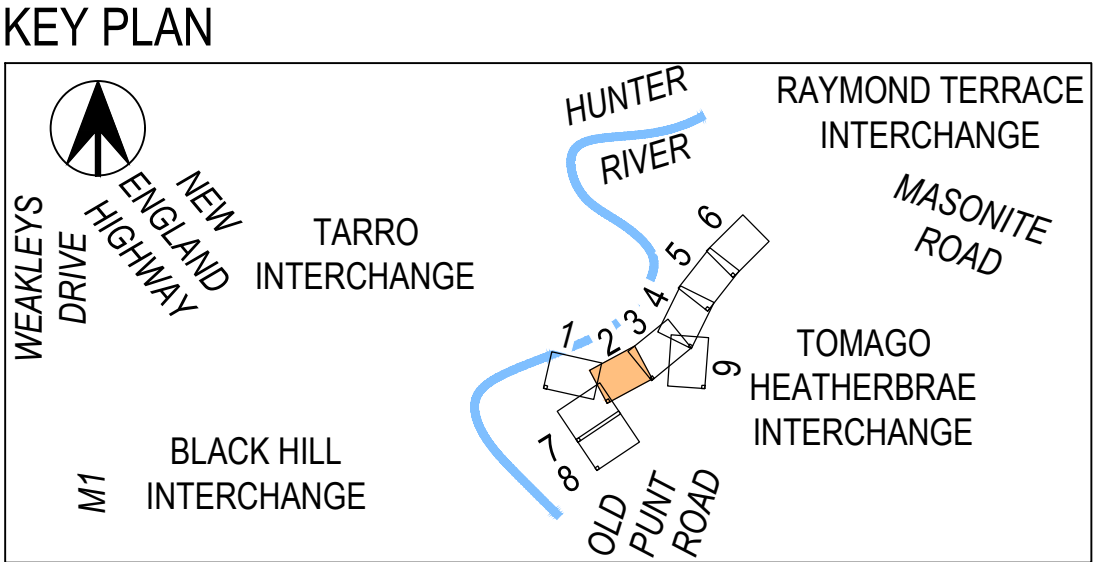
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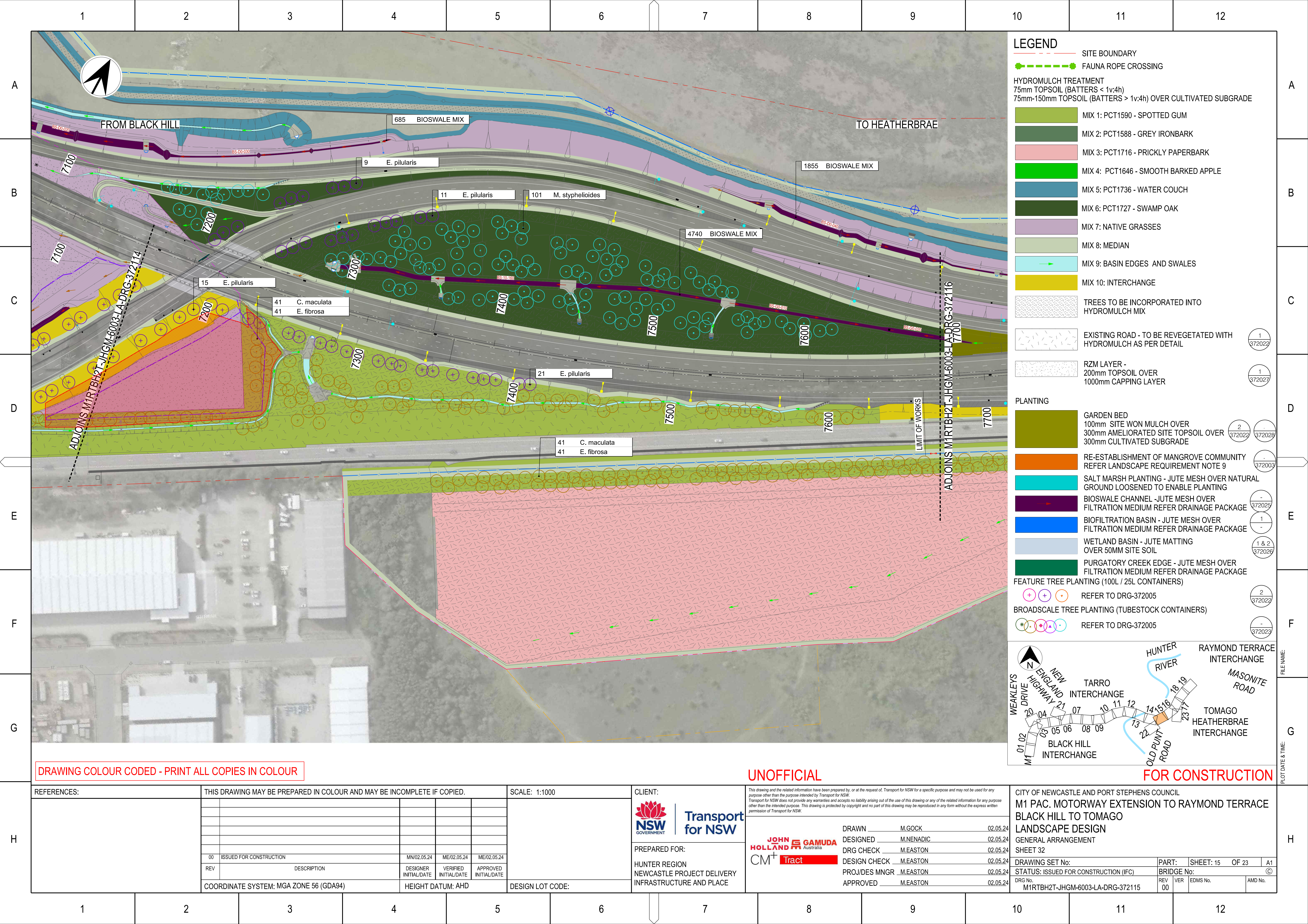
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M1RTBH2T-JHGM-6003-SD-M3D-122002-00.12Da												BLACK HILL TO TOMAGO					
												DRAINAGE DESIGN ZONE 2					
												PLAN					
												DRAWING SET No:					
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										HUNTER REGION		DESIGNED _____ J.MARQUEZ _____ 08.03.24					
										NEWCASTLE PROJECT DELIVERY		DRG CHECK _____ R.SANTANDER _____ 08.03.24					
										INFRASTRUCTURE AND PLACE		DESIGN CHECK _____ N.KELLY _____ 08.03.24					
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												APPROVED _____ M.BAO _____ 08.03.24					
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												JOHN HOLLAND & GAMUDA Australia					
												BN jason bickel jason venture					
												DRAINAGE					

