

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** N30 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	R. Moreton	Locality:	Rushy Lagoon, Near Gladstone
Date Desc.:	14/04/05	Elevation:	34 metres
Map Ref.:	GPS S.A. Off	Rainfall:	786
Northing/Long.:	5472388 AMG zone: 55	Runoff:	Slow
Easting/Lat.:	583943 Datum: GDA94	Drainage:	Imperfectly drained

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	Almost certain or certain
Geol. Ref.:	Qa	Substrate Material:	Soil pit, , Quartz

Landform

Rel/Slope Class:	Rolling low hills 30-90m 10-32%	Pattern Type:	Low hills
Morph. Type:	Lower-slope	Relief:	No Data
Elem. Type:	Drainage depression	Slope Category:	Very gently sloped
Slope:	5 %	Aspect:	200 degrees

Surface Soil Condition Firm

Erosion

Soil Classification

Australian Soil Classification:	Placic Humosequic Semiaquic Podosol Thick Non-gravelly Loamy Sandy Deep	Mapping Unit:	N/A
		Principal Profile Form:	N/A

ASC Confidence:	Analytical data are incomplete but reasonable confidence.	Great Soil Group:	N/A
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Site Disturbance

Vegetation

Surface Coarse Fragments No surface coarse fragments

Profile Morphology

A11	0 - 0.15 m	Black (10YR2/1-Moist); , 0-0% ; Sandy loam; Weak grade of structure, <2 mm, Polyhedral; Single grain
		grade of structure, <2 mm, Granular; Sandy (grains prominent) fabric; Moderately moist; Very weak
		consistence; Non-plastic; Slightly sticky; Field pH 5.4 (pH meter); Common, very fine (0-1mm) roots;
		Abrupt, Wavy change to -
A12	0.15 - 0.3 m	Very dark grey (10YR3/1-Moist); Grey (10YR5/1-Dry); , 10YR41, 0-2% , 0-5mm, Distinct; Loamy sand;
		Weak grade of structure, <2 mm, Polyhedral; Single grain grade of structure, <2 mm, Granular; Sandy
		(grains prominent) fabric; Moderately moist; Loose consistence; Non-plastic; Non-sticky; Field pH 4.7
		(pH meter); Common, very fine (0-1mm) roots; Clear, Smooth change to -
A2	0.3 - 0.6 m	Dark greyish brown (10YR4/2-Moist); , 10YR41, 0-2% , 0-5mm, Distinct; , 7.5YR46, 0-2% , 5-15mm,
		Distinct; Sand; Single grain grade of structure, <2 mm, Granular; ; Sandy (grains prominent) fabric;
		Moderately moist; Loose consistence; Non-plastic; Non-sticky; Field pH 4.7 (pH meter); Few, very fine
		(0-1mm) roots; Abrupt, Wavy change to -
B1hs	0.6 - 0.73 m	(7.5YR4/3-Moist); , 10YR43, 2-10% , 15-30mm, Prominent; Loam; Massive grade of structure; Earthy
		fabric; Wet; Weak consistence; Non-plastic; Slightly sticky; Very few (0 - 2 %), Ferruginous, Medium (2 -
		6 mm), Nodules; Ortstein, Moderately cemented, Continuous, Massive; Field pH 4.9 (pH meter); Few,
		fine (1-2mm) roots; Abrupt, Tongued change to -
B3	0.73 - m	Greyish brown (10YR5/2-Moist); , 7.5YR46, 2-10% , 30-mm, Prominent; Clayey sand; Massive grade of
		structure; Sandy (grains prominent) fabric; Wet; Loose consistence; Non-plastic; Slightly sticky; Field pH
		4.8 (pH meter);

Morphological Notes

A11 salinity measured at 0.5 dsm⁻¹. Non wetting properties. Penetration resistance: Soft
A12 salinity measured at 0 dsm⁻¹. Non wetting properties. Penetration resistance: Soft
A2 salinity measured at 0.0 dsm⁻¹. Penetration resistance: Soft
B1hs salinity measured at 0.1 dsm⁻¹. Penetration resistance: Firm. Sample N30C 60-73cm
B3 salinity measured at 0.0 dsm⁻¹. Water observed. Penetration resistance: Soft. N30D
sampled 80-100cm`

Observation Notes

Improved Pasture

Site Notes

Mode of Geomorphic Activity: Aggraded. Geomorphic agent: Wind. Inundation frequency: none.

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.075	4.9C 5.6A	0.223A	7.54A	3.72	0.26	0.81	0.168775D		12.56175B	
							0.12G 0.23175A			
0.2 - 0.275	4.5C 5.6A	0.045A	0.78A	0.29	0.03	0.12	0.155575D		1.42625B	
							0.09G 0.20625A			
0.6 - 0.73	4.4C 5.4A	0.053A	0.65A	0.45	0.03	0.2	0.44275D		3.9575B	
							2.1G 2.6275A			
0.8 - 1	4.5C 5.5A	0.035A	0.13A	0.11	0.03	0.08	0.1515D		1.1775B	
							0.59G 0.8275A			

Depth	CaCO3	Organic C Clay	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	%	mg/kg	%	%	%	Mg/m3	GV CS FS Silt
0 - 0.075		4.32B	26H		0.31D			
			19.9I					
0.2 - 0.275		0.55B	4H		0.05D			
			4.2I					
0.6 - 0.73		1.57B	3H		0.11D			
			2.7I					
0.8 - 1		0.12B	2H		0.02D			
			2.2I					

Laboratory Analyses Completed for this profile

10B_NR Extractable sulfur (mg/kg) - Not recorded
12_NR_FE Total element - Fe(%) - Not recorded
12A1_CU DTPA - extractable copper, zinc, manganese and iron
12A1_FE DTPA - extractable copper, zinc, manganese and iron
12A1_MN DTPA - extractable copper, zinc, manganese and iron
12A1_ZN DTPA - extractable copper, zinc, manganese and iron
12C1 Calcium chloride extractable boron - manual colour
15_NR_AL Aluminium Cation - meq per 100g of soil - Not recorded
15_NR_H Hydrogen Cation - meq per 100g of soil - Not recorded
15A1_CA Exchangeable bases (Ca²⁺,Mg²⁺,Na⁺,K⁺) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble salts
15A1_K Exchangeable bases (Ca²⁺,Mg²⁺,Na⁺,K⁺) - 1M ammonium chloride at pH 7.0, no pretreatment

for soluble	salts
15A1_MG	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_NA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15G_C_AL2	Exchangeable aluminium - meq per 100g of soil - Aluminium By KCl extraction and detremination
By AAS	
15G1	Exchange acidity (hydrogen and aluminium) by 1M potassium chloride
15J_H	Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen)
15N1	Exchangeable sodium percentage (ESP)
18A1	Bicarbonate-extractable potassium
3A1	EC of 1:5 soil/water extract

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4A1	pH of 1:5 soil/water suspension
4B2	pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1
6B2	Total organic carbon - high frequency induction furnace, volumetric
7A5	Total nitrogen - high frequency induction furnace, thermal conductivity
7C1a	Ammonium-N, in presence or absence of nitrite
7C1b	(Nitrate+nitrite)-N, in presence of nitrite
9B2_COL	Bicarbonate-extractable phosphorus - automated colour. Based on Colwell (1965). Method no
longer	
	recommended
9C2	Olsen-extractable phosphorus - automated colour