

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** N8 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	R. Moreton	Locality:	Oakdene, near Perth
Date Desc.:	24/08/04	Elevation:	160 metres
Map Ref.:	GPS S.A. Off	Rainfall:	630
Northing/Long.:	5390005 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	520438 Datum: GDA94	Drainage:	Poorly drained

Geology

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

Landform

Rel/Slope Class:	Level plain <9m <1%	Pattern Type:	Alluvial plain
Morph. Type:	Flat	Relief:	No Data
Elem. Type:	Terrace plain	Slope Category:	Level
Slope:	1 %	Aspect:	45 degrees

Surface Soil Condition Soft

Erosion

Soil Classification

Australian Soil Classification:	Eutrophic Mottled-Subnatric Grey Sodosol Medium Non-gravelly Silty Clayey Deep	Mapping Unit:	N/A
ASC Confidence:	Analytical data are incomplete but reasonable confidence.	Principal Profile Form:	N/A
		Great Soil Group:	N/A

Site Disturbance

Vegetation

Surface Coarse Fragments No surface coarse fragments

Profile Morphology

A1	0 - 0.07 m	Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Silty loam; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Fine (1-2mm) macropores, Moist; Weak consistence; Slightly plastic; Moderately sticky; Field pH 6.6 (pH meter); Few, fine (1-2mm) roots; Sharp, Smooth change to -
A2	0.07 - 0.11 m	Brown (10YR5/3-Moist); Mottles, 10YR56, 0-2% , 0-5mm, Faint; Silty clay loam (Light); Massive grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, macropores, Moist; Very weak consistence; Non-plastic; Very sticky; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Concretions; Densipan, Moderately cemented, Discontinuous, Massive; Field pH 5.4 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
B1	0.11 - 0.2 m	Brown (10YR4/3-Moist); Mottles, 10YR56, 0-2% , 5-15mm, Faint; Light clay (Light); Strong grade of structure, 20-50 mm, Angular blocky; Moderate grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moist; Firm consistence; Very plastic; Moderately sticky; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.8 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Irregular change to -
B21	0.2 - 0.9 m	Greyish brown (10YR5/2-Moist); Mottles, 10R48, 20-50% , 15-30mm, Distinct; Light clay; Massive grade of structure; Smooth-ped fabric; Moist; Very firm consistence; Very plastic; Very sticky; Field pH 5.7 (pH meter); Gradual, Irregular change to -
B22	0.9 - 1.15 m	Greyish brown (10YR5/2-Moist); Mottles, 10R48, 10-20% , 15-30mm, Distinct; Light clay;

Massive grade
 Field pH 5.3 (pH meter); Gradual, Irregular change to -
 B3 1.15 - 1.6 m Brown (10YR4/3-Moist); Mottles, 10R48, 10-20% , 5-15mm, Distinct; Medium clay (Light);
 Massive grade of structure; Smooth-ped fabric; Moist; Very firm consistence; Very plastic; Very sticky; Field pH 4.7 (pH meter);

Morphological Notes

A1 Grtitty silty loam texture. Salinity measure in dSm⁻¹ 0.1. Emerson Dispersion none
 A2 Grtitty silty clay loam texture. Salinity measure in dSm⁻¹ 0.0.
 B1 Salinity measure in dSm⁻¹ 0.1. Emerson Dispersion slaked and dispersed. sampled N8C sampled 11-20cm
 B21 Salinity measure in dSm⁻¹ 0.1. Sample N8D sampled 25-85cm
 B22 Salinity measure in dSm⁻¹ 0.4. Emerson Dispersion dispersed
 B3 Salinity measure in dSm⁻¹ 0.9. Emerson dispersion: slaked

Observation Notes

Clay substrate <0.06mm grain size with massive structure and moderate strength. Amorphous texture. Brumby Soil Class. Vegetation: Turnip, Fodder Crop. Land System 393121.

Site Notes

Element Slope Class is level (<1%). Geomorphic activity is aggraded with Sheet Wash the geomorphic agent.

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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	5.5C 6A	0.136A	6.97A	1.16	0.38	0.17	0.19D 0G 0.21A		8.89B	
0.11 - 0.2	4.6C 5.8A	0.093A	5.58A	11.72	0.33	1.17	0.328D 0.3G 1.583A		20.383B	
0.175 - 0.225	4.3C 5.3A	0.057A	1.74A	1.34	0.26	0.18	0.34D 0.07G 0.72A		4.24B	
0.25 - 0.85	4.6C 5.7A	0.111A	3.68A	12	0.29	1.96	0.435D 0.54G 2.193A		20.123B	

Depth m	CaCO ₃ %	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m ³	Particle GV CS FS Silt %
0 - 0.075		3.62B	93H 44.5I		0.3D			
0.11 - 0.2		0.87B	2H 1.3I		0.11D			
0.175 - 0.225		0.7B	20H 6.5I		0.04D			
0.25 - 0.85		0.67B	2H 1.3I		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	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_K	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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
4A1	pH of 1:5 soil/water suspension

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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