

Hydrogeological and Contamination Assessment

Trinity Point Drive, Morisset Park, NSW

Prepared for: Trinity Point Development Unit Trust

EP2409.001 3 February 2022

APPROVED COMPANY ISO 9001 Quality Management Systems QMS Certification Services

APPROVED COMPANY AS/NZS 4801 Occupational Health & Safety Management Systems QMS Certification Services

APPROVED COMPANY ISO 14001 Environmental Management Systems QMS Certification Services

EP RISK

Hydrogeological and Contamination Assessment

Trinity Point Drive, Morisset Park, NSW

3 February 2022

Trinity Point Development Unit Trust
27 Patrick Drive
Cooranbong NSW 2265

Ref: EP2409.001

LIMITATIONS

This Hydrogeological and Contamination Assessment was conducted on the behalf Trinity Point Development Unit Trust for the purpose/s stated in Section 1.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in a Hydrogeological and Contamination Assessment to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

All work conducted, and reports produced by EP Risk are based on a specific scope and have been prepared for Trinity Point Development Unit Trust and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

The report(s) and/or information produced by EP Risk should not be reproduced and/or presented/reviewed except in full.

QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
1	S Lord	01.02.2022	P Simpson	01.02.2022	P Simpson	01.02.2022

DOCUMENT CONTROL

Version	Date	Reference	Submitted to
1	03.02.2022	EP2436.001_Sungenia_Hydrogeological Assessment_v1	Trinity Point Development Unit Trust

Table of Contents

1 Introduction 1
1.1 Objectives 1
1.2 Scope of Work 1
1.3 Site Identification and Land Use 2
2 Technical Framework 3
3 Site Conditions and Surrounding Environment 4
3.1 Site Description and Surrounding Land Use 4
3.2 Topography and Drainage 4
3.3 Geology 4
3.4 Acid Sulfate Soil 4
3.5 Meteorology 5
3.6 Hydrogeology 6
3.7 SEPP (Coastal Management) 6
4 Site History 7
4.1 Previous Investigations 7
4.2 Review of Historical Aerial Photographs 9
4.3 Review of Government Databases 9
5 Sampling and Analysis Plan 11
5.1 Data Quality Objectives 11
5.2 Sampling and Analytical Methodology 18
5.3 Analytical Testing 19
5.4 Field and Laboratory Quality Assurance and Quality Control (QA/QC) 20
6 Environmental Criteria 22
6.1 Soil Criteria 22
6.2 Groundwater Criteria 23
7 Results 24
7.1 Subsurface Conditions 24
7.2 Soil Analytical Results 25
7.3 Groundwater Observations 26
7.4 Groundwater Analytical Results 27
8 Discussion 28
9 Conceptual Site Model 31
9.1 Contaminating Activities 31
9.2 Affected Media 31
9.3 Human and Ecological Receptors 31
9.4 Potential and Complete Exposure Pathways 31
10 Conclusion 33

List of Tables in Body of Report

Table 1 – Site Identification 2
Table 2 – Rainfall data (mm) 5
Table 3 – Onsite Monitoring well details 6
Table 4 – Historical Aerial Photograph Review 9
Table 5 – Summary of Decision Rules 12
Table 6 – DQO, Requirements and Indicators 17
Table 7 – Analytical Testing of Primary Samples 20
Table 8 – DQI Results Summary 20
Table 9 – Adopted Soil Criteria 22
Table 10 – Measured Physical Parameters 26
Table 11 – Hydraulic Conductivity Parameters 27
Table 12 – Assessment of Decision Rules 28
Table 13 – Source-Pathway-Receptor Linkages 32

List of Attached Figures

Figure 1 Site and Sampling Locations
Figure 2 Soil Exceedance Plan
Figure 3 Groundwater Contours (24/11/2021)

List of Appendices

Appendix A Soil Profile Logs
Appendix B Groundwater Well Survey Plan
Appendix C Slug Test Results
Appendix D NATA Laboratory Reports
Appendix E Lotsearch report

1 Introduction

EP Risk Management Pty Ltd (EP Risk) was engaged by Trinity Point Development Unit Trust (TPDUT) to undertake a Hydrogeological and Contamination Assessment (the Assessment) at the proposed development on Lot 101 & 102 Deposited Plan (DP) 1256630, Lot 32 DP 117408 (Public Reserve) at 49, 81 & 85 Trinity Point Drive, Morisset Park, New South Wales (NSW) (the Site).

The proposed development is for a mixed-use tourist, hospitality, and residential outcome with a capital investment value of more than $720m. Uses include a 500-seat function centre, two 398 seat restaurants (plus provision for an additional 200 seats outdoors), 220 hotel rooms/suites and 218 residential apartments. Due to its size and value this development is classified as State Significant Development (SSD).

Previous environmental assessments have been completed for the Site including the preparation of a Site Audit Statement (SAS).

1.1 Objectives

The objectives of the Assessment were to:

- assess whether there have been any contaminating activities at the Site since the issue of the SAS that may result in contamination with respect to the proposed development; and
- characterise infiltration, and groundwater properties to inform future earthworks management, construction, and stormwater design for the proposed development.

1.2 Scope of Work

The scope of work for this assessment comprised the following:

- Undertake a desktop review of all relevant information including:
    - Review historical environmental reports.
    - Publicly available Council and regulatory records;
    - Historical aerial photographs;
    - Information relevant to contaminated land and acid sulfate soils (ASS) risk areas; and
    - Geological and hydrological information.
- Undertake provisions for identification of underground services including application for Dial Before You Dig (DBYD) Plans and underground service location by a Telstra accredited contractor of the proposed soil boring / groundwater well locations.
- Collection of soil samples from 15 test pits advanced via an excavator to a maximum depth of 2.6 meters below ground level (m BGL).
- Collection of soil samples from three bore holes advanced via drill rig to a maximum depth of 20 m BGL.
- Collection of soil samples from one hand auger advanced to a maximum depth of 0.7 m BGL.

- Gauging and collection of groundwater samples from three new monitoring wells.
- Engage a suitably qualified surveyor to survey the lateral co-ordinates and top of casing elevation of the new groundwater monitoring wells.
- Undertake slug testing of each monitoring well to enable calculation of hydraulic conductivity at the monitoring wells.
- Analytical testing of groundwater samples for physical and environmental indicators.
- Analytical testing of soil and groundwater samples the analytes of concern at a National Association of Testing Authorities (NATA) registered laboratory.
- Installation of water data loggers into the three monitoring wells for a period of three months. At the end of the three-month period the data loggers will be retrieved, and the data uploaded.
- Preparation of a report, in accordance with the New South Wales Environment Protection Authority (NSW EPA) (2020) *Guidelines for Consultants Reporting on Contaminated Land* and the NEPC (2013) ASC NEPM.

1.3 Site Identification and Land Use

The site identification details are presented in **Table 1**.

Table 1 – Site Identification

Item	Description
Site Address	49, 81 & 85 Trinity Point Drive, Morisset Park, NSW (**Figure 1**)
Legal Description Site Area	Lot 101 & 102 DP 1256630, Part Lot 32 DP 117408 (Public Reserve)
Approximate Site Area	5.3 hectare (ha)
Municipality	Lake Macquarie City Council (Council)
Site Zoning	The Lake Macquarie Local Environment Plan (LEP) 2014 identifies the land as SP3: Tourist and RE1: Recreation.

2 Technical Framework

The Assessment was conducted in general accordance with:

- ASC NEPM (2013).
- Australian Standard (AS) 4482.1-2005: Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds.
- AS 4482.2-1999: Guide to the investigation and sampling of sites with potentially contaminated soil, Part 2: Volatile substances.
- Department of Urban Affairs and Planning and Environment Protection Authority (EPA) (1998) *Managing Land Contamination, Planning Guidelines, SEPP 55 – Remediation of Land.*
- Department of Environment and Conservation NSW (DEC) (2007) *Guidelines for the Assessment and Management of Groundwater Contamination.*
- Friebel, E & Nadebaum, P 2011, Health Screening Levels for Petroleum Hydrocarbons in soil and Groundwater. Part 1: Technical development document, CRC CARE Technical Report no. 10, CRC for Contamination Assessment and Remediation of the Environment (CRC CARE), Adelaide, Australia.
- ANZG (2018) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia.
- National Health and Medical Research Council (NHMRC) (2008) *Guidelines for Managing Risk in Recreational Waters.*
- NHMRC and National Resource Management Ministerial Council (NRMMC) (2011) National Water Quality Management Strategy, Australian Drinking Water Guidelines 6, 2011 (version 3.5 updated August 2018) (ADWG 2011).
- NSW EPA (1995) *Sampling Design Guidelines*.
- NSW EPA (2017) Guidelines for the NSW Auditor Scheme (3rd Edition) (NSW Auditor Guidelines).
- United State Environment Protection Agency (USEPA) (2006) Guidance on Systematic Planning Using the Data Quality Objectives Process, ref: EPA QA/G-4.
- National Acid Sulfate Soils Guidance (2018) National Acid Sulfate Soils Sampling and Identification Methods Manual), Water Quality Australia (National ASS Guidance).
- Western Australian (WA) Department of Health (DOH) (2020) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (DOH 2020).
- WorkCover NSW (2014) Managing Asbestos in or on Soil.
- SafeWork NSW (2019) Code of Practice: How to Manage and Control Asbestos in the Workplace.

3 Site Conditions and Surrounding Environment

3.1 Site Description and Surrounding Land Use

The Site is located to the north of, and on, Bluff Point on the Morisset Peninsula on the western shores of Lake Macquarie. At the time of the Assessment the Site was predominantly grassed with several scattered mature trees and a consistent line of mature trees along the shoreline. A fence with some sandstone blocks was observed at the boundary of the Lot 101 and Lot 102. Surrounding land use comprises of stage 1 Marina development to the north, Lake Macquarie to the east and south and the Trinity Point residential development to the west.

3.2 Topography and Drainage

Topographically, the Site slopes down on slopes of 2° to 6° to the north and north-east from the Bluff Point with an approximate elevation of 0.5 m Australian Height Datum (AHD) to 8.6 m AHD. The southern almost vertical cliff face at Bluff Point is approximative 8m high exposing weathered sandstone with signs of erosion at the lake water level. Drainage at the Site is considered to consist of overland flow migrating across the Site to the lower slopes in the north and into Lake Macquarie.

3.3 Geology

Based on the information contained in the NSW Department of Planning and Environment, Resources and Geoscience the site is situated within the early Triassic Age Munmorah Conglomerate and Quaternary deposits (northern section). The Munmorah Conglomerate Formation is known to contain medium to coarse sandstone, granule to pebble conglomerate, minor siltstone and white claystone and thin lenticular coal seams. The quaternary deposits vary from large man-made clasts (concrete blocks to building demolition rubble) to quarried natural boulders, with interstitial sand sized to clay matrix. Estuarine clastic sediments consisting of fine to medium grained lithic-quartz sand, silt, clay, and shell material are surrounding the peninsula.

3.4 Acid Sulfate Soil

The Lake Macquarie LEP (2014) identified most of the Site to be within a Class 5 acid sulfate soil classification, where works within 500 m of adjacent Class 1, 2, 3 or 4 land that is below 5 m AHD and by which the water table is likely to be lowered below 1 m AHD on adjacent Class 1, 2, 3, or 4 land, present an environmental risk. A Class 4 acid sulfate zone was identified in the north of the Site. The locations of the acid sulfate soil zones are presented in **Figure 3.4.1**.

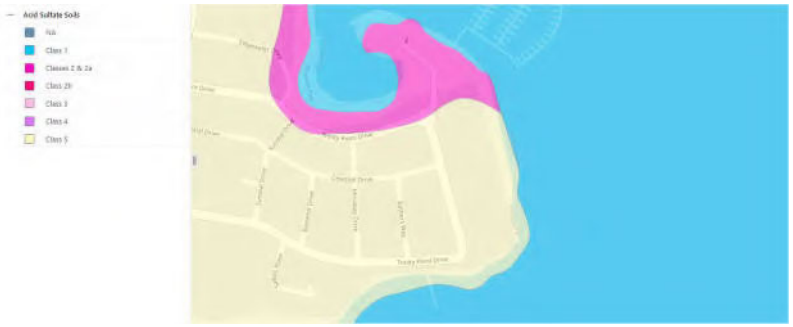


Figure 3.4.1 – Acid Sulfate Soil Risk Map

3.5 Meteorology

Average monthly and annual rainfall data from the closest meteorological station at the Morisset (Balcolyn (Bay Street) weather station is presented in **Table 2**.

Table 2 – Rainfall data (mm)

Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean	86.3	149.8	141.8	118.8	67.7	124.4	60.2	57.8	61	77.8	102	87.2	1070.7

Daily rainfall records at the Morisset (Balcolyn (Bay Street) weather station for 2021 are presented in **Figure 3.5.1.**

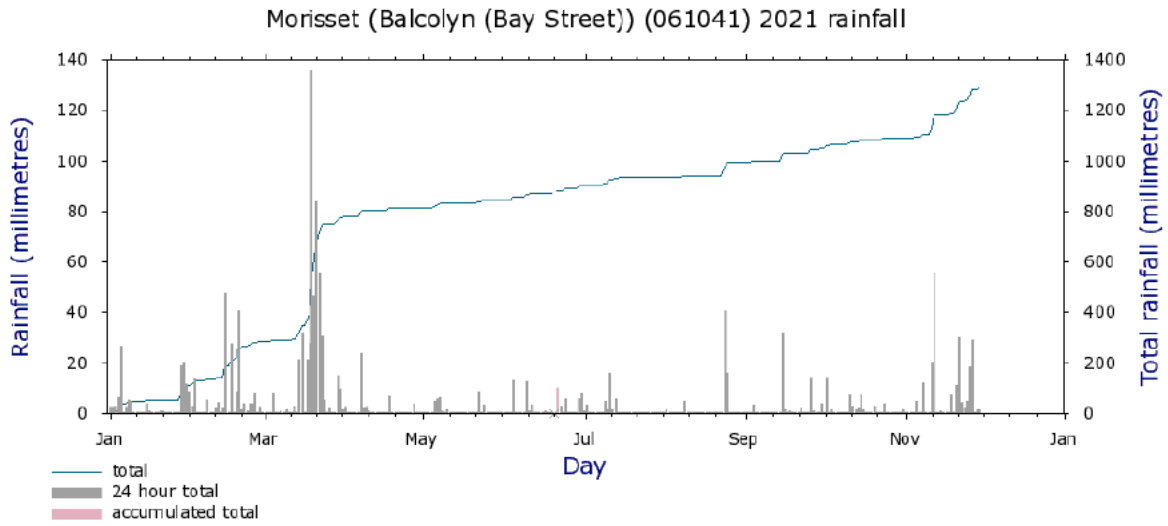


Figure 3.5.1 – Daily and Cumulative Rainfall for 2021 at the Morisset (Balcolyn (Bay Street) Bay Weather Station

Based upon a review of daily rainfall records provided in **Figure 3.5.1**, the Assessment was undertaken during a minor weather event which occurred between the 11th and 12th of November 2021.

3.6 Hydrogeology

Licensed Groundwater Information

Seven registered groundwater bores were identified at the Site. The registered bores are used for test purposes with the depth of bores identified to be between 3.5 and 5.5 metres below ground level (m BGL). Standing water levels (SWL) were recorded between 0.8 and 3.6 m BGL.

Site Specific Hydrogeological Information

Three groundwater monitoring wells were installed at the Site to a maximum depth of 11.76 m BGL. Details of the construction of the groundwater monitoring wells are detailed in soil profile logs attached as **Appendix A** with stabilised groundwater details provided in **Table 3**.

Table 3 – Onsite Monitoring well details

Well ID	Easting	Northing	Well depth (m BTOC[1])	Standing water level (m BTOC)	Groundwater RL (m AHD)
BH2	363910.66	6334087.84	11.11	0.85	0.32
BH3	363900.12	6333994.52	11.76	2.13	0.79
BH4	363940.86	6333863.18	11.29	4.45	2.06

Regional groundwater is inferred to flow north towards the Lake Macquarie. Site specific groundwater conditions are discussed in later sections of this report. A copy of the survey plan is provided as **Appendix B.**

3.7 SEPP (Coastal Management)

Based upon a review of the SEPP (Coastal Management) 2018 maps on the NSW Department of Planning and Environment website[2], the Site is not located within a Proximity Area for Coastal Wetlands.

[1] mBTOC – metres below top of casing.
[2] https://webmap.environment.nsw.gov.au/PlanningHtml5Viewer/?viewer=SEPP_CoastalManagement

4 Site History

4.1 Previous Investigations

The Site was the former residential school for troubled and disabled boys ran by the Brothers of St. John of God which operated in various forms from 1948 until its closure in 2001. A number of environmental investigations and remedial activities have already been prepared for the Site culminating in the issue of a Site Audit Report (SAR) and Site Audit Statement (SAS) prepared by NSW EPA Accredited Contaminated Site Auditor Mr Andrew Lau dated 3 September 2007. The following reports were reviewed as part of the of the SAS with a summary of the findings provided in the SAR:

- PPK Environment and Infrastructure (PPK 2001) *Phase 1 Environmental Site Assessment – St John of God, Henry Street, Morisset Park, NSW*.
- Phase 2 Environmental Site Assessment – St John of God, Henry Street, Morisset Park, NSW, Parsons Brinkerhoff Pty Ltd, February 2005 (PB 2005); and
- Validation Report – 59 Lakeview Road, Morisset Park, NSW, David Lane Associates, August 2007 (DLA 2007).

The SAR concluded the following:

- The remediation and validation are considered to have met the requirements of the Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (2nd Edition) (DEC 2006);
- The site was considered suitable for the proposed residential land-use with gardens and accessible soil, as defined in Table 6-A Schedule B(7B) (NEPC 1999);
- The suitability of the Site for residential use is not subject to any ongoing management or monitoring of land contamination issues; and
- It was considered unlikely to be migration of contaminants from the site which may result in any unacceptable risks to surrounding human or ecological receptors.

The SAS concluded that the Site was suitable for the following land uses:

- Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry.
- Day care centre, preschool, primary school.
- Residential with minimal opportunity for soil access, including units.
- Secondary school.
- Park, recreational open space, playing field.
- Commercial / industrial.

In addition to the above previous investigations, the following investigations were undertaken at the Site after the SAS.

- Douglas Partners Pty Ltd (2007) *Acid Sulfate Soil Assessment, Proposed Trinity Point Marina and Tourist Development, 49 Lakeview Road, Morisset Park* (ref: 39823A dated December 2007).
- Douglas Partners Pty Ltd (2007) *Acid Sulfate Soil Assessment Management Plan, Proposed Trinity Point Marina and Tourist Development, 49 Lakeview Road, Morisset Park* (ref: 39823A dated December 2007).
- Douglas Partners Pty Ltd (2008) *Additional Groundwater Sampling and Testing, Trinity Point Marina, Morisset Park* (ref: 39823.04, dated 21 May 2008).

Douglas Partners (2007) – Acid Sulfate Soil Assessment

Douglas Partners Pty Ltd (DP) were engaged to undertake an acid sulfate soil assessment at the Site and of lake bed sediments of the marina to the north. Investigations were undertaken in October 2007 and comprised the collection of soil samples from 10 test pits advanced to approximately 3 m BGL, seven test bores and three over water test bores as well as the collection of lake bed sediments from 15 locations. Samples were collected for the laboratory analysis for the presence of actual and potential acid sulfate soils. Results of analytical testing indicated the presence of both actual and potential acid sulfate soils, particularly in the low lying portions of the Site requiring the preparation of an acid sulfate soil management plan (ASSMP).

Douglas Partners (2007) – ASSMP

DP (2007) were engaged to prepare an ASSMP for the Site due to previous investigations identifying the presence of actual and potential acid sulfate soils particularly in the low lying portions of the Site. A liming rate of 30kg lime/tonne was adopted for treatment with daily inspection, sampling and testing to verify neutralisation treatment.

Douglas Partners (2008) – Additional Groundwater Sampling and Testing

DP (2008) were engaged to undertake an additional groundwater monitoring event for the purpose of providing background water quality data. In total, seven groundwater wells were gauged and sampled with the depth to groundwater ranging from 0.57 to 2.86 m below ground level. It was noted that one groundwater well (105) was dry at the time of sampling. Groundwater samples were collected and analysed for heavy metals, nitrite, nitrate, chloride, sulphate, total phosphorus, total nitrogen and total iron. Results of analytical testing were not compared to any criteria with only analytical data provided in summary tables.

4.2 Review of Historical Aerial Photographs

A review of historical aerial photographs was undertaken from the years after issue of the SAS in 2007 to determine whether any additional potential contaminating activities have been undertaken at the Site which may pose a risk to the Proposed Development.

Aerial photographs from 2010, 2016 and 2021 provided in the Lotsearch (2021) report, provided as **Appendix E**, were reviewed to identify past land uses of the Site and surroundings. **Table 4** provides a summary of the review.

Table 4 – Historical Aerial Photograph Review

Year	Description
2010	**Site:** The Site was vacant with mature trees located around the permitter of the Site. A dirt road has been constructed along the western site boundary with some disturbance to the ground surface visible in the southern end of the Site. **Surroundings:** Adjacent land was vacant, with some stockpiled soil located in land adjacent to the western boundary of the Site.
2016	**Site:** A sales building had been constructed in the southern end of the Site, with fill material imported onto the Site as part of the development. Works in the northern portion of the Site had also commenced with the importation of fill material also undertaken. **Surroundings:** Significant improvement to the adjacent land to the west has been undertaken with the construction of roads and housing allotments.
2021	**Site:** The sales building in the southern portion of the Site had been removed from the Site. The development of the Marina restaurant and associated carparking had been undertaken in the northern portion of the Site. **Surroundings:** A number of residential dwellings had been constructed within the development to the west.

Based on review of the historical aerial photographs, the importation of fill material and construction / demolition of new buildings was identified as the primary contaminating activity undertaken at the Site since 2007.

4.3 Review of Government Databases

Based upon a review of government databases provided in the Lotsearch (2021) report, the following records were reported:

- Lake Macquarie is reported on the EPA PFAS Investigation Program. However it is considered unlikely given the expanse of Lake Macquarie that PFAS would be found at concentrations that would present a risk to human health or the environment at the Site.
- Licensed activities at the Site include boat mooring and storage.
- Former licensed activities at the Site include application of herbicides to waterways, which are common to the majority of waterways in NSW.

- The Site is located in the West Lake mining subsidence district.
- A current mining title for coal and petroleum is located at the Site and records of historical mining and exploration titles were reported at the Site.
- Lake Macquarie was identified as a moderate potential groundwater dependent ecosystem, with a high likelihood of an inflow dependent ecosystem.

5 Sampling and Analysis Plan

5.1 Data Quality Objectives

In order to ensure an appropriate sampling strategy is adopted for the Assessment, EP Risk adopted the Data Quality Objectives (DQOs) planning process as recommended in the National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM 2013) and with consideration to technical details outlined in US EPA (2006) and AS 4482.1.

State the Problem

Further investigation of the Site was required to assess whether there had been any contaminating activities since the issue of the SAS that may have resulted in contamination with respect to the proposed development. Additionally, investigation of infiltration and groundwater characteristics was required to inform future construction design and methodology. Additional analysis to determine the presence/absence of acid sulfate soils at the Site was required to provide additional coverage and inform if additional management measures to those prescribed by DP (2007) were required.

Identify the Decision

Given that the Site it to be redeveloped for residential purposes, the decision-making process for urban redevelopment Site provided by the NSW EPA (2017) was considered in the development of the following decisions that need to be addressed:

- Does the assessment follow all applicable guidelines?
- Have any aesthetic issues relating to site soils been adequately addressed?
- Has soil been assessed against relevant health-based investigation levels and potential for migration of contamination from soil to groundwater been considered?
- Has groundwater (where relevant) been assessed against relevant investigation levels?
- Have hazardous ground gases (where relevant) been assessed against relevant health-based investigation levels and screening values?
- Any issues relating to local area background soil concentrations that exceed relevant investigation levels have been adequately addressed?
- Are there no impacts of chemical mixtures?
- Are there no potential human health and/or ecological risks to the identified receptors?
- Is there no evidence of, or potential for, migration of contaminants off-site?
- Is further assessment or a site management strategy required?

Identify Inputs into the Decision

The inputs required to make the decision include the following:

- Historical assessment data provided by DP.
- Site history investigation.
- Environmental data as collected by sampling and analysis and site observations made during this investigation.
- Assessment criteria to be achieved on the Site as based on the proposed development of the Site and project objectives, as defined by the Tier 1 assessment criteria nominated in **Section 6**.
- Confirmation that data generated by sampling and analysis are of an acceptable quality to allow reliable comparison to adopted assessment criteria as undertaken by assessment of quality assurance / quality control (QA/QC) as per the data quality indicators (DQIs) established in **Section 5.2**.

Define the Boundaries of the Study

The spatial boundaries of the assessment comprise Lot 101 & 102 DP 1256630, Part Lot 32 DP 117408 with the approximate boundaries identified in **Figure 1**.

Develop a Decision Rule to Identify the Decision

The assessment criteria for the contaminants of concern are presented in **Section 6.** These criteria have been adopted to determine whether additional assessment is required and whether the Site is suitable for the proposed land use. The decision-making process for assessing urban redevelopment sites was adopted and summarised in **Table 5**.

Table 5 – Summary of Decision Rules

Decision	Rule
1. Does the assessment follow all applicable guidelines?	If the assessment follows all applicable guidelines, then the decision is Yes; otherwise, the decision is No.
2. Have any aesthetic issues relating to site soils been adequately addressed?	The following criteria was adopted with respect to aesthetic issues relating to site soils: Either: the reported concentrations are all below the adopted physical and aesthetic management limits; Or: Were any chemically discoloured or stained soils, chemical residues, putrescible refuse, anthropogenic materials, hydrocarbon sheens on groundwater identified?

Table 5 – Summary of Decision Rules	
Decision	**Rule**
	If the criteria stated above are satisfied, and an assessment of risk indicates no unacceptable risks, the decision is Yes. Otherwise, the decision is No.
3. Has soil been assessed against relevant health-based investigation levels and potential for migration of contamination from soil to groundwater been considered?	Soil impacts were assessed and soil analytical data was compared against the adopted health and ecological criteria (refer to **Section 6**). Assessment of the potential for migration of contamination from soil to groundwater includes further assessment of soil leachate and / or assessment of groundwater where Tier 1 criteria have been exceeded (where applicable). The following statistical criteria was adopted with respect to soil and soil leachate (where applicable): Either: the reported concentrations are all below the adopted site criteria; Or: the average site concentration for each analyte must be below the adopted site criterion; no single analyte concentration exceeds 250% of the adopted site criterion; and the standard deviation of the results must be less than 50% of the site criteria. And: the 95% upper confidence limit of the arithmetic mean (UCL_{mean}) for each analyte must be below the adopted site criterion. If the criteria stated above are satisfied, and an assessment of risk indicates no unacceptable risks, the decision is Yes. Otherwise, the decision is No.

Table 5 – Summary of Decision Rules	
Decision	**Rule**
4. Has groundwater (where relevant) been assessed against relevant investigation levels?	Where there is the potential for migration of contamination from soil to groundwater then assessment of groundwater will be required and analytical data compared against the adopted criteria. The following statistical criteria was adopted with respect to groundwater where assessment is required: Either: the reported concentrations are all below the adopted site criteria; Or: The reported concentrations are below upgradient concentrations and are therefore considered representative of background data. If the criteria stated above are satisfied, and an assessment of risk indicates no unacceptable risks, the decision is Yes. Otherwise, the decision is No.
5. Have hazardous ground gases (where relevant) been assessed against relevant health-based investigation levels and screening values?	Where there is the potential for hazardous ground gases to be present then they will need to be assessed and analytical data compared against the adopted criteria. The following statistical criteria was adopted with respect to ground gases (where likely to be present): Either: the reported soil vapour concentrations (where relevant) are all below the adopted site criteria; Or: The reported soil and groundwater concentrations were below the criteria for vapour intrusion. If the criteria stated above are satisfied, and an assessment of risk indicates no unacceptable risks, the decision is Yes. Otherwise, the decision is No.
6. Any issues relating to local area background soil concentrations that exceed relevant investigation levels have been adequately addressed?	Where there is the potential for local area background soil concentrations to be present then they will need to be addressed. Are background soil concentrations exceeding the relevant investigation levels present?

Table 5 – Summary of Decision Rules	
Decision	**Rule**
	Either: the reported soil concentrations are considered to be representative of naturally occurring soil concentrations; Or: The reported soil concentrations are representative of a potential off-site source of contamination. If the soil concentrations are representative of naturally occurring background conditions, then the decision is Yes. Otherwise, the decision is No.
7. Are there no impacts of chemical mixtures?	The following criteria was adopted with respect to chemical mixtures: The impacts of chemical mixtures have been considered and are not present. If the criteria stated above are satisfied, and an assessment of risk indicates no unacceptable risks, the decision is Yes. Otherwise, the decision is No.
8. Are there no potential human health and/or ecological risks to the identified receptors?	Are the statistical criteria stated above satisfied, and has an assessment of risk indicated no unacceptable risks? If yes, the decision is Yes. Otherwise, the decision is No.
9. Is there no evidence of, or potential for, migration of contaminants off-site?	Were soil and groundwater concentrations below the adopted health and ecological criteria identified near the site boundary and found off-site. If so, the decision is Yes. Otherwise the decision is No.
10. Is further assessment or a site management strategy required?	Is the answer to any of the above decisions No? If no, further assessment and / or a site management or remediation strategy may be required to be developed. If yes, further assessment or a site management or remediation strategy is not required.

Specify Acceptable Limits of Decision Errors

The acceptable limits will be as follows:

I. 95% of the data will satisfy the Data Quality Indicators (DQIs) which were determined for completeness, representativeness, precision and accuracy of both field and laboratory data. Therefore, the limit on the decision error will be 5% that a conclusive statement may be incorrect.

II. A comprehensive Quality Assurance/Quality Control (QA/QC) program will be undertaken including representative sampling and sampling at an appropriate density for the investigation.

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

Data Representativeness

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

Completeness

Refers to, the percentage of data that can be considered valid data. Sufficient data is required to enable an assessment of the Decision Rules.

Comparability

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

Precision

Is a measure of the reproducibility of on measurements under a given set of conditions the Relative Percent Difference (RPD) has been adopted to assess the precision of data between duplicate sample pairs according to the following equation.

$$RPD\% = \frac{[\mathrm{Cp} - \mathrm{Cd}]}{\mathrm{Cp} + \mathrm{Cd}} \times 200$$

Where:
Cp = Primary sample
Cd = Duplicate Sample

An acceptance criterion of ±30% had been adopted for inorganic field duplicates and triplicates and ±50% for organic field duplicates and triplicates. However, it should be noted that exceedances of these criteria are common for heterogeneous soil or fill or for low analyte concentrations.

Accuracy

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

Optimise the Design for Obtaining Data

Groundwater wells were located proximal to the areas proposed for construction of the proposed pumping station infrastructure and detention basins.

Table 6 – DQO, Requirements and Indicators

DQO	Requirement	DQI
Precision		
Standard operating procedures appropriate and complied with	The sampling methods comply with industry standards and guidelines	Meet requirement
Intra-laboratory duplicates	1 per 20 samples	RPDs < 30%[3]
Inter-laboratory duplicates	1 per 20 samples	RPDs < 30%[3]
Laboratory duplicates	Minimum of 1 per batch per analyte	RPDs < 30%[3]
Accuracy		
Laboratory matrix spikes	1 per batch per volatile/semi-volatile analyte	Recoveries 50% to 150%
Laboratory surrogate spikes	1 per volatile/semi-volatile analyte sample (as appropriate)	Recoveries 70% to 130%
Laboratory control/method blank samples	At least 1 per batch per analyte tested for	Result < laboratory reporting limit
Representativeness		
Sampling methodology – preservation	Appropriate for the sample type and analytes	Meet requirement
Samples extracted and analysed within holding times	Specific to each analyte	Meet requirement
Field equipment calibration	All field equipment calibrated.	Meet requirement
Comparability		
Sampling approach	Consistent for each sample	Meet requirement
Analysis methodology	Consistent methodology for each sample	Meet requirement
Handling conditions and sampler	Consistent for each sample	Meet requirement
Field observations and analytical	Field observations to support analytical results	Meet requirement

[3] RPDs of up to 50% can be expected for organic analysis and for low concentration of analytes in accordance with AS44482.1-2005.

Table 6 – DQO, Requirements and Indicators		
DQO	**Requirement**	**DQI**
Consistent laboratory reporting limit	Consistent between primary and secondary laboratories	Meet requirement
Completeness		
Sampling staff	Consistent sampling staff used	Meet requirement
Laboratory accreditation	NATA Accredited laboratory for methods used	Meet requirement
Accredited methods	NATA accredited methods used appropriate for each analyte.	Meet requirement
ASC NEPM (2013) lab methods	Lab methods consistent with the ASC NEPM (2013).	Meet requirement
Laboratory reporting limit	Laboratory reporting limit consistent and appropriate	Meet requirement
Consistent weather / field conditions	Consistent	Meet requirement
Chain of custody documentation	Appropriately completed	Meet requirement
Field sampling documentation	Appropriately completed	Meet requirement

5.2 Sampling and Analytical Methodology

Soil Sampling Methodology

The methodology for soil sampling was outlined as follows:

1 Soil samples were collected from 15 test pits, 3 bore holes and 1 hand auger.

2 Test pits were advanced via a 3.5-tonne excavator fitted with a 450mm bucket to a maximum depth of 2.6 m BGL or prior rock refusal.

3 Bore holes were advanced via Comacchio track mounted drill rig to a maximum depth of 19.98 m BGL.

4 Soils were logged for type, colour, texture, other characteristics and indications of contamination as presented in the test pit logs attached as **Appendix E.**

5 All sampling equipment was decontaminated with phosphate free detergent and a dedicated pair of nitrile gloves was used for each sample to prevent cross contamination.

6 Sufficient soil samples were collected and placed into laboratory prepared sampling jars with a unique sample ID added to the label on each jar.

7 The sample jars were preserved on ice immediately after sampling and during shipment to NATA accredited laboratories for analysis. The laboratory chain of custody documentation was completed and accompanied the samples during shipment.

Groundwater Well Installation and Sampling Methodology

The methodology for groundwater well installation is as follows:

1. Three bore holes (BH2-BH4) were advanced to a maximum depth of 19.98 m BGL via Comacchio track mounted drill.
2. The borehole was grouted.
3. Class 18 uPVC 50 mm slotted screen and blank casing were installed in each groundwater monitoring well.
4. A filter pack comprising clean graded sands was installed within the annular space between the borehole and the well casing and extending from the base of the screened interval to approximately 0.5 m above the top of the slotted casing.
5. A bentonite plug of at least 0.5 m was installed above the sand to prevent surface water ingress into the monitoring well.
6. The groundwater monitoring wells were developed using a submersible pump to remove three bore volumes and then left for approximately seven days to recharge and stabilise within the aquifer.
7. An interface probe was used to measure the depth of groundwater within the wells.
8. The groundwater monitoring wells were sampled using a HDPE no-purge Hydrasleeve™ sampler carefully deployed to the bottom of the groundwater monitoring well and gently pulled up in one smooth motion.
9. A water quality meter and flow cell were used to measure water quality parameters electrical conductivity (EC), pH, oxidation reduction potential (ORP), dissolved oxygen (DO) and temperature.
10. Groundwater samples were collected in preserved bottles specific to each analyte with a unique sample identification (ID) added to the label on each bottle.
11. The sample containers were preserved on ice immediately after sampling and during shipment to the laboratories. The laboratory chain of custody (COC) documentation was completed and accompanied the samples during shipment.

Groundwater Level Data Collection

In order to provide a better understanding of groundwater fluctuation and maximum seasonal groundwater levels, three data loggers were installed into the three monitoring wells for a period of three months. At the completion of the three-month period the data loggers will be retrieved and data levels uploaded.

5.3 Analytical Testing

EP Risk used ALS Global and Eurofins MGT as the primary and secondary laboratories, both of which are NATA accredited for the required analysis. The laboratory analysis was undertaken in accordance with **Table 7**.

Table 7 – Analytical Testing of Primary Samples

Media	Sampling Locations	Number of Analysis[4]
Soil	18	• TRH, BTEX, PAH, heavy metals, PCBs, OCPs, OPPs[5] – 14 • Asbestos in soil – bonded (non-friable) ACM and AF/FA (% w/w) – 17 • Acid Sulfate soil field tests (pH_F and pH_{FOX}) – 36 • Chromium reducible sulfur suite test – 12
Groundwater	3	• TRH, BTEX, PAH, heavy metals, PCBs, OCPs, OPPs - 4 • Ammonia, nitrate, nitrite, phosphorus – 4 • Sulfate – 4 • Fluoride and chloride – 4 • Major Cations (Mg^{2+}, Ca^{2+}, Na^{+}, K^{+}) – 4 • Major Anions (HCO^{3-}, CO_3^{2-}, Cl^{-}, SO_4^{2-}) – 4 • Alkalinity – 4 • Acidity – 4 • Ionic Balance – 4 • Hardness – 4 • pH – 4
Rinsate blank	-	• Dissolved heavy metals (Al, Fe, As, Cd, Cr, Cu, Pb, Ni, Hg and Zn) – 1

5.4 Field and Laboratory Quality Assurance and Quality Control (QA/QC)

An assessment of the field and laboratory DQI results is presented in **Table 8**.

Table 8 – DQI Results Summary

Parameter	Requirement	Objective Met
Precision		
Standard operating procedures appropriate and complied with	The sampling methods comply with industry standards and guidelines.	Yes
Field duplicates	• 1 per 20 samples; and • RPDs < 30%.	Yes Yes
Field triplicates	• 1 per 20 samples; and • RPDs < 30%.	Yes Yes

[4] Excluding duplicates and triplicates.
[5] Mercury, cadmium, lead, arsenic, chromium, copper, nickel, zinc, polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene and xylene (BTEX), total recoverable hydrocarbons (TRH), organochlorine pesticides (OCPs), organophosphate pesticides (OPPs) and polychlorinated biphenyls (PCBs).

Table 8 – DQI Results Summary

Parameter	Requirement	Objective Met
Laboratory duplicates	• Minimum of 1 per batch per analyte; • RPDs < 30%; and • >10%, laboratory specified.	Yes Yes Yes
Accuracy		
Laboratory matrix spikes	• 1 per batch per volatile/semi-volatile analyte; and • Recoveries >70% to 130%	Yes Yes
Laboratory surrogate spikes	• 1 per volatile/semi-volatile analyte sample (as appropriate); and • Recoveries 70% to 130%	Yes Yes
Laboratory control samples	• At least 1 per batch for analyte tested; and • 70-130%	Yes Yes
Representativeness		
Sample collection - preservation	Appropriate for the sample type and analytes	Yes
Decontamination procedures	All sampling equipment to be decontaminated between each sample	Yes
Holding times	Samples extracted and analysed within laboratory prescribed holding times	Yes
Rinsate	• 1 per field batch for volatile analytes; and • Result < laboratory reporting limit	Yes Yes
Laboratory Method Blanks	• At least 1 per batch per analyte tested for; and • Result < laboratory reporting limit	Yes Yes
Completeness		
Sample logs and groundwater field sheets	Provided	Yes
Chain of custody	Provided	Yes
Sample receipt acknowledgement	Provided	**Yes**
Laboratory reports	Provided	**Yes**
Comparability		
Sampling staff	Consistent sampling staff used	Yes
Laboratory accreditation	NATA accredited laboratory for methods used	Yes
Accredited methods	NATA accredited methods used appropriate for each analyte	Yes
ASC NEPM (2013) lab methods	Lab methods consistent with the ASC NEPM (2013)	Yes
Laboratory reporting limit consistent and appropriate	Meet Requirement	Yes
Consistent weather / field conditions	Consistent	Yes

On the basis of the information provided in Table 8, EP Risk considers that the DQIs for the project have been met and the data is appropriate for the purposes of this assessment.

6 Environmental Criteria

6.1 Soil Criteria

For the purposes of assessing the results of analytical testing of soils at the Site, the following guidelines were considered:

- ASC NEPM 2013.
- NSW EPA Auditor Guidelines (2017).
- CRC CARE.

EP Risk has adopted the ASC NEPM (2013) Tier 1 Guidelines in accordance with NSW EPA (2017). In accordance with the decision-making process for assessing urban redevelopment sites (Appendix A, NSW EPA, 2017), soil concentrations were compared against the following soil investigation levels (SILs):

- **Health-based Criteria for the current and proposed land use**: ASC NEPM 2013 Health-based Investigation Levels (HILs) and Health Based Screening Levels (HSLs) for residential and open space use and the CRC Care (2011) HSLs for intrusive maintenance worker (shallow trench) and direct contact.
- **Ecological Criteria**: ASC NEPM 2013 Ecological-based Investigation Levels (EILs) and Ecological based Screening Levels (ESLs) for residential and open space land use.
- **Management Limits**: ASC NEPM 2013 management limits are based upon the physical properties of petroleum hydrocarbons to form observable light non-aqueous phase liquid (LNAPL); create fire and explosion hazards or penetrate or damage underground services. The management limits for residential and open space use based on coarse/fine soil have been adopted.
- **Aesthetics**: The consultant should also consider the need for remediation based on the 'aesthetic' contamination as outlined in Schedule B (1) of the ASC NEPM 2013 that states that *'there are no numeric Aesthetic Guidelines however site assessment requires balanced consideration of the quality, type and distribution of foreign material or odours in relation to the specific land use and its sensitivity'*. Soil odour, discolouration and the presence of anthropogenic materials will need to be assessed during the assessment.

The adopted soil criteria for the site are presented in **Table 9**.

Table 9 – Adopted Soil Criteria

Guidelines	COPC	Adopted Criteria
ASC NEPM 2013	Heavy metals/OCP/PCB/ Asbestos	• HIL B (Residential) • HIL C (Open space)
	Heavy metals/OCP/PAH	• EIL (urban residential); < 2 m
	TRH and BTEXN	• Vapour intrusion HSL B (residential) 0 - <1m; SAND and CLAY • Vapour intrusion HSL C (Open space) 0 - <1m; SAND and CLAY

Table 9 – Adopted Soil Criteria		
Guidelines	**COPC**	**Adopted Criteria**
		• ESLs (urban residential); <2m
	TRH	• Management limits (residential and open space); coarse/fine soil.
CRC Care (2011)	TRH and BTEXN	• Direct contact and intrusive maintenance workers HSLs. • Vapour Intrusion HSLs for Intrusive Maintenance Workers (Shallow Trench).
National ASS Guidance 2018	Net Acidity (excluding ANC)	• > 1,000 tonnes disturbed Fine/Coarse soils

On the basis of the proposed development and likely future land use, EP Risk has adopted the HILs, HSLs, EILs and ESLs for a residential and open space land use setting, which is appropriate for the future land use.

6.2 Groundwater Criteria

For the purposes of assessing the results of analytical testing of groundwater at the Site, the following guidelines were considered:

- ANZG (2018);
- ASC NEPM (2013);
- ANZECC (2000); and
- NSW EPA Auditor Guidelines (2017).

Where the default criteria are exceeded, additional investigations may be required. Where no criterion is available, the background levels (if known) or the laboratory limit of reporting (LOR) can be adopted as the groundwater criteria.

Drinking water criteria have been included as initial Tier 1 screening criteria as required by DEC (2007). However, drinking water is not considered to be a likely further beneficial use for groundwater at the Site given the proposed high density residential and open space land use and availability of reticulated potable water supply.

7 Results

The soil and groundwater investigation results are compared to the relevant investigation levels, as detailed in the following sections. Detailed results are provided in the **Tables** section of this report and the NATA certified analytical results and chain of custody documentation are provided as **Appendix D**.

7.1 Subsurface Conditions

The subsurface conditions encountered in the borehole and test pits across the Site are detailed in the attached borehole logs and test pit logs provided as **Appendix A**. These should be read in conjunction with the general notes proceeding them, which explain the descriptive terms and classification methods used in the report.

The subsurface conditions comprise conglomerate and sandstone overlain by residual soils in the southern elevated part of the Site with the central and northern part of the Site overlain by estuarine deposits comprising a variable mixture of granular and cohesive soils. The surficial estuarine deposits are reducing in thickness towards the south and thicker fill/disturbed soils were observed in the south in the areas of previous construction. The geological units encountered across the Site are summarised below:

- FILL/TOPSOIL – Gravelly/Sandy/Silty CLAY low to medium plasticity, red, grey, brown, fine to medium grained sand, fine to medium grained, subangular to angular gravel; Clayey/Gravelly SAND, fine to medium grained, grey, fine to medium grained, rounded-subrounded gravel; Sandy GRAVEL, fine to medium grained, rounded to subrounded, grey and brown, fine to medium grained sand.

- ESTUARINE DEPOSITS – Sandy/Silty/Peaty CLAY, low to high plasticity, grey, black, fine to medium grained sand; Clayey Gravelly SAND, fine to medium grained, grey, brown, fine to medium grained, subangular-subrounded gravel; Clayey Sandy GRAVEL, fine to medium grained, rounded to subangular, brown, grey, pink, fine to medium grained sand.

- RESIDUAL SOILS – Silty/Sandy/Gravelly CLAY, low to high plasticity, brown, red, grey, fine to medium grained sand, fine to medium grained, angular-subrounded gravel; Clayey Gravelly SAND, fine to medium grained, brown, pink, and grey, fine to medium grained, angular-subrounded gravel; Clayey Sandy GRAVEL, fine to medium grained, subangular to angular, red, brown, and grey, fine to medium grained sand.

- EXTREMELY WEATHERED BEDROCK – recovered as Clayey Gravelly SAND, fine to medium grained, brown, very low to low strength.

- BEDROCK – Pebbly SANDSTONE fine to medium grained, grey, thinly bedded, fragmented to slightly fractured, low to very high strength, CONGLOMERATE fine to coarse grained, grey, medium bedded, fragmented to slightly fractured, low to very high strength, INTERBEDDED SANDSTONE AND SILTSTONE, fine to medium grained, dark red and grey, thinly bedded, slightly fractured, low to high strength.

7.2 Soil Analytical Results

The sediment analytical summary tables are provided in **Table 1** and **Table 2** within the **Tables** section of this report. Figures showing the sampling locations are provided in **Figure 2**.

TRH/BTEXN/PAH/OCP/OPP/PCB and Heavy Metals

TRH / BTEXN / PAH / OCP / OPP / PCB and heavy metals concentrations of the soil samples analysed were reported below the adopted human health and ecological criteria and / or laboratory LOR.

Asbestos

The following asbestos results were reported:

- No asbestos was detected in any of the samples collected from the Site above the reporting limit of 0.1 g/kg[6].
- Asbestos containing material (ACM) (as 15% asbestos in ACM in soil >7mm) was reported in excess of the ASC NEPM HSL B/C w/w% criteria at TP211_0.2.
- All asbestos fines (AF) / fibrous asbestos (FA) concentrations were reported below the adopted criteria with the exception of TP201_0.2 and TP211_0.2.
- Respirable (free) fibres were not reported in any asbestos sample collected.

Acid sulfate Soils – pH_F and pH_{FOX}

- pH_F results were recorded all greater than pH of 4.
- pH_{FOX} results were recorded all greater than pH of 3.5 with the exception of BH2_3.5, BH2_4, BH2_4.5, BH2_5, BH2_5.5, BH2_6, BH2_6.5, BH2_7, BH2_7.5, BH2_8, BH2_8.5, TP201_0.6, TP201_1.2, TP201_1.8, TP202_0.7, TP202_1.2, TP203_1.0, TP203_1.5, TP203_2.0, TP203_2.2, TP206_0.5, TP206_1.0, TP206_1.5, TP206_2.0, TP207_1.5, TP207_2.0 and TP207_2.5.

Chromium Reducible Sulfur Suite (S_{CR})

- S_{CR} results were reported greater than the National ASS Guidance (2018) Action Criteria for 1->1,000 tonnes disturbed for coarse/fine textured samples TP201_0.6, TP203_1.0, TP203_1.5, TP206_0.5, TP206_1.0, TP207_1.5, TP207_2.0, TP207_2.5 and TP208_1.6

[6] No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg at TP201_0.2, TP211_0.2 and TP214_0.2.

7.3 Groundwater Observations

Groundwater Physical Parameters

Groundwater parameters were recorded at the time of groundwater monitoring and the results of the parameters are presented in **Table 10**.

Table 10 – Measured Physical Parameters

Sample ID	Temp (°C)	EC[7] (uS/cm)	DO[8] (%)	Redox (mV)	pH	TDS (mg/L)
BH2	21.8	1631	72.2	-54.3	5.74	11,258
BH3	20.8	1239	60	-20.8	5.22	871
BH4	21.5	449.8	42.2	-5.3	5.11	315.25

The groundwater parameters indicated that the water was predominantly brackish to saline water with dissolved oxygen levels between 42 – 72%; redox levels indicating reducing conditions at all wells; and pH was identified to be slightly acidic.

Classification of Groundwater

The samples were analysed for major cations and major anions and the results are presented in the Piper Diagram in **Figure 7.3.1**.

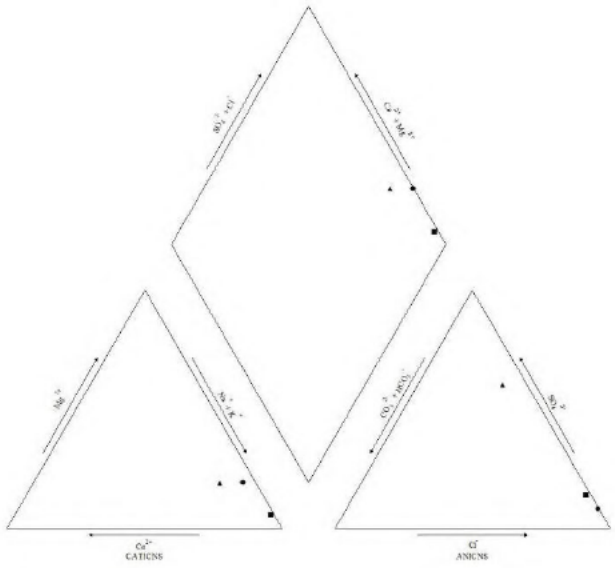


Figure 6.3.1 – Piper Diagram

With reference to the Piper Diagram in **Figure 7.3.1**, all the waters can be classified as Na-Cl, which are typical of waters of marine origin. With respect to the major cations, major anions and TDS, all the

[7] Electrical conductivity.
[8] Dissolved oxygen.

water samples are similar. The ionic balance results were all less than 5% indicating that the major cations and anions present in the system have been considered in the analytical testing regime.

Hydraulic conductivity

Based upon the groundwater gauging data and survey of the top of casing elevations (**Appendix B**), groundwater levels were reported between 0.32 mAHD to 2.06 mAHD with groundwater flow to the north, north west (ref: **Figure 3**).

The Bouwer-Rice solution (1976), as described in Fetter (2001) was used to analyse the rising and falling head data obtained via inserting the slug from the three monitoring wells to estimate a value of the hydraulic conductivity (K). A summary of the data used in the calculations is provided in **Table 11.**

Table 11 – Hydraulic Conductivity Parameters

Well ID	Initial Water Displacement (m)	Depth to top of screen (mBGL)[9]	Depth to bottom of screen (mBGL)	Depth to ground water[10] (mBTOC)	Static water level (mAHD)	Saturated aquifer thickness (m)[11]	Data logger depth (mBGL)[12]	Anisotropy ratio kv/kh	Well radius, screen radius (m)	Hydraulic Conductivity (K) (m/sec)
BH2	1.018	0.5	11.0	0.85	0.32	9.8	11	1	0.025	1.5×10^{-4}
BH3	1.018	0.5	12.0	2.13	0.79	7.5	11.66	1	0.025	8.42×10^{-5}
BH4	1.018	0.5	12.0	4.45	2.06	2.29	11.19	1	0.025	1.1×10^{-4}

The hydraulic conductivity of the unconfined aquifer was calculated using the parameters in **Table 11**, with the calculated hydraulic conductivity across the Site based ranging from 8.42×10^{-5} to 1.5×10^{-4} m/sec.

As of the 30 January 2022, groundwater levels were being recorded over a three month period at the three monitoring well locations. The data from these wells will be uploaded at the end of the three month period and the report revised.

7.4 Groundwater Analytical Results

The groundwater analytical summary table is provided within the **Tables** section of this report. The figure showing locations of monitoring wells is provided as **Figure 2.**

TRH/BTEXN/PAH/OCP/OPP/PCB and Heavy Metals

All TRH / BTEXN / PAH / OCP / OPP / PCB and heavy metals concentrations were reported below the adopted criteria in the groundwater samples analysed with the exception of the following:

- Elevated Zinc (filtered) concentrations above GILs Marine Water in samples BH2 and BH3.

[9] Measured from the top of the groundwater level to the top of the monitoring well screen.
[10] mBTOC – metres below top of casing.
[11] The saturated aquifer thickness is the thickness of the aquifer from the measured water level to the base of underlying silty clay geology of approximately 10 m BGL.
[12] Depth of the water level data logger measured from the groundwater level to the base of the data logger installed in the well.

8 Discussion

An assessment of the decision-making process for assessing urban redevelopment sites detailed in EPA (2017) and provided as **Table 6** has been undertaken to assess suitability of the Site for the Proposed Development, as detailed in **Table 12**.

Table 12 – Assessment of Decision Rules

Decision	Rule
1. Does the assessment follow all applicable guidelines?	The assessment has been undertaken in accordance with all applicable guidelines and criteria as provided in **Section 5**. Therefore, the decision is **Yes**.
2. Have any aesthetic issues relating to site soils been adequately addressed?	Assessment of aesthetic issues has been undertaken at the Site. All soil concentrations were reported below the aesthetic management limits. Minor amounts of anthropogenic material were identified in fill material in isolated areas across the Site. No exceedances of the adopted health and/or ecological criteria were observed with the exception of elevated asbestos w/w% concentrations reported at TP211. There was no visual or olfactory evidence of hydrocarbon or other contamination. Based upon the discussion above, the decision is **Yes**.
3. Has soil been assessed against relevant health-based investigation levels and potential for migration of contamination from soil to groundwater been considered?	Soil has been assessed against the relevant health-based investigation levels provided as **Section 6.** As all the results were below the adopted soil criteria, there was a low risk of migration of contamination to groundwater. Therefore, the decision is **Yes**.
4. Groundwater (where relevant) has been assessed against relevant health-based investigation levels and, if required, any potential impacts to buildings and structures from the presence of contaminants considered?	Groundwater has been assessed against the relevant health-based investigation levels provided as **Section 6.** All the results were below the adopted groundwater criteria except for elevated zinc concentrations. Due to the absence of elevated metals in soil and the low levels reported, it is considered likely these elevated concentrations are metals formed naturally in the environment and pose no significant risk. Drinking water is not considered to be a relevant future beneficial use given the proposed commercial / industrial land use. Therefore, the decision is **Yes**.

Table 12 – Assessment of Decision Rules	
Decision	**Rule**
5. Hazardous ground gases (where relevant) have been assessed against relevant health-based investigation levels and screening values.	As volatile COPC in soil were not reported above the adopted criteria, assessment of hazardous ground gases was not considered relevant and no further ecological risk assessment is required. Therefore, the decision was **not triggered**.
6. Issues relating to local area background soil concentrations that exceed relevant investigation levels have been adequately addressed in the site assessment report(s).	Concentrations of soils have been reported below the adopted criteria. Elevated metals concentrations in groundwater have been attributed to background concentrations. Therefore, the decision was **not triggered**.
7. Are there no impacts of chemical mixtures?	The impacts of chemical mixtures have been considered and are not present. Therefore, the decision is **not triggered**.
8. No potential human health and / or ecological risks to the identified receptors been addressed?	Soil has been assessed against the relevant human health and ecological-based investigation levels provided as **Section 6** and all the results were below the adopted criteria, with the exception of isolated areas of asbestos in soil. Soil has been assessed against the relevant ecological-based investigation levels provided as **Section 6** and all the results were below the adopted criteria with the exception of elevated Net Acidity concentrations reported above the action Criteria for >1,000 tonnes disturbed for coarse/fine textured soil in samples TP201_0.6, TP203_1.0, TP203_1.5, TP206_0.5, TP206_1.0, TP207_1.5, TP207_2.0, TP207_2.5 and TP208_1.6 Therefore, the decision is **No**.

Table 12 – Assessment of Decision Rules	
Decision	**Rule**
9. Is there no evidence of, or potential for, migration of contaminants from the site has been appropriately addressed, including potential risks to off-site receptors, and reported to the site owner or occupier.	Based upon the low concentrations of COPC in soil there is a low likelihood of leaching of contaminants from the Site to groundwater and subsequent off-site migration. Based upon the discussion above, the decision is **Yes**.
10. Is further assessment or a site management strategy required?	The site history review and soil sampling program identified a low risk of contamination in soil at the Site, however further management of asbestos impacted soils at TP211 acid sulfate soils in low lying areas can be undertaken during development through the development of an acid sulfate soil management plan. Therefore, further assessment is not required subject to implementation of the recommendations in this report.

9 Conceptual Site Model

A conceptual site model CSM has been developed based upon the information provided in previous sections of this report.

9.1 Contaminating Activities

The main contaminating activities undertaken at the Site are:

- Importation of fill material.
- Construction and demolition of buildings.

9.2 Affected Media

The potential affected media at the Site are soil and air.

9.3 Human and Ecological Receptors

Sensitive receptors identified at and near the Site were considered to be:

- Future customers and staff of the Proposed Development (ASC NEPM 2013 HIL D and HSL D).
- Future construction and sub-surface maintenance workers at the Site (ASC NEPM 2013 HIL D – commercial / industrial; CRC CARE 2011 Direct contact and intrusive maintenance workers HSLs and Vapour Intrusion HSLs for Intrusive Maintenance Workers (Shallow Trench)).
- Residents of the Site and surrounding residential properties (ASC NEPM 2013 HIL A and HSL A).
- Terrestrial fauna and flora at the Site (ASC NEPM EIL and ESLs).

9.4 Potential and Complete Exposure Pathways

An analysis of the potential exposure pathways between the COPC and the identified human and ecological receptors are presented in **Table 13**.

Table 13 – Source-Pathway-Receptor Linkages

Sources				Pathways	Receptors	Linkages	Comments
Primary	Secondary	Contaminants	Affected Media	Exposure Pathways			
Importation of fill material	Potential importation of contaminated soil	TRH, BTEX, PAH, heavy metals, PCBs, OCPs, OPPs	Soil	Human Health • Dermal contact • Incidental ingestion	• Future construction and sub-surface maintenance workers. • Future customers and staff of the Proposed Development. • Residents at the Site and surrounding residential properties.	Not Complete.	No management required
				Ecological: • Uptake by flora and fauna	• Terrestrial fauna and flora at the Site and on adjoining land. • Ecosystems dependant on Lake Macquarie.		
Construction and demolition of buildings	Potential use of hazardous building materials	Asbestos	Soil and air	Human Health Inhalation	• Future construction and sub-surface maintenance workers. • Future customers and staff of the Proposed Development. • Residents at the Site and surrounding residential properties.	Potentially complete	Asbestos removal and clearance
Acid Sulfate Soil	Oxidation and generation of acidity	**Net acidity**	Soil	Ecological: • Acidification of soil and water	• Terrestrial and aquatic fauna and flora at the Site	Potentially complete	The DP (2007) ASSMP should be implemented during development.

10 Conclusion

The Site is located to the north of, and on, Bluff Point on the Morisset Peninsula on the western shores of Lake Macquarie and was predominantly grassed with several scattered mature trees and a consistent line of mature trees along the shoreline. A restaurant and associated carparking was located in the northern portion. A proposal has been prepared to redevelop the Site into a mixed-use tourist, hospitality, and residential development.

The topography ranges from 0.5 mAHD to 8.6 mAHD and slopes down to the north. Overland flow is expected to follow the topography to towards Lake Macquarie. The Site is underlain by Munmorah Conglomerate Quaternary deposits and is located in a Class 4 and Class 5 ASS zone. Previous groundwater assessment had identified standing water levels between 0.8 and 3.6 mBGL.

The Site was previously used as a residential school for troubled and disabled boys run by the Brothers of St. John of God which operated in various forms from 1948 until its closure in 2001. Previous assessments and remediated have resulted in the provision of a SAS in 2007, which stated that the Site was suitable for residential land use. Future soil disturbance works require the implementation of an acid sulfate soil management plan.

The purpose of the Assessment was to assess whether there had been any contaminating activities at the Site since the issue of the SAS that may have resulted in contamination with respect to the proposed development. Additionally, investigation of infiltration and groundwater characteristics is required to inform future construction and stormwater design.

Based upon a review of aerial photographs, the importation of fill material and construction / demolition of new buildings was identified as the primary contaminating activity undertaken at the Site since 2007.

The Assessment consisted of soil sampling and analytical testing from 15 test pits and three boreholes as well as the installation of three monitoring wells and assessment of hydrogeological properties.

The results of the assessment identified subsurface conditions comprising of conglomerate and sandstone overlain by residual soils in the south elevated part of the Site with the central and northern part of the Site overlain by estuarine deposits comprising a variable mixture of granular and cohesive soils.

The results of soil analytical testing identified isolated bonded ACM in soil at one location and AF / FA in soil and two locations in shallow soil. Testing for ASS identified elevated net acidity in nine samples collected across the Site, confirming the requirement for the implementation of the DP (2007) ASSMP.

Assessment of groundwater identified Na-Cl waters of marine origin with groundwater levels reported between 0.32 mAHD and 2.06 mAHD and groundwater flow to the north / north west. Hydraulic conductivity was calculated across the Site ranging from 8.42×10^{-5} to 1.5×10^{-4} m/sec.

The results of analytical testing of groundwater samples reported all results below the adopted criteria with the exception of zinc concentrations in excess of marine water criteria at two locations.

Based upon the results of the assessment, EP Risk recommends the following:

- Implementation of the DP (2007) ASSMP during soil disturbance works at the site.
- Development of a Remediation Action Plan (RAP) to address isolated shallow asbestos in soil impact.
- Development of a dewatering management plan once the final basement design has been finalised.

