

**Project Name:** SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania  
**Project Code:** SCEAM **Site ID:** C39 **Observation ID:** 1  
**Agency Name:** TAS Department of Primary Industries and Fisheries

**Site Information**

<b>Desc. By:</b>	H. Hawkins	<b>Locality:</b>	On Mt Roland, Near Paradise. In Coup
<b>Date Desc.:</b>	07/07/06	<b>Elevation:</b>	489 metres
<b>Map Ref.:</b>	GPS S.A. Off	<b>Rainfall:</b>	1322
<b>Northing/Long.:</b>	5409454 AMG zone: 55	<b>Runoff:</b>	Slow
<b>Easting/Lat.:</b>	442792 Datum: GDA94	<b>Drainage:</b>	Moderately well drained

**Geology**

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	DR	<b>Substrate Material:</b>	No Data

**Landform**

<b>Rel/Slope Class:</b>	Rolling hills 90-300m 10-32%	<b>Pattern Type:</b>	Hills
<b>Morph. Type:</b>	Upper-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	Moderately inclined
<b>Slope:</b>	15 %	<b>Aspect:</b>	115 degrees

**Surface Soil Condition** Firm

**Erosion**

**Soil Classification**

<b>Australian Soil Classification:</b>	Acidic Dystrophic Red Dermosol Medium Non-gravelly Clay-loamy Clayey Moderately deep	<b>Mapping Unit:</b>	N/A
<b>ASC Confidence:</b>	All necessary analytical data are available.	<b>Principal Profile Form:</b>	Dr4.11
		<b>Great Soil Group:</b>	N/A

**Site Disturbance**

**Vegetation**

**Surface Coarse Fragments** 2-10%, cobbly, 60-200mm, , Dolerite

**Profile Morphology**

O1	0 - 0.03 m	Organic Layer; (/Moist); , 0-0% ; Moist; Clear, Wavy change to -
A1	0.03 - 0.2 m	Dark reddish brown (5YR3/3-Moist); , 0-0% ; Clay loam; Strong grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Subangular blocky; Rough-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Moderately plastic; Normal plasticity; Slightly sticky; 2-10%, cobbly, 60-200mm, subangular, dispersed, Dolerite, coarse fragments; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Wavy change to -
B1	0.2 - 0.43 m	Reddish brown (5YR4/4-Moist); Substrate influence, 10R46, 0-2% , 5-15mm, Faint; Light clay; Strong grade of structure, 20-50 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Subangular blocky; Rough-ped fabric; Moderately moist; Weak consistence; Moderately plastic; Normal plasticity; Slightly sticky; 2-10%, cobbly, 60-200mm, subangular, dispersed, Dolerite, coarse fragments; 10-20%, cobbly, 60-200mm, subangular, dispersed, Dolerite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Wavy change to -
B21	0.43 - 0.62 m	Dark red (2.5YR3/6-Moist); Substrate influence, 10R46, 0-2% , 5-15mm, Faint; Light medium clay; Strong grade of structure, 50-100 mm, Subangular blocky; Strong grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Moderately moist; Weak consistence; Moderately plastic; Normal plasticity; Slightly sticky; 10-20%, cobbly, 60-200mm, subangular, dispersed, Dolerite,

coarse fragments; cutans, 10-50%	0-2%, stony, 200-600mm, subangular, dispersed, Dolerite, coarse fragments; Common of ped faces or walls coated, faint; Few, coarse (>5mm) roots; Abrupt, Wavy change to -
B22      0.62 - 0.82 m medium clay; mm, plastic; Normal coarse fragments; cutans, 10-50%	Dark red (2.5YR3/6-Moist); Substrate influence, 10YR46, 0-2% , 5-15mm, Faint; Light Strong grade of structure, 50-100 mm, Subangular blocky; Strong grade of structure, 5-10 Subangular blocky; Rough-ped fabric; Moderately moist; Weak consistence; Moderately plasticity; Slightly sticky; 10-20%, cobbly, 60-200mm, subangular, dispersed, Dolerite, 0-2%, stony, 200-600mm, subangular, dispersed, Dolerite, coarse fragments; Common of ped faces or walls coated, faint; Few, coarse (>5mm) roots;

**Morphological Notes**

B21      Sample C39C sampled 400-580mm

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B22 Larger Structure in B22 than B21. Sample C39D sampled 600-800mm

#### Observation Notes

Substrate of weathered Dolerite, breaking along fractures

#### Site Notes

Mode of Geomorphic Activity: Eroded. AgentL Sheet wash. Easting and Northing are of the peak of Mt Roland.

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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	4.5C 5.3A	0.095A	6.76A	5.38	0.98	0.19	0.27D 0.77G 1.27A		14.58B	
0.175 - 0.25	4.4C 5.2A	0.059A	2.97A	1.9	0.6	0.15	0.35D 2.03G 2.69A		8.31B	
0.4 - 0.58	4.5C 5.4A	0.024A	0.3A	0.43	0.16	0.16	0.61D 2.22G 3.46A		4.51B	
0.6 - 0.8	4.4C 5.5A	0.022A	0.18A	0.42	0.11	0.19	0.33D 2.47G 3.78A		4.68B	

  

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		8.21B	11H 6I		0.42D						
0.175 - 0.25		3.55B	7H 2.8I		0.25D						
0.4 - 0.58		1.01B	2H 0.6I		0.1D						
0.6 - 0.8		0.94B	2H 0.5I		0.09D						

#### 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