GEOTECHNICS PTY LTD
CONSULTING GEOTECHNICAL ENGINEERS

ACID SULFATE SOILS (ASS) ASSESSMENT

FOR

McDONALD JONES HOMES

Lot 15, 15 Raven Circuit, Warriewood, New South Wales

Report No: 25/2223

Project No: 30055/10042A

September 2025

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Table of Contents

1. INTRODUCTION

This report presents the results of an Acid Sulfate Soils (ASS) assessment carried out by STS Geotechnics Pty Limited (STS) for the proposed new two-storey dwelling at 15 Raven Circuit, Warriewood, NSW. The initial geotechnical investigation for the site was carried out on February 14, 2025 and a Site Investigation Report was prepared under Report No. 25/0545. Reference to the Northern Beaches Council LEP indicates that the site is located within a Class 3 Acid Sulfate Soils areas. In Class 3 areas there is a risk if there are works more than a metre below natural ground surface or works by which the water table is likely to be lowered by more than a metre below the natural ground surface.

Based on the information provided, the proposed dwelling does not involve any basement excavation. However, minor cutting and filling may be required to achieve the desired finished levels. Additional excavations may be required for footings or service trenches.

The purpose of this investigation was to determine the following:

- Subsurface conditions,
- Acid Sulfate Soils Assessment and,
- Requirement for an Acid Sulfate Soils Management Plan.

The investigation was undertaken in accordance with STS proposal P25-433 dated September 1, 2025.

2. NATURE OF THE INVESTIGATION

2.1. Fieldwork

The new fieldwork consisted of the drilling of two (2) boreholes numbered BH101 and BH102 at the locations shown on attached Drawing No. 25/2223. The boreholes were drilled using a utility mounted Christie drilling rig, owned and operated by STS.

Drilling operations were undertaken by one of STS's senior geotechnicians who also logged the subsurface conditions encountered.

Representative soil samples were collected for subsequent laboratory testing.

The subsurface conditions observed are recorded on the borehole log given in Appendix A. An explanation of the terms used on the log is also given in Appendix A. Notes relating to geotechnical reports are also attached.

2.2. Laboratory Testing

Based on field observations, five (5) soil samples were selected for laboratory analysis for the Acid Sulfate Soils assessment. The samples were dispatched to Australian Laboratory Services (ALS) for analysis using the Suspension Peroxide Oxidation Combined Acidity and

Sulphate (SPOCAS) method. The method allows both a measure of the existing and potential acidity.

Detailed test report is given in Appendix B.

3. SUBSURFACE CONDITIONS

When assessing the subsurface conditions across a site from a limited number of boreholes, there is the possibility that variations may occur between test locations. The data derived from the site investigation programme are extrapolated across the site to form a geological model and an engineering opinion is rendered about overall subsurface conditions and their likely behaviour regarding the proposed development. The actual condition at the site may differ from those inferred, since no subsurface exploration programme, no matter how comprehensive, can reveal all subsurface details and anomalies.

The subsurface conditions consist of fill overlying silty sandy clay. The fill is present to a depth of 4.0 metres. Silty sandy clay underlies the fill to the depth of drilling, 4.5 metres.

No groundwater was observed during the fieldwork.

4. ACID SULFATE SOIL ASSESSMENT

4.1. Introduction

ASS is the common name given to sediments and soils containing iron sulfides which, when exposed to oxygen generate sulfuric acid. Natural processes formed most acid sulfate sediments when certain conditions existed in the Holocene geological period (the last 10,000 years). Formation conditions require the presence of iron-rich sediments, sulfate (usually from seawater), removal of reaction products such as bicarbonate, the presence of sulfate reducing bacteria. It should be noted that these conditions exist in mangroves, salt marsh vegetation or tidal areas, and at the bottom of coastal rivers and lakes.

The relatively specific conditions under which acid sulfate soils are formed usually limit their occurrence to low lying parts of coastal floodplains, rivers, and creeks. This includes areas with saline or brackish water such as deltas, coastal flats, back swamps and seasonal or permanent freshwater swamps that were formerly brackish. Due to flooding and stormwater erosion, these sulfidic sediments may continue to be re-distributed through the sands and sediments of the estuarine floodplain region. Sulfidic sediment may be found at any depth in suitable coastal sediments – usually beneath the water table.