Figures



EP RISK

www.eprisk.com.a

Hydrogeological and Contamination Assessment
Trinity Point Marina, Morisset Park, NSW

Figure 1 - Site and Sampling Locations

Job No: EP2409.001
Date: 27/1/2022
Drawing Ref: Draft
Version No: v1

N

0 20 40 60 m

Approximate Scale Only

Coordinate System: MGA 56
Drawn by: SL **Checked by:** PS
Scale of regional map not shown
Source: Near Maps

APPROVED COMPANY ISO 9001 QMS Certification Services
APPROVED COMPANY AS/NZS 4801 QMS Certification Services
APPROVED COMPANY ISO 14001 QMS Certification Services



EP RISK

www.eprisk.com.au

Hydrogeological and Contamination Assessment
Trinity Point Marina, Morisset Park, NSW

Figure 2 - Soil Exceedance Plan

Job No: EP2409.001
Date: 27/1/2022
Drawing Ref: Draft
Version No: v1

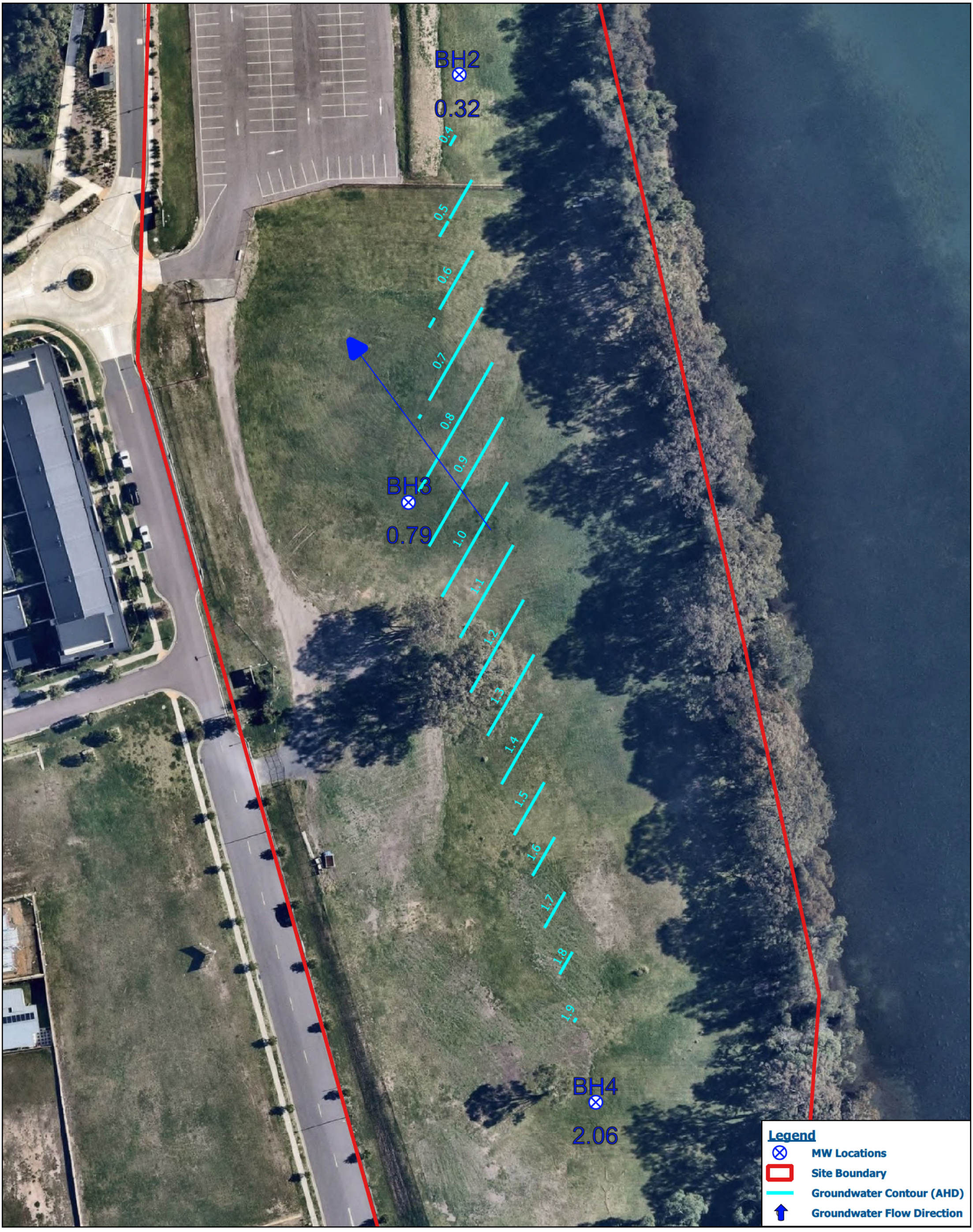
N

0 17 34 51 m

Approximate Scale Only

Coordinate System: MGA 56
Drawn by: SL Checked by: PS
Scale of regional map not shown
Source: Near Maps

APPROVED COMPANY ISO 9001 QMS Certification Services
APPROVED COMPANY AS/NZS 4801 QMS Certification Services
APPROVED COMPANY ISO 14001 QMS Certification Services



EP RISK

www.eprisk.com.au

Hydrogeological and Contamination Assessment
Trinity Point Marina, Morisset Park, NSW

Figure 3 - Groundwater Contours (24/11/2021)

Job No: EP2409.001
Date: 3/02/2022
Drawing Ref: FIg 3
Version No: v1

N

0 10 20 30 m

Approximate Scale Only

Coordinate System: MGA 56
Drawn by: GR Checked by: PS
Scale of regional map not shown
Source: Near Maps

APPROVED COMPANY ISO 9001 Quality Management Systems — QMS Certification Services
APPROVED COMPANY AS/NZS 4801 Occupational Health & Safety Management Systems — QMS Certification Services
APPROVED COMPANY ISO 14001 Environmental Management Systems — QMS Certification Services

Tables

		Analyte grouping	Polynuclear Aromatic Hydrocarbons																			
		Analyte	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1.2.3.cd)pyrene	Dibenz(a.h)anthracene	Benzo(g.h.i)perylene	Sum of polycyclic aromatic hydrocarbons	Benzo(a)pyrene TEQ (zero)	Benzo(a)pyrene TEQ (half LOR)	Benzo(a)pyrene TEQ (LOR)
NEPM 2013 HIL C																				3		
NEPM 2013 HIL B Soil																				4		
NEPM 2013 Soil HSL C for Vapour Intrusion	**0-1m**	**Sand**	NL																			
NEPM 2013 Soil HSL C for Vapour Intrusion	**0-1m**	**Clay**																				
NEPM 2013 Soil HSL B for Vapour Intrusion	**0-1m**	**Sand**																				
NEPM 2013 Soil HSL B for Vapour Intrusion	**0-1m**	**Clay**																				
NEPM 2013 ESLs for Open Space, Fine/Coarse Soil		**0-2m**													0.7							
NEPM 2013 EILs Open Space		**0-2m**																				
CRC Care (2011) HSL C Direct Contact																						
CRC Care (2011) HSL B Direct Contact																						
CRC Care (2011) Intrusive Maintenance Worker		**0-2m**																				
NEPM 2013 Management Limits Parkland and Open Space,		**0-2m**																				
Sample ID:	Sample date:	Sample Description																				
BH200_0.1	15/11/2021	TOPSOIL: clayey SAND	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
BH2_0.4	15/11/2021	TOPSOIL: gravelly SAND	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
BH3_0.1	15/11/2021	TOPSOIL: sandy CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP201_0.2	15/11/2021	FILL: sandy SILT	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP202_0.2	15/11/2021	FILL: sandy SILT	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP203_0.2	15/11/2021	FILL: sandy CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP204_0.2	15/11/2021	FILL: sandy SILT	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	0.6	1.2
TP205_0.2	15/11/2021	FILL: sandy SILT	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP206_0.2	15/11/2021	FILL: sandy SILT	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP207_0.1	15/11/2021	TOPSOIL: clayey sandy SILT	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP208_0.3	15/11/2021	FILL: sandy CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP209_0.6	15/11/2021	FILL: sandy CLAY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP210_0.2	15/11/2021	FILL: sandy SILT	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2
TP211_0.2	15/11/2021	FILL: sandy SILT	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2

		Analyte grouping	TPH					TRH - NEPM 2013 Fractions							BTEXN							
		Analyte	C6 - C9 Fraction	C10 - C14 Fraction	C15 - C28 Fraction	C29 - C36 Fraction	C10 - C36 Fraction (sum)	C6 - C10 Fraction	C6 - C10 Fraction minus BTEX (F1)	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	>C10 - C40 Fraction (sum)	>C10 - C16 Fraction minus Naphthalene (F2)	Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Total Xylenes	Sum of BTEX	Naphthalene
NEPM 2013 HIL C							300															
NEPM 2013 HIL B Soil							400															
NEPM 2013 Soil HSL C for Vapour Intrusion	**0-1m**	**Sand**							NL					NL	NL	NL	NL			NL		
NEPM 2013 Soil HSL C for Vapour Intrusion	**0-1m**	**Clay**																				
NEPM 2013 Soil HSL B for Vapour Intrusion	**0-1m**	**Sand**																				
NEPM 2013 Soil HSL B for Vapour Intrusion	**0-1m**	**Clay**																				
NEPM 2013 ESLs for Open Space, Fine/Coarse Soil		**0-2m**							180		1300/300	5600/2800		120	65/50	105/85	125/70			45/105		
NEPM 2013 EILs Open Space		**0-2m**																				170
CRC Care (2011) HSL C Direct Contact								5100		3800	5300	7400			120	18000	5300			15,000		1900
CRC Care (2011) HSL B Direct Contact								5,600		4200	5800	8100			140	21000	5900			17,000		2200
CRC Care (2011) Intrusive Maintenance Worker		**0-2m**						82000		62000	85000	120000			1,100	120000	85000			130,000		29,000
NEPM 2013 Management Limits Parkland and Open Space,		**0-2m**						800/700		1000	3500/2500	10000										
Sample ID:	Sample date:	Sample Description																				
BH200_0.1	15/11/2021	TOPSOIL: clayey SAND	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
BH2_0.4	15/11/2021	TOPSOIL: gravelly SAND	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
BH3_0.1	15/11/2021	TOPSOIL: sandy CLAY	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP201_0.2	15/11/2021	FILL: sandy SILT	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP202_0.2	15/11/2021	FILL: sandy SILT	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP203_0.2	15/11/2021	FILL: sandy CLAY	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP204_0.2	15/11/2021	FILL: sandy SILT	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP205_0.2	15/11/2021	FILL: sandy SILT	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP206_0.2	15/11/2021	FILL: sandy SILT	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP207_0.1	15/11/2021	TOPSOIL: clayey sandy SILT	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP208_0.3	15/11/2021	FILL: sandy CLAY	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP209_0.6	15/11/2021	FILL: sandy CLAY	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP210_0.2	15/11/2021	FILL: sandy SILT	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TP211_0.2	15/11/2021	FILL: sandy SILT	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1

Analyte grouping		Total Metals								PCB	Organochlorine Pesticides (OP)																
Analyte		Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PCBs	alpha-BHC	Hexachlorobenzene (HCB)	beta-BHC	gamma-BHC	delta-BHC	Heptachlor	Aldrin	Heptachlor epoxide	Total Chlordane (sum)	trans-Chlordane	alpha-Endosulfan	cis-Chlordane	Dieldrin	4.4`-DDE	Endrin	Endosulfan (sum)
NEPM 2013 HIL C Soil		300	90	300	17000	600	80	1200	30000	1		10							70						20	
NEPM 2013 EILs Open/Space		100			50	1100		55	230																	
NEPM 2013 HIL B Soil		500	150	500	30000	1200	120	1200	60000	1		15							90						20	
Sample ID:	Sample date:	Sample Description:																									
BH200_0.1	15/11/2021	TOPSOIL: clayey SAND	<5	<1	3	<5	5	<0.1	<2	14	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH2_0.4	15/11/2021	TOPSOIL: gravelly SAND	<5	<1	<2	<5	6	<0.1	<2	15	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH3_0.1	15/11/2021	TOPSOIL: sandy CLAY	<5	<1	8	7	18	<0.1	<2	47	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP201_0.2	15/11/2021	FILL: sandy SILT	<5	<1	11	18	87	<0.1	3	114	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP202_0.2	15/11/2021	FILL: sandy SILT	<5	<1	5	<5	<5	<0.1	<2	<5	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP203_0.2	15/11/2021	FILL: sandy CLAY	<5	<1	15	<5	8	<0.1	<2	30	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP204_0.2	15/11/2021	FILL: sandy SILT	<5	<1	6	6	11	<0.1	<2	22	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP205_0.2	15/11/2021	FILL: sandy SILT	6	<1	15	<5	11	<0.1	3	37	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP206_0.2	15/11/2021	FILL: sandy SILT	<5	<1	8	11	18	<0.1	7	49	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP207_0.1	15/11/2021	TOPSOIL: clayey sandy SILT	<5	<1	4	<5	8	<0.1	3	24	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP208_0.3	15/11/2021	FILL: sandy CLAY	<5	<1	9	<5	6	<0.1	2	14	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP209_0.6	15/11/2021	FILL: sandy CLAY	<5	<1	17	<5	11	<0.1	<2	47	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP210_0.2	15/11/2021	FILL: sandy SILT	6	<1	12	6	11	<0.1	4	31	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP211_0.2	15/11/2021	FILL: sandy SILT	<5	<1	7	<5	23	<0.1	<2	51	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

		Analyte grouping									Organophosphorus Pesticides (OP)															
		Analyte	beta-Endosulfan	4.4`-DDD	Endrin aldehyde	Endosulfan sulfate	4.4`-DDT	Endrin ketone	Methoxychlor	Sum of DDD + DDE + DDT	Sum of Aldrin + Dieldrin	Dichlorvos	Demeton-S-methyl	Monocrotophos	Dimethoate	Diazinon	Chlorpyrifos-methyl	Parathion-methyl	Malathion	Fenthion	Chlorpyrifos	Parathion	Pirimphos-ethyl	Chlorfenvinphos	Bromophos-ethyl	Fenamiphos	Prothiofos
		NEPM 2013 HIL C Soil				340			400	400	10										250						
		NEPM 2013 EILs Open/Space					180																				
		NEPM 2013 HIL B Soil				400			500	600	10										340						
Sample ID:	Sample date:	Sample Description:																									
BH200_0.1	15/11/2021	TOPSOIL: clayey SAND	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH2_0.4	15/11/2021	TOPSOIL: gravelly SAND	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH3_0.1	15/11/2021	TOPSOIL: sandy CLAY	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP201_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP202_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP203_0.2	15/11/2021	FILL: sandy CLAY	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP204_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP205_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP206_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP207_0.1	15/11/2021	TOPSOIL: clayey sandy SILT	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP208_0.3	15/11/2021	FILL: sandy CLAY	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP209_0.6	15/11/2021	FILL: sandy CLAY	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP210_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
TP211_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05

		Analyte grouping			
		Analyte	Ethion	Carbophenothion	Azinphos Methyl
		NEPM 2013 HIL C Soil			
		NEPM 2013 EILs Open/Space			
		NEPM 2013 HIL B Soil			
Sample ID:	Sample date:	Sample Description:			
BH200_0.1	15/11/2021	TOPSOIL: clayey SAND	<0.05	<0.05	<0.05
BH2_0.4	15/11/2021	TOPSOIL: gravelly SAND	<0.05	<0.05	<0.05
BH3_0.1	15/11/2021	TOPSOIL: sandy CLAY	<0.05	<0.05	<0.05
TP201_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05
TP202_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05
TP203_0.2	15/11/2021	FILL: sandy CLAY	<0.05	<0.05	<0.05
TP204_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05
TP205_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05
TP206_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05
TP207_0.1	15/11/2021	TOPSOIL: clayey sandy SILT	<0.05	<0.05	<0.05
TP208_0.3	15/11/2021	FILL: sandy CLAY	<0.05	<0.05	<0.05
TP209_0.6	15/11/2021	FILL: sandy CLAY	<0.05	<0.05	<0.05
TP210_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05
TP211_0.2	15/11/2021	FILL: sandy SILT	<0.05	<0.05	<0.05

			Sample ID:	BH200_0.1	BH3_0.1	TP201_0.2	TP202_0.2
			Sample date:	15/11/2021	15/11/2021	15/11/2021	15/11/2021
Analyte grouping	Analyte	Units	NEPM 2013 HSLs Residential B/C				
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	Presence	No	No	No*	No
	Asbestos (Trace)	Fibres		No	No	No	No
	Asbestos Type	-		-	-	Ch	-
	Synthetic Mineral Fibre	g/kg		No	No	No	No
	Organic Fibre	g/kg		No	No	No	No
	Unknown Mineral Fibre	g/kg		-	-	-	-
	Sample weight (dry)	g		388	384	574	674
	Description	-		Soil sample.	Soil sample.	A soil sample containing one piece of degraded asbestos cement sheeting approximately 5x5x2mm.	A soil sample.
Asbestos Quantification (non-NATA)	Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	% (w/w)	0.04/0.02	<0.01	<0.01	<0.01	<0.01
	Asbestos (Fines and Fibrous <7mm)	g		<0.0004	<0.0004	0.015	<0.0004
	Asbestos (Fines and Fibrous FA+AF)	% (w/w)	0.001	<0.001	<0.001	0.003	<0.001
	Weight Used for % Calculation	kg		0.388	0.384	0.574	0.674
	Fibrous Asbestos >7mm	g		<0.0004	<0.0004	<0.0004	<0.0004
	Asbestos Containing Material	g		<0.1	<0.1	<0.1	<0.1

			Sample ID:	TP203_0.2	TP204_0.2	TP205_0.2	TP206_0.2	TP207_0.1
			Sample date:	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021
Analyte grouping	Analyte	Units	NEPM 2013 HSLs Residential B/C					
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	Presence	No	No	No	No	-
	Asbestos (Trace)	Fibres		No	No	No	No	No
	Asbestos Type	-		-	-	-	-	-
	Synthetic Mineral Fibre	g/kg		No	No	No	No	No
	Organic Fibre	g/kg		No	No	No	No	No
	Unknown Mineral Fibre	g/kg		-	-	-	-	Yes
	Sample weight (dry)	g		451	588	556	596	513
	Description	-		Soil sample.	Soil sample.	Soil sample.	Soil sample.	Soil sample containing several pieces of semi-soft white plaster-like material containing unknown mineral fibres.
Asbestos Quantification (non-NATA)	Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	% (w/w)	0.04/0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	Asbestos (Fines and Fibrous <7mm)	g		<0.0004	<0.0004	<0.0004	<0.0004	0.261
	Asbestos (Fines and Fibrous FA+AF)	% (w/w)	0.001	<0.001	<0.001	<0.001	<0.001	0.051
	Weight Used for % Calculation	kg		0.451	0.588	0.556	0.596	0.513
	Fibrous Asbestos >7mm	g		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
	Asbestos Containing Material	g		<0.1	<0.1	<0.1	<0.1	<0.1

			Sample ID:	TP208_0.3	TP209_0.6
			Sample date:	15/11/2021	15/11/2021
Analyte grouping	Analyte	Units	NEPM 2013 HSLs Residential B/C		
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	Presence	No	No
	Asbestos (Trace)	Fibres		No	No
	Asbestos Type	-		-	-
	Synthetic Mineral Fibre	g/kg		No	No
	Organic Fibre	g/kg		No	No
	Unknown Mineral Fibre	g/kg		-	-
	Sample weight (dry)	g		571	478
	Description	-		Soil sample.	Soil sample.
Asbestos Quantification (non-NATA)	Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	% (w/w)	0.04/0.02	<0.01	<0.01
	Asbestos (Fines and Fibrous <7mm)	g		<0.0004	<0.0004
	Asbestos (Fines and Fibrous FA+AF)	% (w/w)	0.001	<0.001	<0.001
	Weight Used for % Calculation	kg		0.571	0.478
	Fibrous Asbestos >7mm	g		<0.0004	<0.0004
	Asbestos Containing Material	g		<0.1	<0.1

			Sample ID:	TP210_0.2	TP211_0.2	TP212_0.2	TP213_0.2
			Sample date:	15/11/2021	15/11/2021	15/11/2021	15/11/2021
Analyte grouping	Analyte	Units	NEPM 2013 HSLs Residential B/C				
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	Presence	-	No*	No	No
	Asbestos (Trace)	Fibres		No	No	No	No
	Asbestos Type	-		-	Ch	-	-
	Synthetic Mineral Fibre	g/kg		No	No	No	No
	Organic Fibre	g/kg		No	No	No	No
	Unknown Mineral Fibre	g/kg		Yes	-	-	-
	Sample weight (dry)	g		610	392	551	514
	Description	-		Soil sample containing several pieces of semi-soft white plaster-like material containing unknown mineral fibres.	Soil sample containing one piece of asbestos cement sheeting approximtely 5x5x3mm.	A soil sample.	A soil sample.
Asbestos Quantification (non-NATA)	Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	% (w/w)	0.04/0.02	0.06	<0.01	<0.01	<0.01
	Asbestos (Fines and Fibrous <7mm)	g		0.33	0.0219	<0.0004	<0.0004
	Asbestos (Fines and Fibrous FA+AF)	% (w/w)	0.001	0.054	0.006	<0.001	<0.001
	Weight Used for % Calculation	kg		0.61	0.392	0.551	0.514
	Fibrous Asbestos >7mm	g		<0.0004	<0.0004	<0.0004	<0.0004
	Asbestos Containing Material	g		2.5	<0.1	<0.1	<0.1

			Sample ID:	TP214_0.2	TP215_0.2
			Sample date:	15/11/2021	15/11/2021
Analyte grouping	Analyte	Units	NEPM 2013 HSLs Residential B/C		
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	Presence	No*	No
	Asbestos (Trace)	Fibres		No	No
	Asbestos Type	-		Ch	-
	Synthetic Mineral Fibre	g/kg		No	No
	Organic Fibre	g/kg		No	No
	Unknown Mineral Fibre	g/kg		-	-
	Sample weight (dry)	g		590	670
	Description	-		A soil sample containing one piece of degraded asbestos cement sheeting approximately 3x2x1mm.	A soil sample.
Asbestos Quantification (non-NATA)	Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	% (w/w)	0.04/0.02	<0.01	<0.01
	Asbestos (Fines and Fibrous <7mm)	g		0.0013	<0.0004
	Asbestos (Fines and Fibrous FA+AF)	% (w/w)	0.001	<0.001	<0.001
	Weight Used for % Calculation	kg		0.59	0.67
	Fibrous Asbestos >7mm	g		<0.0004	<0.0004
	Asbestos Containing Material	g		<0.1	<0.1

			Sample ID:	TP211_0.2
			Sample date:	15/11/2021
Analyte grouping	Analyte	Units	NEPM 2013 HSLs Residential B/C	
Bonded Asbestos in Soil Concentration by Gravimetric Approach	Material Sample ID	-		ACMID_01
	Description	-		Several pieces of asbestos cement sheeting approximately 100x60x5mm.
	Asbestos Detected in Material Sample	g/kg		Yes
	Asbestos Type	-		Ch
	Sample weight (dry)	g		134
	Minimum 10 L sample weight	kg		18
	Soil Description	-		FILL: sandy SILT
	Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	% (w/w)	0.04/0.02	0.112

		Sample ID:	RW101
		Sample date:	15/11/2021
Analyte grouping	Analyte	Units	
Total Metals	Arsenic	mg/L	<0.001
	Cadmium	mg/L	<0.0001
	Chromium	mg/L	<0.001
	Copper	mg/L	<0.001
	Lead	mg/L	<0.001
	Mercury	mg/L	<0.0001
	Nickel	mg/L	<0.001
	Zinc	mg/L	<0.005
Polychlorinated Biphenyls (PCB)	Total Polychlorinated biphenyls	Âµg/L	<1
Organochlorine Pesticides (OC)	alpha-BHC	Âµg/L	<0.5
	Hexachlorobenzene (HCB)	Âµg/L	<0.5
	beta-BHC	Âµg/L	<0.5
	gamma-BHC	Âµg/L	<0.5
	delta-BHC	Âµg/L	<0.5
	Heptachlor	Âµg/L	<0.5
	Aldrin	Âµg/L	<0.5
	Heptachlor epoxide	Âµg/L	<0.5
	trans-Chlordane	Âµg/L	<0.5
	alpha-Endosulfan	Âµg/L	<0.5
	cis-Chlordane	Âµg/L	<0.5
	Dieldrin	Âµg/L	<0.5
	4.4`-DDE	Âµg/L	<0.5
	Endrin	Âµg/L	<0.5
	beta-Endosulfan	Âµg/L	<0.5
	4.4`-DDD	Âµg/L	<0.5
	Endrin aldehyde	Âµg/L	<0.5
	Endosulfan sulfate	Âµg/L	<0.5
	4.4`-DDT	Âµg/L	<2.0
	Endrin ketone	Âµg/L	<0.5
	Methoxychlor	Âµg/L	<2.0
	Total Chlordane (sum)	Âµg/L	<0.5
	Sum of DDD + DDE + DDT	Âµg/L	<0.5
	Sum of Aldrin + Dieldrin	Âµg/L	<0.5
Organophosphorus Pesticides (OP)	Dichlorvos	Âµg/L	<0.5
	Demeton-S-methyl	Âµg/L	<0.5
	Monocrotophos	Âµg/L	<2.0
	Dimethoate	Âµg/L	<0.5
	Diazinon	Âµg/L	<0.5
	Chlorpyrifos-methyl	Âµg/L	<0.5
	Parathion-methyl	Âµg/L	<2.0
	Malathion	Âµg/L	<0.5
	Fenthion	Âµg/L	<0.5
	Chlorpyrifos	Âµg/L	<0.5
	Parathion	Âµg/L	<2.0
	Pirimphos-ethyl	Âµg/L	<0.5
	Chlorfenvinphos	Âµg/L	<0.5
	Bromophos-ethyl	Âµg/L	<0.5
	Fenamiphos	Âµg/L	<0.5
	Prothiofos	Âµg/L	<0.5
	Ethion	Âµg/L	<0.5
	Carbophenothion	Âµg/L	<0.5
	Azinphos Methyl	Âµg/L	<0.5
Polynuclear Aromatic Hydrocarbons	Naphthalene	Âµg/L	<1.0
	Acenaphthylene	Âµg/L	<1.0
	Acenaphthene	Âµg/L	<1.0
	Fluorene	Âµg/L	<1.0
	Phenanthrene	Âµg/L	<1.0
	Anthracene	Âµg/L	<1.0
	Fluoranthene	Âµg/L	<1.0
	Pyrene	Âµg/L	<1.0
	Benz(a)anthracene	Âµg/L	<1.0
	Chrysene	Âµg/L	<1.0
	Benzo(b+j)fluoranthene	Âµg/L	<1.0
	Benzo(k)fluoranthene	Âµg/L	<1.0
	Benzo(a)pyrene	Âµg/L	<0.5
	Indeno(1.2.3.cd)pyrene	Âµg/L	<1.0
	Dibenz(a.h)anthracene	Âµg/L	<1.0
	Benzo(g.h.i)perylene	Âµg/L	<1.0
	Sum of polycyclic aromatic hydrocarbons	Âµg/L	<0.5
	Benzo(a)pyrene TEQ (zero)	Âµg/L	<0.5

		Sample ID:	RW101
		Sample date:	15/11/2021
Analyte grouping	Analyte	Units	
Total Petroleum Hydrocarbons	C6 - C9 Fraction	Âµg/L	<20
	C10 - C14 Fraction	Âµg/L	<50
	C15 - C28 Fraction	Âµg/L	<100
	C29 - C36 Fraction	Âµg/L	<50
	C10 - C36 Fraction (sum)	Âµg/L	<50
Total Recoverable Hydrocarbons - NEPM 2013 Fractions	C6 - C10 Fraction	Âµg/L	<20
	C6 - C10 Fraction minus BTEX (F1)	Âµg/L	<20
	>C10 - C16 Fraction	Âµg/L	<100
	>C16 - C34 Fraction	Âµg/L	<100
	>C34 - C40 Fraction	Âµg/L	<100
	>C10 - C40 Fraction (sum)	Âµg/L	<100
	>C10 - C16 Fraction minus Naphthalene (F2)	Âµg/L	<100
BTEXN	Benzene	Âµg/L	<1
	Toluene	Âµg/L	<2
	Ethylbenzene	Âµg/L	<2
	meta- & para-Xylene	Âµg/L	<2
	ortho-Xylene	Âµg/L	<2
	Total Xylenes	Âµg/L	<2
	Sum of BTEX	Âµg/L	<1
	Naphthalene	Âµg/L	<5

	Sample ID:	TB	TS	TSC
	Sample date:	5/11/2021	1/11/2021	1/11/2021
Analyte grouping	Analyte			
Total Petroleum Hydrocarbons	C6 - C9 Fraction	<10	-	-
Total Recoverable Hydrocarbons - NEPM 2013 Fractions	C6 - C10 Fraction	<10	-	-
	C6 - C10 Fraction minus BTEX (F1)	<10	-	-
BTEXN	Benzene	<0.2	<0.2	<0.2
	Toluene	<0.5	0.9	1.1
	Ethylbenzene	<0.5	0.6	0.7
	meta- & para-Xylene	<0.5	3.4	4.1
	ortho-Xylene	<0.5	2.1	2.7
	Total Xylenes	<0.5	5.5	6.8
	Sum of BTEX	<0.2	7	8.6
	Naphthalene	<1	1	1

	Analyte grouping	Total Metals								PCB	Organochlorine Pesticides (OP)																									
	Analyte	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PCBs	alpha-BHC	Hexachlorobenzene (HCB)	beta-BHC	gamma-BHC	delta-BHC	Heptachlor	Aldrin	Heptachlor epoxide	Total Chlordane (sum)	trans-Chlordane	alpha-Endosulfan	cis-Chlordane	Dieldrin	4,4'-DDE	Endrin	Endosulfan (sum)	beta-Endosulfan	4,4'-DDD	Endrin aldehyde	Endosulfan sulfate	4,4'-DDT	Endrin ketone	Methoxychlor	Sum of DDD + DDE + DDT	Sum of Aldrin + Dieldrin
Sample ID:	Sample date:																																			
TP207_0.1	15/11/2021	<5	<1	4	<5	8	<0.1	3	24	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05
QC01	15/11/2021	<5	<1	5	8	7	<0.1	3	25	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05
RPD %	-	0%	0%	22%	-	13%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
QC02	15/11/2021	4	<0.4	<5	8.8	7.1	<0.1	<5	23	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0..05	<0.05
RPD %	-	-	0%	-	-	12%	0%	-	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

	Analyte grouping	Organophosphorus Pesticides (OP)																		
	Analyte	Dichlorvos	Demeton-S-methyl	Monocrotophos	Dimethoate	Diazinon	Chlorpyrifos-methyl	Parathion-methyl	Malathion	Fenthion	Chlorpyrifos	Parathion	Pirimphos-ethyl	Chlorfenvinphos	Bromophos-ethyl	Fenamiphos	Prothiofos	Ethion	Carbophenothion	Azinphos Methyl
Sample ID:	Sample date:																			
TP207_0.1	15/11/2021	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
QC01	15/11/2021	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD %	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
QC02	15/11/2021	<0.2	<0.2	<2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	-	<0.2	<0.2	-	-	-	<0.2	-	<0.2
RPD %	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

			Sample ID	BH2_3.5	BH2_4	BH2_4.5	BH2_5	BH2_5.5	BH2_6	BH2_6.5	BH2_7	BH2_7.5	BH2_8	BH2_8.5	TP201_0.6	TP201_1.2	TP201_1.8	TP202_0.7
			Sample date	2/11/2021	2/11/2021	2/11/2021	2/11/2021	2/11/2021	2/11/2021	2/11/2021	2/11/2021	2/11/2021	2/11/2021	2/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021
Analyte grouping	Analyte	Units	National ASS Guidance 2018															
Ass Field Screening Analysis	pH (F)	pH Unit	<4	6.1	6.1	5.8	5.8	5.5	5.2	5.1	4.9	4.7	4.7	4.7	5.6	4.6	4.9	5.2
	pH (Fox)	pH Unit	<3.5	2.3	2.2	2.3	2.2	2	2.2	2	1.8	2.1	2.4	3.7	4.6	4.3	4.4	4.3
	Reaction Rate	-		4	4	2	4	4	2	4	2	2	2	1	1	1	1	1
	Difference	pH Unit	>1	3.8	3.9	3.5	3.6	3.5	3	3.1	3.1	2.6	2.3	1	1	0.3	0.5	0.9

			Sample ID	TP202_1.2	TP203_1.0	TP203_1.5	TP203_2.0	TP203_2.2	TP206_0.5	TP206_1.0	TP206_1.5	TP206_2.0	TP207_1.5	TP207_2.0	TP207_2.5	TP208_1.6	TP208_2.0	TP208_2.4	TP209_1.5	TP209_2	TP210_1.6
			Sample date	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021
Analyte grouping	Analyte	Units	National ASS Guidance 2018																		
Ass Field Screening Analysis	pH (F)	pH Unit	<4	4.4	6	5.5	5	5.2	6.8	6.7	5	4.8	5.1	4.6	4.7	6.2	4.6	4.3	7	7.1	4.7
	pH (Fox)	pH Unit	<3.5	3.6	3.9	4.5	4.2	4.2	3.7	5	4.2	4.3	3.4	3.3	3	4.7	3.9	3.9	5.2	5.1	4
	Reaction Rate	-		1	2	1	1	1	2	1	1	1	2	1	2	1	1	1	1	2	1
	Difference	pH Unit	>1	0.8	2.1	1	0.8	1	3.1	1.7	0.8	0.5	1.7	1.3	1.7	1.5	0.7	0.4	1.8	2	0.7

			Sample ID	TP210_2.0	TP210_2.4	TP211_0.5
			Sample date	15/11/2021	15/11/2021	15/11/2021
Analyte grouping	Analyte	Units	National ASS Guidance 2018			
Ass Field Screening Analysis	pH (F)	pH Unit	<4	7.5	5	5.2
	pH (Fox)	pH Unit	<3.5	5.8	4.3	4.4
	Reaction Rate	-		2	1	1
	Difference	pH Unit	>1	1.7	0.7	0.8

			Sample ID:	TP201_0.6	TP203_1.0	TP203_1.5	TP206_0 5	TP206_1.0
			Sample date:	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021
			Soil Description:	clayey SAND	sandy SILT	sandy CLAY	sandy SILT	sandy CLAY
Analyte grouping	Analyte	Units	National Acid Sulfate Soil Guidelines 2018 >1000 tonnes Disturbed Fine/Coarse Soils					
Actual Acidity	pH KCl (23A)	pH Unit		5.4	6	4.7	5.6	5.3
	Titratable Actual Acidity (23F)	mole H+ / t		10	3	24	5	8
	sulfidic - Titratable Actual Acidity (s-23F)	% pyrite S		<0.02	<0.02	0.04	<0.02	<0.02
Potential Acidity	Chromium Reducible Sulfur (22B)	% S		0.014	0.016	0.022	0 013	0.012
	acidity - Chromium Reducible Sulfur (a-22B)	mole H+ / t		<10	<10	14	<10	<10
Acid Neutralising Capacity	Acid Neutralising Capacity (19A2)	% CaCO3		-	-	-	-	-
	acidity - Acid Neutralising Capacity (a-19A2)	mole H+ / t		-	-	-	-	-
	sulfidic - Acid Neutralising Capacity (s-19A2)	% pyrite S		-	-	-	-	-
Retained Acidity	Net Acid Soluble Sulfur (20Je)	% S		-	-	-	-	-
	acidity - Net Acid Soluble Sulfur (a-20J)	mole H+ / t		-	-	-	-	-
	sulfidic - Net Acid Soluble Sulfur (s-20J)	% pyrite S		-	-	-	-	-
	KCl Extractable Sulfur (23Ce)	% S		-	-	-	-	-
	HCl Extractable Sulfur (20Be)	% S		-	-	-	-	-
Acid Base Accounting	ANC Fineness Factor			1.5	1.5	1.5	1.5	1.5
	Net Acidity (sulfur units)	% S		0.03	0.02	0.06	0.02	0.03
	Net Acidity (acidity units)	mole H+ / t		18	13	38	13	16
	Liming Rate	kg CaCO3/t		1	<1	3	<1	1
	Net Acidity excluding ANC (sulfur units)	% S	0.03	0.03	0.02	0.06	0.02	0.03
	Net Acidity excluding ANC (acidity units)	mole H+ / t	18	18	13	38	13	16
	Liming Rate excluding ANC	kg CaCO3/t		1	<1	3	<1	1

			Sample ID:	TP207_1 5	TP207_2.0	TP207_2 5	TP208_1.6	TP209_1 5	TP209_2
			Sample date:	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021
			Soil Description:	sandy CLAY	sandy CLAY	sandy CLAY	gravelly sandy CLAY	sandy CLAY	sandy CLAY
Analyte grouping	Analyte	Units	National Acid Sulfate Soil Guidelines 2018 >1000 tonnes Disturbed Fine/Coarse Soils						
Actual Acidity	pH KCl (23A)	pH Unit		4.8	4.4	4.4	5.2	6.2	6.3
	Titratable Actual Acidity (23F)	mole H+ / t		22	54	58	10	<2	<2
	sulfidic - Titratable Actual Acidity (s-23F)	% pyrite S		0.04	0.09	0.09	<0.02	<0.02	<0.02
Potential Acidity	Chromium Reducible Sulfur (22B)	% S		0.013	0.014	0.02	0.015	0.018	0.017
	acidity - Chromium Reducible Sulfur (a-22B)	mole H+ / t		<10	<10	12	<10	11	10
Acid Neutralising Capacity	Acid Neutralising Capacity (19A2)	% CaCO3		-	-	-	-	-	-
	acidity - Acid Neutralising Capacity (a-19A2)	mole H+ / t		-	-	-	-	-	-
	sulfidic - Acid Neutralising Capacity (s-19A2)	% pyrite S		-	-	-	-	-	-
Retained Acidity	Net Acid Soluble Sulfur (20Je)	% S		-	0.04	<0.02	-	-	-
	acidity - Net Acid Soluble Sulfur (a-20J)	mole H+ / t		-	19	<10	-	-	-
	sulfidic - Net Acid Soluble Sulfur (s-20J)	% pyrite S		-	0.03	<0.02	-	-	-
	KCl Extractable Sulfur (23Ce)	% S		-	<0.02	0.02	-	-	-
	HCl Extractable Sulfur (20Be)	% S		-	0.02	0.03	-	-	-
Acid Base Accounting	ANC Fineness Factor			1.5	1.5	1.5	1.5	1.5	1.5
	Net Acidity (sulfur units)	% S		0.05	0.13	0.12	0.03	<0.02	<0.02
	Net Acidity (acidity units)	mole H+ / t		30	82	75	19	11	10
	Liming Rate	kg CaCO3/t		2	6	6	1	<1	<1
	Net Acidity excluding ANC (sulfur units)	% S	0.03	0.05	0.13	0.12	0.03	<0.02	<0.02
	Net Acidity excluding ANC (acidity units)	mole H+ / t	18	30	82	75	19	11	10
	Liming Rate excluding ANC	kg CaCO3/t		2	6	6	1	<1	<1

			Sample ID:	TP210_2.0
			Sample date:	15/11/2021
			Soil Description:	sandy CLAY
Analyte grouping	Analyte	Units	National Acid Sulfate Soil Guidelines 2018 >1000 tonnes Disturbed Fine/Coarse Soils	
Actual Acidity	pH KCl (23A)	pH Unit		6.8
	Titratable Actual Acidity (23F)	mole H+ / t		<2
	sulfidic - Titratable Actual Acidity (s-23F)	% pyrite S		<0.02
Potential Acidity	Chromium Reducible Sulfur (22B)	% S		0.015
	acidity - Chromium Reducible Sulfur (a-22B)	mole H+ / t		<10
Acid Neutralising Capacity	Acid Neutralising Capacity (19A2)	% CaCO3		0.14
	acidity - Acid Neutralising Capacity (a-19A2)	mole H+ / t		29
	sulfidic - Acid Neutralising Capacity (s-19A2)	% pyrite S		0.05
Retained Acidity	Net Acid Soluble Sulfur (20Je)	% S		-
	acidity - Net Acid Soluble Sulfur (a-20J)	mole H+ / t		-
	sulfidic - Net Acid Soluble Sulfur (s-20J)	% pyrite S		-
	KCl Extractable Sulfur (23Ce)	% S		-
	HCl Extractable Sulfur (20Be)	% S		-
Acid Base Accounting	ANC Fineness Factor			1.5
	Net Acidity (sulfur units)	% S		<0.02
	Net Acidity (acidity units)	mole H+ / t		<10
	Liming Rate	kg CaCO3/t		<1
	Net Acidity excluding ANC (sulfur units)	% S	0.03	<0.02
	Net Acidity excluding ANC (acidity units)	mole H+ / t	18	<10
	Liming Rate excluding ANC	kg CaCO3/t		<1

			Inorganics												Alkali Metals				Alkalinity (speciated)			
			Acidity (as CaCO3)	Chloride	Conductivity (at 25°C)	Fluoride (Total)	Hardness mg equivalent CaCO3/L	Nitrate & Nitrite (as N)	pH (at 25 °C)	Phosphate total (as P)	Sulphate (as SO4)	Total Dissolved Solids Dried at 180°C ± 2°C	Total Kjeldahl Nitrogen (as N)	Total Nitrogen (as N)*	Calcium	Magnesium	Potassium	Sodium	Bicarbonate Alkalinity (as CaCO3)	Carbonate Alkalinity (as CaCO3)	Hydroxide Alkalinity (as CaCO3)	Total Alkalinity (as CaCO3)
NEPM 2013 Table 1C GILs, Drinking Water						1.5																
NEPM 2013 Table 1C GILs, Marine Waters																						
Field ID	**Date**	**Units**																				
BH2	24/11/2021	mg/L	310	6600	17000	< 0.5	2100	< 0.05	6.2	< 0.01	800	12000	1.4	1.4	160	420	78	3100	46	< 10	< 20	46
BH3	24/11/2021	mg/L	110	620	1500	< 0.5	71	< 0.05	5.9	0.02	140	1300	0.22	0.22	5	14	1.5	440	20	< 10	< 20	20
BH4	24/11/2021	mg/L	88	42	270	< 0.5	61	< 0.05	6	< 0.01	110	260	0.19	< 0.2	10	8.4	1.9	57	21	< 10	< 20	21

			BTEX								
			Benzene	Ethylbenzene	m&p-Xylenes	o-Xylene	Toluene	Xylenes - Total*	Acenaphthene	Acenaphthylene	Anthracene
NEPM 2013 Table 1C GILs, Drinking Water			0.001	0.3			0.8	0.6			
NEPM 2013 Table 1C GILs, Marine Waters			0.5								
NEPM 2013 Table 1A HSL C for Vapour Intrusion 2m-4m SAND			NL	NL			NL	NL			
Field ID	**Date**	**Units**									
BH2	24/11/2021	mg/L	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	< 0.00001	< 0.00001	< 0.00001
BH3	24/11/2021	mg/L	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	< 0.00001	< 0.00001	< 0.00001
BH4	24/11/2021	mg/L	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	< 0.00001	< 0.00001	< 0.00001

			Polycyclic Aromatic Hydrocarbons (Trace level)							
			Benz(a)anthracene	Benzo(a)pyrene	Benzo(b&j)fluoranthene	Benzo(g.h.i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a.h)anthracene	Fluoranthene
NEPM 2013 Table 1C GILs, Drinking Water				0.00001						
NEPM 2013 Table 1C GILs, Marine Waters										
NEPM 2013 Table 1A HSL C for Vapour Intrusion 2m-4m SAND										
Field ID	**Date**	**Units**								
BH2	24/11/2021	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
BH3	24/11/2021	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
BH4	24/11/2021	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001

			Fluorene	Indeno(1.2.3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAH*
NEPM 2013 Table 1C GILs, Drinking Water								
NEPM 2013 Table 1C GILs, Marine Waters					0.05			
NEPM 2013 Table 1A HSL C for Vapour Intrusion 2m-4m SAND								
Field ID	**Date**	**Units**						
BH2	24/11/2021	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
BH3	24/11/2021	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	0.00001
BH4	24/11/2021	mg/L	< 0.00001	< 0.00001	0.00002	< 0.00001	< 0.00001	0.00002

			TRH												
			Naphthalene	TRH >C10-C16	TRH >C10-C16 less Naphthalene (F2)	TRH >C10-C40 (total)*	TRH >C16-C34	TRH >C34-C40	TRH C10-C14	TRH C10-C36 (Total)	TRH C15-C28	TRH C29-C36	TRH C6-C10	TRH C6-C10 less BTEX (F1)	TRH C6-C9
NEPM 2013 Table 1C GILs, Drinking Water															
NEPM 2013 Table 1C GILs, Marine Waters															
NEPM 2013 Table 1A HSL C for Vapour Intrusion 2m-4m SAND			NL		NL									NL	
Field ID	**Date**	**Units**													
BH2	24/11/2021	mg/L	< 0.01	< 0.05	< 0.05	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02
BH3	24/11/2021	mg/L	< 0.01	< 0.05	< 0.05	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02
BH4	24/11/2021	mg/L	< 0.01	< 0.05	< 0.05	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02

			Arsenic (filtered)	Cadmium (filtered)	Chromium (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	4.4'-DDD	4.4'-DDE	4.4'-DDT
NEPM 2013 Table 1C GILs, Marine Waters				0.0007		0.0013	0.0044	0.0001	0.007	0.015			
Field ID	**Date**	**Units**											
BH2	24/11/2021	mg/L	0.005	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.0001	0.023	0.047	< 0.0002	< 0.0002	< 0.0002
BH3	24/11/2021	mg/L	< 0.001	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.0001	0.004	0.022	< 0.0002	< 0.0002	< 0.0002
BH4	24/11/2021	mg/L	< 0.001	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.0001	0.001	0.007	< 0.0002	< 0.0002	< 0.0002

			Organochlorine Pes									
			a-HCH	Aldrin	Aldrin and Dieldrin (Total)*	b-HCH	Chlordanes - Total	DDT + DDE + DDD (Total)*	d-HCH	Dieldrin	Endosulfan I	Endosulfan II
NEPM 2013 Table 1C GILs, Marine Waters												
Field ID	**Date**	**Units**										
BH2	24/11/2021	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
BH3	24/11/2021	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
BH4	24/11/2021	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002

			ticides									
			Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-HCH (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
NEPM 2013 Table 1C GILs, Marine Waters												
Field ID	**Date**	**Units**										
BH2	24/11/2021	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.005
BH3	24/11/2021	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.005
BH4	24/11/2021	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.005

			Vic EPA IWRG 621 OCP (Total)*	Vic EPA IWRG 621 Other OCP (Total)*	Azinphos-methyl	Bolstar	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos
NEPM 2013 Table 1C GILs, Marine Waters														
Field ID	**Date**	**Units**												
BH2	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002
BH3	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002
BH4	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002

			Organophosphorus Pesticides											
			Dimethoate	Disulfoton	EPN	Ethion	Ethoprop	Ethyl parathion	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion
NEPM 2013 Table 1C GILs, Marine Waters														
Field ID	**Date**	**Units**												
BH2	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
BH3	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
BH4	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

			Mevinphos	Monocrotophos	Naled	Omethoate	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Tetrachlorvinphos	Tokuthion	Trichloronate
NEPM 2013 Table 1C GILs, Marine Waters														
Field ID	**Date**	**Units**												
BH2	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
BH3	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
BH4	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

			BTEX												Total Recoverable Hydrocarbons						
			Benzene	Benzene	Ethylbenzene	Ethylbenzene	m&p-Xylenes	m&p-Xylenes	o-Xylene	o-Xylene	Toluene	Toluene	Xylenes - Total	Xylenes - Total*	Naphthalene	Naphthalene	TRH C6-C10	TRH C6-C10	TRH C6-C10 less BTEX (F1)	TRH C6-C9	TRH C6-C9
Field ID	**Date**	**Units**																			
TB	-	mg/L	< 0.001		< 0.001		< 0.002		< 0.001		< 0.001			< 0.003	< 0.01		< 0.02		< 0.02		< 0.02
TS	-	%		98		98		110		100		110	110			110		80		74	

			BTEX						Heavy Metals							
			Benzene	Ethylbenzene	m&p-Xylenes	o-Xylene	Toluene	Xylenes - Total*	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
Field ID	**Date**	**Units**														
RW101	24/11/2021	mg/L	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	< 0.001	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.005

			Organochlorine Pesticides														
			4.4'-DDD	4.4'-DDE	4.4'-DDT	a-HCH	Aldrin	Aldrin and Dieldrin (Total)*	b-HCH	Chlordanes - Total	DDT + DDE + DDD (Total)*	d-HCH	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin
Field ID	**Date**	**Units**															
RW101	24/11/2021	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002

Field ID	Date	Units	Endrin aldehyde	Endrin ketone	g-HCH (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Vic EPA IWRG 621 OCP (Total)*	Vic EPA IWRG 621 Other OCP (Total)*	Azinphos-methyl	Bolstar	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O
RW101	24/11/2021	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.02	< 0.002

			Organophosphorus Pesticides																
			Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN	Ethion	Ethoprop	Ethyl parathion	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos	Monocrotophos
Field ID	**Date**	**Units**																	
RW101	24/11/2021	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

													Polycyclic Ar							
			Naled	Omethoate	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Tetrachlorvinphos	Tokuthion	Trichloronate	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b&j)fluoranthene	Benzo(g.h.i)perylene	Benzo(k)fluoranthene
Field ID	**Date**	**Units**																		
RW101	24/11/2021	mg/L	< 0.002	< 0.02	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

			omatic Hydrocarbons																				
			Chrysene	Dibenz(a.h)anthracene	Fluoranthene	Fluorene	Indeno(1.2.3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAH*	Naphthalene	TRH >C10-C16	TRH >C10-C16 less Naphthalene (F2)	TRH >C10-C40 (total)*	TRH >C16-C34	TRH >C34-C40	TRH C10-C14	TRH C10-C36 (Total)	TRH C15-C28	TRH C29-C36	TRH C6-C10
Field ID	**Date**	**Units**																					
RW101	24/11/2021	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.05	< 0.05	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.02

Field ID	Date	Units	TRH C6-C10 less BTEX (F1)	TRH C6-C9
RW101	24/11/2021	mg/L	< 0.02	< 0.02

			BTEX																			
			Benzene	Ethylbenzene	m&p-Xylenes	o-Xylene	Toluene	Xylenes - Total*	Naphthalene	TRH >C10-C16	TRH >C10-C16 less Naphthalene (F2)	TRH >C10-C40 (total)*	TRH >C16-C34	TRH >C34-C40	TRH C10-C14	TRH C10-C36 (Total)	TRH C15-C28	TRH C29-C36	TRH C6-C10	TRH C6-C10 less BTEX (F1)	TRH C6-C9
Field ID	**Date**	**Units**																				
BH2	24/11/2021	mg/L	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	< 0.01	< 0.05	< 0.05	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02
QW01	24/11/2021	mg/L	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	< 0.01	< 0.05	< 0.05	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02
RPD%			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
QW02	24/11/2021	mg/L																			
RPD%																					

Field ID	Date	Units	Arsenic (filtered)	Cadmium (filtered)	Chromium (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	4.4'-DDD	4.4'-DDE	4.4'-DDT	a-HCH	Aldrin	Aldrin and Dieldrin (Total)*	b-HCH	Chlordanes - Total	DDT + DDE + DDD (Total)*	d-HCH
BH2	24/11/2021	mg/L	0.005	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.0001	0.023	0.047	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002
QW01	24/11/2021	mg/L	0.005	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.0001	0.023	0.046	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002
RPD%			0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
QW02	24/11/2021	mg/L	0.006	0.0002	<0.001	0.002	<0.001	<0.0001	0.026	0.054	<0.0005	<0.0005	< 0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
RPD%			18%	0%	0%	0%	0%	0%	12%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Organochlorine Pesticides																								
Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-HCH (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Vic EPA IWRG 621 OCP (Total)*	Vic EPA IWRG 621 Other OCP (Total)*	Azinphos-methyl	Bolstar	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos
< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002
< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	< 0.002	-	-	-	<0.0005	-	<0.0005	<0.0005	<0.0005	-	-	<0.0005	<0.0005	<0.0005
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	0%	-	0%	0%	0%	-	-	0%	0%	0%

Organophosphorus Pesticides																						
Dimethoate	Disulfoton	EPN	Ethion	Ethoprop	Ethyl parathion	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos	Monocrotophos	Naled	Omethoate	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Tetrachlorvinphos	Tokuthion	Trichloronate
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.02	< 0.002	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<0.0005	-	-	<0.0005	-	-	-	-	<0.0005	<0.0005	-	-	< 0.002	-	-	-	-	-	-	-	-	-	-	-
0%	-	-	0%	-	-	-	-	0%	0%	-	-	0%	-	-	-	-	-	-	-	-	-	-	-

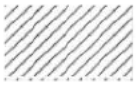
Appendix A
SOIL PROFILE LOGS

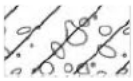
Soil Logging Symbols

CLAYS

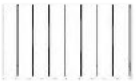

CLAY


silty CLAY

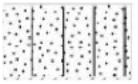

sandy CLAY


gravelly CLAY

SILTS

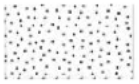

SILT

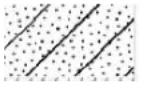

clayey SILT

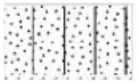

sandy SILT

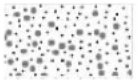

gravelly SILT

SANDS


SAND

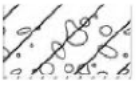

clayey SAND

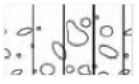

silty SAND

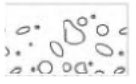

gravelly SAND

GRAVELS


GRAVEL


clayey GRAVEL


silty GRAVEL

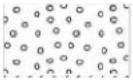

sandy GRAVEL

SEDIMENTARY ROCK

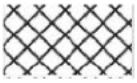

SANDSTONE


SILTSTONE


SHALE


CONGLOMERATE

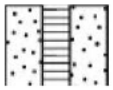
FILL

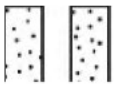

FILL


CONCRETE

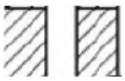

ASPHALT

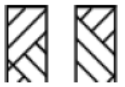
GROUNDWATER WELL SYMBOLS


WELL SCREEN


CASING – filter pack


CASING – backfill


CASING – bentonite seal


CASING – grout seal


BACKFILL

OTHER


TOPSOIL – sandy SILT


TOPSOIL – highly organic

Rock Description Explanation Sheet (1 of 2)

Weathering Condition (Degree of Weathering):

The degree of weathering is a continuum from fresh rock to soil. Boundaries between weathering grades may be abrupt or gradational.

Rock Material Weathering Classification		
Weathering Grade	**Symbol**	**Definition**
Residual Soil	RS	Soil-like material developed on extremely weathered rock; the mass structure and substance fabric are no longer evident; there is a large change in volume, but the material has not been significantly transported.
Extremely Weathered Rock	XW	Rock is weathered to such an extent that it has 'soil' properties, i.e. it either disintegrates or can be remoulded in water, but substance fabric and rock structure still recognisable.
Highly Weathered Rock	HW	Strong discolouration is evident throughout the rock mass, often with significant change in the constituent minerals. The intact rock strength is generally much weaker than that of the fresh rock.
Moderately Weathered Rock	MW	Modest discolouration is evident throughout the rock fabric, often with some change in the constituent minerals. The intact rock strength is usually noticeably weaker than that of the fresh rock.
Slightly Weathered Rock	SW	Rock is slightly discoloured but shows little or no change of strength from fresh rock.
Fresh Rock	FR	Rock shows no sign of decomposition or staining.

Notes:

1. Minor variations within broader weathering grade zones will be noted on the engineering borehole logs.
2. Extremely weathered rock is described in terms of soil engineering properties.
3. Weathering may be pervasive throughout the rock mass or may penetrate inwards from discontinuities to some extent.
4. The 'Distinctly Weathered (DW)' class as defined in AS1726-2017 is divided to incorporate HW and MW in the above table. The symbol DW should not be used.

Strength Condition (Intact Rock Strength):

Strength of Rock Material (Based on Point Load Strength Index, corrected to 50mm diameter – $I_{s(50)}$. Field guide used if no tests available. Refer to AS 4133.4.1-2007.			
Term	**Symbol**	**Point Load Index (MPa)** $I_{s(50)}$	**Field Guide to Strength**
Very Low	VL	>0.03 ≤0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 3cm thick can be broken by finger pressure.
Low	L	>0.1 ≤0.3	Easily scored with a knife; indentations 1mm to 3mm show in the specimen with firm blows of the pick point; has dull sound under hammer. A piece of core 150mm long by 50mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
Medium	M	>0.3 ≤1.0	Readily scored with a knife; a piece of core 150mm long by 50mm diameter can be broken by hand with difficulty.
High	H	>1 ≤3	A piece of core 150mm long by 50mm diameter cannot be broken by hand but can be broken by a pick with a single firm blow; rock rings under hammer.
Very High	VH	>3 ≤10	Hand specimen breaks with pick after more than one blow; rock rings under hammer.
Extremely High	EH	>10	Specimen requires many blows with geological pick to break through intact material; rock rings under hammer.

Notes:

1. These terms refer to the strength of the rock material and not to the strength of the rock mass which may be considerably weaker due to the effect of rock defects.
2. Anisotropy of rock material samples may affect the field assessment of strength.
3. Extremely Low Strength ('EL') is now not considered a description of rock strength in line with the updated AS1726-2017 as by definition EL rock should be described in terms of soil properties.

Rock Description Explanation Sheet (2 of 2)

Discontinuity Description: Refer to AS1726-2017, Table A10.

Anisotropic Fabric	
BED	Bedding
FOL	Foliation
LIN	Mineral lineation
Defect Type	
LP	Lamination Parting
Pt	Bedding Parting
FP	Cleavage / Foliation Parting
Jt	Joint
SZ	Sheared Zone
CZ	Crushed Zone
BZ	Broken Zone
HFZ	Highly Fractured Zone
AZ	Alteration Zone
VN	Vein

Roughness (e.g. Planar, Smooth is abbreviated Pln / Sm)		**Class**
Stepped (Stp)	Rough or irregular (R or Irr)	I
	Smooth (Sm)	II
	Slickensided (Sl)	III
Undulating (Un)	Rough (R)	IV
	Smooth (Sm)	V
	Slickensided (Sl)	VI
Planar (Pln)	Rough (R)	VII
	Smooth (Sm)	VIII
	Slickensided (Sl)	IX

Aperture		**Infilling**		
Closed	CD	No visible coating or infill	Clean	Cn
Open	OP	Surfaces discoloured by mineral/s	Stain	St
Filled	FL	Visible mineral or soil infill <1mm	Veneer	Vr
Tight	TI	Visible mineral or soil infill >1mm	Coating	Ct

Other	
Clay	Clay
Fe	Iron
Co	Coal
Carb	Carbonaceous
Sinf	Soil Infill Zone
Qz	Quartz
Ca	Calcite
Chl	Chlorite
Py	Pyrite
Int	Intersecting
Inc	Incipient
DI	Drilling Induced
H	Horizontal
V	Vertical

Note: Describe 'Zones' and 'Coatings' in terms of composition and thickness (mm).

Discontinuity Spacing: On the geotechnical borehole log, a graphical representation of defect spacing vs depth is shown. This representation takes into account all the natural rock defects occurring within a given depth interval, excluding breaks induced by the drilling / handling of core. Refer to AS1726-2017, BS5930-1999.

Defect Spacing			**Bedding Thickness (Sedimentary Rock Stratification)**	
Spacing/Width (mm)	Descriptor	Symbol	Descriptor	Spacing/Width (mm)
			Thinly Laminated	< 6
<20	Extremely Close	EC	Thickly Laminated	6 – 20
20 – 60	Very Close	VC	Very Thinly Bedded	20 – 60
60 – 200	Close	C	Thinly Bedded	60 – 200
200 – 600	Medium	M	Medium Bedded	200 – 600
600 – 2000	Wide	W	Thickly Bedded	600 – 2000
2000 – 6000	Very Wide	VW	Very Thickly Bedded	> 2000
>6000	Extremely Wide	EW		

Defect Spacing in 3D	
Term	**Description**
Blocky	Equidimensional
Tabular	Thickness much less than length or width
Columnar	Height much greater than cross section

Defect Persistence
(areal extent)
Trace length of defect given in metres

Symbols: The list below provides an explanation of terms and symbols used on the geotechnical borehole, test pit and penetrometer logs.

