

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** N46 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	H. Hawkins	Locality:	Charles McKinnon, Mountford near Longwod
Date Desc.:	20/06/06	Elevation:	166 metres
Map Ref.:	GPS S.A. Off	Rainfall:	650
Northing/Long.:	5397347 AMG zone: 55	Runoff:	Slow
Easting/Lat.:	512414 Datum: GDA94	Drainage:	Rapidly drained

Geology

Exposure Type:	Soil pit	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Qd	Substrate Material:	No Data

Landform

Rel/Slope Class:	Undulating rises 9-30m 3-10%	Pattern Type:	Plain
Morph. Type:	Flat	Relief:	No Data
Elem. Type:	Plain	Slope Category:	Level
Slope:	%	Aspect:	30 degrees

Surface Soil Condition Loose

Erosion

Soil Classification

Australian Soil Classification:	Acidic Regolithic Class Undetermined Tenosol Very thick Non-gravelly Sandy Sandy Very deep	Mapping Unit:	N/A
ASC Confidence:	All necessary analytical data are available.	Principal Profile Form:	N/A
		Great Soil Group:	N/A

Site Disturbance

Vegetation

Surface Coarse Fragments No surface coarse fragments

Profile Morphology

A11p	0 - 0.18 m structure, <2 mm;	Dark greyish brown (10YR4/2-Moist); , 0-0% ; Loamy sand; Single grain grade of
Abundant, very fine		Sandy (grains prominent) fabric; Dry; Very weak consistence; Non-plastic; Non-sticky;
		(0-1mm) roots; Common, fine (1-2mm) roots; Abrupt, Wavy change to -
A12	0.18 - 0.62 m mm, Angular	Dark yellowish brown (10YR4/6-Moist); , 0-0% ; Sand; Weak grade of structure, 10-20
Moderately moist; Very		blocky; Single grain grade of structure, <2 mm; Sandy (grains prominent) fabric;
change to -		weak consistence; Non-plastic; Non-sticky; Few, very fine (0-1mm) roots; Clear, Smooth
B1	0.62 - 0.95 m mm, Angular	Brownish yellow (10YR6/6-Moist); , 0-0% ; Fine sand; Weak grade of structure, 20-50
Moderately moist; Very		blocky; Single grain grade of structure, <2 mm; Sandy (grains prominent) fabric;
		weak consistence; Non-plastic; Non-sticky; Clear, Smooth change to -
B2	0.95 - 1.1 m 10YR46, 20-	Yellowish brown (10YR5/6-Moist); Mottles, 10YR33, 10-20% , 5-15mm, Distinct; Mottles,
blocky; Single		50% , 5-15mm, Distinct; Fine sand (Heavy); Weak grade of structure, 20-50 mm, Angular
weak		grain grade of structure, <2 mm; Sandy (grains prominent) fabric; Moderately moist; Very
		consistence; Non-plastic; Non-sticky;

Morphological Notes

A12	Charcoal Observed from 25cm. Soft, dispersed, 2mm in size, black angular. Mottling observe in
550m	A12 on the back of pit but not other 3 sides. Ver coarse, prominent, 10yr3/2. N46C 300-
B1	Charcoal Observed from 25cm. Soft, dispersed, 2mm in size, black angular. N46D
sampled 650-	930mm

B2
1100mm

Charcoal Observed from 25cm. Soft, dispersed, 2mm in size, black angular. N46E 970-

Observation Notes

Substrate Not reached. Vegetation: Pasture Grass

Site Notes

Mode of Geomorphic Activity: Aggraded. 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	6.1C 6.7A	0.062A	4.94A	0.19	0.32	0.06	0.02D 0G 0.03A		5.54B	
0.19 - 0.265	5.8C 6.5A	0.045A	4.68A	0.16	0.22	0.06	0.03D 0G 0.04A		5.16B	
0.3 - 0.55	4.6C 5.3A	0.015A	0.54A	0.08	0.16	0.05	0.01D 0.14G 0.57A		1.4B	
0.65 - 0.93	5C 5.7A	0.016A	0.72A	0.09	0.16	0.06	0.01D 0.1G 0.26A		1.29B	
0.97 - 1.1	5.9C 6.6A	0.018A	0.96A	0.22	0.2	0.09	0.01D 0G 0.08A		1.55B	

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		1.02B	84H 37.6I		0.1D					
0.19 - 0.265		0.95B	84H 36.1I		0.09D					
0.3 - 0.55		0.14B	26H 15.1I		0.02D					
0.65 - 0.93		0.1B	8H 4I		0.02D					
0.97 - 1.1		0.08B	5H 2I		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

15A1_NA
for soluble

15G_C_AL2
By AAS

15G1

salts

Exchangeable bases (Ca²⁺,Mg²⁺,Na⁺,K⁺) - 1M ammonium chloride at pH 7.0, no pretreatment

salts

Exchangeable aluminium - meq per 100g of soil - Aluminium By KCl extraction and determination

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