

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** S66 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	H. Hawkins	Locality:	Forestry Home Orchard, Wesley Hazel
Date Desc.:	12/09/06	Elevation:	11 metres
Map Ref.:	GPS S.A. Off	Rainfall:	754
Northing/Long.:	5237557 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	496108 Datum: GDA94	Drainage:	Imperfectly 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 rises 9-30m 1-3% **Pattern Type:** Plain

Morph. Type:	Flat	Relief:	No Data
Elem. Type:	Terrace plain	Slope Category:	Level
Slope:	1 %	Aspect:	No Data

Surface Soil Condition Firm

Erosion

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Mottled Eutrophic Grey Dermosol Medium Non-gravelly Loamy Clayey Deep	Principal Profile Form:	N/A
ASC Confidence:	Great Soil Group:	N/A
Analytical data are incomplete but reasonable confidence.		

Site Disturbance

Vegetation

Surface Coarse Fragments No surface coarse fragments

Profile Morphology

A1 0 - 0.18 m Moderate grade of Subangular blocky; Earthy macropores, Common Moderately plastic; (>5mm) roots;	Dark brown (7.5YR3/2-Moist); Mottles, 7.5YR41, 2-10% , 5-15mm, Faint; Clay loam; structure, 50-100 mm, Angular blocky; Moderate grade of structure, 10-20 mm, fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Slightly sticky; Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, coarse Gradual, Wavy change to -
B2 0.18 - 0.52 m Medium heavy clay; mm crack; consistence; Very fine (0-1mm) roots;	Dark reddish grey (5YR4/2-Moist); Mottles, 7.5YR32, 10-20% , 15-30mm, Distinct; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak plastic; Non-sticky; Common cutans, 10-50% of ped faces or walls coated, faint; , very Common, fine (1-2mm) roots; Few, coarse (>5mm) roots; Clear, Wavy change to -
B31 0.52 - 0.79 m Subangular (<1 per 100mm2) Non-sticky; Common coarse (>5mm)	Strong brown (7.5YR4/6-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, blocky; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Few Fine (1-2mm) macropores, Moderately moist; Firm consistence; Moderately plastic; Non- cutans, 10-50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots; Few, roots; Abrupt, Wavy change to -
B32 0.79 - 1 m consistence;	Yellowish brown (10YR5/8-Moist); ; Light medium clay; Smooth-ped fabric; Dry; Very firm Moderately plastic; Non-sticky; Many cutans, >50% of ped faces or walls coated, distinct;

Morphological Notes

A1	Sample S66A 0-75mm
B2	Colour of cutain coating ped faces 5YR 4/1. Sample S66B 180-255, Sample S66C280-520mm
B31	Colour of cutans coating ped faces 7.5YR 4/2. Increase in sand content. S66D 520-790
B32	Colour of cutans coating ped faces 7.5YR 4/2. Increase in sand content. S66E 800-1000mm

Observation Notes

Orchard, Substrate - alluvial sediments

Site Notes

Mode of Geomorphic activity: Aggraded, Agent: Sheet Wash and Over bank Stream, Inundation Frequency: one / 1-10 years, duration 1-20 days, depths 300mm-1m.

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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	6.4C 6.8A	0.129A	38.08A	20.69	0.35	1.14	0D 0.15G 0.07A		60.33B	
0.18 - 0.255	4.8C 5.9A	0.045A	2.43A	0.54	0.11	0.18	0.03D 0.46G 0.97A		4.23B	
0.28 - 0.52	7C 7.2A	0.185A	38.6A	21.25	0.39	1.24	0D 0.1G 0.05A		61.53B	
0.52 - 0.79	5.6C 6.4A	0.032A	5.62A	4.69	0.09	0.16	0D 0.32G 0.15A		10.71B	
0.8 - 1	7.7C 7.8A	0.203A	30.64A	12.59	0.76	0.95	0.02D 0.03G 0.07A		45.01B	

Depth m	CaCO3 %	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle GV CS	Size FS	Analysis Silt
0 - 0.075		3.15B	9H 3.3I		0.26D					
0.18 - 0.255		2.99B	39H 17.9I		0.21D					
0.28 - 0.52		2.86B	6H 2I		0.19D					
0.52 - 0.79		0.39B	4H 0.3I		0.05D					
0.8 - 1		3.8B	81H 43.2I		0.37D					

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

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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