Jet Zero™

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# BASELINE SOILS INVESTIGATION

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# JET ZERO AUSTRALIA




## Project Ulysses – Baseline Soils Investigation

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# EXECUTIVE SUMMARY

Jet Zero Australia Pty Ltd (Jet Zero) are in the process of applying for an environmental authority and development permit to facilitate the construction and operation for Australia's first alcohol-to-jet (ATJ) plant. The plant will convert ethanol feedstock into sustainable aviation fuel at the Project Ulysses site (the project) in Townsville, Queensland.

The greenfield site is located in the mid-to-lower reaches of the Sandfly Creek catchment, with lower portions of the site likely tidally influenced. Although the historical land uses of the area are minimal, the possibility of contamination cannot be excluded. The broader area has been used for illegal dumping which could also have occurred on the site and resulted in soil contamination.

C&R Consulting Pty Ltd (C&R) were commissioned by Jet Zero to undertake a detailed baseline soils investigation in line with the scope of works provided. The purpose of this investigation was to assess the baseline physical and chemical properties of the soils at the project site prior to development. It also aimed to determine whether these soils – in combination with site activities – pose a potential risk to the surrounding environment, including nearby sensitive receptors such as surface water, groundwater and ecological habitats/species.

A total of 36 test pits were excavated to assess soils across the project site. The investigation found that the soil profiles were naturally occurring, with characteristics and chemistry consistent with sodosols. These soils can be prone to waterlogging whichcan have ngineering constraints, if not appropriately managed.

Surface soils were primarily moderately to slightly acidic and likely influenced by minor acid sulphate soils (ASS) generation. Subsoils varied from slightly acidic to strongly alkaline. Deeper subsoils were predominantly alkaline, reflecting sodic profiles near estuarine areas.

Soil salinity was low in topsoils, whereas subsoils showed considerable variability. B horizon samples were moderately saline and deeper subsoils mostly exceeded the desirable salinity threshold for most plants, particularly near estuarine areas. Consequently, establishing vegetation in these soils for rehabilitation or landscaping purposes will likely require specialised plant species adapted to the soil characteristics.

Cation exchange capacity (CEC) – which influences soil stability, nutrient availability, pH buffering, and response to fertilisers and ameliorants – ranged from low to high across the site. CECs ranged from:

- Low to moderate in surface soils;
- Moderate to high in B horizons; and
- Low to high in subsoils.

Calcium:magnesium ratios at the site indicate that the soils are calcium-deficient.

Soil erosion indicators suggest that surface soils within the top 0.25 m are moderately susceptible to erosion, whereas soils below this depth are moderately to highly susceptible. Based on values for exchangeable sodium percent, this erosion susceptibility could likely be mitigated with gypsum treatment. An Erosion and Sediment Control Plan (ESCP) will be developed during both the construction and operational phases of the site to effectively address these concerns.

The soils sampled at the project site were nutrient-poor, likely due to factors such as low organic matter content, limited biological activity, and poor nutrient cycling. This is expected, given the site's proximity to estuarine areas. The salt marsh vegetation at the site has

adapted to these low-nutrient, low-organic-matter conditions. This vegetation is vulnerable to high nutrient loads, often experiencing dieback from eutrophication. For revegetation purposes, this nutrient deficiency should be considered and plant species carefully selected accordingly.

Assessment of heavy metals, hydrocarbons, phenols, pesticides and polychlorinated biphenyls found no presence of soil contamination at the project site. Therefore, the site is considered suitable for all land uses in accordance with National Environment Protection Measure health investigation levels.

Both ASS and potential ASS (PASS) were present at low levels at the project site. However, the wide distribution of low-level but actionable ASS/PASS materials found in surface sediments – and the likely disturbance from the proposed development – necessitate an *extra-high* level of treatment, as outlined in the *Queensland acid sulfate soil technical manual* (Dear et al., 2014). Effective management – including an environmental management plan and risk assessment – are essential. Due to the location of the ASS/PASS materials and their low neutralisation requirements, the most cost-effective strategy will likely involve avoidance and neutralisation, tailored to the specific construction activities and operational needs.

Based on the findings of this soils investigation, the project poses a risk of environmental harm if soils are mismanaged. Without proper mitigation, the oxidation and mobilisation of ASS/PASS – and the erosion-driven mobilisation of sodic soils – could lead to environmental harm.

Although the effects of soil contamination and nutrient mobilisation are considered relatively minor in isolation, they are interconnected with the issues of ASS/PASS and soil erosion. This is due to the associated mobilisation of metals and the risk of eutrophication. However, it is likely that these risks can be effectively managed and mitigated through the implementation of appropriate soil management techniques, detailed within a site-specific ESCP and an ASS mitigation measures with an Environmental Management Plan.

The information contained in this report and its associated appendices serves as baseline information for project operations. It can also act as a reference for future planning, construction, operations and rehabilitation.

# 1. INTRODUCTION

## 1.1 PROJECT LOCATION AND DESCRIPTION

Jet Zero Australia Pty Ltd (Jet Zero) are in the process of applying for an environmental authority (EA) and development permit to facilitate the construction and operation for Australia's first alcohol-to-jet (ATJ) plant. The plant will convert ethanol feedstock into sustainable aviation fuel (SAF) at the Project Ulysses site (the project) in Townsville, Queensland. The project includes a plant to convert undenatured, anhydrous ethanol – derived from agricultural byproducts such as wheat starch or sugar molasses – to SAF and renewable diesel using the *LanzaJet ATJ process*. The current plant design will have a capacity to process at least 182 million L/year of ethanol to SAF and renewable diesel.

The project plant and facility will be located at a greenfield site within the Cleveland Bay Industrial Park of the Townsville State Development Area (Figure 1), which is facilitated by the Queensland Government's Coordinator General. The plant will be supplied with ethanol via road transport. The produced SAF will be transferred to the Port of Townsville or trucked to the relevant airport for blending with conventional jet fuel.

## 1.2 PURPOSE AND SCOPE

C&R Consulting Pty Ltd (C&R) were commissioned by Jet Zero to undertake a detailed baseline soils investigation in line with the provided scope of works. The purpose of this investigation was to assess the baseline physical and chemical properties of the soils at the project site prior to development. It also aimed to determine whether these soils – in combination with site activities – pose a potential risk to the surrounding environment, including nearby sensitive receptors such as surface water, groundwater and ecological habitats/species. To achieve these objectives, this investigation set out to:

- Review all publicly available soil mapping and investigations undertaken in the project site and surrounding areas;
- Describe the topography and geomorphic context of the study area, as well as the soil types mapped for the project site;
- Carry out field investigations at the project site, assessing topography, geomorphology, soil profiles and soil types; and
- Provide a report summarising the findings of the investigation.

This report will be included in an environmental assessment report (EAR), which will be prepared by Jet Zero to support the EA application. The EAR will reference this technical report to address the suitability and management of soils at the project site.

## 1.3 LEGISLATION, STANDARDS AND GUIDELINES

This report has been prepared with reference to the following resources:

- *Guidelines for surveying soil and land resources* (McKenzie, 2008);
- *Queensland acid sulfate soil technical manual: soil management guidelines* (Dear et al., 2014).
- *Guidelines for sampling and analysis of lowland acid sulfate soils (ASS) in Queensland* (Ahern et al., 1998);
- Australian standard (AS) 4969-2008: *Analysis of acid sulfate soil*;

- AS 4482.1-2005: *Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-volatile and semi-volatile substances*;
- *National acid sulfate soils guidance – National acid sulfate soils sampling and identification methods manual* (Sullivan et al., 2018);
- Queensland Environmental Protection Act 1994;
- Queensland State Planning Policy 2017; and
- Queensland State Planning Policy – State Interest Guideline Water Quality 2016.

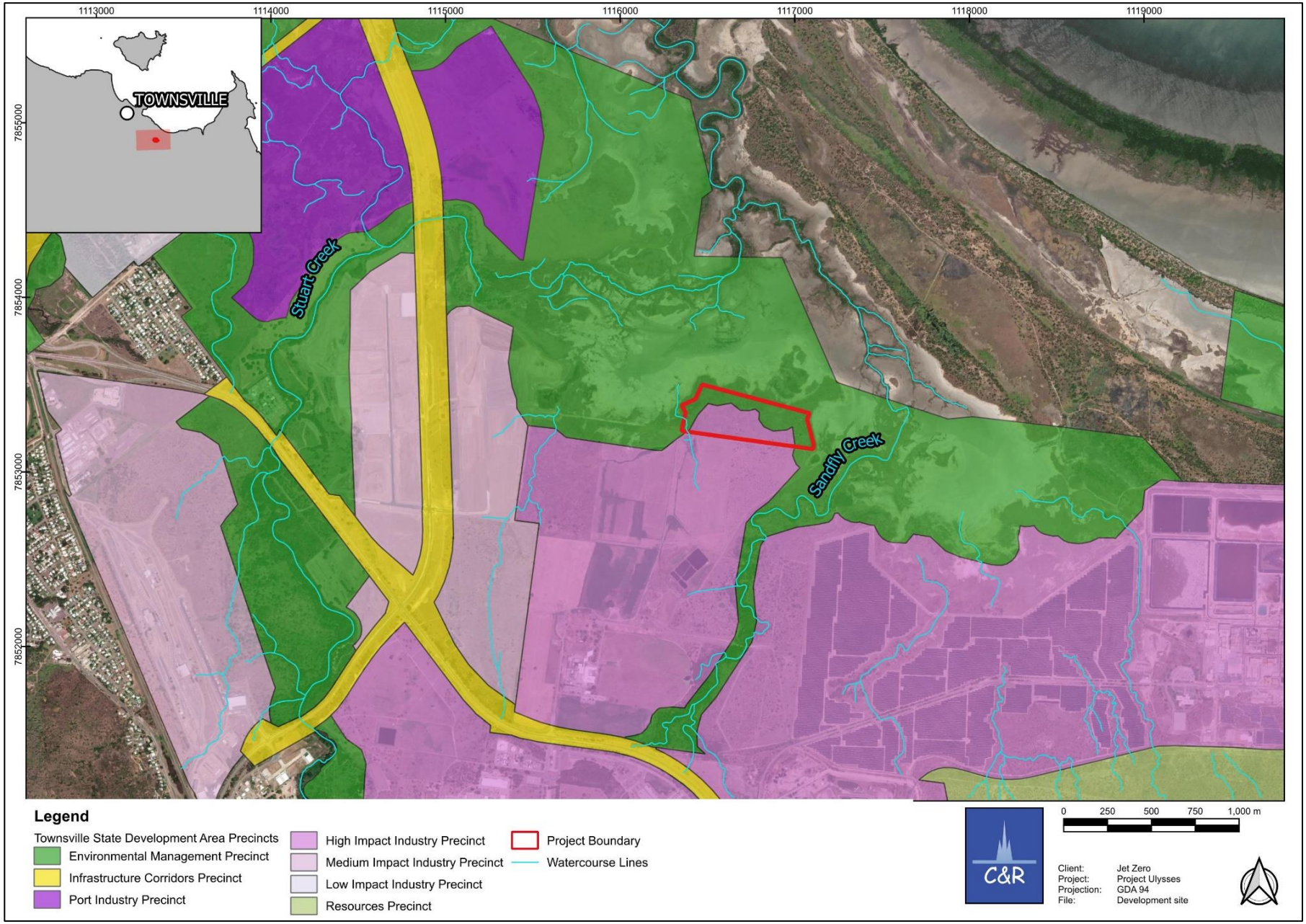



**Figure 1: Project location and development precincts.**

# 2. ENVIRONMENTAL SETTING

## 2.1 STUDY AREA DESCRIPTION

The study area encompasses the entire potential development site situated within the Cleveland Bay Industrial Park, part of the Townsville State Development Area. The site lies within the mid-to-lower reaches of the Sandfly Creek catchment (Figure 1). It is possible that portions of the site maybe tidally influenced. The topography ranges in height from approximately 2.5 m Australian Height Datum (AHD) to 5.25 m AHD, with most of the site below 5 m AHD (Figure 2).

A preliminary review of aerial photographs of the site from the 1960s to the present indicates that the site is largely a greenfield site. All vegetation within the allotment is classified as remnant vegetation (Remnant regional ecosystem vegetation in Queensland Version 13.1, Regional Ecosystems (2023)), indicating that the site has avoided large-scale modification. However, modifications on the adjacent allotment to the south – including the installation of a small dam in the 1970s – may have altered the natural drainage patterns of the site. The site has likely been used for periodic cattle grazing.

Although the historical land uses of the area are minimal, the possibility of contamination cannot be excluded. The broader area (the saline flats/coastal aggregation associated with Sandy Creek, Sandfly Creek, Stuart Creek and the Ross River which is locally known as savannah) has been used for illegal dumping which could also have occurred on the site and resulted in soil contamination.




**Figure 2: Project site topographic relief.**

## 2.2 GEOMORPHIC CONTEXT

Detailed surface geology mapping extracted from Queensland Globe shows the site is located within two Quaternary-aged geological units (Figure 3):

- Qpa – Quaternary-aged sediments clay, silt, sand and gravel; flood-plain alluvium on high terraces; or
- Qhct – Quaternary-aged sediments of silt, mud, sand and minor salt; coastal tidal flats, mangrove flats, supratidal flats, saltpans and grasslands.

The Quaternary sediments in the area have been formed from estuarine and nearshore deposits, with extensive regions of potential marine sediments. Most of these sediments and soils result from a complex interplay of factors, including fluctuations in historical and current sea levels, sediment deposition from coastal ranges during flood and flow events, biological pedogenesis in areas with impeded drainage, and the influence of both current and historical land uses.

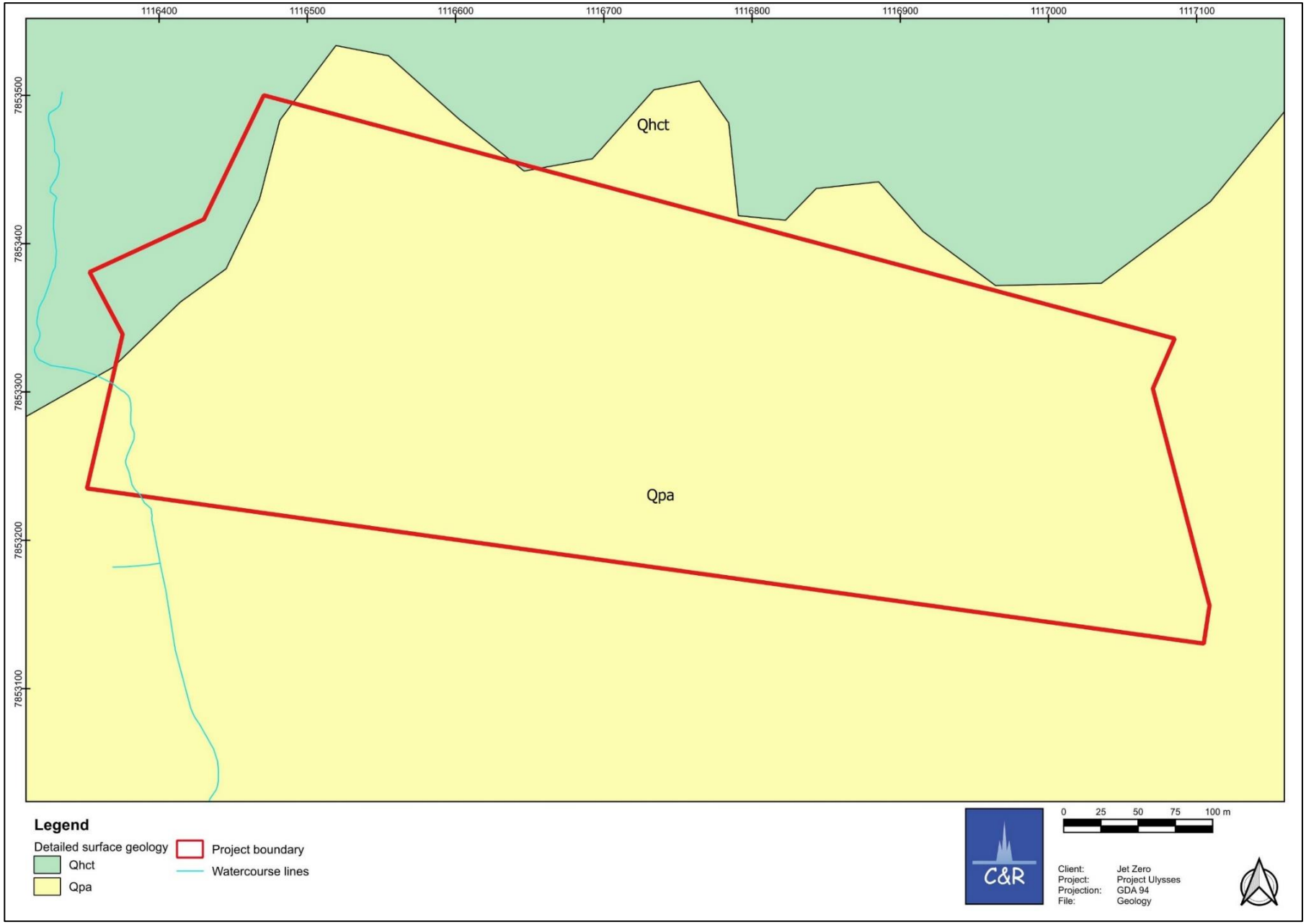



**Figure 3: Mapped surface geology across the project site.**

## 2.3 SOIL PROPERTIES

Detailed 1:50,000 soil mapping has been extracted from Queensland Globe and is shown in Figure 4. These soil units are derived from Murtha (1982). Soils that are relevant to this investigation are shown in Table 1.

**Table 1: Soils within the investigation area.**

| Map label | Soil unit name | Australian soil classification | Description (derived from Murtha, 1982) |
|---|---|---|---|
| GC | Gilligan Complex | Cracking clay soils – Vertisols | Dark, grey-brown, strong, fine, blocky, structured, light to medium clay A horizon; gradual change to olive-brown, heavy clay with coarse, blocky structure grading to dark, yellow-brown, coarse, lenticular structure. Some hard carbonate nodules below 0.5.<br>Characterised by weakly to moderately developed, round gilgai microrelief. Occurs over almost the entire unit. In most areas, there is a complex of soils with cracking clays on the mounds and duplex soils in the depressions. However, in some areas, the clays occupy both mound and depression sites over the central part of the area, with the duplex soils restricted to the depression sites around only the margin of the unit. |
| Co | Coonambelah | Cracking clay soils – Vertisols | Strongly bleached, fine, sandy loam or loam A horizons to 10 cm thick, overlying faintly mottled, very dark, greyish-brown and olive, heavy clay B horizons.<br>Characterised by open grasslands of saltwater couch (*Sporobolus virginicus*). Parts may at least occasionally be inundated by tidal waters.<br>Although the alkaline, dark duplex soils of the Coonambelah series are dominant, similar soils with whole-coloured or -mottled, dark-grey, heavy clay B horizons (Dy 2 -33,2-43, Dy 3-33,3-43) are commonly associated. Acid and neutral variants of these soils also occur. |




**Figure 4: Mapped soils across the project site.**

## 2.4 Acid Sulphate Soils

Only broad, national-scale acid sulphate soils (ASS) mapping is available for the study area. National scale acid sulphate soil mapping obtained from Queensland Globe shows that most of the site is mapped as having a low probability of ASS occurrence (6%–70%), with some areas charted as having a high probability (>70%). However, the reliability of this mapping is questionable because the designations are not based on any supporting soil chemistry data. Based on the following factors, the potential for ASS at the site is likely greater than the mapping suggests:

- The close proximity to estuarine waters;
- The geomorphic context; and
- The topology of the area (the entire site is below 10 m AHD and most of it is below 5 m AHD).

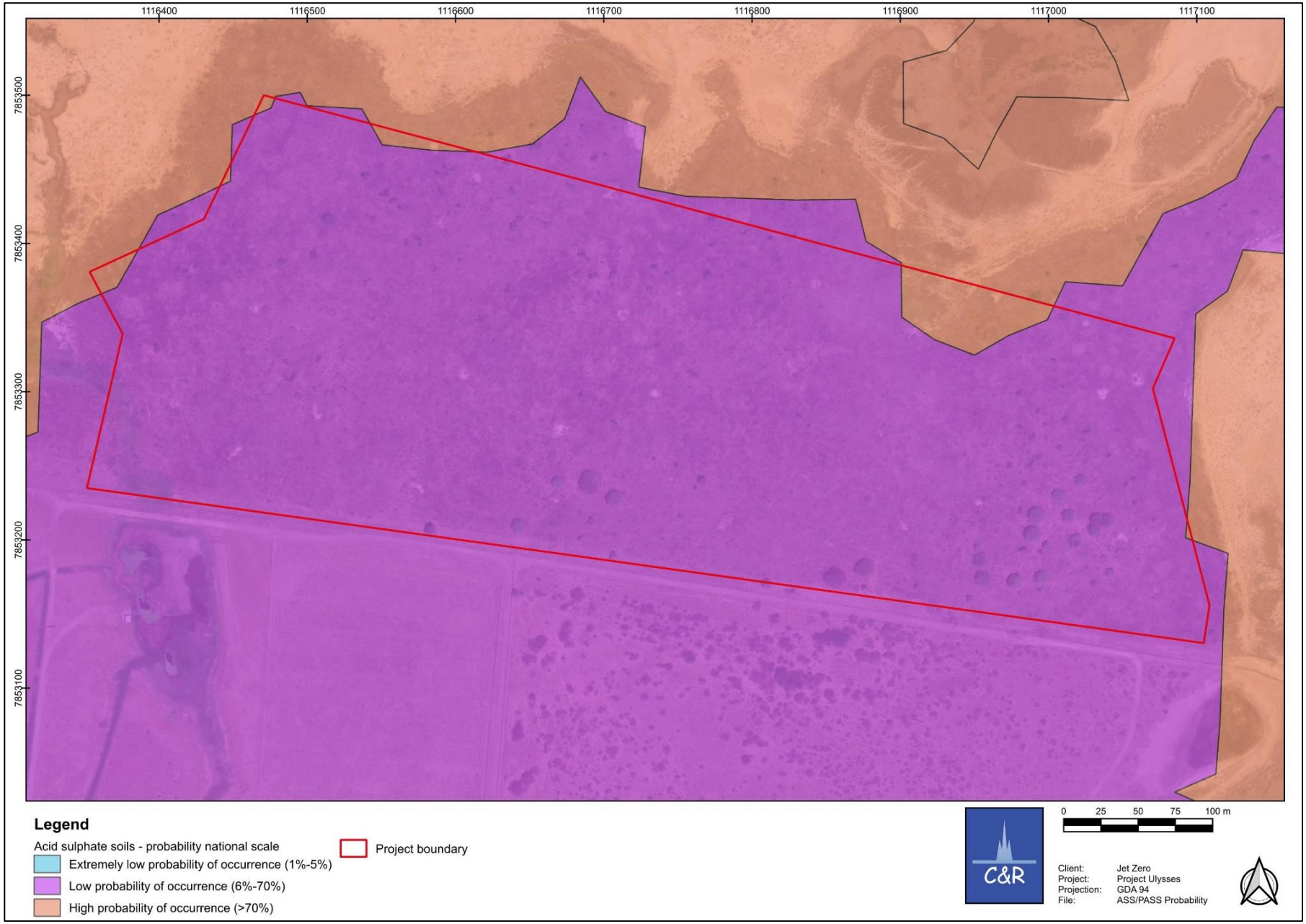



**Figure 5: Mapped probability for acid sulphate soils across the project site.**

# 3. METHODS

The sampling and analysis methods for this investigation were separated into two discrete approaches. A general soils investigation focused on assessing and describing the physical and chemical properties of the soils encountered. In contrast, an ASS investigation was undertaken to determine the potential presence of ASS across the project site. These two approaches were kept separate because each involves differing guidelines and best practices for assessing soils in these contexts.

## 3.1 GENERAL SOILS INVESTIGATION

The general soils assessment set out to describe the physical and chemical properties of the soil, with specific focus on:

- Erodibility;
- Nutrient properties; and
- Contamination.

Physical and chemical properties of soils were assessed in accordance with the *Guidelines for surveying soil and land resources* (McKenzie, 2008) and the provided scope of works. Table 3.1 in McKenzie (2008) provides recommended sampling regimes for various soil survey objectives. Given the scope of the project, a high-density sampling strategy (level 2) was recommended. This involved a density of one site per 2 ha, totalling nine test pits sampled.

Soil sampling and the construction of the stratigraphic logs were carried out by C&R. Sampling for physical and chemical properties utilised nine (9) of the 36 test pits from ASS testing, which are based on a systematic grid pattern (Figure 6). The nine test pits were selected from the grid, with potential land use areas and spatial distribution in mind. Four soil samples (plus duplicates) were collected from each test pit. Soil profiles were identified and described for the nine test pits, with sampling targeting the A horizon, the transition between A to B horizons, as well as the B and C horizons. Samples were collected in accordance with the *Australian soil and land survey: field handbook* (McDonald, 2009). Soil logs are provided in Appendix A and Appendix B.

Soil samples were sent to a National Association of Testing Authorities (NATA) accredited laboratory for testing of the following physical and chemical properties:

- Bulk density (This is a measure of how tightly packed the soil is. Bulk density is a key indicator of soil health. It affects how water, nutrients, and air move through the soil, and how plants and microorganisms grow);
- Emerson testing (Classifies the behaviour of soil aggregates when immersed in water to give an indication of erosion susceptibility);
- Particle size distributions (Provides a statistical analysis of the range of particle sizes in a sample);
- Moisture content (Measures the amount of moisture in a material, expressed as a percentage of the material's weight or mass);
- pH (Potential of hydrogen, measuring the concentration of hydrogen ions in a substance on a logarithmic scale);
- Electrical conductivity (EC; is a measure of salinity, or the amount of dissolved salts in a substance);
- Exchangeable cations (amount of Ca, Mg, Na, K present);

- Nutrients (Levels of total nitrogen, total phosphorus, total Kjeldahl nitrogen, nitrite, nitrate, ammonia and total oxidised nitrogen present within each sample. These are essential elements that plants need to grow);
- Chloride;
- Extractable Fe, Cu, Zn, and Mn (Micronutrients that can be extracted with the resultant levels used to predict how much of these nutrients are available to plants);
- Organic matter and organic carbon (These parameters regulate critical ecosystem services such as nutrient provisioning, water-holding capacity and soil drainage);
- Metals (In accordance with NEPC [2013]; Testing levels of Arsenic [As], Boron [B], Barium [Ba], Beryllium [Be], Cadmium [Cd], Chromium [Cr], Cobalt [Co], Copper [Cu], Manganese [Mn], Nickel [Ni], Lead [Pb], Selenium [Se], Vanadium [V], Zinc [Zn] and Mercury [Hg] within the soil to assess if they are likely to be harmful to humans and/or the environment);
- Pesticides (In accordance with NEPC [2013]; Testing the levels of organochlorine pesticides [OCPs], mirex, atrazine, chlorpyrifos, bifenthrin within the soil to assess if they are likely to be harmful to humans and/or the environment); and
- Hydrocarbons (In accordance with NEPC [2013]; Testing the levels of total recoverable hydrocarbons [TRHs], benzene, toluene, ethylbenzene, xylene and naphthalene [BTEXN], polycyclic aromatic hydrocarbons [PAHs], phenols and polychlorinated biphenyls [PCBs] within soil to assess if these are likely to be harmful to humans and the environment).

## 3.2 Acid Sulphate Soils

The ASS assessment set out to describe the level of actual ASS (AASS) and potential ASS (PASS) present at the project site by:

- Presenting and interpreting the results of the ASS/PASS sampling;
- Discussing the relevance of the results; and
- Determining if a detailed ASS management plan is required as a result of the findings.

An ASS sampling program was developed in accordance with Sullivan et al. (2018). To evaluate AASS and PASS at the 17-hectare project site, 36 test pits were required to achieve an approximate sampling density of one pit per 5,000 $m^2$. This sampling scale aligns with the level of detail necessary for a thorough assessment. Test pits sites were evenly spaced on a systematic grid pattern (Figure 6).

A small excavator was used to dig test pits, with soils broadly described and samples collected every 0.25 m to a depth of 3 m (totalling 12 samples per test pit). All samples were placed on ice and sent to a NATA-accredited laboratory for field-screening using field pH ($pH_F$) and pH field oxidation ($pH_{Fox}$) measurements.

### 3.2.1 Field Screen Testing

*Field screen analysis* is a preliminary test method used to identify the potential presence of ASS/PASS. However, the analysis has limitations. This qualitative approach provides an initial indication, rather than a definitive assessment. If field-screening suggests the presence of ASS/PASS, further analysis using the SPOCAS (suspension peroxide oxidation combined acidity and sulphate) method is recommended. The SPOCAS test is more reliable for quantitatively determining the acidity and sulphate content, offering a more accurate indication of the risk of acid generation in the soil.

Field screen testing with $pH_F$ and $pH_{FOX}$ was conducted as a preliminary and qualitative screening analysis on all representative samples using the peroxide oxidation method. Field

screening test results are assessed by these pre- and post-oxidation pH levels to indicate the presence of AASS and PASS. As a general rule, any soils with a pH change of more than 1 could be considered PASS. Additionally, interpretations generally placed on these qualitative indicators of pH levels and reactions include:

- Field pH ($pH_F$):
  - <4 – Inferred as oxidised ASS;
  - <4.5 – Inferred as extremely acidic soil, possibly due to pyrite oxidation, highly organic soil or prolonged fertiliser use;
  - 4.5–5.5 – Inferred as highly acidic soil. However, it is not conclusive that low pH is due to pyrite oxidation; and
  - >6 – No actual acidity.
- pH field oxidation ($pH_{Fox}$):
  - <3 – Strongly inferred as PASS;
  - 3–4 – Inferred as PASS. Laboratory analysis would be required to confirm presence of sulphides;
  - 4–5 – Inferred level of sulphides present, or the sample might be poorly reactive, or fine carbonates are present; and
  - 5–6 – With a minimal difference to $pH_F$, this is unlikely to be PASS unless carbonates are present in the sample. Where there are large discrepancies between the $pH_F$ and the $pH_{Fox}$, the results are determined to be inconclusive.

The field screen analysis also includes a reaction rating observation – ranging from 1 to 4 – to classify the level of samples reaction as:

1. No to slight reaction;
2. Moderate reaction;
3. Strong reaction with persistent froth; and
4. Extreme reaction.

The field screen analysis is a preliminary test method with limitations, providing qualitative indicators that guide further analysis using the chromium reducible sulphur suite.

### 3.2.2 Chromium Reducible Sulphur Testing

Upon receipt of screening results, one sample from every 1 m of soils (3 samples per test pit) was selected for further ASS analyses at the laboratory. Additionally, 5% of samples were duplicated for quality control purposes. The samples were further assessed for:

- Chromium reducible sulphur suite (A standard suite of tests to assess the potential sulfidic acidity);
- Net acidity level (The measure of the acidity hazard of ASS materials used to determine whether an ASS management plan should be developed. Determined from laboratory analysis, it is the result obtained when the values for various components of soil acidity and acid neutralising capacity are substituted into the Acid Base Accounting equation);
- Total/titratable actual acidity (TAA; The acidity measured by titration with dilute sodium hydroxide following extraction with potassium chloride solution, TAA is another measure used to assess the benchmarks of acidity); and
- Extractable sulphur (This measure gives an indication as to the amount of soluble plus exchangeable sulphur, sulphate from gypsum, as well as some sulphate from aluminium hydroxy sulphate compounds as well as some sulphur from organic matter, but not pyrite sulphur).

Quantitative laboratory analyses of the chromium reducible sulphur suite – in accordance with AS-4969 – were undertaken on selected samples to assess the level and nature of acidity or potential acidity present in the soil profile. On the basis of the field screens, the samples that are most likely ASS within each borehole or excavation were sent for chromium reducible sulphur testing. The chromium reducible sulphur testing calculates an acid base account – which considers all factors – to determine the net acidity that is likely generated from the tested material. The calculation of this net acidity is then used to determine the action criteria and subsequent management of AASS/PASS, in accordance with Sullivan et al. (2018).

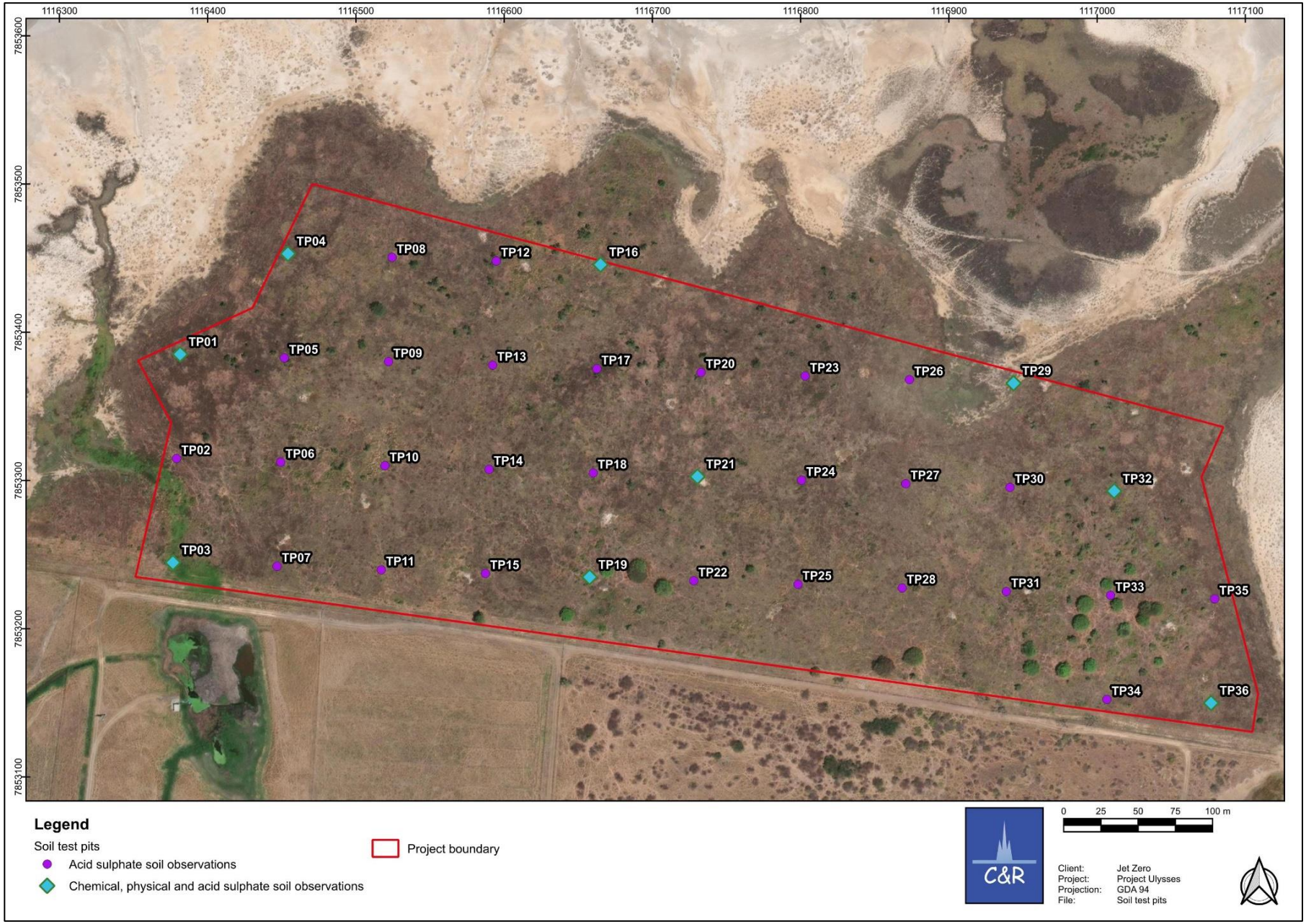



**Figure 6: Test pit locations.**

# 4. RESULTS

## 4.1 SOIL DESCRIPTIONS

All soil profiles observed during this investigation were natural, with local disturbances confined to grazing and adjacent tracks.

All soils had an A1 horizon consisting of a silty, clayey loam, ranging in depth from 0.1 m to 0.4 m. In most instances, clay content increased through the A2 and B2 horizons, typically resulting in silty clay or clay textures. However, in one instance (TP19), the A2 horizon was observed as sandy loam. Below the B2 horizon, the soil texture generally remained consistent as silty clay or clay to the limit of the observation depth. Exceptions to this pattern were noted at TP33, TP34, TP26, TP21, TP16, TP11 and TP10, where a sand layer was noted as the lowest layer within the profile. The depth of this sand layer ranged from 2.25 to 3.0 m.

Despite these differences, the textural contrast within the A2/B2 horizons – combined with the sodic nature of the soils within the A2/B2 zone – indicates that the soils are sodosols. These soils are likely to be prone to waterlogging and have substantial engineering constraints, if not appropriately managed.

The bulk density of the soils ranged from 1,040 to 1,590 kg/m$^3$, with a general trend of increasing bulk density with depth. However, all samples fall within the typical range for the materials tested. Soils composed of clays or clay loams may have limited use for revegetation if their bulk density exceeds 1,400 kg/m$^3$. Most soils suitable for revegetation fall below this threshold. Soils with bulk densities higher than 1,400 kg/m$^3$ are less likely be suitable for revegetation because they tend to have elevated salinity and lower nutrient content.

For further information of the soils observed at each site please refer to Appendix A and Appendix B. Appendix A contains the field logs for each site, providing detailed descriptions of the soil characteristics observed during fieldwork. The appendix also includes an interpretation of each soil profile and accompanying photos of the respective sites. Appendix B combines the distribution of soil strata and links them to the key results from the chemical analysis to determine – within the profile – the distribution of:

- ASS/PASS;
- Soil sodicity; and
- Soil salinity.

## 4.2 GENERAL CHEMICAL PROPERTIES

### 4.2.1 PH VALUES

The pH of analysed soils and subsoils ranged from 5.8 to 9.6. These pH values were assessed against the criteria outlined in Hazelton & Murphy (2016), in the context of soil health for plant growth. The pH assessment in section 4.6 of this report is for acid sulphate soil assessment and uses a different set of assessment criteria as outlined in Sullivan *et al*. (2018). Although some of the terms used within these two guidelines are similar, the context in which they are used is not interchangeable.

The pH of all soils and their rating are presented in Table 1. Topsoils – represented by samples taken from the top 0.25 m of the profile – ranged from 5.8 (moderately acidic) to 7.5

(slightly alkaline). However, most soils were slightly acidic (6–6.6), with only one sample(TP19-0.25m) being assessed as being moderately acidic (5.8) and (TP29-0.25m) recording a slightly alkaline pH value (7.5)..

Soil samples collected from the A2/B2 horizons at a depth of 0.5 m displayed pH values ranging from slightly acidic (6.0) to strongly alkaline (9.2). At three sites (TP19, TP16 and TP04), the B horizon soils were slight acidic (6.0–6.6). The remaining six sites contained alkaline soils with pH values between 7.6 and 9.2. These alkaline subsoils are typical of sodic profiles in close proximity to estuarine environments. The presence of slightly acidic soils (in this case, in the surface layers) suggests influence from ASS generation processes.

All subsoils sampled below 0.75 m are slightly to strongly alkaline (7.1–9.4). The slightly acidic nature of the surface soils – underlain by non-acidic layers – aligns with the findings of the ASS investigation in Section 4.6.

**Table 1: Natural pH of soils and associated pH rating.**

| Sample | pH | pH rating |
|---|---|---|
| TP01-0.25m | 6.4 | Slightly acidic |
| TP01-0.50m | 7.6 | Slightly alkaline |
| TP01-1.00m | 9.6 | Strongly alkaline |
| TP01-2.00m | 8.6 | Moderately alkaline |
| TP03-0.25m | 6.5 | Slightly acidic |
| TP03-0.75m | 8.4 | Moderately alkaline |
| TP03-2.00m | 8.6 | Moderately alkaline |
| TP03-2.50m | 9.0 | Strongly alkaline |
| TP04-0.25m | 6.2 | Slightly acidic |
| TP04-0.50m | 6.6 | Slightly acidic |
| TP04-1.25m | 8.8 | Moderately alkaline |
| TP04-2.00m | 9.4 | Strongly alkaline |
| TP16-0.25m | 6.0 | Slightly acidic |
| TP16-0.50m | 6.3 | Slightly acidic |
| TP16-1.00m | 8.5 | Moderately alkaline |
| TP16-2.75m | 8.3 | Moderately alkaline |
| TP19-0.25m | 5.8 | Moderately acidic |
| TP19-0.50m | 6.0 | Slightly acidic |
| TP19-1.00m | 7.1 | Slightly alkaline |
| TP19-2.75m | 7.9 | Slightly alkaline |
| TP21-0.25m | 6.5 | Slightly acidic |
| TP21-0.50m | 8.2 | Moderately alkaline |
| TP21-2.00m | 9.1 | Strongly alkaline |
| TP21-3.00m | 8.1 | Moderately alkaline |
| TP29-0.25m | 7.5 | Slightly alkaline |
| TP29-0.75m | 8.8 | Moderately alkaline |

| Sample | pH | pH rating |
|---|---|---|
| TP29-1.50m | 8.9 | Moderately alkaline |
| TP29-3.00m | 8.2 | Moderately alkaline |
| TP32-0.25m | 6.2 | Slightly acidic |
| TP32-0.50m | 7.7 | Slightly alkaline |
| TP32-1.25m | 8.6 | Moderately alkaline |
| TP32-2.00m | 8.6 | Moderately alkaline |
| TP36-0.25m | 6.6 | Slightly acidic |
| TP36-0.50m | 9.2 | Strongly alkaline |
| TP36-1.00m | 9.2 | Strongly alkaline |
| TP36-2.50m | 9.2 | Strongly alkaline |

### 4.2.2 SALINITY

Salinity levels are usually determined by measuring the EC of a soil–water suspension. The EC for all samples ranged from 7 to 1,430 µS/cm (Table 2). Table 2 also lists the associated rating.

Topsoils samples – collected from the upper 0.25 m of the soil profile – exhibited ECs ranging from 7 µS/cm (*very low*) to 169 µS/cm (*low*). Among these, only the TP29 site had a topsoil classified as *low*. All other samples recorded ECs below 44 µS/cm, categorising them as *very low*.

The B horizon soil samples – collected at depths of 0.5–0.75 m – exhibited significant variability in EC, ranging from 14 to 983 µS/cm. The two samples classified as having a *high* EC within this horizon were collected at 0.75 m depth. Additionally, these two sites (TP3 and TP29) correspond to the two lowest elevation points within the study area. The presence of mottling in lower horizons of these profiles indicates periods of substantial wetting and drying within the soil. Given the close proximity to the estuarine environment, it is possible that these waters are saline.

Considerable variability exists within the soil samples representing subsoils obtained at a depth of 1.00–2.75 m. The EC within this zone ranges from 40 to 1,430 µS/cm. All samples below a depth of 1.5 m have EC classed from *medium* to *very high*, ranging from 406 to 1,430 µS/cm.

In general, for successful revegetation, a target EC of less than 700 µS/cm is desirable because this level supports the establishment and growth of most plants. All topsoils (0–0.25 m) in the study area meet this target. Most subsoils at a depth of 0.25–0.75 m are also compliant, except for samples from TP03 and TP29. However, soils below 0.75 m generally exceed this threshold, suggesting that specialised vegetation would likely be required to establish in these soils – if they were used for rehabilitation or landscaping purposes.

The distribution of salinity at each soil observation site is detailed in the soil logs provided in Appendix B.

**Table 2: Electrical conductivity of soils and associated rating.**

| Sample | EC (µS/cm) | EC rating |
|---|---|---|
| TP01-0.25m | 12 | *Very low* |
| TP01-0.50m | 55 | *Very low* |

| Sample | EC (µS/cm) | EC rating |
|---|---|---|
| TP01-1.00m | 501 | *Medium* |
| TP01-2.00m | 986 | *High* |
| TP03-0.25m | 44 | *Very low* |
| TP03-0.75m | 945 | *High* |
| TP03-2.00m | 823 | *High* |
| TP03-2.50m | 406 | *Medium* |
| TP04-0.25m | 7 | *Very low* |
| TP04-0.50m | 26 | *Very low* |
| TP04-1.25m | 277 | *Low* |
| TP04-2.00m | 1,050 | *High* |
| TP16-0.25m | 26 | *Very low* |
| TP16-0.50m | 63 | *Very low* |
| TP16-1.00m | 619 | *Medium* |
| TP16-2.75m | 804 | *High* |
| TP19-0.25m | 14 | *Very low* |
| TP19-0.50m | 14 | *Very low* |
| TP19-1.00m | 40 | *Very low* |
| TP19-2.75m | 957 | *High* |
| TP21-0.25m | 29 | *Very low* |
| TP21-0.50m | 281 | *Low* |
| TP21-2.00m | 760 | *High* |
| TP21-3.00m | 579 | *Medium* |
| TP29-0.25m | 169 | *Low* |
| TP29-0.75m | 983 | *High* |
| TP29-1.50m | 1,430 | *Very high* |
| TP29-3.00m | 910 | *High* |
| TP32-0.25m | 26 | *Very low* |
| TP32-0.50m | 124 | *Very low* |
| TP32-1.25m | 715 | *High* |
| TP32-2.00m | 1,130 | *High* |
| TP36-0.25m | 30 | *Very low* |
| TP36-0.50m | 324 | *Medium* |
| TP36-1.00m | 1,100 | *High* |
| TP36-2.50m | 1,370 | *Very high* |

### 4.2.3 CATION EXCHANGE CAPACITY

CEC is the capacity of the soil to hold and exchange cations. It provides a buffering effect to changes in pH, available nutrients, calcium levels and soil structural changes. Consequently, CEC is a major controlling agent of stability in soil structure, nutrient availability for plant growth, soil pH and the soil's reaction to fertilisers and other ameliorants. A low CEC means that the soil has a low resistance to changes in soil chemistry that are caused by land use.

The CEC of all soils ranged from 2.6 to 26.3 meq/100g. This range covers a rating from *low* to *high* (Hazelton and Murphy, 2016). Surface soils at 0.25 m have cation exchange vales ranging from 2.6 to 12.1 meq/100g. Soils representing the top of the B horizon have a CEC range from 10.9 to 20.6 meq/100g, and subsoils have a CEC range from 4.8 to 26.1 meq/100g.

The proportions of the various cations (expressed as a percentage) can be more relevant to plant performance than the actual level of each cation. The desirable ranges for plant growth (% of CEC) for each major cation are outlined in Table 3, along with the analytical results for each cation.

**Table 3: Cation exchange capacity results against optimal range for plant growth (from Hazelton and Murphy, 2016).**

| Cation | Optimal range | Analytical findings |
|---|---|---|
| Calcium | 65%–80% | Values for all soils range from 25% to 58%. All soils are below the desirable range. |
| Magnesium | 10%–20% | Values for all soils range from 35% to 52%. All soils exceeded the desirable range. |
| Potassium | 3%–8% | Values for all soils range from 0.6% to 3.8%. Only three soil samples are in the optimum range (TP01-0.25m, TP04-0.25m and TP16-2.75m). |
| Sodium | <1% | Values for all soils range from 2% to 33%. All soils exceeded the desirable range. |
| Aluminium | <1% | Exchangeable aluminium values are limited due to the alkaline nature of most soils. However, in the three instances where it was detected (TP19-0.25m, TP19-0.50m and TP16-0.25m), the values exceeded the optimal range, varying between 1.6% and 2.8%. All other values are within the optimum range (i.e. <1%). |

It is generally accepted that the calcium:magnesium ratio does not significantly affect plant growth. However, when exchangeable calcium levels fall below 0.5 cmol(+)/kg (equivalent to <0.5 meq/100g) and exchangeable magnesium levels <0.2 cmol(+)/kg, plant growth may be adversely affected (Hazelton and Murphy, 2016). These conditions are most often observed in sandy soils with low organic matter content. At the site, calcium:magnesium ratios range from 0.6 to 1.6, indicating that the soils are either calcium-deficient or have low calcium levels.

## 4.3 EROSIVITY INDICATORS

### 4.3.1 EXCHANGEABLE SODIUM PERCENT (ESP)

The exchangeable sodium percentage (ESP) measures the proportion of cation exchange sites in the soil that are occupied by sodium ions. Soils are considered sodic when the ESP is greater than 6% and highly sodic when the ESP is greater than 15%. Soils that are sodic are susceptible to dispersion (the breakdown of soil aggregates into individual particles) after which they are likely to be more susceptible to erosion due to a lack of cohesion. . ESP values at the site ranged from 2.6% to 34.4% (Table 4). With the exceptions of TP19 and TP03, all soil profiles have sodic material (>6%) for the full thickness of the profile (i.e. 0–3 m depth). Sodic materials were encountered at a depth of 0.7–3 m at TP19, and a depth of 0.4–3 m at site TP03.

The tested profiles exhibit a general trend of increasing sodicity with depth, transitioning from non-sodic (ESP < 15%) in the upper layers to strongly sodic (ESP > 15%) in the deeper layers. This pattern is typical of sodic soils, where the B2 horizon often shows both elevated clay content and higher sodicity. Based on these characteristics, the soils of the site are classed as sodosols under the Australian soil classification framework.

The distribution of soil sodicity – as determined by ESP – for each soil observation site is detailed in the soil logs provided in Appendix B.

**Table 4: Exchangeable sodium percent and associated rating.**

| Sample | ESP | ESP rating |
|---|---|---|
| TP01-0.25m | 8.8 | Sodic |
| TP01-0.50m | 19.9 | Strongly sodic |
| TP01-1.00m | 28.9 | Strongly sodic |
| TP01-2.00m | 31.4 | Strongly sodic |
| TP03-0.25m | 5.4 | Non-sodic |
| TP03-0.75m | 14.0 | Strongly sodic |
| TP03-2.00m | 16.7 | Strongly sodic |
| TP03-2.50m | 17.8 | Strongly sodic |
| TP04-0.25m | 12.1 | Sodic |
| TP04-0.50m | 13.6 | Sodic |
| TP04-1.25m | 34.4 | Strongly sodic |
| TP04-2.00m | 33.8 | Strongly sodic |
| TP16-0.25m | 9.8 | Sodic |
| TP16-0.50m | 11.3 | Sodic |
| TP16-1.00m | 28.9 | Strongly sodic |
| TP16-2.75m | 34.3 | Strongly sodic |
| TP19-0.25m | 2.6 | Non-sodic |
| TP19-0.50m | 3.3 | Non-sodic |
| TP19-1.00m | 9.5 | Sodic |
| TP19-2.75m | 16.3 | Strongly sodic |

| Sample | ESP | ESP rating |
|---|---|---|
| TP21-0.25m | 9.2 | Sodic |
| TP21-0.50m | 11.8 | Sodic |
| TP21-2.00m | 20.7 | Strongly sodic |
| TP21-3.00m | 22.2 | Strongly sodic |
| TP29-0.25m | 6.0 | Sodic |
| TP29-0.75m | 18.9 | Strongly sodic |
| TP29-1.50m | 24.2 | Strongly sodic |
| TP29-3.00m | 26.2 | Strongly sodic |
| TP32-0.25m | 8.6 | Sodic |
| TP32-0.50m | 15.2 | Strongly sodic |
| TP32-1.25m | 27.3 | Strongly sodic |
| TP32-2.00m | 26.7 | Strongly sodic |
| TP36-0.25m | 8.9 | Sodic |
| TP36-0.50m | 14.7 | Strongly sodic |
| TP36-1.00m | 23.2 | Strongly sodic |
| TP36-2.50m | 30.7 | Strongly sodic |

### 4.3.2 EMERSON AGGREGATE TEST

The Emerson aggregate test measures the soil's susceptibility to dispersion when exposed to water. Dispersion refers to the tendency of the clay fraction in a soil to disaggregate into individual particles or colloids when suspended in water. This property is an indicator of soil structural stability and its susceptibility to issues like surface sealing under irrigation or rainfall. Dispersion testing evaluates the soil's behaviour in water and classifies it into one of eight classes based on the cohesion of soil aggregates in suspension. These classes provide insight into the soil's stability and erosion risk. For further information on the classes and the Emerson aggregate test methodology, see https://www.environment.nsw.gov.au/resources/soils/testmethods/eat.pdf.

