

**Project Name:** SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania  
**Project Code:** SCEAM **Site ID:** S15 **Observation ID:** 1  
**Agency Name:** TAS Department of Primary Industries and Fisheries

#### Site Information

<b>Desc. By:</b>	R. Moreton	<b>Locality:</b>	Cawood, Near Ouse
<b>Date Desc.:</b>	09/03/06	<b>Elevation:</b>	140 metres
<b>Map Ref.:</b>	GPS S.A. Off	<b>Rainfall:</b>	600
<b>Northing/Long.:</b>	5297924 AMG zone: 55	<b>Runoff:</b>	Moderately rapid
<b>Easting/Lat.:</b>	478187 Datum: GDA94	<b>Drainage:</b>	No Data

#### Geology

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

#### Landform

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

<b>Morph. Type:</b>	Mid-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	Gently inclined
<b>Slope:</b>	4 %	<b>Aspect:</b>	210 degrees

#### Surface Soil Condition Firm

**Erosion** Stable, Minor (rill)

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Mottled Mesotrophic Brown Chromosol Thick Non-gravelly Loamy Clayey Very deep	<b>Principal Profile Form:</b>	N/A
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	N/A
Analytical data are incomplete but reasonable confidence.		

#### Site Disturbance

#### Vegetation

#### Surface Coarse Fragments No surface coarse fragments

#### Profile Morphology

Ap	0 - 0.12 m	Brown (10YR4/3-Moist); , 0-0% ; Sandy loam; Weak grade of structure, 10-20 mm, Subangular blocky;
		Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Non-plastic; Non-sticky;
		Common, very fine (0-1mm) roots; Abrupt change to -
A12	0.12 - 0.21 m	Brown (10YR4/3-Moist); , 0-0% ; Sandy loam (Heavy); Massive grade of structure; Earthy fabric; Few
		(<1 per 100mm2) Fine (1-2mm) macropores, Dry; Weak consistence; Non-plastic; Non-sticky; Common,
		very fine (0-1mm) roots; Clear change to -
A13	0.21 - 0.34 m	Brown (10YR4/3-Moist); Mechanical, 2-10% , 0-5mm, Faint; Sandy loam (Heavy);
		Massive grade of structure; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry;
		Weak consistence; Non-plastic; Slightly sticky; Very few (0 - 2 %), Ferromanganiferous, Medium
		(2 -6 mm), Nodules; Common, very fine (0-1mm) roots; Clear change to -
A2	0.34 - 0.65 m	Dark yellowish brown (10YR4/4-Moist); Brownish yellow (10YR6/6-Dry); Mechanical, 2-10% , 0-5mm,
		Faint; Clayey sand; Massive grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2)
		Very fine (0.075-1mm) macropores, Dry; Very weak consistence; Non-plastic; Non-sticky; Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Few, fine (1-2mm) roots; Sharp
		change to -
B2	0.65 - 0.97 m	Strong brown (7.5YR4/6-Moist); Mottles, 10YR32, 10-20% , 15-30mm, Distinct; Medium clay; Strong
		grade of structure, 50-100 mm, Prismatic; Smooth-ped fabric; Moderately moist; Very firm consistence;
		Very plastic; Normal plasticity; Moderately sticky; Many (20 - 50 %), Ferromanganiferous, , Laminae;
		Few, very fine (0-1mm) roots;

**Morphological Notes**

B2 Medium Clay, Fine Sand. Pedogenic segregations extensive over ped faces.

**Observation Notes**

Substrate not reached. Vegetation: Rye Grass

**Site Notes**

Mode of geomorphic Activity: Eroded. Geomorphic agent: Soil Creep 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	5.3C 6A	0.065A	6.18A	2.3	0.66	0.17	0.15D 0.02G 0.18A		9.49B	
0.12 - 0.21	4.6C 5.4A	0.047A	4.06A	1.04	0.73	0.08	0.16D 0.36G 0.44A		6.35B	
0.2 - 0.275	5.1C 6A	0.039A	5.08A	1.33	0.23	0.15	0.01D 0.03G 0.06A		6.85B	
0.34 - 0.65	5.9C 6.5A	0.05A	5.44A	1.57	0.31	0.14	0D 0G 0A		7.46B	
0.65 - 0.97	6.5C 7.8A	0.064A	9.32A	11.18	0.34	0.88	0.01D 0G 0.02A		21.74B	

Depth	CaCO <sub>3</sub>	Organic C Clay	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	%	mg/kg	%	%	%	Mg/m <sup>3</sup>	GV CS FS Silt
0 - 0.075		1.49B	88H 44.5I		0.12D			
0.12 - 0.21		1.43B	171H 62.9I		0.13D			
0.2 - 0.275		0.65B	43H 16.7I		0.09D			
0.34 - 0.65		0.33B	14H 6.3I		0.04D			
0.65 - 0.97		0.32B	2H 1I		0.04D			

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

15A1_NA for soluble	salts Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment
15G_C_AL2 By AAS	salts Exchangeable aluminium - meq per 100g of soil - Aluminium By KCl extraction and determination
15G1	Exchange acidity (hydrogen and aluminium) by 1M potassium chloride

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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