

**Project Name:** Nyabing Kukerin land resources survey  
**Project Code:** NYA **Site ID:** 0398 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

<b>Desc. By:</b> Heather Percy	<b>Locality:</b>
<b>Date Desc.:</b> 29/08/95	<b>Elevation:</b> 270 metres
<b>Map Ref.:</b>	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6240900 AMG zone: 50	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 629500 Datum: AGD84	<b>Drainage:</b> Imperfectly drained

#### Geology

<b>ExposureType:</b> Auger boring	<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> Lower-slope	<b>Relief:</b> 5 metres
<b>Elem. Type:</b> Hillslope	<b>Slope Category:</b> No Data
<b>Slope:</b> 2 %	<b>Aspect:</b> 0 degrees

#### Surface Soil Condition Hardsetting, Hardsetting

#### Erosion (wind); (sheet) (rill) (gully)

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Hypocalcic Mesonatric Yellow Sodosol	<b>Principal Profile Form:</b> Dy2.13
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> N/A
All necessary analytical data are available.	

#### Site Disturbance Cultivation. Rainfed

#### Vegetation

**Surface Coarse Fragments** 20-50%, medium gravelly, 6-20mm, subrounded, ; 10-20%, , subangular, Quartz

#### Profile Morphology

A1	0 - 0.1 m	Dark greyish brown (10YR4/2-Moist); , 0-0% ; Clayey sand; Massive grade of structure; 20-50%, medium gravelly, 6-20mm, subangular, , coarse fragments; 10-20%, medium gravelly, 6-20mm, subrounded, Quartz, coarse fragments; Field pH 6 (Raupach); Abrupt, Smooth change to -
A3	0.1 - 0.12 m	Brown (10YR5/3-Moist); , 0-0% ; Clayey sand; Massive grade of structure; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 6.5 (Raupach); Abrupt, Wavy change to -
B21	0.12 - 0.4 m	Brownish yellow (10YR6/6-Moist); , 0-0% ; Medium clay; Moderate grade of structure; Rough-ped fabric; Dry; 0-2%, fine gravelly, 2-6mm, Calcrete, coarse fragments; Soil matrix is Slightly calcareous; Field pH 9 (Raupach); Gradual change to -
B22	0.4 - 0.5 m	Olive yellow (2.5Y6/6-Moist); , 0-0% ; Light medium clay; Moderate grade of structure; Rough-ped fabric; Dry; 0-2%, fine gravelly, 2-6mm, Calcrete, coarse fragments; Soil matrix is Slightly calcareous; Field pH 9.5 (Raupach);

#### Morphological Notes

B22 Stopped by large carbonate nodule.

#### Observation Notes

#### Site Notes

Site in lupin crop - drainage line downslope is affected by severe salinity and moderate sheet and rill erosion - "hardsetting grey clay".

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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 - 0.1	4.9B	6B	3.06H	0.63	0.22	0.04	0.11J		3.95D	
	5.8H									
0 - 0.1	4.9B	6B	3.06H	0.63	0.22	0.04	0.11J		3.95D	
	5.8H									
0 - 0.1	4.9B	6B	3.06H	0.63	0.22	0.04	0.11J		3.95D	
	5.8H									
0.12 - 0.32	8.3B	21B	4E	4.56	0.74	0.84		11B	10.14D	7.64
	9.1H									
0.12 - 0.32	8.3B	21B	4E	4.56	0.74	0.84		11B	10.14D	7.64
	9.1H									
0.12 - 0.32	8.3B	21B	4E	4.56	0.74	0.84		11B	10.14D	7.64
	9.1H									

Depth	CaCO <sub>3</sub>	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size	Analysis
m	%	Clay %	mg/kg	%	%	%	Mg/m <sup>3</sup>	GV CS FS	Silt
0 - 0.1		1.16D						90I	4.5
5.5									
0 - 0.1		1.16D						90I	4.5
5.5									
0 - 0.1		1.16D						90I	4.5
5.5									
0.12 - 0.32	<2C	0.2D						55.5I	3.5
41									
0.12 - 0.32	<2C	0.2D						55.5I	3.5
41									
0.12 - 0.32	<2C	0.2D						55.5I	3.5
41									

### Laboratory Analyses Completed for this profile

15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMV	Exchangeable bases (Ca/Mg ratio) - Not recorded
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	
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_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
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

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P10\_gt2m > 2mm particle size analysis, (method not recorded)  
P10\_NR\_C Clay (%) - Not recorded  
P10\_NR\_S Sand (%) - Not recorded  
P10\_NR\_Z Silt (%) - Not recorded