

**Project Name:** Jerramungup soils inventory (=JER LRS)  
**Project Code:** JSI **Site ID:** 1150 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

|                        |                      |                   |                |
|------------------------|----------------------|-------------------|----------------|
| <b>Desc. By:</b>       | Tim Overheu          | <b>Locality:</b>  |                |
| <b>Date Desc.:</b>     | 30/11/94             | <b>Elevation:</b> | 140 metres     |
| <b>Map Ref.:</b>       |                      | <b>Rainfall:</b>  | 500            |
| <b>Northing/Long.:</b> | 6208061 AMG zone: 50 | <b>Runoff:</b>    | No Data        |
| <b>Easting/Lat.:</b>   | 689536 Datum: AGD84  | <b>Drainage:</b>  | Poorly drained |

#### Geology

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

#### Land Form

**Rel/Slope Class:** Gently undulating plains <9m 1-3% **Pattern Type:** Plain

|                     |         |                        |          |
|---------------------|---------|------------------------|----------|
| <b>Morph. Type:</b> | No Data | <b>Relief:</b>         | 6 metres |
| <b>Elem. Type:</b>  | Plain   | <b>Slope Category:</b> | No Data  |
| <b>Slope:</b>       | 3 %     | <b>Aspect:</b>         | No Data  |

#### Surface Soil Condition Poached, Hardsetting

**Erosion:** (wind); (scald) (sheet) (rill) (mass) (gully)  
(stbank) (tunnel)

#### Soil Classification

|   |  |                                |        |
|---|--|--------------------------------|--------|
| <b>Australian Soil Classification:</b>                    |  | <b>Mapping Unit:</b>           | N/A    |
| Epihypersodic Pedal Hypercalcic Calcarosol                |  | <b>Principal Profile Form:</b> | Db3.13 |
| <b>ASC Confidence:</b>                                    |  | <b>Great Soil Group:</b>       | N/A    |
| Analytical data are incomplete but reasonable confidence. |  |                                |        |

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

#### Vegetation:

**Surface Coarse** 2-10%, medium gravelly, 6-20mm, subangular, Igneous rock (unidentified); 2-10%, , subangular, Dolerite

#### Profile

|       |               |  |
|-------|---------------|--|
| Ap    | 0 - 0.08 m    | Dark brown (10YR3/3-Moist); , 0-0% ; Sandy loam; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Weak consistence; 2-10%, medium gravelly, 6-20mm, subangular, Igneous rock (unidentified), coarse fragments; Field pH 8.2 (pH meter); Sharp change to -  |
| B21   | 0.08 - 0.32 m | Light yellowish brown (10YR6/4-Moist); , 0-0% ; Light medium clay; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Dry; Very firm consistence; 0-2%, medium gravelly, 6-20mm, subangular, Igneous rock (unidentified), coarse fragments; Field pH 9.2 (pH meter); Abrupt change to -  |
| B22tk | 0.32 - 0.55 m | Pale brown (10YR6/3-Moist); , 0-0% ; Light clay; Massive grade of structure; Sandy (grains prominent) fabric; Dry; Weak consistence; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Soft segregations; Soil matrix is Highly calcareous; Field pH 9.7 (pH meter); Abrupt change to -  |
| B21   | 0.55 - 1.35 m | Olive brown (2.5Y4/4-Moist); Mottles, 10YR63, 0-2% , 0-5mm, Faint; Medium clay; Strong grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular, Igneous rock (unidentified), coarse fragments; Soil matrix is Slightly calcareous; Field pH 9.2 (pH meter); Abrupt change to - |
| C     | 1.35 - 1.7 m  | Brown (7.5YR4/3-Moist); , 0-0% ; Light medium clay; Moderately moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, angular, Igneous rock (unidentified), coarse fragments; Soil matrix is Slightly calcareous; Field pH 8.9 (pH meter);   |

#### Morphological Notes

B22tk LAYER OF SOFT LIME - POSSIBLY LIKE SITE 1145, SEASONALY WATERLOGGED

B21 SLIKCEN SIDES ON CUTANS. LAYER SPLIT OVER 2 FOR SAMPLING (55-95-135)

C THIS LAYER WAS GRITTY AND MINERALISED = CF: T.HOLDMAN'S.

**Observation Notes**

**Site Notes**

Moderately deep gravel, much the same as last site, but no a3 horizon a typical sandplain soil, perhaps more representative than the last site. At 100cm, could be an a3 horizon? Hp1=level to very gently undulating upper coastal sandplain.

