**Project Name:** **Warren Reservoir Catchment Survey**
**Project Code:** **WRN** **Site ID:** **085** **Observation ID:** **1**
**Agency Name:** **CSIRO Division of Soils (SA)**

## Site Information

**Desc. By:** I. Hollingsworth
**Date Desc.:** 18/12/90
**Map Ref.:** 1:10000
**Northing/Long.:** 6153730 AMG zone: 54
**Easting/Lat.:** 319545 Datum: AGD66
**Locality:**
**Elevation:** 480 metres
**Rainfall:** No Data
**Runoff:** Moderately rapid
**Drainage:** Poorly drained

## Geology

**ExposureType:** Undisturbed soil core
**Geol. Ref.:** No Data
**Conf. Sub. is Parent. Mat.:** No Data
**Substrate Material:** Undisturbed soil core, 1.1 m deep,Porous, Schist

## Land Form

**Rel/Slope Class:** Rolling low hills 30-90m 10-
**Morph. Type:** Open depression (vale)
**Elem. Type:** Drainage depression
**Slope:** 10 %
**Pattern Type:** Hills
**Relief:** No Data
**Slope Category:** Moderately inclined
**Aspect:** 340 degrees

**Surface Soil Condition (dry):** Firm

**Erosion:**

## Soil Classification

**Australian Soil Classification:**
Hydrosol
**ASC Confidence:**
Confidence level not specified
**Mapping Unit:** N/A
**Principal Profile Form:** Dy3.42
**Great Soil Group:** Gleyed podzolic soil

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

**Vegetation:**

**Surface Coarse Fragments:** No surface coarse fragments

## Profile Morphology

| | | |
|---|---|---|
| A | 0 - 0.08 m | Dark greyish brown (10YR4/2-Moist); Light grey (10YR7/2-Dry); , 7.5YR46, 20-50% , 0-5mm, Faint; Loamy sand; Single grain grade of structure; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Loose consistence; Sharp, Smooth change to - |
| A11 | 0.08 - 0.1 m | Brown (10YR4/3-Moist); Brown (10YR5/3-Dry); , 7.5YR46, 20-50% , 0-5mm, Faint; Sand; Massive grade of structure; Moderately moist; Loose consistence; Sharp, Smooth change to - |
| A12 | 0.1 - 0.3 m | Dark greyish brown (10YR4/2-Moist); Light grey (10YR7/2-Dry); , 7.5YR46, 10-20% , 0-5mm, Faint; Sandy clay loam; Single grain grade of structure; Moist; Loose consistence; Clear, Wavy change to - |
| A2 | 0.3 - 0.4 m | Dark greyish brown (10YR4/2-Moist); Light grey (10YR7/2-Dry); , 7.5YR46, 20-50% , 5-15mm, Faint; Clay loam, sandy; Single grain grade of structure; Wet; Loose consistence; Clear, Wavy change to - |
| BA | 0.4 - 0.45 m | Dark greyish brown (10YR4/2-Moist); Greyish brown (10YR5/2-Dry); , 10YR68, 2-10% , 0-5mm, Distinct; Sandy clay; Single grain grade of structure; Loose consistence; Clear, Wavy change to |
| Bt | 0.45 - 0.5 m | Very dark greyish brown (2.5Y3/2-Moist); Dark greyish brown (2.5Y4/2-Dry); , 7.5YR46, 10-20% , 15-30mm, Distinct; Sandy light clay; Single grain grade of structure; Loose consistence; Clear, Wavy change to - |
| Bt | 0.5 - 0.7 m | Greyish brown (2.5Y5/2-Moist); Light grey (2.5Y7/2-Dry); , 7.5YR58, 10-20% , 15-30mm, Distinct; Sandy light clay; Single grain grade of structure; Loose consistence; Clear, Wavy change to - |
| Bt | 0.7 - 1 m | Dark greyish brown (2.5Y4/2-Moist); Greyish brown (2.5Y5/2-Dry); , 7.5YR58, 20-50% , 5-15mm, Distinct; Sandy light clay; Single grain grade of structure; Loose consistence; |

**Morphological Notes**

**Observation Notes**

**Site Notes**

A1441

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**Project Code:** WRN **Site ID:** 085 **Observation ID:** 1
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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 - 0.1 | 4.5C 5.1A | 0.04A | 0.96D | 0.7 | 0.17 | 0.12 | | 3K | 1.9D | 4.00 |
| 0.1 - 0.3 | 4.9C 5.3A | 0.04A | 1.25D | 0.83 | 0.13 | 0.17 | | 2.7K | 2.4D | 6.30 |
| 0.3 - 0.4 | 5.1C 5.5A | 0.04A | 1.23D | 1.06 | 0.15 | 0.19 | | 2.6K | 2.6D | 7.31 |
| 0.4 - 0.5 | 5.1C 5.6A | 0.06A | 2.59D | 4.33 | 0.46 | 0.52 | 0.1A | 10K | 7.9D | 5.20 |
| 0.5 - 1 | 5.5C 5.7A | 0.07A | 1.42D | 3.49 | 0.35 | 0.41 | | 6.4K | 5.7D | 6.41 |

| 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 - 0.1 | | 0.4C | | | 0D | | | | 28B | 59 | 5 | 7 |
| 0.1 - 0.3 | | 0.4C | | | 0D | | | | 35B | 41 | 13 | 11 |
| 0.3 - 0.4 | | 0.3C | | | 0D | | | | 38B | 40 | 11 | 11 |
| 0.4 - 0.5 | | 0.4C | | | 0D | | | | 30B | 28 | 7 | 33 |
| 0.5 - 1 | | 0.1C | | | 0D | | | | 33B | 34 | 7 | 25 |

| 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 - 0.1 | | | | | | | | | |
| 0.1 - 0.3 | | | | | | | | | |
| 0.3 - 0.4 | | | | | | | | | |
| 0.4 - 0.5 | | | | | | | | | |
| 0.5 - 1 | | | | | | | | | |

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**Laboratory Analyses Completed for this profile**

| | |
|---|---|
| 15B2_CA | Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts |
| 15B2_K | Exchangeable bases and CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts |
| 15B2_MG | Exchangeable bases and CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts |
| 15B2_NA | Exchangeable bases and CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts |
| 15G1 | Exchange acidity (hydrogen and aluminium) by 1M potassium chloride |
| 15I3 | CEC measurement - automated determination of ammonium and chloride ions |
| 15J_BASES | Sum of Bases |
| 2_LOI | Loss on Ignition (%) |
| 2A1 | Air-dry moisture content |
| 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 |
| 5A2 | Chloride - 1:5 soil/water extract, automated colour |
| 6B3 | Total organic carbon - high frequency induction furnace, infrared |
| 7A5 | Total nitrogen - high frequency induction furnace, thermal conductivity |
| P10A1_C | Clay (%) - Pipette |
| P10A1_CS | Coarse sand (%) - Pipette |
| P10A1_FS | Fine sand (%) - Pipette |
| P10A1_Z | Silt (%) - Pipette |