According to Douglas Partners Pty Ltd (2023), the Brisbane City Council (2010) simplified the Emerson class numbers for site assessments, interpreting them as follows:

- Classes 1 and 2: very high potential for erosion;
- Class 3: high potential for erosion;
- Classes 4 to 6: generally medium potential for erosion; and
- Classes 7 and 8: low potential for erosion.

The Emerson class results from site samples varied. All classes were represented, apart from class 8 (indicating no swelling and no slaking).

Surface samples (0.25 m) at sites TP03, TP16, TP21, TP29 and TP36 have an Emerson class of 7. This indicates that no slaking occurred and the soils were subject to swelling. The chance of aggregation breakdown and erosion within these samples is reduced. However, these areas may be prone to waterlogging. The surface samples at the remaining sites (TP19, TP32, TP01 and TP04) have an Emerson class of 3, indicating a high potential for erosion.

With the exception of sites TP19, TP32 and TP29, all subsoils (below 0.25 m) have an Emerson class of 1, 2 or 3, indicating a high susceptibility to aggregation breakdown and erosion. The sample from TP19 at a depth of 0.50 m showed a reduced erosion potential, with an Emerson class of 5. The sample from TP32 exhibited an Emerson class of 7 (not prone to breakdown but subject to swelling). At TP29, aggregation breakdown was observed but was limited due to the presence of natural carbonates.

In summary, the Emerson aggregation analysis has found that:

- Surface soils are prone to either swelling (class 7) or have a high potential for erosion/aggregation breakdown (class 3); and
- Most subsoils have a very high (class 1 or 2) or high (class 3) potential for erosion/aggregation breakdown.

**Table 5: Emerson classifications for each sample.**

| Sample | Emerson class |
|---|---|
| TP01-0.25m | 3 |
| TP01-0.50m | 2 |
| TP01-1.00m | 2 |
| TP01-2.00m | 2 |
| TP03-0.25m | 7 |
| TP03-0.75m | 3 |
| TP03-2.00m | 2 |
| TP03-2.50m | 1 |
| TP04-0.25m | 3 |
| TP04-0.50m | 3 |
| TP04-1.25m | 2 |
| TP04-2.00m | 2 |
| TP16-0.25m | 7 |
| TP16-0.50m | 7 |
| TP16-1.00m | 2 |
| TP16-2.75m | 2 |
| TP19-0.25m | 3 |
| TP19-0.50m | 5 |
| TP19-1.00m | 3 |
| TP19-2.75m | 2 |
| TP21-0.25m | 7 |
| TP21-0.50m | 2 |
| TP21-2.00m | 1 |
| TP21-3.00m | 2 |
| TP29-0.25m | 7 |
| TP29-0.75m | 4 |
| TP29-1.50m | 3 |

| Sample | Emerson class |
|---|---|
| TP29-3.00m | 2 |
| TP32-0.25m | 3 |
| TP32-0.50m | 7 |
| TP32-1.25m | 1 |
| TP32-2.00m | 2 |
| TP36-0.25m | 7 |
| TP36-0.50m | 2 |
| TP36-1.00m | 2 |
| TP36-2.50m | 3 |

## 4.4 NUTRIENTS

Assessment of nutrient requirements are generally tailored to a specific land-use outcome. As these soils are in their natural state, they serve as the baseline for the site and, if required, any future remedial works associated with project activities. The following is a summary of the nutrient levels found within the soils tested:

- Ammonia: below the limit of reporting (LOR; <20 mg/kg) for all soils tested.
- Nitrite: below the LOR (<0.1 mg/kg) for all soils tested.
- Nitrate: ranged from <0.1 to 1.3 mg/kg, all of which are regarded as very low.
- Total nitrogen: ranged from 600 to 1,660 mg/kg in surface samples, indicating a low to moderate classification, and 50–810 mg/kg in subsoil samples, indicating a very low to low classification. Most subsoil samples were below 500 mg/kg, indicating that nitrogen cycling in the subsoils may be somewhat limited. Overall, nitrogen levels in both sub- and surface layers are generally considered low to very low.
- Total phosphorus: ranged from 64 to 295 mg/kg in surface soils and 35–266 mg/kg in subsoils.
- The bicarbonate extractable phosphorus (Colwell) values ranged from <5 to 10 mg/kg. Such values are considered very low to low.
- Bicarbonate extractable potassium (Colwell) values ranged from <100 to 457 mg/kg. The critical (minimum) concentration for plant uptake in clay loam soils is 161 mg/kg. Only two samples (TP03-2.0m and TP36-0.25m) were below this threshold.
- Organic matter: ranged from 0.5% to 2.6% in surface soils, indicating a low to moderate classification, and <0.5%–1.8% in subsoils, suggesting a low to extremely low classification.
- Diethylenetriaminepentaacetic acid (DTPA) extractible copper ranged from <1 to 2 mg/kg. The optimal range for plant growth is between 1 and 40 mg/kg. All surface samples were within that range, albeit at the lower end of the optimal range. It is likely that the soils are copper-deficient. For optimal plant growth, the target for plant tissue is 6 mg/kg.
- DTPA extractible iron ranged from 7 to 127 mg/kg. No optimal range is given for plant growth. However, the target for plant tissue is 100 mg/kg.
- DTPA extractible manganese ranged from 1 to 25 mg/kg. The optimal range for plant growth is between 30 and 500 mg/kg. It is likely that the soils are manganese-deficient. For optimal plant growth, the target for plant tissue is 50 mg/kg.

- DTPA extractible zinc ranged from <1 to 3 mg/kg. The optimal range for plant growth is between 3 and 100 mg/kg. It is likely that the soils are zinc-deficient. For optimal plant growth, the target for plant tissue is 20 mg/kg.

## 4.5 SOIL CONTAMINATION ASSESSMENT

A preliminary review of site aerial photographs (from QImagery https://qimagery.information.qld.gov.au/) from the 1960s to the present indicates that the site remains largely undeveloped, classifying it as a greenfield area. All vegetation within the allotment is classified as remnant, indicating that the site has avoided large-scale modification. However, modifications are likely present on the adjacent allotment to the south, where the installation of a small dam in the 1970s may have altered the natural drainage of the site. It is likely that the site has been used for periodic cattle grazing.

Although the historical land uses of the area are minimal, the possibility of contamination cannot be excluded. The broader area (defined by the saline flats/coastal aggregation associated with Sandy Creek, Sandfly Creek, Stuart creek and the Ross River which is locally known as savannah) has been used for illegal dumping, which could also have occurred on the site and resulted in soil contamination.

### 4.5.1 METALS AND INORGANICS

Heavy metals commonly associated with historical dumping activities include arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc. These metals tend to bind to soils in alkaline environments, becoming mobile only when erosion or sediment transportation occurs. Leaching to groundwater is a key off-site migration pathway for heavy metals, potentially exposing aquatic ecosystems to contaminants under certain conditions. Therefore, the potential for contaminants to leach from soils must be carefully considered in environmental assessments. Both terrestrial and aquatic environments can experience harmful effects due to the toxicity of heavy metals.

An assessment of the metal concentrations within the soils at the project site found that all samples were compliant with relevant NEPC (2013) guideline values, with no non-compliances recorded above the most stringent health investigation levels (HILs) criteria (HIL-A).

### 4.5.2 HYDROCARBONS

Various types of petroleum hydrocarbons were targeted across the site, including the following hydrocarbon suites:

- Monocyclic aromatic hydrocarbons (MAHs) or BTEXN – These compounds are typically associated with solvents and light fuels. Although large quantities are unlikely to be stored or used in extensive quantities across the project site, they may be employed for equipment maintenance. At lower concentrations, BTEXN compounds are not persistent in the environment but can have significant toxicity to ecology. Given the limited site usage and storage, it is unlikely that they will be a significant source of contamination. All analysed samples recorded MAH levels below the LOR. Therefore, MAH levels are not of concern within the soils of the project site.
- PAHs – PAHs are generally associated with oils and greases likely used in maintenance of vehicles. There is potential for the migration of PAHs from impacted areas via surface and groundwater flow. One of the primary concerns associated with the assessment of PAHs is the carcinogenic hazard posed by benzo(a)pyrene and other heavier PAH compounds.PAHs were recorded below the LOR in all analysed samples. Therefore, PAH levels are not of concern within the soils of the project site.

- Total petroleum hydrocarbons (TPHs) – These are generally associated with fuels, oils and greases used in the maintenance of vehicles at the project site. Similar to PAHs, there is the potential for the migration of TPHs via surface and groundwater flow. The development of health-based criteria for TPHs is problematic and subject to debate, given that TPHs represent a complex mixture of compounds. Toxicity assessments usually concentrate on MAHs and PAHs rather than the broader TPHs.TPHs were recorded below the LOR in all analysed samples. Therefore, TPH levels are not of concern within the soils of the project site.

### 4.5.3 PHENOLS

Phenols – which are derived from aromatic hydrocarbons – are chemically distinguished by the presence of a hydroxyl group, which influences their behaviour. All samples tested for phenol, pentachlorophenol, 2,4,5-trichlorophenol and 2,4-dichlorophenol returned values below the LOR. They are, therefore, compliant with the HIL-A criteria. Additionally, all other phenolic compounds tested in the samples were also below the LOR.

### 4.5.4 PESTICIDES

All samples tested for organochlorine pesticides – including endosulfan, endrin, heptachlor, methoxychlor, mirex and the sum of DDD + DDE + DDT (dichlorodiphenyldichloroethane, -dichloroethylene and -trichloroethane) – returned levels below the laboratory LOR. Consequently, all samples comply with HIL-A criteria and the proposed development scenario. Similarly, all organophosphorus pesticide samples were below the LOR. Additionally, all samples tested for atrazine and chlorpyrifos returned results below the laboratory LOR and are in compliance with HIL-A criteria.

### 4.5.5 POLYCHLORINATED BIPHENYLS

PCBs are highly stable, synthetic chemicals that were historically used in a wide range of industrial applications. PCBs are considered a major environmental concern due to their persistence in the environment, ability to bioaccumulate in food chains, and significant toxic risks to both ecosystems and human health.All samples tested for PCBs have returned values below the LOR. They are therefore compliant with HIL-A criteria

## 4.6 ACID SULPHATE SOILS

A total of 432 field screens and 113 chromium suit tests were carried out for these works. The results of these tests are summarised in Table 6, with pHf values compared against the criteria outlined in Sullivan et al. (2018) which are specific to acid sulphate soil assessment and should not be confused with the assessment made in section 4.2.1 of this report. Which is a general assessment of soil pH in the context of soil health.

The $pH_F$ of the soils ranged from 5.4 to 9.6. Out of 432 samples tested, five samples from four sites (TP17, TP18, TP19 and TP24) returned a pH value below 6. These samples – collected at 0.25 m depth from sites TP17, TP18, TP19 and TP24, and at 0.50 m at TP19 – are inferred to be highly acidic. However, it cannot be conclusively determined that the low pH is due to pyrite oxidation. Based on these results, the distribution of ASS at the site may be limited and, if present, ASS is expected to occur at relatively low levels.

The $pH_{Fox}$ of the soils ranged from 2.5 to 9.3. Of the 432 samples tested:

- Two samples (at 0.25 m) had a $pH_{fox}$ below 3, indicating inferred PASS;
- Fifteen (15) samples (at 0.25 m) had a $pH_{fox}$ between 3 and 4, also indicating inferred PASS;

- Twenty-six (26) samples had a $pH_{fox}$ between 4 and 5, which indicates the presence of sulphides, potential poor reactivity, or the presence of fine carbonates (none of these samples exceeded a depth of 1 m);
- Forty-seven (47) samples had a $pH_{fox}$ between 5 and 6, making them unlikely to be PASS. However, these results are inconclusive, with sample depths ranging from 0.25 m to 2.75 m; and
- The remaining 341 samples returned a $pH_{fox}$ value above 6.

Both Dear et al. (2014) and Sullivan et al. (2018) outline action criteria based on soil texture and the degree of disturbance. It is assumed that the levels of disturbance resulting from construction activities is likely to exceed 1,000 t. Therefore, the action criteria outlined in both guidelines are set at ≥0.03% sulphur and 18 mole $H^+$/tonne. Of the 113 samples tested for chromium reducible sulphur:

- Eighteen (18) samples from 18 sites exceeded the threshold of 18 mole $H^+$/tonne or 0.03% sulphur, with values ranging from 18 to 35 mole $H^+$/tonne and 0.03% to 0.06% sulphur. All of these samples were obtained at a depth of 0.25 m;
- Fifteen (15) samples returned mole $H^+$/tonne values above the LOR but below 18 mole $H^+$/tonne;
- These 33 samples were collected from 29 sites; and
- The remaining 80 samples returned values below the LOR.

Based on these results, materials capable of generating acid at actionable levels were identified in surface layers at 18 of the 36 sampled sites. The distribution (i.e. lateral extent) and thickness (i.e. vertical depth) as determined from lithology and testing of PASS – confined to the top 1 m – are displayed in Figure 7. From these data, it is estimated that 36,153 $m^3$ of actionable ASS exist on the site. Given the bulk density of these materials ranging from 1,080 to 1,450 kg/$m^3$, up to 52,500 tonne of material potentially require neutralisation.

Although the presence of acid-generating potential is noted, the magnitude is relatively minor compared to other sites in the region, where values as high as 350 mole $H^+$/tonne have been recorded. The estimated lime treatment required to neutralise these acid-bearing sediments ranges from 1 kg/tonne to 3 kg/tonne, depending on the acidity level.

Despite the low acid-generating potential of the sediments, the extent of site disturbance and the proximity to sensitive environmental receptors necessitate the development of site-specific ASS mitigation measures to be included in an environmental management plan. This plan must address the type and extent of disturbances within all areas identified as containing ASS/PASS. Even under the minimum treatment scenario across the site, more than 53 tonnes of lime will be required for neutralisation, which is classified as an extra-high level of treatment according to Dear et al. (2014).

However, given the nature of the identified ASS/PASS (characterised by relatively low acidity levels and confined to surface layers), management is expected to be relatively straightforward. Techniques involving avoidance and neutralisation are anticipated to effectively mitigate risks. These strategies will need further refinement within the site-specific ASS management plan to address both construction and operational activities at the site.

The distribution of ASS/PASS at each soil observation site is detailed in the soil logs provided in Appendix A and Appendix B. Laboratory analysis results for all sites are available in Appendix C.




**Figure 7: Thickness of ASS/Pass material in meters.**

**Table 6: Summary of AASS/PASS results.**

| Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S | Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP01-0.25m | 7.7 | 5 | 1 | 2.7 | – | – | TP02-0.25m | 6.4 | 3.6 | 2 | 2.8 | – | – |
| TP01-0.50m | 8.2 | 5.2 | 1 | 3 | 12 | 0.02 | TP02-0.50m | 8.4 | 4.5 | 2 | 3.9 | <10 | <0.02 |
| TP01-0.75m | 8.7 | 5.8 | 1 | 2.9 | – | – | TP02-0.75m | 9.1 | 8.2 | 4 | 0.9 | – | – |
| TP01-1.00m | 9.6 | 7.2 | 4 | 2.4 | – | – | TP02-1.00m | 9.2 | 7.9 | 4 | 1.3 | – | – |
| TP01-1.25m | 9.3 | 6.7 | 4 | 2.6 | – | – | TP02-1.25m | 9.0 | 5.9 | 2 | 3.1 | <10 | <0.02 |
| TP01-1.50m | 9.1 | 6.8 | 4 | 2.3 | <10 | <0.02 | TP02-1.50m | 8.5 | 8 | 4 | 0.5 | <10 | <0.02 |
| TP01-1.75m | 8.9 | 8.8 | 4 | 0.1 | – | – | TP02-1.75m | 8.7 | 8.3 | 4 | 0.4 | – | – |
| TP01-2.00m | 9.0 | 8.9 | 4 | 0.1 | – | – | TP02-2.00m | 8.7 | 8.3 | 4 | 0.4 | – | – |
| TP01-2.25m | 8.8 | 8.3 | 4 | 0.5 | – | – | TP02-2.25m | 8.6 | 8.4 | 4 | 0.2 | – | – |
| TP01-2.50m | 8.8 | 6.7 | 4 | 2.1 | <10 | <0.02 | TP02-2.50m | 8.4 | 8.3 | 4 | 0.1 | – | – |
| TP01-2.75m | 8.8 | 8.4 | 4 | 0.4 | – | – | TP02-2.75m | 8.8 | 8.4 | 4 | 0.4 | – | – |
| TP01-3.00m | 9.2 | 7.3 | 4 | 1.9 | – | – | TP02-3.00m | 8.6 | 8.3 | 4 | 0.3 | <10 | <0.02 |
| TP03-0.25m | 8.4 | 6.3 | 4 | 2.1 | – | – | TP04-0.25m | 7.6 | 4.2 | 3 | 3.4 | **31** | **0.05** |
| TP03-0.50m | 8.7 | 7.2 | 4 | 1.5 | – | – | TP04-0.50m | 7.4 | 5.1 | 2 | 2.3 | – | – |
| TP03-0.75m | 8.4 | 6.2 | 4 | 2.2 | <10 | <0.02 | TP04-0.75m | 7.9 | 5.4 | 2 | 2.5 | – | – |
| TP03-1.00m | 8.3 | 7.5 | 4 | 0.8 | – | – | TP04-1.00m | 8.7 | 8.1 | 4 | 0.6 | – | – |
| TP03-1.25m | 8.3 | 7.6 | 4 | 0.7 | – | – | TP04-1.25m | 8.8 | 8.6 | 4 | 0.2 | – | – |
| TP03-1.50m | 8.4 | 7.6 | 4 | 0.8 | – | – | TP04-1.50m | 8.7 | 6.2 | 2 | 2.5 | <10 | <0.02 |
| TP03-1.75m | 8.4 | 7.4 | 4 | 1 | – | – | TP04-1.75m | 8.5 | 8.3 | 4 | 0.2 | – | – |
| TP03-2.00m | 8.6 | 6 | 2 | 2.6 | <10 | <0.02 | TP04-2.00m | 8.6 | 7.7 | 4 | 0.9 | – | – |
| TP03-2.25m | 8.8 | 5.9 | 2 | 2.9 | – | – | TP04-2.25m | 8.6 | 8.4 | 4 | 0.2 | – | – |
| TP03-2.50m | 9.0 | 6.2 | 4 | 2.8 | – | – | TP04-2.50m | 8.6 | 8.6 | 4 | 0 | – | – |
| TP03-2.75m | 9.2 | 6.3 | 4 | 2.9 | – | – | TP04-2.75m | 8.5 | 8.4 | 4 | 0.1 | – | – |
| TP03-3.00m | 9.2 | 6.2 | 4 | 3 | <10 | <0.02 | TP04-3.00m | 8.4 | 8.3 | 4 | 0.1 | <10 | <0.02 |
| TP05-0.25m | 8.1 | 5.2 | 1 | 2.9 | **18** | **0.03** | TP06-0.25m | 6.1 | 3.3 | 3 | 2.8 | **22** | **0.04** |
| TP05-0.50m | 7.4 | 5.4 | 4 | 2 | – | – | TP06-0.50m | 6.9 | 4.7 | 2 | 2.2 | – | – |
| TP05-0.75m | 8.5 | 7.1 | 4 | 1.4 | – | – | TP06-0.75m | 7.4 | 5.1 | 2 | 2.3 | – | – |
| TP05-1.00m | 8.7 | 6.5 | 4 | 2.2 | – | – | TP06-1.00m | 7.9 | 5.4 | 2 | 2.5 | – | – |
| TP05-1.25m | 9.3 | 6.1 | 4 | 3.2 | <10 | <0.02 | TP06-1.25m | 8.7 | 6.1 | 2 | 2.6 | <10 | <0.02 |
| TP05-1.50m | 9.0 | 8.7 | 4 | 0.3 | – | – | TP06-1.50m | 8.1 | 7.1 | 4 | 1 | – | – |

| Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S | Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP05-1.75m | 8.9 | 7.5 | 4 | 1.4 | – | – | TP06-1.75m | 8.2 | 8 | 4 | 0.2 | – | – |
| TP05-2.00m | 8.8 | 6.6 | 4 | 2.2 | – | – | TP06-2.00m | 7.9 | 8 | 4 | -0.1 | – | – |
| TP05-2.25m | 8.8 | 6.6 | 4 | 2.2 | <10 | <0.02 | TP06-2.25m | 7.5 | 8 | 4 | -0.5 | – | – |
| TP05-2.50m | 8.9 | 8.1 | 4 | 0.8 | – | – | TP06-2.50m | 7.8 | 8 | 4 | -0.2 | – | – |
| TP05-2.75m | 8.8 | 8.2 | 4 | 0.6 | – | – | TP06-2.75m | 7.9 | 8.2 | 4 | -0.3 | – | – |
| TP05-3.00m | 8.7 | 6.7 | 4 | 2 | – | – | TP06-3.00m | 8.0 | 8.1 | 4 | -0.1 | <10 | <0.02 |
| TP07-0.25m | 6.0 | 3.5 | 3 | 2.5 | **28** | **0.04** | TP08-0.25m | 8.1 | 5.1 | 3 | 3 | **13** | **0.02** |
| TP07-0.50m | 6.7 | 4.2 | 3 | 2.5 | – | – | TP08-0.50m | 8.7 | 5.8 | 2 | 2.9 | – | – |
| TP07-0.75m | 8.3 | 5.7 | 2 | 2.6 | <10 | <0.02 | TP08-0.75m | 8.5 | 5.9 | 2 | 2.6 | – | – |
| TP07-1.00m | 8.4 | 8.2 | 4 | 0.2 | – | – | TP08-1.00m | 9.0 | 6.6 | 2 | 2.4 | – | – |
| TP07-1.25m | 8.5 | 8.4 | 4 | 0.1 | – | – | TP08-1.25m | 8.7 | 6.8 | 2 | 1.9 | – | – |
| TP07-1.50m | 8.3 | 8.4 | 4 | -0.1 | – | – | TP08-1.50m | 8.5 | 8.4 | 4 | 0.1 | – | – |
| TP07-1.75m | 8.3 | 7.7 | 4 | 0.6 | <10 | <0.02 | TP08-1.75m | 8.5 | 6.2 | 2 | 2.3 | <10 | <0.02 |
| TP07-2.00m | 8.0 | 8 | 4 | 0 | – | – | TP08-2.00m | 8.4 | 8.4 | 4 | 0 | – | – |
| TP07-2.25m | 7.9 | 8.4 | 4 | -0.5 | – | – | TP08-2.25m | 8.6 | 7.6 | 2 | 1 | – | – |
| TP07-2.50m | 8.1 | 8.4 | 4 | -0.3 | – | – | TP08-2.50m | 8.5 | 8.6 | 4 | -0.1 | – | – |
| TP07-2.75m | 8.1 | 5.9 | 2 | 2.2 | <10 | <0.02 | TP08-2.75m | 8.6 | 8.6 | 4 | 0 | – | – |
| TP07-3.00m | 8.3 | 8.1 | 4 | 0.2 | – | – | TP08-3.00m | 8.7 | 6.3 | 4 | 2.4 | <10 | <0.02 |
| TP09-0.25m | 6.8 | 3.8 | 3 | 3 | **12** | **<0.02** | TP10-0.25m | 6.7 | 4 | 2 | 2.7 | – | – |
| TP09-0.50m | 7.4 | 5.9 | 4 | 1.5 | – | – | TP10-0.50m | 6.7 | 4.2 | 2 | 2.5 | – | – |
| TP09-0.75m | 8.4 | 5.7 | 2 | 2.7 | – | – | TP10-0.75m | 6.8 | 4.4 | 2 | 2.4 | – | – |
| TP09-1.00m | 8.4 | 6.1 | 2 | 2.3 | – | – | TP10-1.00m | 6.2 | 4.1 | 2 | 2.1 | **12** | **<0.02** |
| TP09-1.25m | 9.0 | 6.3 | 2 | 2.7 | <10 | <0.02 | TP10-1.25m | 9.1 | 8.3 | 4 | 0.8 | – | – |
| TP09-1.50m | 8.6 | 7.6 | 4 | 1 | – | – | TP10-1.50m | 9.0 | 8.3 | 4 | 0.7 | – | – |
| TP09-1.75m | 8.6 | 8.4 | 4 | 0.2 | – | – | TP10-1.75m | 8.8 | 8.2 | 4 | 0.6 | – | – |
| TP09-2.00m | 8.9 | 7.9 | 4 | 1 | – | – | TP10-2.00m | 8.4 | 8.1 | 4 | 0.3 | <10 | <0.02 |
| TP09-2.25m | 9.1 | 6.7 | 4 | 2.4 | <10 | <0.02 | TP10-2.25m | 8.0 | 7.7 | 4 | 0.3 | – | – |
| TP09-2.50m | 9.0 | 7.7 | 4 | 1.3 | – | – | TP10-2.50m | 8.4 | 5.5 | 2 | 2.9 | – | – |
| TP09-2.75m | 8.6 | 7.8 | 4 | 0.8 | – | – | TP10-2.75m | 8.0 | 5.5 | 2 | 2.5 | <10 | <0.02 |
| TP09-3.00m | 8.5 | 7.9 | 4 | 0.6 | – | – | TP10-3.00m | 8.0 | 7.4 | 4 | 0.6 | – | – |
| TP11-0.25m | 7.8 | 5.9 | 2 | 1.9 | – | – | TP12-0.25m | 6.5 | 3.8 | 3 | 2.7 | **26** | **0.04** |

| Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S | Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP11-0.50m | 7.3 | 5 | 2 | 2.3 | <10 | <0.02 | TP12-0.50m | 6.9 | 4.8 | 4 | 2.1 | – | – |
| TP11-0.75m | 8.3 | 8 | 4 | 0.3 | – | – | TP12-0.75m | 7.8 | 5.6 | 2 | 2.2 | – | – |
| TP11-1.00m | 8.4 | 7.5 | 4 | 0.9 | <10 | <0.02 | TP12-1.00m | 8.9 | 7.9 | 4 | 1 | – | – |
| TP11-1.25m | 8.4 | 8.4 | 4 | 0 | – | – | TP12-1.25m | 8.6 | 8.3 | 4 | 0.3 | – | – |
| TP11-1.50m | 8.2 | 8.3 | 4 | -0.1 | – | – | TP12-1.50m | 8.6 | 5.9 | 1 | 2.7 | – | – |
| TP11-1.75m | 8.2 | 8.3 | 4 | -0.1 | – | – | TP12-1.75m | 8.6 | 5.8 | 1 | 2.8 | <10 | <0.02 |
| TP11-2.00m | 8.5 | 8.7 | 4 | -0.2 | – | – | TP12-2.00m | 8.6 | 6 | 2 | 2.6 | – | – |
| TP11-2.25m | 8.3 | 7 | 2 | 1.3 | <10 | <0.02 | TP12-2.25m | 8.7 | 8.3 | 4 | 0.4 | – | – |
| TP11-2.50m | 8.2 | 7.5 | 2 | 0.7 | – | – | TP12-2.50m | 8.5 | 9 | 4 | -0.5 | – | – |
| TP11-2.75m | 8.6 | 7.6 | 2 | 1 | – | – | TP12-2.75m | 8.7 | 6 | 2 | 2.7 | <10 | <0.02 |
| TP11-3.00m | 8.7 | 8.6 | 4 | 0.1 | – | – | TP12-3.00m | 8.8 | 8.4 | 4 | 0.4 | – | – |
| TP13-0.25m | 7 | 3.7 | 2 | 3.3 | <10 | <0.02 | TP14-0.25m | 6.2 | 3.6 | 2 | 2.6 | **19** | **0.03** |
| TP13-0.50m | 7.6 | 5.7 | 1 | 1.9 | – | – | TP14-0.50m | 7.8 | 5.7 | 2 | 2.1 | – | – |
| TP13-0.75m | 8.1 | 7.6 | 4 | 0.5 | – | – | TP14-0.75m | 7.8 | 5.8 | 2 | 2 | – | – |
| TP13-1.00m | 8.4 | 7.7 | 4 | 0.7 | <10 | <0.02 | TP14-1.00m | 8.7 | 6.7 | 2 | 2 | – | – |
| TP13-1.25m | 8 | 7.8 | 4 | 0.2 | – | – | TP14-1.25m | 8.6 | 7.3 | 4 | 1.3 | – | – |
| TP13-1.50m | 8.4 | 8.1 | 4 | 0.3 | – | – | TP14-1.50m | 9 | 8.3 | 4 | 0.7 | <10 | <0.02 |
| TP13-1.75m | 8.4 | 7.4 | 4 | 1 | – | – | TP14-1.75m | 8.4 | 8.1 | 4 | 0.3 | – | – |
| TP13-2.00m | 8.5 | 6.1 | 2 | 2.4 | – | – | TP14-2.00m | 8.4 | 8.2 | 4 | 0.2 | – | – |
| TP13-2.25m | 8.5 | 6 | 2 | 2.5 | <10 | <0.02 | TP14-2.25m | 8.6 | 8.3 | 4 | 0.3 | – | – |
| TP13-2.50m | 8.5 | 7.6 | 4 | 0.9 | – | – | TP14-2.50m | 9 | 8.2 | 4 | 0.8 | <10 | <0.02 |
| TP13-2.75m | 8.5 | 8.1 | 4 | 0.4 | – | – | TP14-2.75m | 9 | 8.6 | 4 | 0.4 | – | – |
| TP13-3.00m | 8.5 | 8.2 | 4 | 0.3 | – | – | TP14-3.00m | 9 | 8.6 | 4 | 0.4 | – | – |
| TP15-0.25m | 6.8 | 3.4 | 3 | 3.4 | **19** | **0.03** | TP16-0.25m | 7.2 | 4.4 | 2 | 2.8 | **25** | **0.04** |
| TP15-0.50m | 7 | 4.6 | 2 | 2.4 | – | – | TP16-0.50m | 7 | 4.8 | 3 | 2.2 | – | – |
| TP15-0.75m | 8.2 | 7.3 | 4 | 0.9 | – | – | TP16-0.75m | 7.3 | 5.3 | 3 | 2 | – | – |
| TP15-1.00m | 6.8 | 4.8 | 2 | 2 | **16** | **0.02** | TP16-1.00m | 8.4 | 5.8 | 2 | 2.6 | – | – |
| TP15-1.25m | 7.9 | 7.2 | 4 | 0.7 | – | – | TP16-1.25m | 8.3 | 8.2 | 4 | 0.1 | – | – |
| TP15-1.50m | 8.1 | 6.2 | 2 | 1.9 | <10 | <0.02 | TP16-1.50m | 8.4 | 5.9 | 2 | 2.5 | <10 | <0.02 |
| TP15-1.75m | 8.1 | 8.2 | 4 | -0.1 | – | – | TP16-1.75m | 8.5 | 8.3 | 4 | 0.2 | – | – |
| TP15-2.00m | 7.8 | 8 | 4 | -0.2 | – | – | TP16-2.00m | 8.5 | 6 | 2 | 2.5 | – | – |

| Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S | Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP15-2.25m | 7.8 | 8.3 | 4 | -0.5 | – | – | TP16-2.25m | 8.4 | 8.4 | 4 | 0 | – | – |
| TP15-2.50m | 8.2 | 8.4 | 4 | -0.2 | – | – | TP16-2.50m | 8.3 | 6 | 2 | 2.3 | <10 | <0.02 |
| TP15-2.75m | 8.2 | 8.2 | 4 | 0 | – | – | TP16-2.75m | 8.1 | 5.9 | 2 | 2.2 | – | – |
| TP15-3.00m | 8.6 | 7 | 2 | 1.6 | <10 | <0.02 | TP16-3.00m | 7.9 | 8.1 | 4 | -0.2 | – | – |
| TP17-0.25m | 5.6 | 3.2 | 3 | 2.4 | **23** | **0.04** | TP18-0.25m | 5.7 | 2.7 | 2 | 3 | **16** | **0.02** |
| TP17-0.50m | 7.2 | 5.2 | 2 | 2 | – | – | TP18-0.50m | 7.8 | 5.5 | 2 | 2.3 | – | – |
| TP17-0.75m | 9 | 6.6 | 2 | 2.4 | – | – | TP18-0.75m | 8.2 | 7.4 | 4 | 0.8 | – | – |
| TP17-1.00m | 9.1 | 8.8 | 4 | 0.3 | – | – | TP18-1.00m | 8.9 | 7.5 | 4 | 1.4 | – | – |
| TP17-1.25m | 8.4 | 6.6 | 4 | 1.8 | – | – | TP18-1.25m | 8.6 | 7.7 | 4 | 0.9 | <10 | <0.02 |
| TP17-1.50m | 8.5 | 7.4 | 4 | 1.1 | <10 | <0.02 | TP18-1.50m | 8.4 | 7.9 | 4 | 0.5 | – | – |
| TP17-1.75m | 8.4 | 7.2 | 4 | 1.2 | – | – | TP18-1.75m | 8.1 | 8 | 4 | 0.1 | – | – |
| TP17-2.00m | 8.6 | 8.2 | 4 | 0.4 | – | – | TP18-2.00m | 8.1 | 8 | 4 | 0.1 | – | – |
| TP17-2.25m | 8.4 | 8.2 | 4 | 0.2 | – | – | TP18-2.25m | 8.6 | 8.2 | 4 | 0.4 | <10 | <0.02 |
| TP17-2.50m | 8.4 | 6.6 | 4 | 1.8 | <10 | <0.02 | TP18-2.50m | 8.8 | 9 | 4 | -0.2 | – | – |
| TP17-2.75m | 8.3 | 8.2 | 4 | 0.1 | – | – | TP18-2.75m | 8.8 | 8.6 | 4 | 0.2 | – | – |
| TP17-3.00m | 8.7 | 7.5 | 4 | 1.2 | – | – | TP18-3.00m | 8.9 | 8.8 | 4 | 0.1 | – | – |
| TP19-0.25m | 5.4 | 4.4 | 3 | 1 | **34** | **0.05** | TP20-0.25m | 6.4 | 4.3 | 2 | 2.1 | **17** | **0.03** |
| TP19-0.50m | 5.8 | 4.7 | 2 | 1.1 | – | – | TP20-0.50m | 6.8 | 5.1 | 2 | 1.7 | – | – |
| TP19-0.75m | 6.4 | 4.9 | 2 | 1.5 | – | – | TP20-0.75m | 9.2 | 8.9 | 4 | 0.3 | – | – |
| TP19-1.00m | 6.8 | 5.2 | 2 | 1.6 | **12** | **<0.02** | TP20-1.00m | 8.8 | 7.5 | 4 | 1.3 | – | – |
| TP19-1.25m | 7.3 | 6.6 | 2 | 0.7 | – | – | TP20-1.25m | 8.6 | 7.7 | 4 | 0.9 | – | – |
| TP19-1.50m | 7.1 | 7.8 | 4 | -0.7 | – | – | TP20-1.50m | 8.6 | 7.6 | 4 | 1 | – | – |
| TP19-1.75m | 7.9 | 8 | 4 | -0.1 | – | – | TP20-1.75m | 8.4 | 6.8 | 4 | 1.6 | <10 | <0.02 |
| TP19-2.00m | 7.7 | 7.6 | 4 | 0.1 | – | – | TP20-2.00m | 8.3 | 7.4 | 4 | 0.9 | – | – |
| TP19-2.25m | 7.5 | 7.4 | 4 | 0.1 | – | – | TP20-2.25m | 8.4 | 7.6 | 4 | 0.8 | – | – |
| TP19-2.50m | 7.5 | 6 | 2 | 1.5 | – | – | TP20-2.50m | 9 | 8.1 | 4 | 0.9 | – | – |
| TP19-2.75m | 7.6 | 7.9 | 4 | -0.3 | – | – | TP20-2.75m | 8.7 | 8.4 | 4 | 0.3 | – | – |
| TP19-3.00m | 7.7 | 6.3 | 2 | 1.4 | **14** | **0.02** | TP20-3.00m | 8.4 | 7.5 | 4 | 0.9 | <10 | <0.02 |
| TP21-0.25m | 6.6 | 3.8 | 3 | 2.8 | **14** | **0.02** | TP22-0.25m | 6.7 | 3.6 | 3 | 3.1 | **21** | **0.03** |
| TP21-0.50m | 8.3 | 6.5 | 4 | 1.8 | – | – | TP22-0.50m | 6.5 | 4.4 | 3 | 2.1 | – | – |
| TP21-0.75m | 9.1 | 8.6 | 4 | 0.5 | – | – | TP22-0.75m | 7.1 | 5.2 | 3 | 1.9 | – | – |

| Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S | Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP21-1.00m | 8.4 | 8.1 | 4 | 0.3 | – | – | TP22-1.00m | 8 | 6.5 | 2 | 1.5 | <10 | <0.02 |
| TP21-1.25m | 8.4 | 8.1 | 4 | 0.3 | <10 | <0.02 | TP22-1.25m | 8 | 7.7 | 4 | 0.3 | – | – |
| TP21-1.50m | 8.4 | 8.3 | 4 | 0.1 | – | – | TP22-1.50m | 7.9 | 8.1 | 4 | -0.2 | – | – |
| TP21-1.75m | 8.6 | 8.4 | 4 | 0.2 | – | – | TP22-1.75m | 7.7 | 7.9 | 4 | -0.2 | – | – |
| TP21-2.00m | 8.8 | 8 | 4 | 0.8 | – | – | TP22-2.00m | 7.7 | 8 | 4 | -0.3 | – | – |
| TP21-2.25m | 8.5 | 8.1 | 4 | 0.4 | – | – | TP22-2.25m | 7.9 | 8.2 | 4 | -0.3 | – | – |
| TP21-2.50m | 8 | 6.7 | 4 | 1.3 | – | – | TP22-2.50m | 8.1 | 8.6 | 4 | -0.5 | – | – |
| TP21-2.75m | 7.8 | 8.4 | 4 | -0.6 | – | – | TP22-2.75m | 8.2 | 8.2 | 4 | 0 | – | – |
| TP21-3.00m | 8.2 | 8.2 | 4 | 0 | <10 | <0.02 | TP22-3.00m | 8.2 | 8.1 | 4 | 0.1 | <10 | <0.02 |
| TP23-0.25m | 6.3 | 4.3 | 4 | 2 | **16** | **0.02** | TP24-0.25m | 5.8 | 2.5 | 3 | 3.3 | **22** | **0.04** |
| TP23-0.50m | 8 | 6.5 | 4 | 1.5 | – | – | TP24-0.50m | 8.5 | 6 | 3 | 2.5 | – | – |
| TP23-0.75m | 8.6 | 7.4 | 4 | 1.2 | – | – | TP24-0.75m | 8.5 | 7.5 | 4 | 1 | – | – |
| TP23-1.00m | 8.2 | 8 | 4 | 0.2 | – | – | TP24-1.00m | 8.6 | 8.4 | 4 | 0.2 | – | – |
| TP23-1.25m | 8.4 | 6.4 | 4 | 2 | – | – | TP24-1.25m | 8.6 | 6.2 | 3 | 2.4 | <10 | <0.02 |
| TP23-1.50m | 8.2 | 6.4 | 4 | 1.8 | – | – | TP24-1.50m | 9 | 9.3 | 4 | -0.3 | – | – |
| TP23-1.75m | 8.4 | 6 | 4 | 2.4 | <10 | <0.02 | TP24-1.75m | 8.9 | 8.9 | 4 | 0 | – | – |
| TP23-2.00m | 8.4 | 7.4 | 4 | 1 | – | – | TP24-2.00m | 8.6 | 8.1 | 4 | 0.5 | – | – |
| TP23-2.25m | 8.3 | 7.4 | 4 | 0.9 | – | – | TP24-2.25m | 9.5 | 8.4 | 4 | 1.1 | <10 | <0.02 |
| TP23-2.50m | 8.6 | 6.5 | 4 | 2.1 | – | – | TP24-2.50m | 9.2 | 8.5 | 4 | 0.7 | – | – |
| TP23-2.75m | 8.2 | 6.3 | 4 | 1.9 | <10 | <0.02 | TP24-2.75m | 9.1 | 8.6 | 4 | 0.5 | – | – |
| TP23-3.00m | 8.5 | 7.5 | 4 | 1 | – | – | TP24-3.00m | 8.9 | 8.8 | 4 | 0.1 | – | – |
| TP25-0.25m | 6.5 | 3.1 | 3 | 3.4 | **33** | **0.05** | TP26-0.25m | 8.5 | 6.5 | 4 | 2 | – | – |
| TP25-0.50m | 6.9 | 4 | 3 | 2.9 | – | – | TP26-0.50m | 8 | 6.5 | 4 | 1.5 | – | – |
| TP25-0.75m | 6.8 | 4.2 | 3 | 2.6 | – | – | TP26-0.75m | 8.1 | 6.6 | 4 | 1.5 | – | – |
| TP25-1.00m | 8.1 | 6 | 2 | 2.1 | <10 | <0.02 | TP26-1.00m | 7.9 | 6.3 | 4 | 1.6 | <10 | <0.02 |
| TP25-1.25m | 8.4 | 7.1 | 4 | 1.3 | – | – | TP26-1.25m | 8.1 | 7.7 | 4 | 0.4 | – | – |
| TP25-1.50m | 8 | 8.1 | 4 | -0.1 | – | – | TP26-1.50m | 8.3 | 8 | 4 | 0.3 | – | – |
| TP25-1.75m | 7.9 | 8 | 4 | -0.1 | – | – | TP26-1.75m | 8.1 | 7.8 | 4 | 0.3 | – | – |
| TP25-2.00m | 7.9 | 8.1 | 4 | -0.2 | – | – | TP26-2.00m | 8.2 | 7.8 | 4 | 0.4 | <10 | <0.02 |
| TP25- 2.25m | 8.3 | 8.5 | 4 | -0.2 | – | – | TP26-2.25m | 8 | 7.8 | 4 | 0.2 | – | – |
| TP25-2.50m | 8.1 | 6.7 | 4 | 1.4 | <10 | <0.02 | TP26-2.50m | 7.8 | 7.7 | 4 | 0.1 | – | – |

| Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S | Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP25-2.75m | 8.4 | 8.7 | 4 | -0.3 | – | – | TP26-2.75m | 8.1 | 7.4 | 4 | 0.7 | – | – |
| TP25-3.00m | 8.2 | 8.4 | 4 | -0.2 | – | – | TP26-3.00m | 8.1 | 7.4 | 4 | 0.7 | <10 | <0.02 |
| TP27-0.25m | 6.2 | 4.8 | 2 | 1.4 | 26 | 0.04 | TP28-0.25m | 7.9 | 3.4 | 3 | 4.5 | 13 | 0.02 |
| TP27-0.50m | 7.3 | 8.2 | 4 | -0.9 | – | – | TP28-0.50m | 7.3 | 4.5 | 3 | 2.8 | – | – |
| TP27-0.75m | 7 | 7.6 | 4 | -0.6 | – | – | TP28-0.75m | 7.5 | 5.8 | 3 | 1.7 | – | – |
| TP27-1.00m | 7.1 | 6.9 | 4 | 0.2 | – | – | TP28-1.00m | 7.9 | 7.8 | 4 | 0.1 | – | – |
| TP27-1.25m | 7.3 | 6.1 | 2 | 1.2 | – | – | TP28-1.25m | 7.8 | 6.5 | 4 | 1.3 | <10 | <0.02 |
| TP27-1.50m | 7.6 | 6.2 | 2 | 1.4 | <10 | <0.02 | TP28-1.50m | 8 | 8.2 | 4 | -0.2 | – | – |
| TP27-1.75m | 7.7 | 8.2 | 4 | -0.5 | – | – | TP28-1.75m | 7.9 | 7.7 | 4 | 0.2 | – | – |
| TP27-2.00m | 7.3 | 7.8 | 3 | -0.5 | – | – | TP28-2.00m | 8 | 7.9 | 4 | 0.1 | <10 | <0.02 |
| TP27-2.25m | 7.8 | 6.3 | 2 | 1.5 | – | – | TP028-2.25m | 8 | 8.2 | 4 | -0.2 | – | – |
| TP27-2.50m | 7.9 | 8.2 | 4 | -0.3 | – | – | TP028-2.50m | 8.1 | 8.2 | 4 | -0.1 | – | – |
| TP27-2.75m | 7.9 | 6.3 | 2 | 1.6 | <10 | <0.02 | TP028-2.75m | 8.1 | 8.2 | 4 | -0.1 | – | – |
| TP27-3.00m | 8.1 | 6.7 | 3 | 1.4 | – | – | TP028-3.00m | 8.2 | 8.3 | 4 | -0.1 | – | – |
| TP29-0.25m | 6.6 | 5 | 4 | 1.6 | <10 | <0.02 | TP30-0.25m | 7.4 | 5.3 | 2 | 2.1 | 28 | 0.04 |
| TP29-0.50m | 7.1 | 6 | 4 | 1.1 | – | – | TP30-0.50m | 7.8 | 7.7 | 3 | 0.1 | – | – |
| TP29-0.75m | 7.8 | 6.6 | 2 | 1.2 | – | – | TP30-0.75m | 8.3 | 6.5 | 2 | 1.8 | – | – |
| TP29-1.00m | 7.4 | 6.5 | 2 | 0.9 | – | – | TP30-1.00m | 8.1 | 8.5 | 4 | -0.4 | – | – |
| TP29-1.25m | 7.9 | 8.7 | 4 | -0.8 | – | – | TP30-1.25m | 8.2 | 8.8 | 4 | -0.6 | – | – |
| TP29-1.50m | 8.3 | 6.8 | 2 | 1.5 | <10 | <0.02 | TP30-1.50m | 8.1 | 8.6 | 4 | -0.5 | – | – |
| TP29-1.75m | 8.7 | 9 | 4 | -0.3 | – | – | TP30-1.75m | 8.1 | 6.5 | 3 | 1.6 | <10 | <0.02 |
| TP29-2.00m | 8.3 | 6.7 | 4 | 1.6 | – | – | TP30-2.00m | 8.1 | 6.3 | 2 | 1.8 | – | – |
| TP29-2.25m | 8.2 | 8.3 | 4 | -0.1 | – | – | TP30-2.25m | 8.3 | 7.8 | 4 | 0.5 | – | – |
| TP29-2.50m | 8.2 | 8.2 | 4 | 0 | – | – | TP30-2.50m | 8.1 | 8.5 | 4 | -0.4 | – | – |
| TP29-2.75m | 8.2 | 6.9 | 4 | 1.3 | <10 | <0.02 | TP30-2.75m | 8.2 | 8.6 | 4 | -0.4 | – | – |
| TP29-3.00m | 8.2 | 8.2 | 4 | 0 | – | – | TP30-3.00m | 8.1 | 7.9 | 4 | 0.2 | <10 | 0.02 |
| TP31-0.25m | 7.6 | 3.3 | 4 | 4.3 | 10 | <0.02 | TP32-0.25m | 8 | 5 | 2 | 3 | 35 | 0.06 |
| TP31-0.50m | 7 | 5.2 | 2 | 1.8 | – | – | TP32-0.50m | 7.4 | 5.7 | 2 | 1.7 | – | – |
| TP31-0.75m | 7.9 | 7.1 | 3 | 0.8 | – | – | TP32-0.75m | 7.6 | 6 | 2 | 1.6 | – | – |
| TP31-1.00m | 8 | 6.5 | 2 | 1.5 | – | – | TP32-1.00m | 8.5 | 7.8 | 4 | 0.7 | – | – |
| TP31-1.25m | 8 | 6.4 | 2 | 1.6 | <10 | <0.02 | TP32-1.25m | 8.5 | 6.4 | 4 | 2.1 | <10 | <0.02 |

| Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S | Sample | pH | $pH_{FOX}$ | Reaction | pH change | mole $H^+$/t | % S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP31-1.50m | 7.9 | 7.9 | 4 | 0 | – | – | TP32-1.50m | 8.4 | 8.7 | 4 | -0.3 | – | – |
| TP31-1.75m | 8.1 | 8.2 | 4 | -0.1 | – | – | TP32-1.75m | 8.6 | 7.4 | 3 | 1.2 | – | – |
| TP31-2.00m | 8 | 8 | 4 | 0 | – | – | TP32-2.00m | 8.3 | 6.1 | 2 | 2.2 | – | – |
| TP31-2.25m | 8.2 | 6.4 | 4 | 1.8 | <10 | <0.02 | TP32-2.25m | 7.8 | 7.5 | 3 | 0.3 | – | – |
| TP31-2.50m | 8.2 | 7.4 | 4 | 0.8 | – | – | TP32-2.50m | 8.1 | 7.1 | 3 | 1 | <10 | <0.02 |
| TP31-2.75m | 8.3 | 8.5 | 4 | -0.2 | – | – | TP32-2.75m | 8.2 | 8.4 | 4 | -0.2 | – | – |
| TP31-3.00m | 8.2 | 8.5 | 4 | -0.3 | – | – | TP32-3.00m | 7.9 | 8.6 | 4 | -0.7 | – | – |
| TP33-0.25m | 7.1 | 4.5 | 2 | 2.6 | **24** | **0.04** | TP34-0.25m | 7 | 3.6 | 3 | 3.4 | **29** | **0.05** |
| TP33-0.50m | 6.9 | 5 | 2 | 1.9 | – | – | TP34-0.50m | 6.6 | 4.9 | 2 | 1.7 | – | – |
| TP33-0.75m | 7.6 | 6.1 | 2 | 1.5 | – | – | TP34-0.75m | 7.6 | 5.8 | 2 | 1.8 | – | – |
| TP33-1.00m | 7.8 | 6.2 | 2 | 1.6 | – | – | TP34-1.00m | 8.5 | 6.3 | 2 | 2.2 | <10 | 0.02 |
| TP33-1.25m | 8.5 | 8.7 | 4 | -0.2 | <10 | <0.02 | TP34-1.25m | 8 | 8 | 4 | 0 | – | – |
| TP33-1.50m | 8.2 | 8.5 | 4 | -0.3 | – | – | TP34-1.50m | 8.1 | 7.5 | 3 | 0.6 | – | – |
| TP33-1.75m | 7.7 | 6 | 2 | 1.7 | – | – | TP34-1.75m | 7.9 | 8.3 | 4 | -0.4 | – | – |
| TP33-2.00m | 7.6 | 6.6 | 2 | 1 | – | – | TP34-2.00m | 7.7 | 6 | 2 | 1.7 | – | – |
| TP33-2.25m | 7.4 | 5.9 | 2 | 1.5 | – | – | TP34-2.25m | 7.4 | 6.1 | 2 | 1.3 | <10 | <0.02 |
| TP33-2.50m | 7.2 | 5.8 | 2 | 1.4 | **12** | **<0.02** | TP34-2.50m | 7.9 | 6.3 | 2 | 1.6 | – | – |
| TP33-2.75m | 7.4 | 8 | 4 | -0.6 | – | – | TP34-2.75m | 8.2 | 8.9 | 4 | -0.7 | – | – |
| TP33-3.00m | 7 | 6 | 2 | 1 | – | – | TP34-3.00m | 8.2 | 9.1 | 4 | -0.9 | – | – |
| TP35-0.25m | 7.5 | 5.3 | 2 | 2.2 | **12** | **<0.02** | TP36-0.25m | 7.6 | 5.2 | 3 | 2.4 | – | – |
| TP35-0.50m | 7.6 | 5.6 | 2 | 2 | – | – | TP36-0.50m | 8.2 | 6.1 | 2 | 2.1 | – | – |
| TP35-0.75m | 8 | 6 | 2 | 2 | – | – | TP36-0.75m | 9.1 | 6.7 | 2 | 2.4 | <10 | <0.02 |
| TP35-1.00m | 8.4 | 7.4 | 3 | 1 | – | – | TP36-1.00m | 8.2 | 8.4 | 4 | -0.2 | – | – |
| TP35-1.25m | 8.4 | 6.1 | 2 | 2.3 | <10 | <0.02 | TP36-1.25m | 8.6 | 6.3 | 2 | 2.3 | <10 | <0.02 |
| TP35-1.50m | 8.2 | 6.2 | 2 | 2 | – | – | TP36-1.50m | 8.5 | 7.8 | 3 | 0.7 | – | – |
| TP35-1.75m | 8.3 | 6.2 | 2 | 2.1 | – | – | TP36-1.75m | 8.2 | 8.6 | 3 | -0.4 | – | – |
| TP35-2.00m | 8.3 | 6.3 | 2 | 2 | – | – | TP36-2.00m | 8.4 | 6.2 | 2 | 2.2 | <10 | <0.02 |
| TP35-2.25m | 8.5 | 6.1 | 2 | 2.4 | – | – | TP36-2.25m | 8.5 | 7.8 | 3 | 0.7 | – | – |
| TP35-2.50m | 8.4 | 6.1 | 2 | 2.3 | <10 | <0.02 | TP36-2.50m | 8.4 | 8.5 | 4 | -0.1 | – | – |
| TP35-2.75m | 8.2 | 6.3 | 2 | 1.9 | – | – | TP36-2.75m | 8.6 | 8.8 | 4 | -0.2 | – | – |
| TP35-3.00m | 8.2 | 6.8 | 3 | 1.4 | – | – | TP36-3.00m | 8.3 | 8.2 | 4 | 0.1 | <10 | <0.02 |

# 5. DISCUSSION AND CONCLUSIONS

A total of 36 test pits were excavated to assess soils across the project site. The investigation determined that the soil profiles were naturally occurring, with A1 horizons consisting of silty, clayey loam. Through the A2 and B2 horizons, the profiles exhibited an increasing clay content, observed as silty clay or clay. This clay layer extended beyond the B2 horizon to the maximum observation depth in most test pits. In a few instances, a sand layer was identified as the deepest layer within the profile. The observed soil characteristics at site were consistent with sodosols. These soils can be prone to waterlogging and have substantial engineering constraints, if not appropriately managed.

