

**Project Name:** SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania  
**Project Code:** SCEAM **Site ID:** S1 **Observation ID:** 1  
**Agency Name:** TAS Department of Primary Industries and Fisheries

#### Site Information

<b>Desc. By:</b>		<b>Locality:</b>	Dalkeith, Near Nala
<b>Date Desc.:</b>	25/06/05	<b>Elevation:</b>	379 metres
<b>Map Ref.:</b>	GPS S.A. Off	<b>Rainfall:</b>	565
<b>Northing/Long.:</b>	5316697 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	537574 Datum: GDA94	<b>Drainage:</b>	No Data

#### Geology

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	Sa	<b>Substrate Material:</b>	Soil pit, Sandstone

#### Landform

<b>Rel/Slope Class:</b>	Rolling rises 9-30m 10-32%	<b>Pattern Type:</b>	Low hills
<b>Morph. Type:</b>	Mid-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	Gently inclined
<b>Slope:</b>	8 %	<b>Aspect:</b>	73 degrees

#### Surface Soil Condition Soft

#### Erosion Partial, Minor (sheet)

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Eutrophic Mottled-Subnatric Grey Sodosol Medium Non-gravelly Clay-loamy Clayey Deep	<b>Principal Profile Form:</b>	N/A

<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	N/A
Analytical data are incomplete but reasonable confidence.		

#### Site Disturbance

#### Vegetation

#### Surface Coarse Fragments No surface coarse fragments

#### Profile Morphology

A11	0 - 0.12 m	Very dark brown (10YR2/2-Moist); , 0-0% ; Sandy clay loam; Weak grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Earthy fabric; Weak consistence; Non-plastic; Non-sticky; Field pH 6.5 (pH meter); CommonClear, Wavy change to -
A12	0.12 - 0.23 m	Very dark grey (10YR3/1-Moist); , 0-0% ; Sandy loam; Weak grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Very weak consistence; Non-plastic; Non-sticky; Field pH 6.5 (pH meter); FewGradual, Smooth change to -
A21	0.23 - 0.33 m	Greyish brown (10YR5/2-Dry); , 0-0% ; Sandy loam; Weak grade of structure, <2 mm, Subangular blocky; Earthy fabric; Very weak consistence; Non-plastic; Non-sticky; Field pH 6.4 (pH meter); FewClear, Smooth change to -
A22	0.33 - 0.4 m	Pale yellow (2.5Y7/3-Dry); , 0-0% ; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Very weak consistence; Non-plastic; Non-sticky; Field pH 6.5 (pH meter); FewAbrupt, Tongued change to -
B2	0.4 - 0.8 m	Grey (2.5Y5/1-Moist); , 10YR46, 20-50% , 5-15mm, Prominent; Heavy clay; Weak grade of structure, 100-200 mm, Angular blocky; Weak grade of structure, 50-100 mm, Angular blocky; Rough-ped fabric; Very strong consistence; Slightly plastic; Normal plasticity; Slightly sticky; Field pH 6.2 (pH meter); Few

#### Morphological Notes

A11	Dispersion Code 0. Worms and lots of grubs eating roots
A12	Dispersion Code 0
A21	Dispersion Code 0
A22	Dispersion Code 0
B2	Dispersion Code 0.2

### Observation Notes

Vegetation: sparse pasture. Erosion depth: 5cm with a width of 1cm. Substrate: >1m

### Site Notes

Mode of geomorphic activity: Eroded or Aggraded. Geomorphic agent: sheet wash. No inundation.

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### Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Na Cmol (+)/kg				%
0 - 0.075	4.8C 5.6A	0.074A	3.73A	1.06	0.26	0.11	0.2D 0.17G 0.3A		5.46B	
0.12 - 0.23	4.9C 5.8A	0.051A	5.46A	1.41	0.14	0.15	0.05D 0.17G 0.05A		7.21B	
0.23 - 0.33	5.3C 6.1A	0.061A	3.43A	0.62	0.11	0.09	0D 0.04G 0A		4.25B	
0.33 - 0.4	5.5C 6.2A	0.029A	1.29A	0.39	0.1	0.07	0D 0G 0A		1.85B	
0.4 - 0.7	4.8C 6A	0.111A	7.13A	12.07	0.61	1.88	0.4D 0.34G 0.83A		22.52B	

Depth	CaCO3	Organic C Clay	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%
0 - 0.075		2.11B	33H 14.6I		0.19D					
0.12 - 0.23		1.7B	17H OI		0.11D					
0.23 - 0.33		0.63B	10H OI		0.06D					
0.33 - 0.4		0.33B	14H OI		0.02D					
0.4 - 0.7		0.67B	8H OI		0.09D					

### 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 for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
	salts
15A1_K for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
	salts
15A1_MG for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
	salts
15A1_NA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment

for soluble

salts

15G\_C\_AL2  
By AAS

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

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