

**Project Name:** Nyabing Kukerin land resources survey  
**Project Code:** NYA **Site ID:** 0209 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

**Desc. By:** Heather Percy  
**Date Desc.:** 11/07/95  
**Map Ref.:**  
**Northing/Long.:** 6255975 AMG zone: 50  
**Easting/Lat.:** 626165 Datum: AGD84  
**Locality:**  
**Elevation:** 335 metres  
**Rainfall:** No Data  
**Runoff:** No Data  
**Drainage:** Poorly drained

#### Geology

**ExposureType:** Auger boring  
**Geol. Ref.:** No Data  
**Conf. Sub. is Parent. Mat.:** No Data  
**Substrate Material:** No Data

#### Landform

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

**Morph. Type:** Mid-slope  
**Elem. Type:** Hillslope  
**Slope:** 1 %  
**Relief:** 10 metres  
**Slope Category:** No Data  
**Aspect:** No Data

#### Surface Soil Condition Hardsetting, Hardsetting

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

#### Soil Classification

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

#### Site Disturbance Complete clearing. Pasture, native or improved, cultivated at some stage

#### Vegetation

**Surface Coarse Fragments** 2-10%, medium gravelly, 6-20mm, subangular, Quartz; 10-20%, , subangular, Gneiss

#### Profile Morphology

**A1p** 0 - 0.08 m Very dark grey (10YR3/1-Moist); , 0-0% ; Clayey sand; Massive grade of structure; Wet; Very weak consistence; Field pH 5.5 (Raupach); Abrupt, Wavy change to -  
**B21** 0.08 - 0.25 m Brown (10YR5/3-Moist); , 0-0% ; Sandy medium heavy clay; Strong grade of structure; Rough-ped fabric; Dry; Very firm consistence; Soil matrix is Slightly calcareous; Field pH 8.5 (Raupach); Clear change to -  
**B22** 0.25 - 0.35 m Light brownish grey (2.5Y6/3-Moist); , 0-0% ; Sandy light medium clay; Moderate grade of structure; Rough-ped fabric; Dry; Very firm consistence; Soil matrix is Moderately calcareous; Field pH 8.5 (Raupach); Clear change to -  
**B3** 0.35 - 0.4 m Light grey (2.5Y7/2-Moist); , 0-0% ; Sandy light medium clay; Weak grade of structure; Rough-ped fabric; Dry; Very firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Soil matrix is Moderately calcareous; Field pH 9 (Raupach);

#### Morphological Notes

B3 Stopped by rock.

#### Observation Notes

#### Site Notes

"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
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m	dS/m		Cmol (+)/kg						%		
0 - 0.08	5.1B 6.3H	13B	2.75H	2.35	0.26	0.72	0.06J		6.08D		
0 - 0.08	5.1B 6.3H	13B	2.75H	2.35	0.26	0.72	0.06J		6.08D		
0 - 0.08	5.1B 6.3H	13B	2.75H	2.35	0.26	0.72	0.06J		6.08D		
0 - 0.1	4.9B										
0.08 - 0.28	7.5B 8.6H	27B	4.66E	9.44	0.14	3.89		19B	18.13D	20.47	
0.08 - 0.28	7.5B 8.6H	27B	4.66E	9.44	0.14	3.89		19B	18.13D	20.47	
0.08 - 0.28	7.5B 8.6H	27B	4.66E	9.44	0.14	3.89		19B	18.13D	20.47	
0.15 - 0.25	7.8B										
0.35 - 0.45	8.5B										

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 - 0.08		1.8D						85I	5.5
9.5									
0 - 0.08		1.8D						85I	5.5
9.5									
0 - 0.08		1.8D						85I	5.5
9.5									
0 - 0.1									
0.08 - 0.28	<2C	0.35D						60I	6.5
33.5									
0.08 - 0.28	<2C	0.35D						60I	6.5
33.5									
0.08 - 0.28	<2C	0.35D						60I	6.5
33.5									
0.15 - 0.25									
0.35 - 0.45									

#### **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
15C1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 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 (Ca2+,Mg2+,Na+,K+) 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 (Mn2+) 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

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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
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