The pH of soils and subsoils ranged from 5.8 to 9.6. Surface soils were primarily moderately to slightly acidic (5.8–6.6) and likely influenced by minor ASS generation. Subsoils varied from slightly acidic (6.0) to strongly alkaline (9.2). Deeper subsoils were predominantly alkaline (7.1–9.4), reflecting sodic profiles near estuarine areas.

Soil salinity – measured as EC – was low in the topsoil samples (7–169 µS/cm). In contrast, subsoil salinity displayed substantial variability, with EC values in the B horizon ranging from 14 to 983 µS/cm. Deeper subsoils mostly exceeded the desirable threshold of 700 µS/cm, indicating saline conditions in lower profiles, particularly near estuarine areas. Most soils below 0.75 m were non-compliant with the threshold. Consequently, specialised vegetation is likely required to establish in these soils if used for rehabilitation or landscaping purposes.

The CEC – which influences soil stability, nutrient availability, pH buffering, and the response to fertilisers and ameliorants – ranged from low to high across the site. Surface soils exhibited low to moderate CEC. Conversely, the B horizons had moderate to high CEC, and deeper soils ranged from low to high CEC. The calcium:magnesium ratios indicated that the soils are calcium-deficient, which may have implications for soil fertility and management.

Soil erosion indicators suggest that surface soils within the top 0.25 m are moderately susceptible to erosion, whereas soils below this depth exhibit moderate to high susceptibility. The elevated ESP – consistently exceeding 6% and reaching up to 34.4% – further indicates the potential for erosion. This susceptibility may be mitigated through gypsum treatment. A comprehensive soil erosion and sediment control plan will be required during both the construction and operational phases of the site to effectively address these concerns.

The soils sampled at the project site were nutrient-poor, likely due to factors such as low organic matter content, limited biological activity, and poor nutrient cycling. This is expected, given the site's proximity to estuarine areas. The salt marsh vegetation at the site has adapted to these low-nutrient, low organic matter conditions. However, it is vulnerable to high nutrient loads, often experiencing dieback from eutrophication. To ensure successful revegetation, it is crucial to account for this nutrient deficiency when selecting plant species.

Assessment of heavy metals, hydrocarbons, phenols, pesticides and PCBs found no presence of soil contamination at the project site. Therefore, the land is considered suitable for all land uses in accordance with NEPC (2013) HILs.

The widespread distribution of low-level – but actionable – ASS/PASS materials in surface sediments, combined with the anticipated extensive disturbance from the proposed development, necessitate an *extra-high* level of treatment, as outlined in Dear et al. (2014). In a worst-case scenario, up to 250 tonnes of $CaCO_3$ may be required for neutralisation, based on an estimated 37,000 $m^3$ of disturbed material, a bulk density of 1.5, a treatment rate of 3 kg/tonne, and a correction factor of 1.5. Effective management is essential, including a comprehensive environmental management plan and risk assessment. Given the location and relatively low neutralisation requirements of the ASS/PASS materials, the most cost-

effective strategy will likely involve avoidance and neutralisation, tailored to specific construction activities and operational needs.

Based on the findings of this soils investigation, the project poses a risk of environmental harm if soils are mismanaged. Without proper mitigation, the oxidation and mobilisation of PASS or AASS – and the erosion-driven mobilisation of sodic soils – could lead to environmental harm.

Although the effects of soil contamination and nutrient mobilisation are considered relatively minor in isolation, they are interconnected with the issues of ASS/PASS and soil erosion. This is due to the associated mobilisation of metals and the risk of eutrophication. However, it is likely that these risks can be effectively managed and mitigated through the implementation of appropriate soil management techniques. A soil erosion and sediment control plan should be formulated by a suitably qualified person that meet the requirements of the Queensland government and the Townsville City Council. The plan should be in accordance with The International Erosion Control Association (IECA) Best Practice Erosion and Sediment Control (BPESC) document. For the effective and compliant management of potential and actual acid sulphate soils an acid sulphate soil environmental management plan should be developed for the site in accordance with the Queensland Acid Sulfate Soil Technical Manual Soil Management Guidelines v5.1 (2024).

The information contained within this report and the associated appendices can be used as baseline information for project operations. Additionally, this information can be used as a reference point for future planning, construction, operations and rehabilitation.

# 6. REFERENCES

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# Appendix A – Soil stratigraphic logs field data

| Project description | | |
|---|---|---|
| Project name: | Jet Zero – Project Ulysses | |
| Location: | Coastal plains, Stuart, Queensland | |
| Observation ID: | TP01 | |
| Logged by: | DB - C&R Consulting | |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3193 | 146.8596 | 55 | 485251 | 7863832 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

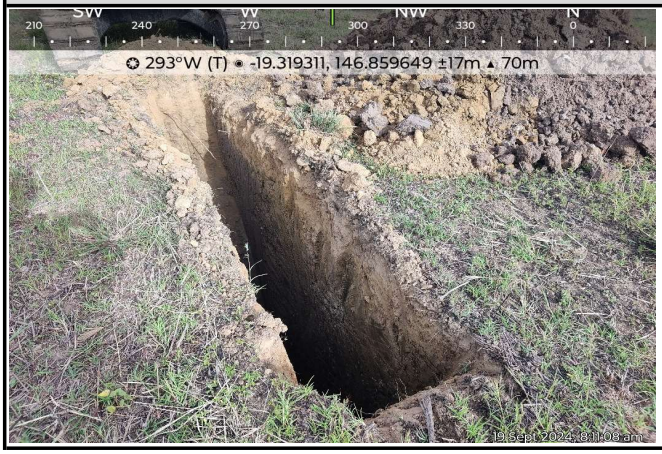
| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
|---|
| Australian Soil Classification (ASC) |
| |
| |
| |

| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | yellow/brown (10YR 6/4) | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.80 | firm | yellow/brown (2.5Y 6/3) | silty clay | none | none |
| 3 | B21 | 0.80 | 2.50 | soft | yellow/brown (10YR 6/4) | silty clay | none | none |
| 4 | B22 | 2.50 | 3.00 | firm | grey (7.5YR 6/1) | clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP01 - 0.25m | 0.25 | ASS field screen, phys/chem | | |
| TP01 - 0.50m | 0.50 | ASS field screen, phys/chem | | |
| TP01 - 0.75m | 0.75 | ASS field screen | | |
| TP01 - 1.00m | 1.00 | ASS field screen, phys/chem | | |
| TP01 - 1.25m | 1.25 | ASS field screen | | |
| TP01 - 1.50m | 1.50 | ASS field screen | | |
| TP01 - 1.75m | 1.75 | ASS field screen | | |
| TP01 - 2.00m | 2.00 | ASS field screen, phys/chem | | |
| TP01 - 2.25m | 2.25 | ASS field screen | | |
| TP01 - 2.50m | 2.50 | ASS field screen | | |
| TP01 - 2.75m | 2.75 | ASS field screen | | |
| TP01 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**






| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP02 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8596 | 55 | 485251 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

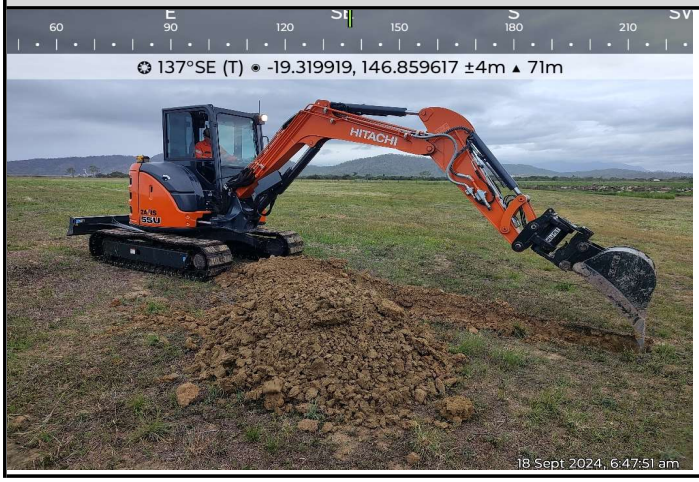
| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

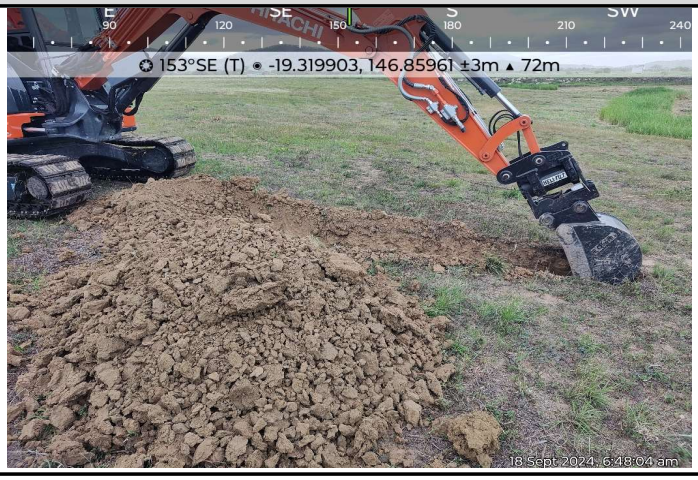
| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.60 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.60 | 1.10 | firm | brown | clay | none | none |
| 3 | B21 | 1.10 | 2.60 | soft | grey | silty clay | light brown (0-25%) | subangular gravel (0-5%) |
| 4 | B22 | 2.60 | 3.00 | soft | grey/brown | clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP02 - 0.25m | 0.25 | ASS field screen | | |
| TP02 - 0.50m | 0.50 | ASS field screen | | |
| TP02 - 0.75m | 0.75 | ASS field screen | | |
| TP02 - 1.00m | 1.00 | ASS field screen | | |
| TP02 - 1.25m | 1.25 | ASS field screen | | |
| TP02 - 1.50m | 1.50 | ASS field screen | | |
| TP02 - 1.75m | 1.75 | ASS field screen | | |
| TP02 - 2.00m | 2.00 | ASS field screen | | |
| TP02 - 2.25m | 2.25 | ASS field screen | | |
| TP02 - 2.50m | 2.50 | ASS field screen | | |
| TP02 - 2.75m | 2.75 | ASS field screen | | |
| TP02 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**



| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP03 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8596 | 55 | 485251 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

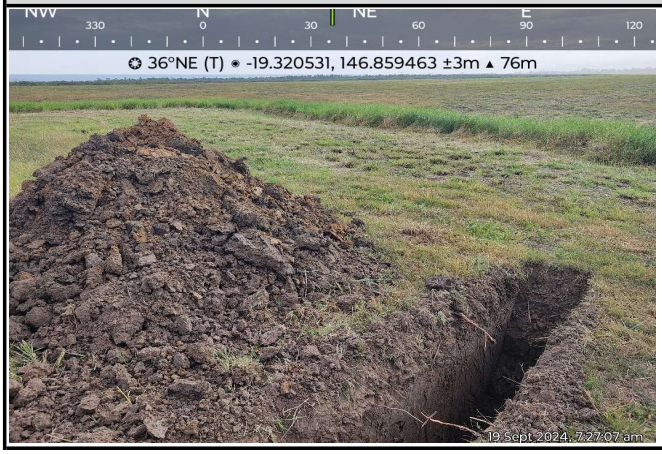
| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.40 | soft | grey (7.5YR 5/1) | silty clay loam | none | none |
| 2 | A2 | 0.40 | 0.80 | firm | grey (7.5YR 6/1) | clay | none | none |
| 3 | B21 | 0.80 | 2.40 | soft | grey (7.5YR 6/1) | silty clay | none | none |
| 4 | B22 | 2.40 | 3.00 | soft | light brown/grey (10YR 6/2) | silty clay | grey (0-25%) | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP03 - 0.25m | 0.25 | ASS field screen, phys/chem | | |
| TP03 - 0.50m | 0.50 | ASS field screen | | |
| TP03 - 0.75m | 0.75 | ASS field screen, phys/chem | DUPLICATE B | |
| TP03 - 1.00m | 1.00 | ASS field screen | | |
| TP03 - 1.25m | 1.25 | ASS field screen | | |
| TP03 - 1.50m | 1.50 | ASS field screen | | |
| TP03 - 1.75m | 1.75 | ASS field screen | | |
| TP03 - 2.00m | 2.00 | ASS field screen, phys/chem | | |
| TP03 - 2.25m | 2.25 | ASS field screen | | |
| TP03 - 2.50m | 2.50 | ASS field screen, phys/chem | | |
| TP03 - 2.75m | 2.75 | ASS field screen | | |
| TP03 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**






| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP04 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3187 | 146.8603 | 55 | 485321 | 7863902 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

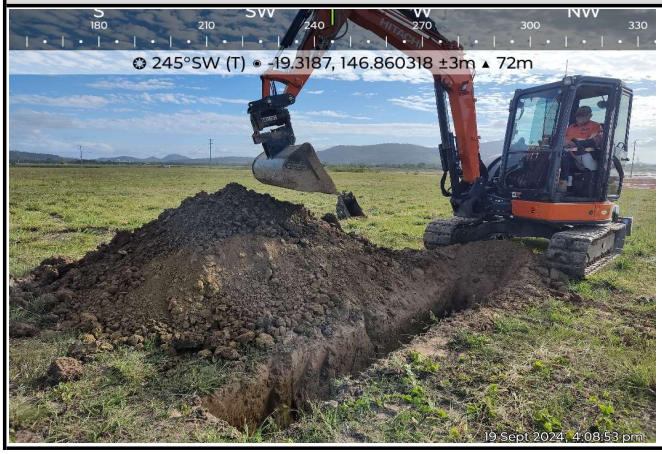
| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | brown (10YR 5/3) | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.20 | stiff | light brown (2.5Y 7/4) | clay | none | none |
| 3 | B21 | 1.20 | 2.00 | soft | light grey (2.5Y 7/2) | sandy clay loam | red/brown (0-25%) | subangular gravel (0-5%) |
| 4 | B22 | 2.00 | 3.00 | firm | light grey (10YR 7/1) | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP04 - 0.25m | 0.25 | ASS field screen, phys/chem | | |
| TP04 - 0.50m | 0.50 | ASS field screen, phys/chem | | |
| TP04 - 0.75m | 0.75 | ASS field screen | | |
| TP04 - 1.00m | 1.00 | ASS field screen | | |
| TP04 - 1.25m | 1.25 | ASS field screen, phys/chem | | |
| TP04 - 1.50m | 1.50 | ASS field screen | | |
| TP04 - 1.75m | 1.75 | ASS field screen | | |
| TP04 - 2.00m | 2.00 | ASS field screen, phys/chem | | |
| TP04 - 2.25m | 2.25 | ASS field screen | | |
| TP04 - 2.50m | 2.50 | ASS field screen | | |
| TP04 - 2.75m | 2.75 | ASS field screen | | |
| TP04 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**






| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP05 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3193 | 146.8603 | 55 | 485321 | 7863832 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | red/brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.20 | stiff | red/brown | clay | none | none |
| 3 | B2 | 1.20 | 3.00 | soft | grey/brown | silty clay | red/brown (0-25%) | none |
| | | | | | | | | |
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| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP05 - 0.25m | 0.25 | ASS field screen | | |
| TP05 - 0.50m | 0.50 | ASS field screen | | |
| TP05 - 0.75m | 0.75 | ASS field screen | | |
| TP05 - 1.00m | 1.00 | ASS field screen | | |
| TP05 - 1.25m | 1.25 | ASS field screen | | |
| TP05 - 1.50m | 1.50 | ASS field screen | | |
| TP05 - 1.75m | 1.75 | ASS field screen | | |
| TP05 - 2.00m | 2.00 | ASS field screen | | |
| TP05 - 2.25m | 2.25 | ASS field screen | | |
| TP05 - 2.50m | 2.50 | ASS field screen | | |
| TP05 - 2.75m | 2.75 | ASS field screen | | |
| TP05 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP06 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8603 | 55 | 485321 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | light brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.60 | firm | dark brown | clay | none | none |
| 3 | B2 | 0.60 | 3.00 | soft | grey/brown | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP06 - 0.25m | 0.25 | ASS field screen | | |
| TP06 - 0.50m | 0.50 | ASS field screen | | |
| TP06 - 0.75m | 0.75 | ASS field screen | | |
| TP06 - 1.00m | 1.00 | ASS field screen | | |
| TP06 - 1.25m | 1.25 | ASS field screen | | |
| TP06 - 1.50m | 1.50 | ASS field screen | | |
| TP06 - 1.75m | 1.75 | ASS field screen | | |
| TP06 - 2.00m | 2.00 | ASS field screen | | |
| TP06 - 2.25m | 2.25 | ASS field screen | | |
| TP06 - 2.50m | 2.50 | ASS field screen | | |
| TP06 - 2.75m | 2.75 | ASS field screen | | |
| TP06 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP07 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8603 | 55 | 485321 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 16/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | red/brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.08 | firm | light brown | clay | none | none |
| 3 | B21 | 0.80 | 2.50 | soft | grey/brown | silty clay | white (0-20%) | none |
| 4 | B22 | 2.50 | 3.00 | soft | grey | clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP07 - 0.25m | 0.25 | ASS field screen | | |
| TP07 - 0.50m | 0.50 | ASS field screen | | |
| TP07 - 0.75m | 0.75 | ASS field screen | | |
| TP07 - 1.00m | 1.00 | ASS field screen | | |
| TP07 - 1.25m | 1.25 | ASS field screen | | |
| TP07 - 1.50m | 1.50 | ASS field screen | | |
| TP07 - 1.75m | 1.75 | ASS field screen | | |
| TP07 - 2.00m | 2.00 | ASS field screen | | |
| TP07 - 2.25m | 2.25 | ASS field screen | | |
| TP07 - 2.50m | 2.50 | ASS field screen | | |
| TP07 - 2.75m | 2.75 | ASS field screen | | |
| TP07 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**



| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP08 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3187 | 146.8609 | 55 | 485391 | 7863902 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | light brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.10 | stiff | dark brown | clay | white (0-10%) | none |
| 3 | B2 | 1.10 | 3.00 | soft | grey/brown | silty clay | red/brown (0-40%) | none |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP08 - 0.25m | 0.25 | ASS field screen | | |
| TP08 - 0.50m | 0.50 | ASS field screen | | |
| TP08 - 0.75m | 0.75 | ASS field screen | | |
| TP08 - 1.00m | 1.00 | ASS field screen | | |
| TP08 - 1.25m | 1.25 | ASS field screen | | |
| TP08 - 1.50m | 1.50 | ASS field screen | | |
| TP08 - 1.75m | 1.75 | ASS field screen | | |
| TP08 - 2.00m | 2.00 | ASS field screen | | |
| TP08 - 2.25m | 2.25 | ASS field screen | | |
| TP08 - 2.50m | 2.50 | ASS field screen | | |
| TP08 - 2.75m | 2.75 | ASS field screen | | |
| TP08 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**



| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP09 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3193 | 146.8609 | 55 | 485391 | 7863832 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.20 | stiff | light brown | clay | none | none |
| 3 | B2 | 1.20 | 3.00 | soft | grey/brown | silty clay | red/brown (0-20%) | none |
| | | | | | | | | |
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| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP09 - 0.25m | 0.25 | ASS field screen | | |
| TP09 - 0.50m | 0.50 | ASS field screen | | |
| TP09 - 0.75m | 0.75 | ASS field screen | | |
| TP09 - 1.00m | 1.00 | ASS field screen | | |
| TP09 - 1.25m | 1.25 | ASS field screen | | |
| TP09 - 1.50m | 1.50 | ASS field screen | | |
| TP09 - 1.75m | 1.75 | ASS field screen | | |
| TP09 - 2.00m | 2.00 | ASS field screen | | |
| TP09 - 2.25m | 2.25 | ASS field screen | | |
| TP09 - 2.50m | 2.50 | ASS field screen | | |
| TP09 - 2.75m | 2.75 | ASS field screen | | |
| TP09 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP10 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8609 | 55 | 485391 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.20 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.20 | 1.60 | firm | yellow/brown | clay | none | none |
| 3 | B2 | 1.60 | 2.80 | soft | grey/brown | silty clay | red/brown (0-30%) | none |
| 4 | D | 2.80 | 3.00 | loose | grey/brown | loamy medium sand | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP10 - 0.25m | 0.25 | ASS field screen | | |
| TP10 - 0.50m | 0.50 | ASS field screen | | |
| TP10 - 0.75m | 0.75 | ASS field screen | | |
| TP10 - 1.00m | 1.00 | ASS field screen | | |
| TP10 - 1.25m | 1.25 | ASS field screen | | |
| TP10 - 1.50m | 1.50 | ASS field screen | | |
| TP10 - 1.75m | 1.75 | ASS field screen | | |
| TP10 - 2.00m | 2.00 | ASS field screen | | |
| TP10 - 2.25m | 2.25 | ASS field screen | | |
| TP10 - 2.50m | 2.50 | ASS field screen | | |
| TP10 - 2.75m | 2.75 | ASS field screen | | |
| TP10 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP11 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8609 | 55 | 485391 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 16/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.10 | soft | light brown | silty clay loam | none | none |
| 2 | A2 | 0.10 | 1.20 | firm | dark brown | clay | none | none |
| 3 | B2 | 1.20 | 2.25 | soft | red/brown | silty clay | grey (0-15%) | none |
| 4 | D | 2.25 | 3.00 | loose | brown | loamy coarse sand | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP11 - 0.25m | 0.25 | ASS field screen | | |
| TP11 - 0.50m | 0.50 | ASS field screen | | |
| TP11 - 0.75m | 0.75 | ASS field screen | | |
| TP11 - 1.00m | 1.00 | ASS field screen | | |
| TP11 - 1.25m | 1.25 | ASS field screen | | |
| TP11 - 1.50m | 1.50 | ASS field screen | | |
| TP11 - 1.75m | 1.75 | ASS field screen | | |
| TP11 - 2.00m | 2.00 | ASS field screen | | |
| TP11 - 2.25m | 2.25 | ASS field screen | | |
| TP11 - 2.50m | 2.50 | ASS field screen | | |
| TP11 - 2.75m | 2.75 | ASS field screen | | |
| TP11 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**



| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP12 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3187 | 146.8616 | 55 | 485461 | 7863902 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.40 | soft | light brown | silty clay loam | none | none |
| 2 | A2 | 0.40 | 1.00 | stiff | brown | clay | none | none |
| 3 | B21 | 1.00 | 2.80 | soft | grey | silty clay | red/brown (0-20%) | none |
| 4 | B22 | 2.80 | 3.00 | soft | brown | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP12 - 0.25m | 0.25 | ASS field screen | | |
| TP12 - 0.50m | 0.50 | ASS field screen | | |
| TP12 - 0.75m | 0.75 | ASS field screen | | |
| TP12 - 1.00m | 1.00 | ASS field screen | | |
| TP12 - 1.25m | 1.25 | ASS field screen | | |
| TP12 - 1.50m | 1.50 | ASS field screen | | |
| TP12 - 1.75m | 1.75 | ASS field screen | | |
| TP12 - 2.00m | 2.00 | ASS field screen | | |
| TP12 - 2.25m | 2.25 | ASS field screen | | |
| TP12 - 2.50m | 2.50 | ASS field screen | | |
| TP12 - 2.75m | 2.75 | ASS field screen | | |
| TP12 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP13 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3193 | 146.8616 | 55 | 485461 | 7863832 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | light brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.70 | firm | dark brown | clay | none | none |
| 3 | B2 | 0.70 | 3.00 | soft | grey/brown | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP13 - 0.25m | 0.25 | ASS field screen | | |
| TP13 - 0.50m | 0.50 | ASS field screen | | |
| TP13 - 0.75m | 0.75 | ASS field screen | | |
| TP13 - 1.00m | 1.00 | ASS field screen | | |
| TP13 - 1.25m | 1.25 | ASS field screen | | |
| TP13 - 1.50m | 1.50 | ASS field screen | | |
| TP13 - 1.75m | 1.75 | ASS field screen | | |
| TP13 - 2.00m | 2.00 | ASS field screen | | |
| TP13 - 2.25m | 2.25 | ASS field screen | | |
| TP13 - 2.50m | 2.50 | ASS field screen | | |
| TP13 - 2.75m | 2.75 | ASS field screen | | |
| TP13 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP14 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8616 | 55 | 485461 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.10 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.10 | 0.90 | stiff | dark brown | clay | none | none |
| 3 | B2 | 0.90 | 3.00 | soft | grey/brown | silty clay | light brown (0-15%) | none |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP14 - 0.25m | 0.25 | ASS field screen | | |
| TP14 - 0.50m | 0.50 | ASS field screen | | |
| TP14 - 0.75m | 0.75 | ASS field screen | | |
| TP14 - 1.00m | 1.00 | ASS field screen | | |
| TP14 - 1.25m | 1.25 | ASS field screen | | |
| TP14 - 1.50m | 1.50 | ASS field screen | | |
| TP14 - 1.75m | 1.75 | ASS field screen | | |
| TP14 - 2.00m | 2.00 | ASS field screen | | |
| TP14 - 2.25m | 2.25 | ASS field screen | | |
| TP14 - 2.50m | 2.50 | ASS field screen | | |
| TP14 - 2.75m | 2.75 | ASS field screen | | |
| TP14 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP15 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8616 | 55 | 485461 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 16/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | light brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.20 | firm | dark brown | clay | none | none |
| 3 | B21 | 1.50 | 2.20 | soft | grey | silty clay | red/brown (0-25%) | none |
| 4 | B22 | 2.20 | 3.00 | soft | brown/grey | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP15 - 0.25m | 0.25 | ASS field screen | | |
| TP15 - 0.50m | 0.50 | ASS field screen | | |
| TP15 - 0.75m | 0.75 | ASS field screen | | |
| TP15 - 1.00m | 1.00 | ASS field screen | | |
| TP15 - 1.25m | 1.25 | ASS field screen | | |
| TP15 - 1.50m | 1.50 | ASS field screen | | |
| TP15 - 1.75m | 1.75 | ASS field screen | | |
| TP15 - 2.00m | 2.00 | ASS field screen | | |
| TP15 - 2.25m | 2.25 | ASS field screen | | |
| TP15 - 2.50m | 2.50 | ASS field screen | | |
| TP15 - 2.75m | 2.75 | ASS field screen | | |
| TP15 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP16 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3187 | 146.8623 | 55 | 485531 | 7863902 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | groundwater at 2.5 mbgl |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | brown (10YR 5/3) | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.00 | soft | brown (10YR 5/3) | silty clay | none | none |
| 3 | B2 | 1.00 | 2.40 | firm | yellow/brown (2.5YR 6/3) | clay | red/brown (0-30%) | none |
| 4 | D | 2.40 | 3.00 | loose | light brown (10YR 6/3) | clayey coarse sand | none | sub-rounded gravel (0-5%) |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP16 - 0.25m | 0.25 | ASS field screen, phys/chem | | |
| TP16 - 0.50m | 0.50 | ASS field screen, phys/chem | | |
| TP16 - 0.75m | 0.75 | ASS field screen | | |
| TP16 - 1.00m | 1.00 | ASS field screen, phys/chem | | |
| TP16 - 1.25m | 1.25 | ASS field screen | | |
| TP16 - 1.50m | 1.50 | ASS field screen | | |
| TP16 - 1.75m | 1.75 | ASS field screen | | |
| TP16 - 2.00m | 2.00 | ASS field screen | | |
| TP16 - 2.25m | 2.25 | ASS field screen | | |
| TP16 - 2.50m | 2.50 | ASS field screen | | |
| TP16 - 2.75m | 2.75 | ASS field screen, phys/chem | | |
| TP16 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**






| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP17 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3193 | 146.8623 | 55 | 485531 | 7863832 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.20 | stiff | brown | clay | none | none |
| 3 | B2 | 1.20 | 3.00 | soft | grey/brown | silty clay | red/brown (0-25%) | none |
| | | | | | | | | |
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| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP17 - 0.25m | 0.25 | ASS field screen | | |
| TP17 - 0.50m | 0.50 | ASS field screen | | |
| TP17 - 0.75m | 0.75 | ASS field screen | | |
| TP17 - 1.00m | 1.00 | ASS field screen | | |
| TP17 - 1.25m | 1.25 | ASS field screen | | |
| TP17 - 1.50m | 1.50 | ASS field screen | | |
| TP17 - 1.75m | 1.75 | ASS field screen | | |
| TP17 - 2.00m | 2.00 | ASS field screen | | |
| TP17 - 2.25m | 2.25 | ASS field screen | | |
| TP17 - 2.50m | 2.50 | ASS field screen | | |
| TP17 - 2.75m | 2.75 | ASS field screen | | |
| TP17 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP18 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8623 | 55 | 485531 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.40 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.40 | 1.10 | firm | brown/grey | clay | none | none |
| 3 | B2 | 1.10 | 3.00 | soft | grey/brown | silty clay | red/brown (0-10%) | none |
| | | | | | | | | |
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| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP18 - 0.25m | 0.25 | ASS field screen | | |
| TP18 - 0.50m | 0.50 | ASS field screen | | |
| TP18 - 0.75m | 0.75 | ASS field screen | | |
| TP18 - 1.00m | 1.00 | ASS field screen | | |
| TP18 - 1.25m | 1.25 | ASS field screen | | |
| TP18 - 1.50m | 1.50 | ASS field screen | | |
| TP18 - 1.75m | 1.75 | ASS field screen | | |
| TP18 - 2.00m | 2.00 | ASS field screen | | |
| TP18 - 2.25m | 2.25 | ASS field screen | | |
| TP18 - 2.50m | 2.50 | ASS field screen | | |
| TP18 - 2.75m | 2.75 | ASS field screen | | |
| TP18 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**



| Project description | | |
|---|---|---|
| Project name: | Jet Zero – Project Ulysses | |
| Location: | Coastal plains, Stuart, Queensland | |
| Observation ID: | TP19 | |
| Logged by: | DB - C&R Consulting | |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8623 | 55 | 485531 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 16/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
|---|
| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | grey (7.5YR 5/1) | silty clay | none | none |
| 2 | A2 | 0.30 | 0.70 | soft | yellow/brown (10YR 6/4) | sandy loam | none | sub-angular gravel (0-25%) |
| 3 | B21 | 0.70 | 2.30 | soft | brown/grey (10YR 6/2) | silty clay | red/brown (0-40%) | none |
| 4 | B22 | 2.30 | 3.00 | soft | red/brown (5YR 6/4) | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP19 - 0.25m | 0.25 | ASS field screen, phys/chem | | |
| TP19 - 0.50m | 0.50 | ASS field screen, phys/chem | | |
| TP19 - 0.75m | 0.75 | ASS field screen | | |
| TP19 - 1.00m | 1.00 | ASS field screen, phys/chem | | |
| TP19 - 1.25m | 1.25 | ASS field screen | | |
| TP19 - 1.50m | 1.50 | ASS field screen | | |
| TP19 - 1.75m | 1.75 | ASS field screen | | |
| TP19 - 2.00m | 2.00 | ASS field screen | | |
| TP19 - 2.25m | 2.25 | ASS field screen | | |
| TP19 - 2.50m | 2.50 | ASS field screen | | |
| TP19 - 2.75m | 2.75 | ASS field screen, phys/chem | | |
| TP19 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**






| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP20 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3193 | 146.8629 | 55 | 485601 | 7863832 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.10 | stiff | brown | clay | none | none |
| 3 | B2 | 1.10 | 3.00 | soft | grey/brown | silty clay | red/brown (0-10%) | none |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP20 - 0.25m | 0.25 | ASS field screen | | |
| TP20 - 0.50m | 0.50 | ASS field screen | | |
| TP20 - 0.75m | 0.75 | ASS field screen | | |
| TP20 - 1.00m | 1.00 | ASS field screen | | |
| TP20 - 1.25m | 1.25 | ASS field screen | | |
| TP20 - 1.50m | 1.50 | ASS field screen | | |
| TP20 - 1.75m | 1.75 | ASS field screen | | |
| TP20 - 2.00m | 2.00 | ASS field screen | | |
| TP20 - 2.25m | 2.25 | ASS field screen | | |
| TP20 - 2.50m | 2.50 | ASS field screen | | |
| TP20 - 2.75m | 2.75 | ASS field screen | | |
| TP20 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**



| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP21 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8629 | 55 | 485601 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | groundwater at 2.6 mbgl |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
|---|
| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | light brown/grey (10YR 6/2) | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.00 | firm | grey (10YR 7/1) | clay | none | none |
| 3 | B21 | 1.00 | 1.90 | soft | grey/brown (10YR 5/1) | silty clay | none | none |
| 4 | B22 | 1.90 | 2.70 | soft | red/brown (5YR 6/3) | silty clay | grey (0-25%) | none |
| 5 | D | 2.70 | 3.00 | loose | light grey (7.5YR 7/2) | loamy coarse sand | none | sub-rounded gravel (10-50%) |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP21 - 0.25m | 0.25 | ASS field screen, phys/chem | | |
| TP21 - 0.50m | 0.50 | ASS field screen, phys/chem | DUPLICATE A | |
| TP21 - 0.75m | 0.75 | ASS field screen | | |
| TP21 - 1.00m | 1.00 | ASS field screen | | |
| TP21 - 1.25m | 1.25 | ASS field screen | | |
| TP21 - 1.50m | 1.50 | ASS field screen | | |
| TP21 - 1.75m | 1.75 | ASS field screen | | |
| TP21 - 2.00m | 2.00 | ASS field screen, phys/chem | | |
| TP21 - 2.25m | 2.25 | ASS field screen | | |
| TP21 - 2.50m | 2.50 | ASS field screen | | |
| TP21 - 2.75m | 2.75 | ASS field screen | | |
| TP21 - 3.00m | 3.00 | ASS field screen, phys/chem | | |

**Site photos**






| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP22 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8629 | 55 | 485601 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 16/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.80 | firm | yellow/brown | clay | none | none |
| 3 | B2 | 0.80 | 3.00 | soft | grey/brown | silty clay | white (0-10%) | none |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP22 - 0.25m | 0.25 | ASS field screen | | |
| TP22 - 0.50m | 0.50 | ASS field screen | | |
| TP22 - 0.75m | 0.75 | ASS field screen | | |
| TP22 - 1.00m | 1.00 | ASS field screen | | |
| TP22 - 1.25m | 1.25 | ASS field screen | | |
| TP22 - 1.50m | 1.50 | ASS field screen | | |
| TP22 - 1.75m | 1.75 | ASS field screen | | |
| TP22 - 2.00m | 2.00 | ASS field screen | | |
| TP22 - 2.25m | 2.25 | ASS field screen | | |
| TP22 - 2.50m | 2.50 | ASS field screen | | |
| TP22 - 2.75m | 2.75 | ASS field screen | | |
| TP22 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP23 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3193 | 146.8636 | 55 | 485671 | 7863832 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.60 | stiff | dark brown | clay | none | none |
| 3 | B21 | 0.60 | 2.10 | soft | grey/brown | silty clay | red/brown (0-25%) | none |
| 4 | B22 | 2.10 | 3.00 | very soft | brown | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP23 - 0.25m | 0.25 | ASS field screen | | |
| TP23 - 0.50m | 0.50 | ASS field screen | | |
| TP23 - 0.75m | 0.75 | ASS field screen | | |
| TP23 - 1.00m | 1.00 | ASS field screen | | |
| TP23 - 1.25m | 1.25 | ASS field screen | | |
| TP23 - 1.50m | 1.50 | ASS field screen | | |
| TP23 - 1.75m | 1.75 | ASS field screen | | |
| TP23 - 2.00m | 2.00 | ASS field screen | | |
| TP23 - 2.25m | 2.25 | ASS field screen | | |
| TP23 - 2.50m | 2.50 | ASS field screen | | |
| TP23 - 2.75m | 2.75 | ASS field screen | | |
| TP23 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP24 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8636 | 55 | 485671 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | grey/brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.80 | firm | dark brown | clay | none | none |
| 3 | B21 | 0.80 | 2.10 | soft | red/brown | silty clay | none | none |
| 4 | B22 | 2.10 | 3.00 | very soft | grey/brown | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP24 - 0.25m | 0.25 | ASS field screen | | |
| TP24 - 0.50m | 0.50 | ASS field screen | | |
| TP24 - 0.75m | 0.75 | ASS field screen | | |
| TP24 - 1.00m | 1.00 | ASS field screen | | |
| TP24 - 1.25m | 1.25 | ASS field screen | | |
| TP24 - 1.50m | 1.50 | ASS field screen | | |
| TP24 - 1.75m | 1.75 | ASS field screen | | |
| TP24 - 2.00m | 2.00 | ASS field screen | | |
| TP24 - 2.25m | 2.25 | ASS field screen | | |
| TP24 - 2.50m | 2.50 | ASS field screen | | |
| TP24 - 2.75m | 2.75 | ASS field screen | | |
| TP24 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
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| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP25 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8636 | 55 | 485671 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 16/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.50 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.50 | 1.20 | firm | brown | clay | none | none |
| 3 | B21 | 1.20 | 2.20 | firm | dark grey | silty clay | none | none |
| 4 | B22 | 2.20 | 3.00 | soft | grey/brown | silty clay | red/brown (0-20%) | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP25 - 0.25m | 0.25 | ASS field screen | | |
| TP25 - 0.50m | 0.50 | ASS field screen | | |
| TP25 - 0.75m | 0.75 | ASS field screen | | |
| TP25 - 1.00m | 1.00 | ASS field screen | | |
| TP25 - 1.25m | 1.25 | ASS field screen | | |
| TP25 - 1.50m | 1.50 | ASS field screen | | |
| TP25 - 1.75m | 1.75 | ASS field screen | | |
| TP25 - 2.00m | 2.00 | ASS field screen | | |
| TP25 - 2.25m | 2.25 | ASS field screen | | |
| TP25 - 2.50m | 2.50 | ASS field screen | | |
| TP25 - 2.75m | 2.75 | ASS field screen | | |
| TP25 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP26 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3193 | 146.8643 | 55 | 485741 | 7863832 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | groundwater at 2.25 mbgl |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | very dark brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.90 | soft | light brown | clay | none | none |
| 3 | B21 | 0.90 | 1.60 | soft | grey | silty clay | red/brown (0-25%) | subangular gravel (0-5%) |
| 4 | B22 | 1.60 | 2.30 | soft | brown | silty clay | none | none |
| 5 | D | 2.30 | 3.00 | loose | light brown | loamy coarse sand | none | subangular gravel (10-30%) |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP26 - 0.25m | 0.25 | ASS field screen | | |
| TP26 - 0.50m | 0.50 | ASS field screen | | |
| TP26 - 0.75m | 0.75 | ASS field screen | | |
| TP26 - 1.00m | 1.00 | ASS field screen | | |
| TP26 - 1.25m | 1.25 | ASS field screen | | |
| TP26 - 1.50m | 1.50 | ASS field screen | | |
| TP26 - 1.75m | 1.75 | ASS field screen | | |
| TP26 - 2.00m | 2.00 | ASS field screen | | |
| TP26 - 2.25m | 2.25 | ASS field screen | | |
| TP26 - 2.50m | 2.50 | ASS field screen | | |
| TP26 - 2.75m | 2.75 | ASS field screen | | |
| TP26 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP27 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8643 | 55 | 485741 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | dark brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.60 | stiff | very dark brown | clay | none | none |
| 3 | B21 | 0.60 | 2.20 | soft | grey/brown | silty clay | red/brown (0-25%) | none |
| 4 | B22 | 2.20 | 3.00 | soft | light brown | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP27 - 0.25m | 0.25 | ASS field screen | | |
| TP27 - 0.50m | 0.50 | ASS field screen | | |
| TP27 - 0.75m | 0.75 | ASS field screen | | |
| TP27 - 1.00m | 1.00 | ASS field screen | | |
| TP27 - 1.25m | 1.25 | ASS field screen | | |
| TP27 - 1.50m | 1.50 | ASS field screen | | |
| TP27 - 1.75m | 1.75 | ASS field screen | | |
| TP27 - 2.00m | 2.00 | ASS field screen | | |
| TP27 - 2.25m | 2.25 | ASS field screen | | |
| TP27 - 2.50m | 2.50 | ASS field screen | | |
| TP27 - 2.75m | 2.75 | ASS field screen | | |
| TP27 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP28 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8643 | 55 | 485741 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 16/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | light brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.20 | firm | dark brown | clay | none | none |
| 3 | B2 | 1.20 | 3.00 | soft | grey/brown | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |
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| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP28 - 0.25m | 0.25 | ASS field screen | | |
| TP28 - 0.50m | 0.50 | ASS field screen | | |
| TP28 - 0.75m | 0.75 | ASS field screen | | |
| TP28 - 1.00m | 1.00 | ASS field screen | | |
| TP28 - 1.25m | 1.25 | ASS field screen | | |
| TP28 - 1.50m | 1.50 | ASS field screen | | |
| TP28 - 1.75m | 1.75 | ASS field screen | | |
| TP28 - 2.00m | 2.00 | ASS field screen | | |
| TP28 - 2.25m | 2.25 | ASS field screen | | |
| TP28 - 2.50m | 2.50 | ASS field screen | | |
| TP28 - 2.75m | 2.75 | ASS field screen | | |
| TP28 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP29 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3193 | 146.8649 | 55 | 485811 | 7863832 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 19/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | groundwater at 2.5 mbgl |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A2 | 0.00 | 0.80 | firm | grey (7.5YR 6/1) | silty clay | none | none |
| 2 | B21 | 0.80 | 2.60 | firm | light brown/grey (10YR 6/2) | silty clay | red/brown (0-20%) | none |
| 3 | B22 | 2.60 | 3.00 | stiff | light grey (10YR 7/2) | clay | none | none |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP29 - 0.25m | 0.25 | ASS field screen, phys/chem | | |
| TP29 - 0.50m | 0.50 | ASS field screen | | |
| TP29 - 0.75m | 0.75 | ASS field screen, phys/chem | | |
| TP29 - 1.00m | 1.00 | ASS field screen | | |
| TP29 - 1.25m | 1.25 | ASS field screen | | |
| TP29 - 1.50m | 1.50 | ASS field screen, phys/chem | | |
| TP29 - 1.75m | 1.75 | ASS field screen | | |
| TP29 - 2.00m | 2.00 | ASS field screen | | |
| TP29 - 2.25m | 2.25 | ASS field screen | | |
| TP29 - 2.50m | 2.50 | ASS field screen | | |
| TP29 - 2.75m | 2.75 | ASS field screen | | |
| TP29 - 3.00m | 3.00 | ASS field screen, phys/chem | | |

**Site photos**






| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP30 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8649 | 55 | 485811 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.20 | soft | light brown | silty clay loam | none | none |
| 2 | A2 | 0.20 | 0.80 | firm | dark brown | clay | none | none |
| 3 | B21 | 0.80 | 2.30 | soft | grey/brown | silty clay | red/brown (0-25%) | none |
| 4 | B22 | 2.30 | 3.00 | soft | grey | clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP30 - 0.25m | 0.25 | ASS field screen | | |
| TP30 - 0.50m | 0.50 | ASS field screen | | |
| TP30 - 0.75m | 0.75 | ASS field screen | | |
| TP30 - 1.00m | 1.00 | ASS field screen | | |
| TP30 - 1.25m | 1.25 | ASS field screen | | |
| TP30 - 1.50m | 1.50 | ASS field screen | | |
| TP30 - 1.75m | 1.75 | ASS field screen | | |
| TP30 - 2.00m | 2.00 | ASS field screen | | |
| TP30 - 2.25m | 2.25 | ASS field screen | | |
| TP30 - 2.50m | 2.50 | ASS field screen | | |
| TP30 - 2.75m | 2.75 | ASS field screen | | |
| TP30 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP31 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8649 | 55 | 485811 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 16/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
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| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | light brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.40 | firm | dark brown | clay | none | none |
| 3 | B21 | 1.40 | 2.10 | soft | brown | silty clay | none | none |
| 4 | B22 | 2.10 | 3.00 | soft | brown/grey | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP31 - 0.25m | 0.25 | ASS field screen | | |
| TP31 - 0.50m | 0.50 | ASS field screen | | |
| TP31 - 0.75m | 0.75 | ASS field screen | | |
| TP31 - 1.00m | 1.00 | ASS field screen | | |
| TP31 - 1.25m | 1.25 | ASS field screen | | |
| TP31 - 1.50m | 1.50 | ASS field screen | | |
| TP31 - 1.75m | 1.75 | ASS field screen | | |
| TP31 - 2.00m | 2.00 | ASS field screen | | |
| TP31 - 2.25m | 2.25 | ASS field screen | | |
| TP31 - 2.50m | 2.50 | ASS field screen | | |
| TP31 - 2.75m | 2.75 | ASS field screen | | |
| TP31 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
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| Project description | | |
|---|---|---|
| Project name: | Jet Zero – Project Ulysses | |
| Location: | Coastal plains, Stuart, Queensland | |
| Observation ID: | TP32 | |
| Logged by: | DB - C&R Consulting | |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3200 | 146.8656 | 55 | 485881 | 7863762 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
|---|
| Australian Soil Classification (ASC) |
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| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | brown (7.5YR 5/2) | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.00 | firm | light brown (2.5Y 5/3) | clay | none | none |
| 3 | B21 | 1.00 | 2.20 | soft | grey (10YR 5/1) | silty clay | none | none |
| 4 | B22 | 2.20 | 3.00 | firm | grey (10YR 5/1) | clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP32 - 0.25m | 0.25 | ASS field screen, phys/chem | | |
| TP32 - 0.50m | 0.50 | ASS field screen, phys/chem | | |
| TP32 - 0.75m | 0.75 | ASS field screen | | |
| TP32 - 1.00m | 1.00 | ASS field screen | | |
| TP32 - 1.25m | 1.25 | ASS field screen, phys/chem | | |
| TP32 - 1.50m | 1.50 | ASS field screen | | |
| TP32 - 1.75m | 1.75 | ASS field screen | | |
| TP32 - 2.00m | 2.00 | ASS field screen, phys/chem | | |
| TP32 - 2.25m | 2.25 | ASS field screen | | |
| TP32 - 2.50m | 2.50 | ASS field screen | | |
| TP32 - 2.75m | 2.75 | ASS field screen | | |
| TP32 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**






| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP33 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8656 | 55 | 485881 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | groundwater at 2.5 mbgl |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
|---|
| Australian Soil Classification (ASC) |
| |
| |
| |

| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | dark brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.30 | stiff | brown | clay | none | none |
| 3 | B21 | 1.30 | 1.60 | soft | light brown | silty clay | none | none |
| 4 | B22 | 1.60 | 2.60 | loose | grey | fine sandy loam | none | none |
| 5 | D | 2.60 | 3.00 | loose | grey | loamy coarse sand | none | none |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP33 - 0.25m | 0.25 | ASS field screen | | |
| TP33 - 0.50m | 0.50 | ASS field screen | | |
| TP33 - 0.75m | 0.75 | ASS field screen | | |
| TP33 - 1.00m | 1.00 | ASS field screen | | |
| TP33 - 1.25m | 1.25 | ASS field screen | | |
| TP33 - 1.50m | 1.50 | ASS field screen | | |
| TP33 - 1.75m | 1.75 | ASS field screen | | |
| TP33 - 2.00m | 2.00 | ASS field screen | | |
| TP33 - 2.25m | 2.25 | ASS field screen | | |
| TP33 - 2.50m | 2.50 | ASS field screen | | |
| TP33 - 2.75m | 2.75 | ASS field screen | | |
| TP33 - 3.00m | 3.00 | ASS field screen | | |

| Site photos |
|---|
| |

| Project description | | |
|---|---|---|
| Project name: | Jet Zero – Project Ulysses | |
| Location: | Coastal plains, Stuart, Queensland | |
| Observation ID: | TP34 | |
| Logged by: | DB - C&R Consulting | |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3212 | 146.8656 | 55 | 485881 | 7863622 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | groundwater at 2.5 mbgl |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