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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 - 0.08    | 7.7B<br>8.4H | 28B    | 12E  | 6.4             | 0.89      | 0.77        |                      | 21B | 20.06D | 3.67  |
| 0.08 - 0.32 | 8.5B<br>9.3H | 60B    | 6.3E | 10              | 0.96      | 4.1         |                      | 22B | 21.36D | 18.64 |
| 0.32 - 0.55 | 8.9B<br>9.8H | 110B   | 3.6E | 9.5             | 0.96      | 7.3         |                      | 22B | 21.36D | 33.18 |
| 0.55 - 0.92 | 8.7B<br>9.3H | 180B   | 2.4E | 15              | 1.3       | 11          |                      | 29B | 29.7D  | 37.93 |
| 0.92 - 1.35 | 8.4B<br>9H   | 190B   | 1.4E | 15              | 1.3       | 12          |                      | 30B | 29.7D  | 40.00 |

| Depth       | CaCO3 | Organic C Clay | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size Analysis |
|-------------|-------|----------------|----------|---------|---------|---------|--------------|------------------------|
| m           | %     | %              | mg/kg    | %       | %       | %       | Mg/m3        | GV CS FS Silt          |
| 0 - 0.08    | 2C    | 1.64D          |          | 160B    | 0.122E  | 0.43A   |              | 3.7                    |
| 21.6        |       |                |          |         |         |         |              |                        |
| 0.08 - 0.32 | 3C    | 0.21D          |          | 19B     | 0.019E  | 0.5A    |              | 2.4                    |
| 29.7        |       |                |          |         |         |         |              |                        |
| 0.32 - 0.55 | 35C   | 0.22D          |          | 14B     | 0.013E  | 0.46A   |              | 9                      |
| 52.1        |       |                |          |         |         |         |              |                        |
| 0.55 - 0.92 | 8C    | 0.12D          |          | 12B     | 0.01E   | 1A      |              | 7.9                    |
| 41.9        |       |                |          |         |         |         |              |                        |
| 0.92 - 1.35 | 2C    | 0.1D           |          | 10B     | 0.006E  | 1.1A    |              | 2.6                    |
| 38.7        |       |                |          |         |         |         |              |                        |

**Laboratory Analyses Completed for this profile**

|                |  |
|----------------|--|
| 12C1           | Calcium chloride extractable boron - manual colour   |
| 15_NR_BSa      | Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available                  |
| 15_NR_CMR      | Exchangeable bases (Ca/Mg ratio) - Not recorded  |
| 15C1_CA        | Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for |
| soluble salts  |  |
| 15C1_CEC       | CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts                     |
| 15C1_K         | Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for            |
| soluble salts  |  |
| 15C1_MG        | Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for            |
| soluble salts  |  |
| 15C1_NA        | Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for            |
| soluble salts  |  |
| 15J_BASES      | Sum of Bases   |
| 15L1_a         | Exchangeable bases Base saturation percentage (BSP) - Auto calculated from available using         |
| Sum of Cations |  |
|                | and measured clay  |
| 15N1_a         | Exchangeable sodium percentage (ESP) - Auto calculated from available using CEC                    |
| 15N1_b         | Exchangeable sodium percentage (ESP) - Auto calculated from available using Sum of Cations         |
| 17A1           | Total Potassium - X-ray fluorescence   |
| 19B_NR         | Calcium Carbonate (CaCO3) - Not recorded   |
| 3_NR           | Electrical conductivity or soluble salts - Not recorded  |
| 4_NR           | pH of soil - Not recorded  |
| 4B1            | pH of 1:5 soil/0.01M calcium chloride extract - direct   |
| 6A1_UC         | Organic carbon (%) - Uncorrected Walkley and Black method  |
| 7A1            | Total nitrogen - semimicro Kjeldahl, steam distillation  |
| 9A3            | Total Phosphorus (ppm) - semimicro kjeldahl, automated colour                                      |
| 9H1            | Anion storage capacity   |

|            |   |
|------------|---|
| P10_1m2m   | 1000 to 2000u particle size analysis, (method not recorded) |
| P10_20_75  | 20 to 75u particle size analysis, (method not recorded)     |
| P10_75_106 | 75 to 106u particle size analysis, (method not recorded)    |
| P10_NR_C   | Clay (%) - Not recorded                                     |

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P10\_NR\_Saa      Sand (%) - Not recorded arithmetic difference, auto generated  
P10\_NR\_Z        Silt (%) - Not recorded  
P10106\_150      106 to 150u particle size analysis, (method not recorded)  
P10150\_180      150 to 180u particle size analysis, (method not recorded)  
P10180\_300      180 to 300u particle size analysis, (method not recorded)  
P10300\_600      300 to 600u particle size analysis, (method not recorded)  
P106001000      600 to 1000u particle size analysis, (method not recorded)