**Project Name:** SOR
**Project Code:** SOR **Site ID:** H69 **Observation ID:** 1
**Agency Name:** CSIRO Division of Soils (TAS)

## Site Information

**Desc. By:** J. Loveday
**Date Desc.:** 24/12/53
**Map Ref.:** Sheet No. : 8412 1:100000
**Northing/Long.:** 147.583333333333
**Easting/Lat.:** -42.7833333333333
**Locality:** .8km E of Sorell
**Elevation:** 30 metres
**Rainfall:** 560
**Runoff:** Moderately rapid
**Drainage:** Poorly drained

## Geology

**ExposureType:** Soil pit
**Geol. Ref.:** No Data
**Conf. Sub. is Parent. Mat.:** No Data
**Substrate Material:** Soil pit, 0.41 m deep,Basalt

## Land Form

**Rel/Slope Class:** Undulating rises 9-30m 3-10%
**Morph. Type:** No Data
**Elem. Type:** No Data
**Slope:** 3.5 %
**Pattern Type:** Rises
**Relief:** No Data
**Slope Category:** Very gently sloped
**Aspect:** No Data

## Surface Soil Condition (dry):

## Erosion:

## Soil Classification

**Australian Soil Classification:**
Melanic Eutrophic Black Kandosol
**ASC Confidence:**
All necessary analytical data are available.
**Mapping Unit:** N/A
**Principal Profile Form:** Gn3.42
**Great Soil Group:** Prairie soil

**Site Disturbance:** Complete clearing. Pasture, native or improved, but never cultivated

## Vegetation:

## Surface Coarse Fragments:

## Profile Morphology

| | | |
|---|---|---|
| A | 0 - 0.064 m | Very dark brown (10YR2/2-Moist); ; Light clay; 20-50 mm, Angular blocky; 2-5 mm, Granular; Dry; Strong consistence; 0-2%, coarse gravelly, 20-60mm, Basalt, coarse fragments; Diffuse change to - |
| A | 0.064 - 0.16 m | Very dark brown (10YR2/2-Moist); ; Heavy clay; , Angular blocky; 2-5 mm, Granular; Dry; Strong consistence; 2-10%, Basalt, coarse fragments; Diffuse change to - |
| B | 0.19 - 0.29 m | Very dark brown (10YR2/2-Moist); ; Heavy clay; , Prismatic; Massive grade of structure; Moderately moist; Strong consistence; 10-20%, Basalt, coarse fragments; FewDiffuse change to - |
| B | 0.29 - 0.38 m | Very dark greyish brown (10YR3/2-Moist); ; Heavy clay; Massive grade of structure; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; 2-10%, Basalt, coarse fragments; Diffuse change to - |
| BC | 0.38 - 0.48 m | Black (2.5Y2/2-Moist); ; Heavy clay; Massive grade of structure; Moderately moist; Firm consistence; 20-50%, Basalt, coarse fragments; |

## Morphological Notes

## Observation Notes

38-48CM SAMPLE TAKEN FROM CRACKS IN MASSIVE BASALT:SORELL SERIES:

## Site Notes

PEMBROKE

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## 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 - 0.064 | 6.2A | | 18.1H | 14.2 | 0.28 | 1.8 | 11.9H<br>21.8E | | 56.2B | |
| 0.064 - 0.16 | 6.3A | | | | | | | 41.6C | | |
| 0.19 - 0.29 | 6.9A | | 16.5H | 18.5 | 0.3 | 3.6 | 6.1H<br>13.5E | | 52.4B | |
| 0.29 - 0.38 | 7.3A | | | | | | | 57C | | |
| 0.38 - 0.48 | 7.4A | | | | | | | | | |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size Analysis | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | GV | CS | FS | Silt | Clay |
| m | % | % | mg/kg | % | % | % | Mg/m3 | | | % | | |
| 0 - 0.064 | | 4.1D | | 0.092D | 0.39A | | | 1 | 4D | 30 | 31 | 28 |
| 0.064 - 0.16 | | 3.4D | | 0.095D | 0.32A | | | 11 | 4D | 28 | 26 | 39 |
| 0.19 - 0.29 | | 1.8D | | | 1.87A | | | 18 | 3D | 23 | 23 | 47 |
| 0.29 - 0.38 | | 1.4D | | 0.077D | 0.154A | | | 8 | 4D | 13 | 19 | 62 |
| 0.38 - 0.48 | | | | | | | | | | | | |

| Depth | COLE | Gravimetric/Volumetric Water Contents | | | | | | K sat | K unsat |
|---|---|---|---|---|---|---|---|---|---|
| | | Sat. | 0.05 Bar | 0.1 Bar | 0.5 Bar | 1 Bar | 5 Bar | 15 Bar | | |
| m | | g/g - m3/m3 | | | | | | | mm/h | mm/h |
| 0 - 0.064 | | | | | | | | | | |
| 0.064 - 0.16 | | | | | | | | | | |
| 0.19 - 0.29 | | | | | | | | | | |
| 0.29 - 0.38 | | | | | | | | | | |
| 0.38 - 0.48 | | | | | | | | | | |

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**Laboratory Analyses Completed for this profile**

| | |
|---|---|
| 15D1_CEC | CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach |
| 15E1_CA | Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble |
| 15E1_K | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15E1_MG | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15E1_NA | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15G_C_H1 | Exchangeable hydrogen - meq per 100g of soil - Hydrogen By back titration of A or B |
| 15G1_H | Hydrogen Cation - meq per 100g of soil - 1M KCl Exch. Acidity By titration to pH 8.0 |
| 15J_H | Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen) |
| 2_LOI | Loss on Ignition (%) |
| 2A1 | Air-dry moisture content |
| 4A1 | pH of 1:5 soil/water suspension |
| 5A2 | Chloride - 1:5 soil/water extract, automated colour |
| 6A1_UC | Organic carbon (%) - Uncorrected Walkley and Black method |
| 7A2 | Total nitrogen - semimicro Kjeldahl , automated colour |
| 9A_HCL | Total element - P(%) - By boiling HCl |
| P10_GRAV | Gravel (%) |
| P10_PB_C | Clay (%) - Plummet balance |
| P10_PB_CS | Coarse sand (%) - Plummet balance |
| P10_PB_FS | Fine sand (%) - Plummet balance |
| P10_PB_Z | Silt (%) - Plummet balance |