Test Results			
PI	Plasticity Index	c'	Effective Cohesion
LL	Liquid Limit	c_u	Undrained Cohesion
LI	Liquidity Index	c'_R	Residual Cohesion
DD	Dry Density	ϕ'	Effective Angle of Internal Friction
WD	Wet Density	ϕ_u	Undrained Angle of Internal Friction
LS	Linear Shrinkage	ϕ'_R	Residual Angle of Internal Friction
MC	Moisture Content	c_v	Coefficient of Consolidation
OC	Organic Content	m_v	Coefficient of Volume Compressibility
WPI	Weighted Plasticity Index	$c_{\alpha\varepsilon}$	Coefficient of Secondary Compression
WLS	Weighted Linear Shrinkage	e	Voids Ratio
DoS	Degree of Saturation	ϕ'_{cv}	Constant Volume Friction Angle
APD	Apparent Particle Density	q_t / q_c	Piezocone Tip Resistance (corrected / uncorrected)
s_u	Undrained Shear Strength	q_d	PANDA Cone Resistance
q_u	Unconfined Compressive Strength	$I_{s(50)}$	Point Load Strength Index
TCR	Total Core Recovery	*RQD*	Rock Quality Designation

Test Symbols	
DCP	Dynamic Cone Penetrometer
SPT	Standard Penetration Test
CPTu	Cone Penetrometer (Piezocone) Test
PANDA	Variable Energy DCP
PP	Pocket Penetrometer Test
U50	Undisturbed Sample 50 mm (nominal diameter)
U100	Undisturbed Sample 100mm (nominal diameter)
UCS	Uniaxial Compressive Strength
Pm	Pressuremeter
FSV	Field Shear Vane
DST	Direct Shear Test
PR	Penetration Rate
PLI	Point Load Index Test (axial)
D	Point Load Test (diametral)
L	Point Load Test (irregular lump)

Groundwater level	Water Inflow	Water Outflow

Borehole No: BH1

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	1.11.21	Northing	6334181.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	1.11.21	Easting	363745.00	Bearing	---	Ground Level	0.75 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
ASV	05/10/21	0	1		SC	TOPSO L: Clayey SAND: fine to medium grained, brown	D	VL			TOPSOIL
					SC	FILL: SAND: fine to medium grained, brown, with clay			SPT 3, 1, 1 N=2		FILL SPT Recovery: 0.24 m; PP 25kPa
		-1	2		CL	Sandy CLAY: low plasticity, grey, fine to medium grained sand	>PL	VS			ESTUARINE DEPOSITS
		-2	3		SC	Clayey Gravelly SAND: fine to medium grained, grey, fine to medium grained, subangular-subrounded gravel	W	VL	SPT 0, 1, 1 N=2		SPT Recovery: 0.25 m; PP 0kPa
		-3	4								

Remarks:

EP UB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH GPJ <<DrawingFile>> 03/01/2022 12:00 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	1.11.21	Northing	6334181.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	1.11.21	Easting	363745.00	Bearing	---	Ground Level	0.75 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
ASV					SC	Clayey Gravelly SAND: fine to medium grained, grey, fine to medium grained, subangular-subrounded gravel *(continued)*	W	VL	SPT 0, 0, 2 N=2		SPT Recovery: 0.25 m; PP 0kPa
		-4	5		CI-CH	Silty CLAY: medium to high plasticity, grey	~PL	F to St	SPT 3, 5, 6 N=11		SPT Recovery: 0.45 m; PP 200kPa
		-6	7		SC	Clayey SAND: fine to medium grained, grey	W	L to MD	SPT 4, 4, 4 N=8		SPT Recovery: 0.45 m; PP 100kPa
		-7	8								

Remarks:

EP UB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:00 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	1.11.21	Northing	6334181.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	1.11.21	Easting	363745.00	Bearing	---	Ground Level	0.75 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
ASV		-8	9		SC	Clayey SAND: fine to medium grained, grey*(continued)*	W	L to MD	SPT 5, 9, 10 N=19		SPT Recovery: 0.45 m; PP 200kPa
						8.85m: with ferruginous cementations 100-200mm					
WB		-9	10		SC	Clayey Gravelly SAND: fine to medium grained, brown and grey mottled, fine to medium grained, subangular-subrounded gravel, with ferruginous cementations 5-20mm			SPT 3, 3, 5 N=8		RESIDUAL SOIL SPT Recovery: 0.27 m; PP 100kPa
		-10	11								
		-11	12		CI-CH	Silty CLAY: medium to high plasticity, brown	<PL ~PL	St to VSt	SPT 8, 8, 11 N=19		SPT Recovery: 0.4 m; PP 300kPa

Remarks:

EP UB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:00 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	1.11.21	Northing	6334181.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	1.11.21	Easting	363745.00	Bearing	---	Ground Level	0.75 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
WB		12	13		CI-CH	Silty CLAY: medium to high plasticity, brown *(continued)*					
		13	14		CL-CI	Sandy CLAY: low to medium plasticity, grey and brown mottled, fine to medium grained sand	~PL	St to VSt	SPT 1, 5, 11 N=16		SPT Recovery: 0.45 m; PP 200kPa
		14	15		SC	Extremely weathered SANDSTONE recovered as Clayey SAND, fine to medium grained, brown, very low to low strength	W	D to VD	SPT 5/0mm HB N=Refusal		EXTREMELY WEATHERED ROCK SPT Recovery: 0 m
		15	16								

Remarks: Continued as Cored Drill Hole

EP UB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:00 10.03.00.09 Developed by Datgel

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	1.11.21	Northing	6334181.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	1.11.21	Easting	363745.00	Bearing	---	Ground Level	0.75 AHD

DRILLING				ROCK MASS CHARACTERISTICS						DISCONTINUITIES		
Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (X - Axial, O - Diametral, □ - Lump) EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH	IS_{50} (MPa) D L A	Defect Spacing (mm) 20, 40, 100, 300, 1000	Core Rec'y (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)
NMLC					START CORING AT 16.00m							
					NO CORE							
					PEBBLY SANDSTONE: fine to medium grained, grey, thinly bedded, fractured	MW				75	40	16.12: Be, 0°, p, s, cn 16 27: Be, 0°, u, s, cn 16 35: Be, 0°, p, r, cn 16.41: Be, 5°, s, r, cn 16.41-16 51: Jo, 95°, u, s, cn 16 51-16.75: Jo, 30°, s, s, cn
		16						0.31 0.22				
			17					0.22 0.57				
						SW						17 29: Be, 0°, u, r, cn
					CONGLOMERATE: fine to medium grained, grey, medium bedded, slightly fractured							
		17								100	75	17 80: Be, 0°, p, r, cn
			18		PEBBLY SANDSTONE: fine to medium grained, grey, thinly bedded, fractured	MW						18 28-18.45: Jo, 30°, p, r, cn
					CONGLOMERATE: fine to medium grained, grey, medium bedded, fractured							18 63: Be, 0°, u, r, cn
		18						0.35 0.31				
			19					0.43 0.46				
						SW to FR						
		19								100	95	19 56: Be, 5°, u, r, cn
			20									

Remarks:

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	1.11.21	Northing	6334181.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	1.11.21	Easting	363745.00	Bearing	---	Ground Level	0.75 AHD

DRILLING				ROCK MASS CHARACTERISTICS						DISCONTINUITIES		
Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (× Axial, ○ Diametral, □ Lump) EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH	IS_{50} (MPa) D L A	Defect Spacing (mm) 20, 40, 100, 300, 1000	Core Rec'y (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)
NMLC		20	21		CONGLOMERATE: fine to medium grained, grey, medium bedded, fractured *(continued)*	SW to FR		2.43 4.2 0.3 0.23				20.44: Be, 0°, p, r, cn 20 54: Be, 0°, p, r, cn
					PEBBLY SANDSTONE: fine to medium grained, grey, thinly bedded, unbroken					100	95	
		21	22		CONGLOMERATE: fine to medium grained, grey, medium bedded, slightly fractured							22.42: Be, 0°, u, r, cn
		22	23			FR		1.2 0.77		100	95	22 68: Be, 0°, p, r, cn
								0.57 0.83				23 37: Be, 0°, u, r, cn
		23	24		PEBBLY SANDSTONE: fine to medium grained, grey, thinly bedded, unbroken							23 63: Be, 5°, u, r, cn

Remarks:

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Borehole No: BH1

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	1.11.21	Northing	6334181.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	1.11.21	Easting	363745.00	Bearing	---	Ground Level	0.75 AHD

DRILLING				ROCK MASS CHARACTERISTICS						DISCONTINUITIES		
Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (X - Axial, O - Diametral, □ - Lump) EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH	IS_{50} (MPa) D L A	Defect Spacing (mm) 20, 40, 100, 300, 1000	Core Rec'y (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)
		24	24		PEBBLY SANDSTONE: fine to medium grained, grey, thinly bedded, unbroken *(continued)*	FR		0.3 0.9		100	95	24.76-24.87: Jo, 15°, u, s, Cemented silty clay cn
NMLC		25 26 27	25 26 27 28		Borehole BH1 Terminated at 24.87 m Target depth achieved							

Remarks:

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Client	Trinity Point Development Unit Trust
Project	Trinity Point Development
Location	Trinity Point Drive
Job Number	EP2397

BH ID 1
Depth 16.00-24.87m
Date 01.11.2021



Core Photograph

BH1

Borehole No: BH2

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	2.11.21	Northing	6334086.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	2.11.21	Easting	363912.00	Bearing	---	Ground Level	1 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
ASV	02/11/21 ▽	0	1		SP	TOPSO L: Gravelly SAND: fine to medium grained, grey, fine to medium grained, rounded-subrounded gravel	D	VL			TOPSOIL	
					GP	Clayey Sandy GRAVEL: fine to medium grained, rounded to sub-rounded, brown, fine to medium grained sand	M		SPT 2, 0, 0 N=0		ESTUARINE DEPOSITS SPT Recovery: 0.1 m; PP 0kPa	
		-1	2									
					SC	Clayey SAND: fine to medium grained, grey	W		SPT 0, 1, 1 N=2		SPT Recovery: 0.2 m; PP 0kPa	
		-2	3									
		-3	4									

Remarks:

Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

Slotted PVC Pipe with Sand Backf ll

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 01/02/2022 19:37 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	2.11.21	Northing	6334086.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	2.11.21	Easting	363912.00	Bearing	---	Ground Level	1 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
ASV		-4	5		SC	Clayey SAND: fine to medium grained, grey *(continued)*	W	MD to D	SPT 5, 7, 8 N=15		SPT Recovery: 0.4 m; PP 0kPa	
					GC	Clayey GRAVEL: fine to medium grained, sub-rounded to sub-angular, grey and pink					RESIDUAL SOIL	
		-5	6		CI-CH	Gravelly CLAY: medium to high plasticity, grey and red mottled, fine to medium grained, angular-subangular gravel, with ferruginous cementations (20-30mm)	<PL	St to VSt	SPT 8, 18, 21 N=39		SPT Recovery: 0.35 m; PP 400kPa	
		-6	7		SC	Clayey SAND: fine to medium grained, grey and pink, with fine to medium grained gravel, angular to subangular	W	D	SPT 10, 22, 16 N=38		SPT Recovery: 0.36 m; PP 300 kPa	
		-7	8		GP	Clayey Sandy GRAVEL: fine to medium grained, sub-angular to angular, red, brown and grey mottled, fine to medium grained sand						

Remarks:

Well Legend:

Slotted PVC Pipe with Sand Backfill

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:00 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	2.11.21	Northing	6334086.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	2.11.21	Easting	363912.00	Bearing	---	Ground Level	1 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
ASV					GP	Clayey Sandy GRAVEL: fine to medium grained, sub-angular to angular, red, brown and grey mottled, fine to medium grained sand*(continued)*	W	D				
		-8	9		CI-CH	Silty CLAY: medium to high plasticity, grey	~PL	VSt to H	SPT 7, 12, 23 N=35		SPT Recovery: 0.33 m; PP 400kPa	
						9.50m: becomes grey and pink						
		-9	10						SPT 4, 8, 12 N=20		SPT Recovery: 0.45 m; PP 200kPa	
WB					SC	Clayey SAND: fine to medium grained, grey and brown	W	MD to D				
		-10	11									
		-11	12		SC	Extremely weathered Sandstone recovered as Clayey Gravely SAND, fine to medium grained, brown, fine to medium grained, subangular to angular, gravel, very low to low strength		D to VD	SPT 12/50mm HB N=Refusal		EXTREMELY WEATHERED ROCK SPT Recovery: 0.05 m	

Remarks:

Well Legend:

Slotted PVC Pipe with Sand Backfill

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:00 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	2.11.21	Northing	6334086.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	2.11.21	Easting	363912.00	Bearing	---	Ground Level	1 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
WB					SC	Extremely weathered Sandstone recovered as Clayey Gravely SAND, fine to medium grained, brown, fine to medium grained, subangular to angular, gravel, very low to low strength *(continued)*	W	D to VD			EXTREMELY WEATHERED ROCK	
		12	13			Continued as Cored Drill Hole						
		13	14									
		14	15									
		15	16									

Remarks:

Well Legend:

Slotted PVC Pipe with Sand Backfill

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:00 10.03.00.09 Developed by Datgel

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	2.11.21	Northing	6334086.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	2.11.21	Easting	363912.00	Bearing	---	Ground Level	1 AHD

DRILLING				ROCK MASS CHARACTERISTICS						DISCONTINUITIES			
Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (× Axial, ○ Diametral, □ Lump) EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH	IS_{50} (MPa) D L A	Defect Spacing (mm) 20, 40, 100, 300, 1000	Core Recy (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)	Well Details
					START CORING AT 12.70m								
NMLC		12	13		NO CORE								
					PEBBLY SANDSTONE: fine to medium grained, grey, medium bedded, slightly fractured	MW		0.23 0.62				12.80: Be, 0°, p, s, cn 12.86: Be, 0°, p, s, cn 12.92: Db	
								0.71 0.96				13.55: Be, 0°, u, s, cn	
		13	14							95	95	13.89: Be, 5°, p, s, cn	
					CONGLOMERATE: fine to coarse grained, grey and green, medium bedded, slightly fractured			0.37 0.88					
						SW							
		14	15									14.96-15 01: Cz, p, r, cn	
										100	75		
						MW						15.50-15 53: Cl, 0°, u, s, cg 15.55: Be, 0°, p, r, cg	
								0.14 0.12					
						SW							
										100	95	15.81: Be, 0°, p, r, cn 15.85: Be, 0°, p, r, cn	
		15	16			FR							

Remarks:

Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	2.11.21	Northing	6334086.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	2.11.21	Easting	363912.00	Bearing	---	Ground Level	1 AHD

DRILLING				ROCK MASS CHARACTERISTICS						DISCONTINUITIES			
Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (× Axial, ○ Diametral, □ Lump) EL -0.03 VL -0.1 L -0.3 M -1 H -3 VH -10 EH	IS_{50} (MPa) D L A	Defect Spacing (mm) 20 40 100 300 1000	Core Rec'y (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)	Well Details
NMLC		16	17		CONGLOMERATE: fine to coarse grained, grey and green, medium bedded, slightly fractured *(continued)*	FR		0.94 1 21		100	95	16.13: Db 16.47: Db 16.69: Db 16.80: Be, 0°, u, r, cn	
								0.86 1.2				17.51: Be, 0°, u, r, cn	
		17	18		Borehole BH2 Terminated at 17.83 m Target depth achieved								
		18	19										
		19	20										

Remarks:

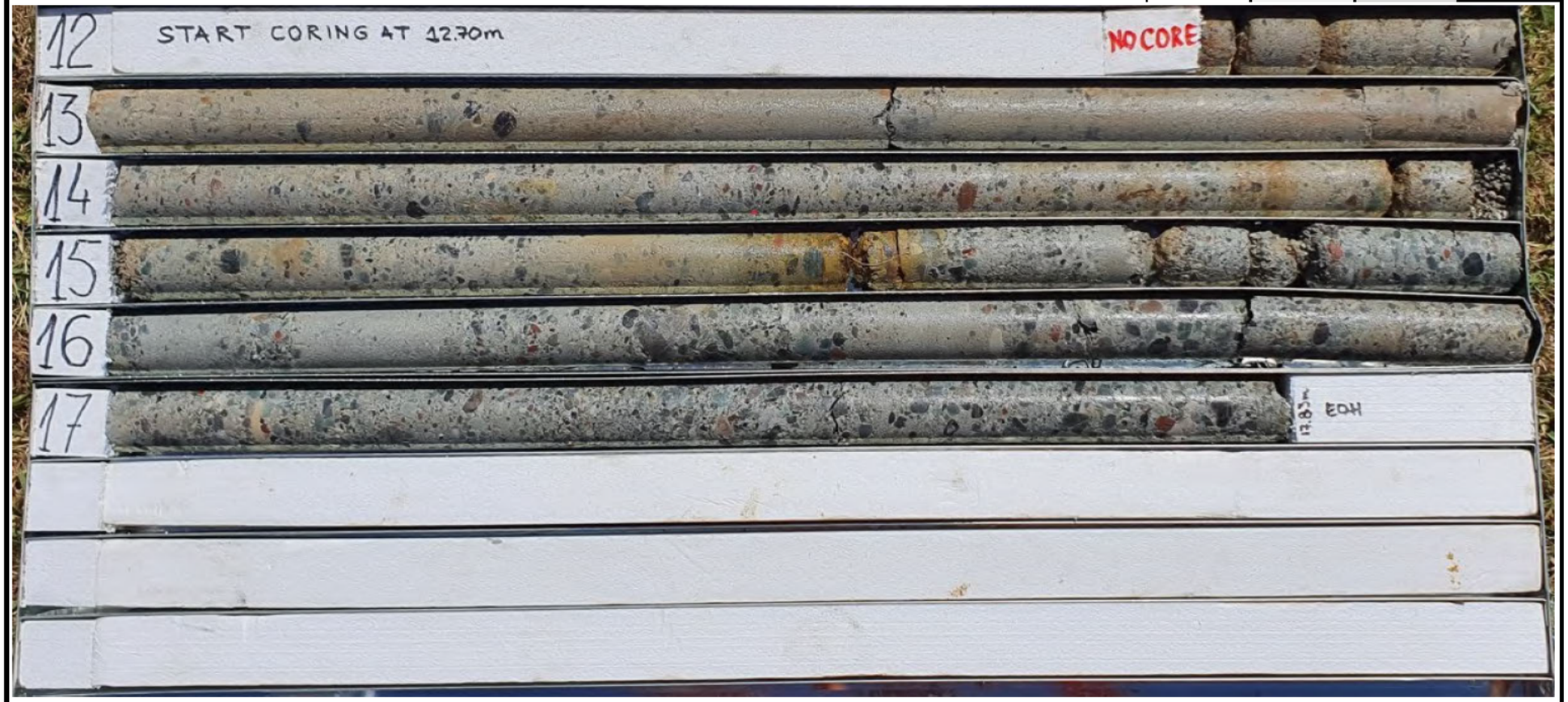
Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Client	Trinity Point Development Unit Trust
Project	Trinity Point Development
Location	Trinity Point Drive
Job Number	EP2397

BH ID 2
Depth 12.70-17.83m
Date 02.11.2021



Core Photograph

BH2

Borehole No: BH3

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	3.11.21	Northing	6333995.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	3.11.21	Easting	363901.00	Bearing	---	Ground Level	3 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
ASV		2	1		CL	TOPSO L: Sandy CLAY: low plasticity, grey, fine to medium grained sand	<PL	F to St			TOPSOIL	
					CL-CI	FILL: Sandy CLAY: low to medium plasticity, brown, fine to medium grained sand, with fine medium grained gravel, subangular to subrounded	~PL				FILL	
		1	2		CL-CI	Sandy CLAY: low to medium plasticity, brown and grey, fine to medium grained sand, with ferruginous cementations (10-20mm)	<PL	St to VSt	SPT 4, 8, 11 N=19		RESIDUAL SOIL SPT Recovery: 0.45 m; PP 400kPa	
		0	3			3.50m: becomes grey	~PL		SPT 1, 4, 8 N=12		SPT Recovery: 0.45 m; PP 400kPa	
		-1	4									

Remarks:

Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

Slotted PVC Pipe with Sand Backf ll

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 01/02/2022 19:37 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	3.11.21	Northing	6333995.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	3.11.21	Easting	363901.00	Bearing	---	Ground Level	3 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
ASV		-2	5		CL-CI	Sandy CLAY: low to medium plasticity, brown and grey, fine to medium grained sand, with ferruginous cementations (10-20mm)*(continued)* 4.30m: becomes brown and grey with ferruginous cementations (20-30mm) 4.75m to 5.25m: becomes red	~PL	St to VSt	SPT 4, 8, 11 N=19		RESIDUAL SOIL SPT Recovery: 0.45 m; PP 400kPa	
	03/11/21				CL-CI	Gravelly Sandy CLAY: low to medium plasticity, grey, fine to medium grained sand, fine to medium grained, subangular to angular gravel			SPT 3, 7, 8 N=15		SPT Recovery: 0.45 m; PP 200kPa	
WB		-3	6									
		-4	7		SC	Clayey SAND: fine to medium grained, grey and brown, with fine to medium grained gravel, angular to subangular	W	MD	SPT 9, 12, 12 N=24		SPT Recovery: 0.45 m; PP 400kPa	
		-5	8		CI-CH	Silty CLAY: medium to high plasticity, grey	~PL	St to VSt				

Remarks:

Well Legend:

Slotted PVC Pipe with Sand Backfill

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:00 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	3.11.21	Northing	6333995.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	3.11.21	Easting	363901.00	Bearing	---	Ground Level	3 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
					CI-CH	Silty CLAY: medium to high plasticity, grey*(continued)*	~PL	St to VSt				
WB		-6	9		SC	Extremely weathered Sandstone recovered as Clayey Gravely SAND, fine to medium grained, brown and grey, fine to medium grained, subangular to angular gravel, very low to low strength	M	MD to D	SPT 10, 21, 31 N=52		EXTREMELY WEATHERED ROCK SPT Recovery: 0.4 m; PP 400kPa	
		-7	10			10.25m: becomes grey and brown			SPT 15, 23, 13/30mm HB N>36		SPT Recovery: 0.33 m; PP300 kPa	
		-8	11					D to VD	SPT 10, 25, 15/20mm HB N>40		SPT Recovery: 0.32 m; PP 400kPa	
		-9	12									

Remarks:

Well Legend:

Slotted PVC Pipe with Sand Backfill

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 14:04 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	3.11.21	Northing	6333995.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	3.11.21	Easting	363901.00	Bearing	---	Ground Level	3 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
WB		10	13		SC	Extremely weathered Sandstone recovered as Clayey Gravely SAND, fine to medium grained, brown and grey, fine to medium grained, subangular to angular gravel, very low to low strength*(continued)*	M				coring tentative - no recovery	
		11	14									
		12	15			Continued as Cored Drill Hole						
		13	16									

Remarks:

Well Legend:

Slotted PVC Pipe with Sand Backfill

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:00 10.03.00.09 Developed by Datgel

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	3.11.21	Northing	6333995.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	3.11.21	Easting	363901.00	Bearing	---	Ground Level	3 AHD

DRILLING				ROCK MASS CHARACTERISTICS						DISCONTINUITIES			
Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (× - Axial, ○ - Diametral, □ - Lump) EL VL L M H VH EH (-0.03, -0.1, -0.3, -1, -3, -10)	IS_{50} (MPa) D L A	Defect Spacing (mm) 20 40 100 300 1000	Core Rec'y (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)	Well Details
		10	13										
		11	14										
					START CORING AT 14.80m								
NMLC		12	15		INTERBEDDED SANDSTONE AND SILTSTONE: fine to medium grained, dark red and grey, thinly bedded, slightly fractured	SW		0.18 0.12		100 100	100 35	15.49: Be, 0°, u, s, cn 15.67: Be, 0°, p, s, cn 15.77: Be, 0°, p, s, cn	
		13	16									15.98: Db	

Remarks:

Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Borehole No: BH3

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	3.11.21	Northing	6333995.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	3.11.21	Easting	363901.00	Bearing	---	Ground Level	3 AHD

DRILLING | ROCK MASS CHARACTERISTICS | DISCONTINUITIES

Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (× Axial, ○ Diametral, □ Lump) EL VL L M H VH EH (-0.03 -0.1 -0.3 -1 -3 -10)	IS_{50} (MPa) D L A	Defect Spacing (mm) 20 40 100 300 1000	Core Rec'y (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)	Well Details
NMLC					INTERBEDDED SANDSTONE AND SILTSTONE: fine to medium grained, dark red and grey, thinly bedded, slightly fractured *(continued)*			0.33 0.75					
										100	35	16.32: Be, 0°, p, s, cn	
					CONGLOMERATE: fine to medium grained, grey, thinly bedded, slightly fractured	SW						16.74: Be, 0°, p, r, cn 16.81: Be, 0°, u, r, cn	
		14	17									17.03: Be, 5°, u, s, cn	
								0.78 1.1				17.22-17 24: Be, 0°, p, r, cn 17.31: Be, 0°, u, r, cn	
												17.51: Db	
					PEBBLY SANDSTONE: fine to medium grained, grey, thinly bedded, sligthly fractured							17.81: Db	
		15	18									17.90-18.13: Jo, 30°, u, s, cn	
								1.63 2 02				18.18: Db	
										100	100	18.47: Be, 0°, u, r, cn	
						FR						18.88: Be, 0°, p, s, cn 18.95: Db	
		16	19					2.3 3					
												19.90: Be, 0°, p, s, cn	
		17	20		CONGLOMERATE: fine to medium grained, grey, thinly								

Remarks:

Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Borehole No: BH3

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	3.11.21	Northing	6333995.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	3.11.21	Easting	363901.00	Bearing	---	Ground Level	3 AHD

DRILLING				ROCK MASS CHARACTERISTICS						DISCONTINUITIES			
Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (× - Axial, ○ - Diametral, □ - Lump) EL VL L M H VH EH (-0.03, -0.1, -0.3, -1, -3, -10)	IS_{50} (MPa) D L A	Defect Spacing (mm) (20, 40, 100, 300, 1000)	Core Rec'y (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)	Well Details
		18	21		bedded, slightly fractured Borehole BH3 Terminated at 19.98 m Target depth achieved								
		19	22										
		20	23										
		21	24										

Remarks:

Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Client	Trinity Point Development Unit Trust
Project	Trinity Point Development
Location	Trinity Point Drive
Job Number	EP2397

BH ID 3
Depth 14.80-19.98m
Date 03.11.2021



Core Photograph

BH3

Borehole No: BH4

Engineering Log - Borehole

SHEET 1 OF 6

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	4.11.21	Northing	6333864.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	4.11.21	Easting	363943.00	Bearing	---	Ground Level	4 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
AD/V					SC	TOPSO L: Clayey SAND: fine to medium grained, grey, with fine to medium grained gravel, subrounded to rounded	D	L			TOPSOIL	
					CL-CI	Gravelly Sandy CLAY: low to medium plasticity, brown, fine to medium grained sand, fine to medium grained, subangular to angular gravel	~PL	VSt	SPT 7, 9, 14 N=23		RESIDUAL SOIL SPT Recovery: 0.45 m; PP 400kPa	
		3	1		CL-CI	Gravelly CLAY: low to medium plasticity, brown, fine to medium grained, subangular to subrounded gravel	<PL					
		2	2		SC	Clayey SAND: fine to medium grained, grey and brown, with ferruginous cementations (10-20mm)	D	D	SPT 7, 14, 24 N=38		SPT Recovery: 0.45 m; PP 400kPa	
		1	3		CL-CI	Gravelly Sandy CLAY: low to medium plasticity, brown, fine to medium grained sand, fine to medium grained, subrounded gravel	<PL	VSt				
		0	4									

Remarks:

Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

Slotted PVC Pipe with Sand Backf ll

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 01/02/2022 19:48 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	4.11.21	Northing	6333864.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	4.11.21	Easting	363943.00	Bearing	---	Ground Level	4 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
AD/V		-1	5		SC	Clayey SAND: fine to medium grained, brown, with chips of rock (SANDSTONE) 10-20mm	D	D to VD	SPT 20, 5/20mm HB N>5		EXTREMELY WEATHERED ROCK SPT Recovery: 0.17 m; PP 400kPa	
		-2	6						SPT 7, 30/150mm HB N>30		SPT Recovery: 0.3 m; PP 400kPa	
	04/11/21	-3	7				W		SPT 17/50mm HB N=Refusal		SPT Recovery: 0.05 m	
WB		-4	8									

Remarks:

Well Legend:

Slotted PVC Pipe with Sand Backfill

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:01 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	4.11.21	Northing	6333864.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	4.11.21	Easting	363943.00	Bearing	---	Ground Level	4 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
WB		-5	9		SC	Clayey SAND: fine to medium grained, brown, with chips of rock (SANDSTONE) 10-20mm *(continued)*	W	D to VD			EXTREMELY WEATHERED ROCK	
		-6	10									
		-7	11									
		-8	12									

Remarks:

Well Legend:

Slotted PVC Pipe with Sand Backfill

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:01 10.03.00.09 Developed by Datgel

Engineering Log - Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	4.11.21	Northing	6333864.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	4.11.21	Easting	363943.00	Bearing	---	Ground Level	4 AHD

DRILLING				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)	Well Details
WB		-9	13		SC	Clayey SAND: fine to medium grained, brown, with chips of rock (SANDSTONE) 10-20mm *(continued)* 12.00m: becomes grey	W	D to VD			EXTREMELY WEATHERED ROCK	
					SC	Extremely weathered Sandstone, recovered as Clayey Gravely SAND, fine to medium grained, grey, fine to medium grained, subangular to angular gravel, very low to low strength						
		-10	14			Continued as Cored Drill Hole						
		-11	15									
		-12	16									

Remarks:

Well Legend:

Slotted PVC Pipe with Sand Backfill

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:01 10.03.00.09 Developed by Datgel

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	4.11.21	Northing	6333864.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	4.11.21	Easting	363943.00	Bearing	---	Ground Level	4 AHD

DRILLING				ROCK MASS CHARACTERISTICS						DISCONTINUITIES			
Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (× Axial, ○ Diametral, □ Lump) EL VL L M H VH EH (-0.03, -0.1, -0.3, -1, -3, -10)	IS_{50} (MPa) D L A	Defect Spacing (mm) 20 40 100 300 1000	Core Rec'y (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)	Well Details
		-9	13		START CORING AT 13.00m								
NMLC					NO CORE					80	0	13.06: Be, 45°, s, s, cn 13.10-13.13: Cz, u, s, cn	
					INTERBEDDED SANDSTONE AND SILTSTONE: fine to coarse grained, grey, very thinly bedded, fractured	MW		0.07 0.11				13.20: Db 13.32: Be, 0°, u, s, cn 13.36: Be, 0°, p, s, cn 13.45: Is, 0°, p, s, vn 13.53: Is, 0°, p, s, vn 13.60: Is, 0°, p, s, vn 13.64: Be, 5°, s, s, cn	
		-10	14									13.79-13 93: Fo, 0°, p, s, cn 14.03: Be, 0°, p, s, cn 14.07: Be, 0°, p, s, cn	
								1.5 2 31					
						SW to FR				100	55	14.25: Be, 5°, p, s, cn 14.32: Be, 5°, p, s, cn 14.75: Be, 0°, p, s, cn 14.85: Be, 5°, u, r, cn 14.92: Be, 60°, s, r, cn	
		-11	15		CONGLOMERATE WITH BEDS OF PEBBY SANDSTONE 50-100MM: fine to medium grained, grey and green, thinly bedded, fractured							15.09: Be, 0°, u, r, cn 15.31: Be, 10°, p, r, cn	
								1.93 2 24				15.50: Be, 10°, u, r, cn	
		-12	16									15.86: Be, 0°, u, r, cn 15.94: Be, 5°, p, r, cn	

Remarks:

Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397 JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Borehole No: BH4

Engineering Log - Cored Borehole

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Drilling	4.11.21	Northing	6333864.00	Slope	90°	Equipment	Comacchio Geo 205
Completed Drilling	4.11.21	Easting	363943.00	Bearing	---	Ground Level	4 AHD

DRILLING | ROCK MASS CHARACTERISTICS | DISCONTINUITIES

Method	Water	RL (m)	Depth (m)	Graphic Log	Description of Rock (rock type: colour, grain size, structure, minor components)	Weathering	Strength Is_{50} (× Axial, ○ Diametral, □ Lump) EL -0.03, VL -0.1, L -0.3, M -1, H -3, VH -10, EH	IS_{50} (MPa) D L A	Defect Spacing (mm) 20, 40, 100, 300, 1000	Core Rec'y (%)	RQD (%)	Description of Defects (defect type, inclination, roughness, thickness, infilling)	Well Details
NMLC		13	17		CONGLOMERATE WITH BEDS OF PEBBY SANDSTONE 50-100MM: fine to medium grained, grey and green, thinly bedded, fractured *(continued)*	SW		0.58 (0 93)		100	55	16.03: Be, 0°, u, r, cn 16.19-16 35: Cs, 0°, p, s, cn 16.49: Be, 0°, p, r, cn 16.67: Be, 0°, p, r, cn 16.90: Be, 0°, s, r, cn 16.94: Db 17.19: Be, 5°, u, r, cn	
		14	18			FR		1.4 (1.5) 0.56 (0 85)		100	80	17.69-17.79: Cz, 0°, u, r, cn 17.92: Db 18.02: Be, 0°, u, s, cn 18.29: Be, 0°, u, r, cn 18.70: Db	
		15	19					0.67 (0 62)				19.07: Be, 0°, u, r, cn	
		16	20		Borehole BH4 Terminated at 19.32 m Target depth achieved								

Remarks:

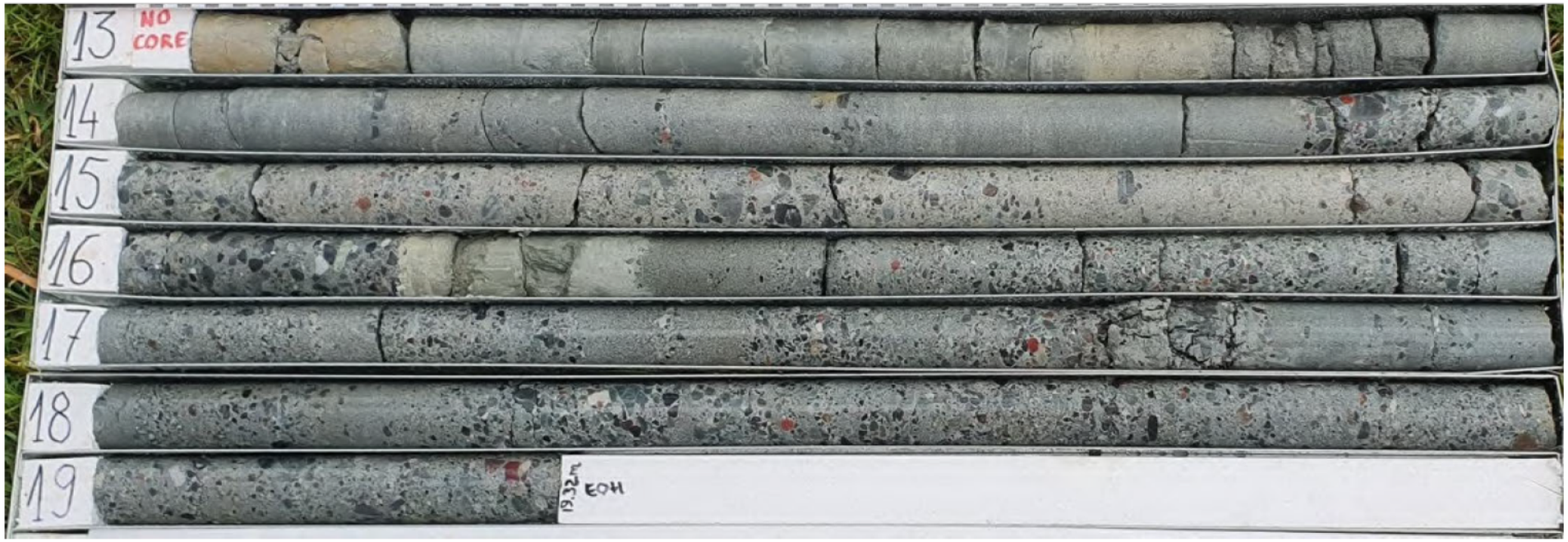
Well Legend:

Bentonite Seal 6 pipe group, 5 pipes

EP LIB 05.GLB Log CW CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:21 10.03.00.09 Developed by Datgel

Client	Trinity Point Development Unit Trust
Project	Trinity Point Development
Location	Trinity Point Drive
Job Number	EP2397

BH ID 4
Depth 13.00-19.32m
Date 04.11.2021



Core Photograph

BH4

Test Pit No: TP1

Engineering Log - Test Pit

SHEET 1 OF 1

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Excavation	10.11.21	Northing	6334123.00	Slope	90°	Equipment	Hand Auger
Completed Excavation	10.11.21	Easting	363835.00	Bearing	---	Ground Level	2 AHD

EXCAVATION				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests DCP Results (blows/ 100mm)	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
HA	Not Encountered	1	1		GC	FILL: Sandy GRAVEL: fine to medium grained, poorly graded, rounded to sub-rounded, grey and brown, fine to medium grained sand sand, with clay	M	MD and D	2		FILL
					GP	FILL: Sandy GRAVEL: fine to medium grained, poorly graded, rounded to sub-rounded, grey, fine to medium grained sand			13	D	
									6		
									6		
									5		
								L and MD	3		
									2		
									2		
									2		
									2		
									1		
									3		
									2		
									2		
									3		
									2		
									3		
									2		
									2		
		0	2					D	10		DCP:-HB
						Test Pit TP1 Terminated at 2.00 m					Target depth
		-1	3								

Remarks:

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:01 10.03.00.09 Developed by Datgel



EP RISK

EP2397 Trinity Point Development
Geotechnical Investigation

TP1

Test Pit No: TP2

Engineering Log - Test Pit

SHEET 1 OF 1

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Excavation	10.11.21	Northing	6334062.00	Slope	90°	Equipment	Hyundai 3529
Completed Excavation	10.11.21	Easting	363880.00	Bearing	---	Ground Level	2 AHD

EXCAVATION				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests DCP Results (blows/ 100mm)	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
E	10/11/21	1	1		CL-CI	TOPSO L: Sandy CLAY: low to medium plasticity, grey, fine to medmium grained sand			3 3		TOPSOIL
					CL-CI	FILL: Silty CLAY: low to medium plasticity, red and grey mottled			4 4		FILL
					CL	Peaty CLAY: low plasticity, black	<PL	F and St	3 2 3 3 2 4		ESTUAR NE DEPOSITS
					CL-CI	Gravelly Sandy CLAY: low to medium plasticity, red, brown and grey, fine to medmium grained sand, fine to medium grained, subrounded gravel	>PL	F and St St and VSt	3 2 2 3 3 3 4 7 6 4	B	
		0	2			Test Pit TP2 Terminated at 2.00 m			5 9		Target depth
		-1	3								

Remarks:

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:01 10.03.00.09 Developed by Datgel



EP RISK	EP2397 Trinity Point Development Geotechnical Investigation
	TP2

Test Pit No: TP3

Engineering Log - Test Pit

SHEET 1 OF 1

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Excavation	10.11.21	Northing	6334003.00	Slope	90°	Equipment	Hyundai 3529
Completed Excavation	10.11.21	Easting	363944.00	Bearing	---	Ground Level	4 AHD

EXCAVATION				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests DCP Results (blows/ 100mm)	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
E	Not Encountered				CL	TOPSO L: Sandy CLAY: low plasticity, dark grey, fine to medium grained sand	<PL	F to St	1 3		TOPSOIL
					SP	FILL: SAND: fine to medium grained, grey, with clay	D	MD and D	3 6		FILL
									4		
					GP	FILL: Sandy GRAVEL: fine to medium grained, sub-rounded, grey, fine to medium grained sand			3 4 3 20 10		
		3	1		SC	Extremely weathered Sandstone recovered as Clayey SAND, fine to coarse grained, brown, white and red with ferruginous cementations (10-20mm)		D to VD	10 10 11 12 15 17	B	EXTREMELY WEATHERED ROCK
						Test Pit TP3 Terminated at 1.60 m					Refusal on bedrock
		2	2								
		1	3								

Remarks:

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:01 10.03.00.09 Developed by Datgel



EP RISK

EP2397 Trinity Point Development
Geotechnical Investigation

TP3

Test Pit No: TP4

Engineering Log - Test Pit

SHEET 1 OF 1

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Excavation	10.11.21	Northing	6333957.00	Slope	90°	Equipment	Hyundai 3529
Completed Excavation	10.11.21	Easting	363907.00	Bearing	---	Ground Level	4 AHD

EXCAVATION				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests DCP Results (blows/ 100mm)	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
E	Not Encountered				CL-CI	FILL: Sandy CLAY: low to medium plasticity, grey, fine to medium grained sand, with pieces of bricks, asphalt concrete and steel	<PL	F to St	9 11 7 9 11 21		FILL DCP:-HB
					GP	FILL: Sandy GRAVEL: fine to medium grained, poorly graded, rounded to sub-rounded, grey, fine to medmium grained sand		MD to D			
		3	1		SC	Extremely weathered Sandstone recovered as Clayey SAND, fine to coarse grained, red and brown, very low to low strength	D	D to VD		B	EXTREMELY WEATHERED ROCK
						Test Pit TP4 Terminated at 1.30 m					Refusal on bedrock
		2	2								
		1	3								

Remarks:

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:01 10.03.00.09 Developed by Datgel



EP RISK

EP2397 Trinity Point Development
Geotechnical Investigation

TP4

Test Pit No: TP5

Engineering Log - Test Pit

SHEET 1 OF 1

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Excavation	10.11.21	Northing	6333865.00	Slope	90°	Equipment	Hyundai 3529
Completed Excavation	10.11.21	Easting	363904.00	Bearing	---	Ground Level	7 AHD

EXCAVATION				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests DCP Results (blows/ 100mm)	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
E	Not Encountered	6	1		CL-CI	FILL: Sandy CLAY: low to medium plasticity, grey, fine to medium grained sand, with pieces of bricks	<PL	St and VSt	4 5 5 4 2 4		FILL
					CH	Sandy CLAY: medium to high plasticity, brown and red, fine to medium grained sand, with chips of Sandstone (10-20mm)			3 7 7 3	B U50	RESIDUAL SOIL
		5	2		SC	Extremely weathered Sandstone recovered as Clayey SAND, fine to coarse grained, red, grey and brown, very low to low strength	M	D	7 7 7 9 8 9 4 3 6 7		EXTREMELY WEATHERED ROCK
						Test Pit TP5 Terminated at 2.00 m			8 15 15		Target depth
		4	3								

Remarks:

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:01 10.03.00.09 Developed by Datgel



EP RISK

EP2397 Trinity Point Development
Geotechnical Investigation

TP5

Engineering Log - Test Pit

Client	Trinity Point Development Unit Trust	Project No.	EP2397
Project	Trinity Point Development	Logged By	OP
Location	Trinity Point Drive	Checked By	JY

Started Excavation	10.11.21	Northing	6333891.00	Slope	90°	Equipment	Hyundai 3529
Completed Excavation	10.11.21	Easting	363967.00	Bearing	---	Ground Level	8 AHD

EXCAVATION				MATERIAL DESCRIPTION					TESTING, SAMPLING & OTHER INFORMATION		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification	Description of Soil (soil type: plasticity/grainsize, colour and other components)	Moisture Condition	Consistency	Tests DCP Results (blows/ 100mm)	Samples	Additional Comments (material origin, pocket penetrometer values, investigation observations)
E	Not Encountered				SM	TOPSO L: Silty SAND: fine to medium grained, dark grey	D	MD to D	3 9		TOPSOIL
					SM	FILL: Silty SAND: fine to medium grained, grey, appears compacted		D to VD	16 14 14 20 25		FILL
		7	1		CL-CI	Extremely weathered Sandstone recovered as Gravely Sandy CLAY, low to medium plasticity, red, brown and grey, fine to medium grained sand. ,fine to medium grained, subangular gravel, very low to low strength	<PL	VSt to H		B	EXTREMELY WEATHERED ROCK
		6	2			Test Pit TP6 Terminated at 1.30 m					Refusal on bedrock
		5	3								

Remarks:

EP LIB 05.GLB Log CW NON-CORED BOREHOLE LOG EP2397.JPG TRINITY POINT SSD GEOTECH.GPJ <<DrawingFile>> 03/01/2022 12:01 10.03.00.09 Developed by Datgel



EP RISK

EP2397 Trinity Point Development
Geotechnical Investigation

TP6

BH200

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** -	**NORTHING** -
CLIENT JPG	**DRILLER** -	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** HA	**LOGGED BY** SL
	TOTAL DEPTH 0.7	**CHECKED BY** PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
	<1	BH200_0.1		TOPSOIL: clayey SAND with gravel, low plasticity, fine to medium sand, small to large rounded to sub angular gravel, dark grey.			
	<1	BH200_0.3		FILL: gravelly SAND with some clay, fine to medium, medium to large sub angular gravel, non plastic, brown, moist.			
0.5	<1	BH200_0.5		SAND: fine to medium, trace small sub angular gravel, non plastic, grey.			Wet at 0.7m
				HA refusal at 0.7m.			

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 14 Dec 2021

TP201

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** -	**NORTHING** -
CLIENT JPG	**DRILLER** -	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** HA	**LOGGED BY** SL
	TOTAL DEPTH 2.0	**CHECKED BY** PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
0	<1	BH201_0.2		FILL: sandy SILT, fine to medium, medium to large sub angular gravel, non plastic, brown, moist.			
0.5	<1	BH201_0.6		clayey SAND: low plasticity, fine to medium, orange brown.			
1		BH201_1.2		sandy CLAY: medium plasticity, fine to medium, trace small sub angular gravel, red brown mottled light grey.			
1.5		BH201_1.8					
2				EOI at 2.0m			

TP202

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** ARSK Civil	**NORTHING** -
CLIENT JPG	**DRILLER** AR	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** 5 t excavator	**LOGGED BY** SL
	TOTAL DEPTH 1.8	**CHECKED BY** PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
0	<1	BH202_0.2		FILL: sandy SILT, fine to medium, medium to large sub angular gravel, non plastic, brown, moist.			
0.5	<1	BH202_0.7		sandy CLAY: medium plasticity, fine to medium, trace small sub angular gravel, red brown mottled light grey.			
1		BH202_1.2					
1.5				XW SANDSTONE: fine to medium, light grey mottled red.			
2				EOI at 1.8m			

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 14 Dec 2021

TP203

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** ARSK Civil	**NORTHING** -
CLIENT JPG	**DRILLER** AR	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** 5 t excavator	**LOGGED BY** SL
	TOTAL DEPTH 2.3	**CHECKED BY** PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
	<1	TP203_0.2		FILL: sandy CLAY, medium plasticity, fine to medium, trace small sub angular gravel, brown mottled light grey.			
0.5				FILL: sandy SILT, fine to medium, medium to large sub angular gravel, non plastic, brown, moist.			
1	<1	TP203_1.0					
				sandy CLAY: medium plasticity, fine to medium, red brown mottled grey.			
1.5	<1	TP203_1.5					
2		TP203_1.5					
				EOI at 2.3 m			

TP204

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** ARSK Civil	**NORTHING** -
CLIENT JPG	**DRILLER** AR	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** 5 t excavator	**LOGGED BY** SL
	TOTAL DEPTH 2.0	**CHECKED BY** PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
0	<1	TP204_0.2		FILL: sandy SILT, fine to medium, medium to large sub angular gravel, non plastic, brown, moist.			
0.5							
1	<1	TP204_1.0					
				sandy CLAY: medium plasticity, fine to medium, orange brown mottled grey.			
1.5	<1	TP204_1.5					
		TP204_1.5					
2				EOI at 2 m			

TP205

PROJECT NUMBER EP2409
PROJECT NAME Trinity Point Enviro
CLIENT JPG
ADDRESS Trinity Point Marina

DRILLING DATE 15/11/2021
DRILLING COMPANY ARSK Civil
DRILLER AR
DRILLING METHOD 5 t excavator
TOTAL DEPTH 1.6

EASTING -
NORTHING -
SURFACE ELEVATION -
LOGGED BY SL
CHECKED BY PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
0	<1	TP205_0.2		FILL: sandy SILT, fine to medium, medium to large sub angular gravel, non plastic, brown, moist.			
0.5	<1	TP205_1.2		sandy CLAY: medium plasticity, fine to medium, red brown mottled grey.			
1	<1	TP205_1.2					
1.5				XW SANDSTONE: fine to medium, light grey mottled red.			
2				EOI at 1.6 m			

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Dec 2021

TP206

PROJECT NUMBER EP2409
PROJECT NAME Trinity Point Enviro
CLIENT JPG
ADDRESS Trinity Point Marina

DRILLING DATE 15/11/2021
DRILLING COMPANY ARSK Civil
DRILLER AR
DRILLING METHOD 5 t excavator
TOTAL DEPTH 2.4

EASTING -
NORTHING -
SURFACE ELEVATION -
LOGGED BY SL
CHECKED BY PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
	<1	TP206_0.2		FILL: sandy SILT, fine to medium, medium to large sub angular gravel, non plastic, brown, moist.			
0.5	<1	TP206_0.5		sandy SILT: non plastic, fine to medium, grey.			
				sandy CLAY: medium plasticity, fine to medium, orange brown mottled grey.			
1	<1	TP206_1					
1.5		TP206_1.5					
2		TP206_2					
				XW SANDSTONE: fine to medium, light grey mottled red.			
				EOI at 2.4 m			

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 14 Dec 2021

TP207

PROJECT NUMBER EP2409
PROJECT NAME Trinity Point Enviro
CLIENT JPG
ADDRESS Trinity Point Marina

DRILLING DATE 15/11/2021
DRILLING COMPANY ARSK Civil
DRILLER AR
DRILLING METHOD 5 t excavator
TOTAL DEPTH 2.6

EASTING -
NORTHING -
SURFACE ELEVATION -
LOGGED BY SL
CHECKED BY PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
	<1	TP207_0.1		TOPSOIL: clayey sandy SILT, low plasticity, fine to medium sand, small to medium sub angular gravel, brown.			
				FILL: sandy CLAY, fine to medium, medium to large sub angular gravel, medium plasticity, brown, moist.			
0.5	<1	TP207_0.5					
	<1	TP207_0.8					Perched water
1							
				sandy CLAY: medium plasticity, fine to medium, grey mottled red.			
1.5	<1	TP207_1.5					
2		TP207_2					
2.5		TP207_2.5					
				EOI at 2.6 m			

TP208

PROJECT NUMBER EP2409
PROJECT NAME Trinity Point Enviro
CLIENT JPG
ADDRESS Trinity Point Marina

DRILLING DATE 15/11/2021
DRILLING COMPANY ARSK Civil
DRILLER AR
DRILLING METHOD 5 t excavator
TOTAL DEPTH 2.6

EASTING -
NORTHING -
SURFACE ELEVATION -
LOGGED BY SL
CHECKED BY PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
	<1	TP208_0.1		TOPSOIL: clayey sandy SILT, low plasticity, fine to medium sand, small to medium sub angular gravel, brown.			
	<1	TP208_0.3		FILL: sandy CLAY, fine to medium, medium to large sub angular gravel, low plasticity, brown, moist.			
0.5				FILL: sandy SILT, non plastic, fine to medium, dark grey.			
	<1	TP208_0.7					
1							
1.5							Perched water
	<1	TP208_1.6		gravelly sandy CLAY: medium plasticity, fine to medium, grey mottled orange, medium to large rounded to sub angular gravel.			
		TP208_2		silty sandy CLAY: medium plasticity, fine to medium, light grey mottled red.			
2							
		TP208_2.4					
2.5							
				EOI at 2.6 m			

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Dec 2021

TP209

PROJECT NUMBER EP2409
PROJECT NAME Trinity Point Enviro
CLIENT JPG
ADDRESS Trinity Point Marina

DRILLING DATE 15/11/2021
DRILLING COMPANY ARSK Civil
DRILLER AR
DRILLING METHOD 5 t excavator
TOTAL DEPTH 2.6

EASTING -
NORTHING -
SURFACE ELEVATION -
LOGGED BY SL
CHECKED BY PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
0	<1	TP209_0.1		FILL: silty SAND, non plastic, fine to medium, dark grey, CWR.			
				FILL: sandy CLAY, fine to medium, medium to large sub angular gravel, low plasticity, orange, moist.			
0.5	<1	TP209_0.6		FILL: sandy CLAY, low plasticity, fine to medium, dark grey.			
1							Perched water
1.5	<1	TP209_1.5		sandy CLAY: medium plasticity, fine to medium, light grey mottled orange/dark red.			
2	<1	TP209_2					
2.5		TP209_2.4					
				EOI at 2.6 m			

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 14 Dec 2021

TP210

PROJECT NUMBER EP2409
PROJECT NAME Trinity Point Enviro
CLIENT JPG
ADDRESS Trinity Point Marina

DRILLING DATE 15/11/2021
DRILLING COMPANY ARSK Civil
DRILLER AR
DRILLING METHOD 5 t excavator
TOTAL DEPTH 2.6

EASTING -
NORTHING -
SURFACE ELEVATION -
LOGGED BY SL
CHECKED BY PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
0	<1	TP210_0.2		FILL: sandy SILT with some gravel, non plastic, fine to medium, grey, medium to large sub angular gravel.			Inclusions of brick and concrete.
0.5	<1	TP210_0.6		FILL: sandy CLAY, fine to medium, medium to large sub angular gravel, low plasticity, orange, moist.			Perched water
1							
1.5	<1	TP210_1.6		sandy CLAY: medium plasticity, fine to medium, orange brown mottled light grey/red.			
2	<1	TP210_2					
2.5		TP210_2.4					
				EOI at 2.6 m			

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Dec 2021

TP211

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** ARSK Civil	**NORTHING** -
CLIENT JPG	**DRILLER** AR	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** 5 t excavator	**LOGGED BY** SL
	TOTAL DEPTH 1.2	**CHECKED BY** PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
	<1	TP211_0.2		FILL: sandy SILT with some gravel, non plastic, fine to medium, grey, medium to large sub angular gravel.			Inclusions of brick, concrete and asbestos sheeting.
0.5	<1	TP211_0.5		sandy CLAY: medium plasticity, fine to medium, orange brown mottled light grey/red.			
1				XW SANDSTONE: fine to medium, light grey mottled red.			
				EOI at 1.2 m			
1.5							

Disclaimer This log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 14 Dec 2021

TP212

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** ARSK Civil	**NORTHING** -
CLIENT JPG	**DRILLER** AR	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** 5 t excavator	**LOGGED BY** SL
	TOTAL DEPTH 0.5	**CHECKED BY** PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
				FILL: sandy SILT with some gravel, non plastic, fine to medium, grey, medium to large sub angular gravel.			
				sandy CLAY: medium plasticity, fine to medium, orange brown mottled light grey/red.			
0.5				EOI at 0.5 m			

TP213

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** ARSK Civil	**NORTHING** -
CLIENT JPG	**DRILLER** AR	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** 5 t excavator	**LOGGED BY** SL
	TOTAL DEPTH 0.5	**CHECKED BY** PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
				FILL: sandy SILT with some gravel, non plastic, fine to medium, grey, medium to large sub angular gravel.			
				sandy CLAY: medium plasticity, fine to medium, orange brown mottled light grey/red.			
0.5				EOI at 0.5 m			

TP214

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** ARSK Civil	**NORTHING** -
CLIENT JPG	**DRILLER** AR	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** 5 t excavator	**LOGGED BY** SL
	TOTAL DEPTH 0.5	**CHECKED BY** PS

COMMENTS

Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
				FILL: sandy SILT with some gravel, non plastic, fine to medium, grey, medium to large sub angular gravel.			
				sandy CLAY: medium plasticity, fine to medium, orange brown mottled light grey/red.			
0.5				EOI at 0.5 m			

TP215

PROJECT NUMBER EP2409	**DRILLING DATE** 15/11/2021	**EASTING** -
PROJECT NAME Trinity Point Enviro	**DRILLING COMPANY** ARSK Civil	**NORTHING** -
CLIENT JPG	**DRILLER** AR	**SURFACE ELEVATION** -
ADDRESS Trinity Point Marina	**DRILLING METHOD** 5 t excavator	**LOGGED BY** SL
	TOTAL DEPTH 0.5	**CHECKED BY** PS

COMMENTS

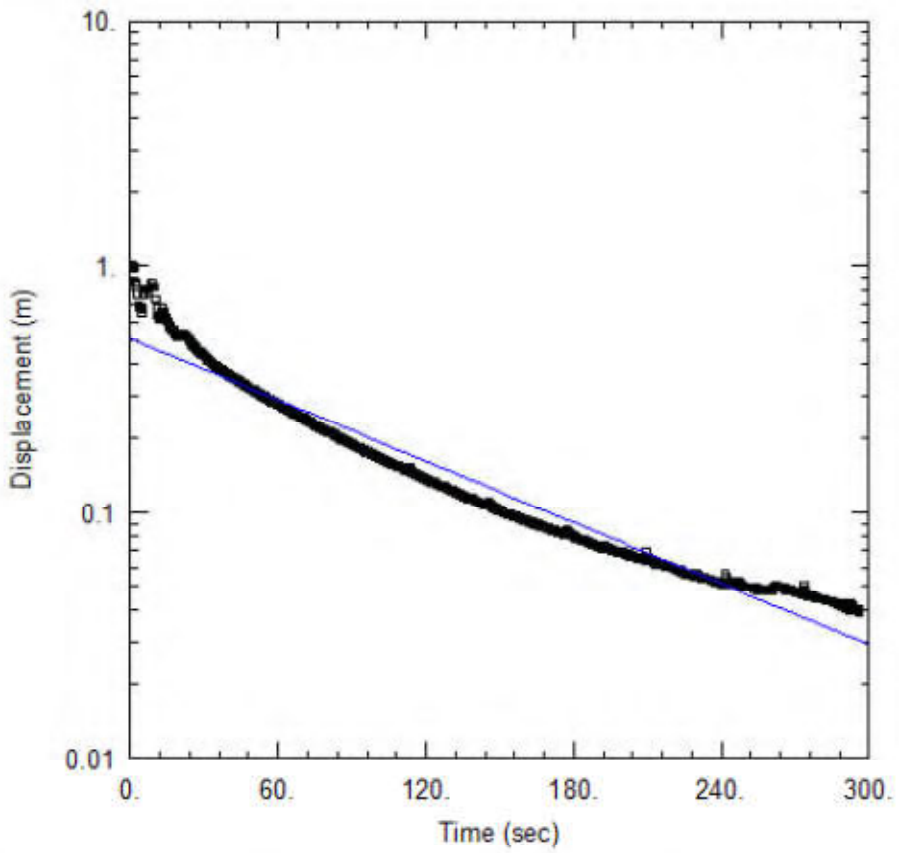
Depth (m)	PID	Samples	Graphic Log	Material Description: Soil type, plasticity/particle characteristics, colour, minor components	Moisture	Consistency	Additional Observations
				FILL: sandy SILT with some gravel, non plastic, fine to medium, grey, medium to large sub angular gravel.			
				sandy CLAY: medium plasticity, fine to medium, orange brown mottled light grey/red.			
0.5				EOI at 0.5 m			

Appendix B
GROUNDWATER WELL SURVEY PLAN

REDACTED

Appendix C

SLUG TEST RESULTS



WELL TEST ANALYSIS

Data Set:
Date: 01/27/22 Time: 13:35:57

PROJECT INFORMATION

Company: EP Risk
Project: EP2409
Location: Trinity Point
Test Well: BH02
Test Date: 19/11/2021

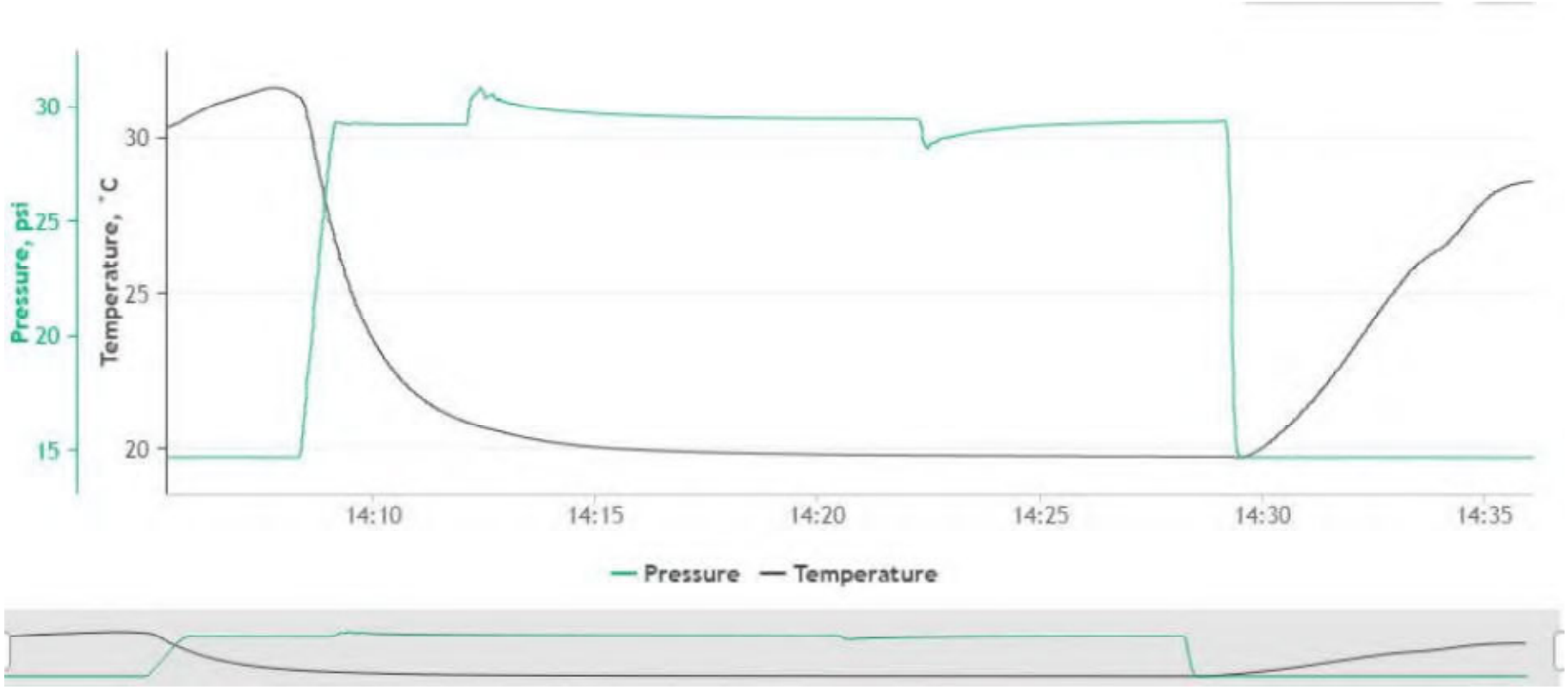
AQUIFER DATA

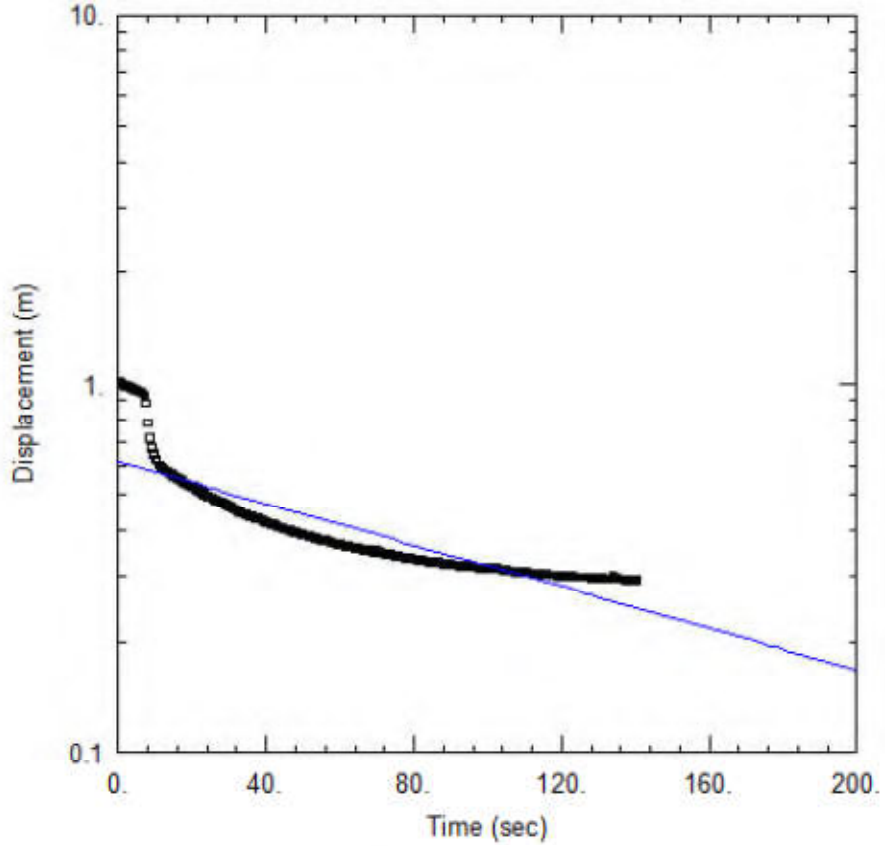
Saturated Thickness: 10.65 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (New Well)

Initial Displacement: 1.018 m
Total Well Penetration Depth: 10.65 m
Casing Radius: 0.025 m
Static Water Column Height: 10.65 m
Screen Length: 10.65 m
Well Radius: 0.025 m
Gravel Pack Porosity: 0.5

SOLUTION


Pressure, psi
30
25
20
15
Temperature, °C
30
25
20
14:10
14:15
14:20
14:25
14:30
14:35
Pressure
Temperature



WELL TEST ANALYSIS

Data Set:
Date: 01/27/22 Time: 14:26:39

PROJECT INFORMATION

Company: EP Risk
Project: EP2409
Location: Trinity Point
Test Well: BH03
Test Date: 19/11/2021

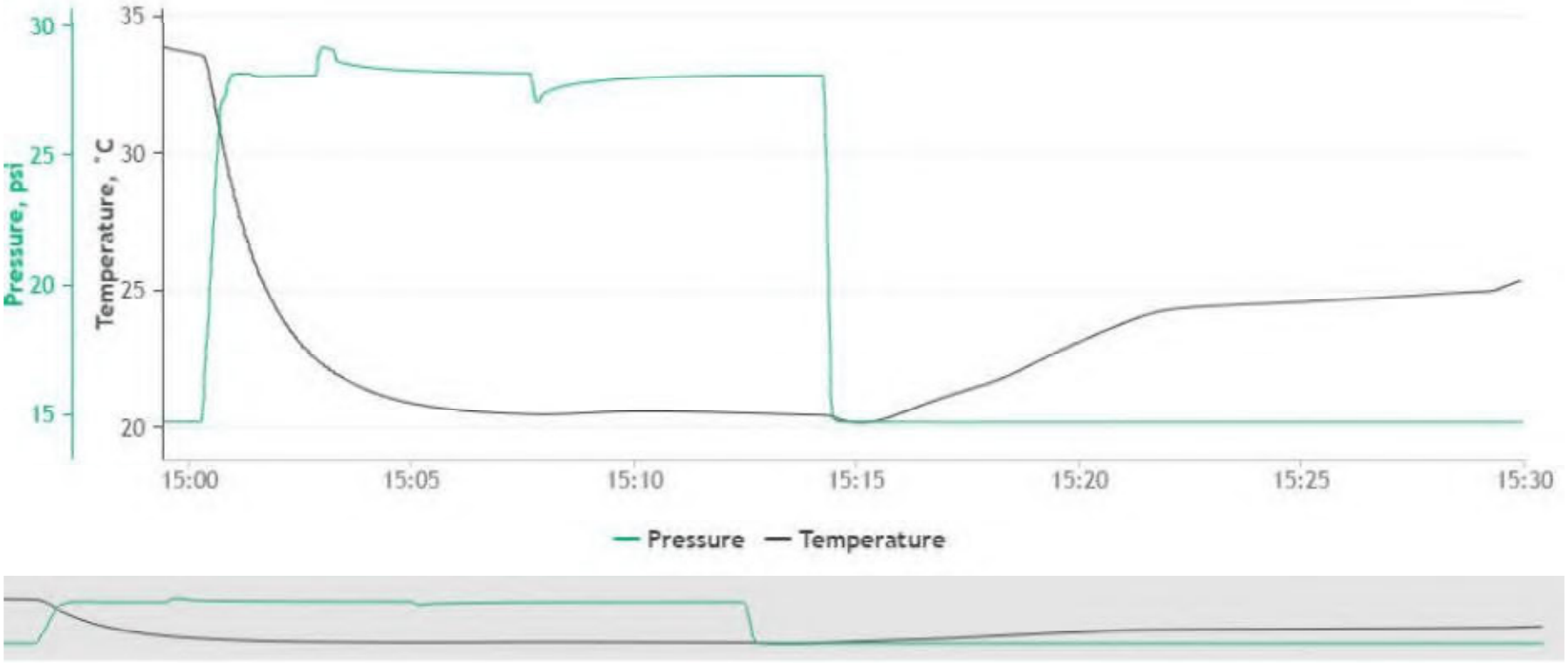
AQUIFER DATA

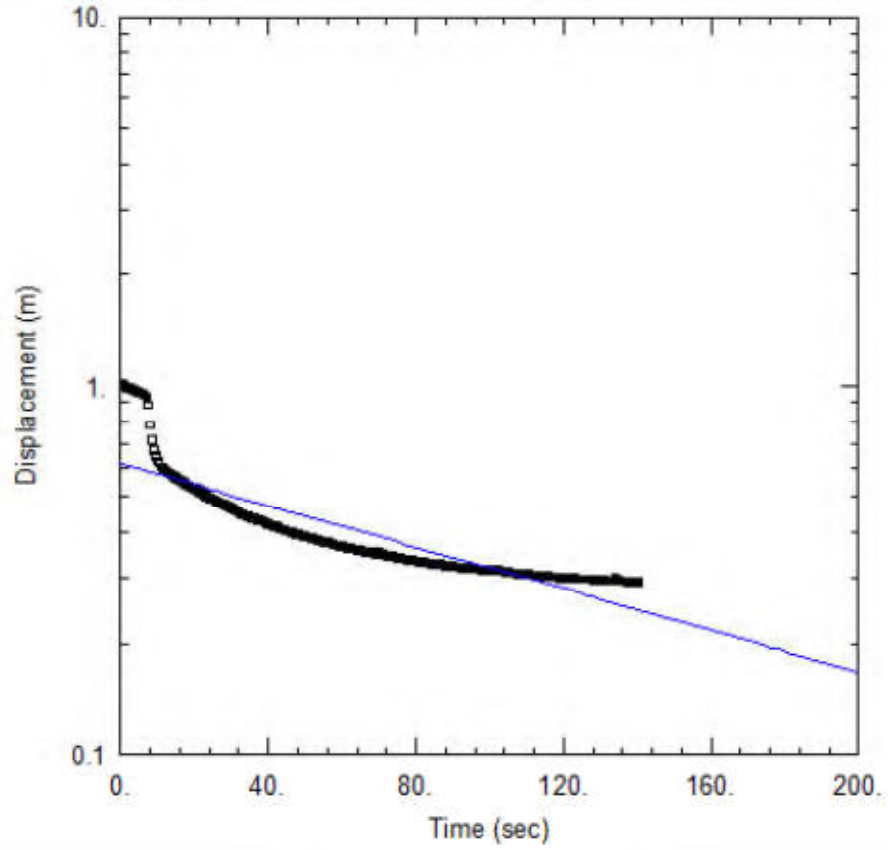
Saturated Thickness: 9.63 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH03)

Initial Displacement: 1.018 m
Total Well Penetration Depth: 9.63 m
Casing Radius: 0.025 m
Static Water Column Height: 9.63 m
Screen Length: 9.63 m
Well Radius: 0.025 m
Gravel Pack Porosity: 0.5

SOLUTION


Pressure, psi
30
25
20
15
Temperature, °C
35
30
25
20
15:00
15:05
15:10
15:15
15:20
15:25
15:30
Pressure
Temperature



WELL TEST ANALYSIS

Data Set:
Date: 01/27/22 Time: 14:39:57

PROJECT INFORMATION

Company: EP Risk
Project: EP2409
Location: Trinity Point
Test Well: BH04
Test Date: 19/11/2021

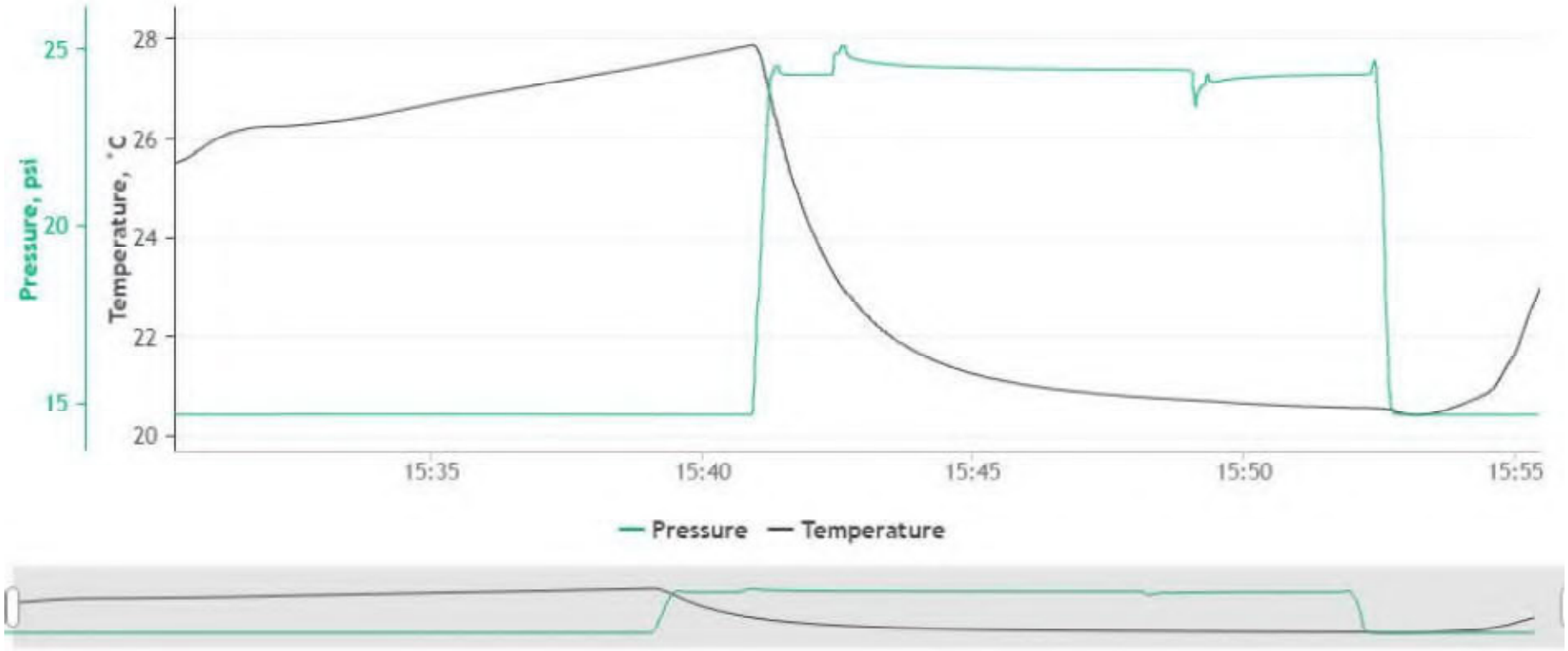
AQUIFER DATA

Saturated Thickness: 6.74 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH04)

Initial Displacement: 1.018 m
Total Well Penetration Depth: 6.74 m
Casing Radius: 0.025 m
Static Water Column Height: 6.74 m
Screen Length: 6.74 m
Well Radius: 0.025 m
Gravel Pack Porosity: 0.5

SOLUTION


Pressure, psi
25
20
15
Temperature, °C
28
26
24
22
20
15:35
15:40
15:45
15:50
15:55
Pressure
Temperature

Appendix D

NATA LABORATORY REPORTS

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2141352**	Page	: 1 of 57
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR STUART LORD	Contact	: Tyler Anderson
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: EP2409	Date Samples Received	: 16-Nov-2021 10:37
Order number	: ----	Date Analysis Commenced	: 17-Nov-2021
C-O-C number	: ----	Issue Date	: 26-Nov-2021 14:05
Sampler	: ----		
Site	: ----		
Quote number	: SY/497/20 Primary analysis only		
No. of samples received	: 76		
No. of samples analysed	: 49		

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

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

This Certificate of Analysis contains the following information:

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

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Kim McCabe	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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

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

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

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

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of he eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- **EA200 Legend**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Analysis of asbestos from swabs and tapes is not covered under the current scope of NATA accreditation.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.
- ASS: EA037 (Rapid Field and F(ox) screening): pH F(ox) Reaction Rate: 1 - Slight; 2 - Moderate; 3 - Strong; 4 - Extreme
- EA037 ASS Field Screening: NATA accreditation does not cover performance of this service.
- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
  Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
  The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
  Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
  All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.

- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of he 2013 NEPM for Assessment of Site Contamination
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0 1g/kg
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- EA200: N/A - Not Applicable

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH200_0.1	BH2_0.4	BH3_0.1	TP201_0.2	TP201_0.6
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-001	ES2141352-005	ES2141352-007	ES2141352-009	ES2141352-010
				Result	Result	Result	Result	Result
EA037: Ass Field Screening Analysis								
ø pH (F)	----	0.1	pH Unit	----	----	----	----	5.6
ø pH (Fox)	----	0.1	pH Unit	----	----	----	----	4.6
ø Reaction Rate	----	1	-	----	----	----	----	1
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	20.3	15.1	26.0	19.2	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	No	No*	----
Asbestos Type	1332-21-4	-	--	-	----	-	Ch	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	----	No	No	----
Sample weight (dry)	----	0.01	g	388	----	384	574	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	No	No	----
Organic Fibre	----	0.1	g/kg	No	----	No	No	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	A. SMYLIE	B.SCHRADER	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	----	<0.0004	0.0150	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	----	<0.001	0.003	----
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	----	<0.1	<0.1	----
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	----	<0.01	<0.01	----
ø Weight Used for % Calculation	----	0.0001	kg	0.388	----	0.384	0.574	----
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	----	<0.0004	<0.0004	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg	3	<2	8	11	----
Copper	7440-50-8	5	mg/kg	<5	<5	7	18	----
Lead	7439-92-1	5	mg/kg	5	6	18	87	----
Nickel	7440-02-0	2	mg/kg	<2	<2	<2	3	----
Zinc	7440-66-6	5	mg/kg	14	15	47	114	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH200_0.1	BH2_0.4	BH3_0.1	TP201_0.2	TP201_0.6
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-001	ES2141352-005	ES2141352-007	ES2141352-009	ES2141352-010
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH200_0.1	BH2_0.4	BH3_0.1	TP201_0.2	TP201_0.6
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-001	ES2141352-005	ES2141352-007	ES2141352-009	ES2141352-010
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH200_0.1	BH2_0.4	BH3_0.1	TP201_0.2	TP201_0.6
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-001	ES2141352-005	ES2141352-007	ES2141352-009	ES2141352-010
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**107**	**103**	**104**	**110**	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**114**	**95.1**	**92.3**	**102**	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**120**	**111**	**100**	**109**	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**93.8**	**88.8**	**84.2**	**88.4**	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**95.0**	**91.0**	**87.2**	**86.1**	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**82.6**	**71.0**	**82.3**	**86.8**	----
EP075(SIM)T: PAH Surrogates									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH200_0.1	BH2_0.4	BH3_0.1	TP201_0.2	TP201_0.6
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-001	ES2141352-005	ES2141352-007	ES2141352-009	ES2141352-010
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
2-Fluorobiphenyl	321-60-8	0.5	%		98.4	95.1	94.9	104	----
Anthracene-d10	1719-06-8	0.5	%		104	95.1	92.1	96.2	----
4 Terphenyl d14	1718-51-0	0.5	%		82 6	84 1	87 3	101	
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		98.1	92.7	94.2	106	----
Toluene-D8	2037-26-5	0.2	%		97.2	92.8	96.1	110	----
4-Bromofluorobenzene	460-00-4	0.2	%		93.7	90.0	95.9	108	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP201_1.2	TP201_1.8	TP202_0.2	TP202_0.7	TP202_1.2
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-011	ES2141352-012	ES2141352-013	ES2141352-014	ES2141352-015
				Result	Result	Result	Result	Result
EA037: Ass Field Screening Analysis								
ø pH (F)	----	0.1	pH Unit	4.6	4.9	----	5.2	4.4
ø pH (Fox)	----	0.1	pH Unit	4.3	4.4	----	4.3	3.6
ø Reaction Rate	----	1	-	1	1	----	1	1
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	----	9.7	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	No	----	----
Asbestos Type	1332-21-4	-	--	----	----	-	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	----	----	No	----	----
Sample weight (dry)	----	0.01	g	----	----	674	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	No	----	----
Organic Fibre	----	0.1	g/kg	----	----	No	----	----
APPROVED IDENTIFIER:	----	-	--	----	----	B.SCHRADER	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	----	----	<0.0004	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	----	----	<0.001	----	----
ø Asbestos Containing Material	1332-21-4	0.1	g	----	----	<0.1	----	----
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	----	----	<0.01	----	----
ø Weight Used for % Calculation	----	0.0001	kg	----	----	0.674	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	----	----	<0.0004	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	<5	----	----
Cadmium	7440-43-9	1	mg/kg	----	----	<1	----	----
Chromium	7440-47-3	2	mg/kg	----	----	5	----	----
Copper	7440-50-8	5	mg/kg	----	----	<5	----	----
Lead	7439-92-1	5	mg/kg	----	----	<5	----	----
Nickel	7440-02-0	2	mg/kg	----	----	<2	----	----
Zinc	7440-66-6	5	mg/kg	----	----	<5	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP201_1.2	TP201_1.8	TP202_0.2	TP202_0.7	TP202_1.2
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-011	ES2141352-012	ES2141352-013	ES2141352-014	ES2141352-015
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	----	----	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	----	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	----	----	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP201_1.2	TP201_1.8	TP202_0.2	TP202_0.7	TP202_1.2
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-011	ES2141352-012	ES2141352-013	ES2141352-014	ES2141352-015
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Fenthion	55-38-9	0.05	mg/kg	----	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	----	----	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	----	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	**1.2**	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	<10	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP201_1.2	TP201_1.8	TP202_0.2	TP202_0.7	TP202_1.2
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-011	ES2141352-012	ES2141352-013	ES2141352-014	ES2141352-015
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		----	----	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		----	----	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	<50	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg		----	----	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	**106**	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	**92.2**	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	**119**	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	**89.3**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	**90.9**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	**70.9**	----	----
EP075(SIM)T: PAH Surrogates									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP201_1.2	TP201_1.8	TP202_0.2	TP202_0.7	TP202_1.2
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-011	ES2141352-012	ES2141352-013	ES2141352-014	ES2141352-015
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	96.3	----	----
Anthracene-d10	1719-06-8	0.5	%		----	----	97.0	----	----
4 Terphenyl d14	1718-51-0	0.5	%				89 9		
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	98.5	----	----
Toluene-D8	2037-26-5	0.2	%		----	----	101	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	97.9	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP203_0.2	TP203_1.0	TP203_1.5	TP203_2.0	TP203_2.2
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-016	ES2141352-017	ES2141352-018	ES2141352-019	ES2141352-020
				Result	Result	Result	Result	Result
EA037: Ass Field Screening Analysis								
ø pH (F)	----	0.1	pH Unit	----	6.0	5.5	5.0	5.2
ø pH (Fox)	----	0.1	pH Unit	----	3.9	4.5	4.2	4.2
ø Reaction Rate	----	1	-	----	2	1	1	1
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.0	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----
Asbestos Type	1332-21-4	-	--	-	----	----	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	----	----	----	----
Sample weight (dry)	----	0.01	g	451	----	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	----	----	----
Organic Fibre	----	0.1	g/kg	No	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	----	----	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	----	----	----	----
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	----	----	----	----
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	----	----	----	----
ø Weight Used for % Calculation	----	0.0001	kg	0.451	----	----	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	15	----	----	----	----
Copper	7440-50-8	5	mg/kg	<5	----	----	----	----
Lead	7439-92-1	5	mg/kg	8	----	----	----	----
Nickel	7440-02-0	2	mg/kg	<2	----	----	----	----
Zinc	7440-66-6	5	mg/kg	30	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP203_0.2	TP203_1.0	TP203_1.5	TP203_2.0	TP203_2.2
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-016	ES2141352-017	ES2141352-018	ES2141352-019	ES2141352-020
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP203_0.2	TP203_1.0	TP203_1.5	TP203_2.0	TP203_2.2
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-016	ES2141352-017	ES2141352-018	ES2141352-019	ES2141352-020
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP203_0.2	TP203_1.0	TP203_1.5	TP203_2.0	TP203_2.2
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-016	ES2141352-017	ES2141352-018	ES2141352-019	ES2141352-020
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**104**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**101**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**100**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**83.2**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**87.5**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**64.9**	----	----	----	----
EP075(SIM)T: PAH Surrogates									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP203_0.2	TP203_1.0	TP203_1.5	TP203_2.0	TP203_2.2
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-016	ES2141352-017	ES2141352-018	ES2141352-019	ES2141352-020
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
2-Fluorobiphenyl	321-60-8	0.5	%		83.1	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		99.9	----	----	----	----
4 Terphenyl d14	1718-51-0	0.5	%		80 4				
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		109	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		110	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		107	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP204_0.2	TP205_0.2	TP206_0.2	TP206_0.5	TP206_1.0
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-021	ES2141352-025	ES2141352-028	ES2141352-029	ES2141352-030
				Result	Result	Result	Result	Result
EA037: Ass Field Screening Analysis								
ø pH (F)	----	0.1	pH Unit	----	----	----	6.8	6.7
ø pH (Fox)	----	0.1	pH Unit	----	----	----	3.7	5.0
ø Reaction Rate	----	1	-	----	----	----	2	1
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	7.5	11.2	15.2	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	----	----
Asbestos Type	1332-21-4	-	--	-	-	-	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	No	----	----
Sample weight (dry)	----	0.01	g	588	556	596	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	No	----	----
Organic Fibre	----	0.1	g/kg	No	No	No	----	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	A. SMYLIE	A. SMYLIE	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	----	----
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	<0.1	<0.1	----	----
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	<0.01	<0.01	----	----
ø Weight Used for % Calculation	----	0.0001	kg	0.588	0.556	0.596	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	6	<5	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg	6	15	8	----	----
Copper	7440-50-8	5	mg/kg	6	<5	11	----	----
Lead	7439-92-1	5	mg/kg	11	11	18	----	----
Nickel	7440-02-0	2	mg/kg	<2	3	7	----	----
Zinc	7440-66-6	5	mg/kg	22	37	49	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP204_0.2	TP205_0.2	TP206_0.2	TP206_0.5	TP206_1.0
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-021	ES2141352-025	ES2141352-028	ES2141352-029	ES2141352-030
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP204_0.2	TP205_0.2	TP206_0.2	TP206_0.5	TP206_1.0
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-021	ES2141352-025	ES2141352-028	ES2141352-029	ES2141352-030
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	**0.6**	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	**0.6**	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	**1.2**	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP204_0.2	TP205_0.2	TP206_0.2	TP206_0.5	TP206_1.0
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-021	ES2141352-025	ES2141352-028	ES2141352-029	ES2141352-030
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**95.2**	**103**	**106**	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**91.4**	**101**	**96.8**	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**95.7**	**104**	**95.8**	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**99.9**	**90.8**	**94.9**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**99.2**	**89.8**	**90.6**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**89.9**	**66.4**	**74.2**	----	----
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP204_0.2	TP205_0.2	TP206_0.2	TP206_0.5	TP206_1.0
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-021	ES2141352-025	ES2141352-028	ES2141352-029	ES2141352-030
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
2-Fluorobiphenyl	321-60-8	0.5	%		95.4	100	98.4	----	----
Anthracene-d10	1719-06-8	0.5	%		92.3	92.4	98.7	----	----
4 Terphenyl d14	1718-51-0	0.5	%		96 0	93 6	89 6		
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		104	100	92.3	----	----
Toluene-D8	2037-26-5	0.2	%		108	104	94.5	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		104	102	94.4	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP206_1.5	TP206_2.0	TP207_0.1	TP207_1.5	TP207_2.0
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-031	ES2141352-032	ES2141352-033	ES2141352-036	ES2141352-037
				Result	Result	Result	Result	Result
EA037: Ass Field Screening Analysis								
ø pH (F)	----	0.1	pH Unit	5.0	4.8	----	5.1	4.6
ø pH (Fox)	----	0.1	pH Unit	4.2	4.3	----	3.4	3.3
ø Reaction Rate	----	1	-	1	1	----	2	1
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	----	12.6	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	-	----	----
Asbestos Type	1332-21-4	-	--	----	----	-	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	----	----	No	----	----
Unknown Mineral Fibre	----	0.1	g/kg	----	----	Yes	----	----
Sample weight (dry)	----	0.01	g	----	----	513	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	No	----	----
Organic Fibre	----	0.1	g/kg	----	----	No	----	----
APPROVED IDENTIFIER:	----	-	--	----	----	A. SMYLIE	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	----	----	0.261	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	----	----	0.051	----	----
ø Asbestos Containing Material	1332-21-4	0.1	g	----	----	<0.1	----	----
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	----	----	<0.01	----	----
ø Weight Used for % Calculation	----	0.0001	kg	----	----	0.513	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	----	----	<0.0004	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	<5	----	----
Cadmium	7440-43-9	1	mg/kg	----	----	<1	----	----
Chromium	7440-47-3	2	mg/kg	----	----	4	----	----
Copper	7440-50-8	5	mg/kg	----	----	<5	----	----
Lead	7439-92-1	5	mg/kg	----	----	8	----	----
Nickel	7440-02-0	2	mg/kg	----	----	3	----	----
Zinc	7440-66-6	5	mg/kg	----	----	24	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	----	----
EP066: Polychlorinated Biphenyls (PCB)								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP206_1.5	TP206_2.0	TP207_0.1	TP207_1.5	TP207_2.0
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-031	ES2141352-032	ES2141352-033	ES2141352-036	ES2141352-037
				Result	Result	Result	Result	Result
EP066: Polychlorinated Biphenyls (PCB) - Continued								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	----	----	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	0.05	mg/kg	----	----	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	----	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP206_1.5	TP206_2.0	TP207_0.1	TP207_1.5	TP207_2.0
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-031	ES2141352-032	ES2141352-033	ES2141352-036	ES2141352-037
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	----	----	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	----	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	----	----	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	----	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	**1.2**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP206_1.5	TP206_2.0	TP207_0.1	TP207_1.5	TP207_2.0
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-031	ES2141352-032	ES2141352-033	ES2141352-036	ES2141352-037
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	----	<10	----	----
C10 - C14 Fraction	----	50	mg/kg		----	----	<50	----	----
C15 C28 Fraction	----	100	mg/kg		----	----	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg				<50		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	<50	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg		----	----	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	**102**	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	**110**	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	**106**	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	**92.0**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	**93.8**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	**64.0**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP206_1.5	TP206_2.0	TP207_0.1	TP207_1.5	TP207_2.0
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-031	ES2141352-032	ES2141352-033	ES2141352-036	ES2141352-037
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	**95.1**	----	----
Anthracene-d10	1719-06-8	0.5	%		----	----	**92.4**	----	----
4 Terphenyl d14	1718-51-0	0.5	%				**108**		
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	**100**	----	----
Toluene-D8	2037-26-5	0.2	%		----	----	**103**	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	**100**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP207_2.5	TP208_0.3	TP208_1.6	TP208_2.0	TP208_2.4
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-038	ES2141352-040	ES2141352-042	ES2141352-043	ES2141352-044
				Result	Result	Result	Result	Result
EA037: Ass Field Screening Analysis								
ø pH (F)	----	0.1	pH Unit	4.7	----	6.2	4.6	4.3
ø pH (Fox)	----	0.1	pH Unit	3.0	----	4.7	3.9	3.9
ø Reaction Rate	----	1	-	2	----	1	1	1
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	9.4	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	----	----
Asbestos Type	1332-21-4	-	--	----	-	----	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	----	No	----	----	----
Sample weight (dry)	----	0.01	g	----	571	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	----	----	----
Organic Fibre	----	0.1	g/kg	----	No	----	----	----
APPROVED IDENTIFIER:	----	-	--	----	A. SMYLIE	----	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	----	<0.0004	----	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	----	<0.001	----	----	----
ø Asbestos Containing Material	1332-21-4	0.1	g	----	<0.1	----	----	----
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	----	<0.01	----	----	----
ø Weight Used for % Calculation	----	0.0001	kg	----	0.571	----	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	----	<0.0004	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	<5	----	----	----
Cadmium	7440-43-9	1	mg/kg	----	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	----	9	----	----	----
Copper	7440-50-8	5	mg/kg	----	<5	----	----	----
Lead	7439-92-1	5	mg/kg	----	6	----	----	----
Nickel	7440-02-0	2	mg/kg	----	2	----	----	----
Zinc	7440-66-6	5	mg/kg	----	14	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP207_2.5	TP208_0.3	TP208_1.6	TP208_2.0	TP208_2.4
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-038	ES2141352-040	ES2141352-042	ES2141352-043	ES2141352-044
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		----	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		----	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		----	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		----	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		----	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		----	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		----	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		----	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		----	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		----	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg		----	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		----	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		----	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		----	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		----	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		----	<0.2	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		----	<0.05	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		----	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		----	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		----	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		----	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		----	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg		----	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		----	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		----	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg		----	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP207_2.5	TP208_0.3	TP208_1.6	TP208_2.0	TP208_2.4
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-038	ES2141352-040	ES2141352-042	ES2141352-043	ES2141352-044
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	**0.6**	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	**1.2**	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP207_2.5	TP208_0.3	TP208_1.6	TP208_2.0	TP208_2.4
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-038	ES2141352-040	ES2141352-042	ES2141352-043	ES2141352-044
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C10 - C14 Fraction	----	50	mg/kg	----	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg	----	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg	----	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg	----	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	----	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	----	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	<50	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg	----	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	----	<0.2	----	----	----
^ Total Xylenes	----	0.5	mg/kg	----	<0.5	----	----	----
Naphthalene	91-20-3	1	mg/kg	----	<1	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	**106**	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	**97.7**	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	**106**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	**88.8**	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	**89.1**	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	**54.8**	----	----	----
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP207_2.5	TP208_0.3	TP208_1.6	TP208_2.0	TP208_2.4
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-038	ES2141352-040	ES2141352-042	ES2141352-043	ES2141352-044
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
2-Fluorobiphenyl	321-60-8	0.5	%		----	**90.8**	----	----	----
Anthracene-d10	1719-06-8	0.5	%		----	**94.8**	----	----	----
4 Terphenyl d14	1718-51-0	0.5	%			**80 0**			
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	**86.8**	----	----	----
Toluene-D8	2037-26-5	0.2	%		----	**80.2**	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	**81.0**	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP209_0.6	TP209_1.5	TP209_2	TP210_0.2	TP210_1.6
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-046	ES2141352-047	ES2141352-048	ES2141352-050	ES2141352-052
				Result	Result	Result	Result	Result
EA037: Ass Field Screening Analysis								
ø pH (F)	----	0.1	pH Unit	----	7.0	7.1	----	4.7
ø pH (Fox)	----	0.1	pH Unit	----	5.2	5.1	----	4.0
ø Reaction Rate	----	1	-	----	1	2	----	1
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	17.7	----	----	14.4	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	-	----
Asbestos Type	1332-21-4	-	--	-	----	----	-	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	----	----	No	----
Unknown Mineral Fibre	----	0.1	g/kg	----	----	----	Yes	----
Sample weight (dry)	----	0.01	g	478	----	----	610	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	----	No	----
Organic Fibre	----	0.1	g/kg	No	----	----	No	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	A. SMYLIE	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	----	----	0.330	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	----	----	0.054	----
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	----	----	2.5	----
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	----	----	0.06	----
ø Weight Used for % Calculation	----	0.0001	kg	0.478	----	----	0.610	----
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	----	----	<0.0004	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	6	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	<1	----
Chromium	7440-47-3	2	mg/kg	17	----	----	12	----
Copper	7440-50-8	5	mg/kg	<5	----	----	6	----
Lead	7439-92-1	5	mg/kg	11	----	----	11	----
Nickel	7440-02-0	2	mg/kg	<2	----	----	4	----
Zinc	7440-66-6	5	mg/kg	47	----	----	31	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	<0.1	----
EP066: Polychlorinated Biphenyls (PCB)								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP209_0.6	TP209_1.5	TP209_2	TP210_0.2	TP210_1.6
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-046	ES2141352-047	ES2141352-048	ES2141352-050	ES2141352-052
				Result	Result	Result	Result	Result
EP066: Polychlorinated Biphenyls (PCB) - Continued								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	<0.05	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-2	0.05	mg/kg	<0.05	----	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP209_0.6	TP209_1.5	TP209_2	TP210_0.2	TP210_1.6
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-046	ES2141352-047	ES2141352-048	ES2141352-050	ES2141352-052
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	<0.05	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	----	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	----	**1.2**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP209_0.6	TP209_1.5	TP209_2	TP210_0.2	TP210_1.6
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-046	ES2141352-047	ES2141352-048	ES2141352-050	ES2141352-052
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	<50	----
C15 C28 Fraction	----	100	mg/kg	<100	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50			<50	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	<0.2	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg	<1	----	----	<1	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**87.8**	----	----	**99.9**	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**88.4**	----	----	**97.1**	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**86.2**	----	----	**98.9**	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**88.4**	----	----	**88.8**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**89.6**	----	----	**89.0**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**61.2**	----	----	**61.2**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP209_0.6	TP209_1.5	TP209_2	TP210_0.2	TP210_1.6
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-046	ES2141352-047	ES2141352-048	ES2141352-050	ES2141352-052
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**93.4**	----	----	**99.1**	----
Anthracene-d10	1719-06-8	0.5	%		**97.6**	----	----	**101**	----
4 Terphenyl d14	1718-51-0	0.5	%		**90 3**			**84 1**	
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**101**	----	----	**96.5**	----
Toluene-D8	2037-26-5	0.2	%		**104**	----	----	**92.2**	----
4-Bromofluorobenzene	460-00-4	0.2	%		**96.6**	----	----	**87.8**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP210_2.0	TP210_2.4	TP211_0.2	TP211_0.5	TP212_0.2
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-053	ES2141352-054	ES2141352-055	ES2141352-057	ES2141352-058
				Result	Result	Result	Result	Result
EA037: Ass Field Screening Analysis								
ø pH (F)	----	0.1	pH Unit	**7.5**	**5.0**	----	**5.2**	----
ø pH (Fox)	----	0.1	pH Unit	**5.8**	**4.3**	----	**4.4**	----
ø Reaction Rate	----	1	-	**2**	**1**	----	**1**	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	----	**10.4**	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	**No***	----	**No**
Asbestos Type	1332-21-4	-	--	----	----	**Ch**	----	**-**
Asbestos (Trace)	1332-21-4	5	Fibres	----	----	**No**	----	**No**
Sample weight (dry)	----	0.01	g	----	----	**392**	----	**551**
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	**No**	----	**No**
Organic Fibre	----	0.1	g/kg	----	----	**No**	----	**No**
APPROVED IDENTIFIER:	----	-	--	----	----	**A. SMYLIE**	----	**B.SCHRADER**
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	----	----	**0.0219**	----	<0.0004
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	----	----	**0.006**	----	<0.001
ø Asbestos Containing Material	1332-21-4	0.1	g	----	----	<0.1	----	<0.1
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	----	----	<0.01	----	<0.01
ø Weight Used for % Calculation	----	0.0001	kg	----	----	**0.392**	----	**0.551**
ø Fibrous Asbestos >7mm	----	0.0004	g	----	----	<0.0004	----	<0.0004
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	<5	----	----
Cadmium	7440-43-9	1	mg/kg	----	----	<1	----	----
Chromium	7440-47-3	2	mg/kg	----	----	**7**	----	----
Copper	7440-50-8	5	mg/kg	----	----	<5	----	----
Lead	7439-92-1	5	mg/kg	----	----	**23**	----	----
Nickel	7440-02-0	2	mg/kg	----	----	<2	----	----
Zinc	7440-66-6	5	mg/kg	----	----	**51**	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP210_2.0	TP210_2.4	TP211_0.2	TP211_0.5	TP212_0.2
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-053	ES2141352-054	ES2141352-055	ES2141352-057	ES2141352-058
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	----	----	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	----	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	----	----	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP210_2.0	TP210_2.4	TP211_0.2	TP211_0.5	TP212_0.2
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-053	ES2141352-054	ES2141352-055	ES2141352-057	ES2141352-058
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Fenthion	55-38-9	0.05	mg/kg	----	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	----	----	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	----	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	**1.2**	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	<10	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP210_2.0	TP210_2.4	TP211_0.2	TP211_0.5	TP212_0.2
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-053	ES2141352-054	ES2141352-055	ES2141352-057	ES2141352-058
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		----	----	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		----	----	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	<50	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg		----	----	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	**115**	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	**106**	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	**112**	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	**91.3**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	**90.2**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	**67.8**	----	----
EP075(SIM)T: PAH Surrogates									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP210_2.0	TP210_2.4	TP211_0.2	TP211_0.5	TP212_0.2
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-053	ES2141352-054	ES2141352-055	ES2141352-057	ES2141352-058
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	**99.6**	----	----
Anthracene-d10	1719-06-8	0.5	%		----	----	**97.4**	----	----
4 Terphenyl d14	1718-51-0	0.5	%				**82 6**		
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	**94.2**	----	----
Toluene-D8	2037-26-5	0.2	%		----	----	**97.2**	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	**90.0**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP213_0.2	TP214_0.2	TP215_0.2	QC01	TB
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	05-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-059	ES2141352-060	ES2141352-061	ES2141352-062	ES2141352-063
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	----	----	11.4	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No*	No	----	----
Asbestos Type	1332-21-4	-	--	-	Ch	-	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	No	----	----
Sample weight (dry)	----	0.01	g	514	590	670	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	No	----	----
Organic Fibre	----	0.1	g/kg	No	No	No	----	----
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	B.SCHRADER	B.SCHRADER	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	0.0013	<0.0004	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	----	----
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	<0.1	<0.1	----	----
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	<0.01	<0.01	----	----
ø Weight Used for % Calculation	----	0.0001	kg	0.514	0.590	0.670	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	----	<5	----
Cadmium	7440-43-9	1	mg/kg	----	----	----	<1	----
Chromium	7440-47-3	2	mg/kg	----	----	----	5	----
Copper	7440-50-8	5	mg/kg	----	----	----	8	----
Lead	7439-92-1	5	mg/kg	----	----	----	7	----
Nickel	7440-02-0	2	mg/kg	----	----	----	3	----
Zinc	7440-66-6	5	mg/kg	----	----	----	25	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	----	<0.1	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP213_0.2	TP214_0.2	TP215_0.2	QC01	TB
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	05-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-059	ES2141352-060	ES2141352-061	ES2141352-062	ES2141352-063
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
gamma-BHC	58-89-9	0.05	mg/kg	----	----	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	----	----	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	----	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	----	<0.05	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	0.05	mg/kg	----	----	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	----	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg	----	----	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	----	----	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg	----	----	----	<0.2	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP213_0.2	TP214_0.2	TP215_0.2	QC01	TB
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	05-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-059	ES2141352-060	ES2141352-061	ES2141352-062	ES2141352-063
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg	----	----	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	----	<0.05	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	<10	<10
C10 - C14 Fraction	----	50	mg/kg	----	----	----	<50	----
C15 - C28 Fraction	----	100	mg/kg	----	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg	----	----	----	<100	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP213_0.2	TP214_0.2	TP215_0.2	QC01	TB
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	05-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2141352-059	ES2141352-060	ES2141352-061	ES2141352-062	ES2141352-063
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	----	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg	----	----	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg	----	----	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	----	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	----	----	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	----	----	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	----	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	----	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	----	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	----	----	----	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	----	----	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	----	----	----	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	**112**	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	----	----	**134**	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	----	**125**	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	----	**88.6**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	----	**89.7**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	----	**60.4**	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	----	**100**	----
Anthracene-d10	1719-06-8	0.5	%	----	----	----	**95.9**	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	**89.4**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP213_0.2	TP214_0.2	TP215_0.2	QC01	TB
				Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	05-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		ES2141352-059	ES2141352-060	ES2141352-061	ES2141352-062	ES2141352-063
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	----	**101**	**108**
Toluene-D8	2037-26-5	0.2	%		----	----	----	**101**	**103**
4 Bromofluorobenzene	460-00-4	0.2	%					**93 3**	**97 9**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TS	TSC	----	----	----
				Sampling date / time	01-Nov-2021 00:00	01-Nov-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2141352-064	ES2141352-066	--------	--------	--------
					Result	Result	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		**0.9**	**1.1**	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		**0.6**	**0.7**	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		**3.4**	**4.1**	----	----	----
ortho Xylene	95-47-6	0.5	mg/kg		**2 1**	**2 7**			
^ **Sum of BTEX**	----	0.2	mg/kg		**7.0**	**8.6**	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		**5.5**	**6.8**	----	----	----
Naphthalene	91-20-3	1	mg/kg		**1**	**1**	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**109**	**118**	----	----	----
Toluene-D8	2037-26-5	0.2	%		**118**	**124**	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**114**	**121**	----	----	----

Analytical Results

Sub-Matrix: **SOLID** (Matrix: **SOLID**)				Sample ID	**ACMID_01**	**----**	**----**	**----**	**----**
				Sampling date / time	15-Nov-2021 00:00	----	----	----	----
Compound	*CAS Number*	*LOR*	*Unit*		**ES2141352-056**	**--------**	**--------**	**--------**	**--------**
					Result	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg		**Yes**	**----**	**----**	**----**	**----**
Asbestos Type	1332-21-4	-	--		**Ch**	**----**	**----**	**----**	**----**
Asbestos (Trace)	1332-21-4	5	Fibres		**N/A**				
Sample weight (dry)	----	0.01	g		**134**	**----**	**----**	**----**	**----**
Synthetic Mineral Fibre	----	0.1	g/kg		**No**	**----**	**----**	**----**	**----**
Organic Fibre	----	0.1	g/kg		**No**	**----**	**----**	**----**	**----**
APPROVED IDENTIFIER:	----	-	--		**B.SCHRADER**	**----**	**----**	**----**	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RW101	----	----	----	----
				Sampling date / time	15-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2141352-065	--------	--------	--------	--------
					Result	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
^ **Total Polychlorinated biphenyls**	----	1	µg/L		<1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.5	µg/L		<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L		<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	µg/L		<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	µg/L		<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	µg/L		<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	µg/L		<0.5	----	----	----	----
Aldrin	309-00-2	0.5	µg/L		<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	µg/L		<0.5	----	----	----	----
trans-Chlordane	5103-74-2	0.5	µg/L		<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	µg/L		<0.5	----	----	----	----
cis-Chlordane	5103-71-9	0.5	µg/L		<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	µg/L		<0.5	----	----	----	----
Endrin	72-20-8	0.5	µg/L		<0.5	----	----	----	----
beta-Endosulfan	33213-65-9	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	µg/L		<0.5	----	----	----	----
Endrin aldehyde	7421-93-4	0.5	µg/L		<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDT	50-29-3	2.0	µg/L		<2.0	----	----	----	----
Endrin ketone	53494-70-5	0.5	µg/L		<0.5	----	----	----	----
Methoxychlor	72-43-5	2.0	µg/L		<2.0	----	----	----	----
^ **Total Chlordane (sum)**	----	0.5	µg/L		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RW101	----	----	----	----
			Sampling date / time	15-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2141352-065	--------	--------	--------	--------
				Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L	<0.5	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	<0.5	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	----	----	----	----
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	----	----	----	----
Monocrotophos	6923-22-4	2.0	µg/L	<2.0	----	----	----	----
Dimethoate	60-51-5	0.5	µg/L	<0.5	----	----	----	----
Diazinon	333-41-5	0.5	µg/L	<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	----	----	----	----
Parathion-methyl	298-00-0	2.0	µg/L	<2.0	----	----	----	----
Malathion	121-75-5	0.5	µg/L	<0.5	----	----	----	----
Fenthion	55-38-9	0.5	µg/L	<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	----	----	----	----
Parathion	56-38-2	2.0	µg/L	<2.0	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	----	----	----	----
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	----	----	----	----
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	µg/L	<0.5	----	----	----	----
Ethion	563-12-2	0.5	µg/L	<0.5	----	----	----	----
Carbophenothion	786-19-6	0.5	µg/L	<0.5	----	----	----	----
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	----	----	----	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	----	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RW101	----	----	----	----
				Sampling date / time	15-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2141352-065	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L		<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L		<100	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ Total Xylenes	----	2	µg/L		<2	----	----	----	----
^ Sum of BTEX	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	1	%		**93.5**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RW101	----	----	----	----
				Sampling date / time	15-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2141352-065	--------	--------	--------	--------
					Result	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.5	%		**97.9**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.5	%		**80.2**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**27.7**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%		**58.1**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%		**63.2**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**83.6**	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		**87.9**	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		**101**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**97.8**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**105**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**103**	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	BH200_0.1 - 15-Nov-2021 00:00	Soil sample.
EA200: Description	BH3_0.1 - 15-Nov-2021 00:00	Soil sample.
EA200: Description	TP201_0.2 - 15-Nov-2021 00:00	A soil sample containing one piece of degraded asbestos cement sheeting approximately 5x5x2mm.
EA200: Description	TP202_0.2 - 15-Nov-2021 00:00	A soil sample.
EA200: Description	TP203_0.2 - 15-Nov-2021 00:00	Soil sample.
EA200: Description	TP204_0.2 - 15-Nov-2021 00:00	Soil sample.
EA200: Description	TP205_0.2 - 15-Nov-2021 00:00	Soil sample.
EA200: Description	TP206_0.2 - 15-Nov-2021 00:00	Soil sample.
EA200: Description	TP207_0.1 - 15-Nov-2021 00:00	Soil sample containing several pieces of semi-soft white plaster-like material containing unknown mineral fibres.
EA200: Description	TP208_0.3 - 15-Nov-2021 00:00	Soil sample.
EA200: Description	TP209_0.6 - 15-Nov-2021 00:00	Soil sample.
EA200: Description	TP210_0.2 - 15-Nov-2021 00:00	Soil sample containing several pieces of semi-soft white plaster-like material containing unknown mineral fibres.
EA200: Description	TP211_0.2 - 15-Nov-2021 00:00	Soil sample containing one piece of asbestos cement sheeting approximtely 5x5x3mm.
EA200: Description	TP212_0.2 - 15-Nov-2021 00:00	A soil sample.
EA200: Description	TP213_0.2 - 15-Nov-2021 00:00	A soil sample.
EA200: Description	TP214_0.2 - 15-Nov-2021 00:00	A soil sample containing one piece of degraded asbestos cement sheeting approximately 3x2x1mm.
EA200: Description	TP215_0.2 - 15-Nov-2021 00:00	A soil sample.

Sub-Matrix: **SOLID**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	ACMID_01 - 15-Nov-2021 00:00	Several pieces of asbestos cement sheeting approximately 100x60x5mm.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	45	134
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	67	111
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	67	111
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	**Low**	**High**
EP080S: TPH(V)/BTEX Surrogates - Continued			

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry) 18958 (Biology).

(SOIL) EA037: Ass Field Screening Analysis

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

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

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

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

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2141352**	Page	: 1 of 16
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR STUART LORD	Contact	: Tyler Anderson
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: EP2409	Date Samples Received	: 16-Nov-2021
Order number	: ----	Date Analysis Commenced	: 17-Nov-2021
C-O-C number	: ----	Issue Date	: 26-Nov-2021
Sampler	: ----		
Site	: ----		
Quote number	: SY/497/20 Primary analysis only		
No. of samples received	: 76		
No. of samples analysed	: 49		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Kim McCabe	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4032050)									
ES2141352-001	BH200_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	3	7	73.4	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	3	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	5	6	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	14	17	22.1	No Limit
ES2141352-040	TP208_0.3	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	9	10	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	2	2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	6	8	20.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	14	13	13.2	No Limit
EA037: Ass Field Screening Analysis (QC Lot: 4023735)									
ES2141352-010	TP201_0.6	EA037: pH (F)	----	0.1	pH Unit	5.6	5.6	0.0	0% - 20%
		EA037: pH (Fox)	----	0.1	pH Unit	4.6	4.6	0.0	0% - 20%
ES2141352-030	TP206_1.0	EA037: pH (F)	----	0.1	pH Unit	6.7	6.8	0.0	0% - 20%
		EA037: pH (Fox)		0 1	pH Unit	5 0	5 0	0 0	0% 20%
EA037: Ass Field Screening Analysis (QC Lot: 4023736)									
ES2141352-048	TP209_2	EA037: pH (F)	----	0.1	pH Unit	7.1	7.2	0.0	0% - 20%
		EA037: pH (Fox)	----	0.1	pH Unit	5.1	5.1	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4032056)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4032056) - continued									
ES2141352-007	BH3_0.1	EA055: Moisture Content	----	0.1	%	26.0	26.2	1.1	0% - 20%
ES2141352-055	TP211_0.2	EA055: Moisture Content	----	0.1	%	10.4	10.5	0.0	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4032051)									
ES2141352-001	BH200_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2141352-040	TP208_0.3	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4019333)									
ES2141352-001	BH200_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2141352-040	TP208_0.3	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4019332)									
ES2141352-001	BH200_0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2141352-040	TP208_0.3	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4019332) - continued									
ES2141352-040	TP208_0.3	EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4019332)									
ES2141352-001	BH200_0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2141352-040	TP208_0.3	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4019332) - continued									
ES2141352-040	TP208_0.3	EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4019331)									
ES2141352-001	BH200_0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2141352-040	TP208_0.3	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4019331) - continued									
ES2141352-040	TP208_0.3	EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4019330)									
ES2141352-001	BH200_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2141352-040	TP208_0.3	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4021879)									
ES2141352-001	BH200_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2141352-040	TP208_0.3	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4019330)									
ES2141352-001	BH200_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2141352-040	TP208_0.3	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4021879)									
ES2141352-001	BH200_0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2141352-040	TP208_0.3	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 4021879)									
ES2141352-001	BH200_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080: BTEXN (QC Lot: 4021879) - continued									
ES2141352-040	TP208_0.3	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020T: Total Metals by ICP-MS (QC Lot: 4032682)									
ES2141503-015	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	0.0005	0.0005	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.025	0.024	6.4	0% - 20%
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.031	0.027	13.4	0% - 20%
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.174	0.169	3.0	0% - 20%
		EG020A-T: Lead	7439 92 1	0 001	mg/L	0 048	0 046	3 8	0% 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.082	0.079	3.4	0% - 20%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.243	0.233	4.1	0% - 20%
ES2141390-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Chromium	7440 47 3	0 001	mg/L	0 001	0 001	0 0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.014	0.014	0.0	0% - 50%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.012	0.012	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4033540)									
ES2140929-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2142113-005	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4029482)									
ES2141352-065	RW101	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2142055-003	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071 Total Recoverable Hydrocarbons NEPM 2013 Fractions (QC Lot 4029482)									
ES2141352-065	RW101	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2142055-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 4029482)									
ES2141352-065	RW101	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	2	2	0 0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4029482) - continued									
ES2141352-065	RW101	EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2142055-003	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4032050)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	98.6	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	90.0	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	111	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	100	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	99.6	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	97.2	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	89.0	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4032051)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	90.2	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4019333)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	88.7	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4019332)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.4	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	106	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	105	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	99.0	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	99.7	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.7	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.8	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	105	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	104	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	107	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	104	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.8	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	87.8	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	86.8	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4019332)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4019332) - continued								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	95.0	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	107	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	103	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	99.1	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	95.0	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	102	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	101	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	96.8	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.3	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	104	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.7	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	107	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.6	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.4	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4019331)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	97.4	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	101	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	102	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	104	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	97.8	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	93.6	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	94.9	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	97.6	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	99.9	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	103	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	96.3	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	92.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	90.6	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	87.0	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	89.8	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4019330)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	95.1	75.0	129

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4019330) - continued								
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	94.5	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	93.2	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4021879)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	80.3	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4019330)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	97.7	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	92.2	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	94.4	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4021879)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	81.5	68.4	128
EP080: BTEXN (QCLot: 4021879)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	83.4	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	83.5	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	81.9	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	83.3	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	83.4	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	87.7	63.0	119

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 4032682)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	95.5	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	94.6	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	94.6	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	93.9	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	95.3	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	92.7	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	95.1	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4033540)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	101	77.0	111
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4019824)								
EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	10 µg/L	84.0	68.9	113
EP068A: Organochlorine Pesticides (OC) (QCLot: 4019823)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	77.6	64.9	107
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	76.6	58.3	111
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	83.9	69.0	117

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP068A: Organochlorine Pesticides (OC) (QCLot: 4019823) - continued								
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	91.4	70.0	112
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	84.5	68.9	110
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	78.5	65.2	108
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	76.6	65.8	109
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	83.5	67.1	107
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	88.1	64.1	110
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	88.8	66.7	112
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	81.6	63.2	111
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	82.6	65.2	113
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	83.2	66.0	112
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	87.5	65.2	113
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	79.2	67.3	114
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	84.2	72.0	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	76.5	66.9	109
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	76.8	65.2	112
EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	5 µg/L	79.4	65.2	112
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	79.4	63.8	110
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	5 µg/L	84.2	61.1	114
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4019823)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	86.5	65.6	114
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	76.6	63.7	113
EP068: Monocrotophos	6923-22-4	2	µg/L	<2.0	5 µg/L	24.4	19.7	48.0
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	76.7	69.5	110
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	86.6	71.1	110
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	79.6	77.0	119
EP068: Parathion-methyl	298-00-0	2	µg/L	<2.0	5 µg/L	80.5	70.0	124
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	84.8	68.4	116
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	79.3	68.6	112
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	89.6	75.0	119
EP068: Parathion	56-38-2	2	µg/L	<2.0	5 µg/L	85.2	67.0	121
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	80.1	69.0	121
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	83.2	71.8	110
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	94.7	67.5	112
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	93.8	64.1	116
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	83.5	67.8	114
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	82.3	74.0	120
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	81.6	66.2	114
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	94.3	51.6	128
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4019822)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4019822) - continued								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	69.6	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	79.5	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	80.1	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	79.7	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	81.0	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	68.4	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	92.2	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	93.6	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	81.1	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	94.1	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	83.7	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	87.6	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	84.8	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	86.6	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	85.3	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	83.7	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4019821)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	66.2	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	83.7	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	79.7	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4029482)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	80.2	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4019821)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	79.7	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	74.5	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	99.0	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4029482)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	77.8	75.0	127
EP080: BTEXN (QCLot: 4029482)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	87.2	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	90.8	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	90.0	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	88.1	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	91.9	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	90.9	70.0	120

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4032050)							
ES2141352-001	BH200_0.1	EG005T: Arsenic	7440-38-2	50 mg/kg	99 0	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96 9	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	103	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	90.4	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.1	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	96.1	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	94.4	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4032051)							
ES2141352-001	BH200_0.1	EG035T: Mercury	7439-97-6	5 mg/kg	106	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4019333)							
ES2141352-001	BH200_0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	101	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4019332)							
ES2141352-001	BH200_0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	98.7	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	82 0	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	97.6	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	105	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	97 2	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	84.4	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4019332)							
ES2141352-001	BH200_0.1	EP068: Diazinon	333-41-5	0.5 mg/kg	118	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	100	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	95.6	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	98.7	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	83 5	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4019331)							
ES2141352-001	BH200_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	105	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	105	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4019330)							
ES2141352-001	BH200_0.1	EP071: C10 - C14 Fraction	----	480 mg/kg	109	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	115	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	121	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4021879)							

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4021879) - continued							
ES2141352-001	BH200_0.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	94.1	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4019330)							
ES2141352-001	BH200_0.1	EP071: >C10 - C16 Fraction	----	860 mg/kg	114	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	119	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	111	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4021879)							
ES2141352-001	BH200_0.1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	95 0	70.0	130
EP080: BTEXN (QCLot: 4021879)							
ES2141352-001	BH200_0.1	EP080: Benzene	71-43-2	2.5 mg/kg	82 0	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	79 5	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	83.7	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	83 0	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	84.7	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	70 8	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EG020T: Total Metals by ICP-MS (QCLot: 4032682)							
ES2141352-065	RW101	EG020A-T: Arsenic	7440-38-2	1 mg/L	94 2	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	97 0	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	99 5	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	94 3	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	98.6	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	94 3	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	94 8	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4033540)							
ES2141352-065	RW101	EG035T: Mercury	7439-97-6	0.01 mg/L	93 8	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4029482)							
ES2141352-065	RW101	EP080: C6 - C9 Fraction	----	325 µg/L	83 5	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4029482)							
ES2141352-065	RW101	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	80.1	70.0	130
EP080: BTEXN (QCLot: 4029482)							
ES2141352-065	RW101	EP080: Benzene	71-43-2	25 µg/L	80 3	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	82.7	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	81 9	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080: BTEXN (QCLot: 4029482) - continued							
ES2141352-065	RW101	EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	82 3	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	83.7	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	72 8	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2141352**	Page	: 1 of 13
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR STUART LORD	Telephone	: +61 2 8784 8555
Project	: EP2409	Date Samples Received	: 16-Nov-2021
Site	: ----	Issue Date	: 26-Nov-2021
Sampler	: ----	No. of samples received	: 76
Order number	: ----	No. of samples analysed	: 49

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / Container / Client Sample D(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP080: BTEXN						
Soil Glass Jar - Unpreserved						
TS, TSC	18-Nov-2021	15-Nov-2021	**3**	19-Nov-2021	15-Nov-2021	**4**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	13	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	5	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	13	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	13	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	5	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	13	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA037: Ass Field Screening Analysis								
Snap Lock Bag - frozen on receipt at ALS (EA037)								
TP201_0.6,	TP201_1.2,	**15-Nov-2021**	**19-Nov-2021**	14-May-2022	✓	**22-Nov-2021**	14-May-2022	✓
TP201_1.8,	TP202_0.7,							
TP202_1.2,	TP203_1.0,							
TP203_1.5,	TP203_2.0,							
TP203_2.2,	TP206_0.5,							
TP206_1.0,	TP206_1.5,							
TP206_2.0,	TP207_1.5,							
TP207_2.0,	TP207_2.5,							
TP208_1.6,	TP208_2.0,							
TP208_2.4,	TP209_1.5,							
TP209_2,	TP210_1.6,							
TP210_2.0,	TP210_2.4,							
TP211_0.5								
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)								
BH200_0.1,	BH2_0.4,	**15-Nov-2021**	**----**	----	----	**23-Nov-2021**	29-Nov-2021	✓
BH3_0.1,	TP201_0.2,							
TP202_0.2,	TP203_0.2,							
TP204_0.2,	TP205_0.2,							
TP206_0.2,	TP207_0.1,							
TP208_0.3,	TP209_0.6,							
TP210_0.2,	TP211_0.2,							
QC01								
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)								
BH200_0.1,	BH3_0.1,	**15-Nov-2021**	**----**	----	----	**17-Nov-2021**	14-May-2022	✓
TP203_0.2,	TP204_0.2,							
TP205_0.2,	TP206_0.2,							
TP207_0.1,	TP208_0.3,							
TP209_0.6,	TP210_0.2,							
TP211_0.2								
Snap Lock Bag - frozen on receipt at ALS (EA200)								
TP201_0.2,	TP202_0.2,	**15-Nov-2021**	**----**	----	----	**17-Nov-2021**	14-May-2022	✓
TP212_0.2,	TP213_0.2,							
TP214_0.2,	TP215_0.2							

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200N: Asbestos Quantification (non-NATA)							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)							
BH200_0.1, BH3_0.1, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2	**15-Nov-2021**	**----**	----	----	**17-Nov-2021**	14-May-2022	✓
Snap Lock Bag - frozen on receipt at ALS (EA200N)							
TP201_0.2, TP202_0.2, TP212_0.2, TP213_0.2, TP214_0.2, TP215_0.2	**15-Nov-2021**	**----**	----	----	**17-Nov-2021**	14-May-2022	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**23-Nov-2021**	14-May-2022	✓	**24-Nov-2021**	14-May-2022	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**23-Nov-2021**	13-Dec-2021	✓	**25-Nov-2021**	13-Dec-2021	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**23-Nov-2021**	29-Nov-2021	✓	**25-Nov-2021**	02-Jan-2022	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**23-Nov-2021**	29-Nov-2021	✓	**25-Nov-2021**	02-Jan-2022	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**23-Nov-2021**	29-Nov-2021	✓	**25-Nov-2021**	02-Jan-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**23-Nov-2021**	29-Nov-2021	✓	**25-Nov-2021**	02-Jan-2022	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
TB	**05-Nov-2021**	**18-Nov-2021**	19-Nov-2021	✓	**19-Nov-2021**	19-Nov-2021	✓
Soil Glass Jar - Unpreserved (EP080)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**18-Nov-2021**	29-Nov-2021	✓	**19-Nov-2021**	29-Nov-2021	✓
Soil Glass Jar - Unpreserved (EP071)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**23-Nov-2021**	29-Nov-2021	✓	**25-Nov-2021**	02-Jan-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080)							
TB	**05-Nov-2021**	**18-Nov-2021**	19-Nov-2021	✓	**19-Nov-2021**	19-Nov-2021	✓
Soil Glass Jar - Unpreserved (EP080)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**18-Nov-2021**	29-Nov-2021	✓	**19-Nov-2021**	29-Nov-2021	✓
Soil Glass Jar - Unpreserved (EP071)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	**15-Nov-2021**	**23-Nov-2021**	29-Nov-2021	✓	**25-Nov-2021**	02-Jan-2022	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
TS, TSC	01-Nov-2021	18-Nov-2021	15-Nov-2021	×	19-Nov-2021	15-Nov-2021	×
Soil Glass Jar - Unpreserved (EP080)							
TB	05-Nov-2021	18-Nov-2021	19-Nov-2021	✓	19-Nov-2021	19-Nov-2021	✓
Soil Glass Jar - Unpreserved (EP080)							
BH200_0.1, BH2_0.4, BH3_0.1, TP201_0.2, TP202_0.2, TP203_0.2, TP204_0.2, TP205_0.2, TP206_0.2, TP207_0.1, TP208_0.3, TP209_0.6, TP210_0.2, TP211_0.2, QC01	15-Nov-2021	18-Nov-2021	29-Nov-2021	✓	19-Nov-2021	29-Nov-2021	✓

Matrix: **SOLID**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)							
ACMID_01	15-Nov-2021	----	----	----	17-Nov-2021	14-May-2022	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
RW101	15-Nov-2021	24-Nov-2021	14-May-2022	✓	24-Nov-2021	14-May-2022	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
RW101	15-Nov-2021	----	----	----	24-Nov-2021	13-Dec-2021	✓
EP066: Polychlorinated Biphenyls (PCB)							
Amber Glass Bottle - Unpreserved (EP066)							
RW101	15-Nov-2021	18-Nov-2021	22-Nov-2021	✓	19-Nov-2021	28-Dec-2021	✓
EP068A: Organochlorine Pesticides (OC)							
Amber Glass Bottle - Unpreserved (EP068)							
RW101	15-Nov-2021	18-Nov-2021	22-Nov-2021	✓	19-Nov-2021	28-Dec-2021	✓
EP068B: Organophosphorus Pesticides (OP)							
Amber Glass Bottle - Unpreserved (EP068)							
RW101	15-Nov-2021	18-Nov-2021	22-Nov-2021	✓	19-Nov-2021	28-Dec-2021	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
RW101	15-Nov-2021	18-Nov-2021	22-Nov-2021	✓	19-Nov-2021	28-Dec-2021	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
RW101	**15-Nov-2021**	**18-Nov-2021**	22-Nov-2021	✓	**19-Nov-2021**	28-Dec-2021	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
RW101	**15-Nov-2021**	**23-Nov-2021**	29-Nov-2021	✓	**23-Nov-2021**	29-Nov-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
RW101	**15-Nov-2021**	**18-Nov-2021**	22-Nov-2021	✓	**19-Nov-2021**	28-Dec-2021	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
RW101	**15-Nov-2021**	**23-Nov-2021**	29-Nov-2021	✓	**23-Nov-2021**	29-Nov-2021	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
RW101	**15-Nov-2021**	**23-Nov-2021**	29-Nov-2021	✓	**23-Nov-2021**	29-Nov-2021	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
ASS Field Screening Analysis	EA037	3	25	**12.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

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

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	13	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	5	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	1	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	13	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	13	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	5	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	13	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
ASS Field Screening Analysis	* EA037	SOIL	In house: Referenced to Acid Sulfate Soils Laboratory Methods Guidelines. As received samples are tested for pH field and pH fox and assessed for a reaction rating.
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM with Confirmation of Identification by AS 4964 - Gravimetric determination of Asbestos Containing Material, F brous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and F brous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against a kane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Asbestos Identification in Bulk Solids	EA200	SOLID	In house: Referenced to AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining

Analytical Methods	Method	Matrix	Method Descriptions
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Polychlorinated Biphenyls (PCB)	EP066	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
Pesticides by GCMS	EP068	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-A kane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Drying only	EN020D	SOIL	In house
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2141352**

Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR STUART LORD	Contact	: Tyler Anderson
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: stuart.lord@eprisk.com.au	E-mail	: Tyler.Anderson@ALSGlobal.com
Telephone	: ----	Telephone	: +61 2 8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: EP2409	Page	: 1 of 5
Order number	: ----	Quote number	: ES2020EPRISK0006 (SY/497/20 Primary analysis only)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	:		

Dates

Date Samples Received	: 16-Nov-2021 10:37	Issue Date	: 17-Nov-2021
Client Requested Due Date	: 26-Nov-2021	Scheduled Reporting Date	: **26-Nov-2021**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 5.8'C
Receipt Detail	:	No. of samples received / analysed	: 70 / 49
		No. of samples NOT collected	6

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Sample ID QC02 will be fowarded to Eurofins as per COC.**
- **Sample 67 to 76 was received as extra.**
- **For sample 5 asbestos analysis has not been added as a separate bag was not received.**
- **EA037 analysis to be conducted by ALS Brisbane.**
- **Sample 63 had a sample date of 15/11 on the COC but the jar had 5/11.**
- **Sample 64 had a sample date of 15/11 on the COC but the jar had 1/11.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Sample TP204_1.0 was not received due to the following reason: Sample not received.
- Sample TP204_1.5 was not received due to the following reason: Sample not received.
- Sample TP204_1.9 was not received due to the following reason: Sample not received.
- Sample TP205_0.7 was not received due to the following reason: Sample not received.
- Sample TP205_1.2 was not received due to the following reason: Sample not received.
- Sample TP209_2.4 was not received due to the following reason: Sample not received.
- **Asbestos analysis will be conducted by ALS Newcastle.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

Method Sample ID	Sample Container Received	Preferred Sample Container for Analysis
Asbestos Classification and Quantitation per NEPM 2013 : EA200N		
TP201_0.2	- Snap Lock Bag - frozen on receipt at ALS	- Snap Lock Bag: Separate bag received
TP202_0.2	- Snap Lock Bag - frozen on receipt at ALS	- Snap Lock Bag: Separate bag received
TP212_0.2	- Snap Lock Bag - frozen on receipt at ALS	- Snap Lock Bag: Separate bag received
TP213 0 2	- Snap Lock Bag - frozen on receipt at ALS	- Snap Lock Bag: Separate bag received
TP214_0.2	- Snap Lock Bag - frozen on receipt at ALS	- Snap Lock Bag: Separate bag received
TP215_0.2	- Snap Lock Bag - frozen on receipt at ALS	- Snap Lock Bag: Separate bag received

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) SOIL No analysis requested	SO L - EA037 ASS Field Screening Analysis	SO L - EA055-103 Moisture Content	SO L - EA200N Asbestos in Soils - (<1kg samples ONLY)	SO L - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals	SO L - S-18 TRH(C6-C9)/BTEXN
ES2141352-001	15-Nov-2021 00:00	BH200_0.1			✓	✓	✓	
ES2141352-002	15-Nov-2021 00:00	BH200_0.3	✓					
ES2141352-003	15-Nov-2021 00:00	BH200_0.6	✓					
ES2141352-004	15-Nov-2021 00:00	BH2_0.1	✓					
ES2141352-005	15-Nov-2021 00:00	BH2_0.4			✓		✓	
ES2141352-006	15-Nov-2021 00:00	BH2_0.7	✓					
ES2141352-007	15-Nov-2021 00:00	BH3_0.1			✓	✓	✓	
ES2141352-008	15-Nov-2021 00:00	BH3_0.5	✓					
ES2141352-009	15-Nov-2021 00:00	TP201_0.2			✓	✓	✓	
ES2141352-010	15-Nov-2021 00:00	TP201_0.6		✓				
ES2141352-011	15-Nov-2021 00:00	TP201_1.2		✓				
ES2141352-012	15-Nov-2021 00:00	TP201_1.8		✓				
ES2141352-013	15-Nov-2021 00:00	TP202_0.2			✓	✓	✓	
ES2141352-014	15-Nov-2021 00:00	TP202_0.7		✓				
ES2141352-015	15-Nov-2021 00:00	TP202_1.2		✓				
ES2141352-016	15-Nov-2021 00:00	TP203_0.2			✓	✓	✓	
ES2141352-017	15-Nov-2021 00:00	TP203_1.0		✓				
ES2141352-018	15-Nov-2021 00:00	TP203_1.5		✓				
ES2141352-019	15-Nov-2021 00:00	TP203_2.0		✓				
ES2141352-020	15-Nov-2021 00:00	TP203_2.2		✓				
ES2141352-021	15-Nov-2021 00:00	TP204_0.2			✓	✓	✓	
ES2141352-025	15-Nov-2021 00:00	TP205_0.2			✓	✓	✓	
ES2141352-028	15-Nov-2021 00:00	TP206_0.2			✓	✓	✓	
ES2141352-029	15-Nov-2021 00:00	TP206_0.5		✓				

