

**Project Name:** Katanning land resources survey  
**Project Code:** KLC **Site ID:** 0721 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

**Desc. By:** Heather Percy  
**Date Desc.:** 19/02/93  
**Map Ref.:**  
**Northing/Long.:** 6330830 AMG zone: 50  
**Easting/Lat.:** 537060 Datum: AGD84  
**Locality:**  
**Elevation:** 340 metres  
**Rainfall:** No Data  
**Runoff:** No Data  
**Drainage:** Imperfectly drained

#### Geology

**ExposureType:** Soil pit  
**Geol. Ref.:** No Data  
**Conf. Sub. is Parent. Mat.:** No Data  
**Substrate Material:** No Data

#### Land Form

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

**Morph. Type:** Upper-slope  
**Elem. Type:** Hillslope  
**Slope:** 2 %  
**Relief:** 25 metres  
**Slope Category:** No Data  
**Aspect:** 0 degrees

#### Surface Soil Condition Hardsetting, Hardsetting

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

#### Soil Classification

**Australian Soil Classification:** Mesotrophic Mottled-Mesonatric Yellow Sodosol  
**ASC Confidence:** All necessary analytical data are available.  
**Mapping Unit:** N/A  
**Principal Profile Form:** Dy3.83  
**Great Soil Group:** N/A

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

#### Vegetation:

**Surface Coarse** 0-2%, medium gravelly, 6-20mm, subrounded, ; No surface coarse fragments

#### Profile

<p>A1 0 - 0.1 m structure; Dry; Loose  Strongly water</p>	<p>Dark greyish brown (10YR4/2-Moist); , 0-0% ; Coarse sand; Single grain grade of consistence; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; repellent, "Field pH 6 (Raupach); Common, fine (1-2mm) roots; Sharp, Smooth change to -</p>
<p>A2e 0.1 - 0.5 m structure; Dry;  fragments; Field pH 6</p>	<p>Light yellowish brown (2.5Y6/4-Moist); , 0-0% ; Clayey coarse sand; Massive grade of Very weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse (Raupach); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -</p>
<p>B2t 0.5 - 1.15 m medium clay;  20mm, rounded, , (Raupach);</p>	<p>Reddish yellow (7.5YR6/6-Moist); Mottles, 10YR72, 10-20% , 15-30mm, Distinct; Light Massive grade of structure; Dry; Very firm consistence; 10-20%, medium gravelly, 6- coarse fragments; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Field pH 6 Clear, Wavy change to -</p>
<p>C 1.15 - 1.8 m Massive grade of</p>	<p>White (10YR8/1-Moist); Mottles, 7.5YR66, 2-10% , 15-30mm, Distinct; Clay loam; structure; Dry; Firm consistence; Field pH 8.5 (Raupach);</p>

#### Morphological Notes

A2e Gravel increased below 40cm to 5% round smoothfaced, medium  
 B2t Nodules of coarse quartz cemented by iron  
 C Kaolinised clay

#### Observation Notes

#### Site Notes

30m downslope of breakaway with a thin layer of coarse sand on surface

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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 6H 5.4B 6.2H 5.4B	8B 9B	5.02H	0.65	0.15	0.1	0.08J		5.92D	
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0 - 0.1	5.3B 6H 5.4B 6.2H 5.4B	8B 9B	5.02H	0.65	0.15	0.1	0.08J		5.92D	
0 - 0.1	5.3B 6H 5.4B 6.2H 5.4B	8B 9B	5.02H	0.65	0.15	0.1	0.08J		5.92D	
0.1 - 0.5	5.1B 6H	2B	0.69H	0.15	0.03	0.04	0.07J		0.91D	
0.1 - 0.5	5.1B 6H	2B	0.69H	0.15	0.03	0.04	0.07J		0.91D	
0.15 - 0.25	5.2B									
0.4 - 0.5	5.3B									
0.5 - 0.8	5.4B 6.3H	5B	0.4H	1.07	0.02	0.3	0.02J		1.79D	
0.5 - 0.8	5.4B 6.3H	5B	0.4H	1.07	0.02	0.3	0.02J		1.79D	
0.8 - 1.15	6.4B 7.3H	18B	0.12A	2.22	0.03	1.29			3.66D	
0.8 - 1.15	6.4B 7.3H	18B	0.12A	2.22	0.03	1.29			3.66D	
1.15 - 1.55	7.1B 7.9H	86B	0.04A	3.88	0.07	2.82			6.81D	
1.15 - 1.55	7.1B 7.9H	86B	0.04A	3.88	0.07	2.82			6.81D	

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		1.82D		200B	0.104E			3.1
3.4		1.87D		200B	0.098E			

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0 - 0.1 3.4	1.82D	200B	0.104E	3.1
0 - 0.1 3.4	1.87D 1.82D	200B 200B	0.098E 0.104E	3.1
0 - 0.1 3.4	1.87D 1.82D	200B 200B	0.098E 0.104E	3.1
0 - 0.1 3.4	1.87D 1.82D	200B 200B	0.098E 0.104E	3.1
0.1 - 0.5 3.5	1.87D 0.18D	200B 37B	0.098E 0.014E	3.6
0.1 - 0.5 3.5	0.18D	37B	0.014E	3.6
0.15 - 0.25 0.4 - 0.5 0.5 - 0.8 23	0.11D	37B	0.009E	7.1
0.5 - 0.8 23	0.11D	37B	0.009E	7.1
0.8 - 1.15 32.1	0.1D	35B	0.007E	8.3
0.8 - 1.15 32.1	0.1D	35B	0.007E	8.3
1.15 - 1.55 42.5	0.05D	43B	0.006E	17.2
1.15 - 1.55 42.5	0.05D	43B	0.006E	17.2

#### **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
15A1_CA for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 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 (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
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)
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
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)