Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **S14** **Observation ID:** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

Site Information

Desc. By:	Christopher Grose	**Locality:**	"Parki" Lower Marshes Rd, Apsley
Date Desc.:	12/04/06	**Elevation:**	239 metres
Map Ref.:	GPS S.A. Off	**Rainfall:**	532
Northing/Long.:	5304106 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	511684 Datum: GDA94	**Drainage:**	No Data

Geology

ExposureType:	Soil pit	**Conf. Sub. is Parent. Mat.:**	Almost certain or certain
Geol. Ref.:	No Data	**Substrate Material:**	Soil pit, Clay

Landform

Rel/Slope Class: Gently undulating plains <9m 1-3% **Pattern Type:** Plain

Morph. Type:	Flat	**Relief:**	No Data
Elem. Type:	Plain	**Slope Category:**	Very gently sloped
Slope:	3 %	**Aspect:**	60 degrees

Surface Soil Condition

Firm

Erosion

Soil Classification

Australian Soil Classification: **Mapping Unit:** N/A
Haplic Hypocalcic Brown Chromosol Thin 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

No surface coarse fragments

Profile Morphology

Ap 0 - 0.16 m Dark greyish brown (10YR4/2-Moist); , 0-0% ; Sandy clay loam; Weak grade of structure, 5-10 mm, Granular; Earthy fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Slightly plastic; Normal plasticity; Slightly sticky; Common, very fine (0-1mm) roots; Sharp, Smooth change to -

B1 0.16 - 0.27 m Very dark greyish brown (10YR3/2-Moist); Mechanical, 10YR44, 20-50% , 15-30mm, Distinct; Heavy clay; Strong grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very plastic; Normal plasticity; Moderately sticky; Few, very fine (0-1mm) roots; Gradual, Wavy change to -

B21 0.27 - 0.68 m Dark greyish brown (2.5Y4/3-Moist); Mottles, 10YR43, 10-20% , 5-15mm, Faint; Heavy clay; Strong grade of structure, 200-500 mm, Prismatic; Strong grade of structure, 50-100 mm, Angular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Moderately moist; Strong consistence; Very plastic; Normal plasticity; Moderately sticky; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Concretions; Few, very fine (0-1mm) roots; Gradual, Wavy change to -

B22 0.68 - 1 m Reddish brown (2.5YR4/3-Moist); , 0-0% ; Heavy clay; Strong grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Very plastic; Normal plasticity; Moderately sticky; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Few, very fine (0-1mm) roots;

Morphological Notes

Ap	Base of Ap horizon charcoal was noted.
B1	Prismatic strucure parts to Angular Blicky Structure
B21	Prismatic strucure parts to Angular Blicky Structure
B22	Carbonate formed a irregular band throughb the B22 horizon.

Observation Notes

The site vegation was barley stubble. Cropped annually.

Site Notes

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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	4.7C 5.7A	0.053A	3.74A	1.81	0.14	0.25	0.01D 0.08G 0.54A		6.48B	
0.15 - 0.225	4.7C 5.8A	0.043A	3.66A	2.11	0.15	0.31	0.4D 0.12G 0.43A		6.66B	
0.27 - 0.47	6.9C 7.7A	0.106A	11.2A	20.77	0.55	3.63	0.01D 0G 0.01A		36.16B	
0.47 - 0.68	7.7C 8.8A	0.197A	11.83A	19.77	0.58	4.63	0.02D 0G 0.02A		36.83B	
0.68 - 1	8.3C 9.1A	0.423A	12.72A	21.44	0.49	5.57	0D 0G 0A		40.22B	

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		1.87B	31H 16.4I		0.2D						
0.15 - 0.225		1.37B	32H 5.9I		0.16D						
0.27 - 0.47		0.56B	2H 1.5I		0.05D						
0.47 - 0.68		0.33B	2H 0.9I		0.04D						
0.68 - 1		0.16B	7H 2.9I		0.03D						

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

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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