

**Project Name:** Katanning land resources survey  
**Project Code:** KLC                   **Site ID:** 0797  
**Agency Name:** Agriculture Western Australia                   **Observation ID:** 1

#### Site Information

|                        |                      |                   |                     |
|------------------------|----------------------|-------------------|---------------------|
| <b>Desc. By:</b>       | Heather Percy        | <b>Locality:</b>  |                     |
| <b>Date Desc.:</b>     | 13/05/93             | <b>Elevation:</b> | 317 metres          |
| <b>Map Ref.:</b>       |                      | <b>Rainfall:</b>  | No Data             |
| <b>Northing/Long.:</b> | 6342230 AMG zone: 50 | <b>Runoff:</b>    | No Data             |
| <b>Easting/Lat.:</b>   | 546320 Datum: AGD84  | <b>Drainage:</b>  | Imperfectly drained |

#### Geology

|                      |          |                                    |         |
|----------------------|----------|------------------------------------|---------|
| <b>ExposureType:</b> | Soil pit | <b>Conf. Sub. is Parent. Mat.:</b> | No Data |
| <b>Geol. Ref.:</b>   | No Data  | <b>Substrate Material:</b>         | No Data |

#### Land Form

|                         |                                   |                      |           |
|-------------------------|-----------------------------------|----------------------|-----------|
| <b>Rel/Slope Class:</b> | Undulating low hills 30-90m 3-10% | <b>Pattern Type:</b> | Low hills |
|-------------------------|-----------------------------------|----------------------|-----------|

|                     |             |                        |           |
|---------------------|-------------|------------------------|-----------|
| <b>Morph. Type:</b> | Flat        | <b>Relief:</b>         | 30 metres |
| <b>Elem. Type:</b>  | Valley flat | <b>Slope Category:</b> | No Data   |
| <b>Slope:</b>       | 0 %         | <b>Aspect:</b>         | No Data   |

#### Surface Soil Condition

Recently cultivated, Hardsetting

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

#### Soil Classification

|                                              |  |                                |        |
|----------------------------------------------|--|--------------------------------|--------|
| <b>Australian Soil Classification:</b>       |  | <b>Mapping Unit:</b>           | N/A    |
| Mesotrophic Mottled-Subnartic Yellow Sodosol |  | <b>Principal Profile Form:</b> | Dy3.12 |
| <b>ASC Confidence:</b>                       |  | <b>Great Soil Group:</b>       | N/A    |

Confidence level not specified

**Site** Cultivation. Rainfed

#### Vegetation:

**Surface Coarse** No surface coarse fragments; No surface coarse fragments

#### Profile

|     |             |                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ap  | 0 - 0.1 m   | Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Sandy clay loam; Moderately moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, rounded, , coarse fragments; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -                                                                                                                                                   |
| B21 | 0.1 - 0.6 m | Brownish yellow (10YR6/8-Moist); Mottles, 10R46, 10-20% , 15-30mm, Distinct; Medium clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Very firm consistence; 20-50%, fine gravelly, 2-6mm, rounded, , coarse fragments; Common (10 - 20 %), Ferruginous, Medium (2 - 6 mm), Nodules; Field pH 7 (Raupach); Common, fine (1-2mm) roots; Clear change to - |
| B22 | 0.6 - 1.2 m | Brownish yellow (10YR6/6-Moist); Mottles, 2.5Y73, 10-20% , 15-30mm, Distinct; Light clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, rounded, , coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 7 (Raupach); Few, fine (1-2mm) roots;                           |

