

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** C8 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	D.B. Kidd	Locality:	Near upper Barr
Date Desc.:	25/08/05	Elevation:	246 metres
Map Ref.:	GPS S.A. Off	Rainfall:	1166
Northing/Long.:	5426753 AMG zone: 55	Runoff:	Moderately rapid
Easting/Lat.:	438979 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, 1.2 m deep,, Basalt

Landform

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

Morph. Type:	Lower-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	Gently inclined
Slope:	7 %	Aspect:	1 degrees

Surface Soil Condition Soft

Erosion Partial, Minor (rill)

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Acidic Eutrophic Red Ferrosol Medium Non-gravelly Clay-loamy Clayey Deep	Principal Profile Form:	N/A
ASC Confidence:	Great Soil Group:	N/A
Analytical data are incomplete but reasonable confidence.		

Site Disturbance

Vegetation

Surface Coarse Fragments 0-2%, cobbly, 60-200mm, ,

Profile Morphology

Ap	0 - 0.17 m	Dark brown (7.5YR3/4-Moist); , 0-0% ; Clay loam; Weak grade of structure, 20-50 mm, Prismatic; Weak
		grade of structure, 5-10 mm, Granular; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2)
		Fine (1-2mm) macropores, Moderately moist; Weak consistence; Moderately plastic;
Subplastic; Slightly		sticky; 0-2%, coarse gravelly, 20-60mm, subrounded, dispersed, Basalt, coarse
fragments; Cultivation		pan, Weakly cemented, Continuous, Massive; Few, very fine (0-1mm) roots; Gradual,
Smooth change to -		
AB	0.17 - 0.32 m	Dark reddish brown (5YR3/4-Moist); , 0-0% ; Light clay; Moderate grade of structure, 20-50 mm,
		Prismatic; Weak grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack;
		Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak
consistence;		Moderately plastic; Subplastic; Slightly sticky; 0-2%, coarse gravelly, 20-60mm,
subrounded, dispersed,		Basalt, coarse fragments; Cultivation pan, Weakly cemented, Continuous, Massive; Few,
very fine (0-		1mm) roots; Gradual, Smooth change to -
B21	0.32 - 0.6 m	(/-Moist); , 0-0% ; Light clay; Moderate grade of structure, 20-50 mm, Polyhedral;
Moderate grade of		structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very
fine (0.075-1mm)		macropores, Moderately moist; Weak consistence; Moderately plastic; Subplastic;
Moderately sticky; 2-		10%, cobbly, 60-200mm, subrounded, dispersed, Basalt, coarse fragments; Very few (0 -
2 %),		Ferruginous, Fine (0 - 2 mm), Nodules; Gradual, Smooth change to -
B22	0.6 - 1.1 m	(/-Moist); Mottles, 2.5YR36, 0-2% , 0-5mm, Faint; Light medium clay; Moderate grade of
structure, 10-		

<p>ped fabric; Few</p> <p>Moderately plastic;</p> <p>coarse</p>	<p>20 mm, Angular blocky; Moderate grade of structure, 10-20 mm, Angular blocky; Rough- (<1 per 100mm²) Very fine (0.075-1mm) macropores, Moist; Weak consistence;</p> <p>Subplastic; Moderately sticky; 2-10%, stony, 200-600mm, subrounded, dispersed, Basalt, fragments; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Nodules;</p>
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Morphological Notes

<p>B21</p> <p>B22</p>	<p>Sample C8C 40-60cm</p> <p>Sample C8D 65-95cm</p>
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Observation Notes

inunadtion frequency: once in 1-10years, for <1 day, at a depth of <50 mm. Erosion depth of 5cm, width of 30cm

Site Notes

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Mode of Geomorphic Activity: Agraded. Geomorphic Agent: Sheet Wash.

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Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.075	5.9C 6.7A	0.072A	19.28A	4.49	1.25	0.14	0D 0G 0A		25.16B	
0.2 - 0.275	5.6C 6.3A	0.08A	16.13A	4.29	0.57	0.16	0D 0G 0A		21.15B	
0.4 - 0.6	4.3C 4.9A	0.093A	4.26A	3.37	0.12	0.11	0.2075D 2.23G 2.8A		10.66B	
0.65 - 0.95	4.3C 4.8A	0.075A	3.47A	4.22	0.12	0.12	0.20525D 1.64G 1.97125A		9.90125B	

Depth m	CaCO3 %	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle GV CS	Size FS	Analysis Silt
0 - 0.075		3.98B	202H 62.7I		0.37D					
0.2 - 0.275		3.44B	129H 33.3I		0.33D					
0.4 - 0.6		0.72B	9H 2.8I		0.09D					
0.65 - 0.95		0.68B	14H 3.5I		0.09D					

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 salts
15A1_K for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15A1_MG for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15A1_NA for soluble	Exchangeable bases (Ca2+,Mg2+,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

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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