Any lowering in the water table that uncovers potential ASS will result in their aeration and the exposure of iron sulfide sediments to oxygen. The lowering in the water table can occur naturally due to seasonal fluctuations and drought or any human intervention, when carrying out any excavations during site development. Potential ASS can also be

exposed to air during physical disturbance with the material at the disturbance face, as well as the extracted material, both potentially being oxidised. The oxidation of iron sulfide sediments in potential ASS results in ASS soils.

Successful management of areas with ASS is possible but must consider the specific nature of the site and the environmental consequences of development. While it is preferable that sites exhibiting acid sulfate characteristics are not disturbed, management techniques have been devised to minimise and manage impacts in certain circumstances.

When works involving the disturbance of soil or the change of groundwater levels are proposed in coastal areas, a preliminary assessment should be undertaken to determine whether acid sulfate soils are present and if the proposed works are likely to disturb these soils.

4.2. Presence of ASS

The Hornsby/ Mona Vale ASS Risk Map (9130S1, Edition Two, December 1997) indicates that the property is within an area where there a high probability of ASS occurring between 1 and 3 metres below the ground surface. It should be noted that maps are a guide only.

The following geomorphic or site criteria are normally used to determine if acid sulfate soils are likely to be present:

- sediments of recent geological age (Holocene epoch)
- soil horizons less than 5 in AHD
- marine or estuarine sediments and tidal lakes
- in coastal wetlands or back swamp areas

4.3. Assessment

A geomorphological assessment for PASS was undertaken by a review of available geomorphic mapping and aerial photography (Google Earth and SIX Maps (https://maps.six.nsw.gov.au/)) to identify, interpret, and compare features against site geomorphic characteristics (sediment, landscape and vegetation) noted in Tables 2.1 and 4.1 of NASSG 2018a that indicate typical locations of PASS. The typical PASS features and results of review are presented in Table 4.1.

Table 4.1 PASS Features Assessment

Geomorphological Indicator Type	Indicator of ASS	Site Presence of Feature
Sediment characteristics	Sediments of recent geological age (Holocene)	Observed, however, not alluvial
	Marine or estuarine sediments	Observed, however, not alluvial
	Iron sulfide minerals, former marine or shales and sediments, coal deposits, and mineral sand deposits	Not observed
	Deep estuarine sediments >10m below ground surface, Holocene or Pleistocene age (only if deep excavation or drainage is proposed)	Deep excavation is not proposed
	Areas known to contain peat or a build-up of organic material.	No peat observed
Landscape characteristics	Land with elevation less than 5 m AHD	Minimum ground RL onsite is approximately 4.0 m AHD
	Areas where the highest known water table level is within 3 m of the surface.	Not observed
	Waterlogged or scalded area	Not observed
	Tidal lakes	Not observed
	Coastal wetlands or back swamp areas	Site is not located in these areas
	Interdune swales or coastal sand dunes (if deep excavation or drainage is proposed)	Not present
	Any areas (including inland areas) where a combination of all the following factors exist: organic matter, iron minerals, waterlogged conditions or high water table, and sulfidic minerals.	Not observed

Geomorphological Indicator Type	Indicator of ASS	Site Presence of Feature
Vegetation characteristic	Areas where the dominant vegetation is mangroves, reeds, rushes and other vegetation associated with areas of shallow water tables such as flooded gums (Eucalyptus rudis) (Eucalyptus robusta), paperbarks (Melaleucaspp.) and casuarinas (Casuarina spp.).	Not observed

To assess the significance of the PASS, the following field methodology was conducted.

- Laboratory testing was carried out on samples ASS1 to ASS5 taken from BH101 and BH102 at depths of 0.5m, 1.5m,4.0m,1.0m, and 2.0m below existing ground level.
- Five samples were sent to a NATA accredited laboratory for Suspension Peroxide Oxidation Combined Acidity and Sulfur (SPOCAS) testing.

Based on the information provided, STS estimates that <1000m^3 of material will be removed for the proposed development.

