Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **N36** **Observation ID:** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

Site Information

Desc. By: Christopher Grose **Locality:** Merton Vale, Campbell Town. Simon Foster
Date Desc.: 03/02/06 **Elevation:** 182 metres
Map Ref.: GPS S.A. Off **Rainfall:** 548
Northing/Long.: 5357710 AMG zone: 55 **Runoff:** Very slow
Easting/Lat.: 536101 Datum: GDA94 **Drainage:** Rapidly drained

Geology

ExposureType: Soil pit **Conf. Sub. is Parent. Mat.:** No Data
Geol. Ref.: Q **Substrate Material:** No Data

Landform

Rel/Slope Class: Undulating rises 9-30m 3-10% **Pattern Type:** Rises
Morph. Type: Mid-slope **Relief:** No Data
Elem. Type: Hillslope **Slope Category:** Very gently sloped
Slope: 3 % **Aspect:** 40 degrees

Surface Soil Condition

Soft

Erosion

Soil Classification

Australian Soil Classification: **Mapping Unit:** N/A
Basic Arenic Class Undetermined Tenosol Medium Non-gravelly Sandy Sandy Very deep **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 - 0.02 m , 0-0% ; Fine sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Loose consistence; Non-plastic; Non-sticky; Many, very fine (0-1mm) roots; Sharp, Smooth change to -

A12 0.02 - 0.08 m Dark brown (10YR3/3-Moist); , 0-0% ; Loamy fine sand; Weak grade of structure, 10-20 mm, Subangular blocky; Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Non-plastic; Non-sticky; Common, very fine (0-1mm) roots; Sharp, Wavy change to -

A13b 0.08 - 0.14 m Dark brown (7.5YR3/4-Moist); , 0-0% ; Loamy sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Non-plastic; Non-sticky; Few, very fine (0-1mm) roots; Sharp, Wavy change to -

B1 0.14 - 0.3 m Strong brown (7.5YR4/6-Moist); , 0-0% ; Loamy sand (Light); Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Non-plastic; Non-sticky; Few, very fine (0-1mm) roots; Clear, Wavy change to -

B21t 0.3 - 0.7 m Strong brown (7.5YR5/6-Moist); , 0-0% ; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Non-plastic; Non-sticky; Few, very fine (0-1mm) roots; Clear, Wavy change to -

B22t 0.7 - 0.93 m Strong brown (7.5YR5/6-Moist); , 0-0% ; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Non-plastic; Non-sticky; Abrupt, Wavy change to -

B31 0.93 - 1.08 m Strong brown (7.5YR4/6-Moist); , 0-0% ; Clayey sand; Massive grade of structure; Sandy

(grains prominent) fabric; Moist; Weak consistence; Non-plastic; Slightly sticky; Few cutans, <10% of ped faces or walls coated, faint; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Abrupt, Wavy change to -

B32 1.08 - 1.25 m Strong brown (7.5YR4/6-Moist); , 0-0% ; Clayey sand; Weak grade of structure, 10-20 mm, Angular blocky; Sandy (grains prominent) fabric; Moist; Very weak consistence; Non-plastic; Slightly sticky; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations;

Morphological Notes

A11	Sandy root mat, slightly non wetting
B21t	sample N36C 300-500
B22t	Sample N36D 500-700
B31	Clayskins coasting sand grains.Sample N36E 700-930mm
B32	Sample N36F 1080-1250mm

Observation Notes

Vegetation: Native Grassland. Substrate not reached. Sub group of Brown - Orthic (IO)

Site Notes

Mode of Geomorphic Activity: Erroded or aggraded, Agent: Wind. Inundation Frequency: No iundation.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations Ca	Mg	K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.075	4.6C 5.5A	0.082A	4.22A	1.09	0.54	0.05	0.06D 0.13G 0.11A		6.01B	
0.2 - 0.275	4.9C 5.6A	0.03A	2.4A	0.65	0.37	0.04	0.04D 0.32G 0.08A		3.54B	
0.3 - 0.5	5.7C 6.3A	0.024A	2.6A	0.8	0.32	0.06	0.03D 0G 0.06A		3.84B	
0.5 - 0.7	5.9C 6.8A	0.029A	2.6A	0.92	0.23	0.05	0.02D 0G 0.02A		3.82B	
0.7 - 0.93	6C 7A	0.022A	2.29A	0.73	0.15	0.06	0.02D 0G 0.03A		3.26B	
0.93 - 1.1	6C 7.2A	0.022A	4.44A	2.67	0.29	0.1	0.03D 0G 0.03A		7.53B	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt
		Clay									
m	%	%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.075		1.38B	16H 8.7I		0.15D						
0.2 - 0.275		0.46B	7H 4.2I		0.05D						
0.3 - 0.5		0.21B	2H 1.7I		0.02D						
0.5 - 0.7		0.19B	2H 1.8I		0.02D						
0.7 - 0.93		0.08B	3H		0.02D						

0.93 - 1.1	0.09B	1.7I 2H 1.1I	0.02D

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

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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
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