

**Project Name:** Nyabing Kukerin land resources survey  
**Project Code:** NYA **Site ID:** 0419 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

**Desc. By:** Heather Percy  
**Date Desc.:** 31/08/95  
**Map Ref.:**  
**Northing/Long.:** 6247400 AMG zone: 50  
**Easting/Lat.:** 638000 Datum: AGD84  
**Locality:**  
**Elevation:** 290 metres  
**Rainfall:** No Data  
**Runoff:** No Data  
**Drainage:** Poorly drained

#### Geology

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

#### Landform

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

**Morph. Type:** Mid-slope  
**Elem. Type:** Hillslope  
**Slope:** 1 %  
**Relief:** 5 metres  
**Slope Category:** No Data  
**Aspect:** 270 degrees

**Surface Soil Condition** Hardsetting, Hardsetting

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

#### Soil Classification

**Australian Soil Classification:** Eutrophic Mesonatric Grey Sodosol  
**ASC Confidence:** All necessary analytical data are available.  
**Mapping Unit:** N/A  
**Principal Profile Form:** Dy2.11  
**Great Soil Group:** N/A

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

#### Vegetation

**Surface Coarse Fragments** 20-50%, medium gravelly, 6-20mm, subangular, Quartz; No surface coarse fragments

#### Profile Morphology

A1 0 - 0.08 m Dark grey (10YR4/1-Moist); , 0-0% ; Coarse sandy loam; Massive grade of structure; Dry; 20-50%, fine  
 Wavy change  
 to -  
 B21 0.08 - 0.3 m Dark greyish brown (10YR4/2-Moist); , 0-0% ; Medium heavy clay; Moderate grade of structure; Rough-  
 ped fabric; Dry; Field pH 7 (Raupach); Clear change to -  
 B22 0.3 - 0.5 m Light brownish grey (2.5Y6/2-Moist); , 0-0% ; Medium heavy clay; Moderate grade of structure; Rough-  
 ped fabric; Moderately moist; Field pH 5.5 (Raupach); Clear change to -  
 B23 0.5 - 0.6 m Light brownish grey (2.5Y6/2-Moist); Mottles, 7.5YR56, 10-20% , 5-15mm, Distinct; Medium heavy clay;  
 Moderate grade of structure; Smooth-ped fabric; Moderately moist; Field pH 5.5 (Raupach);

#### Morphological Notes

B22 Kaolinitic clay  
 B23 Kaolinitic clay

#### Observation Notes

#### Site Notes

"Hardsetting grey clay".

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#### Laboratory Test Results:

| Depth | pH | 1:5 EC | Ca | Exchangeable Mg | Cations K | Na          | Exchangeable Acidity | CEC | ECEC | ESP |
|-------|----|--------|----|-----------------|-----------|-------------|----------------------|-----|------|-----|
| m     |    | dS/m   |    |                 |           | Cmol (+)/kg |                      |     |      | %   |

|             |              |     |      |      |      |      |       |
|-------------|--------------|-----|------|------|------|------|-------|
| 0 - 0.08    | 5.9B<br>6.8H | 18B | 3.3A | 2.46 | 0.3  | 0.85 | 6.91D |
| 0 - 0.08    | 5.9B<br>6.8H | 18B | 3.3A | 2.46 | 0.3  | 0.85 | 6.91D |
| 0 - 0.08    | 5.9B<br>6.8H | 18B | 3.3A | 2.46 | 0.3  | 0.85 | 6.91D |
| 0.08 - 0.28 | 5.9B<br>6.9H | 23B | 2.1A | 3.62 | 0.31 | 1.88 | 7.91D |
| 0.08 - 0.28 | 5.9B<br>6.9H | 23B | 2.1A | 3.62 | 0.31 | 1.88 | 7.91D |
| 0.08 - 0.28 | 5.9B<br>6.9H | 23B | 2.1A | 3.62 | 0.31 | 1.88 | 7.91D |

| Depth               | CaCO <sub>3</sub> | Organic C<br>Clay | Avail. P | Total P | Total N | Total K | Bulk Density      | GV | Particle Size | Analysis |
|---------------------|-------------------|-------------------|----------|---------|---------|---------|-------------------|----|---------------|----------|
| m                   | %                 | %                 | mg/kg    | %       | %       | %       | Mg/m <sup>3</sup> |    | CS FS         | Silt     |
| 0 - 0.08<br>9.5     |                   | 1.13D             |          |         |         |         |                   |    | 81.5I         | 9        |
| 0 - 0.08<br>9.5     |                   | 1.13D             |          |         |         |         |                   |    | 81.5I         | 9        |
| 0 - 0.08<br>9.5     |                   | 1.13D             |          |         |         |         |                   |    | 81.5I         | 9        |
| 0.08 - 0.28<br>42.5 |                   | 0.53D             |          |         |         |         |                   |    | 50I           | 7.5      |
| 0.08 - 0.28<br>42.5 |                   | 0.53D             |          |         |         |         |                   |    | 50I           | 7.5      |
| 0.08 - 0.28<br>42.5 |                   | 0.53D             |          |         |         |         |                   |    | 50I           | 7.5      |

#### 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   |
| 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 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 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 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 salts |
| 15J_BASES                | Sum of Bases  |
| 15L1_a<br>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  |
| 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   |
| P10_gt2m                 | > 2mm particle size analysis, (method not recorded)   |
| P10_NR_C                 | Clay (%) - Not recorded   |
| P10_NR_S                 | Sand (%) - Not recorded   |
| P10_NR_Z                 | Silt (%) - Not recorded   |