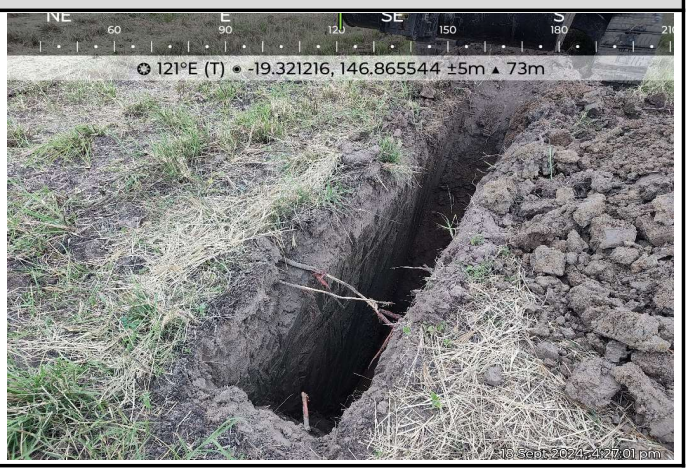
| Soil classification |
|---|
| Australian Soil Classification (ASC) |
| |
| |
| |

| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | grey/brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 1.40 | stiff | dark brown | clay | none | none |
| 3 | B2 | 1.40 | 2.30 | soft | grey/brown | silty clay | red/brown (0-20%) | none |
| 4 | D | 2.30 | 3.00 | loose | red/brown | loamy coarse sand | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP34 - 0.25m | 0.25 | ASS field screen | | |
| TP34 - 0.50m | 0.50 | ASS field screen | | |
| TP34 - 0.75m | 0.75 | ASS field screen | | |
| TP34 - 1.00m | 1.00 | ASS field screen | | |
| TP34 - 1.25m | 1.25 | ASS field screen | | |
| TP34 - 1.50m | 1.50 | ASS field screen | | |
| TP34 - 1.75m | 1.75 | ASS field screen | | |
| TP34 - 2.00m | 2.00 | ASS field screen | | |
| TP34 - 2.25m | 2.25 | ASS field screen | | |
| TP34 - 2.50m | 2.50 | ASS field screen | | |
| TP34 - 2.75m | 2.75 | ASS field screen | | |
| TP34 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**



| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP35 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3206 | 146.8663 | 55 | 485951 | 7863692 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

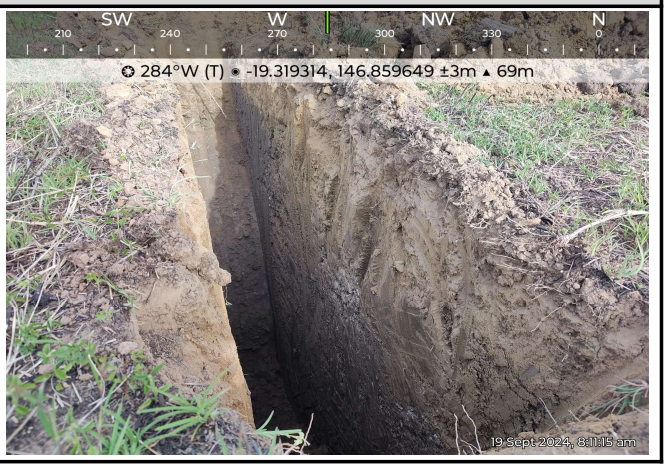
| Soil classification |
|---|
| Australian Soil Classification (ASC) |
| |
| |
| |

| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | brown | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.70 | firm | brown | clay | none | none |
| 3 | B21 | 0.70 | 1.40 | soft | grey/brown | silty clay | red/brown (0-20%) | none |
| 4 | B22 | 1.40 | 3.00 | firm | grey | clay | red/brown (0-10%) | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP35 - 0.25m | 0.25 | ASS field screen | | |
| TP35 - 0.50m | 0.50 | ASS field screen | | |
| TP35 - 0.75m | 0.75 | ASS field screen | | |
| TP35 - 1.00m | 1.00 | ASS field screen | | |
| TP35 - 1.25m | 1.25 | ASS field screen | | |
| TP35 - 1.50m | 1.50 | ASS field screen | | |
| TP35 - 1.75m | 1.75 | ASS field screen | | |
| TP35 - 2.00m | 2.00 | ASS field screen | | |
| TP35 - 2.25m | 2.25 | ASS field screen | | |
| TP35 - 2.50m | 2.50 | ASS field screen | | |
| TP35 - 2.75m | 2.75 | ASS field screen | | |
| TP35 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**





| Project description | |
|---|---|
| Project name: | Jet Zero – Project Ulysses |
| Location: | Coastal plains, Stuart, Queensland |
| Observation ID: | TP36 |
| Logged by: | DB - C&R Consulting |

| Site location | | | | | | |
|---|---|---|---|---|---|---|
| Datum | Latitude (dd) | Longitude (dd) | Zone | Easting (m) | Northing (m) | Location measurement method |
| GDA 94 | -19.3212 | 146.8663 | 55 | 485951 | 7863622 | handheld GPS device |

| Site characteristics | | | |
|---|---|---|---|
| Date: | 18/09/2024 | Observation type: | excavation test pit |
| Site type: | proposed development site | Observation class: | class I observations |

| | | | |
|---|---|---|---|
| Slope (%): | 0 | Morphological type: | |
| Slope type: | | Landform element: | plain |
| Geology: | late Pleistocene alluvium (Qpa) | Landform pattern: | flood plain |

| | | | |
|---|---|---|---|
| Soil name: | | Substrate lithology: | |
| Runoff: | minimal runoff | Depth to free water: | not encountered |
| Permeability: | not measured | Erosion: | none |
| Drainage: | moderately well-drained | Microrelief type: | none |
| Disturbance: | recently slashed | Proportion gilgai: | none |
| Rock outcrop: | none | Vertical interval (m): | none |
| Surface condition: | hard setting, some cracking | Horizontal interval (m): | none |
| Surface coarse fragments: | none | Microrelief component: | none |

| Vegetation | | | |
|---|---|---|---|
| Community name: | none recorded | | |
| Stratum: | | | |
| EDL: | | | |
| Lowest: | | | |

| Soil classification |
|---|
| Australian Soil Classification (ASC) |
| |
| |
| |

| Profile morphology | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Horizon | Upper depth (m) | Lower depth (m) | Consistency | Colour | Texture | Mottles | Course fragments |
| 1 | A1 | 0.00 | 0.30 | soft | grey/brown (10YR 5/2) | silty clay loam | none | none |
| 2 | A2 | 0.30 | 0.90 | stiff | grey (10YR 6/1) | clay | none | none |
| 3 | B21 | 0.90 | 1.30 | soft | grey (7.5YR 5/1) | clay loam | none | sub-rounded gravel (0-15%) |
| 4 | B22 | 1.30 | 3.00 | firm | grey (10YR 5/1) | silty clay | none | none |
| | | | | | | | | |
| | | | | | | | | |

| Laboratory samples | | | | |
|---|---|---|---|---|
| Sample ID | Sample depth (m) | Lab testing | Quality control | Comments |
| TP36 - 0.25m | 0.25 | ASS field screen, phys/chem | | |
| TP36 - 0.50m | 0.50 | ASS field screen, phys/chem | | |
| TP36 - 0.75m | 0.75 | ASS field screen | | |
| TP36 - 1.00m | 1.00 | ASS field screen, phys/chem | | |
| TP36 - 1.25m | 1.25 | ASS field screen | | |
| TP36 - 1.50m | 1.50 | ASS field screen | | |
| TP36 - 1.75m | 1.75 | ASS field screen | | |
| TP36 - 2.00m | 2.00 | ASS field screen | | |
| TP36 - 2.25m | 2.25 | ASS field screen | | |
| TP36 - 2.50m | 2.50 | ASS field screen, phys/chem | | |
| TP36 - 2.75m | 2.75 | ASS field screen | | |
| TP36 - 3.00m | 3.00 | ASS field screen | | |

**Site photos**



# Appendix B – Soil stratigraphic logs with laboratory data

# Geological Borelog

| | | | |
|---|---|---|---|
| LOCATION TP01 | | Borehole Log:TP01 | Logged by |
| SURFACE ELEVATION | JOB NUMBER | | |
| GROUNDWATER | DATUM | PROJECT: Jet Zero | Proj. Manager |
| DRILL METHOD | DATE | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | Emerson erosion potential | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|---|
| | yellow/brown (10YR 6/4)Silty clay loam | 0.1–0.3 | FS/PC | On the basis of laboratory analysis & field screening actionable PASS is likely absent | Sodic | Very low | Slakeing high potential | |
| | yellow/brown (2.5Y 6/3)Silty clay | 0.3–0.8 | FS/PC/A | | | | | |
| | yellow/brown (10YR 6/4) Silty clay | 0.8–2.5 | FS, FS/PC/A, FS, FS/A, FS, FS/PC, FS | | Strongly sodic | Medium | Dispersion very high potential | |
| | grey (7.5YR 6/1) Clay | 2.5–3.0 | FSA, FS/PC, FS | | | High | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP02 | | **Borehole Log:TP02** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | brown Silty clay loam (0.0–0.6) | 0.1 | | | | | |
| | | 0.2 | FS | | | | |
| | | 0.3 | | | | | |
| | | 0.4 | | | | | |
| | | 0.5 | FS/A | | | | |
| | | 0.6 | | | | | |
| | Brown clay (0.6–1.1) | 0.7 | FS | | | | |
| | | 0.8 | | | | | |
| | | 0.9 | | | | | |
| | | 1.0 | FS | | | | |
| | | 1.1 | | | | | |
| | grey silty clay (1.1–2.6) | 1.2 | FS | | | | |
| | | 1.3 | | | | | |
| | | 1.4 | | | | | |
| | | 1.5 | FS/A | | | | |
| | | 1.6 | | | | | |
| | | 1.7 | FS | | | | |
| | | 1.8 | | | | | |
| | | 1.9 | | | | | |
| | | 2 | FS | | | | |
| | | 2.1 | | | | | |
| | | 2.2 | | | | | |
| | | 2.3 | FS | | | | |
| | | 2.4 | | | | | |
| | | 2.5 | FS/A | | | | |
| | | 2.6 | | | | | |
| | Grey/brown clay (2.6–3.0) | 2.7 | FS | | | | |
| | | 2.8 | | | | | |
| | | 2.9 | | | | | |
| | | 3 | FS | | | | |

On the basis of laboratory analysis & field screening actionable PASS is likely absent

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP03 | | **Borehole Log:TP03** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | Emerson emersion potential | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|---|
| | grey (7.5YR 5/1) silty clay loam | 0.1–0.4 | FS/PC | On the basis of laboratory analysis & field screening actionable PASS is likely absent | Non sodic | Very low | Swelling low potential | |
| | grey (7.5YR 6/1) clay | 0.4–0.8 | FS, FS/A | | | | Slakeing high potential | |
| | grey (7.5YR 6/1)Silty clay | 0.8–2.4 | FS/PC, FS/A, FS, FS, FS/PC/A, FS | | Strongly sodic | High | Dispersion very high potential | |
| | light brown/grey (10YR 6/2) silty clay | 2.4–3.0 | FS/PC, FS, FS/A | | | Medium | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP04 | | **Borehole Log:TP04** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | Emerson classification potential | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|---|
| | brown (10YR 5/3) Silty clay loam | 0.1–0.3 | FS/PC/A | On the basis of laboratory analysis & field screening actionable PASS is likely present | Sodic | Very low | Slakeing high potential | |
| | light brown (2.5Y 7/4)) clay | 0.4–1.0 | FS/PC | | | | | |
| | light grey (2.5Y 7/2) sandy clay loam | 1.1–2.0 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely absent | Strongly sodic | Low | Dispersion very high potential | |
| | light grey (10YR 7/1) silty clay | 2.1–3.0 | FS | | | High | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP05 | | **Borehole Log:TP05** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | Red/brown Silty clay loam (0.0 – 0.3 mbgl) | 0.1 – 0.3 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| | red/Brown clay (0.3 – 1.2 mbgl) | 0.3 – 1.2 | FS, FS, FS, FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| | Grey/brown clay (1.2 – 3.0 mbgl) | 1.2 – 3.0 | FS, FS, FS, FS/A, FS, FS, FS | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP06 | | **Borehole Log:TP06** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | Red/brown Silty clay loam (0.0–0.3) | 0.1–0.3 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| | Dark brown clay (0.3–0.6) | 0.4–0.6 | FS | | | | |
| | | 0.7 | FS | | | | |
| | | 0.8–1.0 | FS | | | | |
| | grey/brown clay (1.0–3.0) | 1.1–1.2 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| | | 1.3–1.4 | | | | | |
| | | 1.5 | FS | | | | |
| | | 1.6–1.7 | | | | | |
| | | 1.8 | FS | | | | |
| | | 1.9–2.0 | | | | | |
| | | 2.1–2.2 | FS/A | | | | |
| | | 2.3–2.4 | | | | | |
| | | 2.5 | FS | | | | |
| | | 2.6–2.7 | | | | | |
| | | 2.8 | FS | | | | |
| | | 2.9–3.0 | | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP07 | | **Borehole Log:TP07** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) | | | | | | | |
| 0.1 | Red/brown Silty clay loam | 0.1 | | | | | |
| 0.2 | | 0.2 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | Light brown clay | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | | | | | |
| 0.8 | | 0.8 | FS/A | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | grey/brown Silty clay | 1.1 | | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| 1.2 | | 1.2 | FS | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS/A | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | FS | | | | |
| 2.3 | | 2.3 | | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | grey clay | 2.7 | FS/A | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP08 | | **Borehole Log:TP08** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | Soils: PASS | Soils: Sodic | Soils: EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | Light brown Silty clay loam | 0.1 | | | | | |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | Dark brown clay | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | | 1.1 | | | | | |
| 1.2 | grey/brown clay | 1.2 | FS | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS/A | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | | | | | |
| 2.3 | | 2.3 | FS/A | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | | 2.7 | FS | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS/A | | | | |

On the basis of laboratory analysis & field screening actionable PASS is likely absent

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP09 | | **Borehole Log:TP09** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | Soils: PASS | Soils: Sodic | Soils: EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) | brown Silty clay loam | 0.1 | | | | | |
| 0.1 | | 0.2 | | | | | |
| 0.2 | | 0.3 | FS/A | | | | |
| 0.3 | | 0.4 | | | | | |
| 0.4 | Light brown clay | 0.5 | FS | | | | |
| 0.5 | | 0.6 | | | | | |
| 0.6 | | 0.7 | FS | | | | |
| 0.7 | | 0.8 | | | | | |
| 0.8 | | 0.9 | | | | | |
| 0.9 | | 1.0 | FS | | | | |
| 1.0 | | 1.1 | | | | | |
| 1.1 | | 1.2 | FS/A | | | | |
| 1.2 | | 1.3 | | | | | |
| 1.3 | | 1.4 | | | | | |
| 1.4 | | 1.5 | FS | | | | |
| 1.5 | | 1.6 | | | | | |
| 1.6 | | 1.7 | | | | | |
| 1.7 | | 1.8 | FS | | | | |
| 1.8 | | 1.9 | | | | | |
| 1.9 | | 2 | FS | | | | |
| 2.0 | | 2.1 | | | | | |
| 2.1 | grey/brown clay | 2.2 | | | | | |
| 2.2 | | 2.3 | FS/A | | | | |
| 2.3 | | 2.4 | | | | | |
| 2.4 | | 2.5 | FS | | | | |
| 2.5 | | 2.6 | | | | | |
| 2.6 | | 2.7 | FS | | | | |
| 2.7 | | 2.8 | | | | | |
| 2.8 | | 2.9 | | | | | |
| 2.9 | | 3 | FS | | | | |
| 3.0 | | | | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP10 | | **Borehole Log:TP10** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | brown Silty clay loam (0.0–0.2) | 0.1–0.2 | | | | | |
| | yellow/ brown clay (0.2–1.6) | 0.2–1.6 | FS (0.2), FS (0.5), FS (0.7), FS/A (1.0), FS/A (1.3), FS (1.5), FS (1.7), FS/A (2.0), FS (2.2), FS (2.5), FS/A (2.7) | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| | grey/brown silty clay (1.6–2.8) | 1.6–2.8 | | | | | |
| | grey/brown loamy medium sand (2.8–3.0) | 2.8–3.0 | FS (3.0) | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP11 | | **Borehole Log:TP11** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | Soils: PASS | Soils: Sodic | Soils: EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | Light brown Silty clay loam | 0.1 | | | | | |
| 0.2 | | 0.2 | FS | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | | 0.4 | | | | | |
| 0.5 | | 0.5 | FS/A | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | Dark brown clay | 0.7 | | | | | |
| 0.8 | | 0.8 | FS | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | | 1.1 | | | | | |
| 1.2 | | 1.2 | | | | | |
| 1.3 | | 1.3 | FS/A | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | Red/brown Silty clay | 1.7 | | | | | |
| 1.8 | | 1.8 | FS | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | | | | | |
| 2.3 | | 2.3 | FS/A | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | Brown Loamt coarse sand | 2.6 | | | | | |
| 2.7 | | 2.7 | FS | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP12 | | **Borehole Log:TP12** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | Light brown Silty clay loam | 0.1 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| 0.2 | | 0.2 | | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | | 0.4 | | | | | |
| 0.5 | brown clay | 0.5 | FS | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | Grey Silty clay | 1.1 | | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| 1.2 | | 1.2 | FS | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS/A | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | | | | | |
| 2.3 | | 2.3 | FS/A | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/A | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | Brown Silty clay | 2.9 | | | | | |
| 3.0 | | 3 | FS | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP13 | | **Borehole Log:TP13** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | Light brown Silty clay loam | 0.1 | | | | | The field screen from the result obtained at 0.25m showed a pH change from 7 to 3.7. This would strongly indicate the presence of PASS. The Cr Sulphur test returned results that are below the action critera and below the limit of reporting. It is likley that this acid generation is due to the presences of organic matter. |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | Dark brown clay | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS/A | | | | |
| 1.1 | Grey/brown Silty clay | 1.1 | | | | | |
| 1.2 | | 1.2 | FS | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | FS | | | | |
| 2.3 | | 2.3 | | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/A | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS | | | | |

On the basis of laboratory analysis & field screening actionable PASS is likely absent

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP14 | | **Borehole Log:TP14** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | Soils: PASS | Soils: Sodic | Soils: EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | brown Silty clay loam | 0.1 | | | | | |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | | 0.4 | | | | | |
| 0.5 | Dark brown clay | 0.5 | FS | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | | | | | |
| 0.8 | | 0.8 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | | 1.1 | | | | | |
| 1.2 | | 1.2 | | | | | |
| 1.3 | | 1.3 | FS/A | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | | | | | |
| 1.8 | | 1.8 | FS | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | Grey/brown clay | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | | | | | |
| 2.3 | | 2.3 | FS | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | | 2.7 | FS | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP15 | | **Borehole Log:TP15** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | Light brown Silty clay loam | 0.1 | | | | | |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | Dark brown clay | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS/A | | | | |
| 1.1 | | 1.1 | | | | | |
| 1.2 | Grey Silty clay | 1.2 | FS | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | FS | | | | |
| 2.3 | | 2.3 | | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | Brown grey silty clay | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/A | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| LOCATION TP16 | | Borehole Log:TP16 | Logged by |
| SURFACE ELEVATION | JOB NUMBER | | |
| GROUNDWATER | DATUM | PROJECT:Jet Zero | Proj. Manager |
| DRILL METHOD | DATE | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | Emerson dispersion potential | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|---|
| | brown (10YR 5/3) Silty clay loam | 0.1–0.3 | FS/PC/A | On the basis of laboratory analysis & field screening actionable PASS is likely present | Sodic | Very low | Swelling low potential | |
| | brown (10YR 5/3) Silty loam | 0.4–1.0 | FS/PC | | | | | |
| | yellow/brown (2.5YR 6/3) Clay | 1.1–2.4 | FS/PC | On the basis of laboratory analysis & field screening actionable PASS is likely absent | Strongly sodic | Medium | Dispersion very high potential | |
| | light brown (10YR 6/3) Clayeyy coarse sand | 2.5–3.0 | FS/PC | | | High | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP17 | | **Borehole Log:TP17** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | brown Silty clay loam | 0.1 | | | | | |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | brown clay | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | | 1.1 | | | | | |
| 1.2 | | 1.2 | FS | | | | |
| 1.3 | Grey/brown Silty clay | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS/A | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | FS | | | | |
| 2.3 | | 2.3 | | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS/A | | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/ | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP18 | | **Borehole Log:TP18** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | brown Silty clay loam | 0.1 | | | | | Acid sulphate potential in surface layers however below actionabile levels |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | | 0.4 | | | | | |
| 0.5 | Brown/grey clay | 0.5 | FS | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | | 1.1 | | | | | |
| 1.2 | Grey/brown Silty clay | 1.2 | FS/A | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | | | | | |
| 2.3 | | 2.3 | FS | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/ | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS/A | | | | |

On the basis of laboratory analysis & field screening actionable PASS is likely absent

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| LOCATION TP19 | | Borehole Log:TP19 | Logged by |
| SURFACE ELEVATION | JOB NUMBER | | |
| GROUNDWATER | DATUM | PROJECT:Jet Zero | Proj. Manager |
| DRILL METHOD | DATE | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | Emerson emersion potential | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|---|
| | grey (7.5YR 5/1) silty clay | 0.1–0.3 | FS/PC/A | On the basis of laboratory analysis & field screening actionable PASS is likely present | Non-sodic | | Slakeing high potentia | |
| | yellow/brown (10YR 6/4) Sandy loam | 0.3–0.7 | FS/PC | | | | Slakeing medium potential | |
| | brown/grey (10YR 6/2) silty clay | 0.7–2.3 | FS, FS/PC/A, FS, FS, FS, FS, FS | On the basis of laboratory analysis & field screening actionable PASS is likely absent | Sodic | Very low | Slaking high potential | |
| | red/brown (5YR 6/4 silty clay | 2.3–3.0 | FS, FS/PC | | Strongly sodic | High | Dispersion very high potential | |
| | | 3 | FS/A | | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP20 | | **Borehole Log:TP20** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | brown Silty clay loam | 0.1 – 0.4 | FS/A | | | | Acid sulphate potential in surface layers however below actionabile levels |
| | Brown clay | 0.5 – 1.0 | FS | | | | |
| | Grey/brown Silty clay | 1.1 – 3.0 | FS, FS, FS, FS, FS/A, FS, FS, FS, FS/, FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |

(mbgl) 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP21 | | **Borehole Log:TP21** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | Emerson emersion potential | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|---|
| | light brown/grey (10YR 6/2) silty clay loam | 0.1–0.3 | FS/PC/A | On the basis of laboratory analysis & field screening actionable PASS is likely absent | Sodic | Low | Swelling low potential | |
| | grey (10YR 7/1) clay | 0.4–1.0 | FS/PC, FS, FS | | | | | |
| | grey/brown (10YR 5/1) ailty clay | 1.1–1.9 | FS, FS/A, FS, FS | | | | Dispersion very high potential | |
| | red/brown (5YR 6/3) Silty clay | 2.0–2.7 | FS/PC, FS, FS/A, FS | | Strongly sodic | High | | |
| | Light grey Loamy course sand | 2.8–3.0 | FS/PC | | | Medium | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP22 | | **Borehole Log:TP22** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | brown Silty clay loam | 0.1 | | | | | |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | Yellow/Brown clay | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely Present | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS/A | | | | |
| 1.1 | | 1.1 | | | | | |
| 1.2 | | 1.2 | FS | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | Grey/brown Silty clay | 1.9 | | | | | |
| 2.0 | | 2 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | FS | | | | |
| 2.3 | | 2.3 | | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/ | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS/A | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP23 | | **Borehole Log:TP23** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | Soils: PASS | Soils: Sodic | Soils: EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | brown Silty clay loam | 0.1 | | | | | Acid potential below actionabil in top 30cm |
| 0.2 | | 0.2 | | | | | |
| 0.3 | | 0.3 | FS/A | | | | |
| 0.4 | Dark Brown clay | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | Grey/brown Silty clay | 1.1 | | | | | |
| 1.2 | | 1.2 | FS | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS/A | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | | | | | |
| 2.3 | | 2.3 | FS | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | Brown silty clay | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/ | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS/A | | | | |

On the basis of laboratory analysis & field screening actionable PASS is likely absent

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP24 | | **Borehole Log:TP24** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | Grey/ brown Silty clay loam (0.0–0.3) | 0.1–0.3 | FS/A | On the basis of laboratory analysis & field screening | | | |
| | Dark brown clay (0.3–0.8) | 0.4–0.8 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| | Red/brown clay (0.8–2.1) | 0.9–2.1 | FS/A | | | | |
| | Grey/brown clay (2.1–3.0) | 2.2–3.0 | FS/A | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP25 | | **Borehole Log:TP25** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | Brown Silty clay loam | 0.1 | | | | | |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | | | | |
| 0.6 | Brown clay | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS/A | | | | |
| 1.1 | | 1.1 | | | | | |
| 1.2 | Dark grey Silty clay | 1.2 | FS/A | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | Grey/brown silty clay | 2.2 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| 2.3 | | 2.3 | | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | | 2.7 | FS | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP26 | | **Borehole Log:TP26** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | Soils: PASS | Soils: Sodic | Soils: EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) | Very dark brown Silty clay loam | 0.1 | | | | | |
| 0.1 | | 0.2 | | | | | |
| 0.2 | | 0.3 | FS | | | | |
| 0.3 | | 0.4 | | | | | |
| 0.4 | Light Brown clay | 0.5 | FS | | | | |
| 0.5 | | 0.6 | | | | | |
| 0.6 | | 0.7 | FS | | | | |
| 0.7 | | 0.8 | | | | | |
| 0.8 | | 0.9 | | | | | |
| 0.9 | | 1.0 | FS/A | | | | |
| 1.0 | Grey Silty clay | 1.1 | | | | | |
| 1.1 | | 1.2 | FS | | | | |
| 1.2 | | 1.3 | | | | | |
| 1.3 | | 1.4 | | | | | |
| 1.4 | | 1.5 | FS | | | | |
| 1.5 | | 1.6 | | | | | |
| 1.6 | | 1.7 | FS/A | | | | |
| 1.7 | Brown silty clay | 1.8 | | | | | |
| 1.8 | | 1.9 | | | | | |
| 1.9 | | 2 | FS/A | | | | |
| 2.0 | | 2.1 | | | | | |
| 2.1 | | 2.2 | | | | | |
| 2.2 | | 2.3 | FS | | | | |
| 2.3 | Loamy coarse sand | 2.4 | | | | | |
| 2.4 | | 2.5 | FS | | | | |
| 2.5 | | 2.6 | | | | | |
| 2.6 | | 2.7 | FS/ | | | | |
| 2.7 | | 2.8 | | | | | |
| 2.8 | | 2.9 | | | | | |
| 2.9 | | 3 | FS/A | | | | |
| 3.0 | | | | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP27 | | **Borehole Log:TP27** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | Dark brown Silty clay loam | 0.1 | FS/A | On the basis of laboratory analysis & field screening | | | |
| 0.2 | | 0.2 | | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | Very Brown clay | 0.4 | FS | | | | |
| 0.5 | | 0.5 | | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | Grey/Brown Silty clay | 1.1 | | | | | |
| 1.2 | | 1.2 | FS/A | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS/A | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | FS | | | | |
| 2.3 | | 2.3 | | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | Light brown silty clay | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/A | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS | | | | |

On the basis of laboratory analysis & field screening actionable PASS is likely absent

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP29 | | **Borehole Log:TP29** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

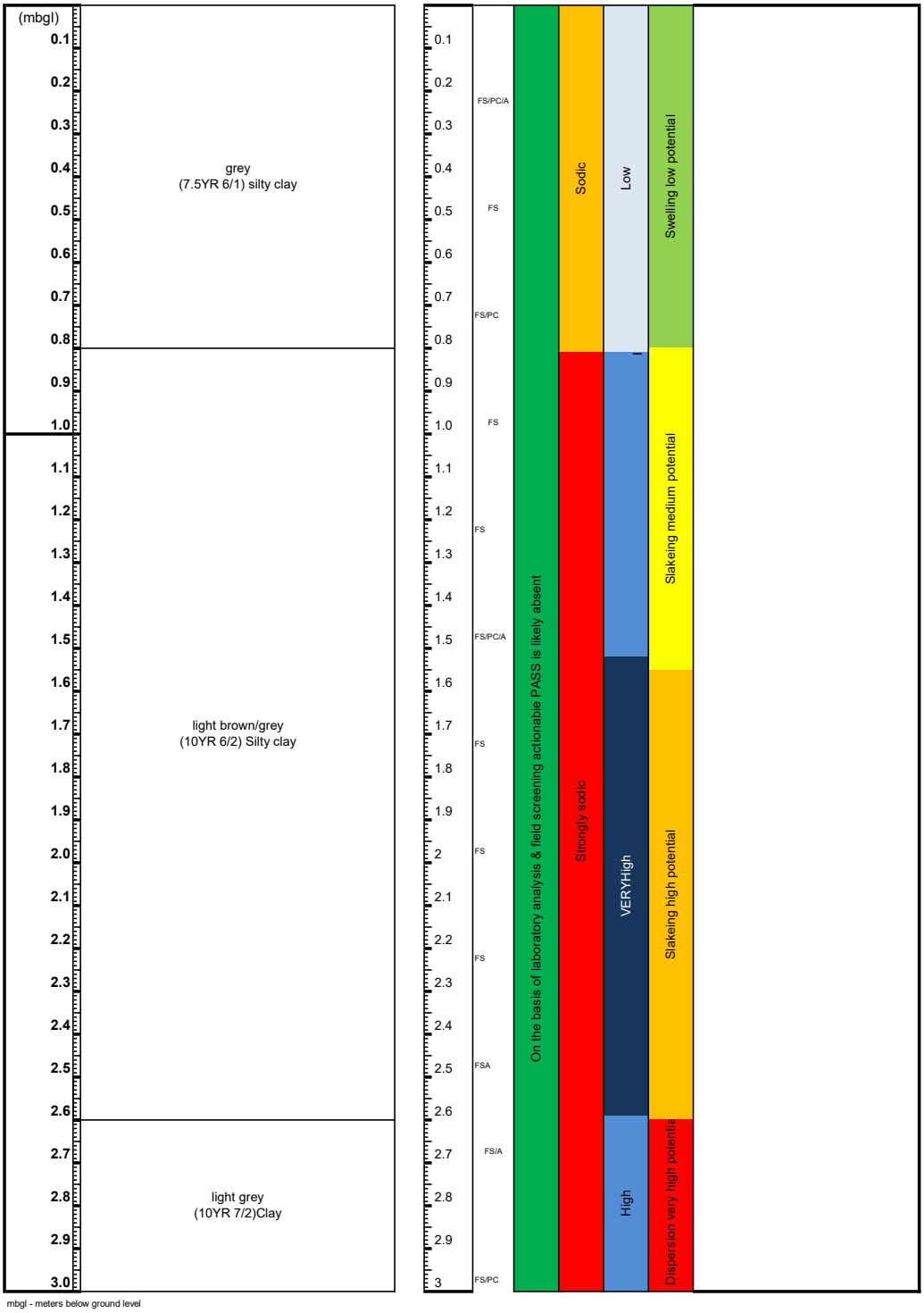
| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | Light brown Silty clay loam (0.0–0.3) | 0.1–0.3 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| | Dark Brown clay (0.3–1.2) | 0.4–1.2 | FS, FS, FS, FS/A | | | | |
| | Gre/ brown silty clay (1.2–3.0) | 1.3–3.0 | FS, FS, FS, FS/A, FS, FS, FS/A, FS | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| LOCATION TP29 | | Borehole Log:TP29 | Logged by |
| SURFACE ELEVATION | JOB NUMBER | | |
| GROUNDWATER | DATUM | PROJECT:Jet Zero | Proj. Manager |
| DRILL METHOD | DATE | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | Emerson emersion potential | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|---|




mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP30 | | **Borehole Log:TP30** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | Light brown Silty clay loam | 0.1 | | On the basis of laboratory analysis & field screening | | | |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | Dark Brown clay | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | Grey/ brown silty clay | 1.1 | | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| 1.2 | | 1.2 | FS/A | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | FS/A | | | | |
| 1.8 | | 1.8 | | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | | | | | |
| 2.3 | | 2.3 | FS | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | | 2.5 | FS | | | | |
| 2.6 | Grey clay | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/A | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS/A | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP31 | | **Borehole Log:TP31** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| (mbgl) 0.1 | Light brown Silty clay loam | 0.1 | | | | | The field screen from the result obtained at 0.25m showed a pH change from 7.6 to 3.3. This would strongly indicate the presence of PASS. The Cr Sulphur test returned results that are below the action critera and below the limit of reporting. It is likley that this acid generation is due to the presences of organic matter. |
| 0.2 | | 0.2 | FS/A | | | | |
| 0.3 | | 0.3 | | | | | |
| 0.4 | Dark brown clay | 0.4 | | | | | |
| 0.5 | | 0.5 | FS | | | | |
| 0.6 | | 0.6 | | | | | |
| 0.7 | | 0.7 | FS | | | | |
| 0.8 | | 0.8 | | | | | |
| 0.9 | | 0.9 | | | | | |
| 1.0 | | 1.0 | FS | | | | |
| 1.1 | | 1.1 | | | | | |
| 1.2 | | 1.2 | FS/A | | | | |
| 1.3 | | 1.3 | | | | | |
| 1.4 | | 1.4 | | | | | |
| 1.5 | Brown clay | 1.5 | FS | | | | |
| 1.6 | | 1.6 | | | | | |
| 1.7 | | 1.7 | | | | | |
| 1.8 | | 1.8 | FS | | | | |
| 1.9 | | 1.9 | | | | | |
| 2.0 | | 2 | FS | | | | |
| 2.1 | | 2.1 | | | | | |
| 2.2 | | 2.2 | | | | | |
| 2.3 | | 2.3 | FS | | | | |
| 2.4 | | 2.4 | | | | | |
| 2.5 | Brown/grey clay | 2.5 | FS/A | | | | |
| 2.6 | | 2.6 | | | | | |
| 2.7 | | 2.7 | FS/A | | | | |
| 2.8 | | 2.8 | | | | | |
| 2.9 | | 2.9 | | | | | |
| 3.0 | | 3 | FS/A | | | | |

On the basis of laboratory analysis & field screening actionable PASS is likely absent

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP32 | | **Borehole Log:TP32** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | Emerson erosion potential | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|---|
| (mbgl) | brown (7.5YR 5/2) silty clay loam | 0.1–0.3 | FS/PC/A | On the basis of laboratory analysis & field screening actionable PASS is likely present | Sodic | Very low | Slakeing high potential | |
| | light brown (2.5Y 5/3) clay | 0.4–1.0 | FS/PC, FS, FS | | | | Swelling low potential | |
| | grey (10YR 5/1) silty clay | 1.1–2.2 | FS/PC/A, FS, FS, FS/PC, FS | On the basis of laboratory analysis & field screening actionable PASS is likely absent | Strongly sodic | High | Dispersion very high potential | |
| | grey (10YR 5/1) clay | 2.3–3.0 | FS/A, FS, FS | | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP33 | | **Borehole Log:TP33** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | Soils: PASS | Soils: Sodic | Soils: EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | Dark brown Silty clay loam (0.0–0.3) | 0.1 | | | | | |
| | | 0.2 | FS/A | | | | |
| | | 0.3 | | | | | |
| | Brown clay (0.3–1.3) | 0.4 | | | | | |
| | | 0.5 | FS | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| | | 0.6 | | | | | |
| | | 0.7 | FS | | | | |
| | | 0.8 | | | | | |
| | | 0.9 | | | | | |
| | | 1.0 | FS | | | | |
| | Light brown silty clay (1.3–1.6) | 1.1 | | | | | |
| | | 1.2 | FS/A | | | | |
| | | 1.3 | | | | | |
| | | 1.4 | | | | | |
| | | 1.5 | FS | | | | |
| | Grey Fine sandy loam (1.6–2.6) | 1.6 | | | | | |
| | | 1.7 | FS/A | | | | |
| | | 1.8 | | | | | |
| | | 1.9 | | | | | |
| | | 2.0 | FS | | | | |
| | | 2.1 | | | | | |
| | | 2.2 | | | | | |
| | | 2.3 | FS | | | | |
| | | 2.4 | | | | | |
| | | 2.5 | FS/A | | | | |
| | | 2.6 | | | | | |
| | Grey loamy coarse sand (2.6–3.0) | 2.7 | FS | | | | |
| | | 2.8 | | | | | |
| | | 2.9 | | | | | |
| | | 3 | FS | | | | |

On the basis of laboratory analysis & field screening actionable PASS is likely absent

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP34 | | **Borehole Log:TP34** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | Grey brown Silty clay loam (0.0–0.3) | 0.1–0.3 | FS/A | On the basis of laboratory analysis & field screening actionable PASS is likely present | | | |
| | Dark brown clay (0.3–1.4) | 0.4–1.4 | FS, FS | | | | |
| | Grey brown silty clay (1.4–2.3) | 1.5–2.3 | FS, FS, FS | On the basis of laboratory analysis & field screening actionable PASS is likely absent | | | |
| | Red/brown loamy coarse sabd (2.3–3.0) | 2.4–3.0 | FS/A, FS, FS | | | | |

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP35 | | **Borehole Log:TP35** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|
| | Brown Silty clay loam (0.0–0.3) | 0.1 | | | | | |
| | | 0.2 | FS | | | | |
| | | 0.3 | | | | | |
| | Brown clay (0.3–0.7) | 0.4 | | | | | |
| | | 0.5 | FS | | | | |
| | | 0.6 | | | | | |
| | | 0.7 | FS/A | | | | |
| | Grey brown clay (0.7–1.4) | 0.8 | | | | | |
| | | 0.9 | | | | | |
| | | 1.0 | FS | | | | |
| | | 1.1 | | | | | |
| | | 1.2 | FS | | | | |
| | | 1.3 | | | | | |
| | | 1.4 | | | | | |
| | Brown clay (1.4–3.0) | 1.5 | FS | | | | |
| | | 1.6 | | | | | |
| | | 1.7 | FS | | | | |
| | | 1.8 | | | | | |
| | | 1.9 | | | | | |
| | | 2 | FS/A | | | | |
| | | 2.1 | | | | | |
| | | 2.2 | | | | | |
| | | 2.3 | FS | | | | |
| | | 2.4 | | | | | |
| | | 2.5 | FS/A | | | | |
| | | 2.6 | | | | | |
| | | 2.7 | FS/A | | | | |
| | | 2.8 | | | | | |
| | | 2.9 | | | | | |
| | | 3 | FS/A | | | | |

On the basis of laboratory analysis & field screening actionable PASS is likely absent

mbgl - meters below ground level

# Geological Borelog

| | | | |
|---|---|---|---|
| **LOCATION** TP36 | | **Borehole Log:TP36** | **Logged by** |
| **SURFACE ELEVATION** | **JOB NUMBER** | | |
| **GROUNDWATER** | **DATUM** | **PROJECT:Jet Zero** | **Proj. Manager** |
| **DRILL METHOD** | **DATE** | | |

| #No. | STRATIGRAPHY | Depth (mbgl) | Soils: SAMPLES | PASS | Sodic | EC | Emerson dispersion potential | CONSTRUCTION DETAILS / COMMENTS |
|---|---|---|---|---|---|---|---|---|
| | grey/brown (10YR 5/2)) silty clay loam | 0.1–0.3 | FS/PC/A | On the basis of laboratory analysis & field screening actionable PASS is likely absent | Sodic | Very low | Swelling low potential | |
| | grey (10YR 6/1) clay | 0.3–0.9 | FS/PC, FS/A | Strongly sodic | | medium | Dispersion very high potential | |
| | grey (7.5YR 5/1) Clay loam | 0.9–1.3 | FS/PC, FS/A | | | High | | |
| | grey (10YR 5/1) Silty clay | 1.3–3.0 | FS, FS, FS/A, FS, FS/PC, FS, FS/A | | | Very high | Slakeing high potential | |

mbgl - meters below ground level

# Appendix C – Laboratory results

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **EB2432677** | Page | : 1 of 88 |
| Client | : **C & R CONSULTING PTY LTD** | Laboratory | : Environmental Division Brisbane |
| Contact | : MR MATT KNOTT | Contact | : Madison Forster |
| Address | : 188 ROSS RIVER ROAD<br>AITKENVALE QUEENSLAND 4812 | Address | : 2 Byth Street Stafford QLD Australia 4053 |
| Telephone | : +61 07 47253751 | Telephone | : +61-7-3552-8685 |
| Project | : Jet Zero 24069 | Date Samples Received | : 24-Sep-2024 07:50 |
| Order number | : ---- | Date Analysis Commenced | : 24-Sep-2024 |
| C-O-C number | : ---- | Issue Date | : 04-Oct-2024 12:27 |
| Sampler | : DEAN BUCHANAN | | |
| Site | : ---- | | |
| Quote number | : EB24CRCONS0004 | | |
| No. of samples received | : 101 | | |
| No. of samples analysed | : 101 | | |

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* |
|---|---|---|
| Beatriz Llarinas | Senior Chemist - Inorganics | Brisbane Inorganics, Stafford, QLD |
| Kim McCabe | Senior Inorganic Chemist | Brisbane Inorganics, Stafford, QLD |
| Kirsty Watson | Senior Chemist - Organics | Brisbane Organics, Stafford, QLD |
| Kirsty Watson | Senior Chemist - Organics | Brisbane Soil Preparation, Stafford, QLD |
| Layla Hafner | Acid Sulphate Soils - Chemist | Brisbane Acid Sulphate Soils, Stafford, QLD |
| Satishkumar Trivedi | Senior Acid Sulfate Soil Chemist | Brisbane Acid Sulphate Soils, Stafford, QLD |
| Timothy Creagh | Senior Chemist - Organics | Brisbane Organics, 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 Contract for details.

