

**Project Name:** Nyabing Kukerin land resources survey  
**Project Code:** NYA **Site ID:** 1022 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

**Desc. By:** Melanie Roberts  
**Date Desc.:** 10/10/97  
**Map Ref.:**  
**Northing/Long.:** 6255885 AMG zone: 50  
**Easting/Lat.:** 650508 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:** %  
**Pattern Type:** No Data  
**Relief:** No Data  
**Slope Category:** No Data  
**Aspect:** No Data

#### Surface Soil Condition

#### Erosion

#### Soil Classification

**Australian Soil Classification:**  
 Hypocalcic Mottled-Hypernatric Grey Sodosol  
**ASC Confidence:**  
 All necessary analytical data are available.  
**Mapping Unit:** N/A  
**Principal Profile Form:** N/A  
**Great Soil Group:** N/A

#### Site Disturbance

#### Vegetation

#### Surface Coarse Fragments

#### Profile Morphology

A1c 0 - 0.1 m Very dark greyish brown (10YR3/2-Moist); ; Sandy loam; 10-20%, Ironstone, coarse fragments; Field pH 6.3 (pH meter);  
 A2ec 0.1 - 0.15 m White (10YR8/1-Moist); ; Sand; 10-20%, Ironstone, coarse fragments; Field pH 6.9 (pH meter);  
 B21ct 0.15 - 1.1 m Grey (10YR6/1-Moist); , 10YR66; 20-50%, Ironstone, coarse fragments; Soil matrix is Moderately calcareous; Field pH 9 (pH meter);  
 B22t  
 B23ct 2 - 2.3 m Light grey (10YR7/1-Moist); ; 10-20%, Ironstone, coarse fragments; Field pH 4.5 (pH meter);

#### Morphological Notes

A1c Gravelly sandy loam.  
 A2ec Bleached gravelly sand.  
 B21ct Grey clay, yellow mottles.  
 B22t Grey clay, red mottles.  
 B23ct Grey kaolinite clay with gravel.

#### Observation Notes

#### Site Notes

Soil pit. On top of layer #3, it is compacted. Plant roots restricted by layer #3.

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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	5.3B 6.3H	19B	4.01H	1.24	0.58	0.98	0.04J		6.81D	

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0.1 - 0.15	6B 7.3H	10B	1.92A	1.39	0.19	0.77		4.27D
0.1 - 0.15	6B 7.3H	10B	1.92A	1.39	0.19	0.77		4.27D
0.15 - 1.1	7.7B 9H	27B	1.66E	7	0.53	4.47		16B 13.66D 27.94
0.15 - 1.1	7.7B 9H	27B	1.66E	7	0.53	4.47		16B 13.66D 27.94
1.1 - 2	5.4B 5.7H	140B	0.11H	4.31	0.39	5.24	0.1J	10.05D
1.1 - 2	5.4B 5.7H	140B	0.11H	4.31	0.39	5.24	0.1J	10.05D
2 - 2.3	4.2B 4.4H	460B	0.06H	4.61	0.37	3.19	0.67J	8.23D
2 - 2.3	4.2B 4.4H	460B	0.06H	4.61	0.37	3.19	0.67J	8.23D

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 - 0.1 6.6		1.65D		180B	0.103E			6.5
0 - 0.1 6.6		1.65D		180B	0.103E			6.5
0.1 - 0.15 11.5		0.58D		46B	0.031E			5.6
0.1 - 0.15 11.5		0.58D		46B	0.031E			5.6
0.15 - 1.1 47.9		0.15D		31B	0.014E			5
0.15 - 1.1 47.9		0.15D		31B	0.014E			5
1.1 - 2 42.6		0.1D		38B	0.007E			4.3
1.1 - 2 42.6		0.1D		38B	0.007E			4.3
2 - 2.3 62		0.17D		21B	0.007E			1.8
2 - 2.3 62		0.17D		21B	0.007E			1.8

#### Laboratory Analyses Completed for this profile

15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMRR	Exchangeable bases (Ca/Mg ratio) - Not recorded
15_NR_MN	Exchangeable bases (Mn++) - meq per 100g of soil - 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
15A1_CEC	salts
15A1_K for soluble	Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble 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
15A1_NA for soluble	salts
15C1_CA pretreatment for	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
	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

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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_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
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
4G_NR	pH buffering capacity, (method not recorded)
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A1	Total nitrogen - semimicro Kjeldahl, steam distillation
7C1a	Ammonium-N, in presence or absence of nitrite
7C1e	Nitrate-N, in presence of nitrite
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)