

**Project Name:** Moora Wongan Hills land resources survey  
**Project Code:** MRA **Site ID:** 0514 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

<b>Desc. By:</b>	Mir Frahmmand	<b>Locality:</b>	
<b>Date Desc.:</b>	24/03/97	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6669690 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	426498 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

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

<b>Morph. Type:</b>	Mid-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	No Data	<b>Slope Category:</b>	No Data
<b>Slope:</b>	2 %	<b>Aspect:</b>	90 degrees

**Surface Soil Condition** Hardsetting, Hardsetting

#### Erosion

#### Soil Classification

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Sodic Eutrophic Red 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 - 0.15 m	Dark reddish brown (2.5YR3/4-Moist); ; Sandy loam; ; ; Dry; Field pH 5.3 (pH meter); Clear change to -
B2	0.15 - 0.25 m	Reddish brown (5YR5/4-Moist); ; Sandy loam; Massive grade of structure; Dry; Field pH 7.2 (pH meter); Diffuse change to -
B21	0.25 - 0.35 m	Yellowish red (5YR4/6-Moist); ; Sandy loam; Moist; 10-20%, angular, Quartz, coarse fragments; 2-10%, angular, Ironstone, coarse fragments; Field pH 7.3 (pH meter); Clear change to -
B22t	0.35 - 0.7 m	Yellowish red (5YR5/6-Moist); ; Clay loam; ; ; Moist; Field pH 8.5 (pH meter); Diffuse change to -
B23t	0.7 - 1.2 m	Strong brown (7.5YR5/6-Moist); , 5YR56, 10-20% , Distinct; Light clay; Massive grade of structure; Moist; Field pH 9.3 (pH meter); Diffuse change to -
B24t	1.2 - 2 m	Strong brown (7.5YR5/6-Moist); , 2.5YR56, 10-20% , Distinct; Sandy clay loam; Massive grade of structure; Moist; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 9.1 (pH meter);

#### Morphological Notes

B22t	gritty
B23t	gritty

#### Observation Notes

#### Site Notes

Alkaline red 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
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m	dS/m		Cmol (+)/kg						%		
0 - 0.15	4.7B 5.4H	12B	2.79H	0.94	0.29	0.24	0.16J		4.26D		
0.15 - 0.25	5.1B 6.6H	3B	3.09A	1.27	0.07	0.31			4.74D		
0.25 - 0.35	5.9B 7.5H	5B	2.13A	0.94	0.07	0.61			3.75D		
0.35 - 0.7	7.3B 8.8H	20B	5.45E	4.23	0.19	4.93		16B	14.8D	30.81	
0.7 - 1.2	8B 9.2H	42B	5.87E	6.13	0.34	7.18		20B	19.52D	35.90	
1.2 - 1.5	8.2B 9.4H	41B	2.69E	3.67	0.3	3.95		12B	10.61D	32.92	

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 - 0.15		1.11D		230B	0.083E				9.4
8.2									
0.15 - 0.25		0.48D							8.4
11.6									
0.25 - 0.35		0.19D							8.2
7.3									
0.35 - 0.7	<2C	0.1D							6
34.3									
0.7 - 1.2	<2C	0.07D							8.8
38.8									
1.2 - 1.5	<2C	0.04D							6.3
24.2									

#### **Laboratory Analyses Completed for this profile**

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 for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_CEC	salts
15A1_K for soluble	Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts
15A1_MG for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_NA for soluble	salts
15C1_CA pretreatment for	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15C1_CEC	salts
15C1_K soluble salts	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5,
15C1_MG soluble salts	soluble salts
15C1_NA soluble salts	CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15E1_AL	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
15E1_CA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
15E1_K	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
15E1_MG	Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble salts
15E1_MN	Exchangeable bases, CEC and AEC 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

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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)
19B_NR	Calcium Carbonate (CaCO <sub>3</sub> ) - 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
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)