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

- EP080 – Volatiles TRH/BTEX: High LCS recovery deemed acceptable as all associated analyte results are less than LOR.
- EG048G (Hexavalent Chromium by Alkaline Digest): Sample TP19 - 0.25m (EB2432677-065) was diluted due to matrix interference. LOR adjusted accordingly.
- EG048G (Hexavalent Chromium by Alkaline Digest): Sample DUPLICATE A (EB2432677-061) was diluted due to matrix interference. LOR adjusted accordingly.
- **SPLIT WORK ORDER: It should be noted that ALS has split this work order over the following work orders (EB2432676 and EB2432677) due to the size of the sample numbers. For any further information regarding this processing of samples please contact ALS client services division on ALSEnviro.Brisbane@alsglobal.com**
- ALS is not NATA accredited for the analysis of Exchangeable Aluminium and Exchange Acidity in soils when performed under ALS Method ED005.
- ALS is not NATA accredited for the analysis of Exchangeable Cations on Alkaline Soils when performed under ALS Method ED006.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- 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.
- EK067G (Total Phosphorous as P): Sample TP19 - 0.50m (EB2432677-066) shows poor matrix spike recovery due to sample heterogeneity. Confirmed by visual inspection.
- The TRIP SPIKE and TRIP SPIKE CONTROL have been analysed for volatile TPH and BTEXN only. The TRIP SPIKE and TRIP SPIKE CONTROL were prepared in the lab using reagent grade sand spiked with petrol. The TRIP SPIKE was dispatched from the lab and the TRIP SPIKE CONTROL retained. The spike samples were extracted and analysed concurrently with samples reported in this batch.
- EG005T (Total Metals by ICP-AES): Some samples shows poor duplicate results due to sample heterogeneity. This has been confirmed by visual inspection.
- EG005T (Total Metals by ICP-AES): Some samples shows poor matrix spike recovery due to sample heterogeneity. This has been confirmed by visual inspection.
- ED006 (Exchangeable Cations on Alkaline Soils): Unable to calculate Magnesium/Potassium Ratio result for some samples as required Exchangeable Magnesium and/or Potassium results are less than the limit of reporting.
- EP066 – Polychlorinated Biphenyls (PCB) and EP075 (SIM) - PAH/Phenols (SIM): High surrogate recoveries for sample 'TP19 - 2.75m' (EB2432677-068) and 'TP21 - 0.25m' (EB2432677-069) have been deemed acceptable as all associated analyte results are less than LOR.
- EP068 – Pesticides by GCMS: High LCS and matrix spike recovery deemed acceptable as all associated analyte results are less than LOR.
- ED006 (Exchangeable Cations on Alkaline Soils): DUPLICATE A (EB2432677-061) shows poor duplicate results due to sample heterogeneity. This has been confirmed by visual inspection.
- 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.
- EA058 Emerson: V. = Very, D. = Dark, L. = Light, VD. = Very Dark
- ED007 and ED008: When Exchangeable Al is reported from these methods, it should be noted that Rayment & Lyons (2011) suggests Exchange Acidity by 1M KCl - Method 15G1 (ED005) is a more suitable method for the determination of exchange acidity (H+ + Al3+).
- ALS is not NATA accredited for the analysis of bulk density in a soil matrix.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP29 - 0.25m | TP29 - 0.50m | TP29 - 0.75m | TP29 - 1.00m | TP29 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-001 | EB2432677-002 | EB2432677-003 | EB2432677-004 | EB2432677-005 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| ø pH (F) | ---- | 0.1 | pH Unit | **6.6** | **7.1** | **7.8** | **7.4** | **7.9** |
| ø pH (Fox) | ---- | 0.1 | pH Unit | **5.0** | **6.0** | **6.6** | **6.5** | **8.7** |
| ø Reaction Rate | ---- | 1 | - | **4** | **4** | **2** | **2** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP29 - 1.50m | TP29 - 1.75m | TP29 - 2.00m | TP29 - 2.25m | TP29 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-006 | EB2432677-007 | EB2432677-008 | EB2432677-009 | EB2432677-010 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| ø pH (F) | ---- | 0.1 | pH Unit | **8.3** | **8.7** | **8.3** | **8.2** | **8.2** |
| ø pH (Fox) | ---- | 0.1 | pH Unit | **6.8** | **9.0** | **6.7** | **8.3** | **8.2** |
| ø Reaction Rate | ---- | 1 | - | **2** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP29 - 2.75m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-011 | EB2432677-012 | EB2432677-013 | EB2432677-014 | EB2432677-015 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| ø pH (F) | ---- | 0.1 | pH Unit | **8.2** | **8.2** | **7.2** | **7.0** | **7.3** |
| ø pH (Fox) | ---- | 0.1 | pH Unit | **6.9** | **8.2** | **4.4** | **4.8** | **5.3** |
| ø Reaction Rate | ---- | 1 | - | **4** | **4** | **2** | **3** | **3** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP16 - 1.00m | TP16 - 1.25m | TP16 - 1.50m | TP16 - 1.75m | TP16 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-016 | EB2432677-017 | EB2432677-018 | EB2432677-019 | EB2432677-020 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| ø pH (F) | ---- | 0.1 | pH Unit | **8.4** | **8.3** | **8.4** | **8.5** | **8.5** |
| ø pH (Fox) | ---- | 0.1 | pH Unit | **5.8** | **8.2** | **5.9** | **8.3** | **6.0** |
| ø Reaction Rate | ---- | 1 | - | **2** | **4** | **2** | **4** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP16 - 2.25m | TP16 - 2.50m | TP16 - 2.75m | TP16 - 3.00m | TP12 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-021 | EB2432677-022 | EB2432677-023 | EB2432677-024 | EB2432677-025 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **ø pH (F)** | ---- | 0.1 | pH Unit | **8.4** | **8.3** | **8.1** | **7.9** | **6.5** |
| **ø pH (Fox)** | ---- | 0.1 | pH Unit | **8.4** | **6.0** | **5.9** | **8.1** | **3.8** |
| **ø Reaction Rate** | ---- | 1 | - | **4** | **2** | **2** | **4** | **3** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP12 - 0.50m | TP12 - 0.75m | TP12 - 1.00m | TP12 - 1.25m | TP12 - 1.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-026 | EB2432677-027 | EB2432677-028 | EB2432677-029 | EB2432677-030 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| ø pH (F) | ---- | 0.1 | pH Unit | **6.9** | **7.8** | **8.9** | **8.6** | **8.6** |
| ø pH (Fox) | ---- | 0.1 | pH Unit | **4.8** | **5.6** | **7.9** | **8.3** | **5.9** |
| ø Reaction Rate | ---- | 1 | - | **4** | **2** | **4** | **4** | **1** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP12 - 1.75m | TP12 - 2.00m | TP12 - 2.25m | TP12 - 2.50m | TP12 - 2.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-031 | EB2432677-032 | EB2432677-033 | EB2432677-034 | EB2432677-035 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **ø pH (F)** | ---- | 0.1 | pH Unit | **8.6** | **8.6** | **8.7** | **8.5** | **8.7** |
| **ø pH (Fox)** | ---- | 0.1 | pH Unit | **5.8** | **6.0** | **8.3** | **9.0** | **6.0** |
| **ø Reaction Rate** | ---- | 1 | - | **1** | **2** | **4** | **4** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP12 - 3.00m | TP08 - 0.25m | TP08 - 0.50m | TP08 - 0.75m | TP08 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-036 | EB2432677-037 | EB2432677-038 | EB2432677-039 | EB2432677-040 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **ø pH (F)** | ---- | 0.1 | pH Unit | **8.8** | **8.1** | **8.7** | **8.5** | **9.0** |
| **ø pH (Fox)** | ---- | 0.1 | pH Unit | **8.4** | **5.1** | **5.8** | **5.9** | **6.6** |
| **ø Reaction Rate** | ---- | 1 | - | **4** | **3** | **2** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP08 - 1.25m | TP08 - 1.50m | TP08 - 1.75m | TP08 - 2.00m | TP08 - 2.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-041 | EB2432677-042 | EB2432677-043 | EB2432677-044 | EB2432677-045 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **ø pH (F)** | ---- | 0.1 | pH Unit | **8.7** | **8.5** | **8.5** | **8.4** | **8.6** |
| **ø pH (Fox)** | ---- | 0.1 | pH Unit | **6.8** | **8.4** | **6.2** | **8.4** | **7.6** |
| **ø Reaction Rate** | ---- | 1 | - | **2** | **4** | **2** | **4** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP08 - 2.50m | TP08 - 2.75m | TP08 - 3.00m | TP04 - 0.25m | TP04 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-046 | EB2432677-047 | EB2432677-048 | EB2432677-049 | EB2432677-050 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| ø pH (F) | ---- | 0.1 | pH Unit | **8.5** | **8.6** | **8.7** | **7.6** | **7.4** |
| ø pH (Fox) | ---- | 0.1 | pH Unit | **8.6** | **8.6** | **6.3** | **4.2** | **5.1** |
| ø Reaction Rate | ---- | 1 | - | **4** | **4** | **4** | **3** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP04 - 0.75m | TP04 - 1.00m | TP04 - 1.25m | TP04 - 1.50m | TP04 - 1.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-051 | EB2432677-052 | EB2432677-053 | EB2432677-054 | EB2432677-055 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **ø pH (F)** | ---- | 0.1 | pH Unit | **7.9** | **8.7** | **8.8** | **8.7** | **8.5** |
| **ø pH (Fox)** | ---- | 0.1 | pH Unit | **5.4** | **8.1** | **8.6** | **6.2** | **8.3** |
| **ø Reaction Rate** | ---- | 1 | - | **2** | **4** | **4** | **2** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP04 - 2.00m | TP04 - 2.25m | TP04 - 2.50m | TP04 - 2.75m | TP04 - 3.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-056 | EB2432677-057 | EB2432677-058 | EB2432677-059 | EB2432677-060 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| ø pH (F) | ---- | 0.1 | pH Unit | **8.6** | **8.6** | **8.6** | **8.5** | **8.4** |
| ø pH (Fox) | ---- | 0.1 | pH Unit | **7.7** | **8.4** | **8.6** | **8.4** | **8.3** |
| ø Reaction Rate | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | DUPLICATE A | DUPLICATE B | TRIP SPIKE 8 | TRIP BLANK 051454 | TP19 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-061 | EB2432677-062 | EB2432677-063 | EB2432677-064 | EB2432677-065 |
| | | | | Result | Result | Result | Result | Result |
| **EA001: pH in soil using 0.01M CaCl extract** | | | | | | | | |
| pH (CaCl2) | ---- | 0.1 | pH Unit | 7.4 | 8.1 | ---- | ---- | 4.6 |
| **EA002: pH 1:5 (Soils)** | | | | | | | | |
| pH Value | ---- | 0.1 | pH Unit | 9.2 | 8.6 | ---- | ---- | 5.8 |
| **EA010: Conductivity (1:5)** | | | | | | | | |
| Electrical Conductivity @ 25°C | ---- | 1 | µS/cm | 386 | 883 | ---- | ---- | 14 |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| ø pH (F) | ---- | 0.1 | pH Unit | ---- | 7.8 | ---- | ---- | ---- |
| ø pH (Fox) | ---- | 0.1 | pH Unit | ---- | 7.5 | ---- | ---- | ---- |
| ø Reaction Rate | ---- | 1 | - | ---- | 4 | ---- | ---- | ---- |
| **EA051 : Bulk Density** | | | | | | | | |
| ø Bulk Density | BULK_DENSITY | 1 | kg/m3 | 1150 | 1270 | ---- | ---- | 1080 |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | 16.4 | 16.3 | ---- | ---- | 12.6 |
| **EA058: Emerson Aggregate Test** | | | | | | | | |
| Color (Munsell) | ---- | - | - | ---- | ---- | ---- | ---- | Gray (7.5YR 5/1) |
| Texture | ---- | - | - | ---- | ---- | ---- | ---- | Light Medium Clay |
| Emerson Class Number | EC/TC | - | - | ---- | ---- | ---- | ---- | 3 |
| **EA150: Particle Sizing** | | | | | | | | |
| +75µm | ---- | 1 | % | ---- | ---- | ---- | ---- | 26 |
| +150µm | ---- | 1 | % | ---- | ---- | ---- | ---- | 18 |
| +300µm | ---- | 1 | % | ---- | ---- | ---- | ---- | 14 |
| +425µm | ---- | 1 | % | ---- | ---- | ---- | ---- | 12 |
| +600µm | ---- | 1 | % | ---- | ---- | ---- | ---- | 10 |
| +1180µm | ---- | 1 | % | ---- | ---- | ---- | ---- | 6 |
| +2.36mm | ---- | 1 | % | ---- | ---- | ---- | ---- | 2 |
| +4.75mm | ---- | 1 | % | ---- | ---- | ---- | ---- | <1 |
| +9.5mm | ---- | 1 | % | ---- | ---- | ---- | ---- | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | DUPLICATE A | DUPLICATE B | TRIP SPIKE 8 | TRIP BLANK 051454 | TP19 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-061 | EB2432677-062 | EB2432677-063 | EB2432677-064 | EB2432677-065 |
| | | | | Result | Result | Result | Result | Result |
| **EA150: Particle Sizing - Continued** | | | | | | | | |
| +19.0mm | ---- | 1 | % | ---- | ---- | ---- | ---- | <1 |
| +37.5mm | ---- | 1 | % | ---- | ---- | ---- | ---- | <1 |
| +75.0mm | ---- | 1 | % | ---- | ---- | ---- | ---- | <1 |
| **EA150: Soil Classification based on Particle Size** | | | | | | | | |
| Fines (<75 µm) | ---- | 1 | % | ---- | ---- | ---- | ---- | 74 |
| Sand (>75 µm) | ---- | 1 | % | ---- | ---- | ---- | ---- | 23 |
| Gravel (>2mm) | ---- | 1 | % | ---- | ---- | ---- | ---- | 3 |
| Cobbles (>6cm) | ---- | 1 | % | ---- | ---- | ---- | ---- | <1 |
| **ED005: Exchange Acidity** | | | | | | | | |
| ø Exchange Acidity | ---- | 0.1 | meq/100g | ---- | ---- | ---- | ---- | 0.5 |
| ø Exchangeable Aluminium | ---- | 0.1 | meq/100g | ---- | ---- | ---- | ---- | 0.2 |
| **ED006: Exchangeable Cations on Alkaline Soils** | | | | | | | | |
| ø Exchangeable Calcium | ---- | 0.2 | meq/100g | 7.0 | 8.8 | ---- | ---- | ---- |
| ø Exchangeable Magnesium | ---- | 0.2 | meq/100g | 8.0 | 8.0 | ---- | ---- | ---- |
| ø Exchangeable Potassium | ---- | 0.2 | meq/100g | <0.2 | <0.2 | ---- | ---- | ---- |
| ø Exchangeable Sodium | ---- | 0.2 | meq/100g | 2.3 | 2.7 | ---- | ---- | ---- |
| ø Cation Exchange Capacity | ---- | 0.2 | meq/100g | 17.3 | 19.5 | ---- | ---- | ---- |
| ø Exchangeable Sodium Percent | ---- | 0.2 | % | 13.2 | 13.8 | ---- | ---- | ---- |
| ø Calcium/Magnesium Ratio | ---- | 0.2 | - | 0.9 | 1.1 | ---- | ---- | ---- |
| **ED007: Exchangeable Cations** | | | | | | | | |
| Exchangeable Calcium | ---- | 0.1 | meq/100g | ---- | ---- | ---- | ---- | 5.8 |
| Exchangeable Magnesium | ---- | 0.1 | meq/100g | ---- | ---- | ---- | ---- | 4.3 |
| Exchangeable Potassium | ---- | 0.1 | meq/100g | ---- | ---- | ---- | ---- | 0.3 |
| Exchangeable Sodium | ---- | 0.1 | meq/100g | ---- | ---- | ---- | ---- | 0.3 |
| Cation Exchange Capacity | ---- | 0.1 | meq/100g | ---- | ---- | ---- | ---- | 11.2 |
| Exchangeable Sodium Percent | ---- | 0.1 | % | ---- | ---- | ---- | ---- | 2.6 |
| Calcium/Magnesium Ratio | ---- | 0.1 | - | ---- | ---- | ---- | ---- | 1.3 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | DUPLICATE A | DUPLICATE B | TRIP SPIKE 8 | TRIP BLANK 051454 | TP19 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-061 | EB2432677-062 | EB2432677-063 | EB2432677-064 | EB2432677-065 |
| | | | | | Result | Result | Result | Result | Result |
| **ED007: Exchangeable Cations - Continued** | | | | | | | | | |
| Magnesium/Potassium Ratio | ---- | 0.1 | - | | **----** | **----** | **----** | **----** | **15.0** |
| **ED021: Bicarbonate Extractable Potassium (Colwell)** | | | | | | | | | |
| Bicarbonate Extractable K (Colwell) | ---- | 100 | mg/kg | | <100 | **336** | **----** | **----** | **362** |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | | |
| Chloride | 16887-00-6 | 10 | mg/kg | | **260** | **1450** | **----** | **----** | **10** |
| **ED092: DTPA Extractable Metals** | | | | | | | | | |
| ø Copper | 7440-50-8 | 1 | mg/kg | | **1** | <1 | **----** | **----** | **2** |
| ø Iron | 7439-89-6 | 1 | mg/kg | | **13** | **10** | **----** | **----** | **127** |
| ø Manganese | 7439-96-5 | 1 | mg/kg | | **6** | **8** | **----** | **----** | **7** |
| ø Zinc | 7440-66-6 | 1 | mg/kg | | <1 | <1 | **----** | **----** | **2** |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | | <5 | <5 | **----** | **----** | <5 |
| Barium | 7440-39-3 | 10 | mg/kg | | **120** | **230** | **----** | **----** | **60** |
| Beryllium | 7440-41-7 | 1 | mg/kg | | <1 | <1 | **----** | **----** | <1 |
| Boron | 7440-42-8 | 50 | mg/kg | | <50 | <50 | **----** | **----** | <50 |
| Cadmium | 7440-43-9 | 1 | mg/kg | | <1 | <1 | **----** | **----** | <1 |
| Chromium | 7440-47-3 | 2 | mg/kg | | **13** | **11** | **----** | **----** | **12** |
| Cobalt | 7440-48-4 | 2 | mg/kg | | **6** | **7** | **----** | **----** | **4** |
| Copper | 7440-50-8 | 5 | mg/kg | | **16** | **12** | **----** | **----** | **10** |
| Lead | 7439-92-1 | 5 | mg/kg | | **10** | **10** | **----** | **----** | **10** |
| Manganese | 7439-96-5 | 5 | mg/kg | | **132** | **231** | **----** | **----** | **107** |
| Nickel | 7440-02-0 | 2 | mg/kg | | **9** | **8** | **----** | **----** | **5** |
| Selenium | 7782-49-2 | 5 | mg/kg | | <5 | <5 | **----** | **----** | <5 |
| Vanadium | 7440-62-2 | 5 | mg/kg | | **49** | **38** | **----** | **----** | **54** |
| Zinc | 7440-66-6 | 5 | mg/kg | | **23** | **21** | **----** | **----** | **14** |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | | |
| Mercury | 7439-97-6 | 0.1 | mg/kg | | <0.1 | <0.1 | **----** | **----** | <0.1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | DUPLICATE A | DUPLICATE B | TRIP SPIKE 8 | TRIP BLANK 051454 | TP19 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-061 | EB2432677-062 | EB2432677-063 | EB2432677-064 | EB2432677-065 |
| | | | | | Result | Result | Result | Result | Result |
| **EG048: Hexavalent Chromium (Alkaline Digest)** | | | | | | | | | |
| Hexavalent Chromium | 18540-29-9 | 0.5 | mg/kg | | <4.0 | <0.5 | ---- | ---- | <4.1 |
| **EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser** | | | | | | | | | |
| Weak Acid Dissociable Cyanide | ---- | 1 | mg/kg | | <1 | <1 | ---- | ---- | <1 |
| **EK055-P: Ammonia as N** | | | | | | | | | |
| Ammonia as N | 7664-41-7 | 20 | mg/kg | | <20 | <20 | ---- | ---- | <20 |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | | |
| Nitrite as N (Sol.) | 14797-65-0 | 0.1 | mg/kg | | <0.1 | <0.1 | ---- | ---- | <0.1 |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | | |
| Nitrate as N (Sol.) | 14797-55-8 | 0.1 | mg/kg | | <0.1 | **0.7** | ---- | ---- | **0.1** |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | | |
| Nitrite + Nitrate as N (Sol.) | ---- | 0.1 | mg/kg | | <0.1 | **0.7** | ---- | ---- | **0.1** |
| **EK061G: Total Kjeldahl Nitrogen By Discrete Analyser** | | | | | | | | | |
| Total Kjeldahl Nitrogen as N | ---- | 20 | mg/kg | | **290** | **230** | ---- | ---- | **1140** |
| **EK062: Total Nitrogen as N (TKN + NOx)** | | | | | | | | | |
| ^ Total Nitrogen as N | ---- | 20 | mg/kg | | **290** | **230** | ---- | ---- | **1140** |
| **EK067G: Total Phosphorus as P by Discrete Analyser** | | | | | | | | | |
| Total Phosphorus as P | ---- | 2 | mg/kg | | **165** | **156** | ---- | ---- | **230** |
| **EK080: Bicarbonate Extractable Phosphorus (Colwell)** | | | | | | | | | |
| Bicarbonate Ext. P (Colwell) | ---- | 5 | mg/kg | | <5 | <5 | ---- | ---- | <5 |
| **EP004: Organic Matter** | | | | | | | | | |
| Organic Matter | ---- | 0.5 | % | | **1.0** | **0.8** | ---- | ---- | **2.2** |
| Total Organic Carbon | ---- | 0.5 | % | | **0.6** | <0.5 | ---- | ---- | **1.3** |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | | |
| Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | | <0.1 | <0.1 | ---- | ---- | <0.1 |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | | |
| alpha-BHC | 319-84-6 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |
| Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |
| beta-BHC | 319-85-7 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | DUPLICATE A | DUPLICATE B | TRIP SPIKE 8 | TRIP BLANK 051454 | TP19 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-061 | EB2432677-062 | EB2432677-063 | EB2432677-064 | EB2432677-065 |
| | | | | | Result | Result | Result | Result | Result |
| **EP068A: Organochlorine Pesticides (OC) - Continued** | | | | | | | | | |
| gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |
| delta-BHC | 319-86-8 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |
| Heptachlor | 76-44-8 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |
| Aldrin | 309-00-2 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |
| Heptachlor epoxide | 1024-57-3 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |
| 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 |
| Mirex | 2385-85-5 | 0.20 | mg/kg | | <0.20 | <0.20 | ---- | ---- | <0.20 |
| ^ 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 |
| Dimethoate | 60-51-5 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | DUPLICATE A | DUPLICATE B | TRIP SPIKE 8 | TRIP BLANK 051454 | TP19 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-061 | EB2432677-062 | EB2432677-063 | EB2432677-064 | EB2432677-065 |
| | | | | | Result | Result | Result | Result | Result |
| **EP068B: Organophosphorus Pesticides (OP) - Continued** | | | | | | | | | |
| **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 |
| **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 |
| **EP068C: Triazines** | | | | | | | | | |
| **Atrazine** | 1912-24-9 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |
| **EP068D: Pyrethroids** | | | | | | | | | |
| **Bifenthrin** | 82657-04-3 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | <0.05 |
| **EP075(SIM)A: Phenolic Compounds** | | | | | | | | | |
| **Phenol** | 108-95-2 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| **2-Chlorophenol** | 95-57-8 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| **2-Methylphenol** | 95-48-7 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| **3- & 4-Methylphenol** | 1319-77-3 | 1 | mg/kg | | <1 | <1 | ---- | ---- | <1 |
| **2-Nitrophenol** | 88-75-5 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| **2.4-Dimethylphenol** | 105-67-9 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| **2.4-Dichlorophenol** | 120-83-2 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | DUPLICATE A | DUPLICATE B | TRIP SPIKE 8 | TRIP BLANK 051454 | TP19 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-061 | EB2432677-062 | EB2432677-063 | EB2432677-064 | EB2432677-065 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)A: Phenolic Compounds - Continued** | | | | | | | | | |
| 2.6-Dichlorophenol | 87-65-0 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| 4-Chloro-3-methylphenol | 59-50-7 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| 2.4.6-Trichlorophenol | 88-06-2 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| 2.4.5-Trichlorophenol | 95-95-4 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| Pentachlorophenol | 87-86-5 | 2 | mg/kg | | <2 | <2 | ---- | ---- | <2 |
| **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 | | <0.5 | <0.5 | ---- | ---- | <0.5 |
| Pyrene | 129-00-0 | 0.5 | mg/kg | | <0.5 | <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 | | <0.5 | <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** | | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | DUPLICATE A | DUPLICATE B | TRIP SPIKE 8 | TRIP BLANK 051454 | TP19 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-061 | EB2432677-062 | EB2432677-063 | EB2432677-064 | EB2432677-065 |
| | | | | | Result | Result | Result | Result | Result |
| **EP080/071: Total Petroleum Hydrocarbons - Continued** | | | | | | | | | |
| C6 - C9 Fraction | ---- | 10 | mg/kg | | <10 | <10 | **24** | <10 | <10 |
| 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 | **31** | <10 | <10 |
| ^ C6 - C10 Fraction minus BTEX (F1) | C6_C10-BTEX | 10 | mg/kg | | <10 | <10 | **19** | <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** | <0.2 | <0.2 |
| Toluene | 108-88-3 | 0.5 | mg/kg | | <0.5 | <0.5 | **4.2** | <0.5 | <0.5 |
| Ethylbenzene | 100-41-4 | 0.5 | mg/kg | | <0.5 | <0.5 | **1.2** | <0.5 | <0.5 |
| meta- & para-Xylene | 108-38-3 106-42-3 | 0.5 | mg/kg | | <0.5 | <0.5 | **4.6** | <0.5 | <0.5 |
| ortho-Xylene | 95-47-6 | 0.5 | mg/kg | | <0.5 | <0.5 | **1.7** | <0.5 | <0.5 |
| ^ Sum of BTEX | ---- | 0.2 | mg/kg | | <0.2 | <0.2 | **11.9** | <0.2 | <0.2 |
| ^ Total Xylenes | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | **6.3** | <0.5 | <0.5 |
| Naphthalene | 91-20-3 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EP066S: PCB Surrogate** | | | | | | | | | |
| Decachlorobiphenyl | 2051-24-3 | 0.1 | % | | **109** | **106** | **----** | **----** | **97.6** |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | | |
| Dibromo-DDE | 21655-73-2 | 0.05 | % | | **120** | **111** | **----** | **----** | **110** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | DUPLICATE A | DUPLICATE B | TRIP SPIKE 8 | TRIP BLANK 051454 | TP19 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-061 | EB2432677-062 | EB2432677-063 | EB2432677-064 | EB2432677-065 |
| | | | | | Result | Result | Result | Result | Result |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | | |
| DEF | 78-48-8 | 0.05 | % | | 90.6 | 80.4 | ---- | ---- | 87.3 |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | | |
| Phenol-d6 | 13127-88-3 | 0.5 | % | | 103 | 93.9 | ---- | ---- | 91.4 |
| 2-Chlorophenol-D4 | 93951-73-6 | 0.5 | % | | 98.3 | 90.4 | ---- | ---- | 88.6 |
| 2.4.6-Tribromophenol | 118-79-6 | 0.5 | % | | 108 | 94.0 | ---- | ---- | 93.2 |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | | |
| 2-Fluorobiphenyl | 321-60-8 | 0.5 | % | | 89.5 | 81.1 | ---- | ---- | 80.9 |
| Anthracene-d10 | 1719-06-8 | 0.5 | % | | 104 | 98.6 | ---- | ---- | 94.5 |
| 4-Terphenyl-d14 | 1718-51-0 | 0.5 | % | | 106 | 102 | ---- | ---- | 97.6 |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | | |
| 1.2-Dichloroethane-D4 | 17060-07-0 | 0.2 | % | | 83.2 | 86.6 | 93.2 | 97.2 | 92.9 |
| Toluene-D8 | 2037-26-5 | 0.2 | % | | 86.8 | 89.1 | 95.1 | 99.1 | 102 |
| 4-Bromofluorobenzene | 460-00-4 | 0.2 | % | | 90.2 | 96.5 | 96.1 | 104 | 104 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP19 - 0.50m | TP19 - 1.00m | TP19 - 2.75m | TP21 - 0.25m | TP21 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-066 | EB2432677-067 | EB2432677-068 | EB2432677-069 | EB2432677-070 |
| | | | | Result | Result | Result | Result | Result |
| **EA001: pH in soil using 0.01M CaCl extract** | | | | | | | | |
| pH (CaCl2) | ---- | 0.1 | pH Unit | 4.8 | 5.7 | 7.3 | 5.0 | 7.6 |
| **EA002: pH 1:5 (Soils)** | | | | | | | | |
| pH Value | ---- | 0.1 | pH Unit | 6.0 | 7.1 | 7.9 | 6.5 | 8.2 |
| **EA010: Conductivity (1:5)** | | | | | | | | |
| Electrical Conductivity @ 25°C | ---- | 1 | µS/cm | 14 | 40 | 957 | 29 | 281 |
| **EA051 : Bulk Density** | | | | | | | | |
| ø Bulk Density | BULK_DENSITY | 1 | kg/m3 | 1220 | 1330 | 1220 | 1170 | 1280 |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | 10.8 | 12.3 | 15.4 | 16.2 | 16.3 |
| **EA058: Emerson Aggregate Test** | | | | | | | | |
| Color (Munsell) | ---- | - | - | Light Yellowish Brown (10YR 6/4) | Light Brownish Gray (10YR 6/2) | Light Reddish Brown (5YR 6/4) | Light Brownish Gray (10YR 6/2) | Light Gray (10YR 7/1) |
| Texture | ---- | - | - | Sandy Loam | Medium Clay | Medium Clay | Light Medium Clay | Medium Heavy Clay |
| Emerson Class Number | EC/TC | - | - | 5 | 3 | 2 | 7 | 2 |
| **EA150: Particle Sizing** | | | | | | | | |
| +75µm | ---- | 1 | % | 54 | 29 | 15 | 12 | 10 |
| +150µm | ---- | 1 | % | 52 | 22 | 9 | 6 | 6 |
| +300µm | ---- | 1 | % | 50 | 19 | 5 | 3 | 3 |
| +425µm | ---- | 1 | % | 49 | 17 | 3 | 2 | 2 |
| +600µm | ---- | 1 | % | 48 | 14 | 2 | 2 | 2 |
| +1180µm | ---- | 1 | % | 43 | 8 | <1 | <1 | 1 |
| +2.36mm | ---- | 1 | % | 26 | 3 | <1 | <1 | <1 |
| +4.75mm | ---- | 1 | % | 7 | <1 | <1 | <1 | <1 |
| +9.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +19.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +37.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +75.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| **EA150: Soil Classification based on Particle Size** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP19 - 0.50m | TP19 - 1.00m | TP19 - 2.75m | TP21 - 0.25m | TP21 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-066 | EB2432677-067 | EB2432677-068 | EB2432677-069 | EB2432677-070 |
| | | | | Result | Result | Result | Result | Result |
| **EA150: Soil Classification based on Particle Size - Continued** | | | | | | | | |
| Fines (<75 µm) | ---- | 1 | % | **46** | **71** | **85** | **88** | **90** |
| Sand (>75 µm) | ---- | 1 | % | **23** | **24** | **15** | **12** | **9** |
| Gravel (>2mm) | ---- | 1 | % | **31** | **5** | <1 | <1 | **1** |
| Cobbles (>6cm) | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| **ED005: Exchange Acidity** | | | | | | | | |
| ø Exchange Acidity | ---- | 0.1 | meq/100g | **0.4** | ---- | ---- | ---- | ---- |
| ø Exchangeable Aluminium | ---- | 0.1 | meq/100g | **0.2** | ---- | ---- | ---- | ---- |
| **ED006: Exchangeable Cations on Alkaline Soils** | | | | | | | | |
| ø Exchangeable Calcium | ---- | 0.2 | meq/100g | ---- | ---- | **4.6** | ---- | **7.6** |
| ø Exchangeable Magnesium | ---- | 0.2 | meq/100g | ---- | ---- | **5.1** | ---- | **8.5** |
| ø Exchangeable Potassium | ---- | 0.2 | meq/100g | ---- | ---- | <0.2 | ---- | <0.2 |
| ø Exchangeable Sodium | ---- | 0.2 | meq/100g | ---- | ---- | **1.9** | ---- | **2.2** |
| ø Cation Exchange Capacity | ---- | 0.2 | meq/100g | ---- | ---- | **11.6** | ---- | **18.2** |
| ø Exchangeable Sodium Percent | ---- | 0.2 | % | ---- | ---- | **16.3** | ---- | **11.8** |
| ø Calcium/Magnesium Ratio | ---- | 0.2 | - | ---- | ---- | **0.9** | ---- | **0.9** |
| **ED007: Exchangeable Cations** | | | | | | | | |
| Exchangeable Calcium | ---- | 0.1 | meq/100g | **4.6** | **5.6** | ---- | **5.8** | ---- |
| Exchangeable Magnesium | ---- | 0.1 | meq/100g | **5.4** | **8.3** | ---- | **7.2** | ---- |
| Exchangeable Potassium | ---- | 0.1 | meq/100g | **0.2** | **0.3** | ---- | **0.2** | ---- |
| Exchangeable Sodium | ---- | 0.1 | meq/100g | **0.3** | **1.5** | ---- | **1.3** | ---- |
| Cation Exchange Capacity | ---- | 0.1 | meq/100g | **10.9** | ---- | ---- | ---- | ---- |
| Cation Exchange Capacity | ---- | 0.1 | meq/100g | ---- | **15.8** | ---- | **14.7** | ---- |
| Exchangeable Sodium Percent | ---- | 0.1 | % | **3.3** | **9.5** | ---- | **9.2** | ---- |
| Calcium/Magnesium Ratio | ---- | 0.1 | - | **0.8** | **0.7** | ---- | **0.8** | ---- |
| Magnesium/Potassium Ratio | ---- | 0.1 | - | **27.5** | **30.3** | ---- | **32.9** | ---- |
| **ED021: Bicarbonate Extractable Potassium (Colwell)** | | | | | | | | |
| Bicarbonate Extractable K (Colwell) | ---- | 100 | mg/kg | **302** | **358** | **339** | **343** | **376** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP19 - 0.50m | TP19 - 1.00m | TP19 - 2.75m | TP21 - 0.25m | TP21 - 0.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-066 | EB2432677-067 | EB2432677-068 | EB2432677-069 | EB2432677-070 |
| | | | | | Result | Result | Result | Result | Result |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | | |
| Chloride | 16887-00-6 | 10 | mg/kg | | <10 | 20 | 1700 | 20 | 170 |
| **ED092: DTPA Extractable Metals** | | | | | | | | | |
| ø Copper | 7440-50-8 | 1 | mg/kg | | <1 | <1 | <1 | 2 | 1 |
| ø Iron | 7439-89-6 | 1 | mg/kg | | 29 | 18 | 8 | 79 | 16 |
| ø Manganese | 7439-96-5 | 1 | mg/kg | | 3 | 3 | 6 | 1 | 4 |
| ø Zinc | 7440-66-6 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Barium | 7440-39-3 | 10 | mg/kg | | 60 | 50 | 70 | 30 | 180 |
| Beryllium | 7440-41-7 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| Boron | 7440-42-8 | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| Cadmium | 7440-43-9 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| Chromium | 7440-47-3 | 2 | mg/kg | | 9 | 11 | 16 | 10 | 11 |
| Cobalt | 7440-48-4 | 2 | mg/kg | | 21 | 9 | 17 | 6 | 16 |
| Copper | 7440-50-8 | 5 | mg/kg | | 7 | 10 | 15 | 12 | 16 |
| Lead | 7439-92-1 | 5 | mg/kg | | 12 | 11 | 13 | 12 | 12 |
| Manganese | 7439-96-5 | 5 | mg/kg | | 275 | 151 | 587 | 104 | 758 |
| Nickel | 7440-02-0 | 2 | mg/kg | | 6 | 5 | 11 | 4 | 12 |
| Selenium | 7782-49-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Vanadium | 7440-62-2 | 5 | mg/kg | | 49 | 45 | 65 | 53 | 51 |
| Zinc | 7440-66-6 | 5 | mg/kg | | 12 | 12 | 18 | 14 | 19 |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | | |
| Mercury | 7439-97-6 | 0.1 | mg/kg | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EG048: Hexavalent Chromium (Alkaline Digest)** | | | | | | | | | |
| Hexavalent Chromium | 18540-29-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser** | | | | | | | | | |
| Weak Acid Dissociable Cyanide | ---- | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP19 - 0.50m | TP19 - 1.00m | TP19 - 2.75m | TP21 - 0.25m | TP21 - 0.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-066 | EB2432677-067 | EB2432677-068 | EB2432677-069 | EB2432677-070 |
| | | | | | Result | Result | Result | Result | Result |
| **EK055-P: Ammonia as N** | | | | | | | | | |
| Ammonia as N | 7664-41-7 | 20 | mg/kg | | <20 | <20 | <20 | <20 | <20 |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | | |
| Nitrite as N (Sol.) | 14797-65-0 | 0.1 | mg/kg | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | | |
| Nitrate as N (Sol.) | 14797-55-8 | 0.1 | mg/kg | | **0.2** | <0.1 | <0.1 | <0.1 | <0.1 |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | | |
| Nitrite + Nitrate as N (Sol.) | ---- | 0.1 | mg/kg | | **0.2** | <0.1 | <0.1 | <0.1 | <0.1 |
| **EK061G: Total Kjeldahl Nitrogen By Discrete Analyser** | | | | | | | | | |
| Total Kjeldahl Nitrogen as N | ---- | 20 | mg/kg | | **580** | **240** | **120** | **800** | **260** |
| **EK062: Total Nitrogen as N (TKN + NOx)** | | | | | | | | | |
| ^ Total Nitrogen as N | ---- | 20 | mg/kg | | **580** | **240** | **120** | **800** | **260** |
| **EK067G: Total Phosphorus as P by Discrete Analyser** | | | | | | | | | |
| Total Phosphorus as P | ---- | 2 | mg/kg | | **217** | **86** | **111** | **128** | **129** |
| **EK080: Bicarbonate Extractable Phosphorus (Colwell)** | | | | | | | | | |
| Bicarbonate Ext. P (Colwell) | ---- | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| **EP004: Organic Matter** | | | | | | | | | |
| Organic Matter | ---- | 0.5 | % | | **1.0** | **0.9** | <0.5 | **1.6** | **0.9** |
| Total Organic Carbon | ---- | 0.5 | % | | **0.6** | **0.5** | <0.5 | **0.9** | **0.5** |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | | |
| Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | | |
| alpha-BHC | 319-84-6 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | | <0.05 | <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 | <0.05 |
| gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | | <0.05 | <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 | <0.05 |
| Heptachlor | 76-44-8 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | 309-00-2 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP19 - 0.50m | TP19 - 1.00m | TP19 - 2.75m | TP21 - 0.25m | TP21 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-066 | EB2432677-067 | EB2432677-068 | EB2432677-069 | EB2432677-070 |
| | | | | Result | Result | Result | Result | Result |
| **EP068A: Organochlorine Pesticides (OC) - Continued** | | | | | | | | |
| **Heptachlor epoxide** | 1024-57-3 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **alpha-Endosulfan** | 959-98-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dieldrin** | 60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin** | 72-20-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| ^ **Endosulfan (sum)** | 115-29-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin aldehyde** | 7421-93-4 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **4.4`-DDT** | 50-29-3 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| **Methoxychlor** | 72-43-5 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Mirex** | 2385-85-5 | 0.20 | mg/kg | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| ^ **Sum of Aldrin + Dieldrin** | 309-00-2/60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068B: Organophosphorus Pesticides (OP)** | | | | | | | | |
| **Dichlorvos** | 62-73-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dimethoate** | 60-51-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Diazinon** | 333-41-5 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Parathion-methyl** | 298-00-0 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Malathion** | 121-75-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP19 - 0.50m | TP19 - 1.00m | TP19 - 2.75m | TP21 - 0.25m | TP21 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-066 | EB2432677-067 | EB2432677-068 | EB2432677-069 | EB2432677-070 |
| | | | | 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 | <0.05 |
| Chlorpyrifos | 2921-88-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Parathion | 56-38-2 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| Chlorfenvinphos | 470-90-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Fenamiphos | 22224-92-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Prothiofos | 34643-46-4 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Ethion | 563-12-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Carbophenothion | 786-19-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068C: Triazines** | | | | | | | | |
| Atrazine | 1912-24-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP068D: Pyrethroids** | | | | | | | | |
| Bifenthrin | 82657-04-3 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP075(SIM)A: Phenolic Compounds** | | | | | | | | |
| Phenol | 108-95-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Chlorophenol | 95-57-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Methylphenol | 95-48-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 3- & 4-Methylphenol | 1319-77-3 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| 2-Nitrophenol | 88-75-5 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dimethylphenol | 105-67-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dichlorophenol | 120-83-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.6-Dichlorophenol | 87-65-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chloro-3-methylphenol | 59-50-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.6-Trichlorophenol | 88-06-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.5-Trichlorophenol | 95-95-4 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP19 - 0.50m | TP19 - 1.00m | TP19 - 2.75m | TP21 - 0.25m | TP21 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-066 | EB2432677-067 | EB2432677-068 | EB2432677-069 | EB2432677-070 |
| | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)A: Phenolic Compounds - Continued** | | | | | | | | |
| Pentachlorophenol | 87-86-5 | 2 | mg/kg | <2 | <2 | <2 | <2 | <2 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | | |
| Naphthalene | 91-20-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthylene | 208-96-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthene | 83-32-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluorene | 86-73-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Phenanthrene | 85-01-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Anthracene | 120-12-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluoranthene | 206-44-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Pyrene | 129-00-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benz(a)anthracene | 56-55-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chrysene | 218-01-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(b+j)fluoranthene | 205-99-2 205-82-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(k)fluoranthene | 207-08-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene | 50-32-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Indeno(1.2.3.cd)pyrene | 193-39-5 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibenz(a.h)anthracene | 53-70-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(g.h.i)perylene | 191-24-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Sum of polycyclic aromatic hydrocarbons | ---- | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (zero) | ---- | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (half LOR) | ---- | 0.5 | mg/kg | **0.6** | **0.6** | **0.6** | **0.6** | **0.6** |
| ^ Benzo(a)pyrene TEQ (LOR) | ---- | 0.5 | mg/kg | **1.2** | **1.2** | **1.2** | **1.2** | **1.2** |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | | |
| C6 - C9 Fraction | ---- | 10 | mg/kg | <10 | <10 | <10 | <10 | <10 |
| C10 - C14 Fraction | ---- | 50 | mg/kg | <50 | <50 | <50 | <50 | <50 |
| C15 - C28 Fraction | ---- | 100 | mg/kg | <100 | <100 | <100 | <100 | <100 |
| C29 - C36 Fraction | ---- | 100 | mg/kg | <100 | <100 | <100 | <100 | <100 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP19 - 0.50m | TP19 - 1.00m | TP19 - 2.75m | TP21 - 0.25m | TP21 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-066 | EB2432677-067 | EB2432677-068 | EB2432677-069 | EB2432677-070 |
| | | | | Result | Result | Result | Result | Result |
| **EP080/071: Total Petroleum Hydrocarbons - Continued** | | | | | | | | |
| ^ **C10 - C36 Fraction (sum)** | ---- | 50 | mg/kg | <50 | <50 | <50 | <50 | <50 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | |
| **C6 - C10 Fraction** | C6_C10 | 10 | mg/kg | <10 | <10 | <10 | <10 | <10 |
| ^ **C6 - C10 Fraction minus BTEX (F1)** | C6_C10-BTEX | 10 | mg/kg | <10 | <10 | <10 | <10 | <10 |
| **>C10 - C16 Fraction** | ---- | 50 | mg/kg | <50 | <50 | <50 | <50 | <50 |
| **>C16 - C34 Fraction** | ---- | 100 | mg/kg | <100 | <100 | <100 | <100 | <100 |
| **>C34 - C40 Fraction** | ---- | 100 | mg/kg | <100 | <100 | <100 | <100 | <100 |
| ^ **>C10 - C40 Fraction (sum)** | ---- | 50 | mg/kg | <50 | <50 | <50 | <50 | <50 |
| ^ **>C10 - C16 Fraction minus Naphthalene (F2)** | ---- | 50 | mg/kg | <50 | <50 | <50 | <50 | <50 |
| **EP080: BTEXN** | | | | | | | | |
| **Benzene** | 71-43-2 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Toluene** | 108-88-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Ethylbenzene** | 100-41-4 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **meta- & para-Xylene** | 108-38-3 106-42-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **ortho-Xylene** | 95-47-6 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ **Sum of BTEX** | ---- | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| ^ **Total Xylenes** | ---- | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Naphthalene** | 91-20-3 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| **EP066S: PCB Surrogate** | | | | | | | | |
| **Decachlorobiphenyl** | 2051-24-3 | 0.1 | % | **101** | **103** | **176** | **173** | **114** |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | |
| **Dibromo-DDE** | 21655-73-2 | 0.05 | % | **110** | **109** | **85.1** | **84.8** | **123** |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | |
| **DEF** | 78-48-8 | 0.05 | % | **87.0** | **78.5** | **67.3** | **68.6** | **91.6** |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | |
| **Phenol-d6** | 13127-88-3 | 0.5 | % | **86.7** | **91.9** | **155** | **154** | **99.8** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP19 - 0.50m | TP19 - 1.00m | TP19 - 2.75m | TP21 - 0.25m | TP21 - 0.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-066 | EB2432677-067 | EB2432677-068 | EB2432677-069 | EB2432677-070 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)S: Phenolic Compound Surrogates - Continued** | | | | | | | | | |
| 2-Chlorophenol-D4 | 93951-73-6 | 0.5 | % | | 84.5 | 89.5 | 147 | 148 | 94.7 |
| 2.4.6-Tribromophenol | 118-79-6 | 0.5 | % | | 87.2 | 90.4 | 157 | 162 | 102 |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | | |
| 2-Fluorobiphenyl | 321-60-8 | 0.5 | % | | 77.8 | 79.4 | 137 | 138 | 88.6 |
| Anthracene-d10 | 1719-06-8 | 0.5 | % | | 93.5 | 94.0 | 156 | 152 | 102 |
| 4-Terphenyl-d14 | 1718-51-0 | 0.5 | % | | 98.3 | 97.7 | 158 | 155 | 106 |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | | |
| 1.2-Dichloroethane-D4 | 17060-07-0 | 0.2 | % | | 89.9 | 88.6 | 82.6 | 87.4 | 78.2 |
| Toluene-D8 | 2037-26-5 | 0.2 | % | | 92.0 | 90.0 | 86.0 | 94.0 | 81.2 |
| 4-Bromofluorobenzene | 460-00-4 | 0.2 | % | | 95.0 | 93.9 | 87.2 | 98.0 | 87.6 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP21 - 2.00m | TP21 - 3.00m | TP32 - 0.25m | TP32 - 0.50m | TP32 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-071 | EB2432677-072 | EB2432677-073 | EB2432677-074 | EB2432677-075 |
| | | | | Result | Result | Result | Result | Result |
| **EA001: pH in soil using 0.01M CaCl extract** | | | | | | | | |
| pH (CaCl2) | ---- | 0.1 | pH Unit | 7.6 | 7.4 | 4.6 | 6.5 | 7.7 |
| **EA002: pH 1:5 (Soils)** | | | | | | | | |
| pH Value | ---- | 0.1 | pH Unit | 9.1 | 8.1 | 6.2 | 7.7 | 8.6 |
| **EA010: Conductivity (1:5)** | | | | | | | | |
| Electrical Conductivity @ 25°C | ---- | 1 | µS/cm | 760 | 579 | 26 | 124 | 715 |
| **EA051 : Bulk Density** | | | | | | | | |
| ø Bulk Density | BULK_DENSITY | 1 | kg/m3 | 1340 | 1590 | 1200 | 1170 | 1210 |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | 17.7 | 12.7 | 12.8 | 15.1 | 16.9 |
| **EA058: Emerson Aggregate Test** | | | | | | | | |
| Color (Munsell) | ---- | - | - | Light Reddish Brown (5YR 6/3) | Pinkish Gray (7.5YR 7/2) | Brown (7.5YR 5/2) | Light Olive Brown (2.5Y 5/3) | Gray (10YR 5/1) |
| Texture | ---- | - | - | Medium Clay | Sandy Loam | Clay Loam Sandy | Medium Heavy Clay | Medium Clay |
| Emerson Class Number | EC/TC | - | - | 1 | 2 | 3 | 7 | 1 |
| **EA150: Particle Sizing** | | | | | | | | |
| +75µm | ---- | 1 | % | 22 | 73 | 12 | 10 | 22 |
| +150µm | ---- | 1 | % | 13 | 70 | 6 | 6 | 15 |
| +300µm | ---- | 1 | % | 9 | 66 | 3 | 3 | 10 |
| +425µm | ---- | 1 | % | 8 | 65 | 2 | 2 | 9 |
| +600µm | ---- | 1 | % | 7 | 63 | 1 | 2 | 7 |
| +1180µm | ---- | 1 | % | 6 | 60 | <1 | <1 | 4 |
| +2.36mm | ---- | 1 | % | 5 | 48 | <1 | <1 | 2 |
| +4.75mm | ---- | 1 | % | 4 | 25 | <1 | <1 | <1 |
| +9.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +19.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +37.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +75.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| **EA150: Soil Classification based on Particle Size** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP21 - 2.00m | TP21 - 3.00m | TP32 - 0.25m | TP32 - 0.50m | TP32 - 1.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-071 | EB2432677-072 | EB2432677-073 | EB2432677-074 | EB2432677-075 |
| | | | | | Result | Result | Result | Result | Result |
| **EA150: Soil Classification based on Particle Size - Continued** | | | | | | | | | |
| Fines (<75 µm) | ---- | 1 | % | | 78 | 27 | 88 | 90 | 78 |
| Sand (>75 µm) | ---- | 1 | % | | 18 | 21 | 12 | 10 | 19 |
| Gravel (>2mm) | ---- | 1 | % | | 5 | 52 | <1 | <1 | 3 |
| Cobbles (>6cm) | ---- | 1 | % | | <1 | <1 | <1 | <1 | <1 |
| **ED006: Exchangeable Cations on Alkaline Soils** | | | | | | | | | |
| ø Exchangeable Calcium | ---- | 0.2 | meq/100g | | 5.0 | 4.4 | ---- | 6.0 | 8.7 |
| ø Exchangeable Magnesium | ---- | 0.2 | meq/100g | | 6.1 | 4.4 | ---- | 5.7 | 8.4 |
| ø Exchangeable Potassium | ---- | 0.2 | meq/100g | | <0.2 | <0.2 | ---- | <0.2 | <0.2 |
| ø Exchangeable Sodium | ---- | 0.2 | meq/100g | | 2.9 | 2.5 | ---- | 2.1 | 6.4 |
| ø Cation Exchange Capacity | ---- | 0.2 | meq/100g | | 14.0 | 11.4 | ---- | 13.8 | 23.5 |
| ø Exchangeable Sodium Percent | ---- | 0.2 | % | | 20.7 | 22.2 | ---- | 15.2 | 27.3 |
| ø Calcium/Magnesium Ratio | ---- | 0.2 | - | | 0.8 | 1.0 | ---- | 1.0 | 1.0 |
| **ED007: Exchangeable Cations** | | | | | | | | | |
| Exchangeable Calcium | ---- | 0.1 | meq/100g | | ---- | ---- | 4.3 | ---- | ---- |
| Exchangeable Magnesium | ---- | 0.1 | meq/100g | | ---- | ---- | 4.9 | ---- | ---- |
| Exchangeable Potassium | ---- | 0.1 | meq/100g | | ---- | ---- | 0.2 | ---- | ---- |
| Exchangeable Sodium | ---- | 0.1 | meq/100g | | ---- | ---- | 0.9 | ---- | ---- |
| Cation Exchange Capacity | ---- | 0.1 | meq/100g | | ---- | ---- | 10.4 | ---- | ---- |
| Exchangeable Sodium Percent | ---- | 0.1 | % | | ---- | ---- | 8.6 | ---- | ---- |
| Calcium/Magnesium Ratio | ---- | 0.1 | - | | ---- | ---- | 0.9 | ---- | ---- |
| Magnesium/Potassium Ratio | ---- | 0.1 | - | | ---- | ---- | 26.1 | ---- | ---- |
| **ED021: Bicarbonate Extractable Potassium (Colwell)** | | | | | | | | | |
| Bicarbonate Extractable K (Colwell) | ---- | 100 | mg/kg | | 339 | 349 | 343 | 330 | 410 |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | | |
| Chloride | 16887-00-6 | 10 | mg/kg | | 990 | 920 | 20 | 80 | 1180 |
| **ED092: DTPA Extractable Metals** | | | | | | | | | |
| ø Copper | 7440-50-8 | 1 | mg/kg | | <1 | <1 | 2 | 1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP21 - 2.00m | TP21 - 3.00m | TP32 - 0.25m | TP32 - 0.50m | TP32 - 1.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-071 | EB2432677-072 | EB2432677-073 | EB2432677-074 | EB2432677-075 |
| | | | | | Result | Result | Result | Result | Result |
| **ED092: DTPA Extractable Metals - Continued** | | | | | | | | | |
| ø Iron | 7439-89-6 | 1 | mg/kg | | 10 | 10 | 86 | 21 | 10 |
| ø Manganese | 7439-96-5 | 1 | mg/kg | | 4 | 5 | 4 | 3 | 6 |
| ø Zinc | 7440-66-6 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Barium | 7440-39-3 | 10 | mg/kg | | 20 | 80 | 40 | 70 | 60 |
| Beryllium | 7440-41-7 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| Boron | 7440-42-8 | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| Cadmium | 7440-43-9 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| Chromium | 7440-47-3 | 2 | mg/kg | | 14 | 10 | 10 | 14 | 12 |
| Cobalt | 7440-48-4 | 2 | mg/kg | | 5 | 9 | 4 | 4 | 15 |
| Copper | 7440-50-8 | 5 | mg/kg | | 11 | 8 | 10 | 16 | 16 |
| Lead | 7439-92-1 | 5 | mg/kg | | 10 | 9 | 11 | 9 | 13 |
| Manganese | 7439-96-5 | 5 | mg/kg | | 173 | 560 | 63 | 61 | 806 |
| Nickel | 7440-02-0 | 2 | mg/kg | | 6 | 9 | 4 | 7 | 13 |
| Selenium | 7782-49-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Vanadium | 7440-62-2 | 5 | mg/kg | | 55 | 47 | 58 | 60 | 42 |
| Zinc | 7440-66-6 | 5 | mg/kg | | 15 | 20 | 12 | 17 | 29 |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | | |
| Mercury | 7439-97-6 | 0.1 | mg/kg | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EG048: Hexavalent Chromium (Alkaline Digest)** | | | | | | | | | |
| Hexavalent Chromium | 18540-29-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser** | | | | | | | | | |
| Weak Acid Dissociable Cyanide | ---- | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EK055-P: Ammonia as N** | | | | | | | | | |
| Ammonia as N | 7664-41-7 | 20 | mg/kg | | <20 | <20 | <20 | <20 | <20 |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP21 - 2.00m | TP21 - 3.00m | TP32 - 0.25m | TP32 - 0.50m | TP32 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-071 | EB2432677-072 | EB2432677-073 | EB2432677-074 | EB2432677-075 |
| | | | | Result | Result | Result | Result | Result |
| **EK057G: Nitrite as N by Discrete Analyser - Continued** | | | | | | | | |
| Nitrite as N (Sol.) | 14797-65-0 | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | |
| Nitrate as N (Sol.) | 14797-55-8 | 0.1 | mg/kg | <0.1 | <0.1 | **0.1** | **0.1** | **0.1** |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | |
| Nitrite + Nitrate as N (Sol.) | ---- | 0.1 | mg/kg | <0.1 | <0.1 | **0.1** | **0.1** | **0.1** |
| **EK061G: Total Kjeldahl Nitrogen By Discrete Analyser** | | | | | | | | |
| Total Kjeldahl Nitrogen as N | ---- | 20 | mg/kg | **80** | **50** | **660** | **470** | **150** |
| **EK062: Total Nitrogen as N (TKN + NOx)** | | | | | | | | |
| ^ Total Nitrogen as N | ---- | 20 | mg/kg | **80** | **50** | **660** | **470** | **150** |
| **EK067G: Total Phosphorus as P by Discrete Analyser** | | | | | | | | |
| Total Phosphorus as P | ---- | 2 | mg/kg | **94** | **295** | **144** | **110** | **190** |
| **EK080: Bicarbonate Extractable Phosphorus (Colwell)** | | | | | | | | |
| Bicarbonate Ext. P (Colwell) | ---- | 5 | mg/kg | <5 | <5 | <5 | <5 | <5 |
| **EP004: Organic Matter** | | | | | | | | |
| Organic Matter | ---- | 0.5 | % | <0.5 | <0.5 | **2.0** | **1.3** | **0.8** |
| Total Organic Carbon | ---- | 0.5 | % | <0.5 | <0.5 | **1.1** | **0.7** | <0.5 |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | |
| Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | |
| alpha-BHC | 319-84-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Heptachlor | 76-44-8 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | 309-00-2 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| trans-Chlordane | 5103-74-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP21 - 2.00m | TP21 - 3.00m | TP32 - 0.25m | TP32 - 0.50m | TP32 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-071 | EB2432677-072 | EB2432677-073 | EB2432677-074 | EB2432677-075 |
| | | | | Result | Result | Result | Result | Result |
| **EP068A: Organochlorine Pesticides (OC) - Continued** | | | | | | | | |
| **alpha-Endosulfan** | 959-98-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dieldrin** | 60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin** | 72-20-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| ^ **Endosulfan (sum)** | 115-29-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin aldehyde** | 7421-93-4 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **4.4`-DDT** | 50-29-3 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| **Methoxychlor** | 72-43-5 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Mirex** | 2385-85-5 | 0.20 | mg/kg | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| ^ **Sum of Aldrin + Dieldrin** | 309-00-2/60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068B: Organophosphorus Pesticides (OP)** | | | | | | | | |
| **Dichlorvos** | 62-73-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dimethoate** | 60-51-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Diazinon** | 333-41-5 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Parathion-methyl** | 298-00-0 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Malathion** | 121-75-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Fenthion** | 55-38-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Chlorpyrifos** | 2921-88-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP21 - 2.00m | TP21 - 3.00m | TP32 - 0.25m | TP32 - 0.50m | TP32 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-071 | EB2432677-072 | EB2432677-073 | EB2432677-074 | EB2432677-075 |
| | | | | Result | Result | Result | Result | Result |
| **EP068B: Organophosphorus Pesticides (OP) - Continued** | | | | | | | | |
| Parathion | 56-38-2 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| Chlorfenvinphos | 470-90-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Fenamiphos | 22224-92-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Prothiofos | 34643-46-4 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Ethion | 563-12-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Carbophenothion | 786-19-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068C: Triazines** | | | | | | | | |
| Atrazine | 1912-24-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP068D: Pyrethroids** | | | | | | | | |
| Bifenthrin | 82657-04-3 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP075(SIM)A: Phenolic Compounds** | | | | | | | | |
| Phenol | 108-95-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Chlorophenol | 95-57-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Methylphenol | 95-48-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 3- & 4-Methylphenol | 1319-77-3 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| 2-Nitrophenol | 88-75-5 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dimethylphenol | 105-67-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dichlorophenol | 120-83-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.6-Dichlorophenol | 87-65-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chloro-3-methylphenol | 59-50-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.6-Trichlorophenol | 88-06-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.5-Trichlorophenol | 95-95-4 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Pentachlorophenol | 87-86-5 | 2 | mg/kg | <2 | <2 | <2 | <2 | <2 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP21 - 2.00m | TP21 - 3.00m | TP32 - 0.25m | TP32 - 0.50m | TP32 - 1.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-071 | EB2432677-072 | EB2432677-073 | EB2432677-074 | EB2432677-075 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued** | | | | | | | | | |
| Naphthalene | 91-20-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthylene | 208-96-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthene | 83-32-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluorene | 86-73-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Phenanthrene | 85-01-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Anthracene | 120-12-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluoranthene | 206-44-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Pyrene | 129-00-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benz(a)anthracene | 56-55-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chrysene | 218-01-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(b+j)fluoranthene | 205-99-2 205-82-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(k)fluoranthene | 207-08-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene | 50-32-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Indeno(1.2.3.cd)pyrene | 193-39-5 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibenz(a.h)anthracene | 53-70-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(g.h.i)perylene | 191-24-2 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Sum of polycyclic aromatic hydrocarbons | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (zero) | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (half LOR) | ---- | 0.5 | mg/kg | | **0.6** | **0.6** | **0.6** | **0.6** | **0.6** |
| ^ Benzo(a)pyrene TEQ (LOR) | ---- | 0.5 | mg/kg | | **1.2** | **1.2** | **1.2** | **1.2** | **1.2** |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | | | |
| C6 - C9 Fraction | ---- | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| C10 - C14 Fraction | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| C15 - C28 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| C29 - C36 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ C10 - C36 Fraction (sum) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP21 - 2.00m | TP21 - 3.00m | TP32 - 0.25m | TP32 - 0.50m | TP32 - 1.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-071 | EB2432677-072 | EB2432677-073 | EB2432677-074 | EB2432677-075 |
| | | | | | Result | Result | Result | Result | Result |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued** | | | | | | | | | |
| C6 - C10 Fraction | C6_C10 | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| ^ C6 - C10 Fraction minus BTEX (F1) | C6_C10-BTEX | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| >C10 - C16 Fraction | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| >C16 - C34 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| >C34 - C40 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ >C10 - C40 Fraction (sum) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| ^ >C10 - C16 Fraction minus Naphthalene (F2) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080: BTEXN** | | | | | | | | | |
| Benzene | 71-43-2 | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | 108-88-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | 100-41-4 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| meta- & para-Xylene | 108-38-3 106-42-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ortho-Xylene | 95-47-6 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Sum of BTEX | ---- | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| ^ Total Xylenes | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | 91-20-3 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EP066S: PCB Surrogate** | | | | | | | | | |
| Decachlorobiphenyl | 2051-24-3 | 0.1 | % | | **111** | **96.0** | **116** | **109** | **102** |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | | |
| Dibromo-DDE | 21655-73-2 | 0.05 | % | | **112** | **93.4** | **119** | **116** | **105** |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | | |
| DEF | 78-48-8 | 0.05 | % | | **79.1** | **65.5** | **87.9** | **85.0** | **75.5** |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | | |
| Phenol-d6 | 13127-88-3 | 0.5 | % | | **89.4** | **80.1** | **104** | **95.8** | **86.6** |
| 2-Chlorophenol-D4 | 93951-73-6 | 0.5 | % | | **85.6** | **77.4** | **101** | **92.6** | **82.8** |
| 2.4.6-Tribromophenol | 118-79-6 | 0.5 | % | | **91.4** | **75.0** | **105** | **97.4** | **85.9** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP21 - 2.00m | TP21 - 3.00m | TP32 - 0.25m | TP32 - 0.50m | TP32 - 1.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-071 | EB2432677-072 | EB2432677-073 | EB2432677-074 | EB2432677-075 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | | |
| **2-Fluorobiphenyl** | 321-60-8 | 0.5 | % | | **81.0** | **71.3** | **93.9** | **83.8** | **77.6** |
| **Anthracene-d10** | 1719-06-8 | 0.5 | % | | **93.8** | **82.3** | **103** | **97.6** | **89.9** |
| **4-Terphenyl-d14** | 1718-51-0 | 0.5 | % | | **99.1** | **87.7** | **109** | **102** | **93.9** |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | | |
| **1.2-Dichloroethane-D4** | 17060-07-0 | 0.2 | % | | **77.2** | **89.7** | **76.8** | **81.2** | **88.2** |
| **Toluene-D8** | 2037-26-5 | 0.2 | % | | **80.1** | **92.2** | **79.8** | **87.1** | **91.9** |
| **4-Bromofluorobenzene** | 460-00-4 | 0.2 | % | | **83.4** | **98.7** | **82.8** | **92.2** | **96.6** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP32 - 2.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 1.00m | TP36 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-076 | EB2432677-077 | EB2432677-078 | EB2432677-079 | EB2432677-080 |
| | | | | Result | Result | Result | Result | Result |
| **EA001: pH in soil using 0.01M CaCl extract** | | | | | | | | |
| pH (CaCl2) | ---- | 0.1 | pH Unit | 8.0 | 5.1 | 6.9 | 8.2 | 7.7 |
| **EA002: pH 1:5 (Soils)** | | | | | | | | |
| pH Value | ---- | 0.1 | pH Unit | 8.6 | 6.6 | 9.2 | 9.2 | 9.2 |
| **EA010: Conductivity (1:5)** | | | | | | | | |
| Electrical Conductivity @ 25°C | ---- | 1 | µS/cm | 1130 | 30 | 324 | 1100 | 1370 |
| **EA051 : Bulk Density** | | | | | | | | |
| ø Bulk Density | BULK_DENSITY | 1 | kg/m3 | 1240 | 1230 | 1120 | 1290 | 1340 |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | 20.0 | 10.1 | 17.3 | 15.8 | 18.1 |
| **EA058: Emerson Aggregate Test** | | | | | | | | |
| Color (Munsell) | ---- | - | - | Gray (10YR 5/1) | Grayish Brown (10YR 5/2) | Gray (10YR 6/1) | Gray (7.5YR 5/1) | Gray (10YR 5/1) |
| Texture | ---- | - | - | Medium Heavy Clay | Silty Clay Loam | Medium Heavy Clay | Light Clay | Medium Heavy Clay |
| Emerson Class Number | EC/TC | - | - | 2 | 7 | 2 | 2 | 3 |
| **EA150: Particle Sizing** | | | | | | | | |
| +75µm | ---- | 1 | % | 9 | 14 | 6 | 41 | 14 |
| +150µm | ---- | 1 | % | 5 | 9 | 4 | 37 | 11 |
| +300µm | ---- | 1 | % | 3 | 6 | 3 | 34 | 8 |
| +425µm | ---- | 1 | % | 3 | 5 | 3 | 32 | 7 |
| +600µm | ---- | 1 | % | 2 | 4 | 2 | 29 | 6 |
| +1180µm | ---- | 1 | % | 1 | 2 | 2 | 22 | 3 |
| +2.36mm | ---- | 1 | % | <1 | <1 | 1 | 15 | 1 |
| +4.75mm | ---- | 1 | % | <1 | <1 | 1 | 10 | <1 |
| +9.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +19.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +37.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +75.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| **EA150: Soil Classification based on Particle Size** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP32 - 2.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 1.00m | TP36 - 2.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-076 | EB2432677-077 | EB2432677-078 | EB2432677-079 | EB2432677-080 |
| | | | | | Result | Result | Result | Result | Result |
| **EA150: Soil Classification based on Particle Size - Continued** | | | | | | | | | |
| Fines (<75 µm) | ---- | 1 | % | | 91 | 86 | 94 | 59 | 86 |
| Sand (>75 µm) | ---- | 1 | % | | 9 | 13 | 5 | 24 | 12 |
| Gravel (>2mm) | ---- | 1 | % | | <1 | 1 | 1 | 17 | 2 |
| Cobbles (>6cm) | ---- | 1 | % | | <1 | <1 | <1 | <1 | <1 |
| **ED006: Exchangeable Cations on Alkaline Soils** | | | | | | | | | |
| ø Exchangeable Calcium | ---- | 0.2 | meq/100g | | 9.3 | ---- | 8.1 | 8.1 | 8.2 |
| ø Exchangeable Magnesium | ---- | 0.2 | meq/100g | | 8.9 | ---- | 7.8 | 8.7 | 9.9 |
| ø Exchangeable Potassium | ---- | 0.2 | meq/100g | | <0.2 | ---- | <0.2 | <0.2 | <0.2 |
| ø Exchangeable Sodium | ---- | 0.2 | meq/100g | | 6.7 | ---- | 2.7 | 5.1 | 8.0 |
| ø Cation Exchange Capacity | ---- | 0.2 | meq/100g | | 25.1 | ---- | 18.6 | 21.9 | 26.1 |
| ø Exchangeable Sodium Percent | ---- | 0.2 | % | | 26.7 | ---- | 14.7 | 23.2 | 30.7 |
| ø Calcium/Magnesium Ratio | ---- | 0.2 | - | | 1.0 | ---- | 1.0 | 0.9 | 0.8 |
| **ED007: Exchangeable Cations** | | | | | | | | | |
| Exchangeable Calcium | ---- | 0.1 | meq/100g | | ---- | 5.0 | ---- | ---- | ---- |
| Exchangeable Magnesium | ---- | 0.1 | meq/100g | | ---- | 4.0 | ---- | ---- | ---- |
| Exchangeable Potassium | ---- | 0.1 | meq/100g | | ---- | 0.2 | ---- | ---- | ---- |
| Exchangeable Sodium | ---- | 0.1 | meq/100g | | ---- | 0.9 | ---- | ---- | ---- |
| Cation Exchange Capacity | ---- | 0.1 | meq/100g | | ---- | 10.3 | ---- | ---- | ---- |
| Exchangeable Sodium Percent | ---- | 0.1 | % | | ---- | 8.9 | ---- | ---- | ---- |
| Calcium/Magnesium Ratio | ---- | 0.1 | - | | ---- | 1.2 | ---- | ---- | ---- |
| Magnesium/Potassium Ratio | ---- | 0.1 | - | | ---- | 15.9 | ---- | ---- | ---- |
| **ED021: Bicarbonate Extractable Potassium (Colwell)** | | | | | | | | | |
| Bicarbonate Extractable K (Colwell) | ---- | 100 | mg/kg | | 457 | 155 | 292 | 361 | 411 |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | | |
| Chloride | 16887-00-6 | 10 | mg/kg | | 1960 | 30 | 110 | 1720 | 2210 |
| **ED092: DTPA Extractable Metals** | | | | | | | | | |
| ø Copper | 7440-50-8 | 1 | mg/kg | | <1 | 2 | 1 | 1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP32 - 2.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 1.00m | TP36 - 2.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-076 | EB2432677-077 | EB2432677-078 | EB2432677-079 | EB2432677-080 |
| | | | | | Result | Result | Result | Result | Result |
| **ED092: DTPA Extractable Metals - Continued** | | | | | | | | | |
| ø Iron | 7439-89-6 | 1 | mg/kg | | 9 | 97 | 18 | 16 | 10 |
| ø Manganese | 7439-96-5 | 1 | mg/kg | | 6 | 19 | 13 | 12 | 6 |
| ø Zinc | 7440-66-6 | 1 | mg/kg | | <1 | 3 | <1 | <1 | <1 |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Barium | 7440-39-3 | 10 | mg/kg | | 90 | 30 | 100 | 80 | 60 |
| Beryllium | 7440-41-7 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| Boron | 7440-42-8 | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| Cadmium | 7440-43-9 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| Chromium | 7440-47-3 | 2 | mg/kg | | 11 | 9 | 13 | 11 | 9 |
| Cobalt | 7440-48-4 | 2 | mg/kg | | 9 | 6 | 11 | 15 | 9 |
| Copper | 7440-50-8 | 5 | mg/kg | | 14 | 10 | 18 | 17 | 10 |
| Lead | 7439-92-1 | 5 | mg/kg | | 11 | 11 | 10 | 12 | 11 |
| Manganese | 7439-96-5 | 5 | mg/kg | | 513 | 200 | 552 | 642 | 426 |
| Nickel | 7440-02-0 | 2 | mg/kg | | 9 | 3 | 13 | 12 | 8 |
| Selenium | 7782-49-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Vanadium | 7440-62-2 | 5 | mg/kg | | 42 | 52 | 58 | 40 | 41 |
| Zinc | 7440-66-6 | 5 | mg/kg | | 26 | 15 | 24 | 30 | 17 |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | | |
| Mercury | 7439-97-6 | 0.1 | mg/kg | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EG048: Hexavalent Chromium (Alkaline Digest)** | | | | | | | | | |
| Hexavalent Chromium | 18540-29-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser** | | | | | | | | | |
| Weak Acid Dissociable Cyanide | ---- | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EK055-P: Ammonia as N** | | | | | | | | | |
| Ammonia as N | 7664-41-7 | 20 | mg/kg | | <20 | <20 | <20 | <20 | <20 |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP32 - 2.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 1.00m | TP36 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-076 | EB2432677-077 | EB2432677-078 | EB2432677-079 | EB2432677-080 |
| | | | | Result | Result | Result | Result | Result |
| **EK057G: Nitrite as N by Discrete Analyser - Continued** | | | | | | | | |
| Nitrite as N (Sol.) | 14797-65-0 | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | |
| Nitrate as N (Sol.) | 14797-55-8 | 0.1 | mg/kg | <0.1 | <0.1 | **0.2** | **0.2** | <0.1 |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | |
| Nitrite + Nitrate as N (Sol.) | ---- | 0.1 | mg/kg | <0.1 | <0.1 | **0.2** | **0.2** | <0.1 |
| **EK061G: Total Kjeldahl Nitrogen By Discrete Analyser** | | | | | | | | |
| Total Kjeldahl Nitrogen as N | ---- | 20 | mg/kg | **120** | **780** | **540** | **240** | **80** |
| **EK062: Total Nitrogen as N (TKN + NOx)** | | | | | | | | |
| ^ Total Nitrogen as N | ---- | 20 | mg/kg | **120** | **780** | **540** | **240** | **80** |
| **EK067G: Total Phosphorus as P by Discrete Analyser** | | | | | | | | |
| Total Phosphorus as P | ---- | 2 | mg/kg | **187** | **135** | **112** | **182** | **148** |
| **EK080: Bicarbonate Extractable Phosphorus (Colwell)** | | | | | | | | |
| Bicarbonate Ext. P (Colwell) | ---- | 5 | mg/kg | <5 | <5 | <5 | <5 | <5 |
| **EP004: Organic Matter** | | | | | | | | |
| Organic Matter | ---- | 0.5 | % | **0.8** | **2.0** | **1.5** | **1.1** | **0.8** |
| Total Organic Carbon | ---- | 0.5 | % | <0.5 | **1.1** | **0.9** | **0.6** | <0.5 |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | |
| Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | |
| alpha-BHC | 319-84-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Heptachlor | 76-44-8 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | 309-00-2 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| trans-Chlordane | 5103-74-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP32 - 2.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 1.00m | TP36 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-076 | EB2432677-077 | EB2432677-078 | EB2432677-079 | EB2432677-080 |
| | | | | Result | Result | Result | Result | Result |
| **EP068A: Organochlorine Pesticides (OC) - Continued** | | | | | | | | |
| **alpha-Endosulfan** | 959-98-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dieldrin** | 60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin** | 72-20-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| ^ **Endosulfan (sum)** | 115-29-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin aldehyde** | 7421-93-4 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **4.4`-DDT** | 50-29-3 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| **Methoxychlor** | 72-43-5 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Mirex** | 2385-85-5 | 0.20 | mg/kg | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| ^ **Sum of Aldrin + Dieldrin** | 309-00-2/60-57-1 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <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 | <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 | <0.05 |
| **Demeton-S-methyl** | 919-86-8 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Dimethoate** | 60-51-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Diazinon** | 333-41-5 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Parathion-methyl** | 298-00-0 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Malathion** | 121-75-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Fenthion** | 55-38-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Chlorpyrifos** | 2921-88-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP32 - 2.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 1.00m | TP36 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-076 | EB2432677-077 | EB2432677-078 | EB2432677-079 | EB2432677-080 |
| | | | | Result | Result | Result | Result | Result |
| **EP068B: Organophosphorus Pesticides (OP) - Continued** | | | | | | | | |
| Parathion | 56-38-2 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| Chlorfenvinphos | 470-90-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Fenamiphos | 22224-92-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Prothiofos | 34643-46-4 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Ethion | 563-12-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Carbophenothion | 786-19-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068C: Triazines** | | | | | | | | |
| Atrazine | 1912-24-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP068D: Pyrethroids** | | | | | | | | |
| Bifenthrin | 82657-04-3 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP075(SIM)A: Phenolic Compounds** | | | | | | | | |
| Phenol | 108-95-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Chlorophenol | 95-57-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Methylphenol | 95-48-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 3- & 4-Methylphenol | 1319-77-3 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| 2-Nitrophenol | 88-75-5 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dimethylphenol | 105-67-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dichlorophenol | 120-83-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.6-Dichlorophenol | 87-65-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chloro-3-methylphenol | 59-50-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.6-Trichlorophenol | 88-06-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.5-Trichlorophenol | 95-95-4 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Pentachlorophenol | 87-86-5 | 2 | mg/kg | <2 | <2 | <2 | <2 | <2 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP32 - 2.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 1.00m | TP36 - 2.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-076 | EB2432677-077 | EB2432677-078 | EB2432677-079 | EB2432677-080 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued** | | | | | | | | | |
| Naphthalene | 91-20-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthylene | 208-96-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthene | 83-32-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluorene | 86-73-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Phenanthrene | 85-01-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Anthracene | 120-12-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluoranthene | 206-44-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Pyrene | 129-00-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benz(a)anthracene | 56-55-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chrysene | 218-01-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(b+j)fluoranthene | 205-99-2 205-82-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(k)fluoranthene | 207-08-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene | 50-32-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Indeno(1.2.3.cd)pyrene | 193-39-5 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibenz(a.h)anthracene | 53-70-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(g.h.i)perylene | 191-24-2 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Sum of polycyclic aromatic hydrocarbons | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (zero) | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (half LOR) | ---- | 0.5 | mg/kg | | **0.6** | **0.6** | **0.6** | **0.6** | **0.6** |
| ^ Benzo(a)pyrene TEQ (LOR) | ---- | 0.5 | mg/kg | | **1.2** | **1.2** | **1.2** | **1.2** | **1.2** |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | | | |
| C6 - C9 Fraction | ---- | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| C10 - C14 Fraction | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| C15 - C28 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| C29 - C36 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ C10 - C36 Fraction (sum) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP32 - 2.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 1.00m | TP36 - 2.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-076 | EB2432677-077 | EB2432677-078 | EB2432677-079 | EB2432677-080 |
