Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **N13** **Observation ID:** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

Site Information

Desc. By: R. Moreton **Locality:** Property: St Ewarton, owned by James Walch. Near Epping Forest
Date Desc.: 26/07/05 **Elevation:** 158 metres
Map Ref.: GPS S.A. Off **Rainfall:** 557
Northing/Long.: 5368406 AMG zone: 55 **Runoff:** Moderately rapid
Easting/Lat.: 522341 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, Alluvium

Landform

Rel/Slope Class: Gently undulating plains <9m 1-3% **Pattern Type:** Plain

Morph. Type: Flat **Relief:** No Data
Elem. Type: Plain **Slope Category:** Level
Slope: % **Aspect:** No Data

Surface Soil Condition

Firm

Erosion

Soil Classification

Australian Soil Classification: Eutrophic Subnatric Brown Sodosol Medium Non-gravelly Loamy Clayey Deep
Mapping Unit: N/A
Principal Profile Form: N/A
ASC Confidence: All necessary analytical data are available.
Great Soil Group: N/A

Site Disturbance

Vegetation

Surface Coarse Fragments

No surface coarse fragments

Profile Morphology

Ap 0 - 0.21 m Very dark brown (10YR2/2-Moist); , 0-0% ; Sandy loam; Weak grade of structure, 5-10 mm, Subangular blocky; Weak grade of structure, 2-5 mm, Polyhedral; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Very weak consistence; Non-plastic; Non-sticky; Field pH 6.7 (pH meter); Common, very fine (0-1mm) roots; Abrupt, Wavy change to -

A2c 0.21 - 0.37 m Brown (10YR4/3-Moist); Mottles, 10YR32, 2-10% , 30-mm, Prominent; Loamy sand (Light); Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Loose consistence; Non-plastic; Non-sticky; Very many (50 - 100 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Field pH 6.6 (pH meter); Few, very fine (0-1mm) roots; Sharp, Wavy change to -

B1t 0.37 - 0.57 m Dark yellowish brown (10YR4/6-Moist); Mottles, 10YR32, 0-2% , 5-15mm, Prominent; Light clay; Moderate grade of structure, 5-10 mm, Angular blocky; Moderate grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Moist; Firm consistence; Very plastic; Normal plasticity; Moderately sticky; Common cutans, 10-50% of ped faces or walls coated, prominent; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Field pH 6.6 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -

B21t 0.57 - 0.68 m Dark yellowish brown (10YR4/4-Moist); Mottles, 7.5YR46, 2-10% , 15-30mm, Distinct; Light clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Moist; Very firm consistence; Very plastic; Normal plasticity; Moderately sticky; Few cutans, <10% of ped faces or walls

coated, distinct;
Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Field pH 7.2 (pH meter); Few,
very fine (0-1mm) roots; Clear, Smooth change to -

B3 0.68 - 1 m Dark yellowish brown (10YR4/4-Moist); Mottles, 10YR46, 10-20% , 5-15mm, Prominent; Sandy light clay;
Massive grade of structure; Earthy fabric; Moist; Strong consistence; Moderately plastic; Normal
plasticity; Moderately sticky; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Soft
segregations; Field pH 7.9 (pH meter);

Morphological Notes

A2c Light gravelly Loamy Sand

B1t Salinity 0.1 dSm-1. Soils sampled 37-57cm labelled N13C. Colour of Clayskins was 2.5Y33

B21t Salinity 0.1 dSm-1. Sandy Lense. Soil sampled 57-68cm, labelled N13D. Colour of Clayskins
10YR34

B3 Salinity 0.1 dSm-1. Sandy Lense. Soil sampled 68-95 cm, labelled N13E

Observation Notes

Vegetation: Improved Pasture.

Site Notes

Mode of Geomorphic Avtivity: Erroded or aggraded. Inundation frequency: none.

Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **N13** **Observation** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations Ca	Mg	K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.075	5.4C 6.2A	0.106A	3.34A	0.64	0.45	0.14	0.05D 0.02G 0.08A		4.65B	
0.2 - 0.275	4.7C 5.6A	0.044A	1.31A	0.64	0.18	0.15	0.13D 0.08G 0.31A		2.59B	
0.37 - 0.57	6.1C 6.7A	0.149A	6.83A	9.36	0.79	2.15	0.0221325 D 0G 0.04475A		19.17475B	
0.57 - 0.68	6.6C 7.5A	0.123A	4.74A	6.81	0.51	1.92	0.01D 0G 0.02A		14B	
0.68 - 0.95	7.1C 8A	0.14A	4.3A	6.72	0.43	2.38	0.01D 0G 0.02A		13.85B	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt
		Clay									
m	%	%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.075		1.44B	217H 72.2I		0.12D						
0.2 - 0.275		0.67B	43H 17.6I		0.04D						
0.37 - 0.57		0.76B	3H 1.6I		0.1D						
0.57 - 0.68		0.44B	3H 1.6I		0.06D						
0.68 - 0.95		0.37B	2H 1.1I		0.05D						

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 (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts
15A1_NA	Exchangeable bases (Ca2+,Mg2+,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

Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **N13** **Observation** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

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
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