

**Project Name:** Bencubbin land resources survey (Merredin North)  
**Project Code:** MDN **Site ID:** 0330 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

**Desc. By:** Gerard Grealish  
**Date Desc.:** 09/08/91  
**Map Ref.:**  
**Northing/Long.:** 6565551 AMG zone: 50  
**Easting/Lat.:** 559815 Datum: AGD84  
**Locality:**  
**Elevation:** No Data  
**Rainfall:** No Data  
**Runoff:** No Data  
**Drainage:** No Data

#### Geology

**ExposureType:** Soil pit  
**Geol. Ref.:** No Data  
**Conf. Sub. is Parent. Mat.:** No Data  
**Substrate Material:** No Data

#### Landform

**Rel/Slope Class:** No Data  
**Morph. Type:** Mid-slope  
**Elem. Type:** Hillslope  
**Slope:** 2 %  
**Pattern Type:** Peneplain  
**Relief:** No Data  
**Slope Category:** No Data  
**Aspect:** 90 degrees

#### Surface Soil Condition

#### Erosion

#### Soil Classification

**Australian Soil Classification:**  
 Acidic Regolithic Orthic Tenosol  
**ASC Confidence:**  
 All necessary analytical data are available.  
**Mapping Unit:** N/A  
**Principal Profile Form:** Uc5.22  
**Great Soil Group:** N/A

#### Site Disturbance

#### Vegetation

#### Surface Coarse Fragments

#### Profile Morphology

A1 Moderately roots; Clear, Wavy	0 - 0.15 m Dark greyish brown (10YR4/2-Moist); ; Sand; Massive grade of structure; Earthy fabric; moist; Very weak consistence; Field pH 6.5 (pH meter); Abundant, very fine (0-1mm) change to -
B21 30mm, Faint; Field pH 4.5 (pH	0.15 - 1 m Brownish yellow (10YR6/6-Moist); , 7.5YR58, 0-2% , 0-5mm, Faint; , 10YR82, 2-10% , 15- Clayey fine sand; Massive grade of structure; Earthy fabric; Moist; Weak consistence; meter); Few, very fine (0-1mm) roots; Diffuse change to -
B22 fabric; Moist; 20 mm),	1 - 1.8 m Brownish yellow (10YR6/6-Moist); ; Clayey fine sand; Massive grade of structure; Earthy Weak consistence; 2-10%, coarse fragments; Few (2 - 10 %), Ferruginous, Coarse (6 - Nodules; Field pH 4.5 (pH meter); Few, very fine (0-1mm) roots;

#### Morphological Notes

A1 3% CLAY  
 B21 8% CLAY--10YR8/2 MOTTLES ARE BLEACHED SAND GRAINS  
 B22 8% CLAY

#### Observation Notes

#### Site Notes

deep yellow sand--free standing water @ 270cm- -laterite nodules increase in abundance below 2m--pH:6.5 @  
 3cm- 4.5 @ 25cm-4.5 @  
 60cm-6.0 @ 100cm-7.5 @ 160cm.

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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	4.7B 5.6H	6B	1.43H	0.35	0.08	0.24	0.25J	2.1D
0.3 - 0.35	4B 4.4H	6B	0.58H	0.19	0.02	0.1	0.78J	0.89D
1.2 - 1.25	4.5B 4.8H	35B	0.87H	0.85	<0.02	1.64	0.06J	3.37D

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 8.4		1.2D		150B				5.1
0.3 - 0.35 17.7		0.19D		28B				3.8
1.2 - 1.25 16.1		0.11D		22B				8

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

15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMd	Exchangeable bases (Ca/Mg ratio) - Not recorded
15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts
15E1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) 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 <sup>2+</sup> ) by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15J_BASdS	Sum of Bases
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
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
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)