

Project Name: Katanning land resources survey
Project Code: KLC **Site ID:** 1588 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

Desc. By: Heather Percy	Locality:
Date Desc.: 15/02/94	Elevation: 295 metres
Map Ref.:	Rainfall: No Data
Northing/Long.: 6298670 AMG zone: 50	Runoff: No Data
Easting/Lat.: 581900 Datum: AGD84	Drainage: Moderately well drained

Geology

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

Land Form

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

Morph. Type: Mid-slope	Relief: 25 metres
Elem. Type: Hillslope	Slope Category: No Data
Slope: 3 %	Aspect: 45 degrees

Surface Soil Condition Cracking

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

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Epicalcareous-Epihypersodic Self-Mulching Red Vertosol	Principal Profile Form: Ug5.38
ASC Confidence:	Great Soil Group: N/A
Confidence level not specified	

Site Cultivation. Rainfed

Vegetation:

Surface Coarse No surface coarse fragments; 2-10%, , subangular, Dolerite

Profile

A1p	0 - 0.05 m	Reddish brown (5YR4/4-Moist); , 0-0% ; Light clay; Weak grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Dry; Very firm consistence; Soil matrix is Very highly calcareous; Field pH 9.5 (Raupach); Many, very fine (0-1mm) roots; Abrupt change to -
B21k	0.05 - 0.4 m	Red (2.5YR4/6-Moist); , 0-0% ; Light medium clay; Strong grade of structure, 50-100 mm, Prismatic; Moderate grade of structure, 50-100 mm, Polyhedral; Rough-ped fabric; Dry; Strong consistence; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Soil matrix is Very highly calcareous; Field pH 9.5 (Raupach); Many, very fine (0-1mm) roots; Gradual, Wavy change to -
B2	0.4 - 0.6 m	Red (2.5YR4/6-Moist); , 0-0% ; Medium clay; Strong grade of structure, 50-100 mm, Polyhedral; Rough-ped fabric; Dry; Strong consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Soil matrix is Very highly calcareous; Field pH 9.5 (Raupach); Common, very fine (0-1mm) roots;
B3	0.6 - 1.7 m	Yellowish red (5YR4/8-Moist); , 0-0% ; Medium clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Dry; Very strong consistence; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
C	1.7 - m	; Dry;

Morphological Notes

B21k	Very patchy distribution of calcium segregation
C	Weathered dolerite with gneiss round floaters of dolerite

Observation Notes

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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	7.9B 8.4H	220B	22E	10	1.2	0.54		35B	33.74D	1.54
0 - 0.1	7.9B 8.6H 7.9B	20B								
0 - 0.05	7.9B 8.4H	220B	22E	10	1.2	0.54		35B	33.74D	1.54
0 - 0.05	7.9B 8.4H	220B	22E	10	1.2	0.54		35B	33.74D	1.54
0 - 0.1	7.9B 8.6H 7.9B	20B								
0 - 0.1	7.9B 8.6H 7.9B	20B								
0 - 0.1	7.9B 8.6H 7.9B	20B								
0.05 - 0.35	8.4B 9.3H	26B	15E	14	0.6	3.1		33B	32.7D	9.39
0.05 - 0.35	8.4B 9.3H	26B	15E	14	0.6	3.1		33B	32.7D	9.39
0.15 - 0.25	8.1B									
0.35 - 0.4	8.7B 9.7H	68B	7.2E	18	0.61	7.4		34B	33.21D	21.76
0.35 - 0.4	8.7B 9.7H	68B	7.2E	18	0.61	7.4		34B	33.21D	21.76
0.4 - 0.6	8.8B 9.6H	100B	5.3E	20	0.59	9.9		35B	35.79D	28.29
0.4 - 0.6	8.8B 9.6H	100B	5.3E	20	0.59	9.9		35B	35.79D	28.29
0.4 - 0.5	8.6B									
0.6 - 0.9	8.8B 9.2H	200B	4.8E	25	0.79	15		43B	45.59D	34.88
0.6 - 0.9	8.8B 9.2H	200B	4.8E	25	0.79	15		43B	45.59D	34.88
0.9 - 1.2	6.8B 7.1H	240B	3.7A	29	0.76	16			49.46D	
0.9 - 1.2	6.8B 7.1H	240B	3.7A	29	0.76	16			49.46D	
1.2 - 1.5	6.4B 6.4H	270B	4.5H	28	0.39	16	<0.02J		48.89D	
1.2 - 1.5	6.4B 6.4H	270B	4.5H	28	0.39	16	<0.02J		48.89D	

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1.5 - 1.7	4.4B	270B	1.8H	26	0.32	15	0.36J	43.12D
	4.7H							
1.5 - 1.7	4.4B	270B	1.8H	26	0.32	15	0.36J	43.12D
	4.7H							

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt
m	%	Clay %	mg/kg	%	%	%	Mg/m3			%	
0 - 0.05	6C	1.1D		220B	0.102E						11.9
40.7											
0 - 0.1		1.02D		190B	0.088E						
		1.02D		190B	0.088E						
0 - 0.05	6C	1.1D		220B	0.102E						11.9
40.7											
0 - 0.05	6C	1.1D		220B	0.102E						11.9
40.7											
0 - 0.1		1.02D		190B	0.088E						
		1.02D		190B	0.088E						
0 - 0.1		1.02D		190B	0.088E						
		1.02D		190B	0.088E						
0 - 0.1		1.02D		190B	0.088E						
		1.02D		190B	0.088E						
0.05 - 0.35	10C	0.47D		94B	0.04E						22.8
36.4											
0.05 - 0.35	10C	0.47D		94B	0.04E						22.8
36.4											
0.15 - 0.25											
0.35 - 0.4	12C	0.26D		60B	0.024E						2.4
58.7											
0.35 - 0.4	12C	0.26D		60B	0.024E						2.4
58.7											
0.4 - 0.6	10C	0.21D		52B	0.019E						6.5
45.4											
0.4 - 0.6	10C	0.21D		52B	0.019E						6.5
45.4											
0.4 - 0.5											
0.6 - 0.9	6C	0.16D		51B	0.015E						8.3
55.6											
0.6 - 0.9	6C	0.16D		51B	0.015E						8.3
55.6											
0.9 - 1.2		0.22D		37B	0.014E						10.8
67.7											
0.9 - 1.2		0.22D		37B	0.014E						10.8
67.7											
1.2 - 1.5		0.22D		36B	0.011E						10.4
69.1											
1.2 - 1.5		0.22D		36B	0.011E						10.4
69.1											
1.5 - 1.7		0.25D		32B	0.01E						10.2
68.9											
1.5 - 1.7		0.25D		32B	0.01E						10.2
68.9											

Laboratory Analyses Completed for this profile

15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMd	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 for soluble	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15A1_NA for soluble	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15C1_CA pretreatment for	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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

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15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts
15E1_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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 (Mn ²⁺) 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 ₃) - 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)