

Project Name: Warren Reservoir Catchment Survey
Project Code: WRN **Site ID:** 001 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (SA)

Site Information

| | | | |
|------------------------|-----------------------------|-------------------|---------------------|
| Desc. By: | I. Hollingsworth | Locality: | WILLIAMSTOWN |
| Date Desc.: | 18/03/94 | Elevation: | 416 metres |
| Map Ref.: | Sheet No. : 6728-21 1:10000 | Rainfall: | No Data |
| Northing/Long.: | 6156700 AMG zone: 54 | Runoff: | Very slow |
| Easting/Lat.: | 318420 Datum: AGD66 | Drainage: | Imperfectly drained |

Geology

| | | | |
|----------------------|--------------|------------------------------------|--|
| ExposureType: | Auger boring | Conf. Sub. is Parent. Mat.: | Almost certain or certain |
| Geol. Ref.: | No Data | Substrate Material: | Auger boring, 1 m deep,Porous, , Unconsolidated material (unidentified) |

Land Form

| | | | |
|-------------------------|---------------------------------------|------------------------|--------------------|
| Rel/Slope Class: | Gently undulating rises 9-30m 1-3% | Pattern Type: | Peneplain |
| Morph. Type: | Lower-slope | Relief: | No Data |
| Elem. Type: | Fan | Slope Category: | Very gently sloped |
| Slope: | 0.5 % | Aspect: | 0 degrees |

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

| | | | |
|--|--------------------------------|--------------------------------|-----|
| Australian Soil Classification: | N/A | Mapping Unit: | N/A |
| ASC Confidence: | Confidence level not specified | Principal Profile Form: | N/A |
| | | Great Soil Group: | N/A |

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Tall Strata - Tree, 12.01-20m, Closed or dense. *Species includes - Pinus radiata

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

| | | |
|-----|--------------|--|
| O1 | 0 - 0.03 m | Organic Layer; , 0-0% ; Single grain grade of structure; Fine, (0 - 5) mm crack; Many (>5 per 100mm2) Fine (1-2mm) macropores, Dry; Loose consistence; Non-plastic; Non-sticky; Field pH 4.5 (Raupach, 0.02); Sharp, Smooth change to - |
| A1 | 0.03 - 0.1 m | Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Loose consistence; Non-plastic; Non-sticky; Field pH 6 (Raupach, 0.05); Few, very fine (0-1mm) roots; Clear, Smooth change to - |
| A21 | 0.1 - 0.35 m | Light brownish grey (2.5Y6/3-Moist); , 2-10% , 0-5mm, Faint; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Loose consistence; Non-plastic; Non-sticky; Field pH 6 (Raupach, 0.2); Common, fine (1-2mm) roots; Sharp, Smooth change to - |
| A22 | 0.35 - 0.4 m | Olive yellow (2.5Y6/6-Moist); , 10-20% , 5-15mm, Distinct; Sand; Single grain grade of structure; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Loose consistence; Non-plastic; Non-sticky; Field pH 6.5 (Raupach, 0.4); Many, fine (1-2mm) roots; Clear, Wavy change to - |
| AB | 0.4 - 0.5 m | Yellowish brown (10YR5/4-Moist); , 10YR58, 10-20% , 5-15mm, Distinct; , 5Y52; Clay loam; Single grain grade of structure; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Very firm consistence; Moderately plastic; Normal plasticity; Slightly sticky; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Concretions; Field pH 7.5 (Raupach, 0.45); Many, fine (1-2mm) roots; Sharp, Tongued change to - |
| Bt | 0.5 - 0.6 m | Yellowish brown (10YR5/4-Moist); , 10YR58, 10-20% , 5-15mm, Distinct; , 5Y52; Sandy clay loam; Strong grade of structure, 20-50 mm, Columnar; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Strong consistence; Moderately plastic; Normal plasticity; Moderately sticky; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 8.5 (Raupach, 0.55); Few, fine (1-2mm) roots; Clear, Wavy change to - |

