

**Project Name:** Nyabing Kukerin land resources survey  
**Project Code:** NYA **Site ID:** 0491 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

**Site Information**

<b>Desc. By:</b> Heather Percy	<b>Locality:</b>
<b>Date Desc.:</b> 29/02/96	<b>Elevation:</b> 310 metres
<b>Map Ref.:</b>	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6295000 AMG zone: 50	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 621550 Datum: AGD84	<b>Drainage:</b> Poorly drained

**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**

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

<b>Morph. Type:</b> Lower-slope	<b>Relief:</b> 10 metres
<b>Elem. Type:</b> Footslope	<b>Slope Category:</b> No Data
<b>Slope:</b> 1 %	<b>Aspect:</b> 180 degrees

**Surface Soil Condition** Hardsetting, Hardsetting

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

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Epibasic Pedal Hypercalcic Calcarosol	<b>Principal Profile Form:</b> N/A
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> N/A
All necessary analytical data are available.	

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

**Vegetation**

**Surface Coarse Fragments** 10-20%, medium gravelly, 6-20mm, subangular, Quartz; No surface coarse fragments

**Profile Morphology**

A1 (grains) 1mm) roots;	0 - 0.1 m	Dark grey (10YR4/1-Moist); , 0-0% ; Sandy clay loam; Massive grade of structure; Sandy prominent) fabric; Dry; Strong consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Abrupt, Wavy change to -
B21 grade of structure, calcareous;	0.1 - 0.3 m	Light brownish grey (2.5Y6/2-Moist); , 0-0% ; Coarse sandy light medium clay; Weak 200-500 mm, Prismatic; Rough-ped fabric; Dry; Strong consistence; Soil matrix is Slightly Field pH 9.5 (Raupach); Common, very fine (0-1mm) roots; Clear, Wavy change to -
B22k light medium Many (20 - 50 %), calcareous; Field	0.3 - 0.7 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 10YR58, 2-10% , 5-15mm, Distinct; Sandy clay; Weak grade of structure, 200-500 mm, Prismatic; Dry; Very strong consistence; Calcareous, Very coarse (20 - 60 mm), Soft segregations; Soil matrix is Moderately pH 9.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B23 sandy light structure, 20-50 Calcareous, Coarse (Raupach); Few, very	0.7 - 1 m	Greyish brown (2.5Y5/2-Moist); Mottles, 7.5YR56, 2-10% , 15-30mm, Distinct; Coarse medium clay; Moderate grade of structure, 200-500 mm, Prismatic; Moderate grade of mm, Polyhedral; Rough-ped fabric; Dry; Very strong consistence; Few (2 - 10 %), (6 - 20 mm), Soft segregations; Soil matrix is Moderately calcareous; Field pH 9.5 fine (0-1mm) roots; Gradual change to -
B3 10YR81, 10- Strong grade	1 - 1.6 m	Grey (2.5Y6/1-Moist); Mottles, 7.5YR56, 2-10% , 30-mm, Prominent; Substrate influence, 20% , 15-30mm, Distinct; Light clay; Moderate grade of structure, 200-500 mm, Prismatic; of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Dry; Strong consistence; Soil

matrix is Moderately  
to - calcareous; Field pH 9 (Raupach); Few, very fine (0-1mm) roots; Gradual, Wavy change

C 1.6 - 1.7 m White (2.5Y8/1-Moist); Mottles, 2.5Y61, 20-50% , 15-30mm, Distinct; , 7.5YR56, 10-20% ,  
30-mm, Prominent; Clay loam; Moderate grade of structure, 20-50 mm, Polyhedral; Smooth-ped  
fabric; Dry; Strong consistence; Soil matrix is Slightly calcareous; Field pH 9 (Raupach);

**Morphological Notes**

B22k Cutans - topsoil - around coarse structure.  
B23 Cutans - topsoil - around coarse structure.  
B3 Cutans - topsoil - around coarse structure - kaolinitic.  
C Cutans - clay from layer above kaolinitic.

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**Observation Notes**

**Site Notes**

Soil pit in Kuringup catchment - near a boggy area - wheel ruts.