| | | | | | Result | Result | Result | Result | Result |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued** | | | | | | | | | |
| **C6 - C10 Fraction** | C6_C10 | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| ^ **C6 - C10 Fraction minus BTEX (F1)** | C6_C10-BTEX | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| **>C10 - C16 Fraction** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **>C16 - C34 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| **>C34 - C40 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ **>C10 - C40 Fraction (sum)** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| ^ **>C10 - C16 Fraction minus Naphthalene (F2)** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080: BTEXN** | | | | | | | | | |
| **Benzene** | 71-43-2 | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Toluene** | 108-88-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Ethylbenzene** | 100-41-4 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **meta- & para-Xylene** | 108-38-3 106-42-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **ortho-Xylene** | 95-47-6 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ **Sum of BTEX** | ---- | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| ^ **Total Xylenes** | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Naphthalene** | 91-20-3 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EP066S: PCB Surrogate** | | | | | | | | | |
| **Decachlorobiphenyl** | 2051-24-3 | 0.1 | % | | **108** | **93.5** | **102** | **99.8** | **111** |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | | |
| **Dibromo-DDE** | 21655-73-2 | 0.05 | % | | **111** | **98.6** | **104** | **103** | **112** |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | | |
| **DEF** | 78-48-8 | 0.05 | % | | **76.7** | **73.4** | **77.0** | **75.8** | **77.7** |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | | |
| **Phenol-d6** | 13127-88-3 | 0.5 | % | | **94.8** | **82.3** | **87.8** | **86.2** | **99.2** |
| **2-Chlorophenol-D4** | 93951-73-6 | 0.5 | % | | **90.7** | **79.3** | **85.9** | **82.3** | **96.0** |
| **2.4.6-Tribromophenol** | 118-79-6 | 0.5 | % | | **92.1** | **78.6** | **85.3** | **84.7** | **94.4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP32 - 2.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 1.00m | TP36 - 2.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-076 | EB2432677-077 | EB2432677-078 | EB2432677-079 | EB2432677-080 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | | |
| **2-Fluorobiphenyl** | 321-60-8 | 0.5 | % | | **85.2** | **74.1** | **75.5** | **73.2** | **84.0** |
| **Anthracene-d10** | 1719-06-8 | 0.5 | % | | **94.1** | **85.4** | **88.6** | **88.1** | **95.7** |
| **4-Terphenyl-d14** | 1718-51-0 | 0.5 | % | | **100** | **89.8** | **95.2** | **95.7** | **105** |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | | |
| **1.2-Dichloroethane-D4** | 17060-07-0 | 0.2 | % | | **79.3** | **72.8** | **106** | **79.7** | **85.0** |
| **Toluene-D8** | 2037-26-5 | 0.2 | % | | **81.2** | **73.9** | **116** | **84.5** | **87.3** |
| **4-Bromofluorobenzene** | 460-00-4 | 0.2 | % | | **86.2** | **76.4** | **123** | **87.0** | **90.9** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP03 - 0.25m | TP03 - 0.75m | TP03 - 2.00m | TP03 - 2.50m | TP01 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-081 | EB2432677-082 | EB2432677-083 | EB2432677-084 | EB2432677-085 |
| | | | | Result | Result | Result | Result | Result |
| **EA001: pH in soil using 0.01M CaCl extract** | | | | | | | | |
| pH (CaCl2) | ---- | 0.1 | pH Unit | 6.2 | 7.9 | 7.9 | 7.9 | 4.5 |
| **EA002: pH 1:5 (Soils)** | | | | | | | | |
| pH Value | ---- | 0.1 | pH Unit | 6.5 | 8.4 | 8.6 | 9.0 | 6.4 |
| **EA010: Conductivity (1:5)** | | | | | | | | |
| Electrical Conductivity @ 25°C | ---- | 1 | µS/cm | 44 | 945 | 823 | 406 | 12 |
| **EA051 : Bulk Density** | | | | | | | | |
| ø Bulk Density | BULK_DENSITY | 1 | kg/m3 | 1220 | 1450 | 1300 | 1450 | 1090 |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | 12.2 | 15.6 | 16.3 | 17.2 | 13.0 |
| **EA058: Emerson Aggregate Test** | | | | | | | | |
| Color (Munsell) | ---- | - | - | Gray (7.5YR 5/1) | Gray (7.5YR 6/1) | Gray (7.5YR 6/1) | Light Brownish Gray (10YR 6/2) | Light Yellowish Brown (10YR 6/4) |
| Texture | ---- | - | - | Light Medium Clay | Medium Clay | Medium Clay | Medium Heavy Clay | Sandy Clay Loam |
| Emerson Class Number | EC/TC | - | - | 7 | 3 | 2 | 1 | 3 |
| **EA150: Particle Sizing** | | | | | | | | |
| +75µm | ---- | 1 | % | 19 | 25 | 19 | 12 | 18 |
| +150µm | ---- | 1 | % | 12 | 16 | 11 | 7 | 8 |
| +300µm | ---- | 1 | % | 7 | 11 | 6 | 5 | 4 |
| +425µm | ---- | 1 | % | 6 | 9 | 4 | 4 | 3 |
| +600µm | ---- | 1 | % | 5 | 8 | 3 | 3 | 3 |
| +1180µm | ---- | 1 | % | 3 | 6 | 2 | 3 | 2 |
| +2.36mm | ---- | 1 | % | 2 | 4 | 1 | 2 | <1 |
| +4.75mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +9.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +19.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +37.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +75.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| **EA150: Soil Classification based on Particle Size** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP03 - 0.25m | TP03 - 0.75m | TP03 - 2.00m | TP03 - 2.50m | TP01 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-081 | EB2432677-082 | EB2432677-083 | EB2432677-084 | EB2432677-085 |
| | | | | | Result | Result | Result | Result | Result |
| **EA150: Soil Classification based on Particle Size - Continued** | | | | | | | | | |
| Fines (<75 µm) | ---- | 1 | % | | 81 | 75 | 81 | 88 | 82 |
| Sand (>75 µm) | ---- | 1 | % | | 17 | 21 | 17 | 10 | 17 |
| Gravel (>2mm) | ---- | 1 | % | | 2 | 4 | 2 | 2 | 1 |
| Cobbles (>6cm) | ---- | 1 | % | | <1 | <1 | <1 | <1 | <1 |
| **ED006: Exchangeable Cations on Alkaline Soils** | | | | | | | | | |
| ø Exchangeable Calcium | ---- | 0.2 | meq/100g | | ---- | 9.3 | 8.9 | 7.3 | ---- |
| ø Exchangeable Magnesium | ---- | 0.2 | meq/100g | | ---- | 8.4 | 7.7 | 5.8 | ---- |
| ø Exchangeable Potassium | ---- | 0.2 | meq/100g | | ---- | <0.2 | <0.2 | <0.2 | ---- |
| ø Exchangeable Sodium | ---- | 0.2 | meq/100g | | ---- | 2.9 | 3.3 | 2.8 | ---- |
| ø Cation Exchange Capacity | ---- | 0.2 | meq/100g | | ---- | 20.6 | 20.0 | 16.0 | ---- |
| ø Exchangeable Sodium Percent | ---- | 0.2 | % | | ---- | 14.0 | 16.7 | 17.8 | ---- |
| ø Calcium/Magnesium Ratio | ---- | 0.2 | - | | ---- | 1.1 | 1.1 | 1.3 | ---- |
| **ED007: Exchangeable Cations** | | | | | | | | | |
| Exchangeable Calcium | ---- | 0.1 | meq/100g | | 14.0 | ---- | ---- | ---- | 4.0 |
| Exchangeable Magnesium | ---- | 0.1 | meq/100g | | 10.4 | ---- | ---- | ---- | 4.2 |
| Exchangeable Potassium | ---- | 0.1 | meq/100g | | 0.4 | ---- | ---- | ---- | 0.3 |
| Exchangeable Sodium | ---- | 0.1 | meq/100g | | 1.4 | ---- | ---- | ---- | 0.8 |
| Cation Exchange Capacity | ---- | 0.1 | meq/100g | | 26.3 | ---- | ---- | ---- | 9.3 |
| Exchangeable Sodium Percent | ---- | 0.1 | % | | 5.4 | ---- | ---- | ---- | 8.8 |
| Calcium/Magnesium Ratio | ---- | 0.1 | - | | 1.3 | ---- | ---- | ---- | 1.0 |
| Magnesium/Potassium Ratio | ---- | 0.1 | - | | 29.1 | ---- | ---- | ---- | 15.9 |
| **ED021: Bicarbonate Extractable Potassium (Colwell)** | | | | | | | | | |
| Bicarbonate Extractable K (Colwell) | ---- | 100 | mg/kg | | 408 | 305 | <100 | 362 | 329 |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | | |
| Chloride | 16887-00-6 | 10 | mg/kg | | 50 | 1560 | 1360 | 400 | <10 |
| **ED092: DTPA Extractable Metals** | | | | | | | | | |
| ø Copper | 7440-50-8 | 1 | mg/kg | | 2 | <1 | <1 | <1 | 1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP03 - 0.25m | TP03 - 0.75m | TP03 - 2.00m | TP03 - 2.50m | TP01 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-081 | EB2432677-082 | EB2432677-083 | EB2432677-084 | EB2432677-085 |
| | | | | Result | Result | Result | Result | Result |
| **ED092: DTPA Extractable Metals - Continued** | | | | | | | | |
| ø Iron | 7439-89-6 | 1 | mg/kg | 51 | 11 | 12 | 11 | 45 |
| ø Manganese | 7439-96-5 | 1 | mg/kg | 25 | 5 | 4 | 2 | 7 |
| ø Zinc | 7440-66-6 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | <5 | <5 | <5 | <5 | <5 |
| Barium | 7440-39-3 | 10 | mg/kg | 130 | 210 | 120 | 90 | 300 |
| Beryllium | 7440-41-7 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Boron | 7440-42-8 | 50 | mg/kg | <50 | <50 | <50 | <50 | <50 |
| Cadmium | 7440-43-9 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Chromium | 7440-47-3 | 2 | mg/kg | 12 | 12 | 11 | 12 | 11 |
| Cobalt | 7440-48-4 | 2 | mg/kg | 12 | 8 | 8 | 11 | 38 |
| Copper | 7440-50-8 | 5 | mg/kg | 16 | 12 | 12 | 16 | 13 |
| Lead | 7439-92-1 | 5 | mg/kg | 13 | 10 | 10 | 14 | 25 |
| Manganese | 7439-96-5 | 5 | mg/kg | 471 | 301 | 396 | 583 | 1920 |
| Nickel | 7440-02-0 | 2 | mg/kg | 9 | 8 | 9 | 10 | 12 |
| Selenium | 7782-49-2 | 5 | mg/kg | <5 | <5 | <5 | <5 | <5 |
| Vanadium | 7440-62-2 | 5 | mg/kg | 45 | 38 | 39 | 59 | 73 |
| Zinc | 7440-66-6 | 5 | mg/kg | 35 | 22 | 21 | 20 | 8 |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | |
| Mercury | 7439-97-6 | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EG048: Hexavalent Chromium (Alkaline Digest)** | | | | | | | | |
| Hexavalent Chromium | 18540-29-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser** | | | | | | | | |
| Weak Acid Dissociable Cyanide | ---- | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| **EK055-P: Ammonia as N** | | | | | | | | |
| Ammonia as N | 7664-41-7 | 20 | mg/kg | <20 | <20 | <20 | <20 | <20 |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP03 - 0.25m | TP03 - 0.75m | TP03 - 2.00m | TP03 - 2.50m | TP01 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-081 | EB2432677-082 | EB2432677-083 | EB2432677-084 | EB2432677-085 |
| | | | | Result | Result | Result | Result | Result |
| **EK057G: Nitrite as N by Discrete Analyser - Continued** | | | | | | | | |
| Nitrite as N (Sol.) | 14797-65-0 | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | |
| Nitrate as N (Sol.) | 14797-55-8 | 0.1 | mg/kg | **0.2** | **1.2** | <0.1 | <0.1 | **0.4** |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | |
| Nitrite + Nitrate as N (Sol.) | ---- | 0.1 | mg/kg | **0.2** | **1.2** | <0.1 | <0.1 | **0.4** |
| **EK061G: Total Kjeldahl Nitrogen By Discrete Analyser** | | | | | | | | |
| Total Kjeldahl Nitrogen as N | ---- | 20 | mg/kg | **1660** | **190** | **70** | **60** | **600** |
| **EK062: Total Nitrogen as N (TKN + NOx)** | | | | | | | | |
| ^ Total Nitrogen as N | ---- | 20 | mg/kg | **1660** | **190** | **70** | **60** | **600** |
| **EK067G: Total Phosphorus as P by Discrete Analyser** | | | | | | | | |
| Total Phosphorus as P | ---- | 2 | mg/kg | **231** | **122** | **143** | **98** | **143** |
| **EK080: Bicarbonate Extractable Phosphorus (Colwell)** | | | | | | | | |
| Bicarbonate Ext. P (Colwell) | ---- | 5 | mg/kg | <5 | <5 | <5 | <5 | <5 |
| **EP004: Organic Matter** | | | | | | | | |
| Organic Matter | ---- | 0.5 | % | **2.6** | **0.9** | **0.6** | <0.5 | **1.2** |
| Total Organic Carbon | ---- | 0.5 | % | **1.5** | **0.5** | <0.5 | <0.5 | **0.7** |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | |
| Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | |
| alpha-BHC | 319-84-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Heptachlor | 76-44-8 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | 309-00-2 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| trans-Chlordane | 5103-74-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP03 - 0.25m | TP03 - 0.75m | TP03 - 2.00m | TP03 - 2.50m | TP01 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-081 | EB2432677-082 | EB2432677-083 | EB2432677-084 | EB2432677-085 |
| | | | | Result | Result | Result | Result | Result |
| **EP068A: Organochlorine Pesticides (OC) - Continued** | | | | | | | | |
| **alpha-Endosulfan** | 959-98-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dieldrin** | 60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin** | 72-20-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| ^ **Endosulfan (sum)** | 115-29-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin aldehyde** | 7421-93-4 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **4.4`-DDT** | 50-29-3 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| **Methoxychlor** | 72-43-5 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Mirex** | 2385-85-5 | 0.20 | mg/kg | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| ^ **Sum of Aldrin + Dieldrin** | 309-00-2/60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068B: Organophosphorus Pesticides (OP)** | | | | | | | | |
| **Dichlorvos** | 62-73-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dimethoate** | 60-51-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Diazinon** | 333-41-5 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Parathion-methyl** | 298-00-0 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Malathion** | 121-75-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Fenthion** | 55-38-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Chlorpyrifos** | 2921-88-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP03 - 0.25m | TP03 - 0.75m | TP03 - 2.00m | TP03 - 2.50m | TP01 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-081 | EB2432677-082 | EB2432677-083 | EB2432677-084 | EB2432677-085 |
| | | | | Result | Result | Result | Result | Result |
| **EP068B: Organophosphorus Pesticides (OP) - Continued** | | | | | | | | |
| Parathion | 56-38-2 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| Chlorfenvinphos | 470-90-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Fenamiphos | 22224-92-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Prothiofos | 34643-46-4 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Ethion | 563-12-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Carbophenothion | 786-19-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068C: Triazines** | | | | | | | | |
| Atrazine | 1912-24-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP068D: Pyrethroids** | | | | | | | | |
| Bifenthrin | 82657-04-3 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP075(SIM)A: Phenolic Compounds** | | | | | | | | |
| Phenol | 108-95-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Chlorophenol | 95-57-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Methylphenol | 95-48-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 3- & 4-Methylphenol | 1319-77-3 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| 2-Nitrophenol | 88-75-5 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dimethylphenol | 105-67-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dichlorophenol | 120-83-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.6-Dichlorophenol | 87-65-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chloro-3-methylphenol | 59-50-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.6-Trichlorophenol | 88-06-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.5-Trichlorophenol | 95-95-4 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Pentachlorophenol | 87-86-5 | 2 | mg/kg | <2 | <2 | <2 | <2 | <2 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP03 - 0.25m | TP03 - 0.75m | TP03 - 2.00m | TP03 - 2.50m | TP01 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-081 | EB2432677-082 | EB2432677-083 | EB2432677-084 | EB2432677-085 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued** | | | | | | | | | |
| Naphthalene | 91-20-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthylene | 208-96-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthene | 83-32-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluorene | 86-73-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Phenanthrene | 85-01-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Anthracene | 120-12-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluoranthene | 206-44-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Pyrene | 129-00-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benz(a)anthracene | 56-55-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chrysene | 218-01-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(b+j)fluoranthene | 205-99-2 205-82-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(k)fluoranthene | 207-08-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene | 50-32-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Indeno(1.2.3.cd)pyrene | 193-39-5 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibenz(a.h)anthracene | 53-70-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(g.h.i)perylene | 191-24-2 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Sum of polycyclic aromatic hydrocarbons | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (zero) | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (half LOR) | ---- | 0.5 | mg/kg | | **0.6** | **0.6** | **0.6** | **0.6** | **0.6** |
| ^ Benzo(a)pyrene TEQ (LOR) | ---- | 0.5 | mg/kg | | **1.2** | **1.2** | **1.2** | **1.2** | **1.2** |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | | | |
| C6 - C9 Fraction | ---- | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| C10 - C14 Fraction | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| C15 - C28 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| C29 - C36 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ C10 - C36 Fraction (sum) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP03 - 0.25m | TP03 - 0.75m | TP03 - 2.00m | TP03 - 2.50m | TP01 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-081 | EB2432677-082 | EB2432677-083 | EB2432677-084 | EB2432677-085 |
| | | | | | Result | Result | Result | Result | Result |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued** | | | | | | | | | |
| **C6 - C10 Fraction** | C6_C10 | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| ^ **C6 - C10 Fraction minus BTEX (F1)** | C6_C10-BTEX | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| **>C10 - C16 Fraction** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **>C16 - C34 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| **>C34 - C40 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ **>C10 - C40 Fraction (sum)** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| ^ **>C10 - C16 Fraction minus Naphthalene (F2)** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080: BTEXN** | | | | | | | | | |
| **Benzene** | 71-43-2 | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Toluene** | 108-88-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Ethylbenzene** | 100-41-4 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **meta- & para-Xylene** | 108-38-3 106-42-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **ortho-Xylene** | 95-47-6 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ **Sum of BTEX** | ---- | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| ^ **Total Xylenes** | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Naphthalene** | 91-20-3 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EP066S: PCB Surrogate** | | | | | | | | | |
| **Decachlorobiphenyl** | 2051-24-3 | 0.1 | % | | **97.9** | **109** | **94.7** | **97.3** | **91.9** |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | | |
| **Dibromo-DDE** | 21655-73-2 | 0.05 | % | | **104** | **105** | **115** | **118** | **114** |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | | |
| **DEF** | 78-48-8 | 0.05 | % | | **78.2** | **70.6** | **95.3** | **96.3** | **93.0** |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | | |
| **Phenol-d6** | 13127-88-3 | 0.5 | % | | **85.9** | **91.2** | **102** | **110** | **101** |
| **2-Chlorophenol-D4** | 93951-73-6 | 0.5 | % | | **83.3** | **86.1** | **92.4** | **101** | **91.0** |
| **2.4.6-Tribromophenol** | 118-79-6 | 0.5 | % | | **80.8** | **90.3** | **99.0** | **96.9** | **99.6** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP03 - 0.25m | TP03 - 0.75m | TP03 - 2.00m | TP03 - 2.50m | TP01 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-081 | EB2432677-082 | EB2432677-083 | EB2432677-084 | EB2432677-085 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | | |
| **2-Fluorobiphenyl** | 321-60-8 | 0.5 | % | | **76.2** | **75.5** | **112** | **118** | **107** |
| **Anthracene-d10** | 1719-06-8 | 0.5 | % | | **87.6** | **93.3** | **92.0** | **94.9** | **99.3** |
| **4-Terphenyl-d14** | 1718-51-0 | 0.5 | % | | **93.2** | **100** | **94.0** | **96.3** | **98.2** |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | | |
| **1.2-Dichloroethane-D4** | 17060-07-0 | 0.2 | % | | **67.1** | **61.8** | **61.8** | **72.6** | **69.0** |
| **Toluene-D8** | 2037-26-5 | 0.2 | % | | **66.2** | **61.4** | **63.8** | **73.5** | **69.2** |
| **4-Bromofluorobenzene** | 460-00-4 | 0.2 | % | | **69.6** | **63.1** | **74.9** | **85.7** | **70.5** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP01 - 0.50m | TP01 - 1.00m | TP01 - 2.00m | TP29 - 0.25m | TP29 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-086 | EB2432677-087 | EB2432677-088 | EB2432677-089 | EB2432677-090 |
| | | | | Result | Result | Result | Result | Result |
| **EA001: pH in soil using 0.01M CaCl extract** | | | | | | | | |
| pH (CaCl2) | ---- | 0.1 | pH Unit | 6.0 | 8.0 | 8.0 | 6.4 | 7.8 |
| **EA002: pH 1:5 (Soils)** | | | | | | | | |
| pH Value | ---- | 0.1 | pH Unit | 7.6 | 9.6 | 8.6 | 7.5 | 8.8 |
| **EA010: Conductivity (1:5)** | | | | | | | | |
| Electrical Conductivity @ 25°C | ---- | 1 | µS/cm | 55 | 501 | 986 | 169 | 983 |
| **EA051 : Bulk Density** | | | | | | | | |
| ø Bulk Density | BULK_DENSITY | 1 | kg/m3 | 1040 | 1320 | 1160 | 1180 | 1260 |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | 16.8 | 13.2 | 19.3 | 13.8 | 18.5 |
| **EA058: Emerson Aggregate Test** | | | | | | | | |
| Color (Munsell) | ---- | - | - | Light Yellowish Brown (2.5Y 6/3) | Light Brownish Gray (10YR 6/2) | Gray (7.5YR 6/1) | Gray (7.5YR 6/1) | Gray (7.5YR 6/1) |
| Texture | ---- | - | - | Medium Clay | Light Clay | Medium Clay | Light Medium Clay | Medium Clay |
| Emerson Class Number | EC/TC | - | - | 2 | 2 | 2 | 7 | 4 |
| **EA150: Particle Sizing** | | | | | | | | |
| +75µm | ---- | 1 | % | 13 | 39 | 16 | 10 | 15 |
| +150µm | ---- | 1 | % | 7 | 30 | 12 | 5 | 11 |
| +300µm | ---- | 1 | % | 4 | 25 | 10 | 3 | 8 |
| +425µm | ---- | 1 | % | 3 | 22 | 8 | 2 | 8 |
| +600µm | ---- | 1 | % | 3 | 20 | 8 | 1 | 7 |
| +1180µm | ---- | 1 | % | 1 | 16 | 6 | <1 | 5 |
| +2.36mm | ---- | 1 | % | <1 | 12 | 4 | <1 | 3 |
| +4.75mm | ---- | 1 | % | <1 | 7 | 3 | <1 | 2 |
| +9.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +19.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +37.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +75.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| **EA150: Soil Classification based on Particle Size** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP01 - 0.50m | TP01 - 1.00m | TP01 - 2.00m | TP29 - 0.25m | TP29 - 0.75m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-086 | EB2432677-087 | EB2432677-088 | EB2432677-089 | EB2432677-090 |
| | | | | | Result | Result | Result | Result | Result |
| **EA150: Soil Classification based on Particle Size - Continued** | | | | | | | | | |
| Fines (<75 µm) | ---- | 1 | % | | 87 | 61 | 84 | 90 | 85 |
| Sand (>75 µm) | ---- | 1 | % | | 12 | 26 | 11 | 10 | 11 |
| Gravel (>2mm) | ---- | 1 | % | | 1 | 13 | 5 | <1 | 4 |
| Cobbles (>6cm) | ---- | 1 | % | | <1 | <1 | <1 | <1 | <1 |
| **ED006: Exchangeable Cations on Alkaline Soils** | | | | | | | | | |
| ø Exchangeable Calcium | ---- | 0.2 | meq/100g | | 4.5 | 3.8 | 6.6 | 12.1 | 7.3 |
| ø Exchangeable Magnesium | ---- | 0.2 | meq/100g | | 4.7 | 4.8 | 8.9 | 7.5 | 6.6 |
| ø Exchangeable Potassium | ---- | 0.2 | meq/100g | | <0.2 | <0.2 | 0.4 | <0.2 | <0.2 |
| ø Exchangeable Sodium | ---- | 0.2 | meq/100g | | 2.3 | 3.5 | 7.3 | 1.2 | 3.3 |
| ø Cation Exchange Capacity | ---- | 0.2 | meq/100g | | 11.6 | 12.1 | 23.2 | 20.8 | 17.3 |
| ø Exchangeable Sodium Percent | ---- | 0.2 | % | | 19.9 | 28.9 | 31.4 | 6.0 | 18.9 |
| ø Calcium/Magnesium Ratio | ---- | 0.2 | - | | 1.0 | 0.8 | 0.8 | 1.6 | 1.1 |
| ø Magnesium/Potassium Ratio | ---- | 0.2 | - | | ---- | ---- | 24.7 | ---- | ---- |
| **ED021: Bicarbonate Extractable Potassium (Colwell)** | | | | | | | | | |
| Bicarbonate Extractable K (Colwell) | ---- | 100 | mg/kg | | 289 | 370 | 341 | 338 | 335 |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | | |
| Chloride | 16887-00-6 | 10 | mg/kg | | 40 | 270 | 1710 | 180 | 1440 |
| **ED092: DTPA Extractable Metals** | | | | | | | | | |
| ø Copper | 7440-50-8 | 1 | mg/kg | | 1 | <1 | <1 | 1 | <1 |
| ø Iron | 7439-89-6 | 1 | mg/kg | | 14 | 8 | 12 | 16 | 13 |
| ø Manganese | 7439-96-5 | 1 | mg/kg | | 3 | 4 | 6 | 10 | 4 |
| ø Zinc | 7440-66-6 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Barium | 7440-39-3 | 10 | mg/kg | | 60 | 630 | 80 | 140 | 240 |
| Beryllium | 7440-41-7 | 1 | mg/kg | | 1 | <1 | <1 | <1 | <1 |
| Boron | 7440-42-8 | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP01 - 0.50m | TP01 - 1.00m | TP01 - 2.00m | TP29 - 0.25m | TP29 - 0.75m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-086 | EB2432677-087 | EB2432677-088 | EB2432677-089 | EB2432677-090 |
| | | | | | Result | Result | Result | Result | Result |
| **EG005(ED093)T: Total Metals by ICP-AES - Continued** | | | | | | | | | |
| Cadmium | 7440-43-9 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| Chromium | 7440-47-3 | 2 | mg/kg | | 15 | 12 | 12 | 14 | 14 |
| Cobalt | 7440-48-4 | 2 | mg/kg | | 3 | 7 | 14 | 9 | 20 |
| Copper | 7440-50-8 | 5 | mg/kg | | 13 | 11 | 14 | 17 | 20 |
| Lead | 7439-92-1 | 5 | mg/kg | | 10 | 10 | 14 | 11 | 14 |
| Manganese | 7439-96-5 | 5 | mg/kg | | 45 | 267 | 567 | 350 | 1320 |
| Nickel | 7440-02-0 | 2 | mg/kg | | 5 | 8 | 9 | 11 | 18 |
| Selenium | 7782-49-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Vanadium | 7440-62-2 | 5 | mg/kg | | 67 | 45 | 49 | 50 | 63 |
| Zinc | 7440-66-6 | 5 | mg/kg | | 11 | 20 | 24 | 26 | 25 |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | | |
| Mercury | 7439-97-6 | 0.1 | mg/kg | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EG048: Hexavalent Chromium (Alkaline Digest)** | | | | | | | | | |
| Hexavalent Chromium | 18540-29-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser** | | | | | | | | | |
| Weak Acid Dissociable Cyanide | ---- | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EK055-P: Ammonia as N** | | | | | | | | | |
| Ammonia as N | 7664-41-7 | 20 | mg/kg | | <20 | <20 | <20 | <20 | <20 |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | | |
| Nitrite as N (Sol.) | 14797-65-0 | 0.1 | mg/kg | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | | |
| Nitrate as N (Sol.) | 14797-55-8 | 0.1 | mg/kg | | 0.1 | 0.2 | 0.2 | <0.1 | 0.4 |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | | |
| Nitrite + Nitrate as N (Sol.) | ---- | 0.1 | mg/kg | | 0.1 | 0.2 | 0.2 | <0.1 | 0.4 |
| **EK061G: Total Kjeldahl Nitrogen By Discrete Analyser** | | | | | | | | | |
| Total Kjeldahl Nitrogen as N | ---- | 20 | mg/kg | | 460 | 130 | 70 | 720 | 320 |
| **EK062: Total Nitrogen as N (TKN + NOx)** | | | | | | | | | |
| ^ Total Nitrogen as N | ---- | 20 | mg/kg | | 460 | 130 | 70 | 720 | 320 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP01 - 0.50m | TP01 - 1.00m | TP01 - 2.00m | TP29 - 0.25m | TP29 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-086 | EB2432677-087 | EB2432677-088 | EB2432677-089 | EB2432677-090 |
| | | | | Result | Result | Result | Result | Result |
| **EK067G: Total Phosphorus as P by Discrete Analyser** | | | | | | | | |
| Total Phosphorus as P | ---- | 2 | mg/kg | **96** | **146** | **152** | **163** | **139** |
| **EK080: Bicarbonate Extractable Phosphorus (Colwell)** | | | | | | | | |
| Bicarbonate Ext. P (Colwell) | ---- | 5 | mg/kg | <5 | <5 | <5 | <5 | <5 |
| **EP004: Organic Matter** | | | | | | | | |
| Organic Matter | ---- | 0.5 | % | **1.1** | **0.6** | **0.5** | **1.7** | **0.7** |
| Total Organic Carbon | ---- | 0.5 | % | **0.7** | <0.5 | <0.5 | **1.0** | <0.5 |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | |
| Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | |
| alpha-BHC | 319-84-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Heptachlor | 76-44-8 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | 309-00-2 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| trans-Chlordane | 5103-74-2 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| cis-Chlordane | 5103-71-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Dieldrin | 60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Endrin | 72-20-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| ^ Endosulfan (sum) | 115-29-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Endrin aldehyde | 7421-93-4 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP01 - 0.50m | TP01 - 1.00m | TP01 - 2.00m | TP29 - 0.25m | TP29 - 0.75m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-086 | EB2432677-087 | EB2432677-088 | EB2432677-089 | EB2432677-090 |
| | | | | | Result | Result | Result | Result | Result |
| **EP068A: Organochlorine Pesticides (OC) - Continued** | | | | | | | | | |
| **Endosulfan sulfate** | 1031-07-8 | 0.05 | mg/kg | | <0.05 | <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 | <0.2 |
| **Endrin ketone** | 53494-70-5 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Methoxychlor** | 72-43-5 | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Mirex** | 2385-85-5 | 0.20 | mg/kg | | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| ^ **Sum of Aldrin + Dieldrin** | 309-00-2/60-57-1 | 0.05 | mg/kg | | <0.05 | <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 | <0.05 |
| **EP068B: Organophosphorus Pesticides (OP)** | | | | | | | | | |
| **Dichlorvos** | 62-73-7 | 0.05 | mg/kg | | <0.05 | <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 | <0.05 |
| **Dimethoate** | 60-51-5 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Diazinon** | 333-41-5 | 0.05 | mg/kg | | <0.05 | <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 | <0.05 |
| **Parathion-methyl** | 298-00-0 | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Malathion** | 121-75-5 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Fenthion** | 55-38-9 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Chlorpyrifos** | 2921-88-2 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Parathion** | 56-38-2 | 0.2 | mg/kg | | <0.2 | <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 | <0.05 |
| **Chlorfenvinphos** | 470-90-6 | 0.05 | mg/kg | | <0.05 | <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 | <0.05 |
| **Fenamiphos** | 22224-92-6 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Prothiofos** | 34643-46-4 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Ethion** | 563-12-2 | 0.05 | mg/kg | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Carbophenothion** | 786-19-6 | 0.05 | mg/kg | | <0.05 | <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 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP01 - 0.50m | TP01 - 1.00m | TP01 - 2.00m | TP29 - 0.25m | TP29 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-086 | EB2432677-087 | EB2432677-088 | EB2432677-089 | EB2432677-090 |
| | | | | Result | Result | Result | Result | Result |
| **EP068C: Triazines** | | | | | | | | |
| **Atrazine** | 1912-24-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP068D: Pyrethroids** | | | | | | | | |
| **Bifenthrin** | 82657-04-3 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP075(SIM)A: Phenolic Compounds** | | | | | | | | |
| **Phenol** | 108-95-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2-Chlorophenol** | 95-57-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2-Methylphenol** | 95-48-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **3- & 4-Methylphenol** | 1319-77-3 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| **2-Nitrophenol** | 88-75-5 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.4-Dimethylphenol** | 105-67-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.4-Dichlorophenol** | 120-83-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.6-Dichlorophenol** | 87-65-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **4-Chloro-3-methylphenol** | 59-50-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.4.6-Trichlorophenol** | 88-06-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.4.5-Trichlorophenol** | 95-95-4 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Pentachlorophenol** | 87-86-5 | 2 | mg/kg | <2 | <2 | <2 | <2 | <2 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | | |
| **Naphthalene** | 91-20-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Acenaphthylene** | 208-96-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Acenaphthene** | 83-32-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Fluorene** | 86-73-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Phenanthrene** | 85-01-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Anthracene** | 120-12-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Fluoranthene** | 206-44-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Pyrene** | 129-00-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Benz(a)anthracene** | 56-55-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Chrysene** | 218-01-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP01 - 0.50m | TP01 - 1.00m | TP01 - 2.00m | TP29 - 0.25m | TP29 - 0.75m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-086 | EB2432677-087 | EB2432677-088 | EB2432677-089 | EB2432677-090 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued** | | | | | | | | | |
| **Benzo(b+j)fluoranthene** | 205-99-2 205-82-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Benzo(k)fluoranthene** | 207-08-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Benzo(a)pyrene** | 50-32-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Indeno(1.2.3.cd)pyrene** | 193-39-5 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Dibenz(a.h)anthracene** | 53-70-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Benzo(g.h.i)perylene** | 191-24-2 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ **Sum of polycyclic aromatic hydrocarbons** | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ **Benzo(a)pyrene TEQ (zero)** | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ **Benzo(a)pyrene TEQ (half LOR)** | ---- | 0.5 | mg/kg | | **0.6** | **0.6** | **0.6** | **0.6** | **0.6** |
| ^ **Benzo(a)pyrene TEQ (LOR)** | ---- | 0.5 | mg/kg | | **1.2** | **1.2** | **1.2** | **1.2** | **1.2** |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | | | |
| **C6 - C9 Fraction** | ---- | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| **C10 - C14 Fraction** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **C15 - C28 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| **C29 - C36 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ **C10 - C36 Fraction (sum)** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | | |
| **C6 - C10 Fraction** | C6_C10 | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| ^ **C6 - C10 Fraction minus BTEX (F1)** | C6_C10-BTEX | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| **>C10 - C16 Fraction** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **>C16 - C34 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| **>C34 - C40 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ **>C10 - C40 Fraction (sum)** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| ^ **>C10 - C16 Fraction minus Naphthalene (F2)** | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080: BTEXN** | | | | | | | | | |
| **Benzene** | 71-43-2 | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP01 - 0.50m | TP01 - 1.00m | TP01 - 2.00m | TP29 - 0.25m | TP29 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-086 | EB2432677-087 | EB2432677-088 | EB2432677-089 | EB2432677-090 |
| | | | | Result | Result | Result | Result | Result |
| **EP080: BTEXN - Continued** | | | | | | | | |
| **Toluene** | 108-88-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Ethylbenzene** | 100-41-4 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **meta- & para-Xylene** | 108-38-3 106-42-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **ortho-Xylene** | 95-47-6 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ **Sum of BTEX** | ---- | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| ^ **Total Xylenes** | ---- | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Naphthalene** | 91-20-3 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| **EP066S: PCB Surrogate** | | | | | | | | |
| **Decachlorobiphenyl** | 2051-24-3 | 0.1 | % | **99.2** | **92.4** | **90.9** | **93.6** | **93.7** |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | |
| **Dibromo-DDE** | 21655-73-2 | 0.05 | % | **111** | **113** | **112** | **115** | **123** |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | |
| **DEF** | 78-48-8 | 0.05 | % | **90.6** | **90.8** | **91.0** | **97.9** | **100** |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | |
| **Phenol-d6** | 13127-88-3 | 0.5 | % | **101** | **98.1** | **90.9** | **96.6** | **105** |
| **2-Chlorophenol-D4** | 93951-73-6 | 0.5 | % | **90.4** | **88.9** | **82.4** | **88.0** | **92.6** |
| **2.4.6-Tribromophenol** | 118-79-6 | 0.5 | % | **104** | **96.3** | **93.2** | **99.5** | **101** |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | |
| **2-Fluorobiphenyl** | 321-60-8 | 0.5 | % | **110** | **103** | **86.3** | **105** | **98.8** |
| **Anthracene-d10** | 1719-06-8 | 0.5 | % | **99.0** | **95.1** | **96.0** | **97.4** | **98.3** |
| **4-Terphenyl-d14** | 1718-51-0 | 0.5 | % | **98.7** | **95.2** | **93.5** | **98.2** | **98.3** |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | |
| **1.2-Dichloroethane-D4** | 17060-07-0 | 0.2 | % | **82.5** | **87.2** | **80.1** | **83.3** | **89.4** |
| **Toluene-D8** | 2037-26-5 | 0.2 | % | **86.9** | **87.4** | **83.4** | **87.4** | **89.6** |
| **4-Bromofluorobenzene** | 460-00-4 | 0.2 | % | **107** | **102** | **101** | **106** | **108** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP29 - 1.50m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-091 | EB2432677-092 | EB2432677-093 | EB2432677-094 | EB2432677-095 |
| | | | | Result | Result | Result | Result | Result |
| **EA001: pH in soil using 0.01M CaCl extract** | | | | | | | | |
| pH (CaCl2) | ---- | 0.1 | pH Unit | 8.1 | 7.6 | 4.4 | 5.0 | 7.4 |
| **EA002: pH 1:5 (Soils)** | | | | | | | | |
| pH Value | ---- | 0.1 | pH Unit | 8.9 | 8.2 | 6.0 | 6.3 | 8.5 |
| **EA010: Conductivity (1:5)** | | | | | | | | |
| Electrical Conductivity @ 25°C | ---- | 1 | µS/cm | 1430 | 910 | 26 | 63 | 619 |
| **EA051 : Bulk Density** | | | | | | | | |
| ø Bulk Density | BULK_DENSITY | 1 | kg/m3 | 1160 | 1380 | 1170 | 1130 | 1150 |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | 23.6 | 21.5 | 14.8 | 18.5 | 16.3 |
| **EA058: Emerson Aggregate Test** | | | | | | | | |
| Color (Munsell) | ---- | - | - | Light Brownish Gray (10YR 6/2) | Light Gray (10YR 7/2) | Brown (10YR 5/3) | Brown (10YR 5/3) | Light Yellowish Brown (2.5Y 6/3) |
| Texture | ---- | - | - | Medium Heavy Clay | Medium Heavy Clay | Medium Clay | Medium Clay | Medium Heavy Clay |
| Emerson Class Number | EC/TC | - | - | 3 | 2 | 7 | 7 | 2 |
| **EA150: Particle Sizing** | | | | | | | | |
| +75µm | ---- | 1 | % | 14 | 10 | 9 | 6 | 8 |
| +150µm | ---- | 1 | % | 9 | 5 | 4 | 3 | 4 |
| +300µm | ---- | 1 | % | 8 | 3 | 2 | 2 | 2 |
| +425µm | ---- | 1 | % | 7 | 2 | 2 | 2 | 2 |
| +600µm | ---- | 1 | % | 6 | 2 | 2 | 2 | 2 |
| +1180µm | ---- | 1 | % | 5 | 1 | 1 | 1 | 1 |
| +2.36mm | ---- | 1 | % | 2 | <1 | <1 | <1 | <1 |
| +4.75mm | ---- | 1 | % | 2 | <1 | <1 | <1 | <1 |
| +9.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +19.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +37.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +75.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| **EA150: Soil Classification based on Particle Size** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP29 - 1.50m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 1.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-091 | EB2432677-092 | EB2432677-093 | EB2432677-094 | EB2432677-095 |
| | | | | | Result | Result | Result | Result | Result |
| **EA150: Soil Classification based on Particle Size - Continued** | | | | | | | | | |
| Fines (<75 µm) | ---- | 1 | % | | 86 | 90 | 91 | 94 | 92 |
| Sand (>75 µm) | ---- | 1 | % | | 11 | 9 | 9 | 6 | 7 |
| Gravel (>2mm) | ---- | 1 | % | | 3 | 1 | <1 | <1 | 1 |
| Cobbles (>6cm) | ---- | 1 | % | | <1 | <1 | <1 | <1 | <1 |
| **ED005: Exchange Acidity** | | | | | | | | | |
| ø Exchange Acidity | ---- | 0.1 | meq/100g | | ---- | ---- | 0.6 | ---- | ---- |
| ø Exchangeable Aluminium | ---- | 0.1 | meq/100g | | ---- | ---- | 0.4 | ---- | ---- |
| **ED006: Exchangeable Cations on Alkaline Soils** | | | | | | | | | |
| ø Exchangeable Calcium | ---- | 0.2 | meq/100g | | 6.9 | 4.2 | ---- | ---- | 2.8 |
| ø Exchangeable Magnesium | ---- | 0.2 | meq/100g | | 6.9 | 4.7 | ---- | ---- | 4.3 |
| ø Exchangeable Potassium | ---- | 0.2 | meq/100g | | <0.2 | <0.2 | ---- | ---- | <0.2 |
| ø Exchangeable Sodium | ---- | 0.2 | meq/100g | | 4.4 | 3.2 | ---- | ---- | 2.9 |
| ø Cation Exchange Capacity | ---- | 0.2 | meq/100g | | 18.4 | 12.3 | ---- | ---- | 10.0 |
| ø Exchangeable Sodium Percent | ---- | 0.2 | % | | 24.2 | 26.2 | ---- | ---- | 28.9 |
| ø Calcium/Magnesium Ratio | ---- | 0.2 | - | | 1.0 | 0.9 | ---- | ---- | 0.7 |
| **ED007: Exchangeable Cations** | | | | | | | | | |
| Exchangeable Calcium | ---- | 0.1 | meq/100g | | ---- | ---- | 5.6 | 7.1 | ---- |
| Exchangeable Magnesium | ---- | 0.1 | meq/100g | | ---- | ---- | 6.3 | 9.2 | ---- |
| Exchangeable Potassium | ---- | 0.1 | meq/100g | | ---- | ---- | 0.2 | 0.3 | ---- |
| Exchangeable Sodium | ---- | 0.1 | meq/100g | | ---- | ---- | 1.3 | 2.1 | ---- |
| Cation Exchange Capacity | ---- | 0.1 | meq/100g | | ---- | ---- | 14.0 | ---- | ---- |
| Cation Exchange Capacity | ---- | 0.1 | meq/100g | | ---- | ---- | ---- | 18.8 | ---- |
| Exchangeable Sodium Percent | ---- | 0.1 | % | | ---- | ---- | 9.8 | 11.3 | ---- |
| Calcium/Magnesium Ratio | ---- | 0.1 | - | | ---- | ---- | 0.9 | 0.8 | ---- |
| Magnesium/Potassium Ratio | ---- | 0.1 | - | | ---- | ---- | 27.0 | 30.7 | ---- |
| **ED021: Bicarbonate Extractable Potassium (Colwell)** | | | | | | | | | |
| Bicarbonate Extractable K (Colwell) | ---- | 100 | mg/kg | | 318 | 185 | 216 | 322 | 360 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP29 - 1.50m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 1.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-091 | EB2432677-092 | EB2432677-093 | EB2432677-094 | EB2432677-095 |
| | | | | | Result | Result | Result | Result | Result |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | | |
| Chloride | 16887-00-6 | 10 | mg/kg | | 2440 | 1660 | 30 | 60 | 900 |
| **ED092: DTPA Extractable Metals** | | | | | | | | | |
| ø Copper | 7440-50-8 | 1 | mg/kg | | <1 | <1 | 2 | 1 | <1 |
| ø Iron | 7439-89-6 | 1 | mg/kg | | 14 | 10 | 102 | 45 | 11 |
| ø Manganese | 7439-96-5 | 1 | mg/kg | | 4 | 3 | 8 | 8 | 4 |
| ø Zinc | 7440-66-6 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Barium | 7440-39-3 | 10 | mg/kg | | 50 | 230 | 30 | 40 | 160 |
| Beryllium | 7440-41-7 | 1 | mg/kg | | <1 | <1 | <1 | 1 | <1 |
| Boron | 7440-42-8 | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| Cadmium | 7440-43-9 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| Chromium | 7440-47-3 | 2 | mg/kg | | 16 | 14 | 11 | 13 | 15 |
| Cobalt | 7440-48-4 | 2 | mg/kg | | 10 | 9 | 2 | 5 | 16 |
| Copper | 7440-50-8 | 5 | mg/kg | | 18 | 16 | 12 | 15 | 19 |
| Lead | 7439-92-1 | 5 | mg/kg | | 11 | 11 | 12 | 12 | 16 |
| Manganese | 7439-96-5 | 5 | mg/kg | | 438 | 333 | 53 | 68 | 723 |
| Nickel | 7440-02-0 | 2 | mg/kg | | 12 | 9 | 4 | 6 | 14 |
| Selenium | 7782-49-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Vanadium | 7440-62-2 | 5 | mg/kg | | 63 | 53 | 54 | 56 | 58 |
| Zinc | 7440-66-6 | 5 | mg/kg | | 26 | 26 | 12 | 13 | 25 |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | | |
| Mercury | 7439-97-6 | 0.1 | mg/kg | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EG048: Hexavalent Chromium (Alkaline Digest)** | | | | | | | | | |
| Hexavalent Chromium | 18540-29-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser** | | | | | | | | | |
| Weak Acid Dissociable Cyanide | ---- | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP29 - 1.50m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-091 | EB2432677-092 | EB2432677-093 | EB2432677-094 | EB2432677-095 |
| | | | | Result | Result | Result | Result | Result |
| **EK055-P: Ammonia as N** | | | | | | | | |
| Ammonia as N | 7664-41-7 | 20 | mg/kg | <20 | <20 | <20 | <20 | <20 |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | |
| Nitrite as N (Sol.) | 14797-65-0 | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | |
| Nitrate as N (Sol.) | 14797-55-8 | 0.1 | mg/kg | <0.1 | <0.1 | **0.1** | <0.1 | **0.9** |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | |
| Nitrite + Nitrate as N (Sol.) | ---- | 0.1 | mg/kg | <0.1 | <0.1 | **0.1** | <0.1 | **0.9** |
| **EK061G: Total Kjeldahl Nitrogen By Discrete Analyser** | | | | | | | | |
| Total Kjeldahl Nitrogen as N | ---- | 20 | mg/kg | **110** | **290** | **780** | **810** | **220** |
| **EK062: Total Nitrogen as N (TKN + NOx)** | | | | | | | | |
| ^ Total Nitrogen as N | ---- | 20 | mg/kg | **110** | **290** | **780** | **810** | **220** |
| **EK067G: Total Phosphorus as P by Discrete Analyser** | | | | | | | | |
| Total Phosphorus as P | ---- | 2 | mg/kg | **121** | **150** | **185** | **180** | **173** |
| **EK080: Bicarbonate Extractable Phosphorus (Colwell)** | | | | | | | | |
| Bicarbonate Ext. P (Colwell) | ---- | 5 | mg/kg | <5 | **5** | <5 | <5 | <5 |
| **EP004: Organic Matter** | | | | | | | | |
| Organic Matter | ---- | 0.5 | % | **0.5** | <0.5 | **2.0** | **1.8** | **0.8** |
| Total Organic Carbon | ---- | 0.5 | % | <0.5 | <0.5 | **1.2** | **1.0** | <0.5 |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | |
| Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | |
| alpha-BHC | 319-84-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Heptachlor | 76-44-8 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | 309-00-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP29 - 1.50m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-091 | EB2432677-092 | EB2432677-093 | EB2432677-094 | EB2432677-095 |
| | | | | Result | Result | Result | Result | Result |
| **EP068A: Organochlorine Pesticides (OC) - Continued** | | | | | | | | |
| **Heptachlor epoxide** | 1024-57-3 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **alpha-Endosulfan** | 959-98-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dieldrin** | 60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin** | 72-20-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| ^ **Endosulfan (sum)** | 115-29-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin aldehyde** | 7421-93-4 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **4.4`-DDT** | 50-29-3 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| **Methoxychlor** | 72-43-5 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Mirex** | 2385-85-5 | 0.20 | mg/kg | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| ^ **Sum of Aldrin + Dieldrin** | 309-00-2/60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068B: Organophosphorus Pesticides (OP)** | | | | | | | | |
| **Dichlorvos** | 62-73-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dimethoate** | 60-51-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Diazinon** | 333-41-5 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Parathion-methyl** | 298-00-0 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Malathion** | 121-75-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP29 - 1.50m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-091 | EB2432677-092 | EB2432677-093 | EB2432677-094 | EB2432677-095 |
| | | | | 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 | <0.05 |
| Chlorpyrifos | 2921-88-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Parathion | 56-38-2 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| Chlorfenvinphos | 470-90-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Fenamiphos | 22224-92-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Prothiofos | 34643-46-4 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Ethion | 563-12-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Carbophenothion | 786-19-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068C: Triazines** | | | | | | | | |
| Atrazine | 1912-24-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP068D: Pyrethroids** | | | | | | | | |
| Bifenthrin | 82657-04-3 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP075(SIM)A: Phenolic Compounds** | | | | | | | | |
| Phenol | 108-95-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Chlorophenol | 95-57-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Methylphenol | 95-48-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 3- & 4-Methylphenol | 1319-77-3 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| 2-Nitrophenol | 88-75-5 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dimethylphenol | 105-67-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4-Dichlorophenol | 120-83-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.6-Dichlorophenol | 87-65-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chloro-3-methylphenol | 59-50-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.6-Trichlorophenol | 88-06-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2.4.5-Trichlorophenol | 95-95-4 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP29 - 1.50m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 1.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-091 | EB2432677-092 | EB2432677-093 | EB2432677-094 | EB2432677-095 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)A: Phenolic Compounds - Continued** | | | | | | | | | |
| Pentachlorophenol | 87-86-5 | 2 | mg/kg | | <2 | <2 | <2 | <2 | <2 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | | | |
| Naphthalene | 91-20-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthylene | 208-96-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthene | 83-32-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluorene | 86-73-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Phenanthrene | 85-01-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Anthracene | 120-12-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluoranthene | 206-44-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Pyrene | 129-00-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benz(a)anthracene | 56-55-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chrysene | 218-01-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(b+j)fluoranthene | 205-99-2 205-82-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(k)fluoranthene | 207-08-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene | 50-32-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Indeno(1.2.3.cd)pyrene | 193-39-5 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibenz(a.h)anthracene | 53-70-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(g.h.i)perylene | 191-24-2 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Sum of polycyclic aromatic hydrocarbons | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (zero) | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (half LOR) | ---- | 0.5 | mg/kg | | **0.6** | **0.6** | **0.6** | **0.6** | **0.6** |
| ^ Benzo(a)pyrene TEQ (LOR) | ---- | 0.5 | mg/kg | | **1.2** | **1.2** | **1.2** | **1.2** | **1.2** |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | | | |
| C6 - C9 Fraction | ---- | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| C10 - C14 Fraction | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| C15 - C28 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| C29 - C36 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP29 - 1.50m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 1.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-091 | EB2432677-092 | EB2432677-093 | EB2432677-094 | EB2432677-095 |
| | | | | | Result | Result | Result | Result | Result |
| **EP080/071: Total Petroleum Hydrocarbons - Continued** | | | | | | | | | |
| ^ C10 - C36 Fraction (sum) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | | |
| C6 - C10 Fraction | C6_C10 | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| ^ C6 - C10 Fraction minus BTEX (F1) | C6_C10-BTEX | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| >C10 - C16 Fraction | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| >C16 - C34 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| >C34 - C40 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ >C10 - C40 Fraction (sum) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| ^ >C10 - C16 Fraction minus Naphthalene (F2) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080: BTEXN** | | | | | | | | | |
| Benzene | 71-43-2 | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | 108-88-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | 100-41-4 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| meta- & para-Xylene | 108-38-3 106-42-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ortho-Xylene | 95-47-6 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Sum of BTEX | ---- | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| ^ Total Xylenes | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | 91-20-3 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EP066S: PCB Surrogate** | | | | | | | | | |
| Decachlorobiphenyl | 2051-24-3 | 0.1 | % | | **83.2** | **90.5** | **93.6** | **94.2** | **94.8** |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | | |
| Dibromo-DDE | 21655-73-2 | 0.05 | % | | **113** | **109** | **107** | **110** | **115** |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | | |
| DEF | 78-48-8 | 0.05 | % | | **87.5** | **86.1** | **87.0** | **92.2** | **98.2** |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | | |
| Phenol-d6 | 13127-88-3 | 0.5 | % | | **92.4** | **94.6** | **92.9** | **98.2** | **96.4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP29 - 1.50m | TP29 - 3.00m | TP16 - 0.25m | TP16 - 0.50m | TP16 - 1.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-091 | EB2432677-092 | EB2432677-093 | EB2432677-094 | EB2432677-095 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)S: Phenolic Compound Surrogates - Continued** | | | | | | | | | |
| 2-Chlorophenol-D4 | 93951-73-6 | 0.5 | % | | 80.9 | 87.5 | 84.4 | 90.9 | 86.2 |
| 2.4.6-Tribromophenol | 118-79-6 | 0.5 | % | | 84.8 | 90.8 | 94.9 | 97.3 | 93.4 |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | | |
| 2-Fluorobiphenyl | 321-60-8 | 0.5 | % | | 91.2 | 87.4 | 92.7 | 93.0 | 94.9 |
| Anthracene-d10 | 1719-06-8 | 0.5 | % | | 85.4 | 93.5 | 93.6 | 96.0 | 97.7 |
| 4-Terphenyl-d14 | 1718-51-0 | 0.5 | % | | 84.7 | 91.5 | 89.2 | 91.3 | 92.3 |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | | |
| 1.2-Dichloroethane-D4 | 17060-07-0 | 0.2 | % | | 98.5 | 87.0 | 82.3 | 83.2 | 91.2 |
| Toluene-D8 | 2037-26-5 | 0.2 | % | | 95.0 | 87.0 | 84.7 | 85.6 | 93.5 |
| 4-Bromofluorobenzene | 460-00-4 | 0.2 | % | | 110 | 101 | 101 | 99.4 | 109 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP16 - 2.75m | TP04 - 0.25m | TP04 - 0.50m | TP04 - 1.25m | TP04 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-096 | EB2432677-097 | EB2432677-098 | EB2432677-099 | EB2432677-100 |
| | | | | Result | Result | Result | Result | Result |
| **EA001: pH in soil using 0.01M CaCl extract** | | | | | | | | |
| pH (CaCl2) | ---- | 0.1 | pH Unit | 7.2 | 4.2 | 5.1 | 7.7 | 7.9 |
| **EA002: pH 1:5 (Soils)** | | | | | | | | |
| pH Value | ---- | 0.1 | pH Unit | 8.3 | 6.2 | 6.6 | 8.8 | 9.4 |
| **EA010: Conductivity (1:5)** | | | | | | | | |
| Electrical Conductivity @ 25°C | ---- | 1 | µS/cm | 804 | 7 | 26 | 277 | 1050 |
| **EA051 : Bulk Density** | | | | | | | | |
| ø Bulk Density | BULK_DENSITY | 1 | kg/m3 | 1480 | 1110 | 1160 | 1220 | 1220 |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | 26.6 | 11.2 | 16.0 | 11.2 | 17.0 |
| **EA058: Emerson Aggregate Test** | | | | | | | | |
| Color (Munsell) | ---- | - | - | Pale Brown (10YR 6/3) | Brown (10YR 5/3) | Pale Brown (2.5Y 7/4) | Light Gray (2.5Y 7/2) | Light Gray (10YR 7/1) |
| Texture | ---- | - | - | Clayey Sand | Light Clay | Medium Heavy Clay | Sandy Clay Loam | Medium Clay |
| Emerson Class Number | EC/TC | - | - | 2 | 3 | 3 | 2 | 2 |
| **EA150: Particle Sizing** | | | | | | | | |
| +75µm | ---- | 1 | % | 70 | 29 | 24 | 39 | 19 |
| +150µm | ---- | 1 | % | 60 | 18 | 18 | 28 | 13 |
| +300µm | ---- | 1 | % | 46 | 10 | 10 | 19 | 8 |
| +425µm | ---- | 1 | % | 34 | 8 | 8 | 16 | 6 |
| +600µm | ---- | 1 | % | 20 | 7 | 7 | 13 | 5 |
| +1180µm | ---- | 1 | % | 6 | 5 | 5 | 8 | 3 |
| +2.36mm | ---- | 1 | % | <1 | 4 | 2 | 4 | <1 |
| +4.75mm | ---- | 1 | % | <1 | 3 | <1 | <1 | <1 |
| +9.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +19.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +37.5mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| +75.0mm | ---- | 1 | % | <1 | <1 | <1 | <1 | <1 |
| **EA150: Soil Classification based on Particle Size** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP16 - 2.75m | TP04 - 0.25m | TP04 - 0.50m | TP04 - 1.25m | TP04 - 2.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-096 | EB2432677-097 | EB2432677-098 | EB2432677-099 | EB2432677-100 |
| | | | | | Result | Result | Result | Result | Result |
| **EA150: Soil Classification based on Particle Size - Continued** | | | | | | | | | |
| Fines (<75 µm) | ---- | 1 | % | | 30 | 71 | 76 | 61 | 81 |
| Sand (>75 µm) | ---- | 1 | % | | 68 | 25 | 21 | 34 | 17 |
| Gravel (>2mm) | ---- | 1 | % | | 2 | 4 | 3 | 5 | 2 |
| Cobbles (>6cm) | ---- | 1 | % | | <1 | <1 | <1 | <1 | <1 |
| **ED006: Exchangeable Cations on Alkaline Soils** | | | | | | | | | |
| ø Exchangeable Calcium | ---- | 0.2 | meq/100g | | 1.2 | ---- | ---- | 1.8 | 3.1 |
| ø Exchangeable Magnesium | ---- | 0.2 | meq/100g | | 2.0 | ---- | ---- | 2.4 | 4.9 |
| ø Exchangeable Potassium | ---- | 0.2 | meq/100g | | <0.2 | ---- | ---- | <0.2 | 0.2 |
| ø Exchangeable Sodium | ---- | 0.2 | meq/100g | | 1.6 | ---- | ---- | 2.2 | 4.2 |
| ø Cation Exchange Capacity | ---- | 0.2 | meq/100g | | 4.8 | ---- | ---- | 6.5 | 12.4 |
| ø Exchangeable Sodium Percent | ---- | 0.2 | % | | 34.3 | ---- | ---- | 34.4 | 33.8 |
| ø Calcium/Magnesium Ratio | ---- | 0.2 | - | | 0.6 | ---- | ---- | 0.8 | 0.6 |
| ø Magnesium/Potassium Ratio | ---- | 0.2 | - | | ---- | ---- | ---- | ---- | 24.1 |
| **ED007: Exchangeable Cations** | | | | | | | | | |
| Exchangeable Calcium | ---- | 0.1 | meq/100g | | ---- | 3.4 | 6.7 | ---- | ---- |
| Exchangeable Magnesium | ---- | 0.1 | meq/100g | | ---- | 3.0 | 6.1 | ---- | ---- |
| Exchangeable Potassium | ---- | 0.1 | meq/100g | | ---- | 0.3 | 0.2 | ---- | ---- |
| Exchangeable Sodium | ---- | 0.1 | meq/100g | | ---- | 0.9 | 2.0 | ---- | ---- |
| Cation Exchange Capacity | ---- | 0.1 | meq/100g | | ---- | 7.8 | 15.1 | ---- | ---- |
| Exchangeable Sodium Percent | ---- | 0.1 | % | | ---- | 12.1 | 13.6 | ---- | ---- |
| Calcium/Magnesium Ratio | ---- | 0.1 | - | | ---- | 1.1 | 1.1 | ---- | ---- |
| Magnesium/Potassium Ratio | ---- | 0.1 | - | | ---- | 9.2 | 27.1 | ---- | ---- |
| **ED021: Bicarbonate Extractable Potassium (Colwell)** | | | | | | | | | |
| Bicarbonate Extractable K (Colwell) | ---- | 100 | mg/kg | | 374 | 339 | 267 | 318 | 383 |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | | |
| Chloride | 16887-00-6 | 10 | mg/kg | | 1580 | <10 | <10 | 250 | 1550 |
| **ED092: DTPA Extractable Metals** | | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP16 - 2.75m | TP04 - 0.25m | TP04 - 0.50m | TP04 - 1.25m | TP04 - 2.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-096 | EB2432677-097 | EB2432677-098 | EB2432677-099 | EB2432677-100 |
| | | | | | Result | Result | Result | Result | Result |
| **ED092: DTPA Extractable Metals - Continued** | | | | | | | | | |
| ø Copper | 7440-50-8 | 1 | mg/kg | | <1 | 2 | <1 | <1 | <1 |
| ø Iron | 7439-89-6 | 1 | mg/kg | | 17 | 75 | 32 | 7 | 11 |
| ø Manganese | 7439-96-5 | 1 | mg/kg | | 2 | 14 | 7 | 3 | 7 |
| ø Zinc | 7440-66-6 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Barium | 7440-39-3 | 10 | mg/kg | | 20 | 50 | 120 | 40 | 80 |
| Beryllium | 7440-41-7 | 1 | mg/kg | | <1 | <1 | 1 | <1 | <1 |
| Boron | 7440-42-8 | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| Cadmium | 7440-43-9 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| Chromium | 7440-47-3 | 2 | mg/kg | | 11 | 10 | 11 | 12 | 11 |
| Cobalt | 7440-48-4 | 2 | mg/kg | | 10 | 4 | 3 | 6 | 12 |
| Copper | 7440-50-8 | 5 | mg/kg | | 9 | 9 | 10 | 14 | 13 |
| Lead | 7439-92-1 | 5 | mg/kg | | 14 | 11 | 10 | 11 | 10 |
| Manganese | 7439-96-5 | 5 | mg/kg | | 387 | 142 | 59 | 217 | 558 |
| Nickel | 7440-02-0 | 2 | mg/kg | | 10 | 2 | 4 | 7 | 9 |
| Selenium | 7782-49-2 | 5 | mg/kg | | <5 | <5 | <5 | <5 | <5 |
| Vanadium | 7440-62-2 | 5 | mg/kg | | 48 | 57 | 55 | 47 | 43 |
| Zinc | 7440-66-6 | 5 | mg/kg | | 21 | 7 | 9 | 16 | 20 |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | | |
| Mercury | 7439-97-6 | 0.1 | mg/kg | | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EG048: Hexavalent Chromium (Alkaline Digest)** | | | | | | | | | |
| Hexavalent Chromium | 18540-29-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser** | | | | | | | | | |
| Weak Acid Dissociable Cyanide | ---- | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EK055-P: Ammonia as N** | | | | | | | | | |
| Ammonia as N | 7664-41-7 | 20 | mg/kg | | <20 | <20 | <20 | <20 | <20 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP16 - 2.75m | TP04 - 0.25m | TP04 - 0.50m | TP04 - 1.25m | TP04 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-096 | EB2432677-097 | EB2432677-098 | EB2432677-099 | EB2432677-100 |
| | | | | Result | Result | Result | Result | Result |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | |
| Nitrite as N (Sol.) | 14797-65-0 | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | |
| Nitrate as N (Sol.) | 14797-55-8 | 0.1 | mg/kg | **1.3** | **0.2** | <0.1 | <0.1 | <0.1 |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | |
| Nitrite + Nitrate as N (Sol.) | ---- | 0.1 | mg/kg | **1.3** | **0.2** | <0.1 | <0.1 | <0.1 |
| **EK061G: Total Kjeldahl Nitrogen By Discrete Analyser** | | | | | | | | |
| Total Kjeldahl Nitrogen as N | ---- | 20 | mg/kg | <20 | **650** | **420** | **100** | **50** |
| **EK062: Total Nitrogen as N (TKN + NOx)** | | | | | | | | |
| ^ Total Nitrogen as N | ---- | 20 | mg/kg | <20 | **650** | **420** | **100** | **50** |
| **EK067G: Total Phosphorus as P by Discrete Analyser** | | | | | | | | |
| Total Phosphorus as P | ---- | 2 | mg/kg | **64** | **133** | **148** | **103** | **96** |
| **EK080: Bicarbonate Extractable Phosphorus (Colwell)** | | | | | | | | |
| Bicarbonate Ext. P (Colwell) | ---- | 5 | mg/kg | **10** | <5 | <5 | <5 | <5 |
| **EP004: Organic Matter** | | | | | | | | |
| Organic Matter | ---- | 0.5 | % | <0.5 | **1.7** | **1.3** | <0.5 | <0.5 |
| Total Organic Carbon | ---- | 0.5 | % | <0.5 | **1.0** | **0.8** | <0.5 | <0.5 |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | |
| Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | |
| alpha-BHC | 319-84-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| Heptachlor | 76-44-8 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | 309-00-2 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| trans-Chlordane | 5103-74-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP16 - 2.75m | TP04 - 0.25m | TP04 - 0.50m | TP04 - 1.25m | TP04 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-096 | EB2432677-097 | EB2432677-098 | EB2432677-099 | EB2432677-100 |
| | | | | Result | Result | Result | Result | Result |
| **EP068A: Organochlorine Pesticides (OC) - Continued** | | | | | | | | |
| **alpha-Endosulfan** | 959-98-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Dieldrin** | 60-57-1 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin** | 72-20-8 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| ^ **Endosulfan (sum)** | 115-29-7 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Endrin aldehyde** | 7421-93-4 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **4.4`-DDT** | 50-29-3 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| **Methoxychlor** | 72-43-5 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Mirex** | 2385-85-5 | 0.20 | mg/kg | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| ^ **Sum of Aldrin + Dieldrin** | 309-00-2/60-57-1 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <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 | <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 | <0.05 |
| **Demeton-S-methyl** | 919-86-8 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Dimethoate** | 60-51-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Diazinon** | 333-41-5 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Parathion-methyl** | 298-00-0 | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| **Malathion** | 121-75-5 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Fenthion** | 55-38-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Chlorpyrifos** | 2921-88-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP16 - 2.75m | TP04 - 0.25m | TP04 - 0.50m | TP04 - 1.25m | TP04 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432677-096 | EB2432677-097 | EB2432677-098 | EB2432677-099 | EB2432677-100 |
| | | | | Result | Result | Result | Result | Result |
| **EP068B: Organophosphorus Pesticides (OP) - Continued** | | | | | | | | |
| **Parathion** | 56-38-2 | 0.2 | mg/kg | <0.2 | <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 | <0.05 |
| **Chlorfenvinphos** | 470-90-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **Fenamiphos** | 22224-92-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Prothiofos** | 34643-46-4 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Ethion** | 563-12-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **Carbophenothion** | 786-19-6 | 0.05 | mg/kg | <0.05 | <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 | <0.05 |
| **EP068C: Triazines** | | | | | | | | |
| **Atrazine** | 1912-24-9 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP068D: Pyrethroids** | | | | | | | | |
| **Bifenthrin** | 82657-04-3 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| **EP075(SIM)A: Phenolic Compounds** | | | | | | | | |
| **Phenol** | 108-95-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2-Chlorophenol** | 95-57-8 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2-Methylphenol** | 95-48-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **3- & 4-Methylphenol** | 1319-77-3 | 1 | mg/kg | <1 | <1 | <1 | <1 | <1 |
| **2-Nitrophenol** | 88-75-5 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.4-Dimethylphenol** | 105-67-9 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.4-Dichlorophenol** | 120-83-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.6-Dichlorophenol** | 87-65-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **4-Chloro-3-methylphenol** | 59-50-7 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.4.6-Trichlorophenol** | 88-06-2 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **2.4.5-Trichlorophenol** | 95-95-4 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Pentachlorophenol** | 87-86-5 | 2 | mg/kg | <2 | <2 | <2 | <2 | <2 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP16 - 2.75m | TP04 - 0.25m | TP04 - 0.50m | TP04 - 1.25m | TP04 - 2.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-096 | EB2432677-097 | EB2432677-098 | EB2432677-099 | EB2432677-100 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued** | | | | | | | | | |
| Naphthalene | 91-20-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthylene | 208-96-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Acenaphthene | 83-32-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluorene | 86-73-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Phenanthrene | 85-01-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Anthracene | 120-12-7 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Fluoranthene | 206-44-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Pyrene | 129-00-0 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benz(a)anthracene | 56-55-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chrysene | 218-01-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(b+j)fluoranthene | 205-99-2 205-82-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(k)fluoranthene | 207-08-9 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene | 50-32-8 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Indeno(1.2.3.cd)pyrene | 193-39-5 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibenz(a.h)anthracene | 53-70-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(g.h.i)perylene | 191-24-2 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Sum of polycyclic aromatic hydrocarbons | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (zero) | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Benzo(a)pyrene TEQ (half LOR) | ---- | 0.5 | mg/kg | | **0.6** | **0.6** | **0.6** | **0.6** | **0.6** |
| ^ Benzo(a)pyrene TEQ (LOR) | ---- | 0.5 | mg/kg | | **1.2** | **1.2** | **1.2** | **1.2** | **1.2** |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | | | |
| C6 - C9 Fraction | ---- | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| C10 - C14 Fraction | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| C15 - C28 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| C29 - C36 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ C10 - C36 Fraction (sum) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | | |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP16 - 2.75m | TP04 - 0.25m | TP04 - 0.50m | TP04 - 1.25m | TP04 - 2.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-096 | EB2432677-097 | EB2432677-098 | EB2432677-099 | EB2432677-100 |
| | | | | | Result | Result | Result | Result | Result |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued** | | | | | | | | | |
| C6 - C10 Fraction | C6_C10 | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| ^ C6 - C10 Fraction minus BTEX (F1) | C6_C10-BTEX | 10 | mg/kg | | <10 | <10 | <10 | <10 | <10 |
| >C10 - C16 Fraction | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| >C16 - C34 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| >C34 - C40 Fraction | ---- | 100 | mg/kg | | <100 | <100 | <100 | <100 | <100 |
| ^ >C10 - C40 Fraction (sum) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| ^ >C10 - C16 Fraction minus Naphthalene (F2) | ---- | 50 | mg/kg | | <50 | <50 | <50 | <50 | <50 |
| **EP080: BTEXN** | | | | | | | | | |
| Benzene | 71-43-2 | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | 108-88-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | 100-41-4 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| meta- & para-Xylene | 108-38-3 106-42-3 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ortho-Xylene | 95-47-6 | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ^ Sum of BTEX | ---- | 0.2 | mg/kg | | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| ^ Total Xylenes | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | 91-20-3 | 1 | mg/kg | | <1 | <1 | <1 | <1 | <1 |
| **EP066S: PCB Surrogate** | | | | | | | | | |
| Decachlorobiphenyl | 2051-24-3 | 0.1 | % | | **90.1** | **90.1** | **93.4** | **83.9** | **94.4** |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | | |
| Dibromo-DDE | 21655-73-2 | 0.05 | % | | **108** | **108** | **106** | **109** | **110** |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | | |
| DEF | 78-48-8 | 0.05 | % | | **88.9** | **86.2** | **86.7** | **85.1** | **85.4** |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | | |
| Phenol-d6 | 13127-88-3 | 0.5 | % | | **94.7** | **94.4** | **96.7** | **90.2** | **91.4** |
| 2-Chlorophenol-D4 | 93951-73-6 | 0.5 | % | | **87.7** | **87.2** | **91.6** | **85.6** | **88.1** |
| 2.4.6-Tribromophenol | 118-79-6 | 0.5 | % | | **91.0** | **95.2** | **92.3** | **80.4** | **82.3** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP16 - 2.75m | TP04 - 0.25m | TP04 - 0.50m | TP04 - 1.25m | TP04 - 2.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432677-096 | EB2432677-097 | EB2432677-098 | EB2432677-099 | EB2432677-100 |
| | | | | | Result | Result | Result | Result | Result |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | | |
| **2-Fluorobiphenyl** | 321-60-8 | 0.5 | % | | **93.0** | **93.2** | **92.9** | **85.2** | **77.7** |
| **Anthracene-d10** | 1719-06-8 | 0.5 | % | | **94.3** | **92.6** | **95.8** | **92.0** | **93.2** |
| **4-Terphenyl-d14** | 1718-51-0 | 0.5 | % | | **88.1** | **90.0** | **90.5** | **83.5** | **87.0** |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | | |
| **1.2-Dichloroethane-D4** | 17060-07-0 | 0.2 | % | | **84.7** | **82.0** | **82.8** | **87.4** | **86.4** |
| **Toluene-D8** | 2037-26-5 | 0.2 | % | | **83.3** | **87.0** | **85.7** | **90.2** | **84.3** |
| **4-Bromofluorobenzene** | 460-00-4 | 0.2 | % | | **101** | **102** | **97.7** | **105** | **99.0** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | ALS CONTROL SPIKE | ---- | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | ---- | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | | EB2432677-101 | -------- | -------- | -------- | -------- |
| | | | | | Result | ---- | ---- | ---- | ---- |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | | | |
| **C6 - C9 Fraction** | ---- | 10 | mg/kg | | **22** | ---- | ---- | ---- | ---- |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | | |
| **C6 - C10 Fraction** | C6_C10 | 10 | mg/kg | | **29** | ---- | ---- | ---- | ---- |
| ^ **C6 - C10 Fraction minus BTEX (F1)** | C6_C10-BTEX | 10 | mg/kg | | **18** | ---- | ---- | ---- | ---- |
| **EP080: BTEXN** | | | | | | | | | |
| **Benzene** | 71-43-2 | 0.2 | mg/kg | | **0.2** | ---- | ---- | ---- | ---- |
| **Toluene** | 108-88-3 | 0.5 | mg/kg | | **4.4** | ---- | ---- | ---- | ---- |
| **Ethylbenzene** | 100-41-4 | 0.5 | mg/kg | | **1.0** | ---- | ---- | ---- | ---- |
| **meta- & para-Xylene** | 108-38-3 106-42-3 | 0.5 | mg/kg | | **4.3** | ---- | ---- | ---- | ---- |
| **ortho-Xylene** | 95-47-6 | 0.5 | mg/kg | | **1.5** | ---- | ---- | ---- | ---- |
| ^ **Sum of BTEX** | ---- | 0.2 | mg/kg | | **11.4** | ---- | ---- | ---- | ---- |
| ^ **Total Xylenes** | ---- | 0.5 | mg/kg | | **5.8** | ---- | ---- | ---- | ---- |
| **Naphthalene** | 91-20-3 | 1 | mg/kg | | <1 | ---- | ---- | ---- | ---- |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | | |
| **1.2-Dichloroethane-D4** | 17060-07-0 | 0.2 | % | | **112** | ---- | ---- | ---- | ---- |
| **Toluene-D8** | 2037-26-5 | 0.2 | % | | **112** | ---- | ---- | ---- | ---- |
| **4-Bromofluorobenzene** | 460-00-4 | 0.2 | % | | **112** | ---- | ---- | ---- | ---- |

