Project Name: Katanning land resources survey

Project Code: KLC Site ID: 0155 Observation ID: 1

Agency Name: Agriculture Western Australia

Site Information

Desc. By: Heather Percy Locality:

Date Desc.:27/03/92Elevation:270 metresMap Ref.:Rainfall:No Data

Northing/Long.: 6255250 AMG zone: 50 Runoff: No Data

Easting/Lat.: 480080 Datum: AGD84 Drainage: Imperfectly drained

Geology

ExposureType:Soil pitConf. Sub. is Parent. Mat.:No DataGeol. Ref.:No DataSubstrate Material:No Data

Land Form

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

Morph. Type:Open depression (vale)Relief:20 metresElem. Type:Drainage depressionSlope Category:No DataSlope:2 %Aspect:270 degrees

<u>Surface Soil Condition</u> Firm <u>Erosion:</u> (wind); (sheet) (rill) (gully)

Soil Classification

Australian Soil Classification:Mapping Unit:N/AFerric Subnatric Yellow SodosolPrincipal Profile Form:Dy4.62ASC 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; No surface coarse fragments

<u>Profile</u>

A1 0 - 0.05 m Dark brown (7.5YR3/2-Moist); , 0-0%; Clayey fine sand; Weak grade of structure, 5-10 mm, Platy; Dry;

Field pH 5 (Raupach); Many, fine (1-2mm) roots; Abrupt, Smooth change to -

A2 0.05 - 0.3 m Yellowish brown (10YR5/4-Moist); , 0-0%; Fine sandy loam; Massive grade of structure; Dry; Field pH 6

(Raupach); Common, fine (1-2mm) roots; Clear, Smooth change to -

B21 0.3 - 0.4 m Yellowish brown (10YR5/6-Moist); , 0-0%; Sandy light clay; Massive grade of structure; Dry; 50-90%,

medium gravelly, 6-20mm, subrounded, Ironstone, coarse fragments; Very many (50 - 100 %).

Ferruginous, Very coarse (20 - 60 mm), Nodules; Field pH 6 (Raupach); Few, fine (1-

2mm) roots; Clear,

Smooth change to -

B22 0.4 - 0.75 m Olive yellow (2.5Y6/6-Moist); , 0-0%; Light clay; Massive grade of structure; Dry; 20-50%, fine gravelly,

2-6mm, subrounded, Ironstone, coarse fragments; Many (20 - 50 %), Ferruginous,

Coarse (6 - 20 mm),
Nodules; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Clear, Smooth change to -

Nodules, Field pri 6 (Raupach), Few, Very line (0-111111) 100ts, Clear, Smooth Change to -

B23 0.75 - 0.9 m Brownish yellow (10YR6/8-Moist); , 0-0%; Light clay; Massive grade of structure; Dry; 50-90%, medium

gravelly, 6-20mm, subrounded, Ironstone, coarse fragments; Many (20 - 50 %),

Ferruginous, Very coarse (20 - 60 mm), Nodules; Field pH 6 (Raupach); Few, medium (2-5mm) roots; Clear,

Smooth change to -

C 0.9 - 1.3 m Light grey (10YR7/2-Moist); Mottles, 10YR68, 20-50%, 15-30mm, Distinct; Medium clay;

Massive

grade of structure; Dry; 20-50%, fine gravelly, 2-6mm, rounded, , coarse fragments; Common (10 - 20 $\,$

%), Ferruginous, Coarse (6 - 20 mm), Nodules; Field pH 8 (Raupach); Few, very fine (0-

1mm) roots;

Morphological Notes
B21 Very slightly dispersive
B22 Very slightly dispersive

Observation Notes

Site Notes

Soil Pit in lower sections of Wattle Creek catchment

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| Laboratory Test Results: |
|--------------------------|
|--------------------------|

