

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** N35 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

| | | | |
|------------------------|----------------------|-------------------|--------------|
| Desc. By: | D.B. Kidd | Locality: | Evercreech |
| Date Desc.: | 14/09/05 | Elevation: | 271 metres |
| Map Ref.: | GPS S.A. Off | Rainfall: | 909 |
| Northing/Long.: | 5409085 AMG zone: 55 | Runoff: | Slow |
| Easting/Lat.: | 576528 Datum: GDA94 | Drainage: | Well 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 plains <9m 1-3% | Pattern Type: | Flood plain |
|-------------------------|-----------------------------------|----------------------|-------------|

| | | | |
|---------------------|-------------|------------------------|--------------------|
| Morph. Type: | Flat | Relief: | No Data |
| Elem. Type: | Valley flat | Slope Category: | Very gently sloped |
| Slope: | 2 % | Aspect: | 175 degrees |

Surface Soil Condition Soft

Erosion

Soil Classification

| | | |
|--|--------------------------------|-----|
| Australian Soil Classification: | Mapping Unit: | N/A |
| Melanic Mesotrophic Brown Dermosol Thick Non-gravelly Clay-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 0-2%, cobbly, 60-200mm, ,

Profile Morphology

| | |
|---|--|
| <p>A11 0 - 0.15 m 10-20 mm, Medium, (5 - 10) mm consistence; Slightly Smooth change to -</p> | <p>Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Clay loam; Strong grade of structure, Polyhedral; Strong grade of structure, 2-5 mm, Angular blocky; Rough-ped fabric; crack; Many (>5 per 100mm²) Fine (1-2mm) macropores, Moderately moist; Weak plastic; Normal plasticity; Slightly sticky; Common, very fine (0-1mm) roots; Gradual, Smooth change to -</p> |
| <p>A12 0.15 - 0.45 m 20-50 mm, ped fabric; Moderately moist; fine (0-1mm)</p> | <p>Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Loam; Moderate grade of structure, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm²) Fine (1-2mm) macropores, Weak consistence; Slightly plastic; Normal plasticity; Moderately sticky; Common, very roots; Gradual, Smooth change to -</p> |
| <p>B1 0.45 - 0.68 m 5-10 mm, (0 - 5) mm medium of ped faces or Few, very fine (0-</p> | <p>Dark yellowish brown (10YR3/4-Moist); , 0-0% ; Light clay; Moderate grade of structure, Angular blocky; Moderate grade of structure, 2-5 mm, Granular; Rough-ped fabric; Fine, crack; Moist; Weak consistence; Moderately plastic; Normal plasticity; Very sticky; 0-2%, gravelly, 6-20mm, rounded, dispersed, Sandstone, coarse fragments; Few cutans, <10% walls coated, faint; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; 1mm) roots; Gradual, Smooth change to -</p> |
| <p>B2 0.68 - 0.9 m Moderate grade Subangular blocky;</p> | <p>Light olive brown (2.5Y5/4-Moist); Mottles, 0-2% , 5-15mm, Faint; Fine sandy light clay; of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Rough-ped fabric; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, rounded,</p> |

dispersed,
segregations;
- Sandstone, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft
Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules; Gradual, Smooth change to

BC 0.9 - 1.1 m Greyish brown (2.5Y5/3-Moist); Mottles, 10YR46, 2-10% , 5-15mm, Distinct; Light clay;
Massive grade of structure; Rough-ped fabric; Moist; Firm consistence; 0-2%, medium gravelly, 6-20mm,
rounded, dispersed, Sandstone, coarse fragments; 10-20%, fine gravelly, 2-6mm, angular,
dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations;
Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules;

BC 0.9 - 1.1 m Greyish brown (2.5Y5/3-Moist); Mottles, 10YR46, 2-10% , 5-15mm, Distinct; Light clay;
Massive grade of structure; Rough-ped fabric; Moist; Firm consistence; 0-2%, medium gravelly, 6-20mm,
rounded, dispersed, Sandstone, coarse fragments; 10-20%, fine gravelly, 2-6mm, angular,
dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations;
Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules;

Morphological Notes

A12 N35C 30-45cm
B1 N35D 45-65 cm
B2 Primary Mottle colour Brown. N35E 70-90cm
BC Gritty texture
BC Gritty texture

Observation Notes

Plantation Forestry

Site Notes

Inundation: One in 1-10 years, for 1-20 days, to a depth of 50-100mm. Geomorphic Activity: Aggraded. Geomorphic Agent: Sheet wash.

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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 | 4.9C 5.6A | 0.064A | 8.5A | 1.27 | 0.34 | 0.16 | 0.31375D 1.16G 1.08275A | | 11.35275B | |
| 0.2 - 0.275 | 5.2C 5.9A | 0.112A | 15.19A | 1.87 | 0.56 | 0.27 | 0.2214D 0.09G 0.4375A | | 18.3275B | |
| 0.3 - 0.45 | 4.3C 4.8A | 0.082A | 2.42A | 0.4 | 0.29 | 0.16 | 0.513875D 3.4G 3.861375A | | 7.131375B | |
| 0.45 - 0.65 | 4.4C 5A | 0.047A | 2.2A | 1.31 | 0.07 | 0.1 | 0.216375D 1.16G 1.674625A | | 5.354625B | |
| 0.7 - 0.9 | 5.4C 6A | 0.046A | 1.67A | 2.75 | 0.13 | 0.27 | 0.109875D 0.15G 0.390375A | | 5.210375B | |

| Depth | CaCO ₃ | Organic C Clay | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size Analysis |
|-------------|-------------------|-------------------|--------------|---------|---------|---------|-------------------|------------------------|
| m | % | % | mg/kg | % | % | % | Mg/m ³ | GV CS FS Silt |
| 0 - 0.075 | | 4.61B | 41H 13.6I | | 0.41D | | | |
| 0.2 - 0.275 | | 5.74B | 77H 25.7I | | 0.5D | | | |
| 0.3 - 0.45 | | 4.91B | 20H 7.4I | | 0.33D | | | |
| 0.45 - 0.65 | | 1.02B | 11H 4.7I | | 0.07D | | | |
| 0.7 - 0.9 | | 0.52B | 9H 4.2I | | 0.04D | | | |

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 |

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|------------------------|---|
| 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) |
| 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 longer | Bicarbonate-extractable phosphorus - automated colour. Based on Colwell (1965). Method no recommended |
| 9C2 | Olsen-extractable phosphorus - automated colour |