

**Project Name:** Nyabing Kukerin land resources survey  
**Project Code:** NYA **Site ID:** 0374 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

**Site Information**

<b>Desc. By:</b>	Heather Percy	<b>Locality:</b>	
<b>Date Desc.:</b>	10/08/95	<b>Elevation:</b>	290 metres
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6237690 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	608020 Datum: AGD84	<b>Drainage:</b>	Poorly 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>	Open depression (vale)	<b>Relief:</b>	5 metres
<b>Elem. Type:</b>	Drainage depression	<b>Slope Category:</b>	No Data
<b>Slope:</b>	1 %	<b>Aspect:</b>	45 degrees

**Surface Soil Condition** Surface crust, Hardsetting

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

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Calcic Hypernatric Brown 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** 10-20%, medium gravelly, 6-20mm, angular, Quartz; 0-2%, , subangular, Gabbro

**Profile Morphology**

A1	0 - 0.08 m	Dark grey (10YR4/1-Moist); , 0-0% ; Coarse sandy clay loam; Massive grade of structure; Moderately moist; Field pH 6 (Raupach); Abrupt, Wavy change to -
B21	0.08 - 0.3 m	Brown (7.5YR4/4-Moist); Mottles, 2.5YR46, 2-10% , 0-5mm, Faint; Sandy medium clay; of structure; Moderately moist; Soil matrix is Slightly calcareous; Field pH 9 (Raupach);
B22	0.3 - 0.4 m	Brown (7.5YR5/4-Moist); Mottles, 2.5YR46, 2-10% , 0-5mm, Faint; Sandy light medium clay; Moderate grade of structure; Moderately moist; 2-10%, medium gravelly, 6-20mm, Calcrete, coarse fragments; Soil matrix is Slightly calcareous; Field pH 9.5 (Raupach); Clear change to -
B23k	0.4 - 0.55 m	Brown (7.5YR5/4-Moist); Mottles, 2.5YR46, 2-10% , 0-5mm, Faint; , 10YR64, 2-10% , 15-30mm, Distinct; Sandy light medium clay; Moderate grade of structure; Moderately moist; 2-10%, medium gravelly, 6-20mm, Calcrete, coarse fragments; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Soil matrix is Moderately calcareous; Field pH 9.5 (Raupach); Gradual change to -
B31k	0.55 - 0.7 m	Yellowish brown (10YR5/4-Moist); Mottles, 7.5YR54, 20-50% , 15-30mm, Faint; Medium clay; Moderate grade of structure; Moderately moist; 10-20%, fine gravelly, 2-6mm, Calcrete, coarse fragments; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Soil matrix is calcareous; Field pH 9.5 (Raupach); Clear change to -
B32k	0.7 - 0.9 m	Light yellowish brown (10YR6/4-Moist); Mottles, 5YR46, 10-20% , 5-15mm, Distinct; Light medium clay; Moderate grade of structure; Moderately moist; 10-20%, medium gravelly, 6-20mm, subrounded, Calcrete, coarse fragments; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Soft segregations;

Soil matrix is Moderately calcareous; Field pH 9.5 (Raupach);

## Morphological Notes

## Observation Notes

## Site Notes

"Hardsetting grey clay" - site is 20 metres downslope from red soil on a dolerite dyke.

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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 - 0.08	5.5B 6.7H	13B	2.89A	4.22	0.32	1.2			8.63D	
0 - 0.08	5.5B 6.7H	13B	2.89A	4.22	0.32	1.2			8.63D	
0 - 0.08	5.5B 6.7H	13B	2.89A	4.22	0.32	1.2			8.63D	
0.08 - 0.28	7.8B 9.1H	27B	3.31E	8.76	0.48	4.71		16B	17.26D	29.44
0.08 - 0.28	7.8B 9.1H	27B	3.31E	8.76	0.48	4.71		16B	17.26D	29.44
0.08 - 0.28	7.8B 9.1H	27B	3.31E	8.76	0.48	4.71		16B	17.26D	29.44

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 - 0.08 15		1.09D						78.5I 6.5
0 - 0.08 15		1.09D						78.5I 6.5
0 - 0.08 15		1.09D						78.5I 6.5
0.08 - 0.28 36.5	<2C	0.2D						56.5I 7
0.08 - 0.28 36.5	<2C	0.2D						56.5I 7
0.08 - 0.28 36.5	<2C	0.2D						56.5I 7

## 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
15A1_CA for soluble	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 salts
15A1_CEC	Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts
15A1_K for soluble	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 salts
15A1_MG for soluble	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 salts
15A1_NA for soluble	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 salts
15C1_CA pretreatment for	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - alcoholic 1M ammonium chloride at pH 8.5, 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
19B_NR	Calcium Carbonate (CaCO <sub>3</sub> ) - Not recorded
3_NR	Electrical conductivity or soluble salts - Not recorded

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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
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