## Surrogate Control Limits

| Sub-Matrix: SOIL | | Recovery Limits (%) | |
|---|---|---|---|
| Compound | CAS Number | Low | High |
| **EP066S: PCB Surrogate** | | | |
| Decachlorobiphenyl | 2051-24-3 | 16 | 134 |
| **EP068S: Organochlorine Pesticide Surrogate** | | | |
| Dibromo-DDE | 21655-73-2 | 10 | 138 |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | |
| DEF | 78-48-8 | 23 | 134 |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | |
| Phenol-d6 | 13127-88-3 | 35 | 154 |
| 2-Chlorophenol-D4 | 93951-73-6 | 42 | 153 |
| 2.4.6-Tribromophenol | 118-79-6 | 26 | 157 |
| **EP075(SIM)T: PAH Surrogates** | | | |
| 2-Fluorobiphenyl | 321-60-8 | 34 | 156 |
| Anthracene-d10 | 1719-06-8 | 37 | 153 |
| 4-Terphenyl-d14 | 1718-51-0 | 42 | 172 |
| **EP080S: TPH(V)/BTEX Surrogates** | | | |
| 1.2-Dichloroethane-D4 | 17060-07-0 | 53 | 134 |
| Toluene-D8 | 2037-26-5 | 60 | 131 |
| 4-Bromofluorobenzene | 460-00-4 | 59 | 127 |

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **EB2434308** | Page | : 1 of 25 |
| Client | : **C & R CONSULTING PTY LTD** | Laboratory | : Environmental Division Brisbane |
| Contact | : MR MATT KNOTT | Contact | : Madison Forster |
| Address | : 188 ROSS RIVER ROAD<br>AITKENVALE QUEENSLAND 4812 | Address | : 2 Byth Street Stafford QLD Australia 4053 |
| Telephone | : +61 07 47253751 | Telephone | : +61-7-3552-8685 |
| Project | : Jet Zero 24069 | Date Samples Received | : 04-Oct-2024 13:58 |
| Order number | : ---- | Date Analysis Commenced | : 10-Oct-2024 |
| C-O-C number | : ---- | Issue Date | : 15-Oct-2024 15:38 |
| Sampler | : DEAN BUCHANAN | | |
| Site | : ---- | | |
| Quote number | : EB24CRCONS0004 | | |
| No. of samples received | : 112 | | |
| No. of samples analysed | : 112 | | |

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 |
| Layla Hafner | Acid Sulphate Soils - 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 Contract for details.

