

**Project Name:** Jerramungup soils inventory (=JER LRS)  
**Project Code:** JSI **Site ID:** 1162 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

|                        |                      |                   |                         |
|------------------------|----------------------|-------------------|-------------------------|
| <b>Desc. By:</b>       | Tim Overheu          | <b>Locality:</b>  |                         |
| <b>Date Desc.:</b>     | 16/11/94             | <b>Elevation:</b> | 323 metres              |
| <b>Map Ref.:</b>       |                      | <b>Rainfall:</b>  | 400                     |
| <b>Northing/Long.:</b> | 6258885 AMG zone: 50 | <b>Runoff:</b>    | No Data                 |
| <b>Easting/Lat.:</b>   | 677920 Datum: AGD84  | <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>   | 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> | Simple-slope | <b>Relief:</b>         | No Data |
| <b>Elem. Type:</b>  | Plain        | <b>Slope Category:</b> | No Data |
| <b>Slope:</b>       | %            | <b>Aspect:</b>         | No Data |

#### Surface Soil Condition Hardsetting, Hardsetting

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

#### Soil Classification

|  |  |                                |        |
|--|--|--------------------------------|--------|
| <b>Australian Soil Classification:</b>       |  | <b>Mapping Unit:</b>           | N/A    |
| Hypercalcic Hypernatric Grey Sodosol         |  | <b>Principal Profile Form:</b> | Dy3.13 |
| <b>ASC Confidence:</b>                       |  | <b>Great Soil Group:</b>       | N/A    |
| All necessary analytical data are available. |  |                                |        |

**Site** Extensive clearing, for example poisoning, ringbarking

#### Vegetation:

**Surface Coarse** 2-10%, medium gravelly, 6-20mm, subangular, Quartz; 0-2%, , subangular, Silcrete

#### Profile

|     |               |  |
|-----|---------------|--|
| Ap  | 0 - 0.06 m    | Dark grey (10YR4/1-Moist); , 0-0% ; Clay loam; Strong grade of structure, 5-10 mm, Subangular blocky;  |
|     |               | Smooth-ped fabric; Dry; Firm consistence; 2-10%, fine gravelly, 2-6mm, subangular, Quartz, coarse      |
|     |               | fragments; Field pH 8 (pH meter); Abrupt change to -   |
| B21 | 0.06 - 0.55 m | Pale olive (5Y6/3-Moist); , 0-0% ; Medium heavy clay; Moderate grade of structure, 5-10 mm, Subangular |
|     |               | blocky; Smooth-ped fabric; Moderately moist; Field pH 8.9 (pH meter); Clear change to -                |
| B22 | 0.55 - 1.4 m  | Pale yellow (2.5Y7/4-Moist); Mottles, 5YR58, 10-20% , 5-15mm, Distinct; Medium heavy clay; Strong      |
|     |               | grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Field pH 8.2 (pH |
|     |               | meter); Clear change to -  |
| C   | 1.4 - 1.8 m   | Light yellowish brown (2.5Y6/4-Moist); Mottles, 10YR68, 10-20% , 5-15mm, Distinct; Medium heavy clay;  |
|     |               | Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Field pH  |
|     |               | 4.7 (pH meter);  |

#### Morphological Notes

|     |  |
|-----|--|
| Ap  | Grey loamy clayey sand   |
| B21 | OLIVE YELLOW SANDY CLAY  |
| B22 | THIS HORIZON AND ONE BELOW HAVE A VERY SMOOTH TALCY TEXTURE    |
| C   | ALSO MOTTLES CMD 10YR 8/2 B. ALSO CALCAREOUS MATERIAL PRESENT. |

#### Observation Notes

##### Site Notes

Except for the sand drift, this soil is similar to the soil down to Keith Thomas' roadway. Distinctly columnar. Looks like a mix between aneixer and 2b series. Sand drift piled up along fence with several sandy layers. common soil up along nt

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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 - 0.06    | 6.3B<br>7.2H | 28B    | 5.5A  | 4.9             | 0.51      | 0.99        |                      |     | 11.9D  |       |
| 0.06 - 0.55 | 8.7B<br>9.5H | 120B   | 1.8E  | 6.1             | 0.94      | 6.4         |                      | 14B | 15.24D | 45.71 |
| 0.55 - 1.4  | 7.5B<br>8H   | 240B   | 0.56A | 4.6             | 0.76      | 5.5         |                      |     | 11.42D |       |
| 1.4 - 1.8   | 5.4B<br>5.4H | 390B   | 0.41H | 4.8             | 0.29      | 3.7         | <0.02J               |     | 9.2D   |       |

| 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 - 0.06    |       | 1.55D          |          | 140B    | 0.1E    | 0.78A   |              | 4.2                    |
| 0.06 - 0.55 | <2C   | 0.08D          |          | 24B     | 0.013E  | 0.91A   |              | 3.4                    |
| 0.55 - 1.4  | <2C   | 0.14D          |          | 41B     | <0.005E | 0.5A    |              | 15.7                   |
| 1.4 - 1.8   |       | 0.13D          |          | 39B     | <0.005E | 0.05A   |              | 32                     |

**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_CM         | Exchangeable bases (Ca/Mg ratio) - Not recorded  |
| 15A1_CA          | Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment      |
| for soluble      | salts  |
| 15A1_CEC         | Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts |
| 15A1_K           | Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment      |
| for soluble      | salts  |
| 15A1_MG          | Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment      |
| for soluble      | salts  |
| 15A1_NA          | Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment      |
| for soluble      | salts  |
| 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_MG          | Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for      |
| soluble salts    |  |
| 15E1_AL          | Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts                  |
| 15E1_CA          | Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble    |
| salts            |  |
| 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_MN          | Exchangeable bases (Mn2+) by compulsive exchange, no pretreatment for soluble salts          |
| 15E1_NA          | Exchangeable bases, CEC and AEC by compulsive exchange, no 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  |
| 4B_AL_NR | Aluminium in 1:5 soil/0.01M calcium chloride extract - method not recorded                 |

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|            |   |
|------------|---|
| 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                                       |
| 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)    |