

**Project Name:** Jerramungup soils inventory (=JER LRS)  
**Project Code:** JSI **Site ID:** 1147 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

**Site Information**

<b>Desc. By:</b>	Tim Overheu	<b>Locality:</b>	
<b>Date Desc.:</b>	21/11/94	<b>Elevation:</b>	120 metres
<b>Map Ref.:</b>		<b>Rainfall:</b>	500
<b>Northing/Long.:</b>	6203238 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	681899 Datum: AGD84	<b>Drainage:</b>	Imperfectly 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:** Sand plain

<b>Morph. Type:</b>	No Data	<b>Relief:</b>	1 metres
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	No Data
<b>Slope:</b>	3 %	<b>Aspect:</b>	No Data

**Surface Soil Condition** Loose

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

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Calcic Hypernatric Red Sodosol	<b>Principal Profile Form:</b>	Dy4.43
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	N/A
All necessary analytical data are available.		

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

**Vegetation:**

**Surface Coarse** No surface coarse fragments; No surface coarse fragments

**Profile**

Ap	0 - 0.05 m	Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Loamy fine sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Loose consistence; 0-2%, fine gravelly, 2-6mm, rounded, Gravel, coarse fragments; Water repellent; Field pH 8 (pH meter); Abrupt change to -
A21	0.05 - 0.08 m	Pale brown (10YR6/3-Moist); , 0-0% ; Fine sand; Single grain grade of structure; Sandy prominent) fabric; Dry; Loose consistence; 0-2%, fine gravelly, 2-6mm, subangular, Gravel, coarse fragments; Field pH 8 (pH meter); Abrupt, Tongued change to -
B21	0.08 - 0.3 m	Yellowish red (5YR5/8-Moist); Mottles, 10YR66, 0-2% , 5-15mm, Faint; Medium clay; Strong grade of structure, 20-50 mm, Columnar; Smooth-ped fabric; Dry; Very firm consistence; Field pH 8.3 (pH meter); Abrupt change to -
B22	0.3 - 0.5 m	Brown (7.5YR4/4-Moist); Mottles, 10YR82, 0-2% , 5-15mm, Faint; Light clay; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Weak consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Soil matrix is Highly calcareous; Field pH 9.2 (pH meter); Abrupt change to -
B23	0.5 - 0.85 m	Yellowish brown (10YR5/6-Moist); , 0-0% ; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, subangular, Siltstone, coarse fragments; Soil matrix is Slightly calcareous; Field pH 8.4 (pH meter); Clear change to -
C	0.85 - 1.5 m	Yellowish red (5YR4/6-Moist); , 20-50% , 5-15mm, Distinct; Sandy clay loam; Moderately moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, subangular, Siltstone, coarse fragments; Field pH 4.9 (pH meter)

meter);

**Morphological Notes**

A21	extends to 20 in places
B22	DISTINCT LAYER OF SOFT LIME WITH SOFT CALCAREOUS NODULES.
C	BOTTOM LAYER, POSSIBLY NOT FAR ABOVE SPONGEOLITE?

**Observation Notes**

**Site Notes**

Level plain, moist soil, under continuous crop; canola.

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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 - 0.05	5.1B 6H	12B	6H	3.4	0.43	0.83	0.04J		10.66D	
0.08 - 0.3	8.6B 9.7H	82B	4.5E	5.9	0.53	6.4		18B	17.33D	35.56
0.3 - 0.5	8.2B 9H	50B	4.9E	7.8	0.51	4.2		19B	17.41D	22.11
0.5 - 0.85	8.2B 8.9H	100B	1.9E	7.5	0.47	8.9		21B	18.77D	42.38
0.85 - 1.2	4.7B 5.1H	240B	2.9H	9	0.3	13	<0.02J		25.2D	

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 - 0.05		3.07D		130B	0.241E	0.21A		3.5
0.08 - 0.3	23C	0.3D		38B	0.024E	0.3A		5
0.3 - 0.5	<2C	0.38D		28B	0.035E	0.38A		3.1
0.5 - 0.85	<2C	0.07D		23B	0.011E	0.54A		3.1
0.85 - 1.2		0.28D		160B	0.021E	0.13A		8.5

**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	
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
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
4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method

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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)