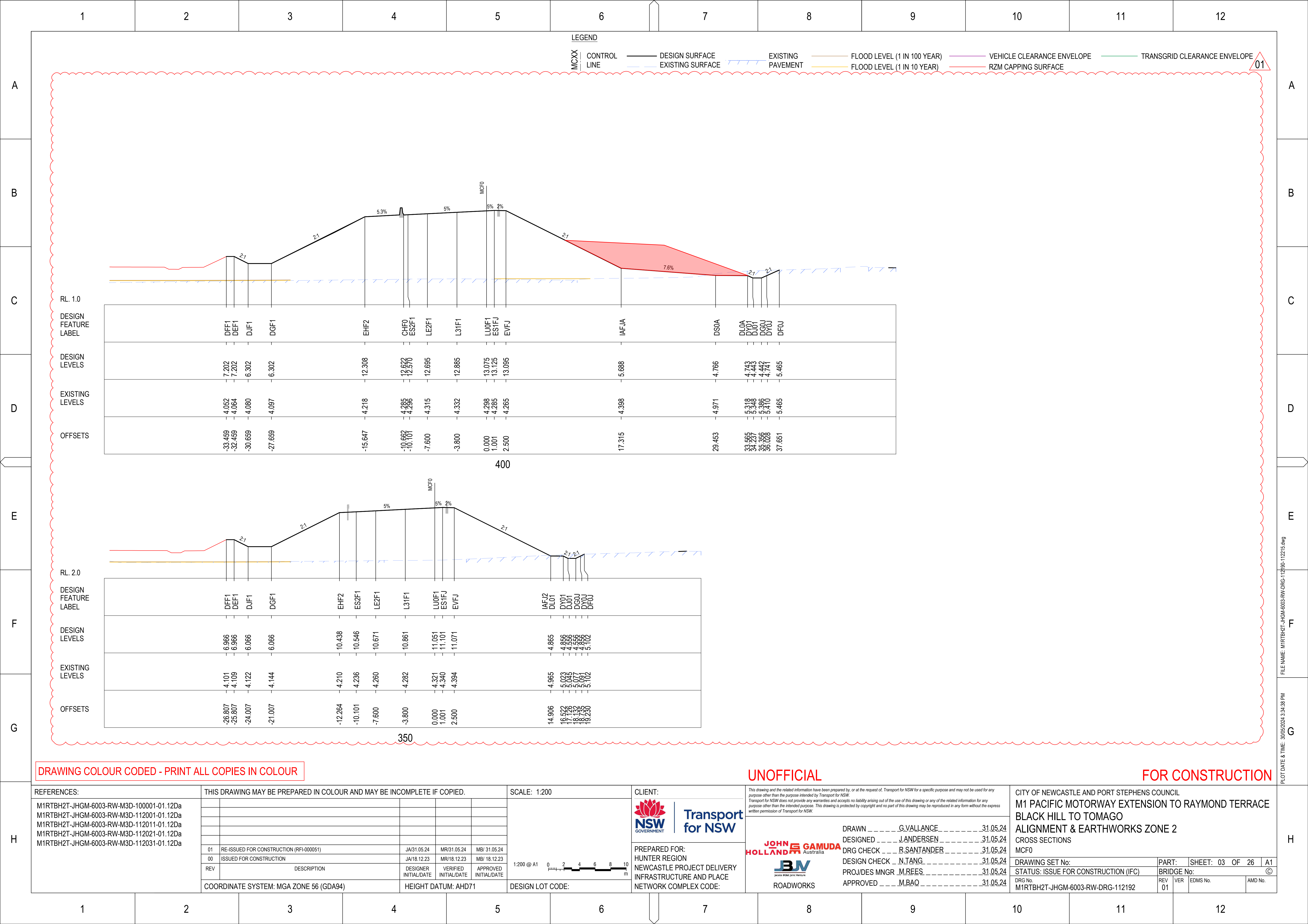
DRAINAGE

DRAWN	J.HARRIS	08.03.24
DESIGNED	J.MARQUEZ	08.03.24
DRG CHECK	R.SANTANDER	08.03.24
DESIGN CHECK	N.KELLY	08.03.24
PROJ/DES MNGR	M.REES	08.03.24
APPROVED	M.BAO	08.03.24



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DESCRIPTION

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CLIENT:

NSW GOVERNMENT

Transport for NSW

PREPARED FOR:

HUNTER REGION

NEWCASTLE PROJECT DELIVERY

INFRASTRUCTURE AND PLACE

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JOHN HOLLAND Australia

GAMUDA

BV

ROADWORKS

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DESIGNED

DRG CHECK

DESIGN CHECK

PROJ/DES MNGR

APPROVED

G.VALLANCE

J.ANDERSEN

R.SANTANDER

N.TANG

M.REES

M.BAO

31.05.24

31.05.24

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31.05.24

CITY OF NEWCASTLE AND PORT STEPHENS COUNCIL

M1 PACIFIC MOTORWAY EXTENSION TO RAYMOND TERRACE

BLACK HILL TO TOMAGO

ALIGNMENT & EARTHWORKS ZONE 2

CROSS SECTIONS

MCF0

DRAWING SET No:

PART:

SHEET: 03 OF 26

A1

STATUS: ISSUE FOR CONSTRUCTION (IFC)

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