

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** S13 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By: Christopher Grose **Locality:** Brownwood Estate, 14 Brownwood Estate

Date Desc.: 24/03/06 **Elevation:** Campania TAS 7026

Map Ref.: GPS S.A. Off **Rainfall:** 90 metres

Northing/Long.: 5278227 AMG zone: 55 **Runoff:** No Data

Easting/Lat.: 536282 Datum: GDA94 **Drainage:** No Data

Geology

Exposure Type: Soil pit **Conf. Sub. is Parent. Mat.:** Probable
Geol. Ref.: Tb **Substrate Material:** Soil pit, 0.65 m deep., Basalt

Landform

Rel/Slope Class: No Data **Pattern Type:** Low hills
Morph. Type: Mid-slope **Relief:** No Data
Elem. Type: Hillslope **Slope Category:** Gently inclined
Slope: 7 % **Aspect:** No Data

Surface Soil Condition Soft

Erosion Partial, Not apparent (sheet)

Soil Classification

Australian Soil Classification: **Mapping Unit:** N/A
 Haplic Class Undetermined Grey Chromosol Medium Non-gravelly **Principal Profile Form:** N/A
 Loamy Clayey Clay-loamy

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

Site Disturbance

Vegetation

Surface Coarse Fragments 0-2%, cobbly, 60-200mm, subangular, Basalt

Profile Morphology

Ap 0 - 0.2 m Very dark brown (10YR2/2-Moist); Mechanical, 10YR43, 2-10% , 5-15mm, Distinct; Sandy loam; Weak
 grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; crack; Few (<1 per 100mm2) Very fine
 (0.075-1mm) macropores, Moist; Weak consistence; Non-plastic; Normal plasticity;
 Slightly sticky; Clear, Wavy change to -

B1 0.2 - 0.34 m Dark brown (7.5YR3/3-Moist); Mottles, 7.5R56, 10-20% , 0-5mm, Faint; Medium clay;
 Moderate grade of structure, 20-50 mm, Angular blocky; Earthy fabric; Few (<1 per 100mm2) Very fine
 (0.075-1mm) macropores, Moist; Firm consistence; Very plastic; Normal plasticity; Moderately sticky;
 10-20%, cobbly, 60-200mm, subangular, Basalt, coarse fragments; Few cutans, <10% of ped faces or
 walls coated, distinct; Few, very fine (0-1mm) roots; Clear, Wavy change to -

B2 0.34 - 0.65 m Dark greyish brown (10YR4/2-Moist); , 0-0% ; Medium clay; Moderate grade of structure,
 20-50 mm, Angular blocky; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores,
 Moist; Firm consistence; Very plastic; Normal plasticity; Moderately sticky; Common cutans, 10-50%
 of ped faces or walls coated, distinct; Abrupt, Irregular change to -

R 0.65 - m Rock

Morphological Notes

Ap Sandy Lenses present, 20x20mm in Size. Mottle colour brown (B)
 B2 Medium Clay Sand. (MCS)

Observation Notes

Substrate: Mineral composition was Dark Minerals (D) Dark Minerals >60%, Quartz visible <5%; Texture was pophyritic (P); Grain Size was <0.06mm (1);

Site Notes

Sampled on raised beds. Cauliflower crop previously, no crop when sampled.

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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	6.3C 7.1A	0.125A	9.69A	3.77	0.68	0.53	0.13D 0G 0.16A		14.83B	
0.1 - 0.2	7C 8.1A	0.167A	9.8A	2.82	0.21	0.4	0.03D 0G 0.03A		13.26B	
0.2 - 0.275	6.1C 6.9A	0.103A	8.21A	3.44	0.26	0.48	0.1D 0G 0.13A		12.52B	
0.34 - 0.65	7C 8A	0.122A	8.72A	23.74	0.14	3.31	0.02D 0G 0.02A		35.93B	

Depth	CaCO ₃	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	Clay %	mg/kg	%	%	%	Mg/m ³	GV CS FS Silt %
0 - 0.075		1.71B	218H		0.2D			
0.1 - 0.2		1.42B	150H		0.12D			
0.2 - 0.275		1.51B	152H		0.15D			
0.34 - 0.65		0.67B	3H		0.08D			
			1.5I					

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 (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_K	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_MG	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_NA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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
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

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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