#### Morphological Notes

Ap Too disturbed to determine structure

#### Observation Notes

#### Site Notes

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#### Laboratory Test Results:

| Depth | pH | 1:5 EC | Exchangeable Cations | Exchangeable | CEC | ECEC | ESP |
|-------|----|--------|----------------------|--------------|-----|------|-----|
|-------|----|--------|----------------------|--------------|-----|------|-----|

| m           |                                      | dS/m      | Ca    | Mg   | K    | Na<br>Cmol (+)/kg | Acidity | %     |
|-------------|--------------------------------------|-----------|-------|------|------|-------------------|---------|-------|
| 0 - 0.1     | 5.7B<br>6.5H<br>5.6B<br>5.9H<br>5.3B | 8B<br>56B | 5.23H | 1.58 | 0.44 | 0.16              | 0.05J   | 7.41D |
| 0 - 0.1     | 5.7B<br>6.5H<br>5.6B<br>5.9H<br>5.3B | 8B<br>56B | 5.23H | 1.58 | 0.44 | 0.16              | 0.05J   | 7.41D |
| 0 - 0.1     | 5.7B<br>6.5H<br>5.6B<br>5.9H<br>5.3B | 8B<br>56B | 5.23H | 1.58 | 0.44 | 0.16              | 0.05J   | 7.41D |
| 0 - 0.1     | 5.7B<br>6.5H<br>5.6B<br>5.9H<br>5.3B | 8B<br>56B | 5.23H | 1.58 | 0.44 | 0.16              | 0.05J   | 7.41D |
| 0 - 0.1     | 5.7B<br>6.5H<br>5.6B<br>5.9H<br>5.3B | 8B<br>56B | 5.23H | 1.58 | 0.44 | 0.16              | 0.05J   | 7.41D |
| 0.1 - 0.35  | 6.4B<br>6.8H                         | 39B       | 2.72A | 3.71 | 0.32 | 0.77              |         | 7.52D |
| 0.1 - 0.3   | 6.1B<br>6.1H                         | 290B      | 2.22H | 3.34 | 0.29 | 0.73              | <0.02J  | 6.58D |
| 0.1 - 0.35  | 6.4B<br>6.8H                         | 39B       | 2.72A | 3.71 | 0.32 | 0.77              |         | 7.52D |
| 0.1 - 0.3   | 6.1B<br>6.1H                         | 290B      | 2.22H | 3.34 | 0.29 | 0.73              | <0.02J  | 6.58D |
| 0.15 - 0.25 | 6.3B                                 |           |       |      |      |                   |         |       |
| 0.3 - 0.6   | 6.2B<br>6.2H                         | 480B      | 1.75H | 5.15 | 0.27 | 1.16              | 0.02J   | 8.33D |
| 0.3 - 0.6   | 6.2B<br>6.2H                         | 480B      | 1.75H | 5.15 | 0.27 | 1.16              | 0.02J   | 8.33D |
| 0.35 - 0.6  | 6.3B<br>6.4H                         | 117B      | 1.55H | 5.01 | 0.22 | 0.78              | <0.02J  | 7.56D |
| 0.35 - 0.6  | 6.3B<br>6.4H                         | 117B      | 1.55H | 5.01 | 0.22 | 0.78              | <0.02J  | 7.56D |
| 0.4 - 0.5   | 6.2B                                 |           |       |      |      |                   |         |       |
| 0.6 - 0.9   | 6.4B<br>6.6H                         | 130B      | 1.11A | 5.65 | 0.32 | 1.04              |         | 8.12D |
| 0.6 - 0.9   | 6.4B<br>6.6H                         | 130B      | 1.11A | 5.65 | 0.32 | 1.04              |         | 8.12D |
| 0.9 - 1.2   | 6.6B<br>6.8H                         | 128B      | 1.05A | 6.34 | 0.37 | 1.56              |         | 9.32D |
| 0.9 - 1.2   | 6.6B<br>6.8H                         | 128B      | 1.05A | 6.34 | 0.37 | 1.56              |         | 9.32D |

