**Project Name:** **SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania**
**Project Code:** **SCEAM** **Site ID:** **C1** **Observation ID:** **1**
**Agency Name:** **TAS Department of Primary Industries and Fisheries**

## Site Information

| | | | |
|---|---|---|---|
| **Desc. By:** | R. Moreton | **Locality:** | Property owner, Robert Addison |
| **Date Desc.:** | 27/09/05 | **Elevation:** | 100 metres |
| **Map Ref.:** | GPS S.A. Off | **Rainfall:** | 950 |
| **Northing/Long.:** | 5434173 AMG zone: 55 | **Runoff:** | Slow |
| **Easting/Lat.:** | 455484 Datum: GDA94 | **Drainage:** | Well drained |

## Geology

| | | | |
|---|---|---|---|
| **ExposureType:** | Soil pit | **Conf. Sub. is Parent. Mat.:** | No Data |
| **Geol. Ref.:** | Tb | **Substrate Material:** | Basalt |

## Landform

| | | | |
|---|---|---|---|
| **Rel/Slope Class:** | Undulating low hills 30-90m 3-10% | **Pattern Type:** | Low hills |
| **Morph. Type:** | Upper-slope | **Relief:** | No Data |
| **Elem. Type:** | Hillslope | **Slope Category:** | Very gently sloped |
| **Slope:** | 3 % | **Aspect:** | 72 degrees |

## Surface Soil Condition

Firm

## Erosion

## Soil Classification

**Australian Soil Classification:**
Haplic Eutrophic Red Ferrosol Thick Non-gravelly Clay-loamy Clayey Medium

**Mapping Unit:** N/A
**Principal Profile Form:** N/A

**ASC Confidence:**
All necessary analytical data are available.

**Great Soil Group:** N/A

## Site Disturbance

## Vegetation

## Surface Coarse Fragments

0-2%, cobbly, 60-200mm, ,

## Profile Morphology

Ap 0 - 0.3 m Reddish brown (5YR5/3-Moist); , 0-0% ; Clay loam; Strong grade of structure, 5-10 mm, Polyhedral; Strong grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Slightly plastic; Very sticky; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Common, very fine (0-1mm) roots; Abrupt, Smooth change to -

B1t 0.3 - 0.45 m Dark reddish brown (5YR3/4-Moist); Substrate influence, 2.5YR36, 0-2% , 5-15mm, Distinct; Clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Slightly plastic; Very sticky; 0-2%, coarse gravelly, 20-60mm, subangular, dispersed, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Few, very fine (0-1mm) roots; Gradual, Smooth change to -

B21t 0.45 - 0.8 m Dark red (2.5YR3/6-Moist); Mottles, 5YR53, 0-2% , 0-5mm, Faint; Substrate influence, 2.5YR36, 0-2% , 0-5mm, Distinct; Clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; Slightly plastic; Very sticky; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Gradual, Smooth change to -

B22t 0.8 - 1.1 m Dark red (2.5YR3/6-Moist); , 0-0% ; Clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; Slightly plastic; Very sticky;

## Morphological Notes

| | |
|---|---|
| Ap | Penetration resistance: Soft |
| B1t | Penetration resistance: Firm. B1T Horizon sampled from .30 to .40m, Label C1C. |
| B21t | Penetration resistance: Stiff. B21T Horizon sampled from .50 to .80m, Label C1D. |
| B22t | Penetration resistance: Very Stiff. B22T Horizon sampled from .85 to 1.10m, Label C1E. |

## Observation Notes

Poppy regrowth. Ryegrass pasture sprayed off. Substrate not reached during Soil Pit observation but positively Tertiary Basalt. Soil Class is
Burnie Clay Loam

## Site Notes

Geomorphic activity was eroded with the geomorphic agent Sheet wash. The inundation frequency is no inundation.

**Project Name:** SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
**Project Code:** SCEAM **Site ID:** C1 **Observation** 1
**Agency Name:** TAS Department of Primary Industries and Fisheries

## Laboratory Test Results:

| Depth | pH | 1:5 EC | Exchangeable Cations | | | | Exchangeable Acidity | CEC | ECEC | ESP |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ca | Mg | K | Na | | | | |
| m | | dS/m | Cmol (+)/kg | | | | | | | % |
| 0 - 0.075 | 5C<br>5.8A | 0.101A | 10.21A | 2.49 | 1.13 | 0.31 | 0.1D<br>0G<br>0.25A | | 14.39B | |
| 0.2 - 0.275 | 5.2C<br>6.1A | 0.045A | 7.92A | 1.62 | 0.54 | 0.17 | 0.1D<br>0.09G<br>0.14A | | 10.39B | |
| 0.3 - 0.4 | 5.5C<br>5.9A | 0.038A | 6.31A | 0.71 | 0.13 | 0.21 | 0.02635D<br>0G<br>0.03635A | | 7.39635B | |
| 0.5 - 0.8 | 5.7C<br>5.9A | 0.064A | 5.9A | 0.54 | 0.09 | 0.26 | 0.01135D<br>0G<br>0.02135A | | 6.81135B | |
| 0.85 - 1.1 | 5.7C<br>5.9A | 0.06A | 5.17A | 1.16 | 0.1 | 0.23 | 0.01D<br>0G<br>0.02A | | 6.68B | |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size | | | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Clay | | | | | | GV | CS | FS | Silt |
| m | % | % | mg/kg | % | % | % | Mg/m3 | | | % | |
| 0 - 0.075 | | 4.31B | 213H<br>73I | | 0.36D | | | | | | |
| 0.2 - 0.275 | | 2.75B | 56H<br>12I | | 0.22D | | | | | | |
| 0.3 - 0.4 | | 1.67B | 5H<br>1.9I | | 0.11D | | | | | | |
| 0.5 - 0.8 | | 0.77B | 4H<br>1.2I | | 0.08D | | | | | | |
| 0.85 - 1.1 | | 0.54B | 4H<br>1.5I | | 0.07D | | | | | | |

## 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 | 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 |