The laboratory results are summarised in Table 4.2, with the full test results available in Appendix B. The test results were compared to action criteria for 1-1000 tonnes of potential ASS disturbed material, as referenced in NSW Acid Sulfate Soil Management Advisory Committee, Acid Sulfate Soil Manual (ASSMAC,1998) summarised in Table 4.2.

The action criteria trigger needed to prepare an ASSMP and are based on the percentage of oxidisable sulphur (or equivalent TPA and TSA) for broad categories of soil types. Works in soils that exceed these action criteria must prepare a management plan and obtain development consent.

As silty clays were encountered in both boreholes, the fine texture (FT) grade criteria is the most appropriate and has been adopted for this assessment.

Table 4.2 – ASS Action Criteria

Type of material		Action Criteria if 1-1000 tonnes ASS disturbed		Action Criteria if more than 1000 tonnes ASS disturbed	
Texture Range (McDonald et al 1990)	**Approx. clay content (%<0.02mm)**	**Sulphur Trail %S oxidisable (oven dry basis) eg S_{TOS} or S_{POS}**	**Acid Trail Mol H^+/tonne (oven dry basis) eg TPA or TSA_S**	**Sulphur Trail %S oxidisable (oven dry basis) eg S_{TOS} or S_{POS}**	**Acid Trail Mol H^+/tonne (oven dry basis) eg TPA or TSA_S**
Coarse Texture (CT) Sands to loamy sands	≤5	0.03	18	0.03	18
Medium Texture (MT) Sandy loams to light clays	5-50	0.06	36	0.03	18
Fine Texture (FT) Medium to heavy clays and silty clays	≥50	0.1	62	0.03	18

Table 4.3 – SPOCAS Test Results Summary

Analysis	Unit	LOR	ASS1 BH3@ 0.5m	ASS2 BH3 @ 1.5m	ASS3 BH3 @ 4.0m	ASS4 BH3@ 1.0m	ASS5 BH3@ 2.0m	Action Criteria[1] <1000 tonnes disturbed
pH before Oxidation	NA	0.1	9.4	9.5	6.6	9.4	6.4	-
pH after Oxidation	NA	0.1	7.6	7.0	5.3	7.4	5.4	<3 (high risk)
S (POS)	%	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.1
TPA	Mole/ tonne	2	<2	<2	<2	<2	4	62
TSA	Mole/ tonne	2	<2	<2	<2	<2	4	62

1 = ASSMAC (1998)

Action Criteria Exceeded

The results of the soil sample analyses are compared to the above criteria in Table 4.3, and the analytical laboratory reports for the testing performed are provided in Appendix B. None of the action criteria were exceeded indicating PASS are not present.

No groundwater was observed in the boreholes during the site drilling and an excavation is not required. Therefore, site development will not require dewatering that will result in the lowering of the groundwater where nearby ASS may be present exposing them to potential oxidation. Based on our onsite observations and testing carried out, it is our opinion that the proposed construction will not intercept any ASS nor cause lowering of any groundwater. Therefore, land management activities are unlikely to be affected by ASS materials.

Our assessment is the proposed construction will not require the preparation of an Acid Sulfate Soil Management Plan.

