Project Name: **Katanning land resources survey**
Project Code: **KLC** **Site ID:** **0413** **Observation ID:** **1**
Agency Name: **Agriculture Western Australia**

Site Information

Desc. By:	Heather Percy	**Locality:**	
Date Desc.:	20/08/92	**Elevation:**	288 metres
Map Ref.:		**Rainfall:**	No Data
Northing/Long.:	6274060 AMG zone: 50	**Runoff:**	No Data
Easting/Lat.:	587990 Datum: AGD84	**Drainage:**	Poorly drained

Geology

ExposureType:	Auger boring	**Conf. Sub. is Parent. Mat.:**	No Data
Geol. Ref.:	No Data	**Substrate Material:**	No Data

Land Form

Rel/Slope Class:	Level plain <9m <1%	**Pattern Type:**	Alluvial plain
Morph. Type:	Flat	**Relief:**	5 metres
Elem. Type:	Plain	**Slope Category:**	No Data
Slope:	0 %	**Aspect:**	225 degrees

Surface Soil Condition Surface flake, Hardsetting

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

Soil Classification

Australian Soil Classification: **Mapping Unit:** N/A
Epihypersodic Pedal Calcic Calcarosol **Principal Profile Form:** Uf6.13
ASC Confidence: **Great Soil Group:** N/A
Confidence level not specified

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

Vegetation:

Surface Coarse 2-10%, medium gravelly, 6-20mm, rounded, Calcrete; No surface coarse fragments

Profile

A1p 0 - 0.1 m Dark grey (10YR4/1-Moist); , 0-0% ; Light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; Soil matrix is Slightly calcareous; Field pH 8.5 (Raupach); Many, fine (1-2mm) roots; Abrupt change to -

B21 0.1 - 0.45 m Light grey (2.5Y7/2-Moist); , 0-0% ; Light medium clay; Moderate grade of structure; Rough-ped fabric; Moderately moist; Weak consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Soil matrix is Very highly calcareous; Field pH 9.5 (Raupach); Few, fine (1-2mm) roots; Gradual change to -

B22k 0.45 - 0.6 m Light brownish grey (2.5Y6/3-Moist); , 0-0% ; Medium clay; Moderate grade of structure; Rough-ped fabric; Moderately moist; Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Concretions; Soil matrix is Very highly calcareous; Field pH 9.5 (Raupach); Few, fine (1-2mm) roots; Gradual change to -

B23 0.6 - 0.8 m Light brownish grey (2.5Y6/3-Moist); , 0-0% ; Medium clay; Moderate grade of structure; Rough-ped fabric; Moderately moist; Firm consistence; Soil matrix is Highly calcareous; Field pH 9.5 (Raupach); Clear change to -

B24 0.8 - 1 m Light brownish grey (2.5Y6/3-Moist); , 0-0% ; Medium clay; Moderate grade of structure; Rough-ped fabric; Moist; Firm consistence; Soil matrix is Highly calcareous; Field pH 9.5 (Raupach);

Morphological Notes

B23 Water started to enter at 65cm
B24 Much water entered at >80cm

Observation Notes

Site Notes

Nader Rd-cereal/medic pasture rotation. Barley on other areas of this soil along Nader Rd, most probably due to

waterlogging and salinity.
All layers sampled for full analysis.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations Ca	Mg	K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.1	7.6B 8.7H	23B	12.49E	5.21	0.63	1.83		21B	20.16D	8.71
0 - 0.1	7.6B 8.7H	23B	12.49E	5.21	0.63	1.83		21B	20.16D	8.71
0 - 0.1	7.6B 8.7H	23B	12.49E	5.21	0.63	1.83		21B	20.16D	8.71
0 - 0.11	7.69B									
0.1 - 0.45	8.4B 9H	180B	6.29E	8.35	0.45	4.85		20B	19.94D	24.25
0.1 - 0.45	8.4B 9H	180B	6.29E	8.35	0.45	4.85		20B	19.94D	24.25
0.1 - 0.45	8.4B 9H	180B	6.29E	8.35	0.45	4.85		20B	19.94D	24.25
0.16 - 0.26	8.27B									
0.36 - 0.46	8.38B									
0.45 - 0.6	8.5B 9.1H	260B	4.13E	9.69	0.58	6.64		21B	21.04D	31.62
0.45 - 0.6	8.5B 9.1H	260B	4.13E	9.69	0.58	6.64		21B	21.04D	31.62
0.45 - 0.6	8.5B 9.1H	260B	4.13E	9.69	0.58	6.64		21B	21.04D	31.62
0.6 - 0.8	8.6B 9H	300B	3.68E	10.67	0.63	7.62		21B	22.6D	36.29
0.6 - 0.8	8.6B 9H	300B	3.68E	10.67	0.63	7.62		21B	22.6D	36.29
0.6 - 0.8	8.6B 9H	300B	3.68E	10.67	0.63	7.62		21B	22.6D	36.29
0.8 - 1	8.5B 8.9H	380B	3.06E	10.69	0.67	7.59		20B	22.01D	37.95
0.8 - 1	8.5B 8.9H	380B	3.06E	10.69	0.67	7.59		20B	22.01D	37.95
0.8 - 1	8.5B 8.9H	380B	3.06E	10.69	0.67	7.59		20B	22.01D	37.95

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt
m	%	Clay %	mg/kg	%	%	%	Mg/m3			%	
0 - 0.1	<2C	0.9D		130B	0.083E						8.7
46.5											
0 - 0.1	<2C	0.9D		130B	0.083E						8.7
46.5											
0 - 0.1	<2C	0.9D		130B	0.083E						8.7
46.5											
0 - 0.11											
0.1 - 0.45	7C	0.29D		45B	0.021E						8.6
54											
0.1 - 0.45	7C	0.29D		45B	0.021E						8.6
54											
0.1 - 0.45	7C	0.29D		45B	0.021E						8.6
54											
0.16 - 0.26											
0.36 - 0.46											
0.45 - 0.6	8C	0.22D		37B	0.017E						7.6
55.7											
0.45 - 0.6	8C	0.22D		37B	0.017E						7.6
55.7											

0.45 - 0.6	8C	0.22D	37B	0.017E	7.6
55.7					
0.6 - 0.8	5C	0.17D	40B	0.015E	7
60					

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0.6 - 0.8	5C	0.17D	40B	0.015E	7
60					
0.6 - 0.8	5C	0.17D	40B	0.015E	7
60					
0.8 - 1	3C	0.15D	33B	0.012E	6.5
60.8					
0.8 - 1	3C	0.15D	33B	0.012E	6.5
60.8					
0.8 - 1	3C	0.15D	33B	0.012E	6.5
60.8					

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
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
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
19B_NR	Calcium Carbonate (CaCO3) - Not recorded
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - 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
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)