

**Project Name:** SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania  
**Project Code:** SCEAM **Site ID:** C11 **Observation ID:** 1  
**Agency Name:** TAS Department of Primary Industries and Fisheries

#### Site Information

<b>Desc. By:</b>	R. Moreton	<b>Locality:</b>	
<b>Date Desc.:</b>	29/08/05	<b>Elevation:</b>	86 metres
<b>Map Ref.:</b>	GPS S.A. Off	<b>Rainfall:</b>	1097
<b>Northing/Long.:</b>	5466456 AMG zone: 55	<b>Runoff:</b>	Moderately rapid
<b>Easting/Lat.:</b>	387580 Datum: GDA94	<b>Drainage:</b>	Well drained

#### Geology

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

#### Landform

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

<b>Morph. Type:</b>	Upper-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	Gently inclined
<b>Slope:</b>	9 %	<b>Aspect:</b>	360 degrees

#### Surface Soil Condition Soft

#### Erosion Partial, Minor (sheet)

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Eutrophic Haplic Red Ferrosol Medium Medium Non-gravelly Clay-loamy Clayey	<b>Principal Profile Form:</b>	N/A
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	N/A
All necessary analytical data are available.		

#### Site Disturbance

#### Vegetation

#### Surface Coarse Fragments No surface coarse fragments

#### Profile Morphology

Ap	0 - 0.25 m	Dark reddish brown (5YR3/3-Moist); , 0-0% ; Strong grade of structure, 20-50 mm, Platy; Moderate
		grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Few (<1 per 100mm2)
		(0.075-1mm) macropores, Moderately moist; Weak consistence; Few, very fine (0-1mm)
		Irregular change to -
B1	0.25 - 0.8 m	Dark reddish brown (5YR3/4-Moist); Mottles, 5YR56, 0-2% , 0-5mm, Faint; Strong grade of structure,
		50-100 mm, Platy; Moderate grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric;
		100mm2) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Few cutans,
		or walls coated, distinct; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft
		very fine (0-1mm) roots; Diffuse, Smooth change to -
B2	0.8 - 1 m	Dark red (2.5YR3/6-Moist); Substrate influence, 7.5YR46, 0-2% , 5-15mm, Distinct;
		structure, 50-100 mm, Platy; Moderate grade of structure, 5-10 mm, Angular blocky;
		Moist; Very weak consistence; 0-2%, medium gravelly, 6-20mm, subrounded, dispersed,
		fragments; Common cutans, 10-50% of ped faces or walls coated, distinct;

#### Morphological Notes

Ap	Evidence of compaction in AP Horizon. Penetration reistance: Soft
B1	Penetration reistance: Stiff. Slicken Sides (K) of Peds colour 5YR34. Evidence of compaction in
	B1 Horizon. Sampled from .25 to .50, Label C11C and .50 to .80, Label C11D.
B2	Penetration reistance: Stiff. Slicken Sides (K) of Peds colour 5YR36. Evidence of compaction in
	B2 Horizon. Sampled from .80 to 1.00m, Label C11E.

### Observation Notes

Site cultivated. No vegetation at time of observation. Substrate not reached during Soil Pit observation but likely to be Tertiary Basalt (BA).  
Soil Class is Lapoinya.

### Site Notes

Property owner, Phillip Beswick. Element Slop Class: Gentle (3-10%). Mode of geomorphic Activity is Eroded.  
Geomorphic agent is  
Volcanic. Inundation frequency was no inundation.

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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	5.2C 5.9A	0.083A	9.08A	3.07	0.97	0.24	0.15D 0.05G 0.2A		13.56B	
0.2 - 0.275	5.4C 6A	0.071A	7.81A	2.98	0.39	0.28	0.05D 0.03G 0.15A		11.61B	
0.25 - 0.5	6C 6.3A	0.115A	6.62A	2.02	0.11	0.35	0.01D 0G 0.0226125 A		9.122613B	
0.5 - 0.8	6.1C 6.2A	0.143A	6.47A	1.83	0.1	0.3	0.01D 0G 0.016475A		8.716475B	
0.8 - 1	6.1C 6.2A	0.119A	5.98A	2.15	0.1	0.31	0.01D 0G 0.019545A		8.559545B	

Depth	CaCO3	Organic C Clay	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	%	mg/kg	%	%	%	Mg/m3	GV CS FS Silt
0 - 0.075		3.33B	240H 0I		0.33D			
0.2 - 0.275		2.19B	42H 7.8I		0.2D			
0.25 - 0.5		0.89B	6H 1.9I		0.09D			
0.5 - 0.8		0.85B	7H 2I		0.08D			
0.8 - 1		0.92B	7H 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 (Ca<sup>2+</sup>, Mg<sup>2+</sup>, Na<sup>+</sup>, K<sup>+</sup>) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts

15A1_K 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 salts
15A1_MG 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 salts
15A1_NA 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 salts

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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
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