

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** S71 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

Desc. By: Gottfried Scholz	Locality:
Date Desc.: 07/05/07	Elevation: 205 metres
Map Ref.: Sheet No. : SK55-8 1:250000	Rainfall: 1000
Northing/Long.: 5194687 AMG zone: 55	Runoff: Very rapid
Easting/Lat.: 526021 Datum: GDA94	Drainage: Imperfectly drained

Geology

ExposureType: Soil pit	Conf. Sub. is Parent. Mat.: Almost certain or certain
Geol. Ref.: No Data	Substrate Material: Soil pit, 2 m deep, Non-porous, dense, , Dolerite

Landform

Rel/Slope Class: Rolling hills 90-300m 10-32%	Pattern Type: Mountains
Morph. Type: Mid-slope	Relief: 300 metres
Elem. Type: Bench	Slope Category: Steep
Slope: 6 %	Aspect: 300 degrees

Surface Soil Condition Loose

Erosion Partial, Minor (sheet) Partial, Present (mass)

Soil Classification

Australian Soil Classification: Dystrophic Dermosolic Redoxic Hydrosol Medium Non-gravelly Loamy Clayey Deep	Mapping Unit: N/A
ASC Confidence: Analytical data are incomplete but reasonable confidence.	Principal Profile Form: Uf6.12
	Great Soil Group: N/A

Site Disturbance

Vegetation

Tall Strata - Cycad, 20.01-35m, Closed or dense. *Species includes - Eucalyptus obliqua

Surface Coarse Fragments 2-10%, medium gravelly, 6-20mm, rounded, Dolerite

Profile Morphology

O1 0 - 0.03 m Loam (Fibric); plastic; Non-sticky; very fine (0-1mm)	Organic Layer; Very dark brown (10YR2/2-Moist); Very dark grey (10YR3/1-Dry); , 0-0% ; Many (>5 per 0.01m2) Coarse (>5mm) macropores, Moist; Loose consistence; Non- 2-10%, cobbly, 60-200mm, rounded, dispersed, Dolerite, coarse fragments; Common, roots; Clear, Wavy change to -
Ah 0.03 - 0.1 m Loam; Weak macropores, Moist; 200mm, rounded, change to -	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); , 0-0% ; grade of structure, 2-5 mm, Granular; Common (1-5 per 100mm2) Medium (2-5mm) Loose consistence; Slightly plastic; Normal plasticity; Slightly sticky; 0-2%, cobbly, 60- dispersed, Dolerite, coarse fragments; Abundant, very fine (0-1mm) roots; Gradual, Wavy
B2g 0.1 - 0.6 m Medium clay; mm crack; consistence; Moderately dispersed, Dolerite, fragments; Abundant,	Olive (5Y4/3-Moist); Olive (5Y5/3-Dry); Mottles, 10YR58, 10-20% , 5-15mm, Distinct; Strong grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Medium, (5 - 10) Many (>5 per 100mm2) Medium (2-5mm) macropores, Moderately moist; Weak plastic; Normal plasticity; Moderately sticky; 0-2%, cobbly, 60-200mm, rounded, coarse fragments; 0-2%, stony, 200-600mm, rounded, dispersed, Dolerite, coarse very fine (0-1mm) roots; Gradual, Wavy change to -
B1g 0.6 - 0.9 m Medium heavy clay; 10) mm crack;	Olive (5Y4/3-Moist); Olive (5Y5/3-Dry); ; Mottles, 5B51, 20-50% , 5-15mm, Distinct; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - Many (>5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; Moderately

plastic; Normal fragments;		plasticity; Very sticky; 0-2%, stony, 200-600mm, rounded, dispersed, Dolerite, coarse
		Abundant, very fine (0-1mm) roots; Gradual, Wavy change to -
B2g 0.9 - 1.1 m 15mm,		Greenish grey (5G5/1-Moist); Greenish grey (5G6/1-Dry); Mottles, 7.5YR58, 20-50% , 5-
fabric; Medium, (5 -		Distinct; Medium clay; Strong grade of structure, 10-20 mm, Prismatic; Smooth-ped
consistence; Moderately		10) mm crack; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak
dispersed, Dolerite,		plastic; Normal plasticity; Moderately sticky; 0-2%, cobbly, 60-200mm, rounded,
Abundant, very		coarse fragments; Many (20 - 50 %), Ferruginous, Medium (2 -6 mm), Soft segregations;
		fine (0-1mm) roots; Gradual, Wavy change to -
G 1.1 - 1.3 m 15mm, Distinct;		Dark bluish grey (5B4/1-Moist); Bluish grey (5B6/1-Dry); Mottles, 7.5YR58, 10-20% , 5-
Coarse, (10 - 20)		Medium clay; Strong grade of structure, 100-200 mm, Prismatic; Smooth-ped fabric;
Very plastic;		mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence;
Dolerite, coarse		Normal plasticity; Moderately sticky; 0-2%, cobbly, 60-200mm, rounded, dispersed,
Very many (50 -		fragments; 0-2%, stony, 200-600mm, rounded, dispersed, Dolerite, coarse fragments;
		100 %), Ferruginous, Medium (2 -6 mm), Veins; Abundant, very fine (0-1mm) roots;

Morphological Notes

B1g white fine hard and soft, medium sand sized dolerite particles occurring in all MC-horizons
G the secondary structure shows a rough-ped fabric.

Observation Notes

Site Notes

transect sampling; pit sampling: S71A 3-10.5cm, S71B 10-17.5cm, S71C 20-60cm, S71D 60-90cm, S71E 90-120cm

Tasmania
Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project,
Project Code: SCEAM Site ID: S71 Observation 1
Agency Name: TAS Department of Primary Industries and Fisheries

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	4C 4.8A	0.101A	3.92A	3.4	0.6	0.46	0.48D 2.55G 2.33A		10.71B	
0.1 - 0.175	4C 4.9A	0.063A	2.11A	2.61	0.37	0.35	0.37D 2.57G 2.53A		7.97B	
0.2 - 0.6	4.2C 5.1A	0.061A	1.25A	2.15	0.31	0.36	0.17D 1.96G 1.85A		5.92B	
0.6 - 0.9	4.2C 5.2A	0.059A	1.31A	2.79	0.25	0.53	0.11D 1.78G 1.69A		6.57B	
0.9 - 1.2	4.1C 5.2A	0.068A	2.57A	8.37	0.21	0.68	0.14D 1.8G 1.86A		13.69B	

Depth	CaCO3	Organic C Clay	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	%	mg/kg	%	%	%	Mg/m3	GV CS FS Silt
0 - 0.075		5.65B	5H 16I		0.25D			
0.1 - 0.175		4.64B	3H 7.3I		0.15D			
0.2 - 0.6		1.97B	2H 4.4I		0.1D			
0.6 - 0.9		0.95B	2H 3.5I		0.07D			
0.9 - 1.2		0.56B	2H 2.3I		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 (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_K for soluble	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_MG for soluble	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_NA for soluble	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15G_C_AL2 By AAS	salts Exchangeable aluminium - meq per 100g of soil - Aluminium By KCl extraction and detremination
15G1	Exchange acidity (hydrogen and aluminium) by 1M potassium chloride

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** S71 **Observation** 1
Agency Name: TAS Department of Primary Industries and Fisheries

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