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| Depth<br>m                       | CaCO3<br>% | Organic C<br>Clay % | Avail. P<br>mg/kg | Total P<br>% | Total N<br>% | Total K<br>% | Bulk Density<br>Mg/m3 | GV    | Particle CS | Size FS | Analysis Silt<br>% |
|----------------------------------|------------|---------------------|-------------------|--------------|--------------|--------------|-----------------------|-------|-------------|---------|--------------------|
| 0 - 0.1<br>14.8                  |            | 1.45D               |                   | 150B         | 0.117E       |              |                       |       |             |         | 9.7                |
|                                  |            | 1.41D               |                   | 120B         | 0.1E         |              |                       |       |             |         |                    |
| 0 - 0.1<br>14.8                  |            | 1.45D               |                   | 150B         | 0.117E       |              |                       |       |             |         | 9.7                |
|                                  |            | 1.41D               |                   | 120B         | 0.1E         |              |                       |       |             |         |                    |
| 0 - 0.1<br>14.8                  |            | 1.45D               |                   | 150B         | 0.117E       |              |                       |       |             |         | 9.7                |
|                                  |            | 1.41D               |                   | 120B         | 0.1E         |              |                       |       |             |         |                    |
| 0 - 0.1<br>14.8                  |            | 1.45D               |                   | 150B         | 0.117E       |              |                       |       |             |         | 9.7                |
|                                  |            | 1.41D               |                   | 120B         | 0.1E         |              |                       |       |             |         |                    |
| 0 - 0.1<br>14.8                  |            | 1.45D               |                   | 150B         | 0.117E       |              |                       |       |             |         | 9.7                |
|                                  |            | 1.41D               |                   | 120B         | 0.1E         |              |                       |       |             |         |                    |
| 0.1 - 0.35<br>51.4               |            | 0.25D               |                   | 46B          | 0.029E       |              |                       |       |             |         | 12.1               |
| 0.1 - 0.3<br>37.5                |            |                     |                   |              |              |              |                       | 55.5I |             |         | 7                  |
| 0.1 - 0.35<br>51.4               |            | 0.25D               |                   | 46B          | 0.029E       |              |                       |       |             |         | 12.1               |
| 0.1 - 0.3<br>37.5                |            |                     |                   |              |              |              |                       | 55.5I |             |         | 7                  |
| 0.15 - 0.25<br>0.3 - 0.6<br>35.5 |            |                     |                   |              |              |              |                       | 48.5I |             |         | 16                 |
| 0.3 - 0.6<br>35.5                |            |                     |                   |              |              |              |                       | 48.5I |             |         | 16                 |
| 0.35 - 0.6<br>47.9               |            | 0.17D               |                   | 41B          | 0.018E       |              |                       |       |             |         | 13.5               |
| 0.35 - 0.6<br>47.9               |            | 0.17D               |                   | 41B          | 0.018E       |              |                       |       |             |         | 13.5               |
| 0.4 - 0.5<br>0.6 - 0.9<br>51.7   |            | 0.13D               |                   | 34B          | 0.014E       |              |                       |       |             |         | 12.9               |
| 0.6 - 0.9<br>51.7                |            | 0.13D               |                   | 34B          | 0.014E       |              |                       |       |             |         | 12.9               |
| 0.9 - 1.2<br>61.3                |            | 0.08D               |                   | 29B          | 0.012E       |              |                       |       |             |         | 9.7                |
| 0.9 - 1.2<br>61.3                |            | 0.08D               |                   | 29B          | 0.012E       |              |                       |       |             |         | 9.7                |

#### Laboratory Analyses Completed for this profile

|                        |                                                                                                                                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15_NR_BSa              | Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available salts                                                                       |
| 15_NR_CMR              | Exchangeable bases (Ca/Mg ratio) - Not recorded                                                                                                               |
| 15A1_CA<br>for soluble | Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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<br>for soluble  | Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts |
| 15A1_MG<br>for soluble | Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts |
| 15A1_NA<br>for soluble | Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts |
| 15E1_AL                | Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts                                                                                   |

|                  |                                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 15E1_CA<br>salts | Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) 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 <sup>2+</sup> ) 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 and measured clay                                        |
| Sum of Cations   |                                                                                                                                                     |
| 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                                                                                                                           |
| 4B1              | pH of 1:5 soil/0.01M calcium chloride extract - direct                                                                                              |
| 6A1_UC           | Organic carbon (%) - Uncorrected Walkley and Black method                                                                                           |

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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  
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)