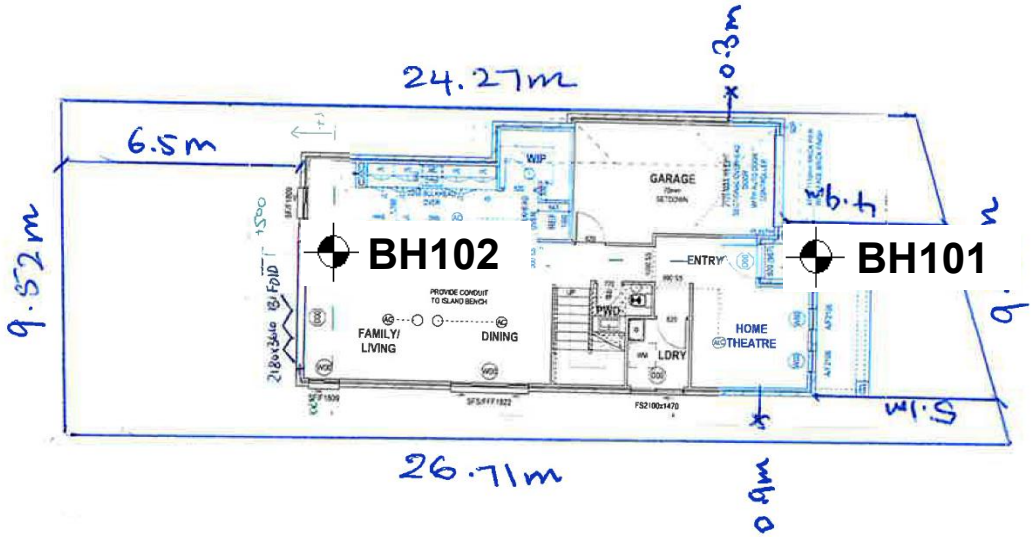
5. FINAL COMMENTS

We recommend a meeting at the commencement of construction to discuss the potential geotechnical issues should the subsurface conditions vary from those inferred above and geotechnical inspection requirements during the construction phase for the proposed development to minimise risks.

During construction, STS should be contacted to determine if any changes should be made to our recommendations for further advice.

Mandana Mohiti
Geotechnical Engineer
STS Geotechnics Pty Limited

Masoud Haghparast
Senior Geotechnical Engineer
STS Geotechnics Pty Limited



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Borehole and Penetrometer Locations

Client:	McDonald Jones Homes	**Project NO.**	30055/10042A	**Date:**	September 3, 2025
Site Address:	Lot 15, 15 Raven Circuit, Warriewood	**Drawing NO.**	25/2223	**Scale:**	Unknown
Work:	Acid Sulfate Soils (ASS) Assessment	**Revision NO.**	0		

Important Information

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INTRODUCTION

These notes have been provided to outline the methodology and limitations inherent in geotechnical reporting. The issues discussed are not relevant to all reports and further advice should be sought if there are any queries regarding any advice or report. When copies of reports are made, they should be reproduced in full.

GEOTECHNICAL REPORTS

Geotechnical reports are prepared by qualified personnel on the information supplied or obtained and are based on current engineering standards of interpretation and analysis.

Information may be gained from limited subsurface testing, surface observations, previous work and is supplemented by knowledge of the local geology and experience of the range of properties that may be exhibited by the materials present. For this reason, geotechnical reports should be regarded as interpretative rather than factual documents, limited to some extent by the scope of information on which they rely.

Where the report has been prepared for a specific purpose (eg. design of a three-storey building), the information and interpretation may not be appropriate if the design is changed (eg. a twenty storey building). In such cases, the report and the sufficiency of the existing work should be reviewed by STS Geotechnics Pty Limited in the light of the new proposal.

Every care is taken with the report content, however, it is not always possible to anticipate or assume responsibility for the following conditions:

- Unexpected variations in ground conditions. The potential for this depends on the amount of investigative work undertaken.
- Changes in policy or interpretation by statutory authorities.
- The actions of contractors responding to commercial pressures.

If these occur, STS Geotechnics Pty Limited would be pleased to resolve the matter through further investigation, analysis or advice.

UNFORSEEN CONDITIONS

Should conditions encountered on site differ markedly from those anticipated from the information contained in the report, STS Geotechnics Pty Limited should be notified immediately. Early identification of site anomalies generally results in any problems being more readily resolved and allows re-interpretation and assessment of the implications for future work.

SUBSURFACE CONDITIONS

Logs of a borehole, recovered core, test pit, excavated face or cone penetration test are an engineering and/or geological interpretation of the subsurface conditions. The reliability of the logged information depends on the drilling/testing method, sampling and/or observation spacings and the ground conditions. It is not always possible or economic to obtain continuous high quality data. It should also be recognised that the volume or material observed or tested is only a fraction of the total subsurface profile.

Interpretation of subsurface information and application to design and construction must take into consideration the spacing of the test locations, the frequency of observations and testing, and the possibility that geological boundaries may vary between observation points.

