Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** C10 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By: R. Moreton
Locality: Property owner, Brian Bonde. Property name, Main Farm. Site located in Slaughterhouse paddock.
Date Desc.: 17/11/05
Elevation: 140 metres
Map Ref.: GPS S.A. Off
Rainfall: 1108
Northing/Long.: 5439842 AMG zone: 55
Runoff: Moderately rapid
Easting/Lat.: 426116 Datum: GDA94
Drainage: Well drained

Geology

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

Landform

Rel/Slope Class: Rolling low hills 30-90m 10-32%
Pattern Type: Hills
Morph. Type: Upper-slope
Relief: No Data
Elem. Type: Hillslope
Slope Category: Gently inclined
Slope: 12 %
Aspect: 20 degrees

Surface Soil Condition

Firm

Erosion

Soil Classification

Australian Soil Classification: Haplic Eutrophic Red Ferrosol Thick Non-gravelly Clay-loamy Clay-loamy Moderately deep
Mapping Unit: N/A
Principal Profile Form: N/A
ASC Confidence: All necessary analytical data are available.
Great Soil Group: N/A

Site Disturbance

Vegetation

Surface Coarse Fragments

No surface coarse fragments

Profile Morphology

A11p 0 - 0.12 m Dark reddish brown (5YR3/4-Moist); Mottles, 2.5YR34, 0-0% ; Clay loam; Strong grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Non-plastic; Moderately sticky; Common, very fine (0-1mm) roots; Clear, Smooth change to -

A12p 0.12 - 0.3 m Dark reddish brown (5YR3/4-Moist); , 0-0% ; Clay loam; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Non-plastic; Moderately sticky; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Common, very fine (0-1mm) roots; Sharp, Smooth change to -

B1t 0.3 - 0.6 m Dark reddish brown (2.5YR3/4-Moist); Mottles, 7.5YR46, 0-2% , 0-5mm; Clay loam; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Firm consistence; Non-plastic; Moderately sticky; 2-10%, coarse gravelly, 20-60mm, subrounded, dispersed, Basalt, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Few, very fine (0-1mm) roots; Gradual, Smooth change to -

B2t 0.6 - 1 m Dark reddish brown (2.5YR3/4-Moist); Mottles, 0-2% , 0-5mm; Clay loam; Moderate grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Firm consistence; Slightly plastic; Slightly sticky; 2-10%, coarse gravelly, 20-

60mm,
subrounded, dispersed, Basalt, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules; Few, very fine (0-1mm) roots;

Morphological Notes

A11p	Penetration resistance: Soft
A12p	Penetration resistance: Firm
B1t	Penetration resistance: Stiff. B1 Horizon sampled from .30 to .55m, Label C10C.
B2t	Penetration resistance: Stiff. B2 Horizon sampled from .65 to .95m, Lable C10D.

Observation Notes

Substrate of Tertiary Basalt not reached during Soil Pit observation. Soil class is Burnie or Lapoinya. Vegetaion is Rye grass Pasture

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Site Notes

Element Slope Class: Gentle. Geomophic Activity is Eroded and the Geomorphic Agent is Volcanic. The inundaion frequency is no
inundation.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.075	5.4C 6A	0.064A	14.34A	2.34	1.01	0.19	0.1D 0.09G 0.14A		18.02B	
0.2 - 0.275	5.4C 6.2A	0.057A	14.5A	2.11	0.85	0.19	0D 0.07G 0.03A		17.68B	
0.3 - 0.55	4.8C 5.5A	0.065A	7.49A	0.6	0.15	0.27	0D 0.64G 0.33A		8.84B	
0.65 - 0.95	4.9C 5.5A	0.062A	6.37A	0.33	0.12	0.25	0D 1.32G 0.27A		7.34B	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis			
		Clay						GV	CS	FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.075		4.32B	225H 51.5I		0.4D						
0.2 - 0.275		4.28B	170H 39.7I		0.39D						
0.3 - 0.55		1.28B	12H 3.5I		0.17D						
0.65 - 0.95		0.98B	10H 2.9I		0.12D						

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
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