			(On Hold) SOIL No analysis requested	SOIL - EA037 ASS Field Screening Analysis	SOIL - EA055-103 Moisture Content	SOIL - EA200N Asbestos in Soils - (<1kg samples ONLY)	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals	SOIL - S-18 TRH(C6-C9)/BTEXN
ES2141352-030	15-Nov-2021 00:00	TP206_1.0		✓				
ES2141352-031	15-Nov-2021 00:00	TP206_1.5		✓				
ES2141352-032	15-Nov-2021 00:00	TP206_2.0		✓				
ES2141352-033	15-Nov-2021 00:00	TP207_0.1			✓	✓	✓	
ES2141352-034	15-Nov-2021 00:00	TP207_0.5	✓					
ES2141352-035	15-Nov-2021 00:00	TP207_0.8	✓					
ES2141352-036	15-Nov-2021 00:00	TP207_1.5		✓				
ES2141352-037	15-Nov-2021 00:00	TP207_2.0		✓				
ES2141352-038	15-Nov-2021 00:00	TP207_2.5		✓				
ES2141352-039	15-Nov-2021 00:00	TP208_0.1	✓					
ES2141352-040	15-Nov-2021 00:00	TP208_0.3			✓	✓	✓	
ES2141352-041	15-Nov-2021 00:00	TP208_0.7	✓					
ES2141352-042	15-Nov-2021 00:00	TP208_1.6		✓				
ES2141352-043	15-Nov-2021 00:00	TP208_2.0		✓				
ES2141352-044	15-Nov-2021 00:00	TP208_2.4		✓				
ES2141352-045	15-Nov-2021 00:00	TP209_0.1	✓					
ES2141352-046	15-Nov-2021 00:00	TP209_0.6			✓	✓	✓	
ES2141352-047	15-Nov-2021 00:00	TP209_1.5		✓				
ES2141352-048	15-Nov-2021 00:00	TP209_2		✓				
ES2141352-050	15-Nov-2021 00:00	TP210_0.2			✓	✓	✓	
ES2141352-051	15-Nov-2021 00:00	TP210_0.6	✓					
ES2141352-052	15-Nov-2021 00:00	TP210_1.6		✓				
ES2141352-053	15-Nov-2021 00:00	TP210_2.0		✓				
ES2141352-054	15-Nov-2021 00:00	TP210_2.4		✓				
ES2141352-055	15-Nov-2021 00:00	TP211_0.2			✓	✓	✓	
ES2141352-057	15-Nov-2021 00:00	TP211_0.5		✓				
ES2141352-058	15-Nov-2021 00:00	TP212_0.2				✓		
ES2141352-059	15-Nov-2021 00:00	TP213_0.2				✓		
ES2141352-060	15-Nov-2021 00:00	TP214_0.2				✓		
ES2141352-061	15-Nov-2021 00:00	TP215_0.2				✓		
ES2141352-062	15-Nov-2021 00:00	QC01			✓		✓	
ES2141352-063	05-Nov-2021 00:00	TB						✓
ES2141352-067	15-Nov-2021 00:00	TP209	✓					
ES2141352-068	15-Nov-2021 00:00	TP205_1.0	✓					
ES2141352-069	15-Nov-2021 00:00	TP205_1.5	✓					
ES2141352-070	15-Nov-2021 00:00	TP205_1.9	✓					
ES2141352-071	15-Nov-2021 00:00	TP204_0.7	✓					
ES2141352-072	15-Nov-2021 00:00	TP204_1.2	✓					
ES2141352-073	15-Nov-2021 00:00	TP204_2.4	✓					
ES2141352-074	15-Nov-2021 00:00	TP210_0.5	✓					
ES2141352-075	15-Nov-2021 00:00	BH02_0.1	✓					

			(On Hold) SOIL No analysis requested	SOIL - EA037 ASS Field Screening Analysis	SOIL - EA055-103 Moisture Content	SOIL - EA200N Asbestos in Soils - (<1kg samples ONLY)	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals	SOIL - S-18 TRH(C6-C9)/BTEXN
ES2141352-076	15-Nov-2021 00:00	NEPM SCREEN	✓					

Matrix: **SOIL**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	SOIL - EP080 BTEXN
ES2141352-064	01-Nov-2021 00:00	TS	✓
ES2141352-066	01-Nov-2021 00:00	TSC	✓

Matrix: **SOLID**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	SOLID - EA200B Asbestos Identification in Bulk Solids (Excluding
ES2141352-056	15-Nov-2021 00:00	ACMID_01	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - W-16T TRH/BTEXN/PAH/OC/OP/PCB/8 Total metals
ES2141352-065	15-Nov-2021 00:00	RW101	✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL**

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

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received		Instructions Received	
				Date	Evaluation	Date	Evaluation
EP080: TRH Volatiles/BTEX							
TSC	Soil Glass Jar - Unpreserved	15-Nov-2021	15-Nov-2021	16-Nov-2021	×	16-Nov-2021	×
TS	Soil Glass Jar - Unpreserved	15-Nov-2021	15-Nov-2021	16-Nov-2021	×	16-Nov-2021	×

Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)	Email	accounts@eprisk.com.au

STUART LORD

- *AU Certificate of Analysis - NATA (COA)	Email	stuart.lord@eprisk.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	stuart.lord@eprisk.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	stuart.lord@eprisk.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	stuart.lord@eprisk.com.au
- Chain of Custody (CoC) (COC)	Email	stuart.lord@eprisk.com.au
- EDI Format - ESDAT (ESDAT)	Email	stuart.lord@eprisk.com.au

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com

☐ **Newcastle**: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E.samples.newcastle@alsenviro.com

☐ **Brisbane**: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E:samples.brisbane@alsenviro.com

☐ **Townsville**: 14-15 Desma Ct, Bohle QLD 4818 Ph:07 4796 0600 E: townsville.environmental@alsenviro.com

☐ **Melbourne**: 2-4 Westall Rd, Springvale VIC 3171 Ph:03 8549 9600 E: samples.melbourne@alsenviro.com

☐ **Adelaide**: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E:adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):
OFFICE:	NEWCASTLE		
PROJECT:	Trinity Point	**ALS QUOTE NO.:**	SY49720v3
ORDER NUMBER:	EP2409		
PROJECT MANAGER:		**CONTACT PH:** 0403768722	
SAMPLER:		**SAMPLER MOBILE:**	
COC emailed to ALS? (YES / NO)		**EDD FORMAT (or default):**	
Email Reports to (will default to PM if no other addresses are listed):	stuart.lord@eprisk.com.au		
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)

COC: 1 2 3 4 5 6 7

OF: 1 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)

Custody seal intact | Yes | No | N/A

Random Sample Temperature on Receipt | Yes | No | N/A

Cooling Method: Ice | Ice Pack | None

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:	DATE/TIME: 16/11/21 17:00	DATE/TIME: Rasheed 16/11/21 7:40pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

COC received 15/11/21 10:37

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).							Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	EA037	EA200N	S-16	EA200B	Hold			Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	BH200_0.1	15/11/2021	s		2		x	x					
2	BH200_0.3	15/11/2021	s		1					x			
3	BH200_0.6	15/11/2021	s		1					x			
4	BH2_0.1	15/11/2021	s		2					x			
5	BH2_0.4	15/11/2021	s		1		x	x					
6	BH2_0.7	15/11/2021	s		1					x			
7	BH3_0.1	15/11/2021	s		2		x	x					
8	BH3_0.5	15/11/2021	s		1					x			
9	TP201_0.2	15/11/2021	s		2		x	x					
10	TP201_0.6	15/11/2021	s		2	x							
11	TP201_1.2	15/11/2021	s		1	x							jar on hold
12	TP201_1.8	15/11/2021	s		1	x							
13	TP202_0.2	15/11/2021	s		2		x	x					
14	TP202_0.7	15/11/2021	s		2	x							jar on hold
				TOTAL									

Subcon / Forward Lab / Split WO: (3)

Lab / Analysis: Asbestos /AS Newcastle

Organised By / Date: EA037 /AS Brisbane

Relinquished By / Date: 24-32 / 33-38 / 42-44, 47-48

Connote / Courier: 52-56, 57

WO No: ES2141352

Attached By PO / Internal Sheet: 49202 EA037 /AS Newcastle 49213 56-61 / 14-15, 17-20

Environmental Division Sydney

Work Order Reference

ES2141352

Telephone : +61-2-8784 8555

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com

☐ **Newcastle**: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E:samples.newcastle@alsenviro.com

☐ **Brisbane**: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E:samples.brisbane@alsenviro.com

☐ **Townsville**: 14-15 Desma Ct, Bohle QLD 4818 Ph:07 4796 0600 E: townsville.environmental@alsenviro.com

☐ **Melbourne**: 2-4 Westall Rd, Springvale VIC 3171 Ph:03 8549 9600 E: samples.melbourne@alsenviro.com

☐ **Adelaide**: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E:adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**	
OFFICE:	NEWCASTLE		☐ Non Standard or urgent TAT **(List due date):**	Custody seal intact?	Yes / No / N/A
PROJECT:	Trinity Point	**ALS QUOTE NO.:** SY49720v3	**COC SEQUENCE NUMBER (Circle)**	Cooler/Ice/Frozen ice breks present upon receipt?	Yes / No / N/A
ORDER NUMBER:	EP2409		COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt	
PROJECT MANAGER:		**CONTACT PH: 0403768722**	OF: 1 2 3 4 5 6 7	Other comments (if any):	
SAMPLER:		**SAMPLER MOBILE:**	**RELINQUISHED BY:**	**RECEIVED BY:**	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / ~~NO~~)		**EDD FORMAT (or default):**				
Email Reports to (will default to PM if no other addresses are listed): **stuart.lord@eprisk.com.au**			DATE/TIME:	DATE/TIME:	DATE/TIME: 16/11/21 17:??	DATE/TIME: 16/11/21 7:40 pm
Email Invoice to (will default to PM if no other addresses are listed):						

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	EA037	EA200N	S-16	EA200B	Hold				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
15	TP202_1.2	15/11/2021	s		1	x								
16	TP203_0.2	15/11/2021	s		2		x	x						
17	TP203_1.0	15/11/2021	s		2	x								jar on hold
18	TP203_1.5	15/11/2021	s		1	x								
19	TP203_2.0	15/11/2021	s		1	x								
20	TP203_2.2	15/11/2021	s		1	x								
21	TP204_0.2	15/11/2021	s		2		x	x						
SNR 22	TP204_1.0	15/11/2021	s		1					x				
SNR 23	TP204_1.5	15/11/2021	s		2	x								jar on hold
SNR 24	TP204_1.9	15/11/2021	s		1	x								
25	TP205_0.2	15/11/2021	s		2		x	x						
SNR 26	TP205_0.7	15/11/2021	s		2	x								jar on hold
SNR 27	TP205_1.2	15/11/2021	s		1	x								
28	TP206_0.2	15/11/2021	s		2		x	x						
				TOTAL										

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com

☐ **Newcastle**: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E: samples.newcastle@alsenviro.com

☐ **Brisbane**: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E:samples.brisbane@alsenviro.com

☐ **Townsville**: 14-15 Desma Ct, Bohle QLD 4818 Ph:07 4796 0600 E: townsville.environmental@alsenviro.com

☐ **Melbourne**: 2-4 Westall Rd, Springvale VIC 3171 Ph 03 8549 9600 E: samples.melbourne@alsenviro.com

☐ **Adelaide**: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E:adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date):
OFFICE:	NEWCASTLE		☐ Non Standard or urgent TAT (List due date):
PROJECT:	Trinity Point	**ALS QUOTE NO.:**	SY49720v3
ORDER NUMBER:	EP2409		
PROJECT MANAGER:		**CONTACT PH:** 0403768722	
SAMPLER:		**SAMPLER MOBILE:**	
COC emailed to ALS? (YES / ~~NO~~)		**EDD FORMAT (or default):**	
Email Reports to (will default to PM if no other addresses are listed):	stuart.lord@eprisk.com.au		
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)

COC: 1 2 **3** 4 5 6 7

OF: 1 2 3 4 **5** 6 7

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No N/A

Cooler Temperature (Indicate per cooler): Yes No N/A

Random Sample Temperature on Receipt: °C

Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:	DATE/TIME: 16/11/21 17:00	DATE/TIME: 16/11/21 7:40 pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	EA037	EA200N	S-16	EA200B	Hold				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
29	TP206_0.5	15/11/2021	s		2	x								jar on hold
30	TP206_1.0	15/11/2021	s		1	x								
31	TP206_1.5	15/11/2021	s		1	x								
32	TP206_2.0	15/11/2021	s		1	x								
33	TP207_0.1	15/11/2021	s		2		x	x						
34	TP207_0.5	15/11/2021	s		1					x				
35	TP207_0.8	15/11/2021	s		1					x				
36	TP207_1.5	15/11/2021	s		2	x								jar on hold
37	TP207_2.0	15/11/2021	s		1	x								
38	TP207_2.5	15/11/2021	s		1	x								
39	TP208_0.1	15/11/2021	s		1					x				
40	TP208_0.3	15/11/2021	s		2		x	x						
41	TP208_0.7	15/11/2021	s		1					x				
42	TP208_1.6	15/11/2021	s		1	x								jar on hold
				TOTAL										

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

CHAIN OF CUSTODY

ALS Laboratory: *please tick* →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsenviro.com

☐ **Newcastle**: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E: samples.newcastle@alsenviro.com

☐ **Brisbane**: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E:samples.brisbane@alsenviro.com

☐ **Townsville**: 14-15 Desma Ct, Bohle QLD 4818 Ph:07 4796 0600 E: townsville.environmental@alsenviro.com

☐ **Melbourne**: 2-4 Westall Rd, Springvale VIC 3171 Ph:03 8549 9600 E: samples.melbourne@alsenviro.com

☐ **Adelaide**: 2-4 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):
OFFICE:	NEWCASTLE		
PROJECT:	Trinity Point	**ALS QUOTE NO.:**	SY49720v3
ORDER NUMBER:	EP2409		
PROJECT MANAGER:		**CONTACT PH:** 0403768722	
SAMPLER:		**SAMPLER MOBILE:**	
COC emailed to ALS? (YES / ~~NO~~)		**EDD FORMAT (or default):**	
Email Reports to (will default to PM if no other addresses are listed):	stuart.lord@eprisk.com.au		
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)

COC: 1 2 3 4 5 6 7

OF: 1 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)

Custody seal intact? Yes / No / N/A

Rec'd at / frozen ice bricks / ice packs upon receipt? Yes / No / N/A

Random Sample Temperature on Receipt: °C

Other comments:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:	DATE/TIME: 16/11/21 17.00	DATE/TIME: Rasheed 16/11/21 7:40 AM

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	EA037	EA200N	S-16	EA200B	Hold				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
43	TP208_2.0	15/11/2021	s		1	x								
44	TP208_2.4	15/11/2021	s		1	x								
45	TP209_0.1	15/11/2021	s		2					x				
46	TP209_0.6	15/11/2021	s		2		x	x						
47	TP209_1.5	15/11/2021	s		2	x								
48	TP209_2	15/11/2021	s		1	x								jar on hold
49	TP209_2.4	15/11/2021	s		1	x								
50	TP210_0.2	15/11/2021	s		2		x	x						
51	TP210_0.6	15/11/2021	s		1					x				
52	TP210_1.6	15/11/2021	s		2	x								
53	TP210_2.0	15/11/2021	s		1	x								jar on hold
54	TP210_2.4	15/11/2021	s		1	x								
55	TP211_0.2	15/11/2021	s		2		x	x						
56	ACMID_01	15/11/2021	s		1				x					
				TOTAL										

SNR

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com

☐ **Newcastle**: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E:samples.newcastle@alsenviro.com

☐ **Brisbane**: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E:samples.brisbane@alsenviro.com

☐ **Townsville**: 14-15 Desma Ct, Bohle QLD 4818 Ph:07 4796 0600 E: townsville.environmental@alsenviro.com

☐ **Melbourne**: 2-4 Westall Rd, Springvale VIC 3171 Ph:03 8549 9600 E: samples.melbourne@alsenviro.com

☐ **Adelaide**: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E:adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (**List due date**):
OFFICE:	NEWCASTLE		☐ Non Standard or urgent TAT (**List due date**):
PROJECT:	Trinity Point	**ALS QUOTE NO.:**	SY49720v3
ORDER NUMBER:	EP2409		
PROJECT MANAGER:		**CONTACT PH:** 0403768722	
SAMPLER:		**SAMPLER MOBILE:**	
COC emailed to ALS? (YES / ~~NO~~)		**EDD FORMAT (or default):**	
Email Reports to (will default to PM if no other addresses are listed):	**stuart.lord@eprisk.com.au**		
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)

COC: 1 2 3 4 5 6 7

OF: 1 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes / No / N/A

Free ice / frozen ice bricks present upon receipt? Yes / No / N/A

Random Sample Temperature on Receipt: °C

Other comments:

RELINQUISHED BY:	**RECEIVED BY:**	**RELINQUISHED BY:**	**RECEIVED BY:**
DATE/TIME:	DATE/TIME:	DATE/TIME: 16/11/21 17:00	DATE/TIME: Rathees 16/11/21 7:40 pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

ALS USE ONLY	**SAMPLE DETAILS** MATRIX: Solid(S) Water(W)			**CONTAINER INFORMATION**		**ANALYSIS REQUIRED including SUITES** (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).								**Additional Information**
LAB ID	**SAMPLE ID**	**DATE / TIME**	**MATRIX**	**TYPE & PRESERVATIVE** *(refer to codes below)*	**TOTAL BOTTLES**	**EA037**	**EA200N**	**S-16**	**EA200B**	**Hold**	**TRH F1/ BTEXN**	**W-16**		Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
~~56~~ 57	TP211_0.5	15/11/2021	s		2	x								jar on hold
58	TP212_0.2	15/11/2021	s		1		x							
59	TP213_0.2	15/11/2021	s		1		x							
60	TP214_0.2	15/11/2021	s		1		x							
61	TP215_0.2	15/11/2021	s		1		x							
62	QC01	15/11/2021	s		1			x						
	QC02	15/11/2021	s		1			x						Please send to Eurofins for analysis
63	TB	15/11/2021	s		1						x			
64	TS	15/11/2021	s		1						x			
65	RW101	15/11/2021	W		1							x		
				TOTAL										

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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

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

☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600 E: gladstone@alsglobal.com

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

☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com

☐MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com

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

☐NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 024423 2063 E: nowra@alsglobal.com

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

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

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

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

CLIENT: EP Risk	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE:		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact: Yes / No / N/A
PROJECT: EP2809	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice packs present upon receipt: Yes / No / N/A
ORDER NUMBER:		COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Stuart Loud	CONTACT PH: 0403768722.	OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):	DATE/TIME:	DATE/TIME:
Email Reports to (will default to PM if no other addresses are listed):		RELINQUISHED BY:	RECEIVED BY:
Email Invoice to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS									Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
				TOTAL										

COC to be emailed.

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

ES2141352

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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

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

GLADSTONE 15 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5691 E: gladstone@alsglobal.com

GYMPIE 79 Hobson Road Kybong QLD 4570 Ph: 07 5481 0177 E: enquiry@alsglobal.com

MELBOURNE 3-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: melb.env@alsglobal.com

MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.env@alsglobal.com

NEWCASTLE 5 Rose Gum Road Warabrook NSW 2304 Ph: 02 4958 9630 E: samples.newcastle@alsglobal.com

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

TAMWORTH 10-18 Gunnedah Road Tamworth NSW 2340 Ph: 02 6755 8225 E: samples.tamworth@alsglobal.com

TOWNSVILLE 14-15 Desma Court Garbutt QLD 4814 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com

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

CLIENT:	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE:		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: EP2409	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER:		COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER:	CONTACT PH:	OF: 1 2 3 4 5 6 7	Other comment:

SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY: / RECEIVED BY:
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):			
Email Reports to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME: 16/11/24 1940	DATE/TIME: / DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):				

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).	Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS		
	Received Extra sample						
67	TP209_	15/11/24	S	250ml jar	1		
68	TP205_1.0		S		1		
69	TP205_1.5		S	Jar+bag	2		
70	TP205_1.9		S	bag ASS	1		
71	TP204_0.7		S	Jar+bag ASS	2		
72	TP204_1.2		S	ASS bag	1		
73	TP204_2.4		S	ASS bag	1		
74	TP210_0.5		S	Asb	1		
75	BH02_01		S	bag Asb	1		
76	NEPM Screen		S	bag Asb	1		
				TOTAL			

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsenviro.com

☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E: samples.newcastle@alsenviro.com

☐ Brisbane: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E: samples.brisbane@alsenviro.com

☐ Townsville: 14-15 Desma Ct, Bohle QLD 4818 Ph 07 4796 0600 E: townsville.environmental@alsenviro.com

☐ Melbourne: 2-4 Westall Rd, Springvale VIC 3171 Ph:03 8549 9600 E: samples.melbourne@alsenviro.com

☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD
OFFICE:	NEWCASTLE
PROJECT:	Trinity Point
ORDER NUMBER:	EP2409
PROJECT MANAGER:	
SAMPLER:	CONTACT PH: 0403768722
COC emailed to ALS? (YES / NO)	SAMPLER MOBILE:
Email Reports to (will default to PM if no other addresses are listed):	EDD FORMAT (or default): stuart.ford@eprisk.com.au
Email Invoice to (will default to PM if no other addresses are listed):	

TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)
☒ Standard TAT (List due date):
☐ Non Standard or urgent TAT (List due date):

ALS QUOTE NO.: SY49720v3

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comment: 5 P

RELINQUISHED BY: # 844053
DATE/TIME:

RECEIVED BY: Nreallum (Eurofins)
DATE/TIME: 17/11 3:20pm

RELINQUISHED BY:
DATE/TIME: 16/11/21 17:00

RECEIVED BY: Rasheed
DATE/TIME: 16/11/21 7:40pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

COC received 15/11/21 10:37

ALS USE ONLY	SAMPLE DETAILS (MATRIX: Solid(S) Water(W))			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	EA037	EA200N	S-16	EA200B	Hold					Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	BH200_0.1	15/11/2021	S		2		x	x							
2	BH200_0.3	15/11/2021	S		1					x					
3	BH200_0.6	15/11/2021	S		1					x					
4	BH2_0.1	15/11/2021	S		2					x					
5	BH2_0.4	15/11/2021	S		1		x	x							
6	BH2_0.7	15/11/2021	S		1					x					
7	BH3_0.1	15/11/2021	S		2		x	x							
8	BH3_0.5	15/11/2021	S		1					x					
9	TP201_0.2	15/11/2021	S		2		x	x							
10	TP201_0.6	15/11/2021	S		2	x									
11	TP201_1.2	15/11/2021	S		1	x									jar on hold
12	TP201_1.8	15/11/2021	S		1	x									
13	TP202_0.2	15/11/2021	S		2		x	x							
14	TP202_0.7	15/11/2021	S		2	x									jar on hold
				TOTAL											

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

Environmental Division Sydney
Work Order Reference
ES2141352

Telephone : +61-2-8784 8555

Sub-Out / Fwd to Lab / plus WO
Lab / Analysis:
Organised by / Date:
Relinquished by / Date:
Connote / Courier:
WO No:
Attached by PM / Internal Sheet:

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ Sydney 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsenviro.com

☐ Brisbane 32 Shand St, Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsenviro.com

☐ Melbourne 24 Westall Rd, Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsenviro.com

☐ Newcastle 5 Rosegum Rd, Warabrook NSW 2304 Ph: 02 4968 9433 E: samples.newcastle@alsenviro.com

☐ Townsville 14-15 Desma Ct, Bohle QLD 4818 Ph: 07 4796 0600 E: samples.townsville@alsenviro.com

☐ Adelaide 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☒ Standard TAT (List due date):												
OFFICE:	NEWCASTLE		☐ Non Standard or urgent TAT (List due date):												
PROJECT:	Trinity Point	ALS QUOTE NO.:	SY49720v3												
ORDER NUMBER:	EP2409														
PROJECT MANAGER:		CONTACT PH: 0403768722													
SAMPLER:		SAMPLER MOBILE:													
COC emailed to ALS? (YES / NO)		EDD FORMAT (or default):													
Email Reports to (will default to PM if no other addresses are listed): stuart.lord@eprisk.com.au															
Email Invoice to (will default to PM if no other addresses are listed):															

COC SEQUENCE NUMBER (Circle)

COC: 1 [2] 3 4 5 6 7

OF: 1 2 3 4 [5] 6 7

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
H 844055	Mccallum (EPRisk)		Rasheed
DATE/TIME:	DATE/TIME: 17/11 3:20pm	DATE/TIME: 16/11/21 17:00	DATE/TIME: 18/11/21 7:40 pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	EA037	EA200N	S-16	EA200B	Hold				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
15	TP202_1.2	15/11/2021	s		1	x								
16	TP203_0.2	15/11/2021	s		2		x	x						
17	TP203_1.0	15/11/2021	s		2	x								
18	TP203_1.5	15/11/2021	s		1	x								jar on hold
19	TP203_2.0	15/11/2021	s		1	x								
20	TP203_2.2	15/11/2021	s		1	x								
21	TP204_0.2	15/11/2021	s		2		x	x						
22	TP204_1.0	15/11/2021	s		1					x				
23	TP204_1.5	15/11/2021	s		2	x								
24	TP204_1.9	15/11/2021	s		1	x								jar on hold
25	TP205_0.2	15/11/2021	s		2		x	x						
26	TP205_0.7	15/11/2021	s		2	x								
27	TP205_1.2	15/11/2021	s		1	x								jar on hold
28	TP206_0.2	15/11/2021	s		2		x	x						
				TOTAL										

SNR
SNR
SNR
SNR
SNR
SNR

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsenviro.com

☐ Brisbane: 32 Shand St, Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsenviro.com

☐ Melbourne: 3-4 Westall Rd, Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsenviro.com

☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph: 02 4958 5433 E: samples.newcastle@alsenviro.com

☐ Townsville: Unit 13, Desma Ct, Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsenviro.com

☐ Adelaide: 21 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):
OFFICE:	NEWCASTLE		
PROJECT:	Trinity Point	ALS QUOTE NO.:	SY49720v3
ORDER NUMBER:	EP2409		
PROJECT MANAGER:		CONTACT PH: 0403758722	
SAMPLER:		SAMPLER MOBILE:	
COC emailed to ALS? (YES / NO)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):	stuart.lord@eprisk.com.au		
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)

COC: 1 2 **3** 4 5 6 7

OF: 1 2 3 4 **5** 6 7

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
#844053	Dmcallum (Emutins)		Rasheed
DATE/TIME:	DATE/TIME: 17/11 3:20pm	DATE/TIME: 16/11/21 17:00	DATE/TIME: 16/11/21 7:40 pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	EA037	EA200N	S-16	EA200B	Hold				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
29	TP206_0.5	15/11/2021	S		2	x								
30	TP206_1.0	15/11/2021	S		1	x								jar on hold
31	TP206_1.5	15/11/2021	S		1	x								
32	TP206_2.0	15/11/2021	S		1	x								
33	TP207_0.1	15/11/2021	S		2		x	x						
34	TP207_0.5	15/11/2021	S		1					x				
35	TP207_0.8	15/11/2021	S		1					x				
36	TP207_1.5	15/11/2021	S		2	x								
37	TP207_2.0	15/11/2021	S		1	x								jar on hold
38	TP207_2.5	15/11/2021	S		1	x								
39	TP208_0.1	15/11/2021	S		1					x				
40	TP208_0.3	15/11/2021	S		2		x	x						
41	TP208_0.7	15/11/2021	S		1					x				
42	TP208_1.6	15/11/2021	S		1	x								jar on hold
				TOTAL										

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT:	EP RISK MANAGEMENT PTY LTD	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☒ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):
OFFICE:	NEWCASTLE		
PROJECT:	Trinity Point	ALS QUOTE NO.:	SY49720v3
ORDER NUMBER:	EP2409		
PROJECT MANAGER:		CONTACT PH: 0403768722	
SAMPLER:		SAMPLER MOBILE:	
COC emailed to ALS? (YES / NO)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):	stuart.lord@eprisk.com.au		
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)

COC: 1 2 3 4 5 6 7

OF: 1 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)

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

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
# 844053	Driccallum (Courier)		Rasheed
DATE/TIME:	DATE/TIME: 17/11 3:20pm	DATE/TIME: 16/11/21 17.00	DATE/TIME: 16/11/21 7:40 AM

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	EA037	EA200N	S-16	EA200B	Hold				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
43	TP208_2.0	15/11/2021	s		1	x								
44	TP208_2.4	15/11/2021	s		1	x								
45	TP209_0.1	15/11/2021	s		2					x				
46	TP209_0.6	15/11/2021	s		2		x	x						
47	TP209_1.5	15/11/2021	s		2	x								
48	TP209_2	15/11/2021	s		1	x								jar on hold
49	TP209_2.4	15/11/2021	s		1	x								
50	TP210_0.2	15/11/2021	s		2		x	x						
51	TP210_0.6	15/11/2021	s		1					x				
52	TP210_1.6	15/11/2021	s		2	x								
53	TP210_2.0	15/11/2021	s		1	x								jar on hold
54	TP210_2.4	15/11/2021	s		1	x								
55	TP211_0.2	15/11/2021	s		2		x	x						
56	ACMID_01	15/11/2021	s		1				x					
				TOTAL										

SMK

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT:	EP RISK MANAGEMENT PTY LTD	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):
OFFICE:	NEWCASTLE		
PROJECT:	Trinity Point	ALS QUOTE NO.:	SY49720v3
ORDER NUMBER:	EP2409		
PROJECT MANAGER:		CONTACT PH: 0403768722	
SAMPLER:		SAMPLER MOBILE:	
COC emailed to ALS? (YES / NO)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):	stuart.lord@eprisk.com.au		
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)

COC:	1	2	3	4	5	6	7
OF:	1	2	3	4	5	6	7

FOR LABORATORY USE ONLY (Circle)

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

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
#844053			Rathead
DATE/TIME:	DATE/TIME: (Evening) 17/11 3:20pm	DATE/TIME: 16/11/21 17.00	DATE/TIME: 16/11/21 7:44 pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please freeze samples for potential additional analysis

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	EA037	EA200N	S-16	EA200B	Hold	TRH F1/ BTEXN	W-16		Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
857	TP211_0.5	15/11/2021	S		2	x								jar on hold
58	TP212_0.2	15/11/2021	S		1		x							
59	TP213_0.2	15/11/2021	S		1		x							
60	TP214_0.2	15/11/2021	S		1		x							
61	TP215_0.2	15/11/2021	S		1		x							
62	QC01	15/11/2021	S		1			x						
	QC02	15/11/2021	S		1			x						Please send to Eurofins for analysis
63	TB	15/11/2021	S		1						x			
64	TS	15/11/2021	S		1						x			
65	RW101	15/11/2021	W		1							x		
				TOTAL										

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: EP Risk	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):	FOR LABORATORY USE ONLY (Circle)	
OFFICE:		Custody Seal Intact?	Yes / No / N/A
PROJECT: EP2409	ALS QUOTE NO.:	Free ice / frozen ice bricks present upon receipt?	Yes / No / N/A
ORDER NUMBER:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 OF: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER: Stuart Lord	CONTACT PH: 0403768722.	Other comment:	
SAMPLER:	SAMPLER MOBILE:		
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):		
Email Reports to (will default to PM if no other addresses are listed):			
Email Invoice to (will default to PM if no other addresses are listed):			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
# 844053	DMcCallum (Courting)		
DATE/TIME:	DATE/TIME: 17/11 3:20pm	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS									Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
				TOTAL										

COC to be emailed.

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

ES2141352

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT:	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests eg.. Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE:		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: EP2409	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER:		COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt °C
PROJECT MANAGER:	CONTACT PH:	OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):	DATE/TIME:	DATE/TIME:
Email Reports to (will default to PM if no other addresses are listed):			RELINQUISHED BY:
Email Invoice to (will default to PM if no other addresses are listed):			DATE/TIME: H844053
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:			RECEIVED BY: DATE/TIME: (Evening) 17/11 3:20pm

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID Received Extra sample	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS									Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
69	TP209	NS 11/24	S		1									
66	TP05-1.0		S		1									
69	TP05-1.5		S	Jar+bag	2									
70	TP05 1.9		S	bag ASS	1									
71	TP04-0.7		S	Jar + bag ASS	2									
72	TP04-1.2		S	ASS bag	1									
73	TP204-1.4		S	ASS bag	1									
74	TP210-0.5		S	Ass	1									
75	BH02-01		S	bag ASS	1									
76	NEPM Scrap		S	bag ASS	1									

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

eurofins | Environment Testing

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

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	EP Risk Management (NSW)
Contact name:	Stuart Lord
Project name:	TRINITY POINT
Project ID:	EP2409
Turnaround time:	5 Day
Date/Time received	Nov 17, 2021 3:20 PM
Eurofins reference	844053

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✗	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✗	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Stuart Lord - Stuart.Lord@eprisk.com.au.

Note: A copy of these results will also be delivered to the general EP Risk Management (NSW) email address.

eurofins | Environment Testing

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

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: EP Risk Management (NSW)
Address: 109/283 Alfred Street
North Sydney
NSW 2060

Project Name: TRINITY POINT
Project ID: EP2409

Order No.:
Report #: 844053
Phone: 02 99225021
Fax:

Received: Nov 17, 2021 3:20 PM
Due: Nov 24, 2021
Priority: 5 Day
Contact Name: Stuart Lord

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA # 1261 Site # 1254								
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794								
Mayfield Laboratory - NATA # 1261 Site # 25079								
Perth Laboratory - NATA # 2377 Site # 2370								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	QC02	Not Provided		Soil	S21-No59766	X	X	X
Test Counts						1	1	1

EP Risk Management (NSW)
109/283 Alfred Street
North Sydney
NSW 2060

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Stuart Lord**

Report **844053-S**
Project name TRINITY POINT
Project ID EP2409
Received Date Nov 17, 2021

Client Sample ID			**QC02**
Sample Matrix			**Soil**
Eurofins Sample No.			**S21-No59766**
Date Sampled			**Not Provided**[I12]
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	100
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5

Client Sample ID			QC02
Sample Matrix			Soil
Eurofins Sample No.			S21-No59766
Date Sampled			Not Provided[I12]
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	116
p-Terphenyl-d14 (surr.)	1	%	105
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-HCH	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-HCH	0.05	mg/kg	< 0.05
d-HCH	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	0.5	mg/kg	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	147
Tetrachloro-m-xylene (surr.)	1	%	114
Organophosphorus Pesticides			
Azinphos-methyl	0.2	mg/kg	< 0.2
Bolstar	0.2	mg/kg	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2
Coumaphos	2	mg/kg	< 2
Demeton-S	0.2	mg/kg	< 0.2
Demeton-O	0.2	mg/kg	< 0.2
Diazinon	0.2	mg/kg	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2
Dimethoate	0.2	mg/kg	< 0.2

Client Sample ID			QC02
Sample Matrix			Soil
Eurofins Sample No.			S21-No59766
Date Sampled			Not Provided[I12]
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Disulfoton	0.2	mg/kg	< 0.2
EPN	0.2	mg/kg	< 0.2
Ethion	0.2	mg/kg	< 0.2
Ethoprop	0.2	mg/kg	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2
Fenthion	0.2	mg/kg	< 0.2
Malathion	0.2	mg/kg	< 0.2
Merphos	0.2	mg/kg	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2
Mevinphos	0.2	mg/kg	< 0.2
Monocrotophos	2	mg/kg	< 2
Naled	0.2	mg/kg	< 0.2
Omethoate	2	mg/kg	< 2
Phorate	0.2	mg/kg	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2
Ronnel	0.2	mg/kg	< 0.2
Terbufos	0.2	mg/kg	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2
Tokuthion	0.2	mg/kg	< 0.2
Trichloronate	0.2	mg/kg	< 0.2
Triphenylphosphate (surr.)	1	%	105
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	147
Tetrachloro-m-xylene (surr.)	1	%	114
Heavy Metals			
Arsenic	2	mg/kg	4.0
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	< 5
Copper	5	mg/kg	8.8
Lead	5	mg/kg	7.1
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	< 5
Zinc	5	mg/kg	23
% Moisture	1	%	7.6

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 01, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 01, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 01, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 01, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 25, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Dec 01, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	Nov 25, 2021	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 25, 2021	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Nov 25, 2021	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Nov 25, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: EP Risk Management (NSW)
Address: 109/283 Alfred Street
North Sydney
NSW 2060

Project Name: TRINITY POINT
Project ID: EP2409

Order No.:
Report #: 844053
Phone: 02 99225021
Fax:

Received: Nov 17, 2021 3:20 PM
Due: Nov 24, 2021
Priority: 5 Day
Contact Name: Stuart Lord

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA # 1261 Site # 1254								
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794								
Mayfield Laboratory - NATA # 1261 Site # 25079								
Perth Laboratory - NATA # 2377 Site # 2370								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	QC02	Not Provided		Soil	S21-No59766	X	X	X
Test Counts						1	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg milligrams per kilogram
mg/L milligrams per litre
ug/L micrograms per litre
ppm Parts per million
ppb Parts per billion
% Percentage
org/100mL Organisms per 100 millilitres
NTU Nephelometric Turbidity Units
MPN/100mL Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs..

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM where no positive PFAS results have been reported have been reviewed and no data was affected.

.

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	107			70-130	Pass	
TRH C10-C14	%	109			70-130	Pass	
Naphthalene	%	117			70-130	Pass	
TRH C6-C10	%	105			70-130	Pass	
TRH >C10-C16	%	105			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	104			70-130	Pass	
Toluene	%	95			70-130	Pass	
Ethylbenzene	%	104			70-130	Pass	
m&p-Xylenes	%	107			70-130	Pass	
o-Xylene	%	113			70-130	Pass	
Xylenes - Total*	%	109			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	76			70-130	Pass	
Acenaphthylene	%	86			70-130	Pass	
Anthracene	%	73			70-130	Pass	
Benz(a)anthracene	%	78			70-130	Pass	
Benzo(a)pyrene	%	83			70-130	Pass	
Benzo(b&j)fluoranthene	%	89			70-130	Pass	
Benzo(g.h.i)perylene	%	81			70-130	Pass	
Benzo(k)fluoranthene	%	78			70-130	Pass	
Chrysene	%	76			70-130	Pass	
Dibenz(a.h)anthracene	%	85			70-130	Pass	
Fluoranthene	%	78			70-130	Pass	
Fluorene	%	78			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	84			70-130	Pass	
Naphthalene	%	81			70-130	Pass	
Phenanthrene	%	78			70-130	Pass	
Pyrene	%	79			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	73			70-130	Pass	
4.4'-DDD	%	81			70-130	Pass	
4.4'-DDE	%	76			70-130	Pass	
4.4'-DDT	%	94			70-130	Pass	
a-HCH	%	77			70-130	Pass	
Aldrin	%	76			70-130	Pass	
b-HCH	%	82			70-130	Pass	
d-HCH	%	73			70-130	Pass	
Dieldrin	%	83			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan I	%	88			70-130	Pass	
Endosulfan II	%	75			70-130	Pass	
Endosulfan sulphate	%	79			70-130	Pass	
Endrin	%	103			70-130	Pass	
Endrin aldehyde	%	81			70-130	Pass	
Endrin ketone	%	80			70-130	Pass	
g-HCH (Lindane)	%	72			70-130	Pass	
Heptachlor	%	94			70-130	Pass	
Heptachlor epoxide	%	71			70-130	Pass	
Hexachlorobenzene	%	76			70-130	Pass	
Methoxychlor	%	88			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	81			70-130	Pass	
Dimethoate	%	87			70-130	Pass	
Ethion	%	130			70-130	Pass	
Fenitrothion	%	107			70-130	Pass	
Methyl parathion	%	129			70-130	Pass	
Mevinphos	%	92			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	80			70-130	Pass	
Aroclor-1260	%	102			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	91			80-120	Pass	
Cadmium	%	89			80-120	Pass	
Chromium	%	86			80-120	Pass	
Copper	%	80			80-120	Pass	
Lead	%	91			80-120	Pass	
Mercury	%	101			80-120	Pass	
Nickel	%	81			80-120	Pass	
Zinc	%	81			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	N21-No44059	NCP	%	128			70-130	Pass	
TRH C10-C14	S21-No68510	NCP	%	114			70-130	Pass	
Naphthalene	N21-No44059	NCP	%	104			70-130	Pass	
TRH C6-C10	N21-No44059	NCP	%	123			70-130	Pass	
TRH >C10-C16	S21-No68510	NCP	%	110			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	N21-No44059	NCP	%	113			70-130	Pass	
Toluene	N21-No44059	NCP	%	97			70-130	Pass	
Ethylbenzene	N21-No44059	NCP	%	101			70-130	Pass	
m&p-Xylenes	N21-No44059	NCP	%	106			70-130	Pass	
o-Xylene	N21-No44059	NCP	%	110			70-130	Pass	
Xylenes - Total*	N21-No44059	NCP	%	107			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S21-No68206	NCP	%	89			70-130	Pass	
Acenaphthylene	S21-No68206	NCP	%	96			70-130	Pass	
Anthracene	S21-No68206	NCP	%	94			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benz(a)anthracene	S21-No68206	NCP	%	89			70-130	Pass	
Benzo(a)pyrene	S21-No68206	NCP	%	98			70-130	Pass	
Benzo(b&j)fluoranthene	S21-No68206	NCP	%	95			70-130	Pass	
Benzo(g.h.i)perylene	S21-No68206	NCP	%	95			70-130	Pass	
Benzo(k)fluoranthene	S21-No68206	NCP	%	96			70-130	Pass	
Chrysene	S21-No68206	NCP	%	93			70-130	Pass	
Dibenz(a.h)anthracene	S21-No68206	NCP	%	105			70-130	Pass	
Fluoranthene	S21-No68206	NCP	%	94			70-130	Pass	
Fluorene	S21-No68206	NCP	%	92			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-No68206	NCP	%	101			70-130	Pass	
Naphthalene	S21-No68206	NCP	%	90			70-130	Pass	
Phenanthrene	S21-No68206	NCP	%	89			70-130	Pass	
Pyrene	S21-No68206	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S21-No68206	NCP	%	89			70-130	Pass	
4.4'-DDD	S21-No68206	NCP	%	93			70-130	Pass	
4.4'-DDE	S21-No68206	NCP	%	95			70-130	Pass	
4.4'-DDT	S21-No68206	NCP	%	114			70-130	Pass	
a-HCH	S21-No68206	NCP	%	93			70-130	Pass	
Aldrin	S21-No68206	NCP	%	91			70-130	Pass	
b-HCH	S21-No68206	NCP	%	93			70-130	Pass	
d-HCH	S21-No68206	NCP	%	88			70-130	Pass	
Dieldrin	S21-No68206	NCP	%	99			70-130	Pass	
Endosulfan I	S21-No68206	NCP	%	101			70-130	Pass	
Endosulfan II	S21-No68206	NCP	%	81			70-130	Pass	
Endosulfan sulphate	S21-No68206	NCP	%	80			70-130	Pass	
Endrin	S21-No68206	NCP	%	128			70-130	Pass	
Endrin aldehyde	S21-No68206	NCP	%	87			70-130	Pass	
Endrin ketone	S21-No68206	NCP	%	85			70-130	Pass	
g-HCH (Lindane)	S21-No68206	NCP	%	90			70-130	Pass	
Heptachlor	S21-No68206	NCP	%	114			70-130	Pass	
Heptachlor epoxide	S21-No68206	NCP	%	87			70-130	Pass	
Hexachlorobenzene	S21-No68206	NCP	%	94			70-130	Pass	
Methoxychlor	S21-No41864	NCP	%	126			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S21-No68206	NCP	%	87			70-130	Pass	
Dimethoate	S21-No60064	NCP	%	76			70-130	Pass	
Ethion	S21-No41864	NCP	%	105			70-130	Pass	
Fenitrothion	S21-No68206	NCP	%	117			70-130	Pass	
Methyl parathion	S21-No41864	NCP	%	118			70-130	Pass	
Mevinphos	S21-No68206	NCP	%	107			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S21-No68206	NCP	%	108			70-130	Pass	
Aroclor-1260	S21-No68206	NCP	%	126			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-No66676	NCP	%	91			75-125	Pass	
Cadmium	S21-No66676	NCP	%	87			75-125	Pass	
Chromium	S21-No66676	NCP	%	102			75-125	Pass	
Copper	S21-No66676	NCP	%	82			75-125	Pass	
Lead	S21-No66676	NCP	%	90			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mercury	S21-No66676	NCP	%	95			75-125	Pass	
Nickel	S21-No66676	NCP	%	83			75-125	Pass	
Zinc	S21-No66676	NCP	%	84			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-No63025	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S21-No63024	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-No63024	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-No63024	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	S21-No63025	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-No63025	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S21-No63024	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-No63024	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-No63024	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-No63025	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-No63025	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-No63025	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-No63025	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-No63025	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-No63025	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S21-No68205	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan sulphate	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S21-No68205	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S21-No68205	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S21-No68205	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S21-No68205	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S21-No68205	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S21-No68205	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S21-No68205	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	S21-No68205	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S21-No68205	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	S21-No68205	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	S21-No68205	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	S21-No68205	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1260	S21-No68205	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	S21-No68205	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-No57795	NCP	mg/kg	< 2	2.4	17	30%	Pass	
Cadmium	S21-No57795	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-No57795	NCP	mg/kg	7.9	11	34	30%	Fail	Q15
Copper	S21-No57795	NCP	mg/kg	10	12	15	30%	Pass	
Lead	S21-No66675	NCP	mg/kg	15	17	13	30%	Pass	
Mercury	S21-No57795	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-No57795	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S21-No57795	NCP	mg/kg	83	93	11	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	N21-No60680	NCP	%	4.9	4.3	13	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
I12	Where sampling date has not been provided, Eurofins | Environment Testing is not able to determine whether analysis has been performed within recommended holding times.
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

John Nguyen	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	EP RISK	Project №	EP2409	Project Manager	SL
Address	3/19 Bolton Street, Newcastle NSW	Project Name	Trinity Point	EDD Format (ESdat, EQuIS etc)	
Contact Name	Stuart Lord				
Phone №	403768722				
Special Directions					
Purchase Order					
Quote ID №	181023EPR				

Sampler(s)	SL
Handed over by	
Email for Invoice	accounts@eprisk.com.au
Email for Results	stuart.lord@eprisk.com.au

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attach SUITE pricing.

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B-10	B1	B11D	B11F	B19A	Acidity	Alkalinity	TDS/EC/pH	Trace PAH									Containers: 500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH2	24/11/21	W	X		X	X	X	X	X	X	X																	
2	BH3	24/11/21	W	X		X	X	X	X	X	X	X																	
3	BH4	24/11/21	W	X		X	X	X	X	X	X	X																	
4	QW01	24/11/21	W	X																									
5	QW02	24/11/21	W	X																									Please send to ALS for analysis
6	TB	24/11/21	W		X																								
7	TS	24/11/21	W		X																								
8	RW101	24/11/21	W	X																									
9																													
10																													
		Total Counts		6	2	3	3	3	3	3	3	3																	

Containers — Change container type & size if necessary.

Required Turnaround Time (TAT) — Default will be 5 days if not ticked.

♦Surcharge will apply
☐ Overnight (reporting by 9am)♦
☐ Same day ♦ ☐ 1 day ♦
☐ 2 days ♦ ☐ 3
☐ 5 days (Standard)
☐ Other( )

Method of Shipment: ☐ Courier (#) ☐ Hand Delivered ☐ Postal

	Name	Signature	Date	Time

Eurofins | mgt Laboratory Use Only

		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	
Received By	QR	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature: 7.7
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	25/11/21	11.09am	Report №: 84368

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	EP RISK	Project №	EP2409	Project Manager	SL
Address	3/19 Bolton Street, Newcastle NSW	Project Name	Trinity Point	EDD Format (ESdat, EQuIS etc)	
Contact Name	Stuart Lord				
Phone №	403766722				
Special Directions					
Purchase Order					
Quote ID №	181023EPR				

Sampler(s)	SL	
Handed over by		
Email for Invoice	accounts@eprisk.com.au	
Email for Results	stuart.lord@eprisk.com.au	

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers — Change container type & size if necessary.

Required Turnaround Time (TAT) — Default will be 5 days if not ticked. ♦Surcharge will apply

☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3
☐ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B-10	B11	B11D	B11F	B19A	Acidity	Alkalinity	TDS/EC/pH	Trace PAH										500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH2	24/11/21	W	X		X	X	X	X	X	X	X																		
2	BH3	24/11/21	W	X		X	X	X	X	X	X	X																		
3	BH4	24/11/21	W	X		X	X	X	X	X	X	X																		
4	QW01	24/11/21	W	X																										
5	QW02	24/11/21	W	X																										Please send to ALS for analysis
6	TB	24/11/21	W		X																									
7	TS	24/11/21	W		X																									
8	RW101	24/11/21	W	X																										
9																														
10																														
	Total Counts			6	2	3	3	3	3	3	3	3																		

Method of Shipment: ☐ Courier (#) ☐ Hand Delivered ☐ Postal — Name — Signature — Date — Time

Eurofins | mgt Laboratory Use Only						
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature 7.7
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date 25/11/21	Time 11.09am	Report №

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

eurofins | Environment Testing

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

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	EP Risk Management (NSW)
Contact name:	Stuart Lord
Project name:	TRINITY POINT
Project ID:	EP2409
Turnaround time:	5 Day
Date/Time received	Nov 25, 2021 11:09 AM
Eurofins reference	845681

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✓	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Stuart Lord - Stuart.Lord@eprisk.com.au.

Note: A copy of these results will also be delivered to the general EP Risk Management (NSW) email address.

eurofins | Environment Testing

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

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: EP Risk Management (NSW)
Address: Level 4 73 Walker St
North Sydney
NSW 2060

Project Name: TRINITY POINT
Project ID: EP2409

Order No.:
Report #: 845681
Phone: 02 99225021
Fax:

Received: Nov 25, 2021 11:09 AM
Due: Dec 2, 2021
Priority: 5 Day
Contact Name: Stuart Lord

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Acidity (as CaCO3)	Conductivity (at 25°C)	pH (at 25 °C)	Eurofins Suite B10	Eurofins Suite B10 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Eurofins Suite B11F: Cl/SO4/Alkalinity/Total F	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217																	
Brisbane Laboratory - NATA # 1261 Site # 20794																	
Mayfield Laboratory - NATA # 1261 Site # 25079																	
Perth Laboratory - NATA # 2377 Site # 2370																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	BH2	Nov 24, 2021		Water	M21-De00435	X	X	X		X		X	X	X		X	X
2	BH3	Nov 24, 2021		Water	M21-De00436	X	X	X		X		X	X	X		X	X
3	BH4	Nov 24, 2021		Water	M21-De00437	X	X	X		X		X	X	X		X	X
4	QW01	Nov 24, 2021		Water	M21-De00438					X							
5	TB	Nov 24, 2021		Water	M21-De00439						X						
6	TS	Nov 24, 2021		Water	M21-De00440										X		
7	RW101	Nov 24, 2021		Water	M21-De00441				X								
Test Counts						3	3	3	1	4	1	3	3	3	1	3	3

EP Risk Management (NSW)
Level 4 73 Walker St
North Sydney
NSW 2060

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **Stuart Lord**

Report **845681-W**
Project name TRINITY POINT
Project ID EP2409
Received Date Nov 25, 2021

Client Sample ID			**BH2**	**BH3**	**BH4**	**QW01**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M21-De00435**	**M21-De00436**	**M21-De00437**	**M21-De00438**
Date Sampled			**Nov 24, 2021**	**Nov 24, 2021**	**Nov 24, 2021**	**Nov 24, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	95	94	97	90
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			BH2	BH3	BH4	QW01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M21-De00435	M21-De00436	M21-De00437	M21-De00438
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	53	115	70	55
p-Terphenyl-d14 (surr.)	1	%	64	109	93	130
Organochlorine Pesticides						
Chlordanes - Total	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
4.4'-DDD	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
4.4'-DDE	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
4.4'-DDT	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
a-HCH	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Aldrin	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
b-HCH	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
d-HCH	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Dieldrin	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endosulfan I	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endosulfan II	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endosulfan sulphate	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin aldehyde	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin ketone	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
g-HCH (Lindane)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Heptachlor	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Heptachlor epoxide	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Hexachlorobenzene	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Methoxychlor	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Toxaphene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin and Dieldrin (Total)*	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dibutylchlorendate (surr.)	1	%	54	103	66	79
Tetrachloro-m-xylene (surr.)	1	%	86	54	101	78
Organophosphorus Pesticides						
Azinphos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Bolstar	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorfenvinphos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorpyrifos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Coumaphos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-S	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Demeton-O	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Diazinon	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dichlorvos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dimethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Disulfoton	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
EPN	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002

Client Sample ID			BH2	BH3	BH4	QW01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M21-De00435	M21-De00436	M21-De00437	M21-De00438
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ethoprop	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenitrothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fensulfothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Malathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Merphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Mevinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Monocrotophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Naled	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Omethoate	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Phorate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Pyrazophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ronnel	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Terbufos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tokuthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Trichloronate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Triphenylphosphate (surr.)	1	%	57	99	69	51
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Naphthalene	0.00001	mg/L	< 0.00001	0.00001	0.00002	-
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Total PAH*	0.00001	mg/L	< 0.00001	0.00001	0.00002	-
2-Fluorobiphenyl (surr.)	1	%	53	115	70	-
p-Terphenyl-d14 (surr.)	1	%	64	109	93	-
Acidity (as CaCO3)	10	mg/L	310	110	88	-
Chloride	1	mg/L	6600	620	42	-
Conductivity (at 25°C)	10	uS/cm	17000	1500	270	-
Fluoride (Total)	0.5	mg/L	< 0.5	< 0.5	< 0.5	-
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
pH (at 25 °C)	0.1	pH Units	6.2	5.9	6.0	-
Phosphate total (as P)	0.01	mg/L	< 0.01	0.02	< 0.01	-

Client Sample ID			BH2	BH3	BH4	QW01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M21-De00435	M21-De00436	M21-De00437	M21-De00438
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Sulphate (as SO4)	5	mg/L	800	140	110	-
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	12000	1300	260	-
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	1.4	0.22	0.19	-
Total Nitrogen (as N)*	0.2	mg/L	1.4	0.22	< 0.2	-
Hardness mg equivalent CaCO3/L	5	mg/L	2100	71	61	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	46	20	21	-
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	-
Hydroxide A kalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	-
Total Alkalinity (as CaCO3)	20	mg/L	46	20	21	-
Alkali Metals						
Calcium	0.5	mg/L	160	5.0	10	-
Magnesium	0.5	mg/L	420	14	8.4	-
Potassium	0.5	mg/L	78	1.5	1.9	-
Sodium	0.5	mg/L	3100	440	57	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.005	< 0.001	< 0.001	0.005
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.023	0.004	0.001	0.023
Zinc (filtered)	0.005	mg/L	0.047	0.022	0.007	0.046

Client Sample ID			TB	TS	RW101
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M21-De00439	M21-De00440	M21-De00441
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons					
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	< 0.1

Client Sample ID			TB	TS	RW101
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M21-De00439	M21-De00440	M21-De00441
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit			
BTEX					
Benzene	0.001	mg/L	< 0.001	-	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	95	-	94
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	83
p-Terphenyl-d14 (surr.)	1	%	-	-	67
Organochlorine Pesticides					
Chlordanes - Total	0.002	mg/L	-	-	< 0.002
4.4'-DDD	0.0002	mg/L	-	-	< 0.0002
4.4'-DDE	0.0002	mg/L	-	-	< 0.0002
4.4'-DDT	0.0002	mg/L	-	-	< 0.0002
a-HCH	0.0002	mg/L	-	-	< 0.0002
Aldrin	0.0002	mg/L	-	-	< 0.0002
b-HCH	0.0002	mg/L	-	-	< 0.0002
d-HCH	0.0002	mg/L	-	-	< 0.0002
Dieldrin	0.0002	mg/L	-	-	< 0.0002
Endosulfan I	0.0002	mg/L	-	-	< 0.0002
Endosulfan II	0.0002	mg/L	-	-	< 0.0002
Endosulfan sulphate	0.0002	mg/L	-	-	< 0.0002
Endrin	0.0002	mg/L	-	-	< 0.0002
Endrin aldehyde	0.0002	mg/L	-	-	< 0.0002
Endrin ketone	0.0002	mg/L	-	-	< 0.0002
g-HCH (Lindane)	0.0002	mg/L	-	-	< 0.0002
Heptachlor	0.0002	mg/L	-	-	< 0.0002
Heptachlor epoxide	0.0002	mg/L	-	-	< 0.0002
Hexachlorobenzene	0.0002	mg/L	-	-	< 0.0002
Methoxychlor	0.0002	mg/L	-	-	< 0.0002
Toxaphene	0.005	mg/L	-	-	< 0.005

Client Sample ID			TB	TS	RW101
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M21-De00439	M21-De00440	M21-De00441
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Aldrin and Dieldrin (Total)*	0.0002	mg/L	-	-	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	-	-	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	-	-	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	-	-	< 0.002
Dibutylchlorendate (surr.)	1	%	-	-	91
Tetrachloro-m-xylene (surr.)	1	%	-	-	53
Organophosphorus Pesticides					
Azinphos-methyl	0.002	mg/L	-	-	< 0.002
Bolstar	0.002	mg/L	-	-	< 0.002
Chlorfenvinphos	0.02	mg/L	-	-	< 0.02
Chlorpyrifos	0.002	mg/L	-	-	< 0.002
Chlorpyrifos-methyl	0.002	mg/L	-	-	< 0.002
Coumaphos	0.02	mg/L	-	-	< 0.02
Demeton-S	0.002	mg/L	-	-	< 0.002
Demeton-O	0.002	mg/L	-	-	< 0.002
Diazinon	0.002	mg/L	-	-	< 0.002
Dichlorvos	0.002	mg/L	-	-	< 0.002
Dimethoate	0.002	mg/L	-	-	< 0.002
Disulfoton	0.002	mg/L	-	-	< 0.002
EPN	0.002	mg/L	-	-	< 0.002
Ethion	0.002	mg/L	-	-	< 0.002
Ethoprop	0.002	mg/L	-	-	< 0.002
Ethyl parathion	0.002	mg/L	-	-	< 0.002
Fenitrothion	0.002	mg/L	-	-	< 0.002
Fensulfothion	0.002	mg/L	-	-	< 0.002
Fenthion	0.002	mg/L	-	-	< 0.002
Malathion	0.002	mg/L	-	-	< 0.002
Merphos	0.002	mg/L	-	-	< 0.002
Methyl parathion	0.002	mg/L	-	-	< 0.002
Mevinphos	0.002	mg/L	-	-	< 0.002
Monocrotophos	0.002	mg/L	-	-	< 0.002
Naled	0.002	mg/L	-	-	< 0.002
Omethoate	0.02	mg/L	-	-	< 0.02
Phorate	0.002	mg/L	-	-	< 0.002
Pirimiphos-methyl	0.02	mg/L	-	-	< 0.02
Pyrazophos	0.002	mg/L	-	-	< 0.002
Ronnel	0.002	mg/L	-	-	< 0.002
Terbufos	0.002	mg/L	-	-	< 0.002
Tetrachlorvinphos	0.002	mg/L	-	-	< 0.002
Tokuthion	0.002	mg/L	-	-	< 0.002
Trichloronate	0.002	mg/L	-	-	< 0.002
Triphenylphosphate (surr.)	1	%	-	-	85
Heavy Metals					
Arsenic	0.001	mg/L	-	-	< 0.001
Cadmium	0.0002	mg/L	-	-	< 0.0002
Chromium	0.001	mg/L	-	-	< 0.001
Copper	0.001	mg/L	-	-	< 0.001
Lead	0.001	mg/L	-	-	< 0.001
Mercury	0.0001	mg/L	-	-	< 0.0001

Client Sample ID			TB	TS	RW101
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M21-De00439	M21-De00440	M21-De00441
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit			
Heavy Metals					
Nickel	0.001	mg/L	-	-	< 0.001
Zinc	0.005	mg/L	-	-	< 0.005
Total Recoverable Hydrocarbons					
Naphthalene	1	%	-	110	-
TRH C6-C10	1	%	-	80	-
TRH C6-C9	1	%	-	74	-
BTEX					
Benzene	1	%	-	98	-
Ethylbenzene	1	%	-	98	-
m&p-Xylenes	1	%	-	110	-
o-Xylene	1	%	-	100	-
Toluene	1	%	-	110	-
Xylenes - Total	1	%	-	110	-
4-Bromofluorobenzene (surr.)	1	%	-	117	-

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Dec 01, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B10 (filtered metals)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)			
Metals M8 filtered	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Acidity (as CaCO3)	Melbourne	Dec 01, 2021	14 Days
- Method: LTM-INO-4210 Acidity			
Conductivity (at 25°C)	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4030 Conductivity			
pH (at 25 °C)	Melbourne	Dec 01, 2021	0 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Eurofins Suite B11F: Cl/SO4/Alkalinity/Total F			
Chloride	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Fluoride (Total)	Melbourne	Dec 01, 2021	28 Days
- Method: APHA 4500 F-C Fluoride by Ion Selective Electrode			
Sulphate (as SO4)	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Dec 01, 2021	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Nitrogen Set (as N)			
Nitrate & Nitrite (as N)	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4120 Analysis of NOx NO2 NH3 by FIA			
Total Kjeldahl Nitrogen (as N)	Melbourne	Dec 01, 2021	28 Days
- Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA			
Eurofins Suite B19A: Total N (TKN, NOx), Total P			
Phosphate total (as P)	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4040 Phosphate by CFA			
Total Dissolved Solids Dried at 180°C ± 2°C	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Eurofins Suite B11D: Na/K/Ca/Mg and Hardness			
Hardness mg equivalent CaCO3/L	Melbourne	Dec 01, 2021	28 Days
- Method: APHA 2340B Hardness by Calculation			
Alkali Metals	Melbourne	Dec 01, 2021	180 Days
- Method: LTM-MET-3010 Alkali Metals Sulfur Silicon Phosphorus by ICP-AES			

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B10			
Metals M8	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

eurofins | Environment Testing

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

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: EP Risk Management (NSW)
Address: Level 4 73 Walker St
North Sydney
NSW 2060

Project Name: TRINITY POINT
Project ID: EP2409

Order No.:
Report #: 845681
Phone: 02 99225021
Fax:

Received: Nov 25, 2021 11:09 AM
Due: Dec 2, 2021
Priority: 5 Day
Contact Name: Stuart Lord

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Acidity (as CaCO3)	Conductivity (at 25°C)	pH (at 25 °C)	Eurofins Suite B10	Eurofins Suite B10 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Eurofins Suite B11F: Cl/SO4/Alkalinity/Total F	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217																	
Brisbane Laboratory - NATA # 1261 Site # 20794																	
Mayfield Laboratory - NATA # 1261 Site # 25079																	
Perth Laboratory - NATA # 2377 Site # 2370																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	BH2	Nov 24, 2021		Water	M21-De00435	X	X	X		X		X	X	X		X	X
2	BH3	Nov 24, 2021		Water	M21-De00436	X	X	X		X		X	X	X		X	X
3	BH4	Nov 24, 2021		Water	M21-De00437	X	X	X		X		X	X	X		X	X
4	QW01	Nov 24, 2021		Water	M21-De00438					X							
5	TB	Nov 24, 2021		Water	M21-De00439						X						
6	TS	Nov 24, 2021		Water	M21-De00440										X		
7	RW101	Nov 24, 2021		Water	M21-De00441				X								
Test Counts						3	3	3	1	4	1	3	3	3	1	3	3

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg milligrams per kilogram
mg/L milligrams per litre
ug/L micrograms per litre
ppm Parts per million
ppb Parts per billion
% Percentage
org/100mL Organisms per 100 millilitres
NTU Nephelometric Turbidity Units
MPN/100mL Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs..

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM where no positive PFAS results have been reported have been reviewed and no data was affected.

.