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**Laboratory Test Results:**

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.1	6.7B 7.2H 6.6B 7.2H 6.6B 7H	63B 44B 71B	7.04A	4.94	0.47	1.32			13.77D	
0 - 0.1	6.7B 7.2H 6.6B 7.2H 6.6B 7H	63B 44B 71B	7.04A	4.94	0.47	1.32			13.77D	
0 - 0.1	6.7B 7.2H 6.6B 7.2H 6.6B 7H	63B 44B 71B	7.04A	4.94	0.47	1.32			13.77D	
0 - 0.1	6.7B 7.2H 6.6B 7.2H 6.6B 7H	63B 44B 71B	7.04A	4.94	0.47	1.32			13.77D	
0 - 0.1	6.7B 7.2H 6.6B 7.2H 6.6B 7H	63B 44B 71B	7.04A	4.94	0.47	1.32			13.77D	
0.1 - 0.3	8.4B 9.3H	79B	5.15E	7.39	0.75	5.78		18B	19.07D	32.11
0.1 - 0.3	8.4B 9.3H	79B	5.15E	7.39	0.75	5.78		18B	19.07D	32.11
0.15 - 0.25	8.4B 9.2H	63B								
0.3 - 0.7	8.7B 9.6H	120B	2.6E	5.1	0.86	7.86		14B	16.42D	56.14
0.3 - 0.7	8.7B 9.6H	120B	2.6E	5.1	0.86	7.86		14B	16.42D	56.14
0.4 - 0.5	8.7B 9.6H	74B								
0.7 - 1	8.7B 9.6H	120B	1.9E	4.23	0.59	7.58		14B	14.3D	54.14
0.7 - 1	8.7B 9.6H	120B	1.9E	4.23	0.59	7.58		14B	14.3D	54.14
1 - 1.5	8B 8.6H	220B	1.2E	5.23	0.61	8.07		14B	15.11D	57.64
1 - 1.5	8B 8.6H	220B	1.2E	5.23	0.61	8.07		14B	15.11D	57.64

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1.5 - 1.7	7.6B 7.9H 7.6B 7.9H	420B	1.01E 1.01E	5.94 5.94	0.53 0.53	7.86 7.86	12B 12B	15.34D 15.34D	65.50
1.5 - 1.7	7.6B 7.9H 7.6B 7.9H	420B	1.01E 1.01E	5.94 5.94	0.53 0.53	7.86 7.86	12B 12B	15.34D 15.34D	65.50
1.5 - 1.7	7.6B 7.9H 7.6B 7.9H	420B	1.01E 1.01E	5.94 5.94	0.53 0.53	7.86 7.86	12B 12B	15.34D 15.34D	65.50
1.5 - 1.7	7.6B 7.9H 7.6B 7.9H	420B	1.01E 1.01E	5.94 5.94	0.53 0.53	7.86 7.86	12B 12B	15.34D 15.34D	65.50

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 - 0.1 26.2		1.11D		150B	0.093E				6.9
0 - 0.1 26.2		1.45D 1.11D		190B 150B	0.093E				6.9
0 - 0.1 26.2		1.45D 1.11D		190B 150B	0.093E				6.9
0 - 0.1 26.2		1.45D 1.11D		190B 150B	0.093E				6.9
0 - 0.1 26.2		1.45D 1.11D		190B 150B	0.093E				6.9
0.1 - 0.3 44.8	2C	1.45D 0.31D		190B 55B					6.5
0.1 - 0.3 44.8	2C	0.31D		55B					6.5
0.15 - 0.25 0.3 - 0.7 41.1	<2C	0.12D		32B					7.9
0.3 - 0.7 41.1	<2C	0.12D		32B					7.9
0.4 - 0.5 0.7 - 1 47.1	2C	0.06D		24B					11.2
0.7 - 1 47.1	2C	0.06D		24B					11.2
1 - 1.5 50.9	<2C	0.07D		28B					17.2
1 - 1.5 50.9	<2C	0.07D		28B					17.2
1.5 - 1.7 48.7	<2C	0.08D		23B					33.5
	<2C	0.08D		23B					33.5
1.5 - 1.7 48.7	<2C	0.08D		23B					33.5
	<2C	0.08D		23B					33.5
1.5 - 1.7 48.7	<2C	0.08D		23B					33.5
	<2C	0.08D		23B					33.5

1.5 - 1.7	<2C	0.08D	23B	33.5
48.7	<2C	0.08D	23B	33.5
	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_CMV	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

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15A1_K for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15A1_MG for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15A1_NA for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15C1_CA pretreatment for	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 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 soluble salts	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
15C1_MG soluble salts	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
15C1_NA soluble salts	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
15J_BASES	Sum of Bases
15L1_a Sum of Cations	Exchangeable bases Base saturation percentage (BSP) - Auto calculated from available using 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 (CaCO3) - 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
7A1	Total nitrogen - semimicro Kjeldahl, steam distillation
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_gt2m	> 2mm 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)