Groundwater observations and measurements outside of specially designed and constructed piezometers should be treated with care for the following reasons:

- In low permeability soils groundwater may not seep into an excavation or bore in the short time it is left open.
- A localised perched water table may not represent the true water table.
- Groundwater levels vary according to rainfall events or season.
- Some drilling and testing procedures mask or prevent groundwater inflow.

The installation of piezometers and long term monitoring of groundwater levels may be required to adequately identify groundwater conditions.

SUPPLY OF GETEOECHNICAL INFORMATION OR TENDERING PURPOSES

It is recommended tenderers are provided with as much geological and geotechnical information that is available and that where there are uncertainties regarding the ground conditions, prospective tenders should be provided with comments discussing the range of likely conditions in addition to the investigation data.

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APPENDIX A – BOREHOLE LOGS AND EXPLANATION SHEETS

GEOTECHNICAL LOG - NON CORE BOREHOLE

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Client: McDonald Jones Homes
Project: Lot 15, 15 Raven Circuit, Warriewood
Location: Refer to Drawing No. 25/2223

Project Number: 30055/10042A
Date : September 3, 2025
Logged: MB Checked By: MT

BOREHOLE NO.: BH101

Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT Soil Name, grain size /plasticity, colour; secondary constituents (Inc. Description) , minor constituents including other remarks	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
			FILL: SILTY GRAVELLY CLAY: low plasticity, brown	CL		<PL
	ASS1					
		1.0				
	ASS2					
		2.0				
		3.0				
		4.0				
	ASS3		SILTY SANDY CLAY: low plasticity, grey brown (saturated)	CL		>PL
			BOREHOLE DISCONTINUED AT 4.5 M			
		5.0				
		6				

D - disturbed sample
U - undisturbed tube sample
B - bulk sample
WT - level of water table or free water
N - Standard Penetration Test (SPT)
S - jar sample

NOTES: See explanation sheets for meaning of all descriptive terms and symbols

Contractor: STS
Equipment: Christie
Hole Diameter (mm): 100
Angle from Vertical (o): 0
Drill Bit: Spiral

GEOTECHNICAL LOG - NON CORE BOREHOLE

GEOTECHNICS PTY LTD
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Client: McDonald Jones Homes
Project: Lot 15, 15 Raven Circuit, Warriewood
Location: Refer to Drawing No. 25/2223

Project Number: 30055/10042A
Date : September 3, 2025
Logged: MB Checked By: MT

BOREHOLE NO.: BH102

Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT Soil Name, grain size /plasticity, colour; secondary constituents (Inc. Description) , minor constituents including other remarks	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
			FILL: SILTY GRAVELLY CLAY: low plasticity, brown	CL		<PL
		1.0				
	ASS4					
		2.0				
	ASS5					
		3.0				
		4.0				
			SILTY SANDY CLAY: low plasticity,grey brown (saturated)	CL		>PL
			BOREHOLE DISCONTINUED AT 4.5 M			
		5.0				
		6				

D - disturbed sample
U - undisturbed tube sample
B - bulk sample
WT - level of water table or free water
N - Standard Penetration Test (SPT)
S - jar sample

NOTES: See explanation sheets for meaning of all descriptive terms and symbols

Contractor: STS
Equipment: Christie
Hole Diameter (mm): 100
Angle from Vertical (o): 0
Drill Bit: Spiral

APPENDIX B – LABORATORY TEST RESULTS

CERTIFICATE OF ANALYSIS

Work Order	: **EB2530807**	Page	: 1 of 4
Client	: **STS Geotechnics**	Laboratory	: Environmental Division Brisbane
Contact	: ENQUIRES STS	Contact	: Customer Services EB
Address	: Unit 14/1 Cowpasture Place Wetherill Park 2164	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61-7-3552-8685
Project	: 30055	Date Samples Received	: 04-Sep-2025 09:50
Order number	: 2025-342	Date Analysis Commenced	: 10-Sep-2025
C-O-C number	: ----	Issue Date	: 10-Sep-2025 14:46
Sampler	: MB		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

