

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** N20 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By:	D.B. Kidd	Locality:	Blackwood Creek - Nosswick
Date Desc.:	27/07/05	Elevation:	208 metres
Map Ref.:	GPS S.A. Off	Rainfall:	859
Northing/Long.:	5382869 AMG zone: 55	Runoff:	Slow
Easting/Lat.:	493803 Datum: GDA94	Drainage:	Imperfectly drained

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	Almost certain or certain
Geol. Ref.:	Qa	Substrate Material:	Soil pit, 1.1 m deep, Non-porous, dense, , Alluvium

Landform

Rel/Slope Class:	Gently undulating plains <9m 1-3%	Pattern Type:	Alluvial plain
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Morph. Type:	Flat	Relief:	No Data
Elem. Type:	Plain	Slope Category:	Very gently sloped
Slope:	2 %	Aspect:	102 degrees

Surface Soil Condition Soft

Erosion

Soil Classification

Australian Soil Classification:	Bleached-Mottled Class Undetermined Brown Kurosol Medium Non-gravelly Clay-loamy Clayey Deep	Mapping Unit:	N/A
ASC Confidence:	Analytical data are incomplete but reasonable confidence.	Principal Profile Form:	N/A
		Great Soil Group:	N/A

Site Disturbance

Vegetation

Surface Coarse Fragments 2-10%, cobbly, 60-200mm, subrounded, Doleritevery strong

Profile Morphology

Ap 0 - 0.17 m structure, 5-10 mm, Fine, (0 - 5) mm consistence; 0-2%, 5mm) roots;	Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Sandy clay loam; Weak grade of Subangular blocky; Weak grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Very weak cobbly, 60-200mm, subrounded, dispersed, Dolerite, coarse fragments; Few, medium (2- Clear, Smooth change to -
A21 0.17 - 0.31 m Sandy loam; Weak Subangular blocky; (0.075-1mm) dispersed, Dolerite, 2mm) roots;	Greyish brown (2.5Y5/3-Moist); Biological mixing, 10YR56, 2-10% , 0-5mm, Distinct; grade of structure, 20-50 mm, Angular blocky; Weak grade of structure, 10-20 mm, Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine macropores, Moist; Very weak consistence; 0-2%, cobbly, 60-200mm, subrounded, coarse fragments; Cultivation pan, Weakly cemented, Continuous, Massive; Few, fine (1- Clear, Smooth change to -
A22 0.31 - 0.42 m sand; Weak Angular blocky; (0.075-1mm) dispersed, Dolerite, 2mm) roots;	Light yellowish brown (2.5Y6/4-Moist); Mottles, 10YR56, 2-10% , 0-5mm, Distinct; Clayey grade of structure, 10-20 mm, Subangular blocky; Weak grade of structure, 2-5 mm, Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine macropores, Moist; Very weak consistence; 0-2%, cobbly, 60-200mm, subrounded, coarse fragments; Cultivation pan, Weakly cemented, Continuous, Massive; Few, fine (1- Abrupt, Smooth change to -
B21t 0.42 - 0.7 m	Yellowish brown (10YR5/8-Moist); Mottles, 2.5Y61, 10-20% , 5-15mm, Prominent;

Medium heavy clay;
consistence; Very
dispersed, Dolerite,
2mm) roots;

Massive grade of structure; Rough-ped fabric; Fine, (0 - 5) mm crack; Moist; Firm
plastic; Superplastic; Moderately sticky; 0-2%, cobbly, 60-200mm, subrounded,
coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Few, fine (1-
Clear, Smooth change to -

B22t 0.7 - 1.1 m
Medium clay;
Superplastic;
fragments; Few

Yellowish brown (10YR5/6-Moist); Mottles, 2.5Y71, 20-50% , 15-30mm, Prominent;
Massive grade of structure; Rough-ped fabric; Moist; Firm consistence; Very plastic;
Moderately sticky; 0-2%, cobbly, 60-200mm, subrounded, dispersed, Dolerite, coarse
cutans, <10% of ped faces or walls coated, distinct; Few, fine (1-2mm) roots;

Morphological Notes

B21t organic staining lining cracks
B22t Organic staining lining cracks

Observation Notes

Organic staining lining cracks in B21 and B22.

Site Notes

Currently certified seed paddock, pre-rolling

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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				Na Cmol (+)/kg				%
0 - 0.075	5.3C 6.1A	0.076A	6.99A	1.2	0.4	0.14	0.08D 0.01G 0.09A		8.82B	
0.2 - 0.275	4.4C 5.3A	0.036A	2.17A	0.79	0.15	0.09	0.28D 0.3G 1.18A		4.38B	
0.45 - 0.65	4.1C 5.1A	0.049A	5.94A	8.72	0.23	0.63	0.666375D 2.19G 5.051375A		20.57137B	
0.75 - 1	4C 5.1A	0.05A	5.67A	11.11	0.27	0.87	0.551375D 2.52G 4.296375A		22.21638B	

Depth	CaCO3	Organic C Clay	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		2.95B	65H 23.6I		0.24D						
0.2 - 0.275		1.12B	20H 5.3I		0.09D						
0.45 - 0.65		0.49B	2H 0.8I		0.05D						
0.75 - 1		0.36B	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
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)

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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