

**Project Name:** Katanning land resources survey  
**Project Code:** KLC **Site ID:** 0068 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

<b>Desc. By:</b> Heather Percy	<b>Locality:</b>
<b>Date Desc.:</b> 24/10/91	<b>Elevation:</b> 306 metres
<b>Map Ref.:</b>	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6256720 AMG zone: 50	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 580720 Datum: AGD84	<b>Drainage:</b> Moderately well 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

#### Land Form

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

<b>Morph. Type:</b> Flat	<b>Relief:</b> 10 metres
<b>Elem. Type:</b> Valley flat	<b>Slope Category:</b> No Data
<b>Slope:</b> 0 %	<b>Aspect:</b> 270 degrees

#### Surface Soil Condition Cracking, 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> Ug6.3
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> N/A
All necessary analytical data are available.	

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

#### Vegetation:

**Surface Coarse** No surface coarse fragments; No surface coarse fragments

#### Profile

A1	0 - 0.05 m	Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Light clay; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Field pH 6.5 (Raupach); Many, fine (1-2mm) roots; Abrupt, Smooth change to -
B21	0.05 - 0.35 m	Dark yellowish brown (10YR4/4-Moist); , 0-0% ; Medium clay; Strong grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Dry; Very many (50 - 100 %), Calcareous, Very coarse (20 - 60 mm), Soft segregations; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Soil matrix is Very highly calcareous; Field pH 9 (Raupach); Many, fine (1-2mm) roots; Diffuse, Smooth change to -
B22	0.35 - 0.83 m	Brown (7.5YR5/4-Moist); , 0-0% ; Sandy medium clay; Strong grade of structure, 50-100 mm, Prismatic; 20-50 mm, Subangular blocky; Rough-ped fabric; Dry; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Soft segregations; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Soil matrix is Highly calcareous; Field pH 9 (Raupach); Common, fine (1-2mm) roots; Gradual, Smooth change to -
B23	0.83 - 1.8 m	Yellowish red (5YR5/6-Moist); , 0-0% ; Medium clay; Moderate grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Dry; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Soil matrix is Highly calcareous; Field pH 8.5 (Raupach); Few, medium (2-5mm) roots; Gradual, Smooth change to -
C	1.8 - 1.9 m	White (10YR8/2-Moist); , 0-0% ; Light clay; Massive grade of structure; Dry; Soil matrix is Slightly calcareous; Field pH 5.5 (Raupach);

#### Morphological Notes

A1 +S  
B23 +S  
C WEATHERED DOLERITE

### Observation Notes

### Site Notes

Infiltration high via cracks. Farmers claim soil has naturally high pedal surface. Dry surface condition needs to be checked jan/feb.

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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 - 0.05	7.2B 7.6H	30B	15.66A	5.97	1.67	0.79			24.09D	
0 - 0.1	6.3B 7H 6.3B 7H	14B								
0 - 0.05	7.2B 7.6H	30B	15.66A	5.97	1.67	0.79			24.09D	
0 - 0.1	6.3B 7H 6.3B 7H	14B								
0 - 0.1	6.3B 7H 6.3B 7H	14B								
0 - 0.1	6.3B 7H 6.3B 7H	14B								
0.05 - 0.35	8.4B 9.4H	50B	8.08E	11.09	0.35	4.72		23B	24.24D	20.52
0.05 - 0.35	8.4B 9.4H	50B	8.08E	11.09	0.35	4.72		23B	24.24D	20.52
0.05 - 0.35	8.4B 9.4H	50B	8.08E	11.09	0.35	4.72		23B	24.24D	20.52
0.35 - 0.83	8.9B 9.7H	100B	2.72E	11.94	0.45	7.96		23B	23.07D	34.61
0.35 - 0.83	8.9B 9.7H	100B	2.72E	11.94	0.45	7.96		23B	23.07D	34.61
0.35 - 0.83	8.9B 9.7H	100B	2.72E	11.94	0.45	7.96		23B	23.07D	34.61
0.83 - 1.8	7.5B 8.4H	96B	0.74E	9.02	0.4	9.45		18B	19.61D	52.50
0.83 - 1.8	7.5B 8.4H	96B	0.74E	9.02	0.4	9.45		18B	19.61D	52.50
0.83 - 1.8	7.5B 8.4H	96B	0.74E	9.02	0.4	9.45		18B	19.61D	52.50
1.8 - 1.9	4.6B 5.2H	110B	1.04H	17.7	0.12	20.5	0.33J		39.36D	
1.8 - 1.9	4.6B 5.2H	110B	1.04H	17.7	0.12	20.5	0.33J		39.36D	

Depth m	CaCO3 %	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle GV CS	Size FS	Analysis Silt
0 - 0.05 26		1.94D		280B						7.5
0 - 0.1		1.73D 1.73D		210B 210B	0.133E 0.133E					

0 - 0.05  
26

1.94D

280B

7.5

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0 - 0.1		1.73D	210B	0.133E	
		1.73D	210B	0.133E	
0 - 0.1		1.73D	210B	0.133E	
		1.73D	210B	0.133E	
0 - 0.1		1.73D	210B	0.133E	
		1.73D	210B	0.133E	
0.05 - 0.35	11C	0.3D	81B		8.4
45.2					
0.05 - 0.35	11C	0.3D	81B		8.4
45.2					
0.05 - 0.35	11C	0.3D	81B		8.4
45.2					
0.35 - 0.83	6C	0.14D	46B		3.8
40					
0.35 - 0.83	6C	0.14D	46B		3.8
40					
0.35 - 0.83	6C	0.14D	46B		3.8
40					
0.83 - 1.8	<2C	0.07D	57B		6.7
32.3					
0.83 - 1.8	<2C	0.07D	57B		6.7
32.3					
0.83 - 1.8	<2C	0.07D	57B		6.7
32.3					
1.8 - 1.9		0.08D	290B		16.5
12.5					
1.8 - 1.9		0.08D	290B		16.5
12.5					

#### **Laboratory Analyses Completed for this profile**

15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMdR	Exchangeable bases (Ca/Mg ratio) - Not recorded
15A1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 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
15A1_K	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_MG	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_NA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
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
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 (CaCO <sub>3</sub> ) - 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
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A1	Total nitrogen - semimicro Kjeldahl, steam distillation
9A3	Total Phosphorus (ppm) - semimicro kjeldahl, automated colour

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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)