

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** C34 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	H. Hawkins	Locality:	Windmill Paddock, on Woodscote near Wesley Vale
Date Desc.:	28/08/06	Elevation:	132 metres
Map Ref.:	GPS S.A. Off	Rainfall:	874
Northing/Long.:	5440531 AMG zone: 55	Runoff:	Rapid
Easting/Lat.:	457192 Datum: GDA94	Drainage:	Well drained

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Tb	Substrate Material:	Soil pit, Basalt

Landform

Rel/Slope Class:	Rolling low hills 30-90m 10-32%	Pattern Type:	Low hills
Morph. Type:	Mid-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	Moderately inclined
Slope:	21 %	Aspect:	No Data

Surface Soil Condition Recently cultivated

Erosion

Soil Classification

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

Site Disturbance

Vegetation

Surface Coarse Fragments No surface coarse fragments

Profile Morphology

A1p	0 - 0.22 m	Dark reddish brown (2.5YR2/3-Moist); , 0-0% ; Loam; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Slightly plastic; Normal plasticity; Slightly sticky; Few cutans, <10% of ped faces or walls coated, distinct; Many, very fine (0-1mm) roots; Abrupt, Wavy change to -
B21t	0.22 - 0.78 m	Dark reddish brown (2.5YR2/3-Moist); , 0-0% ; Clay loam; Moderate grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 2-5 mm, Prismatic; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Slightly plastic; Normal plasticity; Slightly sticky; Common cutans, 10-50% of ped faces or walls coated, distinct; Common, very fine (0-1mm) roots; Few, coarse (>5mm) roots; Clear, Wavy change to -
B22t	0.78 - 1 m	Dark reddish brown (2.5YR2/3-Moist); , 0-0% ; Clay loam; Moderate grade of structure, 10-20 mm, Prismatic; Moderate grade of structure, 2-5 mm, Prismatic; Earthy fabric; Moderately moist; Weak consistence; Slightly plastic; Normal plasticity; Slightly sticky; Few, coarse (>5mm) roots;

Morphological Notes

A1p	C34A sampled 0-75mm
B21t	Colour of Clay Skins coating Ped Faces: 2.5YR 2.5/4. C34B sampled 200-275mm, C34C sampled 300-600mm, C34D sampled 600-780mm
B22t	Colour of Clay Skins coating Ped Faces: 2.5YR 2.5/4. C34E sampled 7800-1000mm

Observation Notes

When pitted Stuart was about to sow peas

Site Notes

Mode of Geomorphi Activity: Eroded or Aggraded, Geomorphic Agent: Sheet Wash. 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	5.2C 5.9A	0.139A	13.89A	2.37	1.42	0.43	0.01D 0.1G 0.16A		18.27B	
0.2 - 0.275	5.2C 5.9A	0.144A	14.64A	2.49	1.42	0.47	0.01D 0.12G 0.15A		19.17B	
0.3 - 0.6	4.3C 4.8A	0.136A	2.59A	0.87	0.48	0.33	0.22D 1.36G 2.26A		6.53B	
0.6 - 0.78	4.5C 4.8A	0.145A	2.19A	0.84	0.38	0.32	0.42D 1.85G 2.61A		6.34B	
0.78 - 1	4.4C 4.5A	0.137A	1.53A	0.58	0.19	0.35	0.54D 3.4G 3.62A		6.27B	

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		7.99B	154H 40.9I		0.55D			
0.2 - 0.275		8.86B	140H 39.1I		0.57D			
0.3 - 0.6		1.38B	6H 1.2I		0.09D			
0.6 - 0.78		0.74B	3H 0.1I		0.06D			
0.78 - 1		0.62B	3H 0.6I		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 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
15A1_MG for soluble	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_NA for soluble	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 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 detremination

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