

**Project Name:** Bencubbin land resources survey (Merredin North)  
**Project Code:** MDN      **Site ID:** 0323      **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

<b>Desc. By:</b>	Gerard Grealish	<b>Locality:</b>	
<b>Date Desc.:</b>	06/08/91	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6635775 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	573081 Datum: AGD84	<b>Drainage:</b>	No Data

#### 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>	No Data	<b>Pattern Type:</b>	Peneplain
<b>Morph. Type:</b>	No Data	<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

#### Erosion

#### Soil Classification

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Calcic Hypernatric Brown Sodosol		<b>Principal Profile Form:</b>	N/A
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	N/A
Analytical data are incomplete but reasonable confidence.			

#### Site Disturbance

#### Vegetation

#### Surface Coarse Fragments

#### Profile Morphology

<b>A1</b>	0 - 0.07 m	Dark reddish brown (5YR3/3-Moist); ; Sandy loam; Weak grade of structure, <2 mm, Subangular blocky; 1mm) roots; Diffuse, Irregular change to -
<b>B1</b>	0.07 - 0.25 m	Dark reddish brown (5YR3/3-Moist); ; Clay loam, sandy; Moderate grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Dry; Firm consistence; Field pH 7.5 (pH meter); Many, very fine (0-10 mm), Soft segregations; Soil matrix is Highly calcareous; Field pH 8 (pH meter); Few, roots; Clear, Wavy change to -
<b>B21</b>	0.25 - 0.7 m	Yellowish red (5YR4/6-Moist); ; Clay loam, sandy; Moderate grade of structure, 5-10 mm, Angular blocky; Rough-ped fabric; Dry; Very firm consistence; Very many (50 - 100 %), (20 - 60 mm), Soft segregations; Soil matrix is Very highly calcareous; Field pH 9.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Wavy change to -
<b>B22</b>	0.7 - 1.1 m	Yellowish red (5YR4/6-Moist); ; Medium heavy clay; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Many (20 - 50 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Soil matrix is Highly calcareous; Field pH 9.5 (pH meter);

#### Morphological Notes

A1	15% CLAY
B1	30% CLAY
B21	35% CLAY
B22	50% CLAY

#### Observation Notes

#### Site Notes

Marindo North rd.

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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				%
0.01 - 0.05	5.8B 7.1H	4B	4.25A	2.17	0.72	0.46			7.6D	
0.16 - 0.2	7.9B 9H	23B	7.93E	8.59	1	3.58		27B	21.1D	13.26
0.46 - 0.5	8.4B 9.5H	69B	3.56E	7.08	0.96	6.6		19B	18.2D	34.74
0.95 - 1	8.2B 8.8H	150B	1.98E	6.99	0.98	8.82		22B	18.77D	40.09

Depth	CaCO <sub>3</sub>	Organic C Clay	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	%	mg/kg	%	%	%	Mg/m <sup>3</sup>	GV CS FS Silt
0.01 - 0.05		0.84D		90B				9.4
12.6								
0.16 - 0.2	<2C	0.49D		78B				12.9
41.7								
0.46 - 0.5	18C	0.17D		56B				11.8
44.3								
0.95 - 1	<2C	0.12D		45B				8.8
48.7								

**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	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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 (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_MG	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_NA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15C1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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	
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)
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
4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
9A3	Total Phosphorus (ppm) - semimicro kjeldahl, automated colour
9B_NR	Bicarbonate-extractable phosphorus (not recorded)
9H1	Anion storage capacity

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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)