

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** C22 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By: R. Moreton John Grey	Locality: Green Acres, Near Montagu. Owned by
Date Desc.: 18/04/05	Elevation: 7 metres
Map Ref.: GPS S.A. Off	Rainfall: 1065
Northing/Long.: 5485666 AMG zone: 55	Runoff: Very slow
Easting/Lat.: 327609 Datum: GDA94	Drainage: Imperfectly drained

Geology

ExposureType: Soil pit	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: Qa	Substrate Material: Soil pit, No Data

Landform

Rel/Slope Class: Undulating rises 9-30m 3-10%	Pattern Type: Alluvial fan
Morph. Type: Flat	Relief: No Data
Elem. Type: Fan	Slope Category: Level
Slope: 1 %	Aspect: 5 degrees

Surface Soil Condition Firm

Erosion

Soil Classification

Australian Soil Classification: Basic Arenic Inceptic Tenosol Medium Non-gravelly Loamy Sandy Moderately deep	Mapping Unit: N/A
ASC Confidence: Analytical data are incomplete but reasonable confidence.	Principal Profile Form: N/A
Australian Soil Classification: Basic Arenic Black-Orthic Tenosol Medium Non-gravelly Loamy Sandy Moderately deep	Great Soil Group: N/A
ASC Confidence: Analytical data are incomplete but reasonable confidence.	Mapping Unit: N/A
	Principal Profile Form: N/A
	Great Soil Group: N/A

Site Disturbance

Vegetation

Surface Coarse Fragments 0-2%, cobbly, 60-200mm, ,

Profile Morphology

A1 0 - 0.2 m Polyhedral; Weak Very weak roots; Gradual,	Black (10YR2/1-Moist); , 0-0% ; Sandy loam; Moderate grade of structure, 5-10 mm, grade of structure, <2 mm, Polyhedral; Sandy (grains prominent) fabric; Moderately moist; consistence; Non-plastic; Slightly sticky; Field pH 6.6 (pH meter); Many, fine (1-2mm) Smooth change to -
A3 0.2 - 0.4 m Angular blocky; Few (<1 per plastic; Slightly Common, very	Black (10YR2/1-Moist); , 0-0% ; Sandy clay loam; Weak grade of structure, 50-100 mm, Weak grade of structure, 20-50 mm, Angular blocky; Sandy (grains prominent) fabric; 100mm2) Fine (1-2mm) macropores, Moderately moist; Very weak consistence; Non-sticky; Cultivation pan, Uncemented, Continuous, Concretionary; Field pH 6.6 (pH meter); fine (0-1mm) roots; Clear, Smooth change to -
2B1 0.4 - 0.52 m prominent) consistence; Continuous, Massive;	Black (10YR2/1-Moist); , 0-0% ; Silty clay loam; Massive grade of structure; Sandy (grains fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very weak Slightly plastic; Normal plasticity; Slightly sticky; Organic pan, Weakly cemented, Field pH 6.8 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
2B2 0.52 - 0.75 m of structure; Moderately moist;	Black (10YR2/1-Moist); , 10YR51, 0-2% , 5-15mm, Distinct; Clayey sand; Massive grade of structure; Sandy (grains prominent) fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Very weak consistence; Non-plastic; Slightly sticky; Field pH 6.9 (pH meter); Few, very

fine (0-1mm)

roots; Clear, Smooth change to -

2BC 0.75 - 1.1 m
(grains prominent)

Dark grey (10YR4/1-Moist); , 0-0% ; Clayey sand; Massive grade of structure; Sandy fabric; Moist; Very weak consistence; Non-plastic; Slightly sticky; Field pH 7 (pH meter);

Morphological Notes

A1
A3
from

Penetration Resisance: soft, Salinity measure in dSm⁻¹ 0
Penetration Resisance: stiff, Salinity measure in dSm⁻¹ 0. Appeared to be compacted tramping or Machinery

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2B1 Penetration Resistance: stiff, Salinity measure in dSm⁻¹ 0
 2B2 Penetration Resistance: stiff, Salinity measure in dSm⁻¹ 0
 2BC Penetration Resistance: soft, Salinity measure in dSm⁻¹ 0.1

Observation Notes

Vegetation Type was Irrigated Pasture. Site was humped and hollowed

Site Notes

Mode of Geomorphic Activity: Aggraded. Agent: Wind. Inundation frequency: None.

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Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.075	5.4C 6.2A	0.168A	12.35A	5.51	0.31	0.53	0D 0.37G 0A		18.7B	
0.2 - 0.275	5.7C 6.6A	0.092A	13.12A	5.31	0.19	0.47	0D 0G 0A		19.09B	
0.4 - 0.52	6.6C 7.2A	0.102A	11.29A	4.21	0.14	0.45	0.134125D 0G		16.22925B	
0.52 - 0.75	6.2C 6.8A	0.087A	7.18A	3.29	0.09	0.34	0.13925A 0.08D 0G 0.09A		10.99B	

Depth m	CaCO3 %	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle GV CS	Size FS	Analysis Silt
0 - 0.075		4.89B	87H 0I		0.52D					
0.2 - 0.275		2.69B	10H 0I		0.21D					
0.4 - 0.52		1.57B	8H 4I		0.16D					
0.52 - 0.75		0.77B	4H 2.3I		0.09D					

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 for soluble	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_K for soluble	salts Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_MG	salts 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