

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** S31 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	R. Moreton	Locality:	Nocton Park Developments, Near Richmond
Date Desc.:	12/12/05	Elevation:	91 metres
Map Ref.:	GPS S.A. Off	Rainfall:	523
Northing/Long.:	5273000 AMG zone: 55	Runoff:	Rapid
Easting/Lat.:	533655 Datum: GDA94	Drainage:	Well drained

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	Probable
Geol. Ref.:	Jd	Substrate Material:	0.6 m deep,, Clay

Landform

Rel/Slope Class:	Rolling hills 90-300m 10-32%	Pattern Type:	Hills
Morph. Type:	Mid-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	Gently inclined
Slope:	10 %	Aspect:	70 degrees

Surface Soil Condition Firm

Erosion

Soil Classification

Australian Soil Classification:	Haplic Eutrophic Grey Dermosol Medium Non-gravelly Clay-loamy Clayey Moderately 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 0-2%, medium gravelly, 6-20mm, ,

Profile Morphology

A1p 0 - 0.12 m Moderate grade	Black (10YR2/1-Moist); Mottles, 10YR34, 0-2% , 5-15mm, Faint; Fine sandy clay loam; of structure, 20-50 mm, Platy; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Fine (1-2mm) macropores, Dry; Weak consistence; Slightly plastic; Normal plasticity; Slightly sticky; 0-2%, coarse gravelly, 20-60mm, subangular, dispersed, Dolerite, coarse fragments; Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
B1t 0.12 - 0.3 m of structure, moist; Firm gravelly, 20-60mm, Gradual, Smooth	Black (10YR2/1-Moist); Mottles, 10YR43, 0-2% , 15-30mm, Faint; Clay loam; Weak grade 50-100 mm, Angular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Moderately consistence; Moderately plastic; Normal plasticity; Moderately sticky; 10-20%, coarse subangular, dispersed, Dolerite, coarse fragments; Few, very fine (0-1mm) roots; change to -
B2t 0.3 - 0.5 m Medium clay (Light); moist; Firm subangular,	Dark greyish brown (10YR4/2-Moist); Mottles, 10YR43, 0-2% , 15-30mm, Distinct; Moderate grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Moderately consistence; Very plastic; Normal plasticity; Moderately sticky; 2-10%, cobbly, 60-200mm, dispersed, Dolerite, coarse fragments; Clear, Irregular change to -
C 0.5 - 0.98 m Prominent; Light clay; Moderately sticky; 10-	Greyish brown (2.5Y5/3-Moist); Substrate influence, 7.5YR56, 10-20% , 5-15mm, Massive grade of structure; Moderately moist; Slightly plastic; Normal plasticity; 20%, coarse gravelly, 20-60mm, subrounded, dispersed, Dolerite, coarse fragments;

Morphological Notes

B2t S31C sampled 30-50

C

Gritty Light clay. S31D sampled 50-80cm. S31E sampled 80-98cm

Observation Notes

Vegetation: Vineyard with rye grass, spear grass, Yorkshire fog.

Site Notes

Mode of Geomorphic Activity: eroded or aggraded. Geomorphic Agent: Sheet wash. Inundation frequency: none.

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Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.075	5C 6.1A	0.062A	9.35A	7.07	0.84	0.43	0.08D 0.01G 0.2A		17.89B	
0.15 - 0.225	5.5C 6.7A	0.049A	10.13A	13.59	0.41	0.9	0.08D 0G 0.09A		25.12B	
0.3 - 0.5	7.3C 8.1A	0.201A	16.79A	24.93	0.47	1.75	0.03D 0G 0.03A		43.97B	
0.5 - 0.8	7.9C 8.8A	0.285A	14.12A	21.84	0.55	2.46	0D 0G 0A		38.97B	
0.8 - 0.98	7.9C 8.8A	0.337A	14.63A	20.7	0.55	2.36	0D 0G 0A		38.24B	

Depth m	CaCO ₃ %	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m ³	Particle GV	Size CS	Analysis FS %	Silt
0 - 0.075		3.11B	53H 23I		0.21D						
0.15 - 0.225		0.97B	20H 7.5I		0.06D						
0.3 - 0.5		0.54B	4H 1.7I		0.07D						
0.5 - 0.8		0.24B	2H 1I		0.03D						
0.8 - 0.98		0.27B	3H 1.5I		0.05D						

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

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