Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **N11** **Observation ID:** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

Site Information

Desc. By:	R. Moreton	**Locality:**	Nearest town, Wynaleah.
Date Desc.:	12/07/05	**Elevation:**	171 metres
Map Ref.:	GPS S.A. Off	**Rainfall:**	1066
Northing/Long.:	5453503 AMG zone: 55	**Runoff:**	Moderately rapid
Easting/Lat.:	573178 Datum: GDA94	**Drainage:**	Moderately well drained

Geology

ExposureType:	Soil pit	**Conf. Sub. is Parent. Mat.:**	Almost certain or certain
Geol. Ref.:	Tb	**Substrate Material:**	Soil pit, No Data

Landform

Rel/Slope Class: Undulating low hills 30-90m 3-10% **Pattern Type:** Hills

Morph. Type:	Simple-slope	**Relief:**	No Data
Elem. Type:	Hillslope	**Slope Category:**	Very gently sloped
Slope:	2 %	**Aspect:**	250 degrees

Surface Soil Condition

Soft

Erosion

Stable, Minor (sheet)

Soil Classification

Australian Soil Classification:
Ferric-Sodic Dystrophic Brown Dermosol Medium Slightly gravelly Clay-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

0-2%, cobbly, 60-200mm, ,

Profile Morphology

A1 0 - 0.19 m Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Clay loam; Moderate grade of structure, 5-10 mm, Angular blocky; Moderate grade of structure, 2-5 mm, Angular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Very weak consistence; Moderately plastic; Normal plasticity; Slightly sticky; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Basalt, coarse fragments; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Cultivation pan, Weakly cemented, Continuous, Massive; Field pH 6.8 (pH meter); Common, very fine (0-1mm) roots; Clear, Irregular change to -

B11 0.19 - 0.35 m Brown (10YR4/3-Moist); Mottles, 10YR44, 2-10% , 5-15mm, Distinct; Silty clay loam; Moderate grade of structure, 2-5 mm, Angular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Slightly plastic; Normal plasticity; Moderately sticky; Common (10 - 20 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH 6.9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Wavy change to -

B12 0.35 - 0.85 m Dark greyish brown (10YR4/2-Moist); Mottles, 10YR44, 0-2% , 5-15mm, Distinct; Light clay; Moderate grade of structure, 2-5 mm, Angular blocky; Rough-ped fabric; Moist; Weak consistence; Slightly plastic; Normal plasticity; Moderately sticky; Common (10 - 20 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH 6.4 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -

B2 0.85 - 1.1 m Dark yellowish brown (10YR4/4-Moist); Mottles, 10YR46, 0-2% , 5-15mm, Distinct; Light clay; Weak grade of structure, 2-5 mm, Angular blocky; Rough-ped fabric; Moist; Weak consistence; Slightly plastic;

Normal plasticity; Slightly sticky; Many (20 - 50 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH
6.6 (pH meter);

Morphological Notes

A1	EC, 0.2 dS/m.
B11	EC, 0.0 dS/m.
B12	EC, 0.0 dS/m. Sampled from .35 to .85m, Label N11C.
B2	EC, 0.0 dS/m. Sampled from .85 to 1.10m, Label N11D.

Observation Notes

The abundance of Pedogenic Segregations increases with depth.

Site Notes

Property owner, Frank Wagner.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.075	4.9C 5.8A	0.109A	6.6A	1.69	0.56	0.15	0.23D 0.05G 0.31A		9.31B	
0.2 - 0.275	4.6C 5.5A	0.063A	4.32A	0.83	0.21	0.12	0.24D 0.12G 0.52A		6B	
0.4 - 0.8	4.7C 5.1A	0.047A	0.42A	0.34	0.06	0.1	0.4175D 0.37G 1.13775A		2.05775B	
0.85 - 1.1	4.7C 5.2A	0.046A	0.65A	0.68	0.06	0.15	0.07625D 0.15G 0.498A		2.038B	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis			
		Clay						GV	CS	FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.075		3.77B	62H 27.4I		0.3D						
0.2 - 0.275		2.59B	38H 16.2I		0.22D						
0.4 - 0.8		0.79B	8H 3I		0.06D						
0.85 - 1.1		0.56B	6H 2.6I		0.08D						

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
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