

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** S27 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By: R. Moreton **Locality:** Property Seaton, Owned by Ron Gunn,
 near Richmond

Date Desc.:
Map Ref.: GPS S.A. Off **Rainfall:** 518
Northing/Long.: 5265279 AMG zone: 55 **Runoff:** Slow
Easting/Lat.: 534021 Datum: GDA94 **Drainage:** Imperfectly drained

Geology

ExposureType: Soil pit **Conf. Sub. is Parent. Mat.:** Probable
Geol. Ref.: Qa **Substrate Material:** Soil pit, Alluvium

Landform

Rel/Slope Class: No Data **Pattern Type:** Alluvial fan
Morph. Type: Lower-slope **Relief:** No Data
Elem. Type: Bench **Slope Category:** Very gently sloped
Slope: 1 % **Aspect:** 270 degrees

Surface Soil Condition Firm

Erosion

Soil Classification

Australian Soil Classification: Sodic Eutrophic Brown Kandosol Medium Non-gravelly Loamy Clayey 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

Ap	0 - 0.16 m	Very dark grey (10YR3/1-Moist); Greyish brown (10YR5/2-Dry); , 0-0% ; Fine sandy clay loam; Moderate
		grade of structure, 10-20 mm, Angular blocky; Moderate grade of structure, 5-10 mm,
		Angular blocky;
		Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Fine (1-2mm)
		macropores, Dry; Very
		weak consistence; Non-plastic; Slightly sticky; Many, fine (1-2mm) roots; Clear, Smooth
		change to -
A3	0.16 - 0.3 m	Very dark grey (10YR3/1-Moist); Mottles, 10YR43, 2-10% , 0-5mm, Distinct; Light medium
		clay; Strong
		grade of structure, 20-50 mm, Columnar; Smooth-ped fabric; Medium, (5 - 10) mm crack;
		Common (1-5
		per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Very
		plastic; Normal
		plasticity; Moderately sticky; Many, fine (1-2mm) roots; Clear, Wavy change to -
B1t	0.3 - 0.44 m	Very dark greyish brown (2.5Y3/2-Moist); Mottles, 2.5Y44, 2-10% , 0-5mm, Faint; Light
		medium clay;
		Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Very
		firm
		consistence; Very plastic; Normal plasticity; Very sticky; Few, fine (1-2mm) roots;
		Gradual, Smooth
		change to -
B2t	0.44 - 0.8 m	Dark greyish brown (2.5Y4/3-Moist); , 0-0% ; Light medium clay; Massive grade of
		structure; Earthy
		fabric; Moderately moist; Firm consistence; Very plastic; Normal plasticity; Very sticky;
		Gradual, Smooth
		change to -
2B1b	0.8 - 0.93 m	Olive brown (2.5Y4/4-Moist); Mottles, 5YR44, 0-2% , 0-5mm, Distinct; Sandy light
		medium clay; Massive
		grade of structure; Sandy (grains prominent) fabric; Moderately moist; Weak consistence;

Very plastic;
segregations;
2B2b 0.93 - 1.2 m sand; Massive
consistence; Non-

Normal plasticity; Very sticky; Many (20 - 50 %), Manganiferous, Medium (2 -6 mm), Soft
Clear, Smooth change to -
Yellowish brown (10YR5/4-Moist); Mottles, 10YR46, 20-50% , 5-15mm, Distinct; Loamy
grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak
plastic; Non-sticky;

Morphological Notes

Ap Water repellent
A3 Soap Feel, perhaps sodic
B1t Soap Feel, perhaps sodic
B2t Soap Feel, perhaps sodic
2B1b Soap Feel, perhaps sodic

Observation Notes

Substrate not reached. Vegetation: No vegetation just stubble and trash (Barley and weeds sprayed).

Site Notes

Mode of Geomorphic activity: Aggraded. Geomorphic Agent: Sheet Wash. Inundation frequency: None.

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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	5.9C 6.6A	0.065A	8.33A	2.94	0.2	0.28	0.29D 0G 0.3A		12.05B	
0.2 - 0.275	5.4C 6.5A	0.091A	8.31A	7.99	0.21	1.27	0.2D 0.01G 0.22A		18B	
0.3 - 0.4	6.8C 8A	0.102A	10.9A	15.41	0.33	2.69	0.01D 0G 0.02A		29.35B	
0.45 - 0.8	7.7C 9A	0.213A	10.95A	16.9	0.41	4.32	0.01D 0G 0.02A		32.6B	
0.8 - 0.9	7.8C 9A	0.228A	9.14A	15.73	0.47	4.65	0.01D 0G 0.02A		30.01B	
0.95 - 1.2	7.9C 9.1A	0.099A	3.64A	6.05	0.23	1.68	0.01D 0G 0.02A		11.62B	

Depth m	CaCO3 %	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle GV	Size CS	Analysis FS	Silt
0 - 0.075		1.87B	112H 49.9I		0.14D						
0.2 - 0.275		0.9B	14H 7.8I		0.06D						
0.3 - 0.4		0.52B	4H 1.7I		0.05D						
0.45 - 0.8		0.17B	2H 0.9I		0.03D						
0.8 - 0.9		0.1B	2H 0.9I		0.03D						
0.95 - 1.2		0.09B	1H 0.6I		0.03D						

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 (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment 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

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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 detremination
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
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 longer	Bicarbonate-extractable phosphorus - automated colour. Based on Colwell (1965). Method no recommended
9C2	Olsen-extractable phosphorus - automated colour