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.0002			0.0002	Pass	
4.4'-DDE	mg/L	< 0.0002			0.0002	Pass	
4.4'-DDT	mg/L	< 0.0002			0.0002	Pass	
a-HCH	mg/L	< 0.0002			0.0002	Pass	
Aldrin	mg/L	< 0.0002			0.0002	Pass	
b-HCH	mg/L	< 0.0002			0.0002	Pass	
d-HCH	mg/L	< 0.0002			0.0002	Pass	
Dieldrin	mg/L	< 0.0002			0.0002	Pass	
Endosulfan I	mg/L	< 0.0002			0.0002	Pass	
Endosulfan II	mg/L	< 0.0002			0.0002	Pass	
Endosulfan sulphate	mg/L	< 0.0002			0.0002	Pass	
Endrin	mg/L	< 0.0002			0.0002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	mg/L	< 0.0002			0.0002	Pass	
Endrin ketone	mg/L	< 0.0002			0.0002	Pass	
g-HCH (Lindane)	mg/L	< 0.0002			0.0002	Pass	
Heptachlor	mg/L	< 0.0002			0.0002	Pass	
Heptachlor epoxide	mg/L	< 0.0002			0.0002	Pass	
Hexachlorobenzene	mg/L	< 0.0002			0.0002	Pass	
Methoxychlor	mg/L	< 0.0002			0.0002	Pass	
Toxaphene	mg/L	< 0.005			0.005	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.002			0.002	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.02			0.02	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	mg/L	< 0.00001			0.00001	Pass	
Acenaphthylene	mg/L	< 0.00001			0.00001	Pass	
Anthracene	mg/L	< 0.00001			0.00001	Pass	
Benz(a)anthracene	mg/L	< 0.00001			0.00001	Pass	
Benzo(a)pyrene	mg/L	< 0.00001			0.00001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.00001			0.00001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.00001			0.00001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chrysene	mg/L	< 0.00001			0.00001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.00001			0.00001	Pass	
Fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Fluorene	mg/L	< 0.00001			0.00001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.00001			0.00001	Pass	
Naphthalene	mg/L	< 0.00001			0.00001	Pass	
Phenanthrene	mg/L	< 0.00001			0.00001	Pass	
Pyrene	mg/L	< 0.00001			0.00001	Pass	
Method Blank							
Acidity (as CaCO3)	mg/L	< 10			10	Pass	
Chloride	mg/L	< 1			1	Pass	
Conductivity (at 25°C)	uS/cm	< 10			10	Pass	
Fluoride (Total)	mg/L	< 0.5			0.5	Pass	
Nitrate & Nitrite (as N)	mg/L	< 0.05			0.05	Pass	
Phosphate total (as P)	mg/L	< 0.01			0.01	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	< 10			10	Pass	
Method Blank							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide A kalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	117			70-130	Pass	
TRH C10-C14	%	106			70-130	Pass	
Naphthalene	%	103			70-130	Pass	
TRH C6-C10	%	121			70-130	Pass	
TRH >C10-C16	%	112			70-130	Pass	
LCS - % Recovery							
BTEX							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzene	%	99			70-130	Pass	
Toluene	%	104			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	100			70-130	Pass	
Xylenes - Total*	%	99			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	90			70-130	Pass	
Anthracene	%	113			70-130	Pass	
Benz(a)anthracene	%	86			70-130	Pass	
Benzo(a)pyrene	%	72			70-130	Pass	
Benzo(b&j)fluoranthene	%	98			70-130	Pass	
Benzo(g.h.i)perylene	%	101			70-130	Pass	
Benzo(k)fluoranthene	%	92			70-130	Pass	
Chrysene	%	103			70-130	Pass	
Dibenz(a.h)anthracene	%	84			70-130	Pass	
Fluoranthene	%	86			70-130	Pass	
Fluorene	%	85			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	89			70-130	Pass	
Naphthalene	%	76			70-130	Pass	
Phenanthrene	%	80			70-130	Pass	
Pyrene	%	111			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	98			70-130	Pass	
4.4'-DDD	%	107			70-130	Pass	
4.4'-DDE	%	123			70-130	Pass	
4.4'-DDT	%	115			70-130	Pass	
a-HCH	%	92			70-130	Pass	
Aldrin	%	117			70-130	Pass	
b-HCH	%	76			70-130	Pass	
d-HCH	%	93			70-130	Pass	
Dieldrin	%	112			70-130	Pass	
Endosulfan I	%	90			70-130	Pass	
Endosulfan II	%	92			70-130	Pass	
Endosulfan sulphate	%	89			70-130	Pass	
Endrin	%	113			70-130	Pass	
Endrin aldehyde	%	111			70-130	Pass	
Endrin ketone	%	73			70-130	Pass	
g-HCH (Lindane)	%	97			70-130	Pass	
Heptachlor	%	94			70-130	Pass	
Heptachlor epoxide	%	94			70-130	Pass	
Hexachlorobenzene	%	121			70-130	Pass	
Methoxychlor	%	106			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	90			70-130	Pass	
Dimethoate	%	92			70-130	Pass	
Ethion	%	79			70-130	Pass	
Fenitrothion	%	91			70-130	Pass	
Methyl parathion	%	88			70-130	Pass	
Mevinphos	%	74			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	90			70-130	Pass	
Anthracene	%	113			70-130	Pass	
Benz(a)anthracene	%	86			70-130	Pass	
Benzo(a)pyrene	%	72			70-130	Pass	
Benzo(b&j)fluoranthene	%	98			70-130	Pass	
Benzo(g.h.i)perylene	%	101			70-130	Pass	
Benzo(k)fluoranthene	%	92			70-130	Pass	
Chrysene	%	103			70-130	Pass	
Dibenz(a.h)anthracene	%	84			70-130	Pass	
Fluoranthene	%	86			70-130	Pass	
Fluorene	%	85			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	89			70-130	Pass	
Naphthalene	%	76			70-130	Pass	
Phenanthrene	%	80			70-130	Pass	
Pyrene	%	111			70-130	Pass	
LCS - % Recovery							
Chloride	%	116			70-130	Pass	
Conductivity (at 25°C)	%	102			70-130	Pass	
Fluoride (Total)	%	113			70-130	Pass	
Nitrate & Nitrite (as N)	%	105			70-130	Pass	
Phosphate total (as P)	%	117			70-130	Pass	
Sulphate (as SO4)	%	127			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	99			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	93			70-130	Pass	
Total Alkalinity (as CaCO3)	%	98			70-130	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	106			80-120	Pass	
Magnesium	%	104			80-120	Pass	
Potassium	%	102			80-120	Pass	
Sodium	%	103			80-120	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	95			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	98			80-120	Pass	
Copper	%	100			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	97			80-120	Pass	
Nickel	%	98			80-120	Pass	
Zinc	%	99			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M21-De00959	NCP	%	120			70-130	Pass	
TRH C10-C14	N21-De05161	NCP	%	91			70-130	Pass	
Naphthalene	M21-De00959	NCP	%	111			70-130	Pass	
TRH C6-C10	M21-De00959	NCP	%	125			70-130	Pass	
TRH >C10-C16	N21-De05161	NCP	%	96			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
BTEX				Result 1					
Benzene	M21-De00959	NCP	%	100			70-130	Pass	
Toluene	M21-De00959	NCP	%	106			70-130	Pass	
Ethylbenzene	M21-De00959	NCP	%	99			70-130	Pass	
m&p-Xylenes	M21-De00959	NCP	%	101			70-130	Pass	
o-Xylene	M21-De00959	NCP	%	99			70-130	Pass	
Xylenes - Total*	M21-De00959	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	L21-No54987	NCP	%	73			70-130	Pass	
Acenaphthylene	L21-No54987	NCP	%	74			70-130	Pass	
Anthracene	L21-No54987	NCP	%	86			70-130	Pass	
Benz(a)anthracene	L21-No54987	NCP	%	88			70-130	Pass	
Benzo(a)pyrene	L21-No54987	NCP	%	79			70-130	Pass	
Benzo(b&j)fluoranthene	L21-No54987	NCP	%	85			70-130	Pass	
Benzo(g.h.i)perylene	L21-No54987	NCP	%	89			70-130	Pass	
Benzo(k)fluoranthene	L21-No54987	NCP	%	98			70-130	Pass	
Chrysene	L21-No54987	NCP	%	79			70-130	Pass	
Dibenz(a.h)anthracene	L21-No54987	NCP	%	81			70-130	Pass	
Fluoranthene	L21-No54987	NCP	%	71			70-130	Pass	
Fluorene	L21-No54987	NCP	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	L21-No54987	NCP	%	99			70-130	Pass	
Naphthalene	L21-No54987	NCP	%	96			70-130	Pass	
Phenanthrene	L21-No54987	NCP	%	99			70-130	Pass	
Pyrene	L21-No54987	NCP	%	76			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	L21-No54987	NCP	%	84			70-130	Pass	
4.4'-DDD	L21-No54987	NCP	%	83			70-130	Pass	
4.4'-DDE	L21-No54987	NCP	%	113			70-130	Pass	
4.4'-DDT	L21-No54987	NCP	%	101			70-130	Pass	
a-HCH	L21-No54987	NCP	%	102			70-130	Pass	
Aldrin	L21-No54987	NCP	%	102			70-130	Pass	
b-HCH	L21-No54987	NCP	%	128			70-130	Pass	
d-HCH	L21-No54987	NCP	%	107			70-130	Pass	
Dieldrin	L21-No54987	NCP	%	90			70-130	Pass	
Endosulfan I	L21-No54987	NCP	%	119			70-130	Pass	
Endosulfan II	L21-No54987	NCP	%	110			70-130	Pass	
Endosulfan sulphate	L21-No54987	NCP	%	113			70-130	Pass	
Endrin	L21-No54987	NCP	%	90			70-130	Pass	
Endrin aldehyde	L21-No54987	NCP	%	121			70-130	Pass	
Endrin ketone	L21-No54987	NCP	%	92			70-130	Pass	
g-HCH (Lindane)	L21-No54987	NCP	%	108			70-130	Pass	
Heptachlor	L21-No54987	NCP	%	76			70-130	Pass	
Heptachlor epoxide	L21-No54987	NCP	%	74			70-130	Pass	
Hexachlorobenzene	L21-No54987	NCP	%	87			70-130	Pass	
Methoxychlor	L21-No54987	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	L21-No42246	NCP	%	113			70-130	Pass	
Dimethoate	L21-No54987	NCP	%	91			70-130	Pass	
Ethion	L21-No54987	NCP	%	72			70-130	Pass	
Fenitrothion	L21-No54987	NCP	%	99			70-130	Pass	
Methyl parathion	L21-No54987	NCP	%	84			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mevinphos	L21-No54987	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Acenaphthene	L21-No54987	NCP	%	73			70-130	Pass	
Acenaphthylene	L21-No54987	NCP	%	74			70-130	Pass	
Anthracene	L21-No54987	NCP	%	86			70-130	Pass	
Benz(a)anthracene	L21-No54987	NCP	%	88			70-130	Pass	
Benzo(a)pyrene	L21-No54987	NCP	%	79			70-130	Pass	
Benzo(b&j)fluoranthene	L21-No54987	NCP	%	85			70-130	Pass	
Benzo(g.h.i)perylene	L21-No54987	NCP	%	89			70-130	Pass	
Benzo(k)fluoranthene	L21-No54987	NCP	%	98			70-130	Pass	
Chrysene	L21-No54987	NCP	%	79			70-130	Pass	
Dibenz(a.h)anthracene	L21-No54987	NCP	%	81			70-130	Pass	
Fluoranthene	L21-No54987	NCP	%	71			70-130	Pass	
Fluorene	L21-No54987	NCP	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	L21-No54987	NCP	%	99			70-130	Pass	
Naphthalene	L21-No54987	NCP	%	96			70-130	Pass	
Phenanthrene	L21-No54987	NCP	%	99			70-130	Pass	
Pyrene	L21-No54987	NCP	%	76			70-130	Pass	
Spike - % Recovery									
				Result 1					
Phosphate total (as P)	S21-No57757	NCP	%	118			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	M21-No66219	NCP	%	107			75-125	Pass	
Magnesium	M21-No66219	NCP	%	95			75-125	Pass	
Potassium	M21-No66219	NCP	%	93			75-125	Pass	
Sodium	M21-No66219	NCP	%	95			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	M21-No65947	NCP	%	95			75-125	Pass	
Cadmium (filtered)	M21-No65947	NCP	%	96			75-125	Pass	
Chromium (filtered)	M21-No65947	NCP	%	93			75-125	Pass	
Copper (filtered)	M21-No65947	NCP	%	91			75-125	Pass	
Lead (filtered)	M21-No65947	NCP	%	93			75-125	Pass	
Mercury (filtered)	M21-No65947	NCP	%	46			75-125	Fail	Q08
Nickel (filtered)	M21-No65947	NCP	%	91			75-125	Pass	
Zinc (filtered)	M21-No65947	NCP	%	107			75-125	Pass	
Spike - % Recovery									
				Result 1					
Nitrate & Nitrite (as N)	M21-De00436	CP	%	90			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B21-No63399	NCP	%	102			75-125	Pass	
Cadmium	B21-No63399	NCP	%	100			75-125	Pass	
Chromium	B21-No63399	NCP	%	97			75-125	Pass	
Copper	B21-No63399	NCP	%	98			75-125	Pass	
Lead	B21-No63399	NCP	%	98			75-125	Pass	
Mercury	B21-No63399	NCP	%	84			75-125	Pass	
Nickel	B21-No63399	NCP	%	97			75-125	Pass	
Zinc	B21-No63399	NCP	%	103			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M21-De00960	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	N21-De05173	NCP	mg/L	0.06	< 0.05	43	30%	Fail	Q15
TRH C15-C28	N21-De05173	NCP	mg/L	1.7	0.9	61	30%	Fail	Q15
TRH C29-C36	N21-De05173	NCP	mg/L	0.3	0.2	34	30%	Fail	Q15
Naphthalene	M21-De00960	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M21-De00960	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	N21-De05173	NCP	mg/L	0.14	0.09	46	30%	Fail	Q15
TRH >C16-C34	N21-De05173	NCP	mg/L	1.9	1.1	59	30%	Fail	Q15
TRH >C34-C40	N21-De05173	NCP	mg/L	0.1	< 0.1	23	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M21-De00960	NCP	mg/L	0.001	0.001	1.0	30%	Pass	
Toluene	M21-De00960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M21-De00960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M21-De00960	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M21-De00960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M21-De00960	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
4.4'-DDD	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
4.4'-DDE	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
4.4'-DDT	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
a-HCH	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Aldrin	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
b-HCH	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
d-HCH	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Dieldrin	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endosulfan I	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endosulfan II	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endosulfan sulphate	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endrin	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endrin aldehyde	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endrin ketone	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
g-HCH (Lindane)	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Heptachlor	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Heptachlor epoxide	M21-De07758	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Hexachlorobenzene	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Methoxychlor	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Toxaphene	M21-De04760	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Bolstar	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorfenvinphos	M21-De04760	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Chlorpyrifos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorpyrifos-methyl	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Coumaphos	M21-De04760	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-S	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Demeton-O	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Diazinon	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dichlorvos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dimethoate	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Disulfoton	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
EPN	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethoprop	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethyl parathion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenitrothion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fensulfothion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenthion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Malathion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Merphos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methyl parathion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Mevinphos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Monocrotophos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Naled	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Omethoate	M21-De04760	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Phorate	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pirimiphos-methyl	M21-De04760	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Pyrazophos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ronnel	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbufos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tetrachlorvinphos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tokuthion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Acenaphthylene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Anthracene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benz(a)anthracene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(a)pyrene	M21-De04760	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(g.h.i)perylene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(k)fluoranthene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Chrysene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Dibenz(a.h)anthracene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Fluoranthene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluorene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Naphthalene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Phenanthrene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Pyrene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	M21-No70053	NCP	mg/L	290	300	2.0	30%	Pass	
Fluoride (Total)	S21-No66083	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Phosphate total (as P)	M21-De08344	NCP	mg/L	0.91	0.90	1.0	30%	Pass	
Sulphate (as SO4)	M21-No70053	NCP	mg/L	660	650	1.0	30%	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	L21-No64607	NCP	mg/L	430	490	13	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	M21-No66219	NCP	mg/L	92	96	4.0	30%	Pass	
Magnesium	M21-No66219	NCP	mg/L	24	25	4.0	30%	Pass	
Potassium	M21-No66219	NCP	mg/L	6.3	6.3	<1	30%	Pass	
Sodium	M21-No66219	NCP	mg/L	37	37	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	M21-No65947	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	M21-No65947	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	M21-No65947	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	M21-No65947	NCP	mg/L	0.008	0.008	<1	30%	Pass	
Lead (filtered)	M21-No65947	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	M21-No65947	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	M21-No65947	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	M21-No65947	NCP	mg/L	0.007	0.008	13	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (at 25°C)	M21-De00436	CP	uS/cm	1500	1500	<1	30%	Pass	
Nitrate & Nitrite (as N)	M21-De00436	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
pH (at 25 °C)	M21-De00436	CP	pH Units	5.9	5.9	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	M21-De00436	CP	mg/L	20	20	<1	30%	Pass	
Carbonate Alkalinity (as CaCO3)	M21-De00436	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide A kalinity (as CaCO3)	M21-De00436	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	M21-De00436	CP	mg/L	20	20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	B21-No63399	NCP	mg/L	0.001	0.001	2.0	30%	Pass	
Cadmium	B21-No63399	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	B21-No63399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	B21-No63399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	B21-No63399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	B21-No63399	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	B21-No63399	NCP	mg/L	< 0.001	0.001	6.0	30%	Pass	
Zinc	B21-No63399	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

John Nguyen	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2143239**	Page	: 1 of 5
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR STUART LORD	Contact	: Tyler Anderson
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: EP2409	Date Samples Received	: 16-Nov-2021 10:37
Order number	: ----	Date Analysis Commenced	: 02-Dec-2021
C-O-C number	: ----	Issue Date	: 02-Dec-2021 20:29
Sampler	: ----		
Site	: ----		
Quote number	: SY/497/20 Primary analysis only		
No. of samples received	: 12		
No. of samples analysed	: 12		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

General Comments

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

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

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

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

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

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

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

- ASS: EA033 (CRS Suite): Laboratory determinations of ANC needs to be corroborated by effectiveness of the measured ANC in rela ion to incubation ANC. Unless corroborated, the results of ANC tes ing should be discounted when determining Net Acidity for comparison with action criteria, or for the determination of the acidity hazard and required liming amounts.
- ASS: EA033 (CRS Suite): Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from 'kg/t dry weight' to 'kg/m3 in-situ soil', multiply 'reported results' x 'wet bulk density of soil in t/m3'.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP201_0.6	TP203_1.0	TP203_1.5	TP206_0.5	TP206_1.0
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2143239-001	ES2143239-002	ES2143239-003	ES2143239-004	ES2143239-005
				Result	Result	Result	Result	Result
EA033-A: Actual Acidity								
pH KCl (23A)	----	0.1	pH Unit	5.4	6.0	4.7	5.6	5.3
Titratable Actual Acidity (23F)	----	2	mole H+ / t	10	3	24	5	8
sulfidic Titratable Actual Acidity (s 23F)	----	0.02	% pyrite S	<0.02	<0.02	0 04	<0.02	<0.02
EA033-B: Potential Acidity								
Chromium Reducible Sulfur (22B)	----	0.005	% S	0.014	0.016	0.022	0.013	0.012
acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	<10	14	<10	<10
EA033-E: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	1.5	1.5	1.5	1.5	1.5
Net Acidity (sulfur units)	----	0.02	% S	0.03	0.02	0.06	0.02	0.03
Net Acidity (acidity units)	----	10	mole H+ / t	18	13	38	13	16
Liming Rate	----	1	kg CaCO3/t	1	<1	3	<1	1
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	0.03	0.02	0.06	0.02	0.03
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	18	13	38	13	16
Liming Rate excluding ANC	----	1	kg CaCO3/t	1	<1	3	<1	1

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP207_1.5	TP207_2.0	TP207_2.5	TP208_1.6	TP209_1.5
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00	15-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	ES2143239-006	ES2143239-007	ES2143239-008	ES2143239-009	ES2143239-010
				Result	Result	Result	Result	Result
EA033-A: Actual Acidity								
pH KCl (23A)	----	0.1	pH Unit	4.8	4.4	4.4	5.2	6.2
Titratable Actual Acidity (23F)	----	2	mole H+ / t	22	54	58	10	<2
sulfidic Titratable Actual Acidity (s 23F)	----	0.02	% pyrite S	0 04	0 09	0 09	<0.02	<0.02
EA033-B: Potential Acidity								
Chromium Reducible Sulfur (22B)	----	0.005	% S	0.013	0.014	0.020	0.015	0.018
acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	<10	12	<10	11
EA033-D: Retained Acidity								
KCl Extractable Sulfur (23Ce)	----	0.02	% S	----	<0.02	0.02	----	----
HCl Extractable Sulfur (20Be)	----	0.02	% S	----	0.02	0.03	----	----
Net Acid Soluble Sulfur (20Je)	----	0.02	% S	----	0.04	<0.02	----	----
acidity - Net Acid Soluble Sulfur (a-20J)	----	10	mole H+ / t	----	19	<10	----	----
sulfidic - Net Acid Soluble Sulfur (s-20J)	----	0.02	% pyrite S	----	0.03	<0.02	----	----
EA033-E: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	1.5	1.5	1.5	1.5	1.5
Net Acidity (sulfur units)	----	0.02	% S	0.05	0.13	0.12	0.03	<0.02
Net Acidity (acidity units)	----	10	mole H+ / t	30	82	75	19	11
Liming Rate	----	1	kg CaCO3/t	2	6	6	1	<1
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	0.05	0.13	0.12	0.03	<0.02
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	30	82	75	19	11
Liming Rate excluding ANC	----	1	kg CaCO3/t	2	6	6	1	<1

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP209_2	TP210_2.0	----	----	----
			Sampling date / time	15-Nov-2021 00:00	15-Nov-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2143239-011	ES2143239-012	--------	--------	--------
				Result	Result	----	----	----
EA033-A: Actual Acidity								
pH KCl (23A)	----	0.1	pH Unit	**6.3**	**6.8**	----	----	----
Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	----	----	----
sulfidic Titratable Actual Acidity (s 23F)	----	0.02	% pyrite S	<0.02	<0.02			
EA033-B: Potential Acidity								
Chromium Reducible Sulfur (22B)	----	0.005	% S	**0.017**	**0.015**	----	----	----
acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	**10**	<10	----	----	----
EA033-C: Acid Neutralising Capacity								
Acid Neutralising Capacity (19A2)	----	0.01	% CaCO3	**----**	**0.14**	----	----	----
acidity - Acid Neutralising Capacity (a-19A2)	----	10	mole H+ / t	**----**	**29**	----	----	----
sulfidic - Acid Neutralising Capacity (s-19A2)	----	0.01	% pyrite S	**----**	**0.05**	----	----	----
EA033-E: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	**1.5**	**1.5**	----	----	----
Net Acidity (sulfur units)	----	0.02	% S	<0.02	<0.02	----	----	----
Net Acidity (acidity units)	----	10	mole H+ / t	**10**	<10	----	----	----
Liming Rate	----	1	kg CaCO3/t	<1	<1	----	----	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	<0.02	----	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	**10**	<10	----	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	<1	----	----	----

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry) 18958 (Biology).

(SOIL) EA033-B: Potential Acidity

(SOIL) EA033-C: Acid Neutralising Capacity

(SOIL) EA033-D: Retained Acidity

(SOIL) EA033-A: Actual Acidity

(SOIL) EA033-E: Acid Base Accounting

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2143239**	Page	: 1 of 5
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR STUART LORD	Contact	: Tyler Anderson
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: EP2409	Date Samples Received	: 16-Nov-2021
Order number	: ----	Date Analysis Commenced	: 02-Dec-2021
C-O-C number	: ----	Issue Date	: 02-Dec-2021
Sampler	: ----		
Site	: ----		
Quote number	: SY/497/20 Primary analysis only		
No. of samples received	: 12		
No. of samples analysed	: 12		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA033-A: Actual Acidity (QC Lot: 4048554)									
EB2134630-005	Anonymous	EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	<0.02	0.0	No Limit
		EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	4	4	0.0	No Limit
		EA033: pH KCl (23A)	----	0.1	pH Unit	5.1	5.0	0.0	0% - 20%
ES2142465-028	Anonymous	EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	<0.02	0.0	No Limit
		EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	0.0	No Limit
		EA033: pH KCl (23A)	----	0.1	pH Unit	6.5	6.5	0.0	0% - 20%
EA033-A: Actual Acidity (QC Lot: 4048555)									
ES2143239-005	TP206_1.0	EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	<0.02	0.0	No Limit
		EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	8	9	0.0	No Limit
		EA033: pH KCl (23A)	----	0.1	pH Unit	5.3	5.3	0.0	0% - 20%
EA033-B: Potential Acidity (QC Lot: 4048554)									
EB2134630-005	Anonymous	EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	0.024	0.022	10.3	No Limit
		EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	15	14	10.3	No Limit
ES2142465-028	Anonymous	EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	0.015	0.016	0.0	No Limit
		EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	<10	0.0	No Limit
EA033-B: Potential Acidity (QC Lot: 4048555)									
ES2143239-005	TP206_1.0	EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	0.012	0.012	0.0	No Limit
		EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	<10	0.0	No Limit
EA033-C: Acid Neutralising Capacity (QC Lot: 4048554)									
ES2142465-028	Anonymous	EA033: Acid Neutralising Capacity (19A2)	----	0.01	% CaCO3	0.12	0.11	13.5	0% - 50%

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EA033-C: Acid Neutralising Capacity (QC Lot: 4048554) - continued									
ES2142465-028	Anonymous	EA033: sulfidic - Acid Neutralising Capacity (s-19A2)	----	0.01	% pyrite S	0.04	0.04	0.0	No Limit
		EA033: acidity - Acid Neutralising Capacity (a-19A2)	----	10	mole H+ / t	25	22	13.5	No Limit

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA033-A: Actual Acidity (QCLot: 4048554)								
EA033: pH KCl (23A)	----	----	pH Unit	----	4.4 pH Unit	101	91.0	107
EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	19 mole H+ / t	88.6	70.0	124
EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	----	----	----	----
EA033-A: Actual Acidity (QCLot: 4048555)								
EA033: pH KCl (23A)	----	----	pH Unit	----	4.4 pH Unit	101	91.0	107
EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	19 mole H+ / t	89.3	70.0	124
EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	----	----	----	----
EA033-B: Potential Acidity (QCLot: 4048554)								
EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	<0.005	0.246 % S	96.3	77.0	121
EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	----	----	----	----
EA033-B: Potential Acidity (QCLot: 4048555)								
EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	<0.005	0.246 % S	98.1	77.0	121
EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	----	----	----	----
EA033-C: Acid Neutralising Capacity (QCLot: 4048554)								
EA033: Acid Neutralising Capacity (19A2)	----	0.01	% CaCO3	<0.01	10 % CaCO3	102	91.0	112
EA033: acidity - Acid Neutralising Capacity (a-19A2)	----	10	mole H+ / t	<10	----	----	----	----
EA033: sulfidic - Acid Neutralising Capacity (s-19A2)	----	0.01	% pyrite S	<0.01	----	----	----	----
EA033-C: Acid Neutralising Capacity (QCLot: 4048555)								
EA033: Acid Neutralising Capacity (19A2)	----	0.01	% CaCO3	<0.01	10 % CaCO3	102	91.0	112
EA033: acidity - Acid Neutralising Capacity (a-19A2)	----	10	mole H+ / t	<10	----	----	----	----
EA033: sulfidic - Acid Neutralising Capacity (s-19A2)	----	0.01	% pyrite S	<0.01	----	----	----	----
EA033-D: Retained Acidity (QCLot: 4048554)								
EA033: Net Acid Soluble Sulfur (20Je)	----	0.02	% S	<0.02	----	----	----	----
EA033: acidity - Net Acid Soluble Sulfur (a-20J)	----	10	mole H+ / t	<10	----	----	----	----
EA033: sulfidic - Net Acid Soluble Sulfur (s-20J)	----	0.02	% pyrite S	<0.02	----	----	----	----
EA033: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.02	0.04779 % S	94.6	70.0	128
EA033: HCl Extractable Sulfur (20Be)	----	0.02	% S	<0.02	0.279 % S	99.9	70.0	120
EA033-D: Retained Acidity (QCLot: 4048555)								
EA033: Net Acid Soluble Sulfur (20Je)	----	0.02	% S	<0.02	----	----	----	----
EA033: acidity - Net Acid Soluble Sulfur (a-20J)	----	10	mole H+ / t	<10	----	----	----	----
EA033: sulfidic - Net Acid Soluble Sulfur (s-20J)	----	0.02	% pyrite S	<0.02	----	----	----	----
EA033: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.02	0.04779 % S	94.6	70.0	128
EA033: HCl Extractable Sulfur (20Be)	----	0.02	% S	<0.02	0.279 % S	99.9	70.0	120

Matrix Spike (MS) Report

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

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2143239**	Page	: 1 of 5
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR STUART LORD	Telephone	: +61 2 8784 8555
Project	: EP2409	Date Samples Received	: 16-Nov-2021
Site	: ----	Issue Date	: 02-Dec-2021
Sampler	: ----	No. of samples received	: 12
Order number	: ----	No. of samples analysed	: 12

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA033-A: Actual Acidity								
Snap Lock Bag - frozen on receipt at ALS (EA033)								
TP201_0.6,	TP203_1.0,	**15-Nov-2021**	**02-Dec-2021**	15-Nov-2022	✓	**02-Dec-2021**	02-Mar-2022	✓
TP203_1.5,	TP206_0.5,							
TP206_1.0,	TP207_1.5,							
TP207_2.0,	TP207_2.5,							
TP208_1.6,	TP209_1.5,							
TP209_2,	TP210_2.0							
EA033-B: Potential Acidity								
Snap Lock Bag - frozen on receipt at ALS (EA033)								
TP201_0.6,	TP203_1.0,	**15-Nov-2021**	**02-Dec-2021**	15-Nov-2022	✓	**02-Dec-2021**	02-Mar-2022	✓
TP203_1.5,	TP206_0.5,							
TP206_1.0,	TP207_1.5,							
TP207_2.0,	TP207_2.5,							
TP208_1.6,	TP209_1.5,							
TP209_2,	TP210_2.0							
EA033-C: Acid Neutralising Capacity								
Snap Lock Bag - frozen on receipt at ALS (EA033)								
TP201_0.6,	TP203_1.0,	**15-Nov-2021**	**02-Dec-2021**	15-Nov-2022	✓	**02-Dec-2021**	02-Mar-2022	✓
TP203_1.5,	TP206_0.5,							
TP206_1.0,	TP207_1.5,							
TP207_2.0,	TP207_2.5,							
TP208_1.6,	TP209_1.5,							
TP209_2,	TP210_2.0							
EA033-D: Retained Acidity								
Snap Lock Bag - frozen on receipt at ALS (EA033)								
TP201_0.6,	TP203_1.0,	**15-Nov-2021**	**02-Dec-2021**	15-Nov-2022	✓	**02-Dec-2021**	02-Mar-2022	✓
TP203_1.5,	TP206_0.5,							
TP206_1.0,	TP207_1.5,							
TP207_2.0,	TP207_2.5,							
TP208_1.6,	TP209_1.5,							
TP209_2,	TP210_2.0							

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA033-E: Acid Base Accounting								
Snap Lock Bag - frozen on receipt at ALS (EA033)								
TP201_0.6,	TP203_1.0,	**15-Nov-2021**	**02-Dec-2021**	15-Nov-2022	✓	**02-Dec-2021**	02-Mar-2022	✓
TP203_1.5,	TP206_0.5,							
TP206_1.0,	TP207_1.5,							
TP207_2.0,	TP207_2.5,							
TP208_1.6,	TP209_1.5,							
TP209_2,	TP210_2.0							

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Chromium Suite for Acid Sulphate Soils	EA033	3	29	**10.34**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Chromium Suite for Acid Sulphate Soils	EA033	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Chromium Suite for Acid Sulphate Soils	EA033	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Chromium Suite for Acid Sulphate Soils	EA033	SOIL	In house: Referenced to Ahern et al 2004. This method covers the determination of Chromium Reducible Sulfur (SCR); pHKCl; titratable actual acidity (TAA); acid neutralising capacity by back titration (ANC); and net acid soluble sulfur (SNAS) which incorporates peroxide sulfur. It applies to soils and sediments (including sands) derived from coastal regions. Liming Rate is based on results for samples as submitted and incorporates a minimum safety factor of 1.5.

Preparation Methods	Method	Matrix	Method Descriptions
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house

Vishal
26/11/2021
1522

Vishal Patel

From: Tyler Anderson
Sent: Friday, 26 November 2021 3:22 PM
To: rebatches.sydney
Cc: rebatches.brisbane
Subject: FW: [EXTERNAL] - FW: RESULTS & EDD for ALS Workorder : ES2141352 | Your Reference: EP2409

Hi team,

Can you please organise the below repatch?

Kind regards,

Tyler Anderson

Client Services Coordinator, Environmental
Sydney

T +61 2 8784 8555 F +61 2 8784 8500
D +61 2 8784 8501
tyler.anderson@alsglobal.com
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

Subscribe

EnviroMail™ 00 - All EnviroMails™ in one convenient library.
EnviroMail™ 134 - ALS Australia Dioxin Capability
EnviroMail™ 133 - Sampling and Analysis of air and gas using canisters
EnviroMail™ 132 - BIOSOLIDS: PFAS, TOP Assay & TOF
EnviroMail™ 131 - Important Changes to the Australian Standard Leaching Procedures AS4439.2 & AS4439.3

Environmental Division
Sydney
Work Order Reference
ES2143239

Telephone : + 61-2-8784 8555



Right Solutions · Right Partner
www.alsglobal.com

From: Stuart Lord <Stuart.Lord@eprisk.com.au>
Sent: Friday, 26 November 2021 3:20 PM
To: Tyler Anderson <tyler.anderson@alsglobal.com>
Subject: RE: [EXTERNAL] - FW: RESULTS & EDD for ALS Workorder : ES2141352 | Your Reference: EP2409

Hey Tyler,

Can I get the below samples analysed for the chromium reducible sulfur suite please?

- TP201_0.6
- TP203_1.0
- TP203_1.5
- TP206_0.5
- TP206_1.0
- TP207_1.5
- TP207_2.0
- TP207_2.5
- TP208_1.6
- TP209_1.5
- TP209_2
- TP210_2.0

10, 17, 18, 29, 30, 36, 37, 38, 42, 47, 48, 53

Kind Regards,

Stuart Lord

Senior Environmental Scientist

Business Management Systems Manager
EP Risk Management Pty Ltd

m: 0403 768 722

From: Tyler Anderson <tyler.anderson@alsglobal.com>
Sent: Friday, 26 November 2021 2:38 PM
To: Stuart Lord <Stuart.Lord@eprisk.com.au>
Subject: RE: [EXTERNAL] - FW: RESULTS & EDD for ALS Workorder : ES2141352 | Your Reference: EP2409

Hi Stuart,

Not a problem at all. I will get this sent out to you now.

Kind regards,

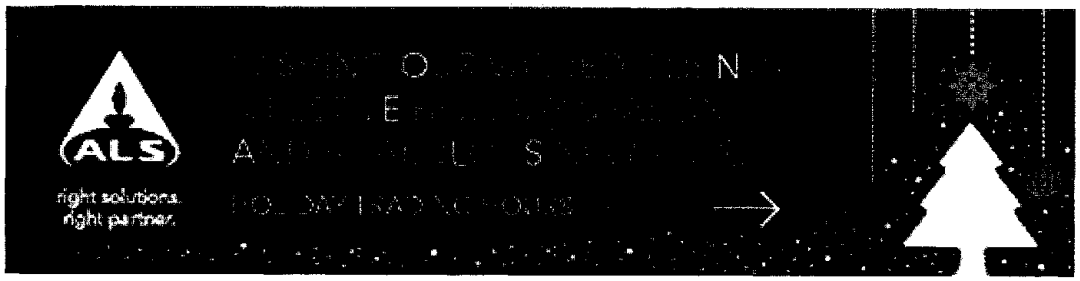
Tyler Anderson

Client Services Coordinator, Environmental
Sydney

T +61 2 8784 8555 F +61 2 8784 8500
D +61 2 8784 8501
tyler.anderson@alsglobal.com
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

Subscribe

EnviroMail™ 00 - All EnviroMails™ in one convenient library.
EnviroMail™ 134 - ALS Australia Dioxin Capability
EnviroMail™ 133 - Sampling and Analysis of air and gas using canisters
EnviroMail™ 132 - BIOSOLIDS: PFAS, TOP Assay & TOF
EnviroMail™ 131 - Important Changes to the Australian Standard Leaching Procedures AS4439.2 & AS4439.3



Right Solutions · Right Partner
www.alsglobal.com

From: Stuart Lord <Stuart.Lord@eprisk.com.au>
Sent: Friday, 26 November 2021 2:37 PM
To: Tyler Anderson <tyler.anderson@alsglobal.com>
Subject: RE: [EXTERNAL] - FW: RESULTS & EDD for ALS Workorder : ES2141352 | Your Reference: EP2409

Sorry, I was after the ENMRG.CSV file.

Kind Regards,

Stuart Lord

Senior Environmental Scientist
Business Management Systems Manager
EP Risk Management Pty Ltd

m: 0403 768 722

From: Tyler Anderson <tyler.anderson@alsglobal.com>
Sent: Friday, 26 November 2021 2:35 PM
To: Stuart Lord <Stuart.Lord@eprisk.com.au>
Subject: RE: [EXTERNAL] - FW: RESULTS & EDD for ALS Workorder : ES2141352 | Your Reference: EP2409

Hi Stuart,

Are you able to please confirm what CSV file you were after? I can see that you have the ESDAT CSV files for this one. Were you after something different?

Kind regards,

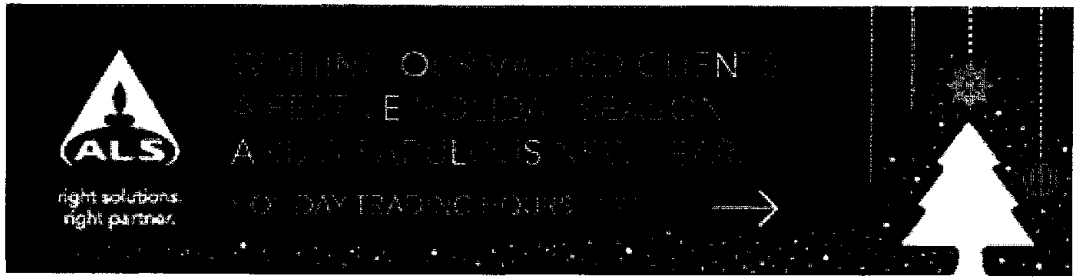
Tyler Anderson

Client Services Coordinator, Environmental
Sydney

T +61 2 8784 8555 F +61 2 8784 8500
D +61 2 8784 8501
tyler.anderson@alsglobal.com
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

Subscribe

EnviroMail™ 00 - All EnviroMails™ in one convenient library.
EnviroMail™ 134 - ALS Australia Dioxin Capability
EnviroMail™ 133 - Sampling and Analysis of air and gas using canisters
EnviroMail™ 132 - BIOSOLIDS: PFAS, TOP Assay & TOF
EnviroMail™ 131 - Important Changes to the Australian Standard Leaching Procedures AS4439.2 & AS4439.3



Right Solutions · Right Partner
www.alsglobal.com

From: Stuart Lord <Stuart.Lord@eprisk.com.au>
Sent: Friday, 26 November 2021 2:21 PM
To: Tyler Anderson <tyler.anderson@alsglobal.com>
Subject: [EXTERNAL] - FW: RESULTS & EDD for ALS Workorder : ES2141352 | Your Reference: EP2409

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hey Tyler,

Are we able to get the CSV file for the above batch sent through? Seems to be missing from the email.

Kind Regards,

Stuart Lord

Senior Environmental Scientist
Business Management Systems Manager
EP Risk Management Pty Ltd

m: 0403 768 722

From: angel-no-reply@alsglobal.com <angel-no-reply@alsglobal.com>
Sent: Friday, 26 November 2021 2:08 PM
To: Stuart Lord <Stuart.Lord@eprisk.com.au>
Subject: RESULTS & EDD for ALS Workorder : ES2141352 | Your Reference: EP2409

Deliverables for ALS Workorder ES2141352

Project: EP2409

Dear STUART LORD,

Please find enclosed the following deliverables for **ES2141352**:

- ES2141352_0_COA.pdf
- EP2409.ESDAT_ES2141352_0.Chemistry2e.CSV
- EP2409.ESDAT_ES2141352_0.Header.XML
- EP2409.ESDAT_ES2141352_0.Sample2e.CSV
- ES2141352_0_QC.pdf
- ES2141352_0_QCI.pdf
- ES2141352_COC.pdf

Report Recipients

- STUART LORD
  - ES2141352_0_COA.pdf (Email)
  - EP2409.ESDAT_ES2141352_0.Chemistry2e.CSV
  - EP2409.ESDAT_ES2141352_0.Header.XML
  - EP2409.ESDAT_ES2141352_0.Sample2e.CSV
  - ES2141352_0_QC.pdf (Email)
  - ES2141352_0_QCI.pdf (Email)
  - ES2141352_COC.pdf (Email)
- ACCOUNTS PAYABLE
  - ES2141352_COC

EP Risk Management (NSW)
Level 4 73 Walker St
North Sydney
NSW 2060

NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **Stuart Lord**

Report **845681-W**
Project name TRINITY POINT
Project ID EP2409
Received Date Nov 25, 2021

Client Sample ID			**BH2**	**BH3**	**BH4**	**QW01**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M21-De00435**	**M21-De00436**	**M21-De00437**	**M21-De00438**
Date Sampled			**Nov 24, 2021**	**Nov 24, 2021**	**Nov 24, 2021**	**Nov 24, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	95	94	97	90
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			BH2	BH3	BH4	QW01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M21-De00435	M21-De00436	M21-De00437	M21-De00438
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	53	115	70	55
p-Terphenyl-d14 (surr.)	1	%	64	109	93	130
Organochlorine Pesticides						
Chlordanes - Total	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
4.4'-DDD	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
4.4'-DDE	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
4.4'-DDT	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
a-HCH	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Aldrin	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
b-HCH	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
d-HCH	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Dieldrin	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endosulfan I	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endosulfan II	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endosulfan sulphate	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin aldehyde	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin ketone	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
g-HCH (Lindane)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Heptachlor	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Heptachlor epoxide	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Hexachlorobenzene	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Methoxychlor	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Toxaphene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin and Dieldrin (Total)*	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dibutylchlorendate (surr.)	1	%	54	103	66	79
Tetrachloro-m-xylene (surr.)	1	%	86	54	101	78
Organophosphorus Pesticides						
Azinphos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Bolstar	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorfenvinphos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorpyrifos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Coumaphos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-S	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Demeton-O	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Diazinon	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dichlorvos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dimethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Disulfoton	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
EPN	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002

Client Sample ID			BH2	BH3	BH4	QW01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M21-De00435	M21-De00436	M21-De00437	M21-De00438
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ethoprop	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenitrothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fensulfothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Malathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Merphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Mevinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Monocrotophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Naled	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Omethoate	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Phorate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Pyrazophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ronnel	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Terbufos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tokuthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Trichloronate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Triphenylphosphate (surr.)	1	%	57	99	69	51
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Naphthalene	0.00001	mg/L	< 0.00001	0.00001	0.00002	-
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Total PAH*	0.00001	mg/L	< 0.00001	0.00001	0.00002	-
2-Fluorobiphenyl (surr.)	1	%	53	115	70	-
p-Terphenyl-d14 (surr.)	1	%	64	109	93	-
Acidity (as CaCO3)	10	mg/L	310	110	88	-
Chloride	1	mg/L	6600	620	42	-
Conductivity (at 25°C)	10	uS/cm	17000	1500	270	-
Fluoride (Total)	0.5	mg/L	< 0.5	< 0.5	< 0.5	-
Nitrate & Nitrite (as N)	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
pH (at 25 °C)	0.1	pH Units	6.2	5.9	6.0	-
Phosphate total (as P)	0.01	mg/L	< 0.01	0.02	< 0.01	-

Client Sample ID			BH2	BH3	BH4	QW01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M21-De00435	M21-De00436	M21-De00437	M21-De00438
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Sulphate (as SO4)	5	mg/L	800	140	110	-
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	12000	1300	260	-
Total Kjeldahl Nitrogen (as N)	0.2	mg/L	1.4	0.22	0.19	-
Total Nitrogen (as N)*	0.2	mg/L	1.4	0.22	< 0.2	-
Hardness mg equivalent CaCO3/L	5	mg/L	2100	71	61	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	46	20	21	-
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	-
Hydroxide A kalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	-
Total Alkalinity (as CaCO3)	20	mg/L	46	20	21	-
Alkali Metals						
Calcium	0.5	mg/L	160	5.0	10	-
Magnesium	0.5	mg/L	420	14	8.4	-
Potassium	0.5	mg/L	78	1.5	1.9	-
Sodium	0.5	mg/L	3100	440	57	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.005	< 0.001	< 0.001	0.005
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.023	0.004	0.001	0.023
Zinc (filtered)	0.005	mg/L	0.047	0.022	0.007	0.046

Client Sample ID			TB	TS	RW101
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M21-De00439	M21-De00440	M21-De00441
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons					
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	< 0.1

Client Sample ID			TB	TS	RW101
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M21-De00439	M21-De00440	M21-De00441
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit			
BTEX					
Benzene	0.001	mg/L	< 0.001	-	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	95	-	94
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	83
p-Terphenyl-d14 (surr.)	1	%	-	-	67
Organochlorine Pesticides					
Chlordanes - Total	0.002	mg/L	-	-	< 0.002
4.4'-DDD	0.0002	mg/L	-	-	< 0.0002
4.4'-DDE	0.0002	mg/L	-	-	< 0.0002
4.4'-DDT	0.0002	mg/L	-	-	< 0.0002
a-HCH	0.0002	mg/L	-	-	< 0.0002
Aldrin	0.0002	mg/L	-	-	< 0.0002
b-HCH	0.0002	mg/L	-	-	< 0.0002
d-HCH	0.0002	mg/L	-	-	< 0.0002
Dieldrin	0.0002	mg/L	-	-	< 0.0002
Endosulfan I	0.0002	mg/L	-	-	< 0.0002
Endosulfan II	0.0002	mg/L	-	-	< 0.0002
Endosulfan sulphate	0.0002	mg/L	-	-	< 0.0002
Endrin	0.0002	mg/L	-	-	< 0.0002
Endrin aldehyde	0.0002	mg/L	-	-	< 0.0002
Endrin ketone	0.0002	mg/L	-	-	< 0.0002
g-HCH (Lindane)	0.0002	mg/L	-	-	< 0.0002
Heptachlor	0.0002	mg/L	-	-	< 0.0002
Heptachlor epoxide	0.0002	mg/L	-	-	< 0.0002
Hexachlorobenzene	0.0002	mg/L	-	-	< 0.0002
Methoxychlor	0.0002	mg/L	-	-	< 0.0002
Toxaphene	0.005	mg/L	-	-	< 0.005

Client Sample ID			TB	TS	RW101
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M21-De00439	M21-De00440	M21-De00441
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Aldrin and Dieldrin (Total)*	0.0002	mg/L	-	-	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	-	-	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	-	-	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	-	-	< 0.002
Dibutylchlorendate (surr.)	1	%	-	-	91
Tetrachloro-m-xylene (surr.)	1	%	-	-	53
Organophosphorus Pesticides					
Azinphos-methyl	0.002	mg/L	-	-	< 0.002
Bolstar	0.002	mg/L	-	-	< 0.002
Chlorfenvinphos	0.02	mg/L	-	-	< 0.02
Chlorpyrifos	0.002	mg/L	-	-	< 0.002
Chlorpyrifos-methyl	0.002	mg/L	-	-	< 0.002
Coumaphos	0.02	mg/L	-	-	< 0.02
Demeton-S	0.002	mg/L	-	-	< 0.002
Demeton-O	0.002	mg/L	-	-	< 0.002
Diazinon	0.002	mg/L	-	-	< 0.002
Dichlorvos	0.002	mg/L	-	-	< 0.002
Dimethoate	0.002	mg/L	-	-	< 0.002
Disulfoton	0.002	mg/L	-	-	< 0.002
EPN	0.002	mg/L	-	-	< 0.002
Ethion	0.002	mg/L	-	-	< 0.002
Ethoprop	0.002	mg/L	-	-	< 0.002
Ethyl parathion	0.002	mg/L	-	-	< 0.002
Fenitrothion	0.002	mg/L	-	-	< 0.002
Fensulfothion	0.002	mg/L	-	-	< 0.002
Fenthion	0.002	mg/L	-	-	< 0.002
Malathion	0.002	mg/L	-	-	< 0.002
Merphos	0.002	mg/L	-	-	< 0.002
Methyl parathion	0.002	mg/L	-	-	< 0.002
Mevinphos	0.002	mg/L	-	-	< 0.002
Monocrotophos	0.002	mg/L	-	-	< 0.002
Naled	0.002	mg/L	-	-	< 0.002
Omethoate	0.02	mg/L	-	-	< 0.02
Phorate	0.002	mg/L	-	-	< 0.002
Pirimiphos-methyl	0.02	mg/L	-	-	< 0.02
Pyrazophos	0.002	mg/L	-	-	< 0.002
Ronnel	0.002	mg/L	-	-	< 0.002
Terbufos	0.002	mg/L	-	-	< 0.002
Tetrachlorvinphos	0.002	mg/L	-	-	< 0.002
Tokuthion	0.002	mg/L	-	-	< 0.002
Trichloronate	0.002	mg/L	-	-	< 0.002
Triphenylphosphate (surr.)	1	%	-	-	85
Heavy Metals					
Arsenic	0.001	mg/L	-	-	< 0.001
Cadmium	0.0002	mg/L	-	-	< 0.0002
Chromium	0.001	mg/L	-	-	< 0.001
Copper	0.001	mg/L	-	-	< 0.001
Lead	0.001	mg/L	-	-	< 0.001
Mercury	0.0001	mg/L	-	-	< 0.0001

Client Sample ID			TB	TS	RW101
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M21-De00439	M21-De00440	M21-De00441
Date Sampled			Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit			
Heavy Metals					
Nickel	0.001	mg/L	-	-	< 0.001
Zinc	0.005	mg/L	-	-	< 0.005
Total Recoverable Hydrocarbons					
Naphthalene	1	%	-	110	-
TRH C6-C10	1	%	-	80	-
TRH C6-C9	1	%	-	74	-
BTEX					
Benzene	1	%	-	98	-
Ethylbenzene	1	%	-	98	-
m&p-Xylenes	1	%	-	110	-
o-Xylene	1	%	-	100	-
Toluene	1	%	-	110	-
Xylenes - Total	1	%	-	110	-
4-Bromofluorobenzene (surr.)	1	%	-	117	-

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Dec 01, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B10 (filtered metals)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)			
Metals M8 filtered	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Dec 01, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Acidity (as CaCO3)	Melbourne	Dec 01, 2021	14 Days
- Method: LTM-INO-4210 Acidity			
Conductivity (at 25°C)	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4030 Conductivity			
pH (at 25 °C)	Melbourne	Dec 01, 2021	0 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Eurofins Suite B11F: Cl/SO4/Alkalinity/Total F			
Chloride	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Fluoride (Total)	Melbourne	Dec 01, 2021	28 Days
- Method: APHA 4500 F-C Fluoride by Ion Selective Electrode			
Sulphate (as SO4)	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Dec 01, 2021	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Nitrogen Set (as N)			
Nitrate & Nitrite (as N)	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4120 Analysis of NOx NO2 NH3 by FIA			
Total Kjeldahl Nitrogen (as N)	Melbourne	Dec 01, 2021	28 Days
- Method: APHA 4500-Norg B,D Total Kjeldahl Nitrogen by FIA			
Eurofins Suite B19A: Total N (TKN, NOx), Total P			
Phosphate total (as P)	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4040 Phosphate by CFA			
Total Dissolved Solids Dried at 180°C ± 2°C	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Eurofins Suite B11D: Na/K/Ca/Mg and Hardness			
Hardness mg equivalent CaCO3/L	Melbourne	Dec 01, 2021	28 Days
- Method: APHA 2340B Hardness by Calculation			
Alkali Metals	Melbourne	Dec 01, 2021	180 Days
- Method: LTM-MET-3010 Alkali Metals Sulfur Silicon Phosphorus by ICP-AES			

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B10			
Metals M8	Melbourne	Dec 01, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

eurofins | Environment Testing

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

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: EP Risk Management (NSW)
Address: Level 4 73 Walker St
North Sydney
NSW 2060

Project Name: TRINITY POINT
Project ID: EP2409

Order No.:
Report #: 845681
Phone: 02 99225021
Fax:

Received: Nov 25, 2021 11:09 AM
Due: Dec 2, 2021
Priority: 5 Day
Contact Name: Stuart Lord

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Acidity (as CaCO3)	Conductivity (at 25°C)	pH (at 25 °C)	Eurofins Suite B10	Eurofins Suite B10 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Eurofins Suite B11F: Cl/SO4/Alkalinity/Total F	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217																	
Brisbane Laboratory - NATA # 1261 Site # 20794																	
Mayfield Laboratory - NATA # 1261 Site # 25079																	
Perth Laboratory - NATA # 2377 Site # 2370																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	BH2	Nov 24, 2021		Water	M21-De00435	X	X	X		X		X	X	X		X	X
2	BH3	Nov 24, 2021		Water	M21-De00436	X	X	X		X		X	X	X		X	X
3	BH4	Nov 24, 2021		Water	M21-De00437	X	X	X		X		X	X	X		X	X
4	QW01	Nov 24, 2021		Water	M21-De00438					X							
5	TB	Nov 24, 2021		Water	M21-De00439						X						
6	TS	Nov 24, 2021		Water	M21-De00440										X		
7	RW101	Nov 24, 2021		Water	M21-De00441				X								
Test Counts						3	3	3	1	4	1	3	3	3	1	3	3

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg milligrams per kilogram
mg/L milligrams per litre
ug/L micrograms per litre
ppm Parts per million
ppb Parts per billion
% Percentage
org/100mL Organisms per 100 millilitres
NTU Nephelometric Turbidity Units
MPN/100mL Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs..

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM where no positive PFAS results have been reported have been reviewed and no data was affected.

.

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.0002			0.0002	Pass	
4.4'-DDE	mg/L	< 0.0002			0.0002	Pass	
4.4'-DDT	mg/L	< 0.0002			0.0002	Pass	
a-HCH	mg/L	< 0.0002			0.0002	Pass	
Aldrin	mg/L	< 0.0002			0.0002	Pass	
b-HCH	mg/L	< 0.0002			0.0002	Pass	
d-HCH	mg/L	< 0.0002			0.0002	Pass	
Dieldrin	mg/L	< 0.0002			0.0002	Pass	
Endosulfan I	mg/L	< 0.0002			0.0002	Pass	
Endosulfan II	mg/L	< 0.0002			0.0002	Pass	
Endosulfan sulphate	mg/L	< 0.0002			0.0002	Pass	
Endrin	mg/L	< 0.0002			0.0002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	mg/L	< 0.0002			0.0002	Pass	
Endrin ketone	mg/L	< 0.0002			0.0002	Pass	
g-HCH (Lindane)	mg/L	< 0.0002			0.0002	Pass	
Heptachlor	mg/L	< 0.0002			0.0002	Pass	
Heptachlor epoxide	mg/L	< 0.0002			0.0002	Pass	
Hexachlorobenzene	mg/L	< 0.0002			0.0002	Pass	
Methoxychlor	mg/L	< 0.0002			0.0002	Pass	
Toxaphene	mg/L	< 0.005			0.005	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.002			0.002	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.02			0.02	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	mg/L	< 0.00001			0.00001	Pass	
Acenaphthylene	mg/L	< 0.00001			0.00001	Pass	
Anthracene	mg/L	< 0.00001			0.00001	Pass	
Benz(a)anthracene	mg/L	< 0.00001			0.00001	Pass	
Benzo(a)pyrene	mg/L	< 0.00001			0.00001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.00001			0.00001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.00001			0.00001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chrysene	mg/L	< 0.00001			0.00001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.00001			0.00001	Pass	
Fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Fluorene	mg/L	< 0.00001			0.00001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.00001			0.00001	Pass	
Naphthalene	mg/L	< 0.00001			0.00001	Pass	
Phenanthrene	mg/L	< 0.00001			0.00001	Pass	
Pyrene	mg/L	< 0.00001			0.00001	Pass	
Method Blank							
Acidity (as CaCO3)	mg/L	< 10			10	Pass	
Chloride	mg/L	< 1			1	Pass	
Conductivity (at 25°C)	uS/cm	< 10			10	Pass	
Fluoride (Total)	mg/L	< 0.5			0.5	Pass	
Nitrate & Nitrite (as N)	mg/L	< 0.05			0.05	Pass	
Phosphate total (as P)	mg/L	< 0.01			0.01	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	< 10			10	Pass	
Method Blank							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide A kalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	117			70-130	Pass	
TRH C10-C14	%	106			70-130	Pass	
Naphthalene	%	103			70-130	Pass	
TRH C6-C10	%	121			70-130	Pass	
TRH >C10-C16	%	112			70-130	Pass	
LCS - % Recovery							
BTEX							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzene	%	99			70-130	Pass	
Toluene	%	104			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	100			70-130	Pass	
Xylenes - Total*	%	99			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	90			70-130	Pass	
Anthracene	%	113			70-130	Pass	
Benz(a)anthracene	%	86			70-130	Pass	
Benzo(a)pyrene	%	72			70-130	Pass	
Benzo(b&j)fluoranthene	%	98			70-130	Pass	
Benzo(g.h.i)perylene	%	101			70-130	Pass	
Benzo(k)fluoranthene	%	92			70-130	Pass	
Chrysene	%	103			70-130	Pass	
Dibenz(a.h)anthracene	%	84			70-130	Pass	
Fluoranthene	%	86			70-130	Pass	
Fluorene	%	85			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	89			70-130	Pass	
Naphthalene	%	76			70-130	Pass	
Phenanthrene	%	80			70-130	Pass	
Pyrene	%	111			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	98			70-130	Pass	
4.4'-DDD	%	107			70-130	Pass	
4.4'-DDE	%	123			70-130	Pass	
4.4'-DDT	%	115			70-130	Pass	
a-HCH	%	92			70-130	Pass	
Aldrin	%	117			70-130	Pass	
b-HCH	%	76			70-130	Pass	
d-HCH	%	93			70-130	Pass	
Dieldrin	%	112			70-130	Pass	
Endosulfan I	%	90			70-130	Pass	
Endosulfan II	%	92			70-130	Pass	
Endosulfan sulphate	%	89			70-130	Pass	
Endrin	%	113			70-130	Pass	
Endrin aldehyde	%	111			70-130	Pass	
Endrin ketone	%	73			70-130	Pass	
g-HCH (Lindane)	%	97			70-130	Pass	
Heptachlor	%	94			70-130	Pass	
Heptachlor epoxide	%	94			70-130	Pass	
Hexachlorobenzene	%	121			70-130	Pass	
Methoxychlor	%	106			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	90			70-130	Pass	
Dimethoate	%	92			70-130	Pass	
Ethion	%	79			70-130	Pass	
Fenitrothion	%	91			70-130	Pass	
Methyl parathion	%	88			70-130	Pass	
Mevinphos	%	74			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	90			70-130	Pass	
Anthracene	%	113			70-130	Pass	
Benz(a)anthracene	%	86			70-130	Pass	
Benzo(a)pyrene	%	72			70-130	Pass	
Benzo(b&j)fluoranthene	%	98			70-130	Pass	
Benzo(g.h.i)perylene	%	101			70-130	Pass	
Benzo(k)fluoranthene	%	92			70-130	Pass	
Chrysene	%	103			70-130	Pass	
Dibenz(a.h)anthracene	%	84			70-130	Pass	
Fluoranthene	%	86			70-130	Pass	
Fluorene	%	85			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	89			70-130	Pass	
Naphthalene	%	76			70-130	Pass	
Phenanthrene	%	80			70-130	Pass	
Pyrene	%	111			70-130	Pass	
LCS - % Recovery							
Chloride	%	116			70-130	Pass	
Conductivity (at 25°C)	%	102			70-130	Pass	
Fluoride (Total)	%	113			70-130	Pass	
Nitrate & Nitrite (as N)	%	105			70-130	Pass	
Phosphate total (as P)	%	117			70-130	Pass	
Sulphate (as SO4)	%	127			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	99			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	93			70-130	Pass	
Total Alkalinity (as CaCO3)	%	98			70-130	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	106			80-120	Pass	
Magnesium	%	104			80-120	Pass	
Potassium	%	102			80-120	Pass	
Sodium	%	103			80-120	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	95			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	98			80-120	Pass	
Copper	%	100			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	97			80-120	Pass	
Nickel	%	98			80-120	Pass	
Zinc	%	99			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M21-De00959	NCP	%	120			70-130	Pass	
TRH C10-C14	N21-De05161	NCP	%	91			70-130	Pass	
Naphthalene	M21-De00959	NCP	%	111			70-130	Pass	
TRH C6-C10	M21-De00959	NCP	%	125			70-130	Pass	
TRH >C10-C16	N21-De05161	NCP	%	96			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
BTEX				Result 1					
Benzene	M21-De00959	NCP	%	100			70-130	Pass	
Toluene	M21-De00959	NCP	%	106			70-130	Pass	
Ethylbenzene	M21-De00959	NCP	%	99			70-130	Pass	
m&p-Xylenes	M21-De00959	NCP	%	101			70-130	Pass	
o-Xylene	M21-De00959	NCP	%	99			70-130	Pass	
Xylenes - Total*	M21-De00959	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	L21-No54987	NCP	%	73			70-130	Pass	
Acenaphthylene	L21-No54987	NCP	%	74			70-130	Pass	
Anthracene	L21-No54987	NCP	%	86			70-130	Pass	
Benz(a)anthracene	L21-No54987	NCP	%	88			70-130	Pass	
Benzo(a)pyrene	L21-No54987	NCP	%	79			70-130	Pass	
Benzo(b&j)fluoranthene	L21-No54987	NCP	%	85			70-130	Pass	
Benzo(g.h.i)perylene	L21-No54987	NCP	%	89			70-130	Pass	
Benzo(k)fluoranthene	L21-No54987	NCP	%	98			70-130	Pass	
Chrysene	L21-No54987	NCP	%	79			70-130	Pass	
Dibenz(a.h)anthracene	L21-No54987	NCP	%	81			70-130	Pass	
Fluoranthene	L21-No54987	NCP	%	71			70-130	Pass	
Fluorene	L21-No54987	NCP	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	L21-No54987	NCP	%	99			70-130	Pass	
Naphthalene	L21-No54987	NCP	%	96			70-130	Pass	
Phenanthrene	L21-No54987	NCP	%	99			70-130	Pass	
Pyrene	L21-No54987	NCP	%	76			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	L21-No54987	NCP	%	84			70-130	Pass	
4.4'-DDD	L21-No54987	NCP	%	83			70-130	Pass	
4.4'-DDE	L21-No54987	NCP	%	113			70-130	Pass	
4.4'-DDT	L21-No54987	NCP	%	101			70-130	Pass	
a-HCH	L21-No54987	NCP	%	102			70-130	Pass	
Aldrin	L21-No54987	NCP	%	102			70-130	Pass	
b-HCH	L21-No54987	NCP	%	128			70-130	Pass	
d-HCH	L21-No54987	NCP	%	107			70-130	Pass	
Dieldrin	L21-No54987	NCP	%	90			70-130	Pass	
Endosulfan I	L21-No54987	NCP	%	119			70-130	Pass	
Endosulfan II	L21-No54987	NCP	%	110			70-130	Pass	
Endosulfan sulphate	L21-No54987	NCP	%	113			70-130	Pass	
Endrin	L21-No54987	NCP	%	90			70-130	Pass	
Endrin aldehyde	L21-No54987	NCP	%	121			70-130	Pass	
Endrin ketone	L21-No54987	NCP	%	92			70-130	Pass	
g-HCH (Lindane)	L21-No54987	NCP	%	108			70-130	Pass	
Heptachlor	L21-No54987	NCP	%	76			70-130	Pass	
Heptachlor epoxide	L21-No54987	NCP	%	74			70-130	Pass	
Hexachlorobenzene	L21-No54987	NCP	%	87			70-130	Pass	
Methoxychlor	L21-No54987	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	L21-No42246	NCP	%	113			70-130	Pass	
Dimethoate	L21-No54987	NCP	%	91			70-130	Pass	
Ethion	L21-No54987	NCP	%	72			70-130	Pass	
Fenitrothion	L21-No54987	NCP	%	99			70-130	Pass	
Methyl parathion	L21-No54987	NCP	%	84			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mevinphos	L21-No54987	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Acenaphthene	L21-No54987	NCP	%	73			70-130	Pass	
Acenaphthylene	L21-No54987	NCP	%	74			70-130	Pass	
Anthracene	L21-No54987	NCP	%	86			70-130	Pass	
Benz(a)anthracene	L21-No54987	NCP	%	88			70-130	Pass	
Benzo(a)pyrene	L21-No54987	NCP	%	79			70-130	Pass	
Benzo(b&j)fluoranthene	L21-No54987	NCP	%	85			70-130	Pass	
Benzo(g.h.i)perylene	L21-No54987	NCP	%	89			70-130	Pass	
Benzo(k)fluoranthene	L21-No54987	NCP	%	98			70-130	Pass	
Chrysene	L21-No54987	NCP	%	79			70-130	Pass	
Dibenz(a.h)anthracene	L21-No54987	NCP	%	81			70-130	Pass	
Fluoranthene	L21-No54987	NCP	%	71			70-130	Pass	
Fluorene	L21-No54987	NCP	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	L21-No54987	NCP	%	99			70-130	Pass	
Naphthalene	L21-No54987	NCP	%	96			70-130	Pass	
Phenanthrene	L21-No54987	NCP	%	99			70-130	Pass	
Pyrene	L21-No54987	NCP	%	76			70-130	Pass	
Spike - % Recovery									
				Result 1					
Phosphate total (as P)	S21-No57757	NCP	%	118			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	M21-No66219	NCP	%	107			75-125	Pass	
Magnesium	M21-No66219	NCP	%	95			75-125	Pass	
Potassium	M21-No66219	NCP	%	93			75-125	Pass	
Sodium	M21-No66219	NCP	%	95			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	M21-No65947	NCP	%	95			75-125	Pass	
Cadmium (filtered)	M21-No65947	NCP	%	96			75-125	Pass	
Chromium (filtered)	M21-No65947	NCP	%	93			75-125	Pass	
Copper (filtered)	M21-No65947	NCP	%	91			75-125	Pass	
Lead (filtered)	M21-No65947	NCP	%	93			75-125	Pass	
Mercury (filtered)	M21-No65947	NCP	%	46			75-125	Fail	Q08
Nickel (filtered)	M21-No65947	NCP	%	91			75-125	Pass	
Zinc (filtered)	M21-No65947	NCP	%	107			75-125	Pass	
Spike - % Recovery									
				Result 1					
Nitrate & Nitrite (as N)	M21-De00436	CP	%	90			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B21-No63399	NCP	%	102			75-125	Pass	
Cadmium	B21-No63399	NCP	%	100			75-125	Pass	
Chromium	B21-No63399	NCP	%	97			75-125	Pass	
Copper	B21-No63399	NCP	%	98			75-125	Pass	
Lead	B21-No63399	NCP	%	98			75-125	Pass	
Mercury	B21-No63399	NCP	%	84			75-125	Pass	
Nickel	B21-No63399	NCP	%	97			75-125	Pass	
Zinc	B21-No63399	NCP	%	103			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M21-De00960	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	N21-De05173	NCP	mg/L	0.06	< 0.05	43	30%	Fail	Q15
TRH C15-C28	N21-De05173	NCP	mg/L	1.7	0.9	61	30%	Fail	Q15
TRH C29-C36	N21-De05173	NCP	mg/L	0.3	0.2	34	30%	Fail	Q15
Naphthalene	M21-De00960	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M21-De00960	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	N21-De05173	NCP	mg/L	0.14	0.09	46	30%	Fail	Q15
TRH >C16-C34	N21-De05173	NCP	mg/L	1.9	1.1	59	30%	Fail	Q15
TRH >C34-C40	N21-De05173	NCP	mg/L	0.1	< 0.1	23	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M21-De00960	NCP	mg/L	0.001	0.001	1.0	30%	Pass	
Toluene	M21-De00960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M21-De00960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M21-De00960	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M21-De00960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M21-De00960	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	M21-De04760	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
4.4'-DDD	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
4.4'-DDE	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
4.4'-DDT	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
a-HCH	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Aldrin	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
b-HCH	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
d-HCH	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Dieldrin	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endosulfan I	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endosulfan II	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endosulfan sulphate	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endrin	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endrin aldehyde	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endrin ketone	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
g-HCH (Lindane)	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Heptachlor	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Heptachlor epoxide	M21-De07758	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Hexachlorobenzene	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Methoxychlor	M21-De04760	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Toxaphene	M21-De04760	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Bolstar	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorfenvinphos	M21-De04760	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Chlorpyrifos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorpyrifos-methyl	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Coumaphos	M21-De04760	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-S	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Demeton-O	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Diazinon	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dichlorvos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dimethoate	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Disulfoton	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
EPN	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethoprop	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethyl parathion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenitrothion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fensulfothion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenthion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Malathion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Merphos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methyl parathion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Mevinphos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Monocrotophos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Naled	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Omethoate	M21-De04760	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Phorate	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pirimiphos-methyl	M21-De04760	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Pyrazophos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ronnel	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbufos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tetrachlorvinphos	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tokuthion	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	M21-De04760	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Acenaphthylene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Anthracene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benz(a)anthracene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(a)pyrene	M21-De04760	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(g.h.i)perylene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(k)fluoranthene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Chrysene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Dibenz(a.h)anthracene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Fluoranthene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluorene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Naphthalene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Phenanthrene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Pyrene	M21-No66089	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	M21-No70053	NCP	mg/L	290	300	2.0	30%	Pass	
Fluoride (Total)	S21-No66083	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Phosphate total (as P)	M21-De08344	NCP	mg/L	0.91	0.90	1.0	30%	Pass	
Sulphate (as SO4)	M21-No70053	NCP	mg/L	660	650	1.0	30%	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	L21-No64607	NCP	mg/L	430	490	13	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	M21-No66219	NCP	mg/L	92	96	4.0	30%	Pass	
Magnesium	M21-No66219	NCP	mg/L	24	25	4.0	30%	Pass	
Potassium	M21-No66219	NCP	mg/L	6.3	6.3	<1	30%	Pass	
Sodium	M21-No66219	NCP	mg/L	37	37	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	M21-No65947	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	M21-No65947	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	M21-No65947	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	M21-No65947	NCP	mg/L	0.008	0.008	<1	30%	Pass	
Lead (filtered)	M21-No65947	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	M21-No65947	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	M21-No65947	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	M21-No65947	NCP	mg/L	0.007	0.008	13	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (at 25°C)	M21-De00436	CP	uS/cm	1500	1500	<1	30%	Pass	
Nitrate & Nitrite (as N)	M21-De00436	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
pH (at 25 °C)	M21-De00436	CP	pH Units	5.9	5.9	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	M21-De00436	CP	mg/L	20	20	<1	30%	Pass	
Carbonate Alkalinity (as CaCO3)	M21-De00436	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide A kalinity (as CaCO3)	M21-De00436	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	M21-De00436	CP	mg/L	20	20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	B21-No63399	NCP	mg/L	0.001	0.001	2.0	30%	Pass	
Cadmium	B21-No63399	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	B21-No63399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	B21-No63399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	B21-No63399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	B21-No63399	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	B21-No63399	NCP	mg/L	< 0.001	0.001	6.0	30%	Pass	
Zinc	B21-No63399	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

John Nguyen	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

eurofins | Environment Testing

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

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: EP Risk Management (NSW)
Address: Level 4 73 Walker St
North Sydney
NSW 2060

Project Name: TRINITY POINT
Project ID: EP2409

Order No.:
Report #: 845681
Phone: 02 99225021
Fax:

Received: Nov 25, 2021 11:09 AM
Due: Dec 2, 2021
Priority: 5 Day
Contact Name: Stuart Lord

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Acidity (as CaCO3)	Conductivity (at 25°C)	pH (at 25 °C)	Eurofins Suite B10	Eurofins Suite B10 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B19A: Total N (TKN, NOx), Total P	Eurofins Suite B11F: Cl/SO4/Alkalinity/Total F	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217																	
Brisbane Laboratory - NATA # 1261 Site # 20794																	
Mayfield Laboratory - NATA # 1261 Site # 25079																	
Perth Laboratory - NATA # 2377 Site # 2370																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	BH2	Nov 24, 2021		Water	M21-De00435	X	X	X		X		X	X	X		X	X
2	BH3	Nov 24, 2021		Water	M21-De00436	X	X	X		X		X	X	X		X	X
3	BH4	Nov 24, 2021		Water	M21-De00437	X	X	X		X		X	X	X		X	X
4	QW01	Nov 24, 2021		Water	M21-De00438					X							
5	TB	Nov 24, 2021		Water	M21-De00439						X						
6	TS	Nov 24, 2021		Water	M21-De00440										X		
7	RW101	Nov 24, 2021		Water	M21-De00441				X								
Test Counts						3	3	3	1	4	1	3	3	3	1	3	3

eurofins | Environment Testing

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

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261 Site # 1254

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	EP Risk Management (NSW)
Contact name:	Stuart Lord
Project name:	TRINITY POINT
Project ID:	EP2409
Turnaround time:	5 Day
Date/Time received	Nov 25, 2021 11:09 AM
Eurofins reference	845681

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✓	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Stuart Lord - Stuart.Lord@eprisk.com.au.

