

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** S21 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	D.B. Kidd	Locality:	Curringa Farm, Near Hamilton
Date Desc.:	25/05/05	Elevation:	89 metres
Map Ref.:	GPS S.A. Off	Rainfall:	534
Northing/Long.:	5287994 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	482825 Datum: GDA94	Drainage:	No Data

Geology

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

Landform

Rel/Slope Class:	Rolling low hills 30-90m 10-32%	Pattern Type:	Hills
Morph. Type:	Lower-slope	Relief:	No Data
Elem. Type:	Footslope	Slope Category:	Very gently sloped
Slope:	4 %	Aspect:	238 degrees

Surface Soil Condition Firm

Erosion

Soil Classification

Australian Soil Classification:	Eutrophic Class Undetermined Brown Sodosol Medium Non-gravelly Clay-loamy Clayey 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

A1p	0 - 0.18 m	Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Fine sandy clay loam (Heavy); Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Non-plastic; Non-sticky; Field pH 6.9 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
A2	0.18 - 0.23 m	Yellowish brown (10YR5/4-Moist); Mottles, 7.5YR44, 10-20% , 0-5mm, Prominent; Sandy loam (Heavy); Weak grade of structure, 2-5 mm, Subangular blocky; Sandy (grains prominent) fabric; Moderately moist; Weak consistence; Non-plastic; Slightly sticky; Field pH 7.2 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
B2t	0.23 - 0.62 m	Brown (7.5YR4/3-Moist); Mottles, 5YR46, 20-50% , 15-30mm, Prominent; Medium heavy clay; Massive grade of structure; Moderately moist; Firm consistence; Moderately plastic; Subplastic; Non-sticky; 0-2%, coarse gravelly, 20-60mm, subrounded, dispersed, Dolerite, coarse fragments; Many cutans, >50% of ped faces or walls coated, prominent; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), pH 8.4 (pH meter); Few, very fine (0-1mm) roots; Clear, Wavy change to -
BC	0.62 - 100 m	Brownish yellow (10YR6/6-Moist); Mottles, 2.5Y62, 20-50% , 15-30mm, Prominent; Medium heavy clay; Massive grade of structure; Moderately moist; Firm consistence; Moderately plastic; Subplastic; Slightly sticky; 0-2%, coarse gravelly, 20-60mm, subrounded, dispersed, Dolerite, coarse fragments; Many (20 - 50 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8.8 (pH meter);

Morphological Notes

A1p Salinity: 0.3dSm-1
A2 Salinity: 0.1 dSm-1
B2t Colour of Clay skins coating ped faces 7.5yr43. Salinity: 0.3 dSm-1. Soapy feel. Sticks
burried in

B2. Sample S21C 38-58cm
BC Texture was MHC Gritty. Salinity: 0.2 dSm-1. Soapy feel. Sample S21D 70-90cm

Observation Notes

Vegetation: cabbages

Site Notes

Mode of geomorphic Activity: Eroded or aggraded. Sheet Wash the Geomorphic Agent. Inunadion frequency: Once
in 50-100 years, for a
duratino of <1 day, to a depth of <50mm.

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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				Cmol (+)/kg				%
0 - 0.075	5.9C 6.8A	0.105A	9.9A	4.53	0.5	0.66	0.05D 0G		15.65B	
0.15 - 0.225	5.8C 7A	0.098A	11.4A	10.45	0.59	1.78	0.06A 0.03D 0G		24.26B	
0.38 - 0.58	7.3C 8.1A	0.32A	19.51A	13.19	0.7	4.82	0.04A 0.01D 0G		38.23988B	
							0.019885A			
0.7 - 0.9	8C 8.9A	0.268A	14.29A	10.82	0.62	2.39	0.01D 0G		28.14B	
							0.02A			

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	Clay %	mg/kg	%	%	%	Mg/m3	GV CS FS Silt %
0 - 0.075		2.31B	21H 16.8I		0.24D			
0.15 - 0.225		0.84B	10H 1.3I		0.15D			
0.38 - 0.58		0.58B	3H 1.5I		0.07D			
0.7 - 0.9		0.16B	1H 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 for soluble	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15A1_MG for soluble	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15A1_NA for soluble	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment 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
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

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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