

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** C21 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By: D.B. Kidd **Locality:** Property owner, Jeff Argent. Nearest town, Britton Swamp.

Date Desc.: 21/04/05 **Elevation:** 50 metres
Map Ref.: GPS S.A. Off **Rainfall:** 1318
Northing/Long.: 5463705 AMG zone: 55 **Runoff:** Very slow
Easting/Lat.: 328677 Datum: GDA94 **Drainage:** Poorly drained

Geology

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

Landform

Rel/Slope Class: Gently undulating plains <9m 1-3% **Pattern Type:** Alluvial plain

Morph. Type: Flat **Relief:** No Data
Elem. Type: Backplain **Slope Category:** Level
Slope: 3 % **Aspect:** No Data

Surface Soil Condition Firm

Erosion

Soil Classification

Australian Soil Classification: Chernic Humose-Acidic Oxyaquic Hydrosol Loamy Clayey Deep **Mapping Unit:** N/A
Principal Profile Form: N/A

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

Site Disturbance

Vegetation

Surface Coarse Fragments No surface coarse fragments

Profile Morphology

A11 0 - 0.05 m structure, 5-10 mm, (<1 per 100mm2) Field pH 5.6 (pH	Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Sandy loam; Moderate grade of Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Earthy fabric; Few Very fine (0.075-1mm) macropores, Moist; Weak consistence; Non-plastic; Non-sticky; meter); Many, very fine (0-1mm) roots; Sharp, Wavy change to -
A12 0.05 - 0.22 m Coarse sandy loam; mm, Granular; macropores, Moist; (0-1mm) roots;	Very dark greyish brown (10YR3/2-Moist); , 10YR82, 20-50% , 15-30mm, Prominent; Moderate grade of structure, 10-20 mm, Subangular blocky; Weak grade of structure, 2-5 Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) Firm consistence; Non-plastic; Non-sticky; Field pH 5.9 (pH meter); Common, very fine Sharp, Smooth change to -
A2e 0.22 - 0.3 m Sandy (grains pans, roots; Sharp,	Greyish brown (2.5Y5/2-Moist); , 0-0% ; Loamy coarse sand; Massive grade of structure; prominent) fabric; Moderately moist; Weak consistence; Non-plastic; Non-sticky; Other Uncemented, Continuous, Massive; Field pH 5.6 (pH meter); Few, very fine (0-1mm) Smooth change to -
D 0.3 - 0.33 m to -	, 0-0% ; Massive grade of structure; Dry; Non-plastic; Non-sticky; Sharp, Smooth change
B21 0.33 - 0.53 m structure, 20-50 fabric; Few (<1 per Slightly sticky; Field	Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Silty medium clay; Moderate grade of mm, Subangular blocky; Moderate grade of structure, <2 mm, Granular; Rough-ped 100mm2) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Non-plastic; pH 5.3 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Irregular change to -

B22 0.53 - 1 m 50 mm, Angular crack; Few (<1 plastic; Normal	Very dark grey (10YR3/1-Moist); , 0-0% ; Silty medium clay; Weak grade of structure, 20- blocky; Weak grade of structure, 2-5 mm, Granular; Rough-ped fabric; Fine, (0 - 5) mm per 100mm ²) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Slightly plasticity; Slightly sticky; Field pH 4.8 (pH meter);
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Morphological Notes

A11 A12 A2e D	ec, 0.1dSm. ec, 0.1dSm. ec, 0.0dSm. D horizon is charcoal layer.
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B21 ec, 0.0dSm. Sampled from 35cm - 45cm, Label C21C.
 B22 ec, 0.0dSm. Sampled from 60cm - 80cm, Label C21D.

Observation Notes

Site Notes

Irrigated pasture at time of description.

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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	5.4C 6.1A	0.228A	23.21A	8.44	1.39	0.85	0D 0.09G 0A		33.89B	
0.2 - 0.275	4.3C 5.3A	0.102A	6A	5.11	0.53	0.42	0D 2.95G 0A		12.06B	
0.35 - 0.45	4.2C 5A	0.087A	1.24A	1.22	0.36	0.22	0.96D 6.38G 7.68A		10.72B	
0.6 - 0.8	4.2C 5A	0.069A	0.94A	0.87	0.31	0.16	1.05575D 6.48G 8.0095A		10.2895B	

Depth	CaCO3	Organic C	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		6.04B	143H 0I		1.19D						
0.2 - 0.275		6.18B	45H 0I		0.94D						
0.35 - 0.45		8.68B	10H 4.2I		0.43D						
0.6 - 0.8		5.72B	8H 3I		0.26D						

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
By AAS

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

15G1
15J_H
15N1
18A1
3A1
4A1

Exchange acidity (hydrogen and aluminium) by 1M potassium chloride
Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen)
Exchangeable sodium percentage (ESP)
Bicarbonate-extractable potassium
EC of 1:5 soil/water extract
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