Note: A copy of these results will also be delivered to the general EP Risk Management (NSW) email address.

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	EP RISK	Project №	EP2409	Project Manager	SL
Address	3/19 Bolton Street, Newcastle NSW	Project Name	Trinity Point	EDD Format (ESdat, EQuIS etc)	
Contact Name	Stuart Lord				
Phone №	403768722				
Special Directions					
Purchase Order					
Quote ID №	181023EPR				

Sampler(s)	SL
Handed over by	
Email for Invoice	accounts@eprisk.com.au
Email for Results	stuart.lord@eprisk.com.au

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attach SUITE pricing.

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B-10	B1	B11D	B11F	B19A	Acidity	Alkalinity	TDS/EC/pH	Trace PAH									Containers: 500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH2	24/11/21	W	X		X	X	X	X	X	X	X																	
2	BH3	24/11/21	W	X		X	X	X	X	X	X	X																	
3	BH4	24/11/21	W	X		X	X	X	X	X	X	X																	
4	QW01	24/11/21	W	X																									
5	QW02	24/11/21	W	X																									Please send to ALS for analysis
6	TB	24/11/21	W		X																								
7	TS	24/11/21	W		X																								
8	RW101	24/11/21	W	X																									
9																													
10																													
		Total Counts		6	2	3	3	3	3	3	3	3																	

Containers — Change container type & size if necessary.

Required Turnaround Time (TAT) — Default will be 5 days if not ticked.

♦Surcharge will apply
☐ Overnight (reporting by 9am)♦
☐ Same day ♦ ☐ 1 day ♦
☐ 2 days ♦ ☐ 3
☐ 5 days (Standard)
☐ Other( )

Method of Shipment: ☐ Courier (#) ☐ Hand Delivered ☐ Postal

	Name	Signature	Date	Time

Eurofins | mgt Laboratory Use Only

		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	
Received By	QR	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature: 7.7
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	25/11/21	11.09am	Report №: 84368

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	EP RISK	Project №	EP2409	Project Manager	SL
Address	3/19 Bolton Street, Newcastle NSW	Project Name	Trinity Point	EDD Format (ESdat, EQuIS etc)	
Contact Name	Stuart Lord				
Phone №	403766722				
Special Directions					
Purchase Order					
Quote ID №	181023EPR				

Sampler(s)	SL	
Handed over by		
Email for Invoice	accounts@eprisk.com.au	
Email for Results	stuart.lord@eprisk.com.au	

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers — Change container type & size if necessary.

Required Turnaround Time (TAT) — Default will be 5 days if not ticked. ♦Surcharge will apply

☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3
☐ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B-10	B11	B11D	B11F	B19A	Acidity	Alkalinity	TDS/EC/pH	Trace PAH										500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH2	24/11/21	W	X		X	X	X	X	X	X	X																		
2	BH3	24/11/21	W	X		X	X	X	X	X	X	X																		
3	BH4	24/11/21	W	X		X	X	X	X	X	X	X																		
4	QW01	24/11/21	W	X																										
5	QW02	24/11/21	W	X																										Please send to ALS for analysis
6	TB	24/11/21	W		X																									
7	TS	24/11/21	W		X																									
8	RW101	24/11/21	W	X																										
9																														
10																														
	Total Counts			6	2	3	3	3	3	3	3	3																		

Method of Shipment: ☐ Courier (#) ☐ Hand Delivered ☐ Postal — Name — Signature — Date — Time

Eurofins | mgt Laboratory Use Only						
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature 7.7
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date 25/11/21	Time 11.09am	Report №

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2124070**	Page	: 1 of 7
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Melbourne
Contact	: MR STUART LORD	Contact	: Hannah White
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: EP2409	Date Samples Received	: 01-Dec-2021 09:30
Order number	: ----	Date Analysis Commenced	: 01-Dec-2021
C-O-C number	: ----	Issue Date	: 06-Dec-2021 17:04
Sampler	: SL		
Site	: ----		
Quote number	: ----		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Jarwis Nheu	Senior Inorganic Chemist	Me bourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Me bourne Organics, Springvale, VIC

General Comments

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

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

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

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

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

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

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

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QW02	----	----	----	----
				Sampling date / time	24-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2124070-001	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		**0.006**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.002**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.026**	----	----	----	----
inc	7440-66-6	0.005	mg/L		**0 054**				
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.5	µg/L		<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L		<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	µg/L		<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	µg/L		<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	µg/L		<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	µg/L		<0.5	----	----	----	----
Aldrin	309-00-2	0.5	µg/L		<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	µg/L		<0.5	----	----	----	----
trans-Chlordane	5103-74-2	0.5	µg/L		<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	µg/L		<0.5	----	----	----	----
cis-Chlordane	5103-71-9	0.5	µg/L		<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	µg/L		<0.5	----	----	----	----
Endrin	72-20-8	0.5	µg/L		<0.5	----	----	----	----
beta-Endosulfan	33213-65-9	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	µg/L		<0.5	----	----	----	----
Endrin aldehyde	7421-93-4	0.5	µg/L		<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	µg/L		<0.5	----	----	----	----
4.4`-DDT	50-29-3	2.0	µg/L		<2.0	----	----	----	----
Endrin ketone	53494-70-5	0.5	µg/L		<0.5	----	----	----	----
Methoxychlor	72-43-5	2.0	µg/L		<2.0	----	----	----	----
^ Total Chlordane (sum)	----	0.5	µg/L		<0.5	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L		<0.5	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QW02	----	----	----	----
				Sampling date / time	24-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2124070-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.5	µg/L		<0.5	----	----	----	----
Demeton-S-methyl	919-86-8	0.5	µg/L		<0.5	----	----	----	----
Monocrotophos	6923-22-4	2.0	µg/L		<2.0	----	----	----	----
Dimethoate	60-51-5	0.5	µg/L		<0.5	----	----	----	----
Diazinon	333-41-5	0.5	µg/L		<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L		<0.5	----	----	----	----
Parathion-methyl	298-00-0	2.0	µg/L		<2.0	----	----	----	----
Malathion	121-75-5	0.5	µg/L		<0.5	----	----	----	----
Fenthion	55-38-9	0.5	µg/L		<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	µg/L		<0.5	----	----	----	----
Parathion	56-38-2	2.0	µg/L		<2.0	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	µg/L		<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	µg/L		<0.5	----	----	----	----
Bromophos-ethyl	4824-78-6	0.5	µg/L		<0.5	----	----	----	----
Fenamiphos	22224-92-6	0.5	µg/L		<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	µg/L		<0.5	----	----	----	----
Ethion	563-12-2	0.5	µg/L		<0.5	----	----	----	----
Carbophenothion	786-19-6	0.5	µg/L		<0.5	----	----	----	----
Azinphos Methyl	86-50-0	0.5	µg/L		<0.5	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L		<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L		<1.0	----	----	----	----
Phenanthrene	85-01-8	1.0	µg/L		<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L		<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L		<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L		<1.0	----	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QW02	----	----	----	----
				Sampling date / time	24-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2124070-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L		<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L		<100	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ Total Xylenes	----	2	µg/L		<2	----	----	----	----
^ Sum of BTEX	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.5	%		**66.4**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.5	%		**75.2**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QW02	----	----	----	----
				Sampling date / time	24-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2124070-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**11.0**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%		**48.5**	----	----	----	----
2 4 6 Tribromophenol	118-79-6	1.0	%		**77 4**				
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**66.5**	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		**71.6**	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		**70.0**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**101**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**98.1**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**102**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	117
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	51	127
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	51
2-Chlorophenol-D4	93951-73-6	30	114
2.4.6-Tribromophenol	118-79-6	26	133
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	35	127
Anthracene-d10	1719-06-8	44	122
4-Terphenyl-d14	1718-51-0	44	124
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	129
Toluene-D8	2037-26-5	70	125
4-Bromofluorobenzene	460-00-4	71	129

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM2124070**	Page	: 1 of 8
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Melbourne
Contact	: MR STUART LORD	Contact	: Hannah White
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: EP2409	Date Samples Received	: 01-Dec-2021
Order number	: ----	Date Analysis Commenced	: 01-Dec-2021
C-O-C number	: ----	Issue Date	: 06-Dec-2021
Sampler	: SL		
Site	: ----		
Quote number	: ----		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Jarwis Nheu	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4053087)									
EM2124015-007	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.037	0.040	8.2	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EM2124042-009	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 4053089)									
EM2124042-007	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4049076)									
EM2124111-003	Anonymous	EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(IM) Fluorene	86-73-7	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	<1.0	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4049076) - continued									
EM2124111-003	Anonymous	EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	<1.0	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4049075)									
EM2123786-001	Anonymous	EP071: C15 - C28 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	0.0	No Limit
EM2124111-003	Anonymous	EP071: C15 - C28 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4049455)									
EM2124070-001	QW02	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4049075)									
EM2123786-001	Anonymous	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C16 - C34 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	0.0	No Limit
EM2124111-003	Anonymous	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C16 - C34 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4049455)									
EM2124070-001	QW02	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 4049455)									
EM2124070-001	QW02	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4049455) - continued									
EM2124070-001	QW02	EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

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

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

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4053087)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	100	89.0	111
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	93.0	83.5	111
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	97.6	83.2	109
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	96.7	83.1	107
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	94.0	84.6	108
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	97.9	84.3	110
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	105	86.3	112
EG035F: Dissolved Mercury by FIMS (QCLot: 4053089)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	89.7	71.6	116
EP068A: Organochlorine Pesticides (OC) (QCLot: 4049077)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	2.5 µg/L	96.4	50.6	119
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	2.5 µg/L	85.9	44.2	117
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	2.5 µg/L	98.7	53.7	119
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	2.5 µg/L	96.5	47.7	117
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	2.5 µg/L	98.0	52.5	117
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	2.5 µg/L	97.0	46.9	118
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	2.5 µg/L	95.0	48.0	115
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	2.5 µg/L	98.8	51.1	119
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	2.5 µg/L	97.3	48.4	120
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	2.5 µg/L	94.6	50.1	122
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	2.5 µg/L	97.7	51.0	118
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	2.5 µg/L	96.1	48.4	116
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	2.5 µg/L	94.6	49.3	116
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	2.5 µg/L	102	47.1	130
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	2.5 µg/L	97.6	51.6	118
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	2.5 µg/L	94.2	48.6	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	2.5 µg/L	101	49.4	128
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	2.5 µg/L	101	49.1	123
EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	2.5 µg/L	113	45.6	126
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	2.5 µg/L	98.3	52.8	117
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	2.5 µg/L	111	47.1	126
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4049077)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	2.5 µg/L	97.0	47.4	133
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	2.5 µg/L	104	46.4	129

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4049077) - continued								
EP068: Monocrotophos	6923-22-4	2	µg/L	<2.0	2.5 µg/L	14.8	10.0	42.9
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	2.5 µg/L	106	41.7	131
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	2.5 µg/L	105	50.5	122
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	2.5 µg/L	102	52.4	123
EP068: Parathion-methyl	298-00-0	2	µg/L	<2.0	2.5 µg/L	116	52.0	132
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	2.5 µg/L	112	51.8	133
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	2.5 µg/L	103	52.3	123
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	2.5 µg/L	99.6	48.7	122
EP068: Parathion	56-38-2	2	µg/L	<2.0	2.5 µg/L	116	49.5	136
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	2.5 µg/L	104	50.4	123
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	2.5 µg/L	112	50.9	131
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	2.5 µg/L	104	47.5	126
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	2.5 µg/L	138	46.5	138
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	2.5 µg/L	99.8	49.2	119
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	2.5 µg/L	103	50.0	126
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	2.5 µg/L	103	50.0	131
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	2.5 µg/L	137	41.7	147
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4049076)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	79.7	42.8	114
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	85.7	48.6	119
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	86.9	47.0	117
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	88.9	49.5	119
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	89.4	49.4	121
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	88.9	48.4	122
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	96.7	50.3	124
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	94.8	50.0	126
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	90.8	49.4	127
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	91.5	48.7	126
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	84.8	54.5	134
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	90.2	56.1	134
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	101	55.6	135
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	85.2	54.4	126
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	90.1	54.5	126
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	89.5	54.4	126
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4049075)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	4670 µg/L	104	47.2	122
EP071: C15 - C28 Fraction	----	100	µg/L	<100	15800 µg/L	112	52.9	131
EP071: C29 - C36 Fraction	----	50	µg/L	<50	8180 µg/L	108	50.4	127

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4049075) - continued								
EP071: C10 - C36 Fraction (sum)	----	50	µg/L	<50	28650 µg/L	109	51.5	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4049455)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	360 µg/L	102	66.2	134
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4049075)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	6100 µg/L	104	49.1	125
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	21200 µg/L	110	51.6	128
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	1620 µg/L	101	47.2	130
EP071: >C10 - C40 Fraction (sum)	----	100	µg/L	<100	28920 µg/L	108	51.2	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4049455)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	450 µg/L	108	66.2	132
EP080: BTEXN (QCLot: 4049455)								
EP080: Benzene	71-43-2	1	µg/L	<1	20 µg/L	107	68.8	127
EP080: Toluene	108-88-3	2	µg/L	<2	20 µg/L	110	72.9	129
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	111	71.7	130
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	40 µg/L	109	72.3	136
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	111	75.9	134
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	108	68.3	131

Matrix Spike (MS) Report

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

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4053087)							
EM2124015-007	Anonymous	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	103	76.6	124
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	97 8	74.6	118
		EG020A-F: Chromium	7440-47-3	0.2 mg/L	99.7	71.0	135
		EG020A-F: Copper	7440-50-8	0.2 mg/L	99 8	76.0	130
		EG020A-F: Lead	7439-92-1	0.2 mg/L	90.7	75.0	133
		EG020A-F: Nickel	7440-02-0	0.2 mg/L	99.6	73.0	131
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	103	75.0	131
EG035F: Dissolved Mercury by FIMS (QCLot: 4053089)							
EM2124042-008	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	95.6	70.0	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4049455)							

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4049455) - continued							
EM2124148-001	Anonymous	EP080: C6 - C9 Fraction	----	280 µg/L	85 9	33.9	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4049455)							
EM2124148-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	330 µg/L	81.4	34.0	122
EP080: BTEXN (QCLot: 4049455)							
EM2124148-001	Anonymous	EP080: Benzene	71-43-2	20 µg/L	105	56.3	133
		EP080: Toluene	108-88-3	20 µg/L	109	60.4	132

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2124070**	Page	: 1 of 5
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Melbourne
Contact	: MR STUART LORD	Telephone	: +61-3-8549 9600
Project	: EP2409	Date Samples Received	: 01-Dec-2021
Site	: ----	Issue Date	: 06-Dec-2021
Sampler	: SL	No. of samples received	: 1
Order number	: ----	No. of samples analysed	: 1

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

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

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
Pesticides by GCMS	0	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	8	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	3	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	12	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
QW02	**24-Nov-2021**	**----**	----	----	**03-Dec-2021**	23-May-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
QW02	**24-Nov-2021**	**----**	----	----	**03-Dec-2021**	22-Dec-2021	✓
EP068A: Organochlorine Pesticides (OC)							
Amber Glass Bottle - Unpreserved (EP068)							
QW02	**24-Nov-2021**	**01-Dec-2021**	01-Dec-2021	✓	**02-Dec-2021**	10-Jan-2022	✓
EP068B: Organophosphorus Pesticides (OP)							
Amber Glass Bottle - Unpreserved (EP068)							
QW02	**24-Nov-2021**	**01-Dec-2021**	01-Dec-2021	✓	**02-Dec-2021**	10-Jan-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
QW02	**24-Nov-2021**	**01-Dec-2021**	01-Dec-2021	✓	**02-Dec-2021**	10-Jan-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
QW02	**24-Nov-2021**	**01-Dec-2021**	01-Dec-2021	✓	**02-Dec-2021**	10-Jan-2022	✓
Amber VOC Vial - HCl (EP080)							
QW02	**24-Nov-2021**	**01-Dec-2021**	08-Dec-2021	✓	**02-Dec-2021**	08-Dec-2021	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
QW02	**24-Nov-2021**	**01-Dec-2021**	01-Dec-2021	✓	**02-Dec-2021**	10-Jan-2022	✓
Amber VOC Vial - HCl (EP080)							
QW02	**24-Nov-2021**	**01-Dec-2021**	08-Dec-2021	✓	**02-Dec-2021**	08-Dec-2021	✓
EP080: BTEXN							
Amber VOC Vial - HCl (EP080)							
QW02	**24-Nov-2021**	**01-Dec-2021**	08-Dec-2021	✓	**02-Dec-2021**	08-Dec-2021	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	3	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	8	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	3	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	12	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-A kane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ **Sydney Laboratory** Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066 02 9900 8400 EnviroSampleNSW@eurofins.com

☐ **Brisbane Laboratory** Unit 1 21 Smallwood Place Murarrie QLD 4172 07 3902 4600 EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory** Unit 2 91 Leach Highway Kewdale WA 6105 08 9251 9600 EnviroSampleWA@eurofins.com

☐ **Melbourne Laboratory** 2 Kingston Town Close Oakleigh VIC 3166 03 8564 5000 EnviroSampleVic@eurofins.com

Company	EP RISK	Project №	EP2409
Address	3/19 Bolton Street, Newcastle NSW	Project Name	Trinity Point
Contact Name	Stuart Lord	Project Manager	SL
Phone №	403768722	EDD Format (ESdat, EQuIS etc)	
Special Directions		Sampler(s)	SL
Purchase Order		Handed over by	
Quote ID №	181023EPR	Email for Invoice	accounts@eprisk.com.au
		Email for Results	stuart.lord@eprisk.com.au

Analyses (Where metals are required, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.)

Containers (Change container type & size if necessary.)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked.)

♦Surcharge will apply

☐ Overnight (reporting by 9am)♦
☐ Same day ♦ ☐ 1 day ♦
☐ 2 days ♦ ☐ 3
☐ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B-10	B11	B11D	B11F	B19A	Acidity	Alkalinity	TDS/EC/pH	Trace PAH	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH2	24/11/21	W	X		X	X	X	X	X	X	X									
2	BH3	24/11/21	W	X		X	X	X	X	X	X	X									
3	BH4	24/11/21	W	X		X	X	X	X	X	X	X									
4	QW01	24/11/21	W	X																	
5	QW02	24/11/21	W	X																	Please send to ALS for analysis
6	TB	24/11/21	W		X																
7	TS	24/11/21	W		X																
8	RW101	24/11/21	W	X																	
9																					
10																					
	Total Counts			6	2	3	3	3	3	3	3	3									

SCANNED

Environmental Division Melbourne
Work Order Reference
EM2124070

Telephone : + 61-3-8549 9600

Received: 24/11/21 9:30 Carrier: courier
Cooler:
Temp: 16.2 °C Seal: Y
Ice: Y/N Ice Pack: Y/N
Term

(9)

COPY

Method of Shipment						
☐ Courier (#)	☐ Hand Delivered	☐ Postal	Name		Signature		Date		Time	

Eurofins | mgt Laboratory Use Only										
Received By:		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Temperature	7.7
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	25/11/21	Time	8.29am	Temperature	

Relinquished by Sultanah on 24/11 at 8AM

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

LD 1/12

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	EP RISK	Project №	EP2409	Project Manager	SL
Address	3/19 Bolton Street, Newcastle NSW	Project Name	Trinity Point	EDD Format ESdat, EQuIS etc	
Contact Name	Stuart Lord			Sampler(s)	SL
Phone №	403768722			Handed over by	
Special Directions				Email for Invoice	accounts@eprisk.com.au
Purchase Order				Email for Results	stuart.lord@eprisk.com.au
Quote ID №	181023EPR				

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers — Change container type & size if necessary

Required Turnaround Time (TAT) — Default will be 5 days if not ticked.

- ♦Surcharge will apply
- ☐ Overnight (reporting by 9am♦)
- ☐ Same day♦ ☐ 1 day♦
- ☐ 2 days♦ ☐ 3
- ☐ 5 days (Standard)
- ☐ Other

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B-10	B1	B11D	B11F	B19A	Acidity	Alkalinity	TDS/EC/pH	Trace PAH	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH2	24/11/21	W	X		X	X	X	X	X	X	X									
2	BH3	24/11/21	W	X		X	X	X	X	X	X	X									
3	BH4	24/11/21	W	X		X	X	X	X	X	X	X									
4	QW01	24/11/21	W	X																	
5	QW02	24/11/21	W	X																	
6	TB	24/11/21	W		X																
7	TS	24/11/21	W		X																
8	RW101	24/11/21	W	X																	
9																					
10																					
	Total Counts			6	2	3	3	3	3	3	3	3									

Environmental Division
Melbourne
Work Order Reference
EM2124070

Telephone : +61-3-8549 9600

Please send to ALS for analysis

12, 9:30 couriers

16.2 ☐ Tem

Method of Shipment: ☐ Courier #: ☐ Hand Delivered ☐ Postal — Name: — Signature: — Date: — Time:

Eurofins | mgt Laboratory Use Only	Received By	QR	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	25/11/21	Time	11.09am

Temperature: 7.7 — Report №:

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request

Relinquished by Sutherah on all 12 at 9AM

Appendix E
LOTSEARCH REPORT

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 29 Oct 2021 09:18:05

Reference: LS025942 EP

Address: 49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Disclaimer:
The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features.
You should obtain independent advice before you make any decision based on the information within the report.
The detailed terms applicable to use of this report are set out at the end of this report.

Dataset Listing

Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	30/06/2021	30/06/2021	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	13/10/2021	11/10/2021	Monthly	1000m	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority	08/10/2021	08/10/2021	Monthly	1000m	0	0	0
Former Gasworks	Environment Protection Authority	11/08/2021	11/10/2017	Quarterly	1000m	0	0	0
National Waste Management Facilities Database	Geoscience Australia	12/05/2021	07/03/2017	Annually	1000m	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	15/02/2021	13/07/2012	Annually	1000m	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	28/10/2021	14/07/2021	Monthly	2000m	1	1	1
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	29/10/2021	29/10/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	29/10/2021	29/10/2021	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	08/10/2021	08/10/2021	Monthly	2000m	0	0	0
Defence 3 Year Regional Contamina ion Inves igation Program	Department of Defence	19/08/2021	19/08/2021	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	02/02/2021	13/12/2018	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	28/10/2021	28/10/2021	Monthly	1000m	2	6	6
Delicensed POEO Activities s ill regulated by the EPA	Environment Protection Authority	28/10/2021	28/10/2021	Monthly	1000m	0	0	0
Former POEO Licensed Ac ivities now revoked or surrendered	Environment Protection Authority	28/10/2021	28/10/2021	Monthly	1000m	3	3	3
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	0	0	0
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	0	0
Points of Interest	NSW Department of Finance, Services & Innovation	19/08/2021	19/08/2021	Quarterly	1000m	1	1	14
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	19/08/2021	19/08/2021	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	19/08/2021	19/08/2021	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Finance, Services & Innovation	19/08/2021	19/08/2021	Quarterly	1000m	0	0	1
State Forest	Forestry Corporation of NSW	25/02/2021	14/02/2021	Annually	1000m	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	22/01/2021	11/12/2020	Annually	1000m	0	0	1
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000m	0	1	1
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	26/10/2020	21/02/2018	Annually	1000m	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000m	7	7	7

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Geological Units 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	1	1	1
Geological Structures 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000m	1	1	1
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	14/10/2020	27/07/2020	Annually	1000m	2	2	2
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	19/08/2021	28/06/2021	Monthly	500m	3	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	1	1	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000m	0	0	0
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	19/08/2021	05/08/2021	Quarterly	1000m	1	1	1
Current Mining Titles	NSW Department of Industry	28/09/2021	28/09/2021	Monthly	1000m	1	1	6
Mining Title Applications	NSW Department of Industry	28/09/2021	28/09/2021	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	28/09/2021	28/09/2021	Monthly	1000m	9	9	12
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	19/08/2021	07/12/2018	Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	19/08/2021	13/08/2021	Monthly	1000m	2	5	17
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	18/05/2021	20/11/2019	Annually	1000m	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	18/05/2021	20/11/2019	Annually	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	19/08/2021	25/06/2021	Quarterly	1000m	0	0	0
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	19/08/2021	13/08/2021	Monthly	1000m	0	0	0
Bush Fire Prone Land	NSW Rural Fire Service	21/10/2021	19/10/2021	Weekly	1000m	0	0	3
Lower Hunter and Central Coast Regional Vegetation Survey	NSW Office of Environment & Heritage	28/02/2015	16/11/2009	As required	1000m	1	2	11
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	24/02/2021	19/03/2020	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Annually	1000m	1	2	5
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000m	1	3	10
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	18/10/2021	18/10/2021	Weekly	10000m	-	-	-

Site Diagram

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 53402m²

Total Perimeter: 1.31km

Disclaimers:

Measurements are approximate only and may have been simplified or smaller lengths removed for readability.

Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Scale: 0 25 50 100 Meters

Data Source Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 29 October 2021

Contaminated Land

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
N/A	No records in buffer								

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
N/A	No records in buffer							

Contaminated Land Records of Notice Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority
Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Waste Management & Liquid Fuel Facilities

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist	Direction
N/A	No records in buffer											

Waste Management Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

National Liquid Fuel Facilities

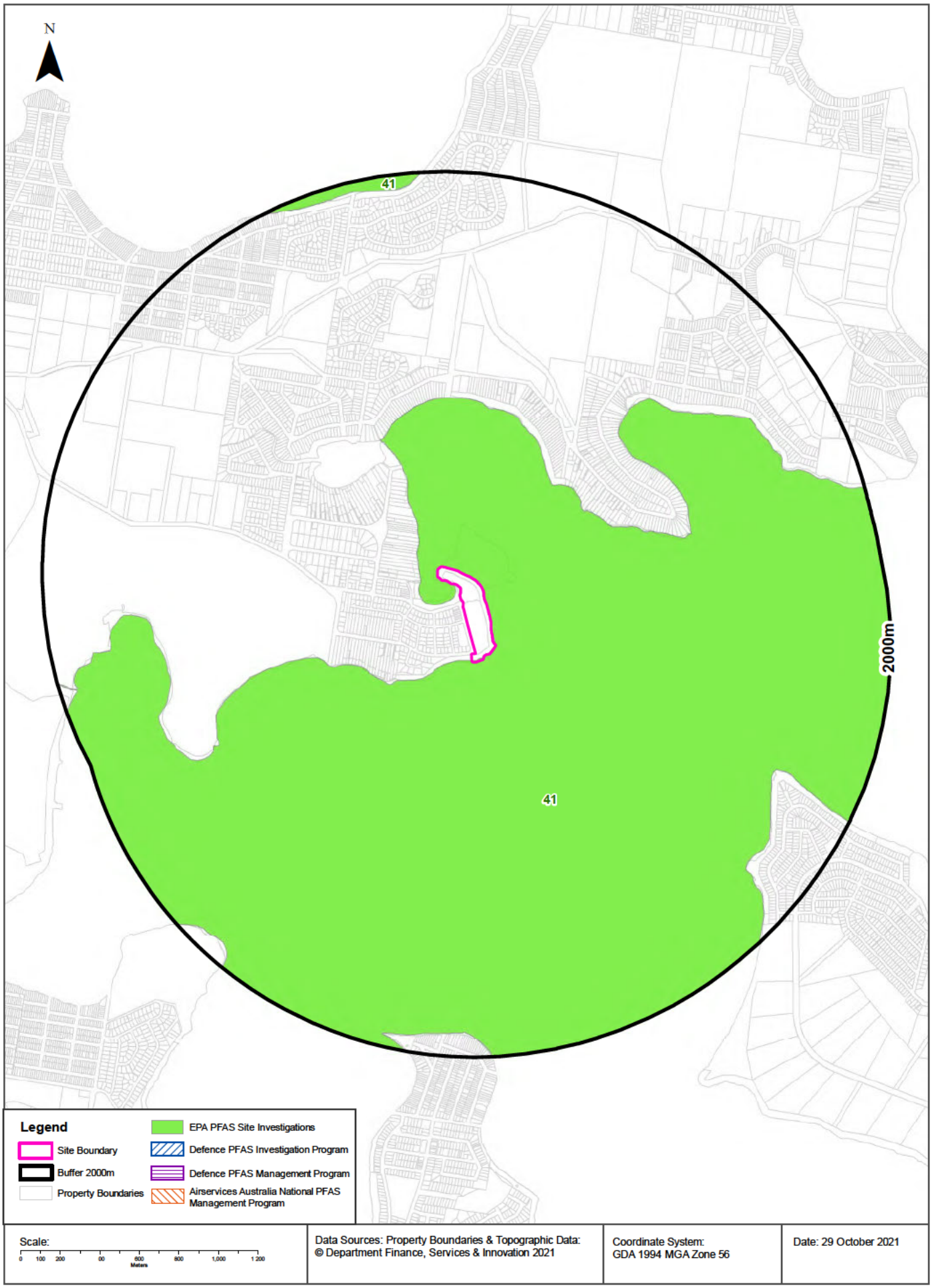
National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
N/A	No records in buffer										

National Liquid Fuel Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

PFAS Investigation & Management Programs

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



PFAS Investigation & Management Programs

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Map ID	Site	Address	Loc Conf	Dist	Dir
41	Lake Macquarie		Area Match	0m	On-site

EPA PFAS Investigation Program: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Defence PFAS Investigation Program

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Investigation Program Data Custodian: Department of Defence, Australian Government

Defence PFAS Management Program

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Management Program Data Custodian: Department of Defence, Australian Government

Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

Map ID	Site Name	Impacts	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Defence 3 Year Regional Contamination Investigation Program

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
N/A	No records in buffer					

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasminco Lead Abatement Strategy Area

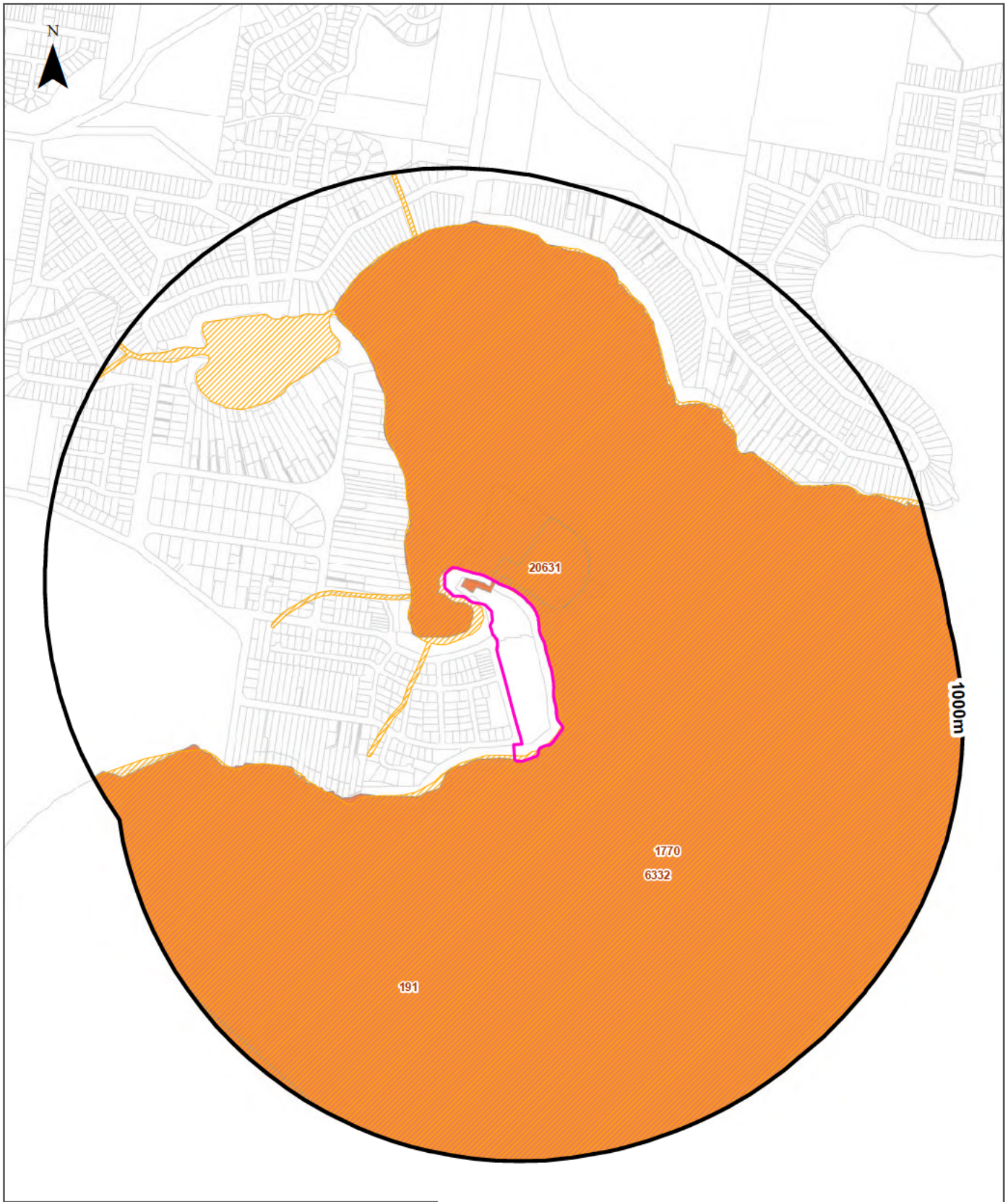
Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Other Sites with Contamination Issues: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Current EPA Licensed Activities

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary
- Current Licensed Activities under POEO Act
- Current Licences related to Other Activities incl. Application of Herbicides to Waterways
- Current Licences related to Irrigated Agriculture

Scale:	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021	Coordinate System: GDA 1994 MGA Zone 56	Date: 29 October 2021

EPA Activities

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Licensed Activities under the POEO Act 1997

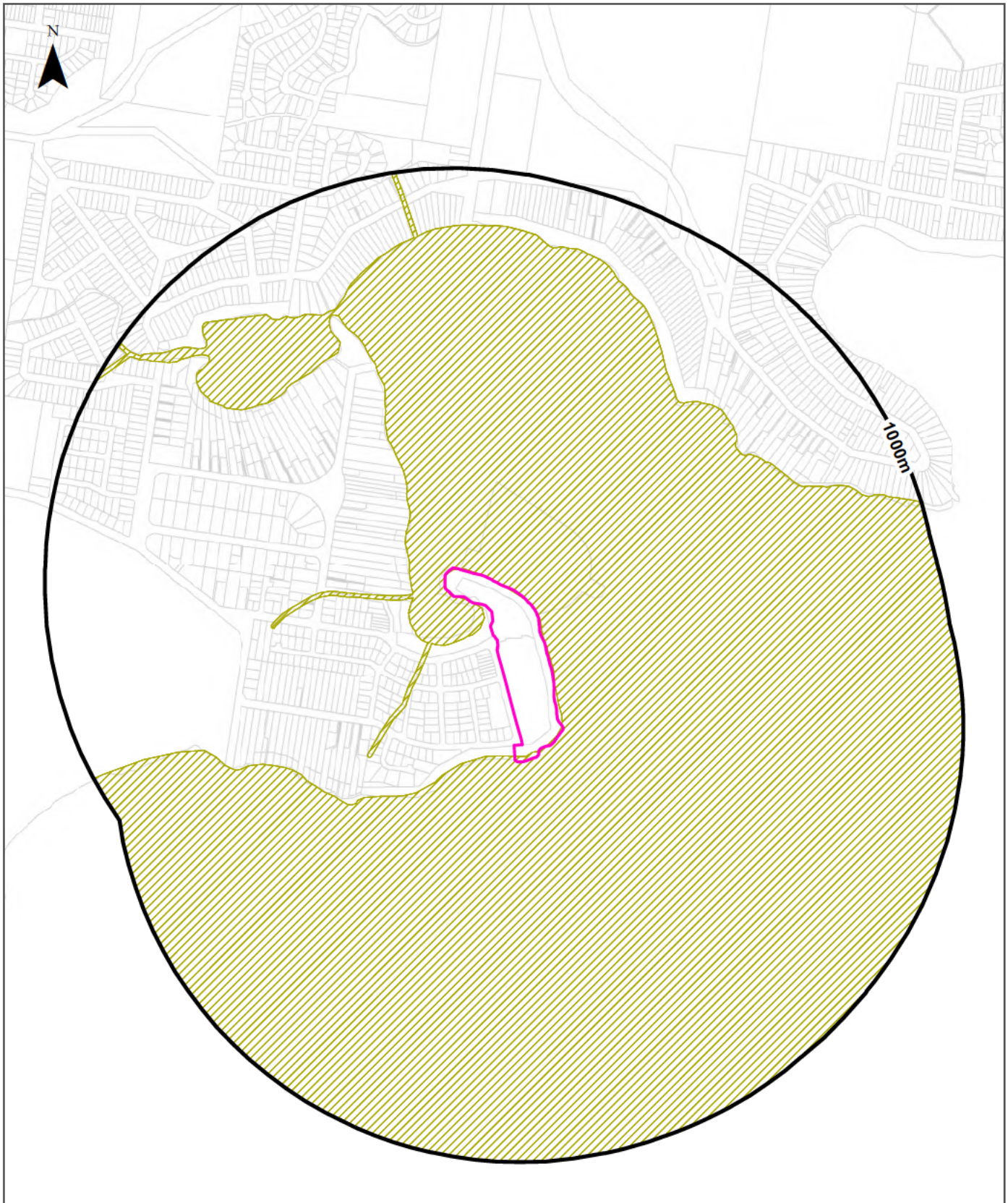
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
20631	TRINITY POINT MARINA PTY LIMITED		71 Trinity Point Drive	MORISSET PARK, NSW 2264	Boat mooring and storage	Premise Match	0m	On-site
6332	LAKE MACQUARIE CITY COUNCIL	-	-	SPEERS POINT	Other activities	Network of Features	0m	On-site
1770	GREAT SOUTHERN ENERGY PTY LTD	CHAIN VALLEY COLLIERY	CONSTRUCTION ROAD	CHAIN VALLEY BAY	Mining for coal	Premise Match	0m	South East
1770	GREAT SOUTHERN ENERGY PTY LTD	CHAIN VALLEY COLLIERY	CONSTRUCTION ROAD	CHAIN VALLEY BAY	Coal works	Premise Match	0m	South East
191	GREAT SOUTHERN ENERGY PTY LTD	MANNERING COLLIERY	RUTLEYS ROAD	DOYALSON	Coal works	Premise Match	50m	South
191	GREAT SOUTHERN ENERGY PTY LTD	MANNERING COLLIERY	RUTLEYS ROAD	DOYALSON	Mining for coal	Premise Match	50m	South

POEO Licence Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary
- Delicensed Activities still Regulated by EPA
- Former Licensed/Regulated Activities (revoked or surrendered)
- Surrendered Licences related to Other Activities on Waterways incl. Application of Herbicides

Scale:	Property Boundary Data Source:	Coordinate System:	Date: 29 October 2021
0 100 200 00 600 Meters	© Department Finance, Services & Innovation 2021	GDA 1994 MGA Zone 56	

EPA Activities

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

Delicensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site

Former Licensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Historical Business Directories

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Universal Business Directory records from years 1991, 1982, 1970, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Business Directory Records 1950-1991
Road or Area Matches

Universal Business Directory records from years 1991, 1982, 1970, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer					

Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Historical Business Directories

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Dry Cleaners, Motor Garages & Service Stations Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Dry Cleaners, Motor Garages & Service Stations Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer					

Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Aerial Imagery 2021

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 29 October 2021
0 40 80 120 160 Meters	© Aerometrex Pty Ltd	GDA 1994 MGA Zone 56	

Aerial Imagery 2016

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 29 October 2021
0 40 80 120 160 Meters	© Aerometrex Pty Ltd	GDA 1994 MGA Zone 56	

Aerial Imagery 2010

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Aerial Imagery 2001

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



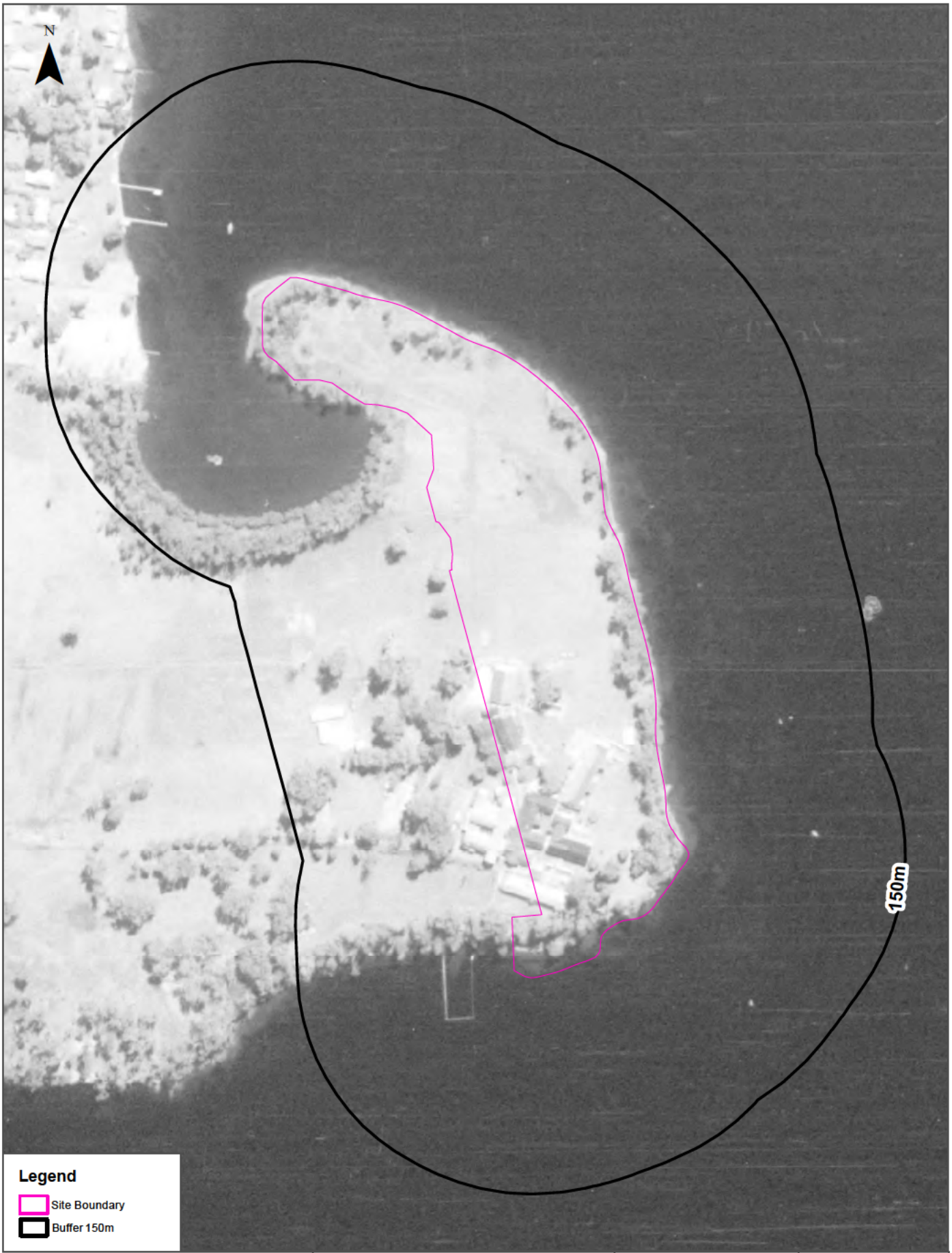
Aerial Imagery 1994

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Aerial Imagery 1984

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Aerial Imagery 1976

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



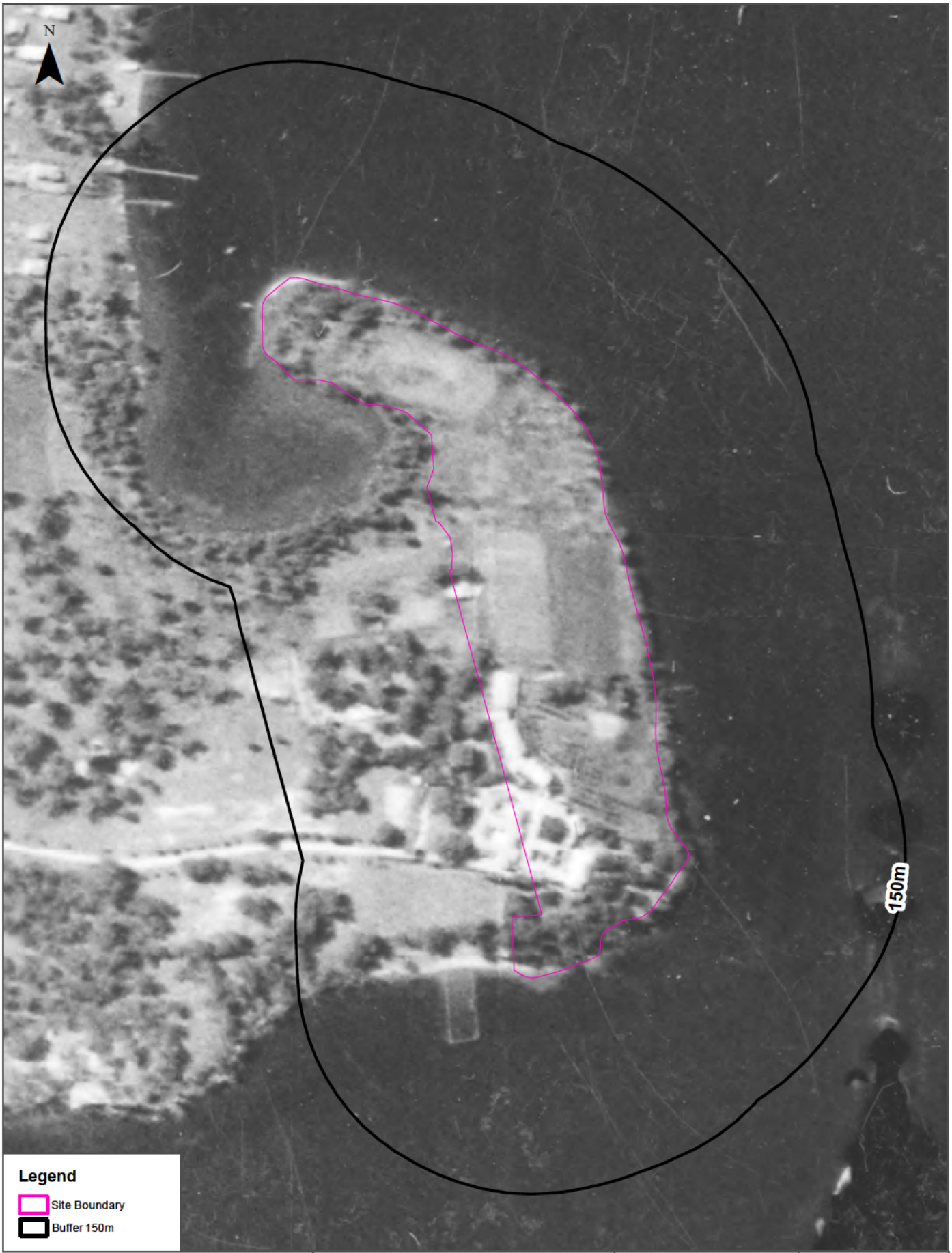
Aerial Imagery 1965

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Aerial Imagery 1954

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Data Source Aerial Imagery: ©2021 Geoscience Australia

Coordinate System:
GDA 1994 MGA Zone 56

Date: 28 October 2021

Topographic Map 2015

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Historical Map 1976

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Historical Map c.1942

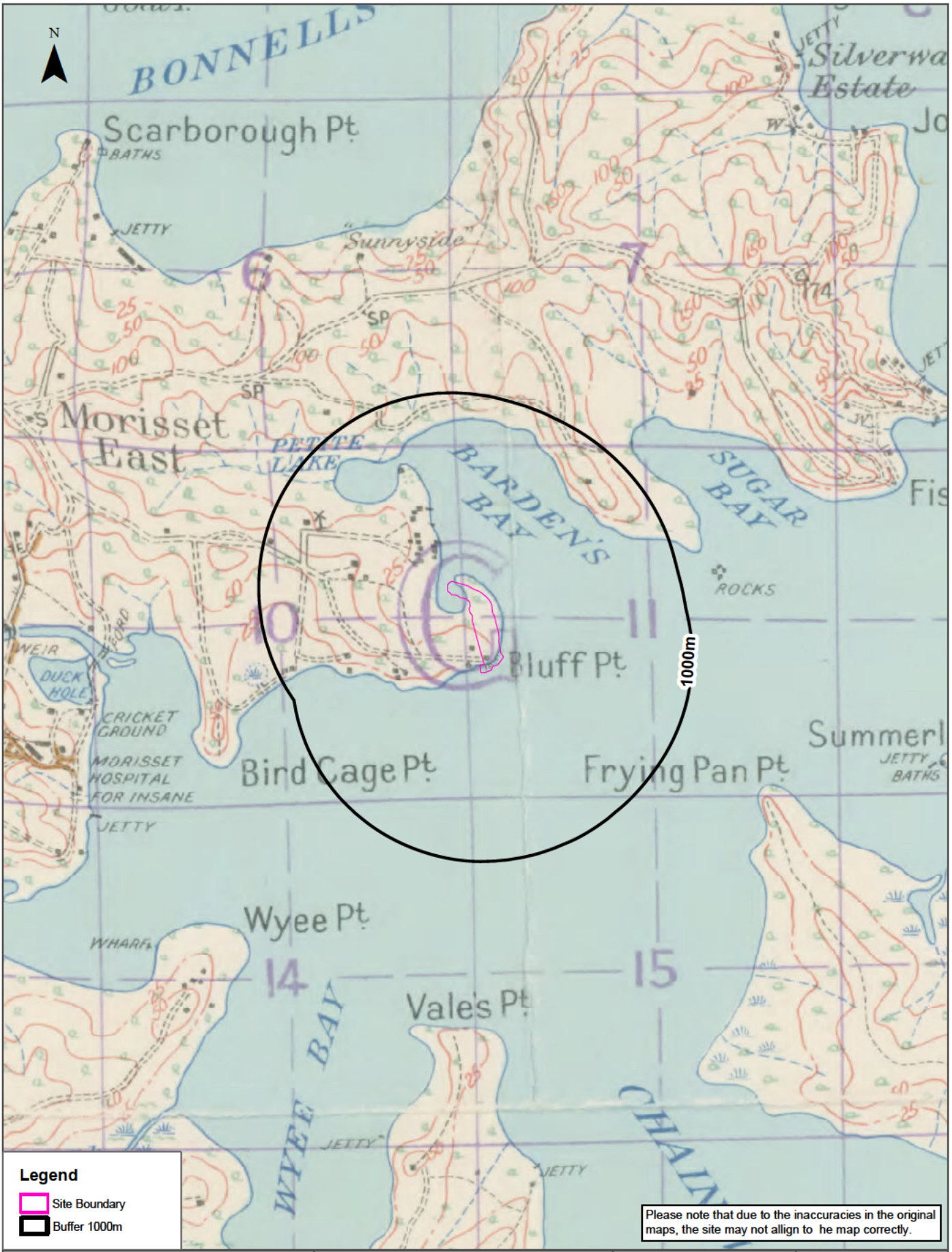
49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Scale: 0 320 640 960 1,280 Meters	Data Sources: Australia 1 63360 Produced by Australian Section Imperial General Staff	Coordinate System: GDA 1994 MGA Zone 56	Date: 29 October 2021

Historical Map c.1928

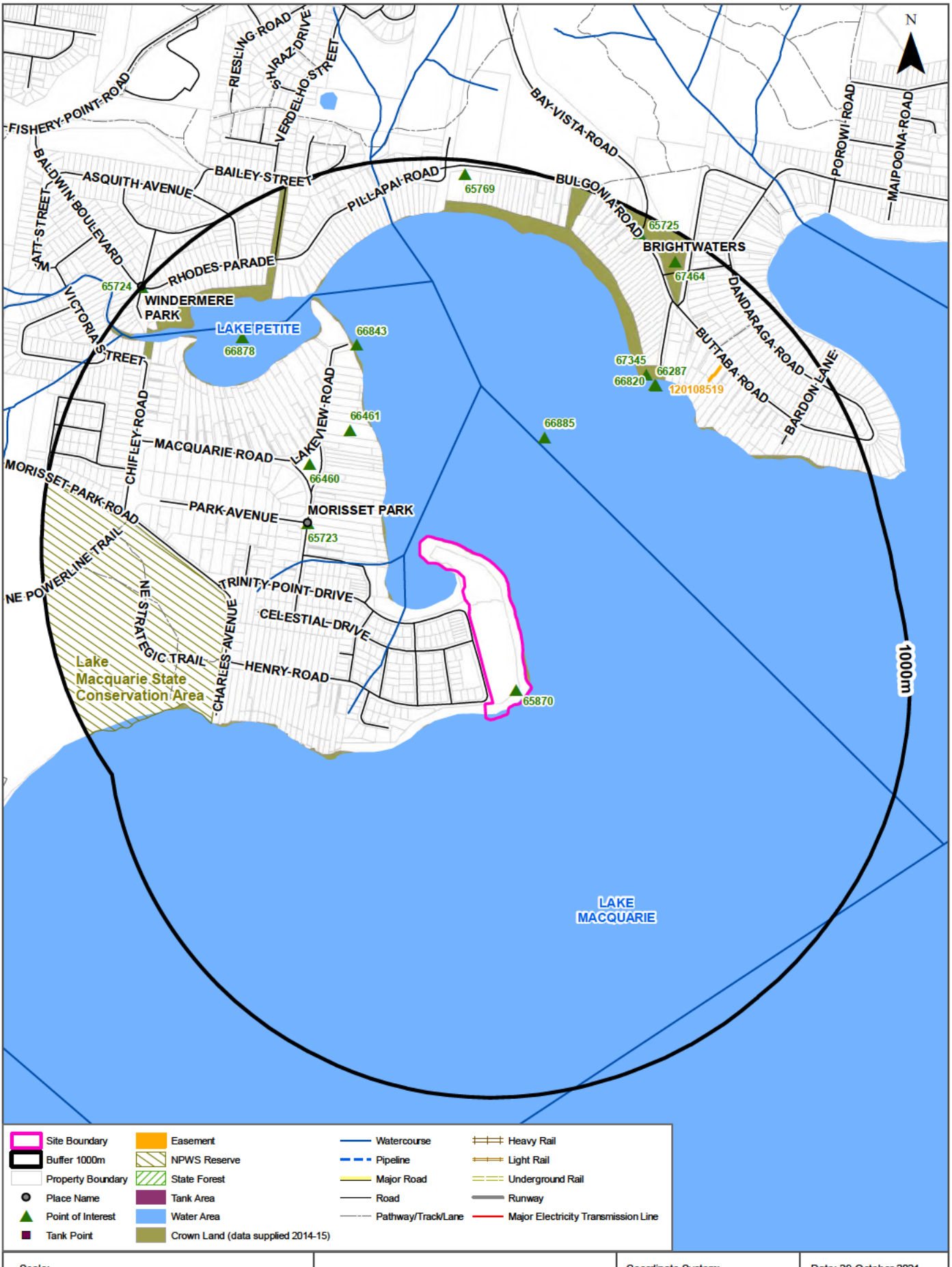
49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Scale:	Data Sources: Australia 1 63360 Produced by Australian Section Imperial General Staff	Coordinate System: GDA 1994 MGA Zone 56	Date: 29 October 2021

Topographic Features

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Topographic Features

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
65870	Headland	BLUFF POINT	0m	On-site
65723	Suburb	MORISSET PARK	302m	North West
66461	Retirement Village	AMBLESIDE RETIREMENT VILLAGE	347m	North West
66885	Bay Like	BARDENS BAY	354m	North
66460	Park	IRENE AUSTON RESERVE	358m	North West
66843	Boat Ramp	Boat Ramp	540m	North West
66820	Swimming Pool	BATHS	639m	North East
66287	Wharf	Wharf	639m	North East
67345	Picnic Area	Picnic Area	644m	North East
66878	Natural Waterbody	LAKE PETITE	718m	North West
67464	Park	BRIGHTWATERS HALL RESERVE	931m	North East
65725	Suburb	BRIGHTWATERS	949m	North
65769	Primary School	BRIGHTWATERS CHRISTIAN COLLEGE	963m	North
65724	Suburb	WINDERMERE PARK	999m	North West

Topographic Data Source: © Land and Property Information (2015)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Topographic Features

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks Data Source: © Land and Property Information (2015)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Major Easements

What Major Easements exist within the dataset buffer?
Note. Easements provided by LPI are not at the detail of local governments. They are limited to major easements such as Right of Carriageway, Electrical Lines (66kVa etc.), Easement to drain water & Significant subterranean pipelines (gas, water etc.).

