

Project Name: Katanning land resources survey
Project Code: KLC **Site ID:** 0067 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

Desc. By: Heather Percy	Locality:
Date Desc.: 24/10/91	Elevation: 309 metres
Map Ref.:	Rainfall: No Data
Northing/Long.: 6257260 AMG zone: 50	Runoff: No Data
Easting/Lat.: 580960 Datum: AGD84	Drainage: Poorly 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: Lower-slope	Relief: 10 metres
Elem. Type: Hillslope	Slope Category: No Data
Slope: 1 %	Aspect: 225 degrees

Surface Soil Condition Hardsetting, Hardsetting

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

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Hypocalcic Subnatric Brown Sodosol	Principal Profile Form: Dy2.13
ASC Confidence:	Great Soil Group: 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; 2-10%, , rounded, Calcrete

Profile

A1	0 - 0.12 m	Dark greyish brown (10YR4/2-Moist); , 0-0% ; Sandy clay loam; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Strongly water repellent, "Field pH 6 (Raupach); Abundant, fine (1-2mm) roots; Abrupt, Wavy change to -
B21	0.12 - 0.55 m	Brown (10YR5/3-Moist); , 0-0% ; Medium clay; Strong grade of structure, 100-200 mm, Prismatic; Rough-ped fabric; Dry; 20-50%, Quartz, coarse fragments; Common (10 - 20 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Concretions; Soil matrix is Slightly calcareous; Field pH 8 (Raupach); Common, fine (1-2mm) roots; Gradual, Smooth change to -
B22	0.55 - 1.5 m	Brown (10YR5/3-Moist); , 0-0% ; Medium clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Dry; 10-20%, Quartz, coarse fragments; Common (10 - 20 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Concretions; Soil matrix is Slightly calcareous; Field pH 9.5 (Raupach); Few, medium (2-5mm) roots; Diffuse, Wavy change to -
BC	1.5 - 2 m	Brown (10YR5/3-Moist); Mottles, 10YR81, 20-50% , 30-mm, Distinct; Light clay; Moderate grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Dry; 20-50%, Quartz, coarse fragments; Soil matrix is Slightly calcareous; Field pH 9.5 (Raupach); Few, medium (2-5mm) roots;

Morphological Notes

A1	V.HUMIC IN PLACES-TENDING TO MASSIVE
B21	F A QZ, M IS. +S
B22	F A QZ.+S.Ca CONCRETIONS AT TOP OF HORIZON
BC	F A QZ. +S

Observation Notes

Site Notes

Some surface cracks. Farmers refer to this as good moort soil due to taller moort cover and yellow subsoil rather than grey.

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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 - 0.12	5.3B 5.9H	16B	26.33H	12.1	0.42	1.06	0.04J		39.91D	
0 - 0.1	5.2B 5.9H	13B								
0 - 0.12	5.3B 5.9H	16B	26.33H	12.1	0.42	1.06	0.04J		39.91D	
0 - 0.1	5.2B 5.9H	13B								
0.12 - 0.55	6.1B 7.4H	8B	4.4A	7.49	0.56	1.25			13.7D	
0.12 - 0.32	7B 8H	21B	6.4E	8.58	0.69	1.2		18B	16.87D	6.67
0.12 - 0.55	6.1B 7.4H	8B	4.4A	7.49	0.56	1.25			13.7D	
0.12 - 0.32	7B 8H	21B	6.4E	8.58	0.69	1.2		18B	16.87D	6.67
0.12 - 0.32	7B 8H	21B	6.4E	8.58	0.69	1.2		18B	16.87D	6.67
0.32 - 0.55	7.6B 8.6H	28B	4E	8.12	0.44	2.08		15B	14.64D	13.87
0.32 - 0.55	7.6B 8.6H	28B	4E	8.12	0.44	2.08		15B	14.64D	13.87
0.32 - 0.55	7.6B 8.6H	28B	4E	8.12	0.44	2.08		15B	14.64D	13.87
0.55 - 1.5	8.4B 9.1H	92B	1.67E	8.21	0.48	5.02		14B	15.38D	35.86
0.55 - 1.5	8.4B 9.1H	92B	1.67E	8.21	0.48	5.02		14B	15.38D	35.86
0.55 - 1.5	8.4B 9.1H	92B	1.67E	8.21	0.48	5.02		14B	15.38D	35.86
1.5 - 2	7.8B 8.4H	140B	0.33E	5.25	0.2	3.6		10B	9.38D	36.00
1.5 - 2	7.8B 8.4H	140B	0.33E	5.25	0.2	3.6		10B	9.38D	36.00
1.5 - 2	7.8B 8.4H	140B	0.33E	5.25	0.2	3.6		10B	9.38D	36.00

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 - 0.12 21		10.94D		170B						5.4
0 - 0.1		1.63D		270B	0.14E					
0 - 0.12 21		10.94D		170B						5.4
0 - 0.1		1.63D		270B	0.14E					
0.12 - 0.55 35.4		0.48D		46B						5.6
0.12 - 0.32 44	<2C							51I		5
0.12 - 0.55 35.4		0.48D		46B						5.6
0.12 - 0.32 44	<2C							51I		5

0.12 - 0.32	<2C	51I	5
44			
0.32 - 0.55	<2C	55.5I	5.5
39			

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0.32 - 0.55 39	<2C			55.5l	5.5
0.32 - 0.55 39	<2C			55.5l	5.5
0.55 - 1.5 39.9	2C	0.15D	41B		8.4
0.55 - 1.5 39.9	2C	0.15D	41B		8.4
0.55 - 1.5 39.9	2C	0.15D	41B		8.4
1.5 - 2 30.6	<2C	0.1D	51B		25.2
1.5 - 2 30.6	<2C	0.1D	51B		25.2
1.5 - 2 30.6	<2C	0.1D	51B		25.2

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 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
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
15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts
15E1_CA salts	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 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
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_S	Sand (%) - Not recorded
P10_NR_Saa	Sand (%) - Not recorded arithmetic difference, auto generated
P10_NR_Z	Silt (%) - Not recorded

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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)