

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** N17 **Observation ID:** 1
Agency Name: TAS Department of Primary Industries and Fisheries

Site Information

| | | | |
|------------------------|----------------------|-------------------|---------------------------|
| Desc. By: | R. Moreton | Locality: | Tulluchcorum, near Fingal |
| Date Desc.: | 20/09/05 | Elevation: | 224 metres |
| Map Ref.: | GPS S.A. Off | Rainfall: | 616 |
| Northing/Long.: | 5386672 AMG zone: 55 | Runoff: | Moderately rapid |
| Easting/Lat.: | 573975 Datum: GDA94 | Drainage: | Imperfectly drained |

Geology

| | | | |
|----------------------|----------|------------------------------------|-------------------|
| ExposureType: | Soil pit | Conf. Sub. is Parent. Mat.: | No Data |
| Geol. Ref.: | Ts | Substrate Material: | Soil pit, No Data |

Landform

| | | | |
|-------------------------|--|----------------------|---------------|
| Rel/Slope Class: | Gently undulating plains <9m 1-3% (alluvial) | Pattern Type: | Terraced land |
|-------------------------|--|----------------------|---------------|

| | | | |
|---------------------|--------------|------------------------|--------------------|
| Morph. Type: | Flat | Relief: | No Data |
| Elem. Type: | Terrace flat | Slope Category: | Very gently sloped |
| Slope: | 3 % | Aspect: | 320 degrees |

Surface Soil Condition Soft

Erosion

Soil Classification

| | | | |
|--|--|--------------------------------|-----|
| Australian Soil Classification: | Eutrophic Mottled-Subnatric Brown Sodosol Thick Non-gravelly 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 No surface coarse fragments

Profile Morphology

| | | |
|-----|---------------|---|
| Ap | 0 - 0.22 m | Dark brown (10YR3/3-Moist); , 0-0% ; Fine sandy loam; Moderate grade of structure, 2-5 mm, fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moist; Very weak consistence; Non-plastic; Slightly sticky; Common, very fine (0-1mm) roots; Abrupt, Irregular change to - |
| A2 | 0.22 - 0.32 m | Yellowish brown (10YR5/4-Moist); Mechanical, 7.5YR58, 2-10% , 0-5mm, Distinct; Mottles, 10YR33, 2-10% , 5-15mm, Distinct; Loamy coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; Non-plastic; Slightly sticky; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Densipan, Weakly cemented, Continuous, Massive; Few, very fine (0-1mm) roots; Clear, Wavy change to - |
| B1t | 0.32 - 0.7 m | Yellowish brown (10YR5/6-Moist); Mottles, 10YR54, 2-10% , 5-15mm, Faint; Medium clay; Massive grade of structure; Smooth-ped fabric; Moist; Weak consistence; Very plastic; Normal plasticity; Very sticky; 0-2%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Gradual, Smooth change to - |
| B2t | 0.7 - 0.98 m | Yellowish brown (10YR5/6-Moist); Mottles, 10YR54, 10-20% , 5-15mm, Faint; Medium clay; Massive grade of structure; Smooth-ped fabric; Moderately moist; Firm consistence; Very plastic; Normal plasticity; Very sticky; Common cutans, 10-50% of ped faces or walls coated, distinct; |

Morphological Notes

| | |
|----|---|
| Ap | Penetration resistance: Soft |
| A2 | Thixotrophic A2, Penetration resistance: Soft |

B1t Penetration resistance: Firm. Cutans coated ped faces. Sampled 32-70 cm labeled N17c
 B2t Penetration resistance: Firm, Cutans coated ped faces. Sampled 70-98cm labelled as
 N17D

Observation Notes

Soil Class: Newham. Vegetation: Ryegrass Pasture. Substrate Material was not reached. Probably Tertiary river sediments.

Site Notes

Pit located at start of transect. Mode of Geomorphic Agent: Eroded or aggraded. Geomorphic Agent over bank stream. Element Slope
 Class: Very Gentle. Inundation of less than once per 100yrs.

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM Site ID: N17 Observation 1
Agency Name: TAS Department of Primary Industries and Fisheries

Laboratory Test Results:

| Depth | pH | 1:5 EC | Ca | Exchangeable Cations | Na | Exchangeable | CEC | ECEC | ESP |
|-------------|--------------|--------|-------|----------------------|-------------|--------------|--|-----------|-----|
| m | | dS/m | | Mg K | Cmol (+)/kg | Acidity | | | % |
| 0 - 0.075 | 6.2C 6.8A | 0.096A | 6.48A | 0.94 | 0.38 | 0.1 | 0.24D 0G | 8.15B | |
| 0.2 - 0.275 | 5.9C 6.6A | 0.061A | 4.22A | 0.79 | 0.26 | 0.08 | 0.25A 0.17D 0G | 5.53B | |
| 0.32 - 0.7 | 4.8C 6.1A | 0.059A | 4.27A | 11.37 | 0.32 | 1.34 | 0.18A 0.13695D 0.08G 0.3735A | 17.6735B | |
| 0.7 - 0.98 | 5.6C 7A | 0.05A | 1.71A | 10.01 | 0.22 | 1.65 | 0.0109075 D 0G 0.1199825 A | 13.70998B | |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size Analysis |
|-------------|-------|-----------|---------------|---------|---------|---------|--------------|------------------------|
| m | % | Clay % | mg/kg | % | % | % | Mg/m3 | GV CS FS Silt |
| 0 - 0.075 | | 1.74B | 139H 49.1I | | 0.14D | | | |
| 0.2 - 0.275 | | 1.16B | 92H 33.4I | | 0.08D | | | |
| 0.32 - 0.7 | | 0.57B | 2H 1I | | 0.06D | | | |
| 0.7 - 0.98 | | 0.33B | 1H 0.7I | | 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 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 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) |
| 18A1 | Bicarbonate-extractable potassium |
| 3A1 | EC of 1:5 soil/water extract |

Project Name: SCEAM - Soil Condition Evaluation & Monitoring Project, Tasmania
Project Code: SCEAM **Site ID:** N17 **Observation** 1
Agency Name: TAS Department of Primary Industries and Fisheries

| | |
|---------|---|
| 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 |