Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **C28** **Observation ID:** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

Site Information

Desc. By:	D.B. Kidd	**Locality:**	Near Railton
Date Desc.:	01/08/05	**Elevation:**	48 metres
Map Ref.:	GPS S.A. Off	**Rainfall:**	996
Northing/Long.:	5426366 AMG zone: 55	**Runoff:**	Very slow
Easting/Lat.:	449803 Datum: GDA94	**Drainage:**	Well drained

Geology

ExposureType:	Soil pit	**Conf. Sub. is Parent. Mat.:**	Probable
Geol. Ref.:	Qp	**Substrate Material:**	Soil pit, 1.1 m deep,, No Data

Landform

Rel/Slope Class:	Undulating low hills 30-90m 3-10%	**Pattern Type:**	Low hills
Morph. Type:	Flat	**Relief:**	No Data
Elem. Type:	Footslope	**Slope Category:**	Level
Slope:	2 %	**Aspect:**	No Data

Surface Soil Condition

Soft

Erosion

Soil Classification

Australian Soil Classification:
Haplic Mesotrophic Brown Ferrosol Medium Gravelly Clay-loamy Clayey Moderately deep

Mapping Unit: N/A
Principal Profile Form: Db3.11

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: N/A

Site Disturbance

Vegetation

Surface Coarse Fragments

2-10%, cobbly, 60-200mm, ,

Profile Morphology

Ap 0 - 0.19 m Very dark greyish brown (10YR3/2-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; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; Slightly plastic; Normal plasticity; Moderately sticky; 20-50%, medium gravelly, 6-20mm, subrounded, dispersed, coarse fragments; Few, very fine (0-1mm) roots; Clear, Smooth change to -

B21 0.19 - 0.4 m Yellowish red (5YR4/6-Moist); , 0-0% ; Light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Granular; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Very plastic; Superplastic; Moderately sticky; 20-50%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Gradual, Smooth change to -

B22 0.4 - 0.65 m Strong brown (7.5YR4/6-Moist); Biological mixing, 5YR56, 2-10% , 5-15mm, Faint; Light clay; Moderate grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Moderately plastic; Normal plasticity; Moderately sticky; 20-50%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Gradual, Smooth change to -

B3 0.65 - 1 m Dark yellowish brown (10YR4/6-Moist); Biological mixing, 5YR46, 10-20% , 15-30mm, Distinct; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm,

		Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2)
Very fine		(0.075-1mm) macropores, Moist; Weak consistence; Slightly plastic; Normal plasticity;
Slightly sticky; 20-		50%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Gradual, Smooth
change to -		
BC	1 - 1.1 m	, 0-0% ; Fine, (0 - 5) mm crack; Moist;

Morphological Notes

Ap	Gritty Texture
B21	Gritty Texture
B22	Gritty Texture. Sample C28C 40-65cm
B3	Gritty Texture. Sample C28D 65-85cm

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Observation Notes

Plantation

Site Notes

Mode of geomorphic Activity: Eroded or aggaded. Agent: Sheet Wash. Inunadtion frequency: <once per 100 years, for the duration of < 1
day, to a depth of < 50mm.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.075	5.2C 6A	0.052A	11.02A	1.05	0.36	0.13	0.1529D 0.26G 0.25925A		12.81925B	
0.15 - 0.225	5.3C 6.3A	0.049A	10.25A	0.99	0.38	0.13	0.045925D 0.14G 0.14A		11.89B	
0.4 - 0.65	5.8C 6.2A	0.037A	3.58A	0.43	0.23	0.06	0.01D 0G 0.02A		4.32B	
0.65 - 0.85	5.7C 6.1A	0.027A	3.57A	0.62	0.17	0.08	0.022825D 0G 0.066125A		4.506125B	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis			
		Clay						GV	CS	FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.075		3.39B	16H 3.8I		0.18D						
0.15 - 0.225		2.91B	3H 1.9I		0.16D						
0.4 - 0.65		0.51B	3H 1.2I		0.05D						
0.65 - 0.85		0.41B	2H 1I		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	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts
15A1_K	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts

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

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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