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

- ASS: EA033 (CRS Suite): Analysis is performed as per the Acid Sulfate Soils Laboratory Methods Guidelines (2004) and the updated National Acid Sulfate Soils Guidance: National acid sulfate soils identification and laboratory methods manual, Department of Agriculture and Water Resources, Canberra, ACT (2018)
- ASS: EA033 (CRS Suite):Retained Acidity not required because pH KCl greater than or equal to 4.5
- ASS: EA033 (CRS Suite): Laboratory determinations of ANC needs to be corroborated by effectiveness of the measured ANC in relation to incubation ANC. Unless corroborated, the results of ANC testing 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 | TP27 - 0.25m | TP27 - 1.50m | TP27 - 2.75m | TP30 - 0.25m | TP30 - 1.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-001 | EB2434308-002 | EB2434308-003 | EB2434308-004 | EB2434308-005 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **5.1** | **7.3** | **8.4** | **5.0** | **8.3** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | **19** | <2 | <2 | **18** | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | **0.03** | <0.02 | <0.02 | **0.03** | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.012** | **0.015** | **0.017** | **0.016** | **0.016** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | <10 | **11** | **10** | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **----** | **1.34** | **2.90** | **----** | **2.43** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **----** | **269** | **580** | **----** | **485** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **----** | **0.43** | **0.93** | **----** | **0.78** |
| **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 | **0.04** | <0.02 | <0.02 | **0.04** | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | **26** | <10 | <10 | **28** | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | **2** | <1 | <1 | **2** | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | **0.04** | <0.02 | <0.02 | **0.04** | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | **26** | <10 | **11** | **28** | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | **2** | <1 | <1 | **2** | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP30 - 3.00m | TP32 - 0.25m | TP32 - 1.25m | TP32 - 2.50m | TP33 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-006 | EB2434308-007 | EB2434308-008 | EB2434308-009 | EB2434308-010 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **8.4** | **4.8** | **7.8** | **8.3** | **5.2** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | <2 | **25** | <2 | <2 | **14** |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | <0.02 | **0.04** | <0.02 | <0.02 | **0.02** |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.020** | **0.016** | **0.013** | **0.015** | **0.016** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | **13** | **10** | <10 | <10 | **10** |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **3.09** | **----** | **1.92** | **3.81** | **----** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **617** | **----** | **384** | **760** | **----** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **0.99** | **----** | **0.62** | **1.22** | **----** |
| **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 | <0.02 | **0.06** | <0.02 | <0.02 | **0.04** |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | <10 | **35** | <10 | <10 | **24** |
| Liming Rate | ---- | 1 | kg CaCO3/t | <1 | **3** | <1 | <1 | **2** |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | **0.02** | **0.06** | <0.02 | <0.02 | **0.04** |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | **13** | **35** | <10 | <10 | **24** |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | <1 | **3** | <1 | <1 | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP33 - 1.25m | TP33 - 2.50m | TP35 - 0.25m | TP35 - 1.25m | TP35 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-011 | EB2434308-012 | EB2434308-013 | EB2434308-014 | EB2434308-015 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **8.7** | **6.1** | **6.3** | **8.6** | **7.0** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | <2 | **2** | <2 | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.014** | **0.016** | **0.020** | **0.012** | **0.016** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | **10** | **12** | <10 | **10** |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **10.1** | **----** | **----** | **2.75** | **1.32** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **2020** | **----** | **----** | **549** | **264** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **3.23** | **----** | **----** | **0.88** | **0.42** |
| **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 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | <10 | **12** | **12** | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | <1 | <1 | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | <10 | **12** | **12** | <10 | **10** |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | <1 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP34 - 0.25m | TP34 - 1.00m | TP34 - 2.50m | TP36 - 0.75m | TP36 - 1.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-016 | EB2434308-017 | EB2434308-018 | EB2434308-019 | EB2434308-020 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | 4.9 | 8.3 | 6.8 | 8.6 | 7.2 |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | 21 | <2 | <2 | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | 0.03 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | 0.014 | 0.020 | 0.020 | 0.017 | 0.016 |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | <10 | 13 | 12 | 11 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | ---- | 4.02 | 1.01 | 14.9 | 0.89 |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | ---- | 803 | 202 | 2970 | 178 |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | ---- | 1.29 | 0.32 | 4.76 | 0.29 |
| **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 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | 29 | <10 | <10 | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | | 2 | <1 | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | 0.05 | 0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | 29 | 13 | 12 | 11 | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | 2 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP36 - 2.00m | TP36 - 3.00m | TP02 - 0.50m | TP02 - 1.25m | TP02 - 1.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-021 | EB2434308-022 | EB2434308-023 | EB2434308-024 | EB2434308-025 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **8.3** | **8.5** | **8.3** | **9.0** | **7.0** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | <2 | <2 | <2 | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.016** | **0.014** | **0.018** | **0.013** | **0.014** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | **10** | <10 | **11** | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **1.96** | **2.62** | **1.94** | **2.28** | **2.05** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **392** | **523** | **387** | **456** | **409** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **0.63** | **0.84** | **0.62** | **0.73** | **0.66** |
| **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 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | <1 | <1 | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | **10** | <10 | **11** | <10 | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | <1 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP02 - 3.00m | TP06 - 0.25m | TP06 - 1.25m | TP06 - 3.00m | TP10 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-026 | EB2434308-027 | EB2434308-028 | EB2434308-029 | EB2434308-030 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **8.4** | **5.0** | **8.5** | **7.1** | **6.4** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | <2 | **12** | <2 | <2 | **3** |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.012** | **0.016** | **0.014** | **0.014** | **0.014** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | **10** | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **2.37** | **----** | **11.4** | **1.26** | **----** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **473** | **----** | **2290** | **251** | **----** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **0.76** | **----** | **3.67** | **0.40** | **----** |
| **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 | <0.02 | **0.04** | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | <10 | **22** | <10 | <10 | **12** |
| Liming Rate | ---- | 1 | kg CaCO3/t | <1 | **2** | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | <0.02 | **0.04** | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | <10 | **22** | <10 | <10 | **12** |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | <1 | **2** | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP10 - 2.00m | TP10 - 2.75m | TP14 - 0.25m | TP14 - 1.25m | TP14 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-031 | EB2434308-032 | EB2434308-033 | EB2434308-034 | EB2434308-035 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **7.4** | **6.7** | **5.2** | **8.4** | **8.6** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | <2 | <2 | **11** | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.013** | **0.009** | **0.013** | **0.012** | **0.010** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **0.87** | **0.91** | **----** | **4.22** | **3.04** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **173** | **181** | **----** | **843** | **607** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **0.28** | **0.29** | **----** | **1.35** | **0.97** |
| **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 | <0.02 | <0.02 | **0.03** | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | <10 | <10 | **19** | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | <1 | <1 | **1** | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | <0.02 | <0.02 | **0.03** | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | <10 | <10 | **19** | <10 | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | <1 | <1 | **1** | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP18 - 0.25m | TP18 - 1.25m | TP18 - 2.25m | TP21 - 0.25m | TP21 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-036 | EB2434308-037 | EB2434308-038 | EB2434308-039 | EB2434308-040 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **5.8** | **8.4** | **8.5** | **6.3** | **6.8** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | **6** | <2 | <2 | **5** | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.015** | **0.014** | **0.014** | **0.014** | **0.011** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **----** | **7.12** | **3.07** | **----** | **1.92** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **----** | **1420** | **614** | **----** | **384** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **----** | **2.28** | **0.98** | **----** | **0.61** |
| **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 | **0.02** | <0.02 | <0.02 | **0.02** | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | **16** | <10 | <10 | **14** | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | **1** | <1 | <1 | **1** | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | **0.02** | <0.02 | <0.02 | **0.02** | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | **16** | <10 | <10 | **14** | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | **1** | <1 | <1 | **1** | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP21 - 2.50m | TP24 - 0.25m | TP24 - 1.25m | TP24 - 2.25m | TP07 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-041 | EB2434308-042 | EB2434308-043 | EB2434308-044 | EB2434308-045 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | 6.6 | 4.9 | 8.5 | 8.0 | 5.0 |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | <2 | 15 | <2 | <2 | 19 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | <0.02 | 0.02 | <0.02 | <0.02 | 0.03 |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | 0.013 | 0.011 | 0.013 | 0.013 | 0.015 |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | 1.35 | ---- | 2.49 | 2.00 | ---- |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | 270 | ---- | 498 | 399 | ---- |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | 0.43 | ---- | 0.80 | 0.64 | ---- |
| **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 | | <0.02 | 0.04 | <0.02 | <0.02 | 0.04 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | <10 | 22 | <10 | <10 | 28 |
| Liming Rate | ---- | 1 | kg CaCO3/t | | <1 | 2 | <1 | <1 | 2 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | <0.02 | 0.04 | <0.02 | <0.02 | 0.04 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | <10 | 22 | <10 | <10 | 28 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | <1 | 2 | <1 | <1 | 2 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP07 - 0.75m | TP07 - 1.75m | TP07 - 2.75m | TP11 - 0.50m | TP11 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-046 | EB2434308-047 | EB2434308-048 | EB2434308-049 | EB2434308-050 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **6.3** | **8.7** | **8.5** | **7.3** | **8.6** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | <2 | <2 | <2 | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.013** | **0.013** | **0.015** | **0.014** | **0.010** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **----** | **13.2** | **3.51** | **2.11** | **10.9** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **----** | **2640** | **702** | **421** | **2170** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **----** | **4.23** | **1.12** | **0.67** | **3.49** |
| **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 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | <1 | <1 | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | <10 | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | <1 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP11 - 2.25m | TP15 - 0.25m | TP15 - 1.00m | TP15 - 1.50m | TP15 - 3.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-051 | EB2434308-052 | EB2434308-053 | EB2434308-054 | EB2434308-055 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **7.3** | **5.2** | **5.3** | **8.4** | **7.5** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | <2 | **11** | **9** | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.008** | **0.013** | **0.010** | **0.010** | **0.014** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **1.28** | **----** | **----** | **3.92** | **1.59** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **256** | **----** | **----** | **782** | **318** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **0.41** | **----** | **----** | **1.25** | **0.51** |
| **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 | <0.02 | **0.03** | **0.02** | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | <10 | **19** | **16** | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | <1 | **1** | **1** | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | <0.02 | **0.03** | **0.02** | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | <10 | **19** | **16** | <10 | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | <1 | **1** | **1** | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP19 - 0.25m | TP19 - 1.00m | TP19 - 3.00m | TP22 - 0.25m | TP22 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-056 | EB2434308-057 | EB2434308-058 | EB2434308-059 | EB2434308-060 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **4.7** | **5.6** | **5.6** | **4.9** | **6.6** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | **27** | **5** | **6** | **14** | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | **0.04** | <0.02 | <0.02 | **0.02** | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.011** | **0.011** | **0.011** | **0.010** | **0.009** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **----** | **----** | **----** | **----** | **1.27** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **----** | **----** | **----** | **----** | **254** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **----** | **----** | **----** | **----** | **0.41** |
| **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** | <0.02 | **0.02** | **0.03** | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | **34** | **12** | **14** | **21** | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | **2** | <1 | **1** | **2** | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | **0.05** | <0.02 | **0.02** | **0.03** | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | **34** | **12** | **14** | **21** | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | **2** | <1 | **1** | **2** | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP22 - 3.00m | TP25 - 0.25m | TP25 - 1.00m | TP25 - 2.50m | TP28 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-061 | EB2434308-062 | EB2434308-063 | EB2434308-064 | EB2434308-065 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | **8.6** | **4.6** | **8.3** | **8.5** | **5.7** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | <2 | **28** | <2 | <2 | **7** |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | <0.02 | **0.04** | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | **0.012** | **0.009** | **0.009** | **0.016** | **0.010** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | **10.6** | **----** | **2.18** | **3.78** | **----** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | **2130** | **----** | **435** | **756** | **----** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | **3.41** | **----** | **0.70** | **1.21** | **----** |
| **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 | | <0.02 | **0.05** | <0.02 | <0.02 | **0.02** |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | <10 | **33** | <10 | <10 | **13** |
| Liming Rate | ---- | 1 | kg CaCO3/t | | <1 | **2** | <1 | <1 | **1** |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | <0.02 | **0.05** | <0.02 | <0.02 | **0.02** |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | <10 | **33** | <10 | <10 | **13** |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | <1 | **2** | <1 | <1 | **1** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP28 - 1.25m | TP28 - 2.00m | TP31 - 0.25m | TP31 - 1.25m | TP31 - 2.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-066 | EB2434308-067 | EB2434308-068 | EB2434308-069 | EB2434308-070 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | 8.4 | 8.3 | 6.3 | 8.4 | 8.3 |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | <2 | <2 | 5 | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | 0.010 | 0.012 | 0.009 | 0.015 | 0.009 |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | 8.92 | 3.48 | ---- | 3.94 | 2.46 |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | 1780 | 694 | ---- | 787 | 491 |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | 2.86 | 1.11 | ---- | 1.26 | 0.79 |
| **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 | | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | <10 | <10 | 10 | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | | <1 | <1 | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | <10 | <10 | 10 | <10 | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | <1 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP03 - 0.75m | TP03 - 2.00m | TP03 - 3.00m | TP01 - 0.50m | TP01 - 1.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-071 | EB2434308-072 | EB2434308-073 | EB2434308-074 | EB2434308-075 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | **8.6** | **8.5** | **7.8** | **6.0** | **8.8** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | <2 | <2 | <2 | **6** | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | **0.014** | **0.009** | **0.011** | **0.010** | **0.014** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | **4.85** | **3.90** | **1.66** | **----** | **8.84** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | **970** | **779** | **331** | **----** | **1760** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | **1.56** | **1.25** | **0.53** | **----** | **2.83** |
| **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 | | <0.02 | <0.02 | <0.02 | **0.02** | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | **12** | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | | <1 | <1 | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | <0.02 | <0.02 | <0.02 | **0.02** | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | **12** | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | <1 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP01 - 2.50m | TP05 - 0.25m | TP05 - 1.25m | TP05 - 2.25m | TP09 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-076 | EB2434308-077 | EB2434308-078 | EB2434308-079 | EB2434308-080 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | **8.6** | **5.9** | **8.7** | **8.6** | **6.1** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | <2 | **11** | <2 | <2 | **5** |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | **0.013** | **0.011** | **0.008** | **0.010** | **0.010** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | **4.04** | **----** | **5.19** | **4.64** | **----** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | **806** | **----** | **1040** | **928** | **----** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | **1.29** | **----** | **1.66** | **1.49** | **----** |
| **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 | | <0.02 | **0.03** | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | <10 | **18** | <10 | <10 | **12** |
| Liming Rate | ---- | 1 | kg CaCO3/t | | <1 | **1** | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | <0.02 | **0.03** | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | <10 | **18** | <10 | <10 | **12** |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | <1 | **1** | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP09 - 1.25m | TP09 - 2.25m | TP13 - 0.25m | TP13 - 1.00m | TP13 - 2.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-081 | EB2434308-082 | EB2434308-083 | EB2434308-084 | EB2434308-085 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | **8.8** | **8.7** | **7.2** | **8.2** | **7.2** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | <2 | <2 | <2 | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | **0.013** | **0.008** | **0.012** | **0.012** | **0.011** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | **10.8** | **6.74** | **0.62** | **2.76** | **1.88** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | **2150** | **1350** | **123** | **551** | **375** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | **3.44** | **2.16** | **0.20** | **0.88** | **0.60** |
| **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 | | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | | <1 | <1 | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | <10 | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | <1 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP17 - 0.25m | TP17 - 1.50m | TP17 - 2.50m | TP20 - 0.25m | TP20 - 1.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-086 | EB2434308-087 | EB2434308-088 | EB2434308-089 | EB2434308-090 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **4.8** | **8.8** | **8.6** | **5.3** | **7.4** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | **18** | <2 | <2 | **10** | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | **0.03** | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.007** | **0.010** | **0.017** | **0.010** | **0.010** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | <10 | **10** | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **----** | **5.29** | **2.97** | **----** | **1.03** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **----** | **1060** | **594** | **----** | **206** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **----** | **1.70** | **0.95** | **----** | **0.33** |
| **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 | **0.04** | <0.02 | <0.02 | **0.03** | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | **23** | <10 | <10 | **17** | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | **2** | <1 | <1 | **1** | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | **0.04** | <0.02 | <0.02 | **0.03** | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | **23** | <10 | **10** | **17** | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | **2** | <1 | <1 | **1** | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP20 - 3.00m | TP23 - 0.25m | TP23 - 1.75m | TP23 - 2.75m | TP26 - 1.00m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-091 | EB2434308-092 | EB2434308-093 | EB2434308-094 | EB2434308-095 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | 6.8 | 5.3 | 6.8 | 6.4 | 6.9 |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | <2 | 6 | <2 | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | 0.018 | 0.016 | 0.011 | 0.009 | 0.011 |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | 11 | <10 | <10 | <10 | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | 1.44 | ---- | 0.55 | ---- | 1.04 |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | 289 | ---- | 110 | ---- | 208 |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | 0.46 | ---- | 0.18 | ---- | 0.33 |
| **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 | | <0.02 | 0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | <10 | 16 | <10 | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | | <1 | 1 | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | <0.02 | 0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | 11 | 16 | <10 | <10 | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | <1 | 1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP26 - 2.00m | TP26 - 3.00m | TP29 - 0.25m | TP29 - 1.50m | TP29 - 2.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2434308-096 | EB2434308-097 | EB2434308-098 | EB2434308-099 | EB2434308-100 |
| | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **6.4** | **6.6** | **6.2** | **8.7** | **7.2** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | <2 | <2 | <2 | <2 | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | **0.012** | **0.013** | **0.013** | **0.017** | **0.010** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | **10** | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **----** | **0.53** | **----** | **7.82** | **1.03** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **----** | **106** | **----** | **1560** | **206** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **----** | **0.17** | **----** | **2.50** | **0.33** |
| **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 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | <10 | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | <1 | <1 | <1 | <1 | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | <10 | <10 | <10 | **10** | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | <1 | <1 | <1 | <1 | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP16 - 0.25m | TP16 - 1.50m | TP16 - 2.50m | TP12 - 0.25m | TP12 - 1.75m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-101 | EB2434308-102 | EB2434308-103 | EB2434308-104 | EB2434308-105 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | **5.1** | **8.8** | **7.3** | **5.5** | **6.8** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | **20** | <2 | <2 | **10** | <2 |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | **0.03** | <0.02 | <0.02 | <0.02 | <0.02 |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | **0.009** | **0.018** | **0.016** | **0.025** | **0.015** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | <10 | **11** | **10** | **16** | <10 |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | **----** | **4.71** | **0.24** | **----** | **0.78** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | **----** | **941** | **48** | **----** | **156** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | **----** | **1.51** | **0.08** | **----** | **0.25** |
| **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 | | **0.04** | <0.02 | <0.02 | **0.04** | <0.02 |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | **25** | <10 | <10 | **26** | <10 |
| Liming Rate | ---- | 1 | kg CaCO3/t | | **2** | <1 | <1 | **2** | <1 |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | **0.04** | <0.02 | <0.02 | **0.04** | <0.02 |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | **25** | **11** | **10** | **26** | <10 |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | **2** | <1 | <1 | **2** | <1 |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP12 - 2.75m | TP08 - 0.25m | TP08 - 1.75m | TP08 - 3.00m | TP04 - 0.25m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2434308-106 | EB2434308-107 | EB2434308-108 | EB2434308-109 | EB2434308-110 |
| | | | | | Result | Result | Result | Result | Result |
| **EA033-A: Actual Acidity** | | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | | **7.8** | **6.0** | **8.7** | **7.0** | **5.2** |
| Titratable Actual Acidity (23F) | ---- | 2 | mole H+ / t | | <2 | **4** | <2 | <2 | **14** |
| sulfidic - Titratable Actual Acidity (s-23F) | ---- | 0.02 | % pyrite S | | <0.02 | <0.02 | <0.02 | <0.02 | **0.02** |
| **EA033-B: Potential Acidity** | | | | | | | | | |
| Chromium Reducible Sulfur (22B) | ---- | 0.005 | % S | | **0.013** | **0.014** | **0.010** | **0.012** | **0.027** |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | | <10 | <10 | <10 | <10 | **17** |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | | **1.46** | **----** | **4.88** | **0.67** | **----** |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | | **292** | **----** | **975** | **133** | **----** |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | | **0.47** | **----** | **1.56** | **0.21** | **----** |
| **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 | | <0.02 | **0.02** | <0.02 | <0.02 | **0.05** |
| Net Acidity (acidity units) | ---- | 10 | mole H+ / t | | <10 | **13** | <10 | <10 | **31** |
| Liming Rate | ---- | 1 | kg CaCO3/t | | <1 | <1 | <1 | <1 | **2** |
| Net Acidity excluding ANC (sulfur units) | ---- | 0.02 | % S | | <0.02 | **0.02** | <0.02 | <0.02 | **0.05** |
| Net Acidity excluding ANC (acidity units) | ---- | 10 | mole H+ / t | | <10 | **13** | <10 | <10 | **31** |
| Liming Rate excluding ANC | ---- | 1 | kg CaCO3/t | | <1 | <1 | <1 | <1 | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP04 - 1.50m | TP04 - 3.00m | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | EB2434308-111 | EB2434308-112 | -------- | -------- | -------- |
| | | | | Result | Result | ---- | ---- | ---- |
| **EA033-A: Actual Acidity** | | | | | | | | |
| pH KCl (23A) | ---- | 0.1 | pH Unit | **7.5** | **8.4** | ---- | ---- | ---- |
| 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 | **0.012** | **0.017** | ---- | ---- | ---- |
| acidity - Chromium Reducible Sulfur (a-22B) | ---- | 10 | mole H+ / t | <10 | **10** | ---- | ---- | ---- |
| **EA033-C: Acid Neutralising Capacity** | | | | | | | | |
| Acid Neutralising Capacity (19A2) | ---- | 0.01 | % CaCO3 | **0.54** | **3.45** | ---- | ---- | ---- |
| acidity - Acid Neutralising Capacity (a-19A2) | ---- | 10 | mole H+ / t | **108** | **690** | ---- | ---- | ---- |
| sulfidic - Acid Neutralising Capacity (s-19A2) | ---- | 0.01 | % pyrite S | **0.17** | **1.10** | ---- | ---- | ---- |
| **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 | ---- | ---- | ---- |

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **EB2432029** | Page | : 1 of 22 |
| Client | : **C & R CONSULTING PTY LTD** | Laboratory | : Environmental Division Brisbane |
| Contact | : MR MATT KNOTT | Contact | : Madison Forster |
| Address | : 188 ROSS RIVER ROAD<br>AITKENVALE QUEENSLAND 4812 | Address | : 2 Byth Street Stafford QLD Australia 4053 |
| Telephone | : +61 07 47253751 | Telephone | : +61-7-3552-8685 |
| Project | : Jet Zero 24069 | Date Samples Received | : 18-Sep-2024 09:00 |
| Order number | : ---- | Date Analysis Commenced | : 23-Sep-2024 |
| C-O-C number | : ---- | Issue Date | : 25-Sep-2024 09:25 |
| Sampler | : DEAN BUCHANAN | | |
| Site | : ---- | | |
| Quote number | : EB24CRCONS0004 | | |
| No. of samples received | : 96 | | |
| No. of samples analysed | : 96 | | |

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* |
|---|---|---|
| Layla Hafner | Acid Sulphate Soils - 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 Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
~ = Indicates an estimated value.

- 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.

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP07 - 0.25m | TP07 - 0.50m | TP07 - 0.75m | TP07 - 1.00m | TP07 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-001 | EB2432029-002 | EB2432029-003 | EB2432029-004 | EB2432029-005 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **6.0** | **6.7** | **8.3** | **8.4** | **8.5** |
| pH (Fox) | ---- | 0.1 | pH Unit | **3.5** | **4.2** | **5.7** | **8.2** | **8.4** |
| Reaction Rate | ---- | 1 | - | **3** | **3** | **2** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP07 - 1.50m | TP07 - 1.75m | TP07 - 2.00m | TP07 - 2.25m | TP07 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-006 | EB2432029-007 | EB2432029-008 | EB2432029-009 | EB2432029-010 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.3** | **8.3** | **8.0** | **7.9** | **8.1** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.4** | **7.7** | **8.0** | **8.4** | **8.4** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP07 - 2.75m | TP07 - 3.00m | TP11 - 0.25m | TP11 - 0.50m | TP11 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-011 | EB2432029-012 | EB2432029-013 | EB2432029-014 | EB2432029-015 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.1** | **8.3** | **7.8** | **7.3** | **8.3** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **5.9** | **8.1** | **5.9** | **5.0** | **8.0** |
| **Reaction Rate** | ---- | 1 | - | **2** | **4** | **2** | **2** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP11 - 1.00m | TP11 - 1.25m | TP11 - 1.50m | TP11 - 1.75m | TP11 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-016 | EB2432029-017 | EB2432029-018 | EB2432029-019 | EB2432029-020 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.4** | **8.4** | **8.2** | **8.2** | **8.5** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.5** | **8.4** | **8.3** | **8.3** | **8.7** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP11 - 2.25m | TP11 - 2.50m | TP11 - 2.75m | TP11 - 3.00m | TP15 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-021 | EB2432029-022 | EB2432029-023 | EB2432029-024 | EB2432029-025 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **8.3** | **8.2** | **8.6** | **8.7** | **6.8** |
| pH (Fox) | ---- | 0.1 | pH Unit | **7.0** | **7.5** | **7.6** | **8.6** | **3.4** |
| Reaction Rate | ---- | 1 | - | **2** | **2** | **2** | **4** | **3** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP15 - 0.50m | TP15 - 0.75m | TP15 - 1.00m | TP15 - 1.25m | TP15 - 1.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-026 | EB2432029-027 | EB2432029-028 | EB2432029-029 | EB2432029-030 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.0** | **8.2** | **6.8** | **7.9** | **8.1** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **4.6** | **7.3** | **4.8** | **7.2** | **6.2** |
| **Reaction Rate** | ---- | 1 | - | **2** | **4** | **2** | **4** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP15 - 1.75m | TP15 - 2.00m | TP15 - 2.25m | TP15 - 2.50m | TP15 - 2.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-031 | EB2432029-032 | EB2432029-033 | EB2432029-034 | EB2432029-035 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.1** | **7.8** | **7.8** | **8.2** | **8.2** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.2** | **8.0** | **8.3** | **8.4** | **8.2** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP15 - 3.00m | TP19 - 0.25m | TP19 - 0.50m | TP19 - 0.75m | TP19 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-036 | EB2432029-037 | EB2432029-038 | EB2432029-039 | EB2432029-040 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **8.6** | **5.4** | **5.8** | **6.4** | **6.8** |
| pH (Fox) | ---- | 0.1 | pH Unit | **7.0** | **4.4** | **4.7** | **4.9** | **5.2** |
| Reaction Rate | ---- | 1 | - | **2** | **3** | **2** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP19 - 1.25m | TP19 - 1.50m | TP19 - 1.75m | TP19 - 2.00m | TP19 - 2.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-041 | EB2432029-042 | EB2432029-043 | EB2432029-044 | EB2432029-045 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.3** | **7.1** | **7.9** | **7.7** | **7.5** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.6** | **7.8** | **8.0** | **7.6** | **7.4** |
| **Reaction Rate** | ---- | 1 | - | **2** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP19 - 2.50m | TP19 - 2.75m | TP19 - 3.00m | TP22 - 0.25m | TP22 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-046 | EB2432029-047 | EB2432029-048 | EB2432029-049 | EB2432029-050 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.5** | **7.6** | **7.7** | **6.7** | **6.5** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.0** | **7.9** | **6.3** | **3.6** | **4.4** |
| **Reaction Rate** | ---- | 1 | - | **2** | **4** | **2** | **3** | **3** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP22 - 0.75m | TP22 - 1.00m | TP22 - 1.25m | TP22 - 1.50m | TP22 - 1.75m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432029-051 | EB2432029-052 | EB2432029-053 | EB2432029-054 | EB2432029-055 |
| | | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | | **7.1** | **8.0** | **8.0** | **7.9** | **7.7** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | | **5.2** | **6.5** | **7.7** | **8.1** | **7.9** |
| **Reaction Rate** | ---- | 1 | - | | **3** | **2** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP22 - 2.00m | TP22 - 2.25m | TP22 - 2.50m | TP22 - 2.75m | TP22 - 3.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-056 | EB2432029-057 | EB2432029-058 | EB2432029-059 | EB2432029-060 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.7** | **7.9** | **8.1** | **8.2** | **8.2** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.0** | **8.2** | **8.6** | **8.2** | **8.1** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP25 - 0.25m | TP25 - 0.50m | TP25 - 0.75m | TP25 - 1.00m | TP25 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-061 | EB2432029-062 | EB2432029-063 | EB2432029-064 | EB2432029-065 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **6.5** | **6.9** | **6.8** | **8.1** | **8.4** |
| pH (Fox) | ---- | 0.1 | pH Unit | **3.1** | **4.0** | **4.2** | **6.0** | **7.1** |
| Reaction Rate | ---- | 1 | - | **3** | **3** | **3** | **2** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP25 - 1.50m | TP25 - 1.75m | TP25 - 2.00m | TP25- 2.25m | TP25 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-066 | EB2432029-067 | EB2432029-068 | EB2432029-069 | EB2432029-070 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.0** | **7.9** | **7.9** | **8.3** | **8.1** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.1** | **8.0** | **8.1** | **8.5** | **6.7** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP25 - 2.75m | TP25 - 3.00m | TP28 - 0.25m | TP28 - 0.50m | TP28 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-071 | EB2432029-072 | EB2432029-073 | EB2432029-074 | EB2432029-075 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **8.4** | **8.2** | **7.9** | **7.3** | **7.5** |
| pH (Fox) | ---- | 0.1 | pH Unit | **8.7** | **8.4** | **3.4** | **4.5** | **5.8** |
| Reaction Rate | ---- | 1 | - | **4** | **4** | **3** | **3** | **3** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP28 - 1.00m | TP28 - 1.25m | TP28 - 1.50m | TP28 - 1.75m | TP28 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-076 | EB2432029-077 | EB2432029-078 | EB2432029-079 | EB2432029-080 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.9** | **7.8** | **8.0** | **7.9** | **8.0** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.8** | **6.5** | **8.2** | **7.7** | **7.9** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP028 - 2.25m | TP028 - 2.50m | TP028 - 2.75m | TP028 - 3.00m | TP31 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-081 | EB2432029-082 | EB2432029-083 | EB2432029-084 | EB2432029-085 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.0** | **8.1** | **8.1** | **8.2** | **7.6** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.2** | **8.2** | **8.2** | **8.3** | **3.3** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP31 - 0.50m | TP31 - 0.75m | TP31 - 1.00m | TP31 - 1.25m | TP31 - 1.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-086 | EB2432029-087 | EB2432029-088 | EB2432029-089 | EB2432029-090 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.0** | **7.9** | **8.0** | **8.0** | **7.9** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **5.2** | **7.1** | **6.5** | **6.4** | **7.9** |
| **Reaction Rate** | ---- | 1 | - | **2** | **3** | **2** | **2** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP31 - 1.75m | TP31 - 2.00m | TP31 - 2.25m | TP31 - 2.50m | TP31 - 2.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 | 16-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432029-091 | EB2432029-092 | EB2432029-093 | EB2432029-094 | EB2432029-095 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.1** | **8.0** | **8.2** | **8.2** | **8.3** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.2** | **8.0** | **6.4** | **7.4** | **8.5** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP31 - 3.00m | ---- | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 16-Sep-2024 00:00 | ---- | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | | EB2432029-096 | -------- | -------- | -------- | -------- |
| | | | | | Result | ---- | ---- | ---- | ---- |
| **EA037: Ass Field Screening Analysis** | | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | | **8.2** | **----** | **----** | **----** | **----** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | | **8.5** | **----** | **----** | **----** | **----** |
| **Reaction Rate** | ---- | 1 | - | | **4** | **----** | **----** | **----** | **----** |

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **EB2432400** | Page | : 1 of 19 |
| Client | : **C & R CONSULTING PTY LTD** | Laboratory | : Environmental Division Brisbane |
| Contact | : MR MATT KNOTT | Contact | : Madison Forster |
| Address | : 188 ROSS RIVER ROAD<br>AITKENVALE QUEENSLAND 4812 | Address | : 2 Byth Street Stafford QLD Australia 4053 |
| Telephone | : +61 07 47253751 | Telephone | : +61-7-3552-8685 |
| Project | : Jet Zero 24069 | Date Samples Received | : 20-Sep-2024 08:10 |
| Order number | : ---- | Date Analysis Commenced | : 26-Sep-2024 |
| C-O-C number | : ---- | Issue Date | : 26-Sep-2024 15:03 |
| Sampler | : DEAN BUCHANAN | | |
| Site | : ---- | | |
| Quote number | : EB24CRCONS0004 | | |
| No. of samples received | : 84 | | |
| No. of samples analysed | : 84 | | |

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* |
|---|---|---|
| Layla Hafner | Acid Sulphate Soils - 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 Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
~ = Indicates an estimated value.

- **SPLIT WORK ORDER: It should be noted that ALS has split this work order over the following work order EB2432407 due to the size of the sample numbers. For any further information regarding this processing of samples please contact ALS client services division on ALSEnviro.Brisbane@alsglobal.com**
- 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.

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP02 - 0.25m | TP02 - 0.50m | TP02 - 0.75m | TP02 - 1.00m | TP02 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-001 | EB2432400-002 | EB2432400-003 | EB2432400-004 | EB2432400-005 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **6.4** | **8.4** | **9.1** | **9.2** | **9.0** |
| pH (Fox) | ---- | 0.1 | pH Unit | **3.6** | **4.5** | **8.2** | **7.9** | **5.9** |
| Reaction Rate | ---- | 1 | - | **2** | **2** | **4** | **4** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP02 - 1.50m | TP02 - 1.75m | TP02 - 2.00m | TP02 - 2.25m | TP02 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-006 | EB2432400-007 | EB2432400-008 | EB2432400-009 | EB2432400-010 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.5** | **8.7** | **8.7** | **8.6** | **8.4** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.0** | **8.3** | **8.3** | **8.4** | **8.3** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP02 - 2.75m | TP02 - 3.00m | TP06 - 0.25m | TP06 - 0.50m | TP06 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-011 | EB2432400-012 | EB2432400-013 | EB2432400-014 | EB2432400-015 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **8.8** | **8.6** | **6.1** | **6.9** | **7.4** |
| pH (Fox) | ---- | 0.1 | pH Unit | **8.4** | **8.3** | **3.3** | **4.7** | **5.1** |
| Reaction Rate | ---- | 1 | - | **4** | **4** | **3** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP06 - 1.00m | TP06 - 1.25m | TP06 - 1.50m | TP06 - 1.75m | TP06 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-016 | EB2432400-017 | EB2432400-018 | EB2432400-019 | EB2432400-020 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **7.9** | **8.7** | **8.1** | **8.2** | **7.9** |
| pH (Fox) | ---- | 0.1 | pH Unit | **5.4** | **6.1** | **7.1** | **8.0** | **8.0** |
| Reaction Rate | ---- | 1 | - | **2** | **2** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP06 - 2.25m | TP06 - 2.50m | TP06 - 2.75m | TP06 - 3.00m | TP10 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-021 | EB2432400-022 | EB2432400-023 | EB2432400-024 | EB2432400-025 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **7.5** | **7.8** | **7.9** | **8.0** | **6.7** |
| pH (Fox) | ---- | 0.1 | pH Unit | **8.0** | **8.0** | **8.2** | **8.1** | **4.0** |
| Reaction Rate | ---- | 1 | - | **4** | **4** | **4** | **4** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP10 - 0.50m | TP10 - 0.75m | TP10 - 1.00m | TP10 - 1.25m | TP10 - 1.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-026 | EB2432400-027 | EB2432400-028 | EB2432400-029 | EB2432400-030 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **6.7** | **6.8** | **6.2** | **9.1** | **9.0** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **4.2** | **4.4** | **4.1** | **8.3** | **8.3** |
| **Reaction Rate** | ---- | 1 | - | **2** | **2** | **2** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP10 - 1.75m | TP10 - 2.00m | TP10 - 2.25m | TP10 - 2.50m | TP10 - 2.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-031 | EB2432400-032 | EB2432400-033 | EB2432400-034 | EB2432400-035 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.8** | **8.4** | **8.0** | **8.4** | **8.0** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.2** | **8.1** | **7.7** | **5.5** | **5.5** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP10 - 3.00m | TP14 - 0.25m | TP14 - 0.50m | TP14 - 0.75m | TP14 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-036 | EB2432400-037 | EB2432400-038 | EB2432400-039 | EB2432400-040 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **8.0** | **6.2** | **7.8** | **7.8** | **8.7** |
| pH (Fox) | ---- | 0.1 | pH Unit | **7.4** | **3.6** | **5.7** | **5.8** | **6.7** |
| Reaction Rate | ---- | 1 | - | **4** | **2** | **2** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP14 - 1.25m | TP14 - 1.50m | TP14 - 1.75m | TP14 - 2.00m | TP14 - 2.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-041 | EB2432400-042 | EB2432400-043 | EB2432400-044 | EB2432400-045 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.6** | **9.0** | **8.4** | **8.4** | **8.6** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.3** | **8.3** | **8.1** | **8.2** | **8.3** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP14 - 2.50m | TP14 - 2.75m | TP14 - 3.00m | TP18 - 0.25m | TP18 - 0.50m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432400-046 | EB2432400-047 | EB2432400-048 | EB2432400-049 | EB2432400-050 |
| | | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | | **9.0** | **9.0** | **9.0** | **5.7** | **7.8** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | | **8.2** | **8.6** | **8.6** | **2.7** | **5.5** |
| **Reaction Rate** | ---- | 1 | - | | **4** | **4** | **4** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP18 - 0.75m | TP18 - 1.00m | TP18 - 1.25m | TP18 - 1.50m | TP18 - 1.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-051 | EB2432400-052 | EB2432400-053 | EB2432400-054 | EB2432400-055 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.2** | **8.9** | **8.6** | **8.4** | **8.1** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.4** | **7.5** | **7.7** | **7.9** | **8.0** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP18 - 2.00m | TP18 - 2.25m | TP18 - 2.50m | TP18 - 2.75m | TP18 - 3.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-056 | EB2432400-057 | EB2432400-058 | EB2432400-059 | EB2432400-060 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.1** | **8.6** | **8.8** | **8.8** | **8.9** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.0** | **8.2** | **9.0** | **8.6** | **8.8** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP21 - 0.25m | TP21 - 0.50m | TP21 - 0.75m | TP21 - 1.00m | TP21 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-061 | EB2432400-062 | EB2432400-063 | EB2432400-064 | EB2432400-065 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **6.6** | **8.3** | **9.1** | **8.4** | **8.4** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **3.8** | **6.5** | **8.6** | **8.1** | **8.1** |
| **Reaction Rate** | ---- | 1 | - | **3** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP21 - 1.50m | TP21 - 1.75m | TP21 - 2.00m | TP21 - 2.25m | TP21 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-066 | EB2432400-067 | EB2432400-068 | EB2432400-069 | EB2432400-070 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.4** | **8.6** | **8.8** | **8.5** | **8.0** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.3** | **8.4** | **8.0** | **8.1** | **6.7** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP21 - 2.75m | TP21 - 3.00m | TP24 - 0.25m | TP24 - 0.50m | TP24 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-071 | EB2432400-072 | EB2432400-073 | EB2432400-074 | EB2432400-075 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.8** | **8.2** | **5.8** | **8.5** | **8.5** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.4** | **8.2** | **2.5** | **6.0** | **7.5** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **3** | **3** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP24 - 1.00m | TP24 - 1.25m | TP24 - 1.50m | TP24 - 1.75m | TP24 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432400-076 | EB2432400-077 | EB2432400-078 | EB2432400-079 | EB2432400-080 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.6** | **8.6** | **9.0** | **8.9** | **8.6** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.4** | **6.2** | **9.3** | **8.9** | **8.1** |
| **Reaction Rate** | ---- | 1 | - | **4** | **3** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP24 - 2.25m | TP24 - 2.50m | TP24 - 2.75m | TP24 - 3.00m | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | ---- |
| Compound | CAS Number | LOR | Unit | EB2432400-081 | EB2432400-082 | EB2432400-083 | EB2432400-084 | -------- |
| | | | | Result | Result | Result | Result | ---- |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **9.5** | **9.2** | **9.1** | **8.9** | **----** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.4** | **8.5** | **8.6** | **8.8** | **----** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **----** |

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **EB2432407** | Page | : 1 of 19 |
| Client | : **C & R CONSULTING PTY LTD** | Laboratory | : Environmental Division Brisbane |
| Contact | : MR MATT KNOTT | Contact | : Madison Forster |
| Address | : 188 ROSS RIVER ROAD<br>AITKENVALE QUEENSLAND 4812 | Address | : 2 Byth Street Stafford QLD Australia 4053 |
| Telephone | : +61 07 47253751 | Telephone | : +61-7-3552-8685 |
| Project | : Jet Zero 24069 | Date Samples Received | : 20-Sep-2024 08:10 |
| Order number | : ---- | Date Analysis Commenced | : 26-Sep-2024 |
| C-O-C number | : ---- | Issue Date | : 27-Sep-2024 11:48 |
| Sampler | : DEAN BUCHANAN | | |
| Site | : ---- | | |
| Quote number | : EB24CRCONS0004 | | |
| No. of samples received | : 85 | | |
| No. of samples analysed | : 84 | | |

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* |
|---|---|---|
| Layla Hafner | Acid Sulphate Soils - 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.

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LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
~ = Indicates an estimated value.

- **SPLIT WORK ORDER: It should be noted that ALS has split this work order over the following work order EB2432400, due to the size of the sample numbers. For any further information regarding this processing of samples please contact ALS client services division on ALSEnviro.Brisbane@alsglobal.com**
- 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.

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP27 - 0.25m | TP27 - 0.50m | TP27 - 0.75m | TP27 - 1.00m | TP27 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-001 | EB2432407-002 | EB2432407-003 | EB2432407-004 | EB2432407-005 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **6.2** | **7.3** | **7.0** | **7.1** | **7.3** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **4.8** | **8.2** | **7.6** | **6.9** | **6.1** |
| **Reaction Rate** | ---- | 1 | - | **2** | **4** | **4** | **4** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP27 - 1.50m | TP27 - 1.75m | TP27 - 2.00m | TP27 - 2.25m | TP27 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-006 | EB2432407-007 | EB2432407-008 | EB2432407-009 | EB2432407-010 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.6** | **7.7** | **7.3** | **7.8** | **7.9** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.2** | **8.2** | **7.8** | **6.3** | **8.2** |
| **Reaction Rate** | ---- | 1 | - | **2** | **4** | **3** | **2** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP27 - 2.75m | TP27 - 3.00m | TP30 - 0.25m | TP30 - 0.50m | TP30 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-011 | EB2432407-012 | EB2432407-013 | EB2432407-014 | EB2432407-015 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.9** | **8.1** | **7.4** | **7.8** | **8.3** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.3** | **6.7** | **5.3** | **7.7** | **6.5** |
| **Reaction Rate** | ---- | 1 | - | **2** | **3** | **2** | **3** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP30 - 1.00m | TP30 - 1.25m | TP30 - 1.50m | TP30 - 1.75m | TP30 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-016 | EB2432407-017 | EB2432407-018 | EB2432407-019 | EB2432407-020 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.1** | **8.2** | **8.1** | **8.1** | **8.1** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.5** | **8.8** | **8.6** | **6.5** | **6.3** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **3** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP30 - 2.25m | TP30 - 2.50m | TP30 - 2.75m | TP30 - 3.00m | TP32 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-021 | EB2432407-022 | EB2432407-023 | EB2432407-024 | EB2432407-025 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **8.3** | **8.1** | **8.2** | **8.1** | **8.0** |
| pH (Fox) | ---- | 0.1 | pH Unit | **7.8** | **8.5** | **8.6** | **7.9** | **5.0** |
| Reaction Rate | ---- | 1 | - | **4** | **4** | **4** | **4** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP32 - 0.50m | TP32 - 0.75m | TP32 - 1.00m | TP32 - 1.25m | TP32 - 1.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-026 | EB2432407-027 | EB2432407-028 | EB2432407-029 | EB2432407-030 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **7.4** | **7.6** | **8.5** | **8.5** | **8.4** |
| pH (Fox) | ---- | 0.1 | pH Unit | **5.7** | **6.0** | **7.8** | **6.4** | **8.7** |
| Reaction Rate | ---- | 1 | - | **2** | **2** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP32 - 1.75m | TP32 - 2.00m | TP32 - 2.25m | TP32 - 2.50m | TP32 - 2.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-031 | EB2432407-032 | EB2432407-033 | EB2432407-034 | EB2432407-035 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.6** | **8.3** | **7.8** | **8.1** | **8.2** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.4** | **6.1** | **7.5** | **7.1** | **8.4** |
| **Reaction Rate** | ---- | 1 | - | **3** | **2** | **3** | **3** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP32 - 3.00m | TP33 - 0.25m | TP33 - 0.50m | TP33 - 0.75m | TP33 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-036 | EB2432407-037 | EB2432407-038 | EB2432407-039 | EB2432407-040 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **7.9** | **7.1** | **6.9** | **7.6** | **7.8** |
| pH (Fox) | ---- | 0.1 | pH Unit | **8.6** | **4.5** | **5.0** | **6.1** | **6.2** |
| Reaction Rate | ---- | 1 | - | **4** | **2** | **2** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP33 - 1.25m | TP33 - 1.50m | TP33 - 1.75m | TP33 - 2.00m | TP33 - 2.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-041 | EB2432407-042 | EB2432407-043 | EB2432407-044 | EB2432407-045 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.5** | **8.2** | **7.7** | **7.6** | **7.4** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.7** | **8.5** | **6.0** | **6.6** | **5.9** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **2** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP33 - 2.50m | TP33 - 2.75m | TP33 - 3.00m | TP35 - 0.25m | TP35 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-046 | EB2432407-047 | EB2432407-048 | EB2432407-049 | EB2432407-050 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.2** | **7.4** | **7.0** | **7.5** | **7.6** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **5.8** | **8.0** | **6.0** | **5.3** | **5.6** |
| **Reaction Rate** | ---- | 1 | - | **2** | **4** | **2** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP35 - 0.75m | TP35 - 1.00m | TP35 - 1.25m | TP35 - 1.50m | TP35 - 1.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-051 | EB2432407-052 | EB2432407-053 | EB2432407-054 | EB2432407-055 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.0** | **8.4** | **8.4** | **8.2** | **8.3** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.0** | **7.4** | **6.1** | **6.2** | **6.2** |
| **Reaction Rate** | ---- | 1 | - | **2** | **3** | **2** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP35 - 2.00m | TP35 - 2.25m | TP35 - 2.50m | TP35 - 2.75m | TP35 - 3.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-056 | EB2432407-057 | EB2432407-058 | EB2432407-059 | EB2432407-060 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.3** | **8.5** | **8.4** | **8.2** | **8.2** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.3** | **6.1** | **6.1** | **6.3** | **6.8** |
| **Reaction Rate** | ---- | 1 | - | **2** | **2** | **2** | **2** | **3** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP34 - 0.25m | TP34 - 0.50m | TP34 - 0.75m | TP34 - 1.00m | TP34 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-061 | EB2432407-062 | EB2432407-063 | EB2432407-064 | EB2432407-065 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.0** | **6.6** | **7.6** | **8.5** | **8.0** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **3.6** | **4.9** | **5.8** | **6.3** | **8.0** |
| **Reaction Rate** | ---- | 1 | - | **3** | **2** | **2** | **2** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP34 - 1.50m | TP34 - 1.75m | TP34 - 2.00m | TP34 - 2.25m | TP34 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-066 | EB2432407-067 | EB2432407-068 | EB2432407-069 | EB2432407-070 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.1** | **7.9** | **7.7** | **7.4** | **7.9** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.5** | **8.3** | **6.0** | **6.1** | **6.3** |
| **Reaction Rate** | ---- | 1 | - | **3** | **4** | **2** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | TP34 - 2.75m | TP34 - 3.00m | TP36 - 0.25m | TP36 - 0.50m | TP36 - 0.75m |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | | EB2432407-071 | EB2432407-072 | EB2432407-073 | EB2432407-074 | EB2432407-075 |
| | | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | | **8.2** | **8.2** | **7.6** | **8.2** | **9.1** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | | **8.9** | **9.1** | **5.2** | **6.1** | **6.7** |
| **Reaction Rate** | ---- | 1 | - | | **4** | **4** | **3** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP36 - 1.00m | TP36 - 1.25m | TP36 - 1.50m | TP36 - 1.75m | TP36 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432407-076 | EB2432407-077 | EB2432407-078 | EB2432407-079 | EB2432407-080 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.2** | **8.6** | **8.5** | **8.2** | **8.4** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.4** | **6.3** | **7.8** | **8.6** | **6.2** |
| **Reaction Rate** | ---- | 1 | - | **4** | **2** | **3** | **3** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP36 - 2.25m | TP36 - 2.50m | TP36 - 2.75m | TP36 - 3.00m | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | 18-Sep-2024 00:00 | ---- |
| Compound | CAS Number | LOR | Unit | EB2432407-081 | EB2432407-082 | EB2432407-083 | EB2432407-084 | -------- |
| | | | | Result | Result | Result | Result | ---- |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.5** | **8.4** | **8.6** | **8.3** | **----** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.8** | **8.5** | **8.8** | **8.2** | **----** |
| **Reaction Rate** | ---- | 1 | - | **3** | **4** | **4** | **4** | **----** |

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **EB2432676** | Page | : 1 of 24 |
| Client | : **C & R CONSULTING PTY LTD** | Laboratory | : Environmental Division Brisbane |
| Contact | : MR MATT KNOTT | Contact | : Madison Forster |
| Address | : 188 ROSS RIVER ROAD<br>AITKENVALE QUEENSLAND 4812 | Address | : 2 Byth Street Stafford QLD Australia 4053 |
| Telephone | : +61 07 47253751 | Telephone | : +61-7-3552-8685 |
| Project | : Jet Zero 24069 | Date Samples Received | : 24-Sep-2024 09:00 |
| Order number | : ---- | Date Analysis Commenced | : 30-Sep-2024 |
| C-O-C number | : ---- | Issue Date | : 30-Sep-2024 09:58 |
| Sampler | : DEAN BUCHANAN | | |
| Site | : ---- | | |
| Quote number | : EB24CRCONS0004 | | |
| No. of samples received | : 108 | | |
| No. of samples analysed | : 108 | | |

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* |
|---|---|---|
| Layla Hafner | Acid Sulphate Soils - 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 Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
~ = Indicates an estimated value.

- **SPLIT WORK ORDER: It should be noted that ALS has split this work order over the following work orders (EB2432676 and EB2432677) due to the size of the sample numbers. For any further information regarding this processing of samples please contact ALS client services division on ALSEnviro.Brisbane@alsglobal.com**
- 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.

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP03 - 0.25m | TP03 - 0.50m | TP03 - 0.75m | TP03 - 1.00m | TP03 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-001 | EB2432676-002 | EB2432676-003 | EB2432676-004 | EB2432676-005 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.4** | **8.7** | **8.4** | **8.3** | **8.3** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.3** | **7.2** | **6.2** | **7.5** | **7.6** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP03 - 1.50m | TP03 - 1.75m | TP03 - 2.00m | TP03 - 2.25m | TP03 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-006 | EB2432676-007 | EB2432676-008 | EB2432676-009 | EB2432676-010 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.4** | **8.4** | **8.6** | **8.8** | **9.0** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.6** | **7.4** | **6.0** | **5.9** | **6.2** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **2** | **2** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP03 - 2.75m | TP03 - 3.00m | TP01 - 0.25m | TP01 - 0.50m | TP01 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-011 | EB2432676-012 | EB2432676-013 | EB2432676-014 | EB2432676-015 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **9.2** | **9.2** | **7.7** | **8.2** | **8.7** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.3** | **6.2** | **5.0** | **5.2** | **5.8** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **1** | **1** | **1** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP01 - 1.00m | TP01 - 1.25m | TP01 - 1.50m | TP01 - 1.75m | TP01 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-016 | EB2432676-017 | EB2432676-018 | EB2432676-019 | EB2432676-020 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **9.6** | **9.3** | **9.1** | **8.9** | **9.0** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.2** | **6.7** | **6.8** | **8.8** | **8.9** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP01 - 2.25m | TP01 - 2.50m | TP01 - 2.75m | TP01 - 3.00m | TP05 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-021 | EB2432676-022 | EB2432676-023 | EB2432676-024 | EB2432676-025 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.8** | **8.8** | **8.8** | **9.2** | **8.1** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.3** | **6.7** | **8.4** | **7.3** | **5.2** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **1** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP05 - 0.50m | TP05 - 0.75m | TP05 - 1.00m | TP05 - 1.25m | TP05 - 1.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-026 | EB2432676-027 | EB2432676-028 | EB2432676-029 | EB2432676-030 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **7.4** | **8.5** | **8.7** | **9.3** | **9.0** |
| pH (Fox) | ---- | 0.1 | pH Unit | **5.4** | **7.1** | **6.5** | **6.1** | **8.7** |
| Reaction Rate | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP05 - 1.75m | TP05 - 2.00m | TP05 - 2.25m | TP05 - 2.50m | TP05 - 2.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-031 | EB2432676-032 | EB2432676-033 | EB2432676-034 | EB2432676-035 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.9** | **8.8** | **8.8** | **8.9** | **8.8** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.5** | **6.6** | **6.6** | **8.1** | **8.2** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP05 - 3.00m | TP09 - 0.25m | TP09 - 0.50m | TP09 - 0.75m | TP09 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-036 | EB2432676-037 | EB2432676-038 | EB2432676-039 | EB2432676-040 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **8.7** | **6.8** | **7.4** | **8.4** | **8.4** |
| pH (Fox) | ---- | 0.1 | pH Unit | **6.7** | **3.8** | **5.9** | **5.7** | **6.1** |
| Reaction Rate | ---- | 1 | - | **4** | **3** | **4** | **2** | **2** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP09 - 1.25m | TP09 - 1.50m | TP09 - 1.75m | TP09 - 2.00m | TP09 - 2.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-041 | EB2432676-042 | EB2432676-043 | EB2432676-044 | EB2432676-045 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **9.0** | **8.6** | **8.6** | **8.9** | **9.1** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.3** | **7.6** | **8.4** | **7.9** | **6.7** |
| **Reaction Rate** | ---- | 1 | - | **2** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP09 - 2.50m | TP09 - 2.75m | TP09 - 3.00m | TP13 - 0.25m | TP13 - 0.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-046 | EB2432676-047 | EB2432676-048 | EB2432676-049 | EB2432676-050 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **9.0** | **8.6** | **8.5** | **7.0** | **7.6** |
| pH (Fox) | ---- | 0.1 | pH Unit | **7.7** | **7.8** | **7.9** | **3.7** | **5.7** |
| Reaction Rate | ---- | 1 | - | **4** | **4** | **4** | **2** | **1** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP13 - 0.75m | TP13 - 1.00m | TP13 - 1.25m | TP13 - 1.50m | TP13 - 1.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-051 | EB2432676-052 | EB2432676-053 | EB2432676-054 | EB2432676-055 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.1** | **8.4** | **8.0** | **8.4** | **8.4** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.6** | **7.7** | **7.8** | **8.1** | **7.4** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP13 - 2.00m | TP13 - 2.25m | TP13 - 2.50m | TP13 - 2.75m | TP13 - 3.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-056 | EB2432676-057 | EB2432676-058 | EB2432676-059 | EB2432676-060 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.5** | **8.5** | **8.5** | **8.5** | **8.5** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.1** | **6.0** | **7.6** | **8.1** | **8.2** |
| **Reaction Rate** | ---- | 1 | - | **2** | **2** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP17 - 0.25m | TP17 - 0.50m | TP17 - 0.75m | TP17 - 1.00m | TP17 - 1.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-061 | EB2432676-062 | EB2432676-063 | EB2432676-064 | EB2432676-065 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| pH (F) | ---- | 0.1 | pH Unit | **5.6** | **7.2** | **9.0** | **9.1** | **8.4** |
| pH (Fox) | ---- | 0.1 | pH Unit | **3.2** | **5.2** | **6.6** | **8.8** | **6.6** |
| Reaction Rate | ---- | 1 | - | **3** | **2** | **2** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP17 - 1.50m | TP17 - 1.75m | TP17 - 2.00m | TP17 - 2.25m | TP17 - 2.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-066 | EB2432676-067 | EB2432676-068 | EB2432676-069 | EB2432676-070 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.5** | **8.4** | **8.6** | **8.4** | **8.4** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.4** | **7.2** | **8.2** | **8.2** | **6.6** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP17 - 2.75m | TP17 - 3.00m | TP20 - 0.25m | TP20 - 0.50m | TP20 - 0.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-071 | EB2432676-072 | EB2432676-073 | EB2432676-074 | EB2432676-075 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.3** | **8.7** | **6.4** | **6.8** | **9.2** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **8.2** | **7.5** | **4.3** | **5.1** | **8.9** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **2** | **2** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP20 - 1.00m | TP20 - 1.25m | TP20 - 1.50m | TP20 - 1.75m | TP20 - 2.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-076 | EB2432676-077 | EB2432676-078 | EB2432676-079 | EB2432676-080 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.8** | **8.6** | **8.6** | **8.4** | **8.3** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.5** | **7.7** | **7.6** | **6.8** | **7.4** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP20 - 2.25m | TP20 - 2.50m | TP20 - 2.75m | TP20 - 3.00m | TP23 - 0.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-081 | EB2432676-082 | EB2432676-083 | EB2432676-084 | EB2432676-085 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.4** | **9.0** | **8.7** | **8.4** | **6.3** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.6** | **8.1** | **8.4** | **7.5** | **4.3** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP23 - 0.50m | TP23 - 0.75m | TP23 - 1.00m | TP23 - 1.25m | TP23 - 1.50m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-086 | EB2432676-087 | EB2432676-088 | EB2432676-089 | EB2432676-090 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.0** | **8.6** | **8.2** | **8.4** | **8.2** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.5** | **7.4** | **8.0** | **6.4** | **6.4** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP23 - 1.75m | TP23 - 2.00m | TP23 - 2.25m | TP23 - 2.50m | TP23 - 2.75m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-091 | EB2432676-092 | EB2432676-093 | EB2432676-094 | EB2432676-095 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.4** | **8.4** | **8.3** | **8.6** | **8.2** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **6.0** | **7.4** | **7.4** | **6.5** | **6.3** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP23 - 3.00m | TP26 - 0.25m | TP26 - 0.50m | TP26 - 0.75m | TP26 - 1.00m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-096 | EB2432676-097 | EB2432676-098 | EB2432676-099 | EB2432676-100 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.5** | **8.5** | **8.0** | **8.1** | **7.9** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.5** | **6.5** | **6.5** | **6.6** | **6.3** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP26 - 1.25m | TP26 - 1.50m | TP26 - 1.75m | TP26 - 2.00m | TP26 - 2.25m |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 |
| Compound | CAS Number | LOR | Unit | EB2432676-101 | EB2432676-102 | EB2432676-103 | EB2432676-104 | EB2432676-105 |
| | | | | Result | Result | Result | Result | Result |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **8.1** | **8.3** | **8.1** | **8.2** | **8.0** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.7** | **8.0** | **7.8** | **7.8** | **7.8** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **4** | **4** |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | TP26 - 2.50m | TP26 - 2.75m | TP26 - 3.00m | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | 19-Sep-2024 00:00 | ---- | ---- |
| Compound | CAS Number | LOR | Unit | EB2432676-106 | EB2432676-107 | EB2432676-108 | -------- | -------- |
| | | | | Result | Result | Result | ---- | ---- |
| **EA037: Ass Field Screening Analysis** | | | | | | | | |
| **pH (F)** | ---- | 0.1 | pH Unit | **7.8** | **8.1** | **8.1** | **----** | **----** |
| **pH (Fox)** | ---- | 0.1 | pH Unit | **7.7** | **7.4** | **7.4** | **----** | **----** |
| **Reaction Rate** | ---- | 1 | - | **4** | **4** | **4** | **----** | **----** |