

**Project Name:** Moora Wongan Hills land resources survey  
**Project Code:** MRA **Site ID:** 0520 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

**Site Information**

<b>Desc. By:</b>	Mir Frahmmand	<b>Locality:</b>	
<b>Date Desc.:</b>	04/04/97	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6681248 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	514955 Datum: AGD84	<b>Drainage:</b>	Well drained

**Geology**

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

**Landform**

<b>Rel/Slope Class:</b>	Gently undulating rises 9-30m 1-3%	<b>Pattern Type:</b>	Rises
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<b>Morph. Type:</b>	Lower-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Footslope	<b>Slope Category:</b>	No Data
<b>Slope:</b>	2 %	<b>Aspect:</b>	270 degrees

**Surface Soil Condition** Soft

**Erosion**

**Soil Classification**

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Acidic Duric Brown Kandosol		<b>Principal Profile Form:</b>	N/A
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	N/A
Confidence level not specified			

**Site Disturbance**

**Vegetation**

**Surface Coarse Fragments**

**Profile Morphology**

A1	0 - 0.05 m	Brown (10YR4/3-Moist); ; Clayey sand; Massive grade of structure; Moist; Field pH 4.9 (pH meter);
		Clear, Smooth change to -
A2	0.05 - 0.15 m	; Fine sandy loam; Massive grade of structure; Moist; Field pH 4.1 (pH meter); Diffuse, Smooth change
		to -
B1	0.15 - 0.4 m	Brownish yellow (10YR6/6-Moist); ; Clay loam, fine sandy; Massive grade of structure; Dry; Field pH 4
		(pH meter); Diffuse, Smooth change to -
B2t	0.4 - 0.6 m	Reddish yellow (7.5YR6/8-Moist); Substrate influence, 2.5YR46, 10-20% , 5-15mm, Distinct; Sandy clay
		loam; Massive grade of structure; Dry; Field pH 4.1 (pH meter); Diffuse, Smooth change to -
B21t	0.6 - 0.8 m	Strong brown (7.5YR5/8-Moist); ; Sandy clay loam; Massive grade of structure; Dry; Field pH 4.1 (pH
		meter); Diffuse, Smooth change to -
B22t	0.8 - 1.2 m	Reddish brown (5YR5/4-Moist); ; Sandy clay loam; Massive grade of structure; Moderately moist; Field
		pH 5.3 (pH meter); Abrupt, Irregular change to -
Bcw	1.2 - 1.8 m	Yellowish red (5YR5/6-Moist); ; Clayey sand; Dry; 50-90%, medium gravelly, 6-20mm, angular,
		Ironstone, coarse fragments; Silcrete, Weakly cemented, Massive; Field pH 5.9 (pH meter); Sharp
		change to -
Cm	1.8 - m	; Silcrete, Weakly cemented, Massive;

**Morphological Notes**

A2	f-m
B1	f-m
B2t	f-m
B21t	f-m
B22t	f-m

Bcw  
Cm

Silcrete nodules contains magnesium about 5%  
Duricrust

**Observation Notes**

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**Site Notes**

Grey/ brown deep loamy 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				Na	Cmol (+)/kg			%
0 - 0.05	5B	6B	1.39H	0.31	0.19	0.06	0.05J		1.95D	
0.05 - 0.15	5.9H 4.2B	4B	0.88H	0.19	0.06	0.1	0.4J		1.23D	
0.15 - 0.4	5.2H 4B	5B	0.5H	0.11	0.03	0.05	0.89J		0.69D	
0.4 - 0.6	4.6H 3.9B	6B	0.7H	0.25	0.04	0.04	0.96J		1.03D	
0.6 - 0.8	4.4H 4B	6B	0.82H	0.38	0.03	0.02	0.63J		1.25D	
0.8 - 1.2	4.5H 4.5B	4B	1.62H	1.11	0.12	0.02	0.04J		2.87D	
1.2 - 1.8	5.4H 6.1B	2B	2.41H	1.89	1.06	0.12			5.48D	
	7.6H									

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	Clay %	mg/kg	%	%	%	Mg/m3	GV CS FS Silt
0 - 0.05		0.95D		160B	0.056E			4.5
10.6								
0.05 - 0.15		0.78D						4
15.5								
0.15 - 0.4		0.34D						4.5
21.5								
0.4 - 0.6		0.22D						4.9
23.2								
0.6 - 0.8		0.18D						5.2
26.7								
0.8 - 1.2		0.15D						8.1
21.3								
1.2 - 1.8		0.05D						2.4
5.6								

**Laboratory Analyses Completed for this profile**

15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMRR	Exchangeable bases (Ca/Mg ratio) - Not recorded
15_NR_MN	Exchangeable bases (Mn++) - meq per 100g of soil - Not recorded
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
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
18A1_NR	Bicarbonate-extractable potassium (not recorded)
3_NR	Electrical conductivity or soluble salts - Not recorded

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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
9B_NR	Bicarbonate-extractable phosphorus (not recorded)
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)