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120108519	Primary	Undefined		745m	Nor h East

Easements Data Source: © Land and Property Information (2015)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Topographic Features

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

State Forest

What State Forest exist within the dataset buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N0629	STATE CONSERVATION AREA	Lake Macquarie State Conservation Area	18/04/1997	524m	West

NPWS Data Source: © NSW Department of Finance, Services & Innovation (2018)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Elevation Contours (m AHD)

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

- Elevation Contour (m AHD)
- Site Boundary
- Buffer 1000m
- Property Boundary

Accuracy & Currency: This contour data can be up to 0.4 of the contour interval out in height and must therefore not be used for any design or engineering works, but only as a general guide to topography. Gaps may occur along contour lines due to vertical topography, obscured topography in the source photography such as buildings, dense vegetation or dead ground, or the fact that original buildings have been replaced in the intervening thirty years since the original contour capture.

Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 29 October 2021
0 100 200 400 Meters	© Department Finance, Services & Innovation 2021	GDA 1994 MGA Zone 56	

Hydrogeology & Groundwater

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive aquifers of low to moderate productivity	32m	North West

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

Prohibition Area No.	Prohibition	Distance	Direction
N/A	No records in buffer		

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 Data Source : NSW Department of Primary Industries

Groundwater Boreholes

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Hydrogeology & Groundwater

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW202027	20BL171570	Bore	Private	Test Bore	Test Bore		16/10/2007	3.70	3.70		0.80			0m	On-site
GW202028	20BL171570	Bore	Private	Test Bore	Test Bore		28/09/2007	5.50	5.50		1.60			0m	On-site
GW202098	20BL171570	Bore	Private	Test Bore	Augmentation, Test Bore		08/10/2007	4.00	4.00		0.80			0m	On-site
GW202246	20BL171570	Bore	Private	Test Bore	Test Bore		16/10/2007	3.50	3.50		1.20			0m	On-site
GW202247	20BL171570	Bore	Private	Test Bore	Test Bore		28/09/2007	5.00	5.00		3.60			0m	On-site
GW202248	20BL171570	Bore	Private	Test Bore	Test Bore		28/09/2007	5.00	5.00					0m	On-site
GW202372	20BL168053	Bore	Private	Test Bore	Test Bore		26/09/2007	4.00	4.00		1.20			0m	On-site

Borehole Data Source : NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation for all bores prefixed with GW. All other bores © Commonwealth of Australia (Bureau of Meteorology) 2015. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Hydrogeology & Groundwater

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Driller's Logs

Drill log data relevant to the boreholes within the dataset buffer:

Groundwater No	Drillers Log	Distance	Direction
No related drill log data			

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Geology

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary
- Fault
- Dyke
- Fold
- Marker Bed
- Trend Line
- Metamorphic Boundary
- Shear Zone
- Structure
- Thrust Fault
- Lineament

Scale: 0 100 200 00 600 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 29 October 2021

Geology

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Geological Units 1:250,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dist	Dir
Rn	Sandstone, interbedded sandstone and siltstone, claystone. conglomerate and sandstone (Widden Brook conglomerate)	Narrabeen Group	Narrabeen Group	Clifton Subgroup	Mesozoic	0m	On-site

Geological Structures 1:250,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Distance	Direction
N/A	No records in buffer				

Geological Data Source : NSW Department of Industry, Resources & Energy
© State of New South Wales through the NSW Department of Industry, Resources & Energy

Naturally Occurring Asbestos Potential

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Naturally Occurring Asbestos Potential

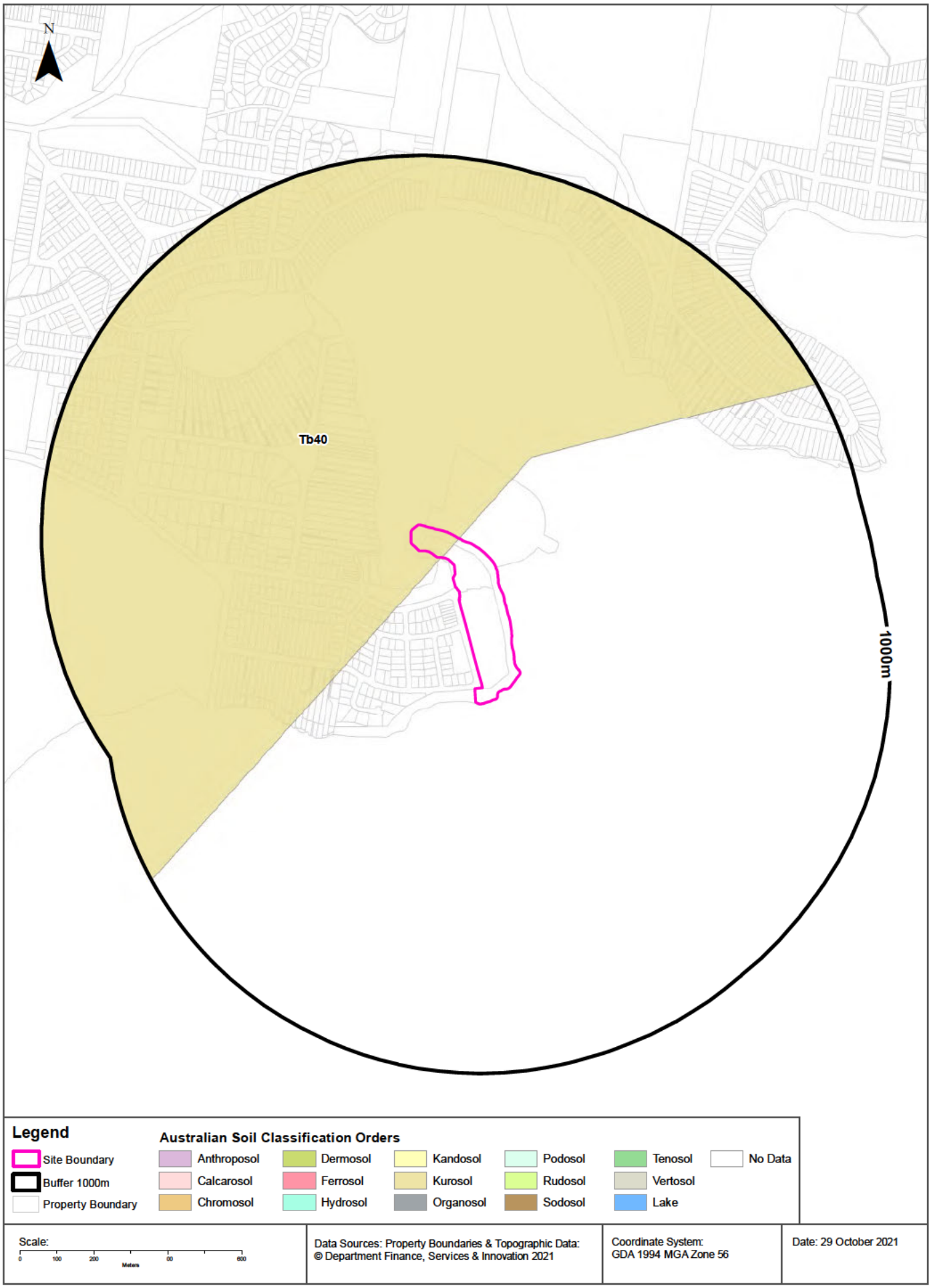
Naturally Occurring Asbestos Potential within the dataset buffer:

Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

Naturally Occurring Asbestos Potential Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Atlas of Australian Soils

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Soils

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Atlas of Australian Soils

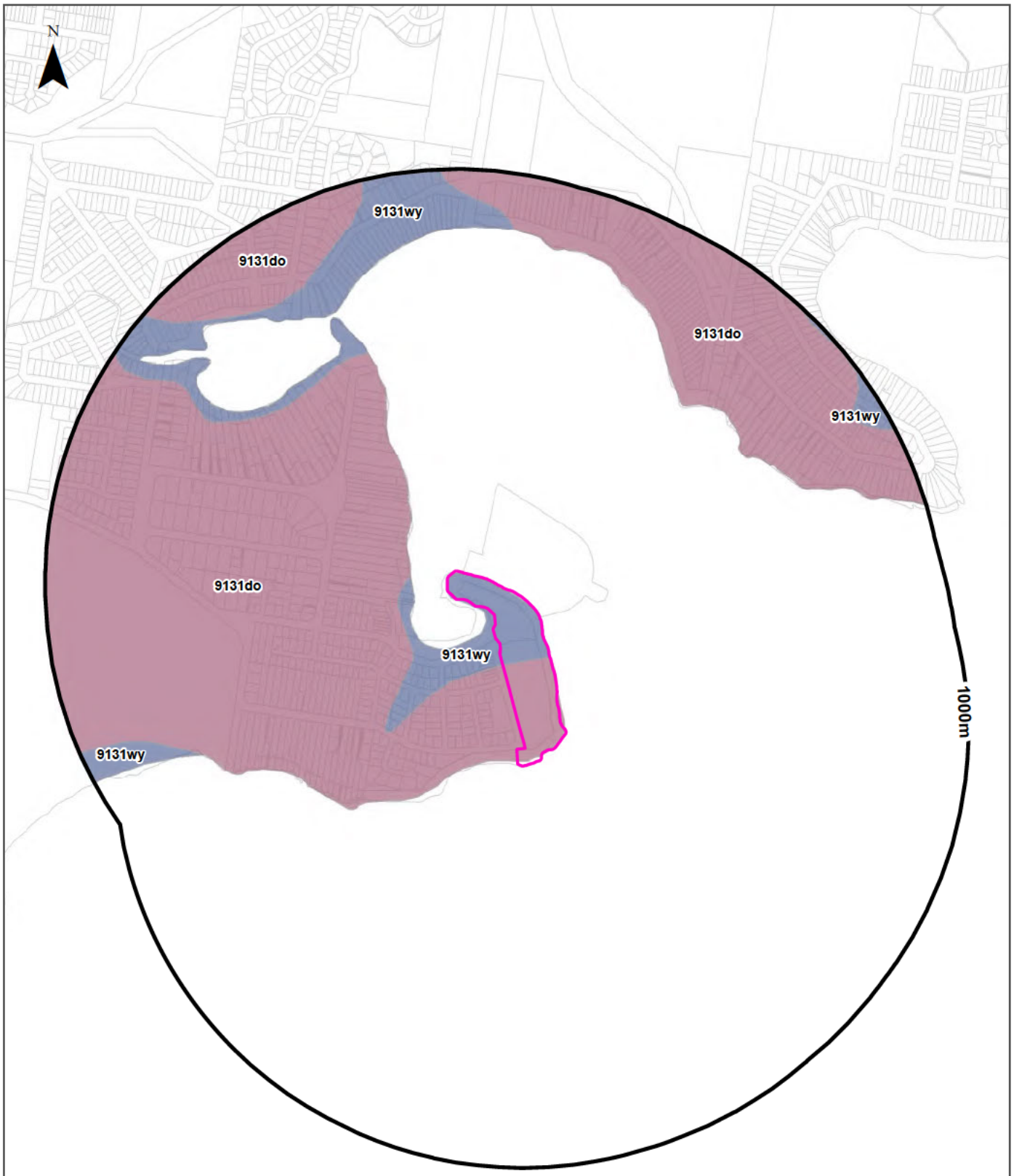
Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Tb40	Kurosol	Undulating to hilly areas with some steep slopes and cliffs, rock outcrops, and narrow terraced valleys: chief soils are hard acidic yellow mottled soils (Dy3.41) with some shallow soils such as (Um4.1) and (Uc4.1) on the steeper slopes. Associated are: (Gn2.2) soils and (Dd1) soils, both of which occur on slopes; undescribed soils in the valleys; and some (Dy5) and (Uc1 .2) soils along the coast. As mapped, small areas of units Gb10 and Cb28 are included.	0m	On-site

Atlas of Australian Soils Data Source: CSIRO
Creative Commons 4.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/4.0/au/deed.en

Soil Landscapes of Central and Eastern NSW

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary

Scale:	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021	Coordinate System: GDA 1994 MGA Zone 56	Date: 29 October 2021

Soils

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Soil Landscapes of Central and Eastern NSW

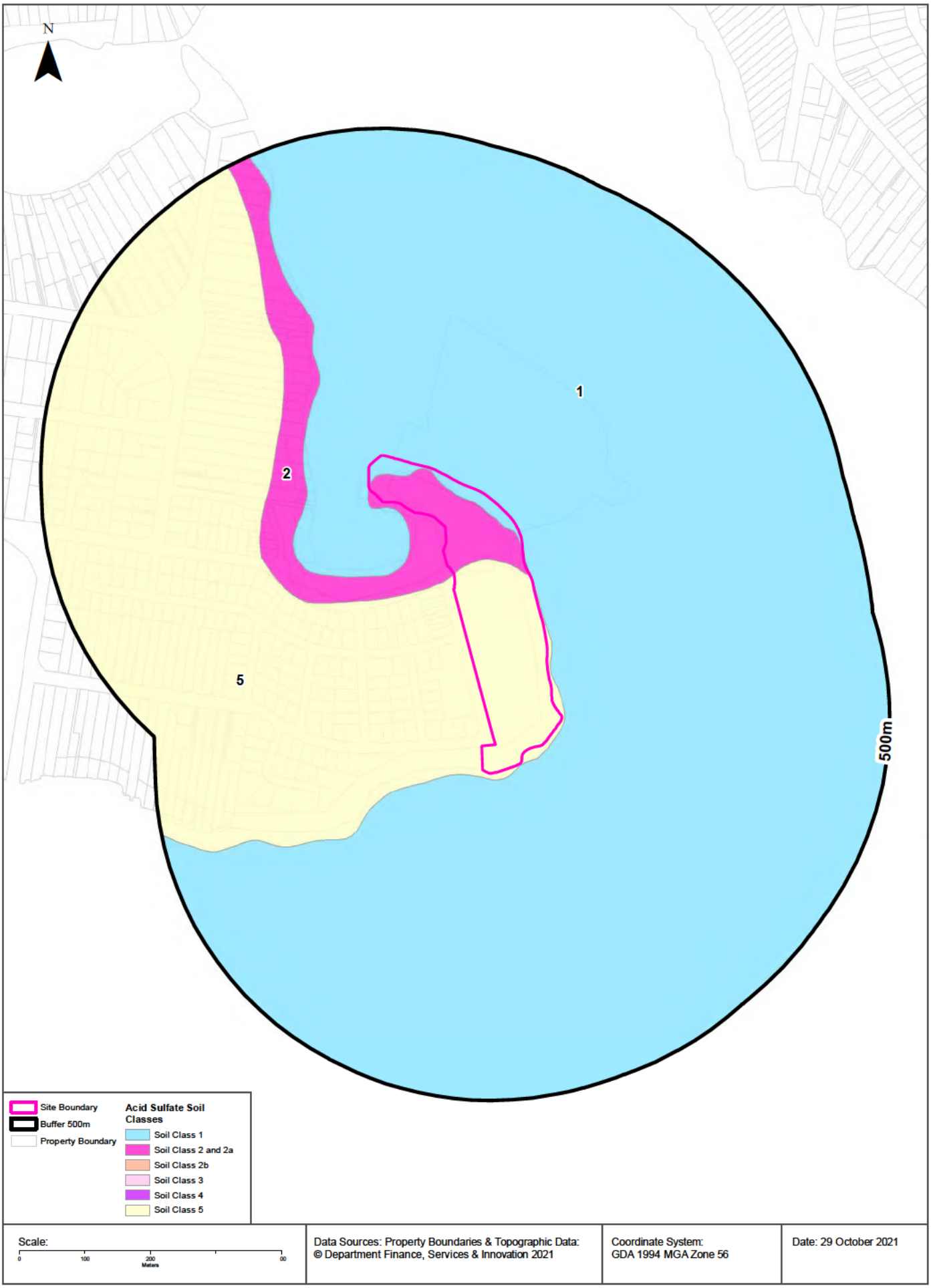
Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
9131wy	Wyong	0m	On-site
9131do	Doyalson	0m	On-site

Soil Landscapes of Central and Eastern NSW: NSW Department of Planning, Industry and Environment
Creative Commons 4.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/4.0/au/deed.en

Acid Sulfate Soils

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Acid Sulfate Soils

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Environmental Planning Instrument - Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	EPI Name
1	Any works present an environmental risk	Lake Macquarie Local Environmental Plan 2014

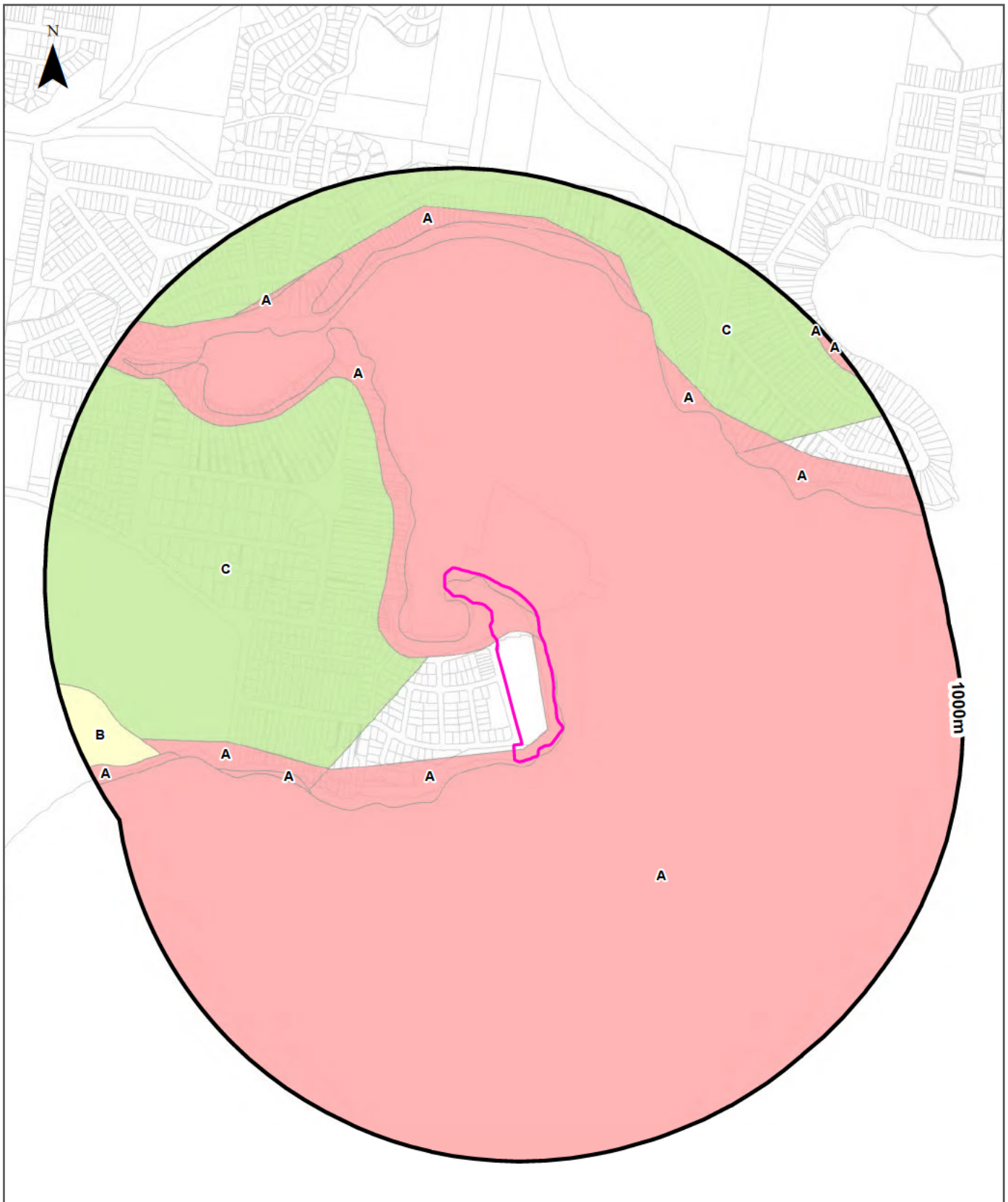
If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	EPI Name	Distance	Direction
N/A				

NSW Crown Copyright - Planning and Environment
Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

Atlas of Australian Acid Sulfate Soils

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

Site Boundary

Buffer 1000m

Property Boundary

Probability of occurrence of Acid Sulfate Soils

A. High (>70%)

B. Low (6-70%)

C. Extremely Low (1-5%)

D. No Chance (0%)

No Data

Scale: 0 100 200 00 600 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 29October 2021

Acid Sulfate Soils

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance	Direction
A	High Probability of occurrence. >70% chance of occurrence.	0m	On-site
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	142m	North West
B	Low Probability of occurrence. 6-70% chance of occurrence.	821m	West

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Dryland Salinity

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

Is there Dryland Salinity - National Assessment data within the dataset buffer?

No

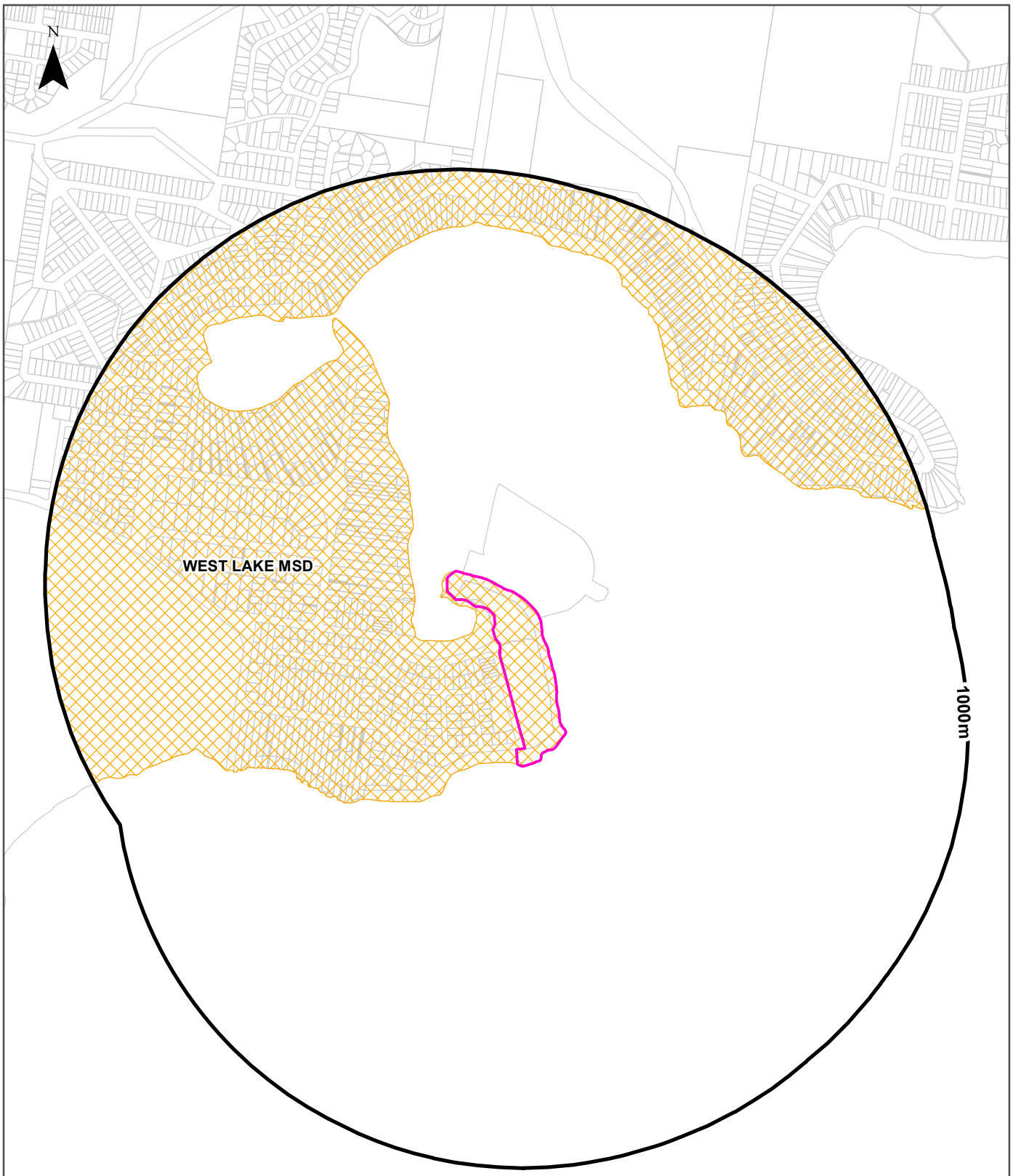
What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A		

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Mining Subsidence Districts

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

- Site Boundary
- Property Boundary
- Buffer 1000m
- Mining Subsidence District

Scale:	Data Sources: Property Boundaries © Department Finance, Services & Innovation 2021	Coordinate System: GDA 1994 MGA Zone 56	Date: 29 October 2021

Mining

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Mining Subsidence Districts

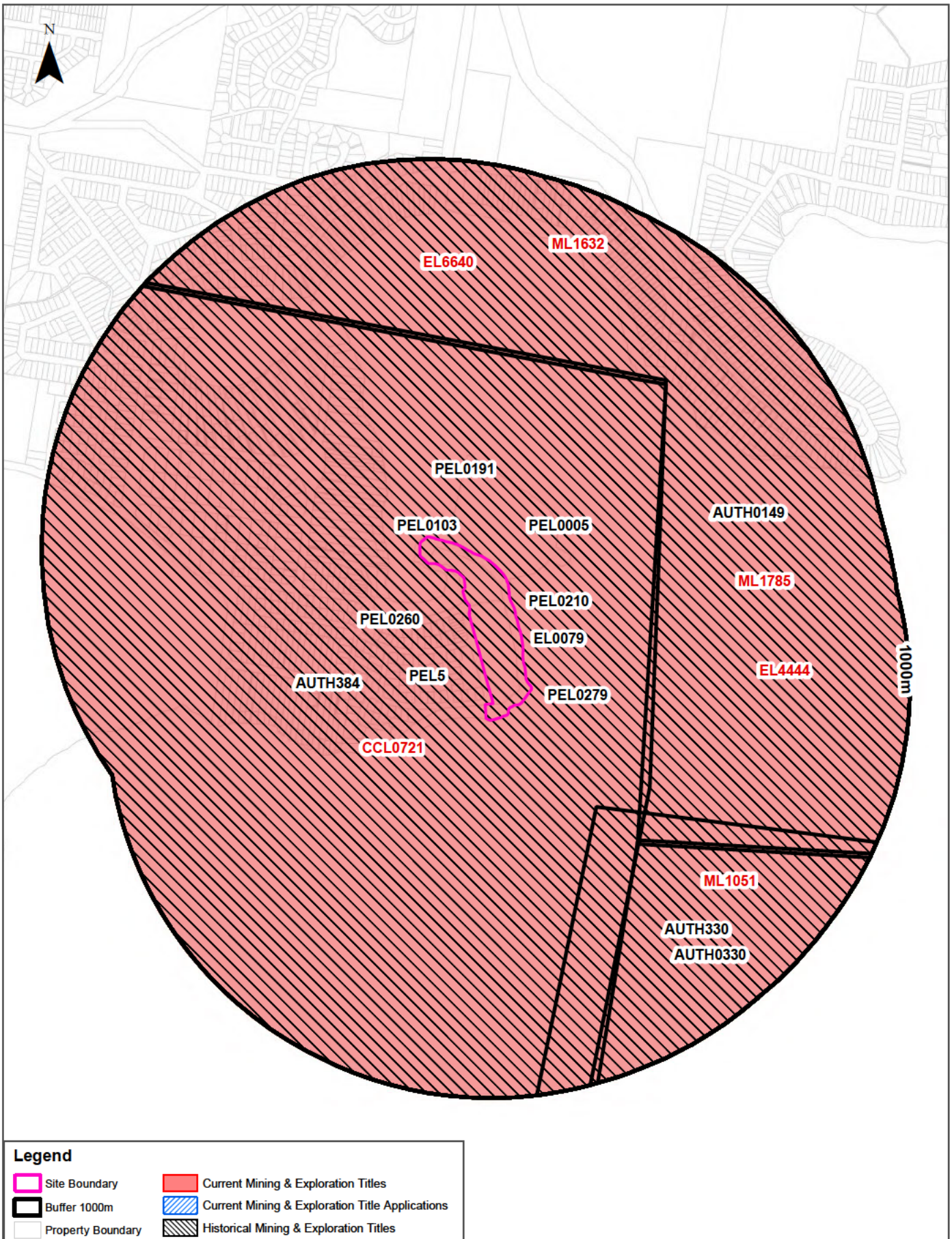
Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
WEST LAKE	0m	On-site

Mining Subsidence District Data Source: © Land and Property Information (2016)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Mining & Exploration Titles

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Mining

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist	Dir
CCL0721	CENTENNIAL MANNERING PTY LTD	28/06/1989	29/07/2026	23 Dec 2008	MINING	COAL	Coal, Petroleum	0m	On-site
EL4444	CENTENNIAL MYUNA PTY LIMITED	23/10/1992	23/10/2017	Renewal Sought	EXPLORING	COAL	Group 9	322m	East
ML1785	GREAT SOUTHERN ENERGY PTY LTD	28/04/2021	13/10/2022	28 Apr 2021	MINING	COAL	Coal, Petroleum	322m	North East
ML1051	GREAT SOUTHERN ENERGY PTY LTD	07/07/1941	07/07/2022	27 Sep 2007	MINING	COAL	Coal, Petroleum	406m	South East
EL6640	CENTENNIAL MYUNA PTY LIMITED	23/04/2008	23/10/2017	Renewal Sought	EXPLORING	COAL	Group 9	523m	North
ML1632	CENTENNIAL MYUNA PTY LIMITED	13/04/2013	13/10/2022	28 Apr 2021	MINING	COAL	Coal, Petroleum	676m	North

Current Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer						

Current Mining & Exploration Title Applications Data Source: © State of New South Wales through NSW Department of Industry

Mining

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	9/09/1981	8/03/1993	PETROLEUM	Petroleum	0m	On-site
EL0079	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	01 Feb 1967	01 Feb 1968	MINERALS		0m	On-site
PEL5	AGL UPSTREAM INVESTMENTS PTY LIMITED			MINERALS		0m	On-site
AUTH384	CENTENNIAL MANNERING PTY LTD			MINERALS		0m	On-site
PEL0005	AGL UPSTREAM INVESTMENTS PTY LIMITED	11/11/1993	4/03/2015	PETROLEUM	Petroleum	0m	On-site
PEL0191	NORTHWEST OIL AND MINERALS CO NL			PETROLEUM	Petroleum	0m	On-site
PEL0103	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	On-site
PEL0279	THE ELECTRICITY COMMISSION OF NSW (TRADING AS PACIFIC POWER)	17/04/1990	11/11/1993	PETROLEUM	Petroleum	0m	On-site
AUTH0149	THE ELECTRICITY COMMISSION OF NSW (TRADING AS PACIFIC POWER)	03 Feb 1979	14 Feb 1992	COAL	Coal	305m	North East
AUTH330	CATHERINE HILL RESOURCES PTY LIMITED,LAKECOAL PTY LTD			MINERALS		339m	South East
AUTH0330	CATHERINE HILL RESOURCES PTY LIMITED,LAKECOAL PTY LTD	25 Jul 1984	25 Jul 1999	COAL	Coal	476m	South East

Historical Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

State Environmental Planning Policy

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

State Significant Precincts

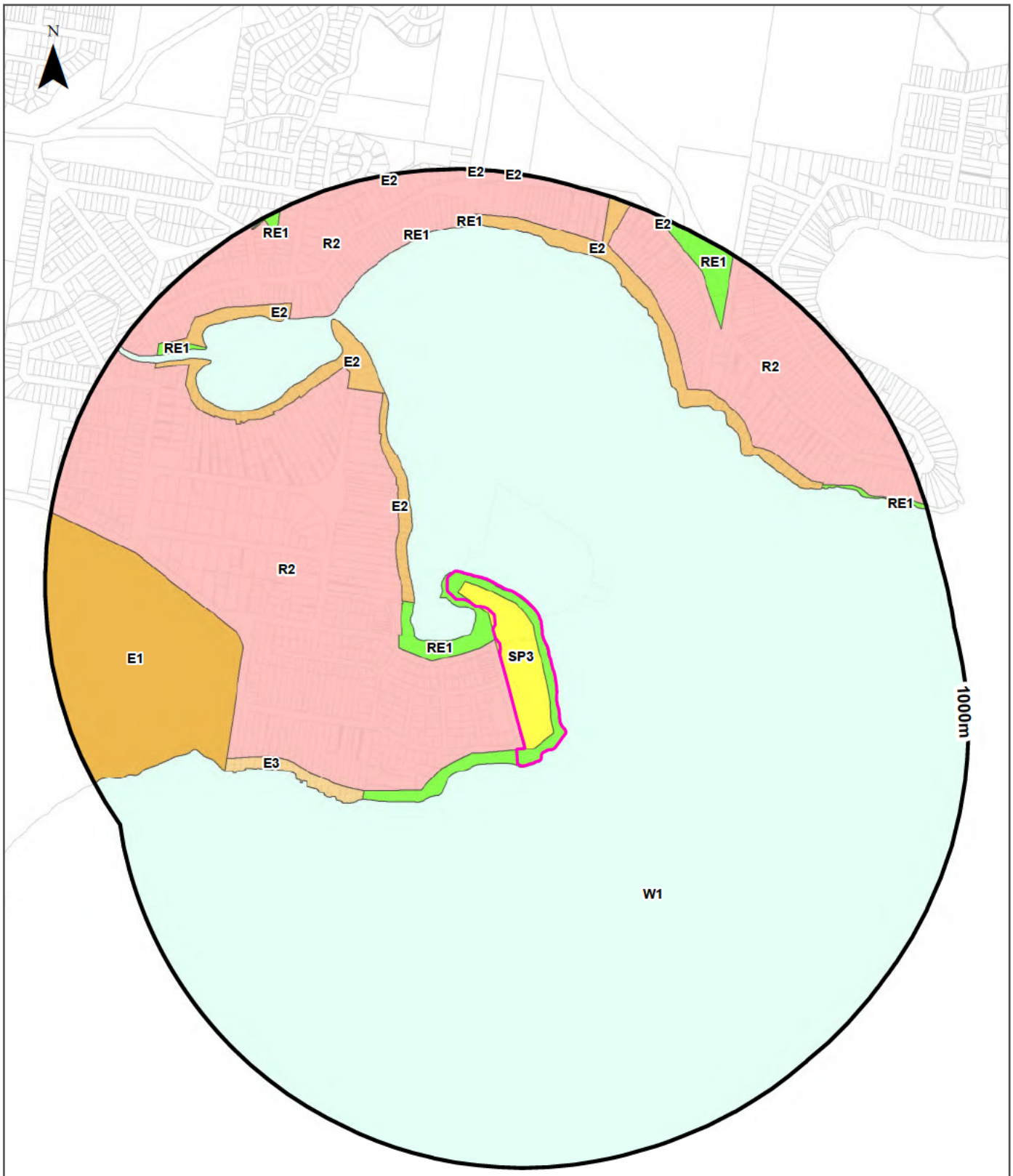
What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
N/A	No records in buffer							

State Environment Planning Policy Data Source: NSW Crown Copyright - Planning & Environment
Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

EPI Planning Zones

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary

Scale:	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021 Planning: NSW Crown Copyright - Planning & Environment	Coordinate System: GDA 1994 MGA Zone 56	Date: 29 October 2021

Environmental Planning Instrument

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recrea ion		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		0m	On-site
SP3	Tourist		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		0m	On-site
W1	Natural Waterways		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		0m	South East
R2	Low Density Residential		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		0m	North West
E2	Environmental Conservation		Lake Macquarie Local Environmental Plan 2014	08/05/2015	08/05/2015	16/07/2021	Amendment No 5	82m	North West
E3	Environmental Management		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		385m	South West
E2	Environmental Conservation		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		474m	North West
E1	National Parks and Nature Reserves		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		524m	West
E2	Environmental Conservation		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		619m	North
E2	Environmental Conservation		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		751m	North West
RE1	Public Recrea ion		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		771m	North East
RE1	Public Recrea ion		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		826m	North West
RE1	Public Recrea ion		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		831m	North
RE1	Public Recrea ion		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		833m	North East
RE1	Public Recrea ion		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		857m	North
RE1	Public Recrea ion		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		947m	North West
E2	Environmental Conservation		Lake Macquarie Local Environmental Plan 2014	12/09/2014	10/10/2014	16/07/2021		983m	North

Environmental Planning Instrument Data Source: NSW Crown Copyright - Planning & Environment
Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

Heritage

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Commonwealth Heritage List

What are the Commonwealth Heritage List Items located within the dataset buffer?

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
Creative Commons 3.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/3.0/au/deed.en

National Heritage List

What are the National Heritage List Items located within the dataset buffer?
Note. Please click on Place Id to activate a hyperlink to online website.

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
Creative Commons 3.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/3.0/au/deed.en

State Heritage Register - Curtilages

What are the State Heritage Register Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage
Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

Environmental Planning Instrument - Heritage

What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
N/A	No records in buffer								

Heritage Data Source: NSW Crown Copyright - Planning & Environment
Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

Natural Hazards - Bush Fire Prone Land

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Scale:

Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2021. Property Boundaries: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 29 October 2021

Natural Hazards

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Bush Fire Prone Land

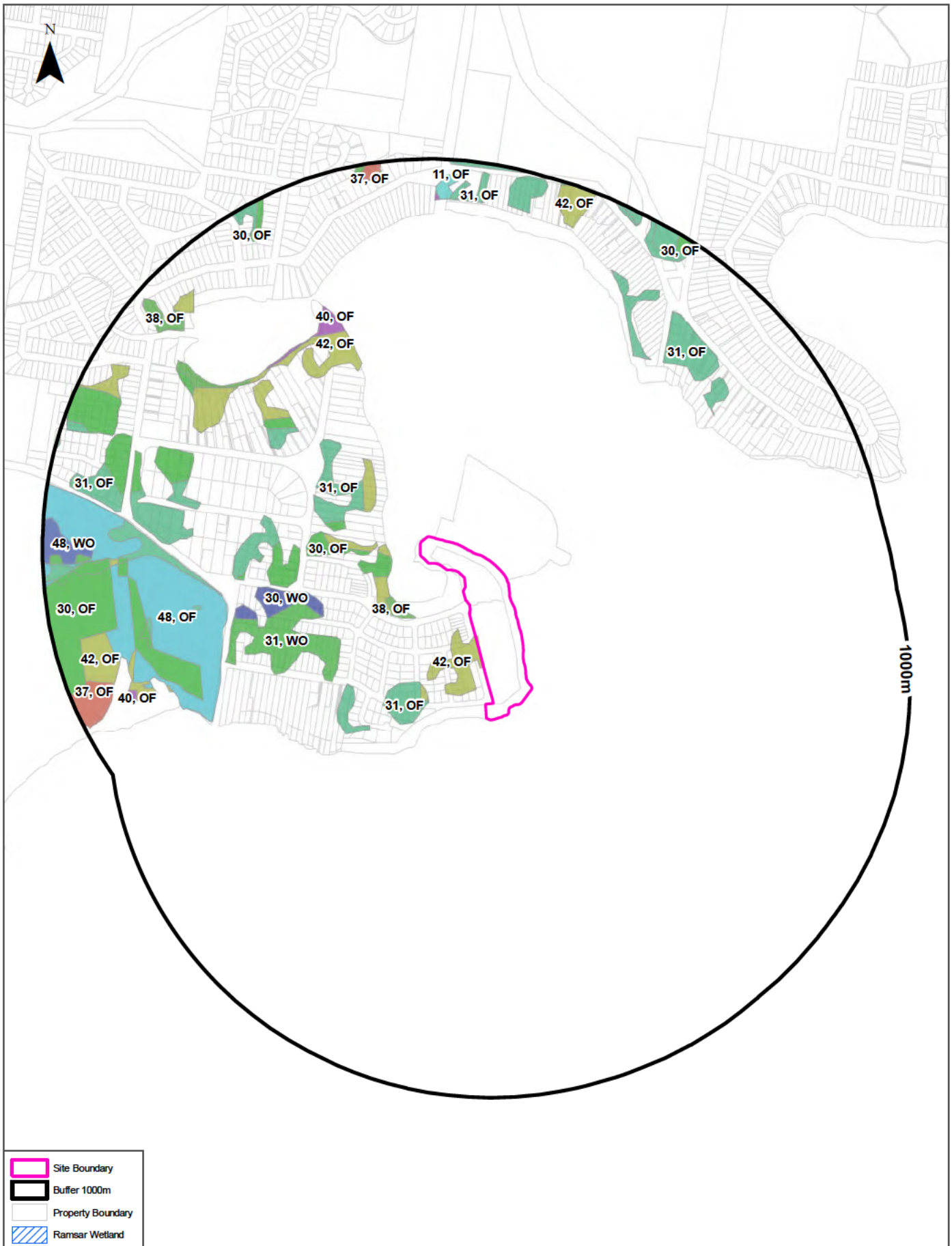
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	417m	West
Vegetation Category 1	517m	West
Vegetation Category 3	818m	West

NSW Bush Fire Prone Land - © NSW Rural Fire Service under Creative Commons 4.0 International Licence

Ecological Constraints - Vegetation & Ramsar Wetlands

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Ecological Constraints

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Lower Hunter and Central Coast Regional Vegetation Survey

What vegetation from the Lower Hunter and Central Coast Regional Survey exists within the dataset buffer?

Map Id	Unit Desc	Canopy Code	Canopy Cover	Species	Distance	Direction
42	Riparian Melaleuca Swamp Woodland	OF	Mid Dense (Open Forest) 50-<100% cover	Melaleuca sieberi / E. robusta	0m	On-site
30	Coastal Plains Smooth-barked Apple Woodland	OF	Mid Dense (Open Forest) 50-<100% cover	A. costata / C. gummifera / E. capitellata / E. umbra	75m	North West
38	Redgum Rough Barked Apple Forest	OF	Mid Dense (Open Forest) 50-<100% cover	E. tereticronis / A. floribunda / E. resinifera subsp resinifera	127m	West
31	Coastal Plains Scribbly Gum Woodland	OF	Mid Dense (Open Forest) 50-<100% cover	E. haemostoma / C. gummifera / E. capitellata / A. inopina	147m	South West
30	Coastal Plains Smooth-barked Apple Woodland	WO	Sparse (Woodland) 20-<50% cover	A. costata / C. gummifera / E. capitellata / E. umbra	288m	West
31	Coastal Plains Scribbly Gum Woodland	WO	Sparse (Woodland) 20-<50% cover	E. haemostoma / C. gummifera / E. capitellata / A. inopina	305m	West
48	Coastal Clay Heath	OF	Mid Dense (Open Forest) 50-<100% cover	Allocasuarina distyla /Hakea dactyloides / Melaleuca nodosa	526m	West
40	Swamp Oak Rushland Forest	OF	Mid Dense (Open Forest) 50-<100% cover	C. glauca / Melaleuca ericifolia / Baumea juncea	586m	North West
48	Coastal Clay Heath	WO	Sparse (Woodland) 20-<50% cover	Allocasuarina distyla /Hakea dactyloides / Melaleuca nodosa	862m	West
37	Swamp Mahogany - Paperbark Forest	OF	Mid Dense (Open Forest) 50-<100% cover	Melaleuca quinquinervia / E. robusta / C. glauca	875m	West
11	Coastal Sheltered Apple - Peppermint Forest	OF	Mid Dense (Open Forest) 50-<100% cover	A. costata / E. piperita	895m	North

Lower Hunter and Central Coast Regional Vegetation Survey: NSW Office of Environment and Heritage

Ramsar Wetlands

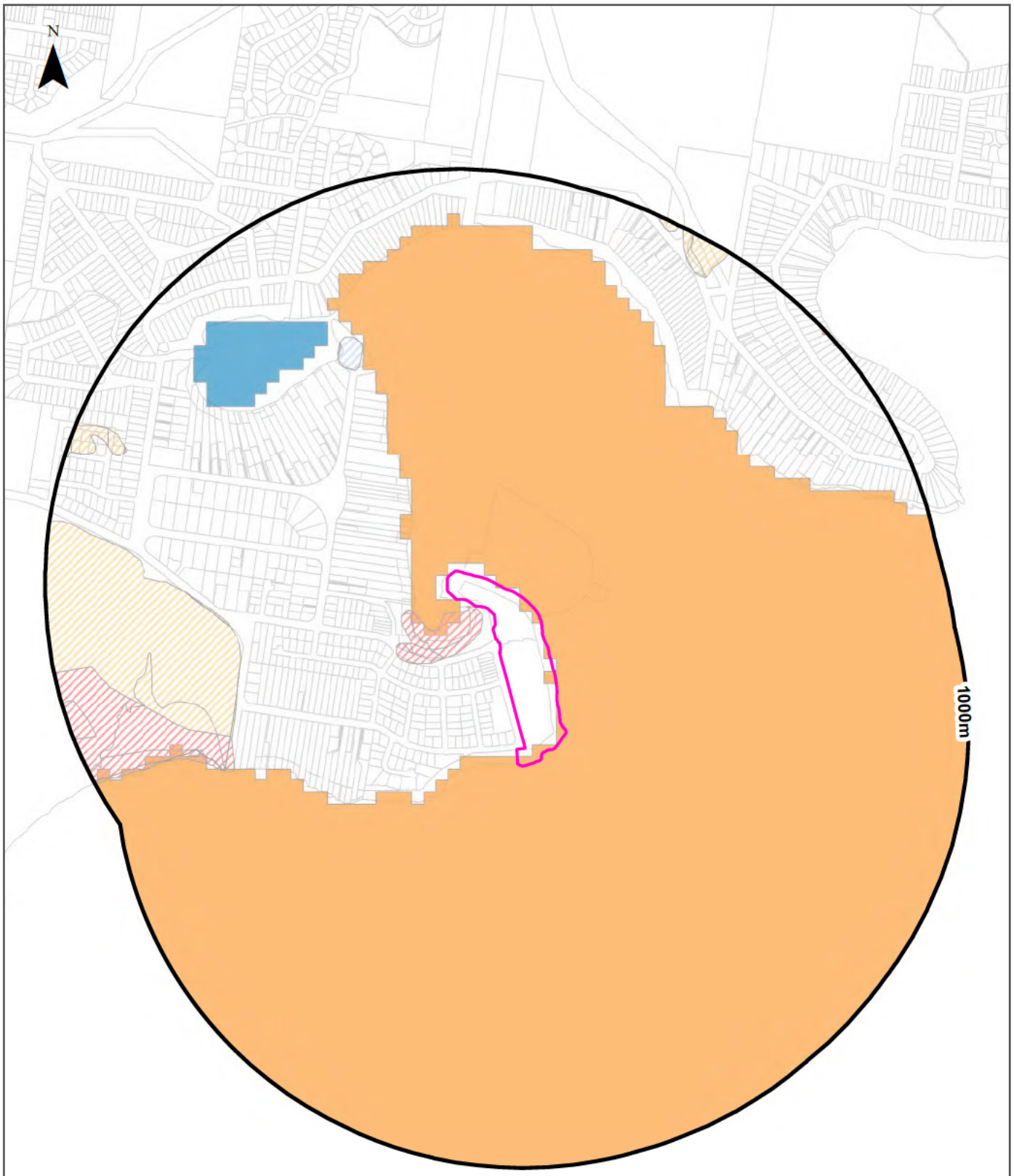
What Ramsar Wetland areas exist within the dataset buffer?

Map Id	Ramsar Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

Ramsar Wetlands Data Source: © Commonwealth of Australia - Department of Agriculture, Water and the Environment

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 29 October 2021

Ecological Constraints

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

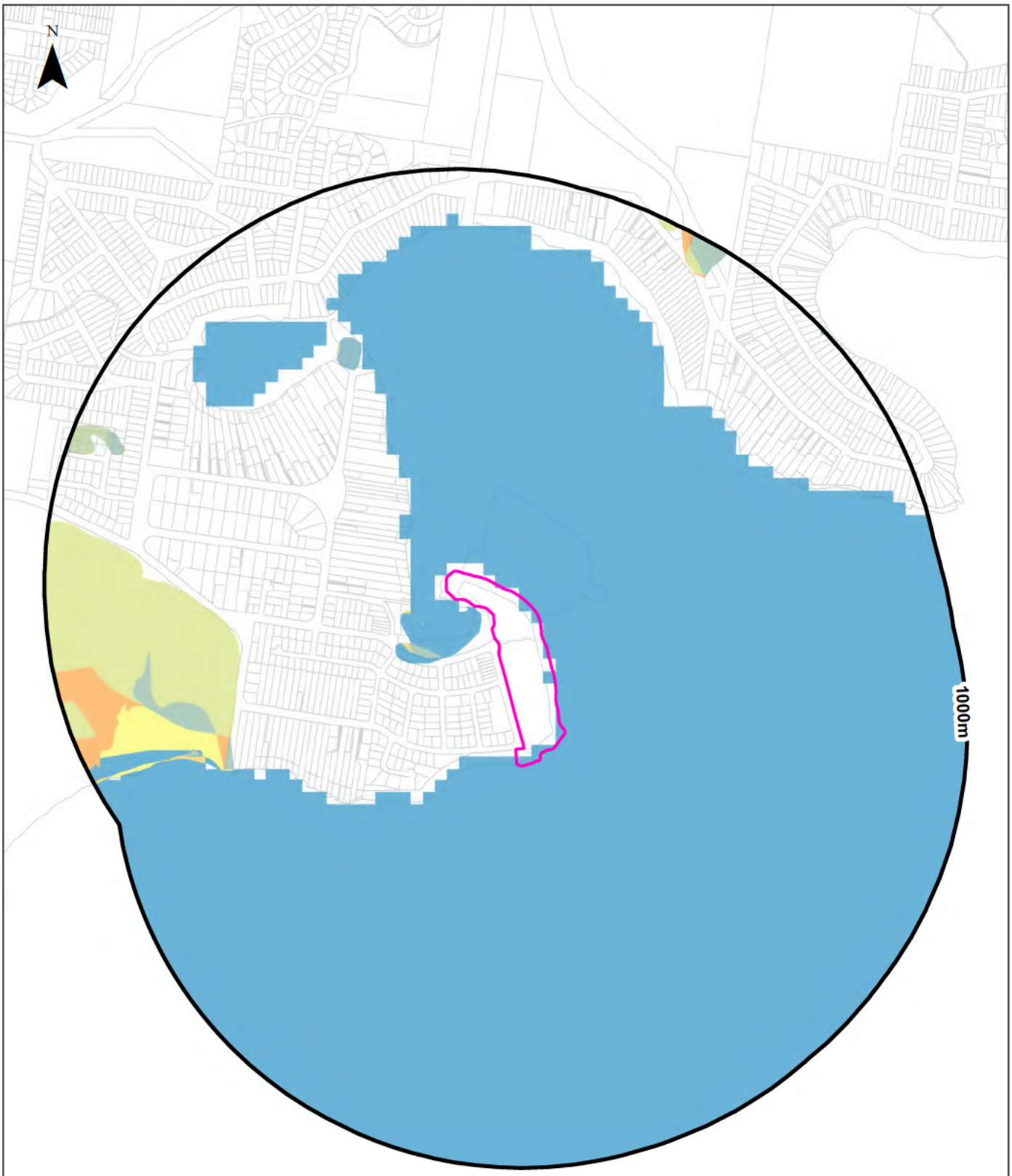
Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Aquatic	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Wetland		0m	On-site
Terrestrial	High potential GDE - from regional studies	Deeply dissected sandstone plateaus.	Vegetation		0m	West
Terrestrial	Moderate potential GDE - from regional studies	Deeply dissected sandstone plateaus.	Vegetation		532m	West
Terrestrial	Low potential GDE - from regional studies	Deeply dissected sandstone plateaus.	Vegetation		557m	North West
Aquatic	Low potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Wetland		626m	North West

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Ecological Constraints - Inflow Dependent Ecosystems Likelihood

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264



Legend

- Site Boundary
- Buffer 1000m
- Property Boundaries
- NULL
- 1 (Low)
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 (High)

Scale: 0 100 200 00 600 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 29 October 2021

Ecological Constraints

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Aquatic	10	Deeply dissected sandstone plateaus.	Wetland		0m	On-site
Terrestrial	10	Deeply dissected sandstone plateaus.	Vegetation		0m	West
Terrestrial	4	Deeply dissected sandstone plateaus.	Vegetation		100m	North West
Terrestrial	8	Deeply dissected sandstone plateaus.	Vegetation		137m	West
Terrestrial	6	Deeply dissected sandstone plateaus.	Vegetation		532m	West
Terrestrial	9	Deeply dissected sandstone plateaus.	Vegetation		557m	North West
Terrestrial	3	Deeply dissected sandstone plateaus.	Vegetation		648m	West
Terrestrial	5	Deeply dissected sandstone plateaus.	Vegetation		672m	West
Terrestrial	7	Deeply dissected sandstone plateaus.	Vegetation		710m	West
Terrestrial	1	Deeply dissected sandstone plateaus.	Vegetation		917m	North

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Ecological Constraints

49, 81 & 85 Trinity Point Drive, Morisset Park, NSW 2264

NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Crinia tinnula	Wallum Froglet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Mixophyes iteratus	Giant Barred Frog	Endangered	Category 2	Endangered	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna carneipes	Flesh-footed Shearwater	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna grisea	Sooty Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Charadrius leschenaultii	Greater Sand-plover	Vulnerable	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius mongolus	Lesser Sand-plover	Vulnerable	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius veredus	Oriental Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Cuculus optatus	Oriental Cuckoo	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Diomedea exulans	Wandering Albatross	Endangered	Not Sensitive	Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Geophaps scripta scripta	Squatter Pigeon (southern subspecies)	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Macronectes giganteus	Southern Giant Petrel	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pterodroma leucoptera leucoptera	Gould's Petrel	Vulnerable	Not Sensitive	Endangered	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stercorarius parasi icus	Arctic Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Thalasseus bergii	Crested Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Turnix maculosus	Red-backed Button-quail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Eubalaena australis	Southern Right Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Megaptera novaeangliae	Humpback Whale	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Nyctophilus bifax	Eastern Long-eared Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pseudomys gracilicaudatus	Eastern Chestnut Mouse	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pseudomys novaehollandiae	New Holland Mouse	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Vespadelus troughtoni	Eastern Cave Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Eretmochelys imbricata	Hawksbill Turtle	Not Listed	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Reptilia	Hoplocephalus stephensii	Stephens' Banded Snake	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Pseudonaja modesta	Ringed Brown Snake	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Angophora inopina	Charmhaven Apple	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Astrotricha crassifolia	Thick-leaf Star-hair	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Caladenia tessellata	Thick Lip Spider Orchid	Endangered	Category 2	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Clematis fawcettii	Northern Clematis	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Corunastylis sp. Charmhaven (NSW896673)		Critically Endangered	Category 2	Critically Endangered	
Plantae	Flora	Corybas dowlingii	Red Helmet Orchid	Endangered	Category 2	Not Listed	
Plantae	Flora	Cryptostylis hunteriana	Leafless Tongue Orchid	Vulnerable	Category 2	Vulnerable	
Plantae	Flora	Cymbidium canaliculatum	Tiger Orchid	Not Listed	Category 2	Not Listed	
Plantae	Flora	Dillwynia tenuifolia		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Diuris praecox	Rough Doubletail	Vulnerable	Category 2	Vulnerable	
Plantae	Flora	Eucalyptus camfieldii	Camfield's Stringybark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus parramattensis subsp. decadens		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus parramattensis subsp. parramattensis		Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Fontainea oraria	Coastal Fontainea	Critically Endangered	Category 2	Endangered	
Plantae	Flora	Genoplesium insigne	Variable Midge Orchid	Critically Endangered	Category 2	Critically Endangered	
Plantae	Flora	Grevillea parviflora subsp. parviflora	Small-flower Grevillea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Not Listed	Not Sensitive	Extinct	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Maundia triglochinoides		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Melaleuca biconvexa	Biconvex Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Persicaria elatior	Tall Knotweed	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pterostylis pulchella	Waterfall Greenhood	Vulnerable	Category 2	Vulnerable	
Plantae	Flora	Pultenaea maritima	Coast Headland Pea	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Rhodamnia rubescens	Scrub Turpentine	Critically Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Rhodomyrtus psidioides	Native Guava	Critically Endangered	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Rutidosis heterogama	Heath Wrinklewort	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Tetratheca juncea	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Thelymitra adorata	Wyong Sun Orchid	Critically Endangered	Category 2	Critically Endangered	

Data does not include NSW category 1 sensitive species.
NSW BioNet: © State of NSW and Office of Environment and Heritage

Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading “LC” or “LocConf”. These codes lookup to the following location confidences:

LC Code	Location Confidence
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced to an approximate or general area
Road Match	Georeferenced to a road or rail corridor
Road Intersection	Georeferenced to a road intersection
Buffered Point	A point feature buffered to x metres
Adjacent Match	Land adjacent to a georeferenced feature
Network of Features	Georeferenced to a network of features
Suburb Match	Georeferenced to a suburb boundary
As Supplied	Spatial data supplied by provider

USE OF REPORT - APPLICABLE TERMS

The following terms apply to any person (End User) who is given the Report by the person who purchased the Report from Lotsearch Pty Ltd (ABN: 89 600 168 018) (Lotsearch) or who otherwise has access to the Report (Terms). The contract terms that apply between Lotsearch and the purchaser of the Report are specified in the order form pursuant to which the Report was ordered and the terms set out below are of no effect as between Lotsearch and the purchaser of the Report.

1. End User acknowledges and agrees that:
   (a) the Report is compiled from or using content (**Third Party Content**) which is comprised of:
      (i) content provided to Lotsearch by third party content suppliers with whom Lotsearch has contractual arrangements or content which is freely available or methodologies licensed to Lotsearch by third parties with whom Lotsearch has contractual arrangements (**Third Party Content Suppliers**); and
      (ii) content which is derived from content described in paragraph (i);
   (b) Neither Lotsearch nor Third Party Content Suppliers takes any responsibility for or give any warranty in relation to the accuracy or completeness of any Third Party Content included in the Report including any contaminated land assessment or other assessment included as part of a Report;
   (c) the Third Party Content Suppliers do not constitute an exhaustive set of all repositories or sources of information available in relation to the property which is the subject of the Report (**Property**) and accordingly neither Lotsearch nor Third Party Content Suppliers gives any warranty in relation to the accuracy or completeness of the Third Party Content incorporated into the report including any contaminated land assessment or other assessment included as part of a Report;
   (d) Reports are generated at a point in time (as specified by the date/time stamp appearing on the Report) and accordingly the Report is based on the information available at that point in time and Lotsearch is not obliged to undertake any additional reporting to take into consideration any information that may become available between the point in time specified by the date/time stamp and the date on which the Report was provided by Lotsearch to the purchaser of the Report;
   (e) Reports must be used or reproduced in their entirety and End User must not reproduce or make available to other persons only parts of the Report;
   (f) Lotsearch has not undertaken any physical inspection of the property;
   (g) neither Lotsearch nor Third Party Content Suppliers warrants that all land uses or features whether past or current are identified in the Report;
   (h) the Report does not include any information relating to the actual state or condition of the Property;
   (i) the Report should not be used or taken to indicate or exclude actual fitness or unfitness of Land or Property for any particular purpose
   (j) the Report should not be relied upon for determining saleability or value or making any other decisions in relation to the Property and in particular should not be taken to be a rating or assessment of the desirability or market value of the property or its features; and
   (k) the End User should undertake its own inspections of the Land or Property to satisfy itself that there are no defects or failures
2. The End User may not make the Report or any copies or extracts of the report or any part of it available to any other person. If End User wishes to provide the Report to any other person or make extracts or copies of the Report, it must contact the purchaser of the Report before doing so to ensure the proposed use is consistent with the contract terms between Lotsearch and the purchaser.
3. Neither Lotsearch (nor any of its officers, employees or agents) nor any of its Third Party Content Suppliers will have any liability to End User or any person to whom End User provides the Report and End User must not represent that Lotsearch or any of its Third Party Content Suppliers accepts liability to any such person or make any other representation to any such person on behalf of Lotsearch or any Third Party Content Supplier.
4. The End User hereby to the maximum extent permitted by law:
   (a) acknowledges that the Lotsearch (nor any of its officers, employees or agents), nor any of its Third Party Content Supplier have any liability to it under or in connection with the

Report or these Terms;

(b) waives any right it may have to claim against Third Party Content Supplier in connection with the Report, or the negotiation of, entry into, performance of, or termination of these Terms; and

(c) releases each Third Party Content Supplier from any claim it may have otherwise had in connection with the Report, or the negotiation of, entry into, performance of, or termination of these Terms.

5. The End User acknowledges that any Third Party Supplier shall be entitled to plead the benefits conferred on it under clause 4, despite not being a party to these terms.
6. End User must not remove any copyright notices, trade marks, digital rights management information, other embedded information, disclaimers or limitations from the Report or authorise any person to do so.
7. End User acknowledges and agrees that Lotsearch and Third Party Content Suppliers retain ownership of all copyright, patent, design right (registered or unregistered), trade marks (registered or unregistered), database right or other data right, moral right or know how or any other intellectual property right in any Report or any other item, information or data included in or provided as part of a Report.
8. To the extent permitted by law and subject to paragraph 9, all implied terms, representations and warranties whether statutory or otherwise relating to the subject matter of these Terms other than as expressly set out in these Terms are excluded.
9. Subject to paragraph 6, Lotsearch excludes liability to End User for loss or damage of any kind, however caused, due to Lotsearch's negligence, breach of contract, breach of any law, in equity, under indemnities or otherwise, arising out of all acts, omissions and events whenever occurring.
10. Lotsearch acknowledges that if, under applicable State, Territory or Commonwealth law, End User is a consumer certain rights may be conferred on End User which cannot be excluded, restricted or modified. If so, and if that law applies to Lotsearch, then, Lotsearch's liability is limited to the greater of an amount equal to the cost of resupplying the Report and the maximum extent permitted under applicable laws.
11. Subject to paragraph 9, neither Lotsearch nor the End User is liable to the other for:
    (a) any indirect, incidental, consequential, special or exemplary damages arising out of or in relation to the Report or these Terms; or
    (b) any loss of profit, loss of revenue, loss of interest, loss of data, loss of goodwill or loss of business opportunities, business interruption arising directly or indirectly out of or in relation to the Report or these Terms,

    irrespective of how that liability arises including in contract or tort, liability under indemnity or for any other common law, equitable or statutory cause of action or otherwise.
12. These Terms are subject to New South Wales law.