| Depth | рН | 1:5 EC | | hangeabl | e Cations K | Na | Exchangeable Acidity | CEC | ECEC | ESP |
|---------------------|----------------------------|-------------------------|-------------|----------------------|----------------|-----------|-------------------------|-----|------------------------|-----------------|
| m | | dS/m | Ca i | vig | ĸ | Cmol (| | | | % |
| 0 - 0.05 | 4.9B 5.7H | 20B | 5.26H | 2.28 | 0.13 | 0.4 | 0.21J | | 8.07D | |
| 0 - 0.1 | 5B 5.8H 5B | 13B | | | | | | | | |
| 0 - 0.05 | 5.8H 4.9B 5.7H | 20B | 5.26H | 2.28 | 0.13 | 0.4 | 0.21J | | 8.07D | |
| 0 - 0.1 | 5.8H 5.8H 5B 5.8H | 13B | | | | | | | | |
| 0 - 0.1 | 5B 5.8H 5B 5.8H | 13B | | | | | | | | |
| 0 - 0.1 | 5B 5.8H 5B 5.8H | 13B | | | | | | | | |
| 0.05 - 0.3 | 5.2B 6.2H | 4B | 1.22H | 1 | 0.02 | 0.17 | 0.04J | | 2.41D | |
| 0.05 - 0.3 | 5.2B 6.2H | 4B | 1.22H | 1 | 0.02 | 0.17 | 0.04J | | 2.41D | |
| 0.3 - 0.4 | 5.7B 6.7H | 5B | 1.69A | 2 | 0.02 | 0.34 | | | 4.05D | |
| 0.3 - 0.4 | 5.7B 6.7H | 5B | 1.69A | 2 | 0.02 | 0.34 | | | 4.05D | |
| 0.4 - 0.75 | 6.2B 6.5H | 31B | 1.76H | 4.16 | <0.02 | 0.81 | 0.03J | | 6.74D | |
| 0.4 - 0.75 | 6.2B 6.5H | 31B | 1.76H | 4.16 | <0.02 | 0.81 | 0.03J | | 6.74D | |
| 0.75 - 0.9 | 6.3B 6.7H | 42B | 1.49A | 4.69 | <0.02 | 0.96 | | | 7.15D | |
| 0.75 - 0.9 | 6.3B 6.7H | 42B | 1.49A | 4.69 | <0.02 | 0.96 | | | 7.15D | |
| 0.9 - 1.3 | 6.9B 7.2H | 160B | | 3.74 | 0.02 | 0.63 | | | 5.31D | |
| 0.9 - 1.3 | 6.9B 7.2H | 160B | 0.92A | 3.74 | 0.02 | 0.63 | | | 5.31D | |
| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Tota K | | | rticle Size A CS FS | nalysis Silt |
| m | % | Clay % | mg/kg | % | % | % | Mg/m3 | | % | |
| 0 - 0.05 10.4 | | 3.72D | | 270B | 0.30 |)2E | | | | 7.4 |
| 0 - 0.1 0 - 0.05 | | 4.42D 4.42D 3.72D | | 350B 350B 270B | | 64E | | | | 7.4 |

10.4 0 - 0.1 4.42D 350B 0.364E 4.42D 350B 0.364E

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|---------------|-----------------|----------------|----------|-------------|---|-----|
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| 0 - 0.1 | 4.42D | 350B | 0.364E | | | |
| | 4.42D | 350B | 0.364E | | | |
| 0 - 0.1 | 4.42D | 350B | 0.364E | | | |
| | 4.42D | 350B | 0.364E | | | |
| 0.05 - 0.3 | 0.41D | 80B | 0.035E | | | 2.1 |
| 14.2 | | | | | | |
| 0.05 - 0.3 | 0.41D | 80B | 0.035E | | | 2.1 |
| 14.2 | | | | | | |
| 0.3 - 0.4 | 0.33D | 98B | 0.037E | | | 2.1 |
| 29.6 | | | | | | |
| 0.3 - 0.4 | 0.33D | 98B | 0.037E | | | 2.1 |
| 29.6 | | | | | | |
| 0.4 - 0.75 | 0.25D | 87B | 0.023E | | | 3.3 |
| 50.9 | | | | | | |
| 0.4 - 0.75 | 0.25D | 87B | 0.023E | | | 3.3 |
| 50.9 | | | | | | |
| 0.75 - 0.9 | 0.18D | 70B | 0.012E | | | 5.2 |
| 53.9 | | | | | | |
| 0.75 - 0.9 | 0.18D | 70B | 0.012E | | | 5.2 |
| 53.9 | | | | | | |
| 0.9 - 1.3 | 0.09D | 46B | 0.005E | | | 1.2 |
| 47 | | | | | | |
| 0.9 - 1.3 | 0.09D | 46B | 0.005E | | | 1.2 |
| 47 | | | | | | |
| | | | | | | |

Laboratory Analyses Completed for this profile

| 15_NR_BSa 15_NR_CMR 15A1_CA | Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available Exchangeable bases (Ca/Mg ratio) - Not recorded Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment |
|-----------------------------------|---|
| for soluble | Exchangeable bases (Gaz 1, Naz 1, Na 1, Na 1) - 1 Wallington at pri 7.5, no pretreatment |
| ioi solubic | salts |
| 15A1_CEC | Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts |
| 15A1_CLC | Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment |
| for soluble | Exchangeable bases (Caz+, Nigz+, Na+, N+) - This animonium chionide at pri 7.0, no pretreatment |
| ioi soluble | salts |
| 15A1 MG | Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment |
| for soluble | Exchangeable bases (Ca2+,ivig2+,ivia+,iv+) - Tivi aminonium chionde at pri 7.0, no pretreatment |
| ioi soluble | salts |
| 15 | |
| 15A1_NA | Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment |
| for soluble | salts |
| 4554 AL | |
| 15E1_AL 15E1 CA | Exchangeable AI - by compulsive exchange, no pretreatment for soluble salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble |
| salts | Exchangeable bases (Caz+,wgz+,wa+,x+) by compulsive exchange, no pretreatment for soluble |
| 15E1 K | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15E1_K 15E1_MG | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15E1_MO | 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 | Exoral goals sacretation percentage (Eor) Trate calculates from available config |
| | 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) |

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P106001000 600 to 1000u particle size analysis, (method not recorded)