

Project Name: Jerramungup soils inventory (=JER LRS)
Project Code: JSI **Site ID:** 1155 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

Desc. By:	Tim Overheu	Locality:	
Date Desc.:	29/11/94	Elevation:	No Data
Map Ref.:		Rainfall:	400
Northing/Long.:	6242715 AMG zone: 50	Runoff:	No Data
Easting/Lat.:	680459 Datum: AGD84	Drainage:	Moderately well drained

Geology

ExposureType:	Existing vertical exposure	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	No Data	Substrate Material:	No Data

Land Form

Rel/Slope Class: Gently undulating rises 9-30m 1-3% **Pattern Type:** Rises

Morph. Type:	Mid-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	2 %	Aspect:	90 degrees

Surface Soil Condition Firm

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

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Eutrophic Mottled-Mesonatric Red Sodosol		Principal Profile Form:	N/A
ASC Confidence:		Great Soil Group:	N/A
All necessary analytical data are available.			

Site Cultivation. Rainfed

Vegetation:

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

Profile

Ap	0 - 0.14 m	Dark brown (7.5YR3/4-Moist); , 0-0% ; Sandy clay loam; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Very weak consistence; 2-10%, medium gravelly, 6-20mm, subangular, Quartz, coarse fragments; Field pH 6.7 (pH meter); Clear change to -
A21	0.14 - 0.28 m	Dark reddish brown (5YR3/3-Moist); , 0-0% ; Coarse sandy clay loam; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Very weak consistence; 2-10%, medium gravelly, 6-20mm, subangular, Igneous rock (unidentified), coarse fragments; Field pH 6.5 (pH meter); Sharp change to -
A3	0.28 - 0.46 m	Dark brown (7.5YR3/4-Moist); , 0-0% ; Clayey sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Loose consistence; 2-10%, medium gravelly, 6-20mm, subangular, Igneous rock (unidentified), coarse fragments; Field pH 6.5 (pH meter); Sharp change to -
B21b	0.46 - 0.68 m	Dark reddish brown (5YR3/4-Moist); , 2.5YR48, 10-20% , 5-15mm, Distinct; Coarse sandy medium clay; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very firm consistence; 2-10%, medium gravelly, 6-20mm, subangular, Quartz, coarse fragments; Field pH 7 (pH meter); Clear change to -
B3	0.68 - 1.25 m	Reddish brown (5YR5/3-Moist); Mottles, 2.5Y62, 10-20% , 30-mm, Distinct; Sandy light medium clay; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Firm consistence; 2-10%, cobbly, 60-200mm, subangular, Quartz, coarse fragments; Field pH 8.2 (pH meter); Abrupt change to -
B4b	1.25 - 1.35 m	Brown (10YR5/3-Moist); , 2.5Y36, 10-20% , 5-15mm, Distinct; Light medium clay;

Moderate grade of
consistence; 2-10%,
8.2 (pH meter);

structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm
cobbly, 60-200mm, subangular, Igneous rock (unidentified), coarse fragments; Field pH

Morphological Notes

A3 Discontinuity at A3/2B21. Organic staining or leached zone? app. 2cm
B21b ALSO Mottles FMD 2.5YR 4/8
B4b Very greasy

Observation Notes

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A deep sand over weathering laterite alternative classification uc2.21 depth of sand = deep sand, but clay at 100cm;
dy ?? [lab data suggests
sandy duplex]

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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 - 0.14	5B 6H	10B	4.2H	0.82	0.37	0.58	0.06J		5.97D	
0.14 - 0.28	5.6B 6.3H	18B	2.8H	1.1	0.25	0.78	0.03J		4.93D	
0.28 - 0.46	6.1B 6.8H	20B	1.4A	0.95	0.18	0.4			2.93D	
0.46 - 0.68	6.4B 7.4H	40B	6.1A	9.9	0.76	3.4			20.16D	
0.68 - 1.25	7.4B 8.5H	22B	3E	5.3	0.48	4.2		14B	12.98D	30.00
1.25 - 1.35	7.3B 8.4H	46B	7.8E	16	1.2	14		44B	39D	31.82

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 - 0.14		1.09D		120B	0.082E	1.6A		6.8
0.14 - 0.28		0.38D		89B	0.035E	1.8A		5.3
0.28 - 0.46		0.28D		84B	0.03E	1.7A		4.4
0.46 - 0.68		0.48D		67B	0.068E	1.5A		5.6
0.68 - 1.25	<2C	0.06D		120B	0.007E	2.1A		4.9
1.25 - 1.35	<2C	0.08D		50B	0.02E	1A		8.8

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
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_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

soluble salts

15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts
15E1_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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 (Mn ²⁺) by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts

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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 (CaCO ₃) - 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
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)