Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **N23** **Observation ID:** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

Site Information

Desc. By: R. Moreton **Locality:** Soil Pit is adjacent transect start point between rows 36 & 37.

Date Desc.: 29/11/05 **Elevation:** 171 metres
Map Ref.: GPS S.A. Off **Rainfall:** 958
Northing/Long.: 5433365 AMG zone: 55 **Runoff:** Rapid
Easting/Lat.: 515793 Datum: GDA94 **Drainage:** Moderately well drained

Geology

ExposureType: Soil pit **Conf. Sub. is Parent. Mat.:** Probable
Geol. Ref.: No Data **Substrate Material:** Soil pit, 1 m deep,, Mudstone

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: 18 % **Aspect:** No Data

Surface Soil Condition

Firm

Erosion

Soil Classification

Australian Soil Classification: Melanic Eutrophic Black Dermosol Medium Non-gravelly Clay-loamy Clayey Deep
Mapping Unit: N/A
Principal Profile Form: N/A
ASC Confidence: Confidence level not specified
Great Soil Group: N/A

Site Disturbance

Vegetation

Surface Coarse Fragments

No surface coarse fragments

Profile Morphology

A11 0 - 0.18 m Black (10YR2/1-Moist); , 0-0% ; Clay loam; Moderate grade of structure, 2-5 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Common, very fine (0-1mm) roots; Clear, Smooth change to -

A12 0.18 - 0.3 m Black (10YR2/1-Moist); Substrate influence, 2.5Y64, 0-2% , 5-15mm, Prominent; Clay loam; Strong grade of structure, 5-10 mm, Angular blocky; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, subrounded, dispersed, Mudstone, coarse fragments; Few, very fine (0-1mm) roots; Clear, Smooth change to -

B1 0.3 - 0.52 m Dark greyish brown (2.5Y4/2-Moist); Substrate influence, 2.5Y64, 10-20% , 5-15mm, Prominent; Mottles, 10YR46, 2-10% , 0-5mm, Faint; Medium clay (Light); Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; 10-20%, coarse gravelly, 20-60mm, subrounded, dispersed, Mudstone, coarse fragments; Few, very fine (0-1mm) roots; Gradual, Smooth change to -

B2 0.52 - 1 m Very dark greyish brown (10YR3/2-Moist); Substrate influence, 2.5Y64, 10-20% , 5-15mm, Prominent; Mottles, 10YR46, 2-10% , 0-5mm, Faint; Light clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Moist; Weak consistence;

10-20%, coarse gravelly, 20-60mm, subrounded, dispersed, Mudstone, coarse fragments; Few cutans,
<10% of ped faces or walls coated, distinct; Abrupt, Smooth change to -

BC 1 - 1.2 m Light brownish grey (2.5Y6/3-Moist); Mottles, 10YR68, 10-20% , 5-15mm, Prominent; Massive grade of
structure; Moderately moist; Strong consistence;

Morphological Notes

B1 B1 Sampled from .30 to .52m, Label N23C.
B2 Cutans of organic-humus nature. Colour, Hue 2.5Y Value 2.5 Chroma 1. B2 Sampled from .60 to
.90m, Label N23D.
BC BC Sampled from 1.00 to 1.20m, Label N23E.

Observation Notes

Massive structure of substrate rock (Mudstone, MU) has amorphous texture with grain size <0.06mm. Some water worn Quartz (QZ)
fragments within MU.

Site Notes

Property owner, Chris Smith.

Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **N23** **Observation** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

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	5.1C 6.1A	0.077A	12.9A	4.87	1.4	0.18	0.20798D 0.01G 0.21775A		19.56775B	
0.2 - 0.275	5C 6A	0.046A	10.23A	5.23	0.98	0.21	0.19805D 0.04G 0.28075A		16.93075B	
0.3 - 0.52	4.6C 5.9A	0.04A	16.45A	15.26	0.7	0.33	0.27D 0.13G 1.22A		33.96B	
0.6 - 0.9	4.2C 5.5A	0.037A	11.27A	14.3	0.74	0.46	2.95D 8.1G 12.45A		39.22B	
1 - 1.2	3.9C 5.1A	0.038A	5.5A	11.21	0.65	0.45	4.72D 16.61G 20.62A		38.43B	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt
m	%	Clay %	mg/kg	%	%	%	Mg/m3			%	
0 - 0.075		3.56B	38H 17.8I		0.34D						
0.2 - 0.275		2.2B	22H 8.6I		0.21D						
0.3 - 0.52		0.38B	3H 1.5I		0.07D						
0.6 - 0.9		0.44B	2H 0.5I		0.08D						
1 - 1.2		0.24B	2H 0.7I		0.04D						

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

Project Name: **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
Project Code: **SCEAM** **Site ID:** **N23** **Observation** **1**
Agency Name: **TAS Department of Primary Industries and Fisheries**

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