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| | | |
|------|-------------|---|
| BC | 0.6 - 0.7 m | Yellowish brown (10YR5/8-Moist); , 10YR58, 10-20% , 5-15mm, Distinct; , 5Y52; Sandy loam; Strong grade of structure, 20-50 mm, Columnar; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Dry; Strong consistence; Moderately plastic; Normal plasticity; Moderately sticky; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 9 (Raupach, 0.65); Few, fine (1-2mm) roots; Clear, Wavy change to - |
| C1 | 0.7 - 1 m | Yellowish brown (10YR5/6-Moist); , 10YR58, 10-20% , 5-15mm, Distinct; , 5Y52; Sandy loam; Moderate grade of structure, 20-50 mm, Prismatic; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Moderately plastic; Normal plasticity; Moderately sticky; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 9 (Raupach, 0.8); Few, fine (1-2mm) roots; Clear, Wavy change to - |
| C2 | 1 - 1.1 m | Yellowish brown (10YR5/4-Moist); , 5Y52, 10-20% , 5-15mm, Distinct; , 10YR58; Sandy loam; Moderate grade of structure, 20-50 mm, Prismatic; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Moderately plastic; Normal plasticity; Moderately sticky; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 9 (Raupach, 1.05); Few, fine (1-2mm) roots; Sharp, Smooth change to - |
| 2Bt | 1.1 - 1.3 m | Greyish brown (2.5Y5/3-Moist); , 5Y52, 2-10% , 5-15mm, Distinct; , 10YR58; Medium clay; Moderate grade of structure, 20-50 mm, Prismatic; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very plastic; Normal plasticity; Moderately sticky; Many cutans, >50% of ped faces or walls coated, distinct; Field pH 9.5 (Raupach, 1.2); Common, fine (1-2mm) roots; Abrupt, Smooth change to - |
| 2Btk | 1.3 - 1.4 m | Light olive brown (2.5Y5/4-Moist); , 5Y52, 10-20% , 5-15mm, Distinct; , 10YR58; Medium clay; Moderate grade of structure, 20-50 mm, Prismatic; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very plastic; Normal plasticity; Moderately sticky; Common cutans, 10-50% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9.5 (Raupach, 1.4); Few, fine (1-2mm) roots; Abrupt, Wavy change to - |
| 2C | 1.4 - 2 m | Light olive brown (2.5Y5/4-Moist); , 5Y52, 10-20% , 5-15mm, Distinct; , 10YR58; Sandy clay loam; Moderate grade of structure, 20-50 mm, Prismatic; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Moderately plastic; Normal plasticity; Moderately sticky; Few cutans, <10% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; |

Morphological Notes

Observation Notes

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Laboratory Test Results:

| Depth | pH | 1:5 EC | Exchangeable Cations | | | Exchangeable | CEC | ECEC | ESP |
|-------|----|--------|----------------------|----|---|--------------|---------|------|-----|
| m | | dS/m | Ca | Mg | K | Na | Acidity | | |
| | | | | | | Cmol (+)/kg | | | % |

| Depth | CaCO3 | Organic | Avail. | Total | Total | Total | Bulk | Particle | Size | Analysis | |
|-------|-------|---------|--------|-------|-------|-------|---------|----------|------|----------|-----------|
| m | % | C | P | P | N | K | Density | GV | CS | FS | Silt Clay |
| | | % | mg/kg | % | % | % | Mg/m3 | | | % | |

| Depth | COLE | Gravimetric/Volumetric Water Contents | | | | | | K sat | K unsat |
|-------|------|---------------------------------------|----------|---------|---------|-------|-------|-------|---------|
| | | Sat. | 0.05 Bar | 0.1 Bar | 0.5 Bar | 1 Bar | 5 Bar | | |
| m | | | | | g/g - | m3/m3 | | mm/h | mm/h |

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Laboratory Analyses Completed for this profile