General Comments

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

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

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

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

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

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS 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: EA029 (SPOCAS): Retained Acidity not required because pH KCl greater than or equal to 4.5
- ASS: EA029 (SPOCAS): 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: EA029 (SPOCAS): 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	30055/10042A-ASS1	30055/10042A-ASS2	30055/10042A-ASS3	30055/10042A-ASS4	30055/10042A-ASS5
			Sampling date / time	03-Sep-2025 00:00	03-Sep-2025 00:00	03-Sep-2025 00:00	03-Sep-2025 00:00	03-Sep-2025 00:00
Compound	CAS Number	LOR	Unit	EB2530807-001	EB2530807-002	EB2530807-003	EB2530807-004	EB2530807-005
				Result	Result	Result	Result	Result
EA029-A: pH Measurements								
pH KCl (23A)	----	0.1	pH Unit	**9.4**	**9.5**	**6.6**	**9.4**	**6.4**
pH OX (23B)	----	0.1	pH Unit	**7.6**	**7.0**	**5.3**	**7.4**	**5.4**
EA029-B: Acidity Trail								
Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	<2	<2	<2
Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	<2	<2	<2	**4**
Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	<2	<2	<2	**4**
sulfidic - Titratable Actual Acidity (s-23F)	----	0.020	% pyrite S	<0.020	<0.020	<0.020	<0.020	<0.020
sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.020	% pyrite S	<0.020	<0.020	<0.020	<0.020	<0.020
sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.020	% pyrite S	<0.020	<0.020	<0.020	<0.020	<0.020
EA029-C: Sulfur Trail								
KCl Extractable Sulfur (23Ce)	----	0.020	% S	<0.020	<0.020	<0.020	<0.020	<0.020
Peroxide Sulfur (23De)	----	0.020	% S	<0.020	<0.020	<0.020	<0.020	<0.020
Peroxide Oxidisable Sulfur (23E)	----	0.020	% S	<0.020	<0.020	<0.020	<0.020	<0.020
acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	<10	<10	<10	<10	<10
EA029-D: Calcium Values								
KCl Extractable Calcium (23Vh)	----	0.020	% Ca	**0.169**	**0.130**	**0.080**	**0.158**	**0.082**
Peroxide Calcium (23Wh)	----	0.020	% Ca	**0.341**	**0.175**	**0.081**	**0.358**	**0.083**
Acid Reacted Calcium (23X)	----	0.020	% Ca	**0.172**	**0.044**	<0.020	**0.200**	<0.020
acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	**86**	**22**	<10	**100**	<10
sulfidic - Acid Reacted Calcium (s-23X)	----	0.020	% S	**0.138**	**0.035**	<0.020	**0.160**	<0.020
EA029-E: Magnesium Values								
KCl Extractable Magnesium (23Sm)	----	0.020	% Mg	<0.020	<0.020	<0.020	<0.020	<0.020
Peroxide Magnesium (23Tm)	----	0.020	% Mg	<0.020	<0.020	<0.020	<0.020	<0.020
Acid Reacted Magnesium (23U)	----	0.020	% Mg	<0.020	<0.020	<0.020	<0.020	<0.020
Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	<10	<10	<10	<10	<10
sulfidic - Acid Reacted Magnesium (s-23U)	----	0.020	% S	<0.020	<0.020	<0.020	<0.020	<0.020

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	30055/10042A-ASS1	30055/10042A-ASS2	30055/10042A-ASS3	30055/10042A-ASS4	30055/10042A-ASS5
				Sampling date / time	03-Sep-2025 00:00	03-Sep-2025 00:00	03-Sep-2025 00:00	03-Sep-2025 00:00	03-Sep-2025 00:00
Compound	CAS Number	LOR	Unit		EB2530807-001	EB2530807-002	EB2530807-003	EB2530807-004	EB2530807-005
					Result	Result	Result	Result	Result
EA029-F: Excess Acid Neutralising Capacity									
Excess Acid Neutralising Capacity (23Q)	----	0.020	% CaCO3		**0.739**	**0.259**	**----**	**0.762**	**----**
acidity - Excess Acid Neutralising Capacity (a-23Q)	----	10	mole H+ / t		**148**	**52**	**----**	**152**	**----**
sulfidic - Excess Acid Neutralising Capacity (s-23Q)	----	0.020	% S		**0.236**	**0.083**	**----**	**0.244**	**----**
EA029-H: 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