

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** C2 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	R. Moreton	Locality:	David Chaplin, near Wesley Vale
Date Desc.:	07/06/06	Elevation:	103 metres
Map Ref.:	GPS S.A. Off	Rainfall:	828
Northing/Long.:	5439952 AMG zone: 55	Runoff:	Moderately rapid
Easting/Lat.:	458239 Datum: GDA94	Drainage:	Well drained

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	Almost certain or certain
Geol. Ref.:	Tb	Substrate Material:	Soil pit, , Basalt

Landform

Rel/Slope Class:	Rolling low hills 30-90m 10-32%	Pattern Type:	Hills
Morph. Type:	Lower-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	Gently inclined
Slope:	13 %	Aspect:	140 degrees

Surface Soil Condition Soft

Erosion

Soil Classification

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

Site Disturbance

Vegetation

Surface Coarse Fragments No surface coarse fragments

Profile Morphology

A11	0 - 0.07 m	(/-Moist); , 0-0% ; Clay loam; Moderate grade of structure, <2 mm, Polyhedral; Rough-ped fabric; Few
Normal		(<1 per 100mm ²) Very fine (0.075-1mm) macropores, Weak consistence; Slightly plastic; plasticity; Moderately sticky; Few, very fine (0-1mm) roots; Clear, Smooth change to -
A12	0.07 - 0.3 m	(/-Moist); Mottles, 5YR34, 0-2% , 0-5mm, Faint; Clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Few
Normal		(<1 per 100mm ²) Very fine (0.075-1mm) macropores, Weak consistence; Slightly plastic; plasticity; Very sticky; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A3	0.3 - 0.48 m	(/-Moist); , 0-0% ; Clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Few (<1 per 100mm ²)
Very fine		(0.075-1mm) macropores, Weak consistence; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Few, very fine (0-1mm) roots; Clear, Smooth change to -
B1	0.48 - 0.64 m	Dark reddish brown (5YR3/3-Moist); , 0-0% ; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Moderate grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Weak
Weak		consistence; Gradual, Smooth change to -
B2	0.64 - 1.1 m	Dark reddish brown (5YR3/4-Moist); , 0-0% ; Clay loam; Moderate grade of structure, 20-50 mm, Lenticular; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Weak
consistence;		

Morphological Notes

A3 Charcoal fragments, <2mm in A3

Observation Notes

Vegetation was Broccoli Crop, Just picked. No inundation.

Site Notes

Mode of Geomorphic Activity: Aggraded. Geomorphic Agent: Channeled Stream.

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Cations		Na	Exchangeable	CEC	ECEC	ESP
m		dS/m		Mg	K	Cmol (+)/kg	Acidity			%
0 - 0.075	4.8C 5.6A	0.09A	11.9A	2.56	1.18	0.21	0.4D 0.36G 0.63A		16.48B	
0.2 - 0.275	5C 5.8A	0.101A	14.4A	2.76	0.88	0.29	0.1D 0G 0.15A		18.48B	
0.3 - 0.48	5.2C 5.9A	0.096A	18.31A	2.11	0.21	0.45	0.01D 0.06G 0.11A		21.19B	
0.48 - 0.64	5.6C 6.2A	0.159A	14.1A	2.14	0.2	0.57	0.01D 0G 0.03A		17.04B	
0.64 - 0.94	5.9C 6.2A	0.158A	8.8A	1.92	0.17	0.53	0.01D 0G 0.03A		11.45B	
0.94 - 0.11	6.1C 6.5A	0.164A	7.52A	2.22	0.15	0.47	0.01D 0G 0.03A		10.39B	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	Clay %	mg/kg	%	%	%	Mg/m3	GV CS FS Silt
0 - 0.075		4.15B	224H			0.33D		
0.2 - 0.275		4.21B	82.8I 234H			0.33D		
0.3 - 0.48		3.24B	68.4I 53H			0.3D		
0.48 - 0.64		1.17B	16.3I 18H			0.22D		
0.64 - 0.94		0.64B	5.8I 16H			0.15D		
0.94 - 0.11		0.47B	4.9I 14H			0.11D		
			3.3I					

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 (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_K for soluble	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
	salts

15A1_MG
for soluble

Exchangeable bases (Ca^{2+} , Mg^{2+} , Na^{+} , K^{+}) - 1M ammonium chloride at pH 7.0, no pretreatment
salts

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15A1_NA for soluble	Exchangeable bases (Ca ²⁺ , Mg ²⁺ , Na ⁺ , K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15G_C_AL2 By AAS	Exchangeable aluminium - meq per 100g of soil - Aluminium By KCl extraction and detremination
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 longer	Bicarbonate-extractable phosphorus - automated colour. Based on Colwell (1965). Method no
	recommended
9C2	Olsen-extractable phosphorus - automated colour