

**Project Name:** WAGGA WAGGA SOIL LANDSCAPES  
**Project Code:** 1000448      **Site ID:** WW43      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

**Site Information**

|                        |                          |                   |                         |
|------------------------|--------------------------|-------------------|-------------------------|
| <b>Desc. By:</b>       | Chen, XY                 | <b>Locality:</b>  |                         |
| <b>Date Desc.:</b>     | 15/07/93                 | <b>Elevation:</b> | 220 metres              |
| <b>Map Ref.:</b>       | Sheet No. : 8327 1:25000 | <b>Rainfall:</b>  | No Data                 |
| <b>Northing/Long.:</b> | 6095025 AMG zone: 55     | <b>Runoff:</b>    | Slow                    |
| <b>Easting/Lat.:</b>   | 508450 Datum: AGD66      | <b>Drainage:</b>  | Moderately well drained |

**Geology**

|                      |                            |                                    |         |
|----------------------|----------------------------|------------------------------------|---------|
| <b>ExposureType:</b> | Existing vertical exposure | <b>Conf. Sub. is Parent. Mat.:</b> | No Data |
| <b>Geol. Ref.:</b>   | Cza                        | <b>Substrate Material:</b>         | Clay    |

**Land Form**

|                         |           |                        |            |
|-------------------------|-----------|------------------------|------------|
| <b>Rel/Slope Class:</b> | No Data   | <b>Pattern Type:</b>   | Pediment   |
| <b>Morph. Type:</b>     | Flat      | <b>Relief:</b>         | No Data    |
| <b>Elem. Type:</b>      | Footslope | <b>Slope Category:</b> | No Data    |
| <b>Slope:</b>           | 2 %       | <b>Aspect:</b>         | 45 degrees |

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

**Erosion:** Partial, Minor (sheet) Active, Severe (gully)

**Soil Classification**

|  |                                |                                |        |
|--|--------------------------------|--------------------------------|--------|
| <b>Australian Soil Classification:</b> | N/A                            | <b>Mapping Unit:</b>           | N/A    |
| <b>ASC Confidence:</b>                 | Confidence level not specified | <b>Principal Profile Form:</b> | Db2.42 |
|  |                                | <b>Great Soil Group:</b>       | N/A    |

**Site Disturbance:**

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

|    |               |  |
|----|---------------|--|
| A1 | 0 - 0.25 m    | Dark brown (7.5YR3/4-Moist); ; Loam; Massive grade of structure; Earthy fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Moderately moist; Weak consistence; Slightly plastic; Slightly sticky; Field pH 6 (Raupach); Many, fine (1-2mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -   |
| A2 | 0.25 - 0.45 m | Pinkish grey (7.5YR6/3-Moist); Pinkish yellow (7.5YR8/2-Dry); ; Fine sandy loam; Massive grade of structure; Earthy fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Dry; Weak consistence; Non-plastic; Non-sticky; Field pH 6.5 (Raupach); Few, fine (1-2mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -   |
| B  | 0.45 - 1.5 m  | Strong brown (7.5YR4/6-Moist); Mottles, 20-50% , Distinct; Fine sandy light medium clay; Strong grade of structure, 50-100 mm, Angular blocky; 20-50 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Moderately moist; Very firm consistence; Moderately plastic; Moderately sticky; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Few, fine (1-2mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -       |
| C  | 1.5 - 2.5 m   | Yellowish brown (10YR5/4-Moist); Mottles, 2-10% , Distinct; Light medium clay; Strong grade of structure, 50-100 mm, Prismatic; 20-50 mm, Columnar; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very plastic; Very sticky; Common cutans, 10-50% of ped faces or walls coated, distinct; Common (10 - 20 %), Ferromanganiferous, Medium (2 -6 mm), Nodules, strong, segregations;Common (10 - 20 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules, strong, segregations;Field pH 8 (Raupach); |

**Morphological Notes**

C 5m from the profile site.

**Observation Notes**

**Site Notes**

40M FROM TRACK, ON W SIDE OF GULLY

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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 - 0.25    | 6B   | 0.07A  | 6.2J | 2.5             | 0.9       | 0.3         | 0L                   | 11.1I |      | 2.70 |
| 0.25 - 0.45 | 5.8B | 0.02A  | 1J   | 0.4             | 0.4       | 0.2         | 0L                   | 3.9I  |      | 5.13 |
| 0.45 - 1.5  | 4.5B | 1.34A  | 4.4J | 5.7             | 0.5       | 0.8         | 0L                   | 11.4I |      | 7.02 |

| Depth       | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle GV | Size CS | Analysis FS | Silt | Clay |
|-------------|-------|-----------|----------|---------|---------|---------|--------------|-------------|---------|-------------|------|------|
| m           | %     | %         | mg/kg    | %       | %       | %       | Mg/m3        |             |         | %           |      |      |
| 0 - 0.25    |       | 1.27A     | 3D       |         |         |         |              | 3           | 22F     | 61          | 10   | 7    |
| 0.25 - 0.45 |       | 0.05A     | 1D       |         |         |         |              | 2           | 23F     | 51          | 19   | 5    |
| 0.45 - 1.5  |       | 0.12A     | 0D       |         |         |         |              | 2           | 8F      | 45          | 13   | 32   |

| Depth       | COLE | Gravimetric/Volumetric Water Contents |          |             |         |       |       |        | K sat | K unsat |
|-------------|------|---------------------------------------|----------|-------------|---------|-------|-------|--------|-------|---------|
| m           |      | Sat.                                  | 0.05 Bar | 0.1 Bar     | 0.5 Bar | 1 Bar | 5 Bar | 15 Bar | mm/h  | mm/h    |
|             |      |                                       |          | g/g - m3/m3 |         |       |       |        |       |         |
| 0 - 0.25    |      |                                       |          | 0.42B       |         |       |       | 0.05B  |       |         |
| 0.25 - 0.45 |      |                                       |          | 0.23B       |         |       |       | 0.08B  |       |         |
| 0.45 - 1.5  |      |                                       |          | 0.47B       |         |       |       | 0.14B  |       |         |

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**Laboratory Analyses Completed for this profile**

|            |  |
|------------|--|
| 15F1_CA    | Exchangeable bases by 0.01M silver-thiourea (AgTU)+, no pretreatment for soluble salts |
| 15F1_K     | Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts                 |
| 15F1_MG    | Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts                 |
| 15F1_NA    | Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts                 |
| 15F2       | Exchangeable aluminium by 0.01m (AgTU)+  |
| 15F3       | CEC by 0.01M silver-thiourea (AgTU)+   |
| 3A1        | EC of 1:5 soil/water extract   |
| 4B1        | pH of 1:5 soil/0.01M calcium chloride extract - direct                                 |
| 6A1        | Organic carbon - Walkley and Black   |
| 9E         | Available P (mg/kg) - Bray P   |
| 9J2        | Phosphate sorption curve - automated colour  |
| P10_GRAV   | Gravel (%)   |
| P10_HYD_C  | Clay (%) - Hydrometer Method   |
| P10_HYD_CS | Coarse Sand (%) - Hydrometer Method  |
| P10_HYD_FS | Fine Sand (%) - Hydrometer Method  |
| P10_HYD_Z  | Silt (%) - Hydrometer Method   |
| P3B_GV_01  | 0.1 BAR Moisture g/g - Gravimetric using suction plate                                 |
| P3B_GV_15  | 15 BAR Moisture g/g - Gravimetric using pressure plate                                 |