**Project Name:** YAL
**Project Code:** YAL **Site ID:** P671 **Observation ID:** 1
**Agency Name:** CSIRO Division of Soils (WA)

## Site Information

| | | | |
|---|---|---|---|
| **Desc. By:** | G.M. Dimmock | **Locality:** | Adjacent to proline bore A2 (1964 series) and deep bore 4 (1968 Gemco series): |
| **Date Desc.:** | 28/10/71 | **Elevation:** | 340 metres |
| **Map Ref.:** | Sheet No. : 2134 1:100000 | **Rainfall:** | 620 |
| **Northing/Long.:** | 116.475833333333 | **Runoff:** | Rapid |
| **Easting/Lat.:** | -31.7663888888889 | **Drainage:** | Imperfectly drained |

## Geology

| | | | |
|---|---|---|---|
| **ExposureType:** | Undisturbed soil core | **Conf. Sub. is Parent. Mat.:** | No Data |
| **Geol. Ref.:** | No Data | **Substrate Material:** | Auger boring, 12 m deep,Granite |

## Land Form

| | | | |
|---|---|---|---|
| **Rel/Slope Class:** | No Data | **Pattern Type:** | No Data |
| **Morph. Type:** | Ridge | **Relief:** | No Data |
| **Elem. Type:** | Hillcrest | **Slope Category:** | No Data |
| **Slope:** | 0 % | **Aspect:** | No Data |

## Surface Soil Condition (dry):

## Erosion:

## Soil Classification

**Australian Soil Classification:**
Ferric Mesotrophic Brown Kurosol
**ASC Confidence:**
All necessary analytical data are available.

**Mapping Unit:** N/A
**Principal Profile Form:** Dy5.81
**Great Soil Group:** Lateritic podzolic soil

**Site Disturbance:** Complete clearing. Pasture, native or improved, but never cultivated

## Vegetation:

Tall Strata - Tree, , Isolated plants. *Species includes - None Recorded

## Surface Coarse Fragments:

## Profile Morphology

| | | |
|---|---|---|
| A1 | 0 - 0.05 m | Very dark grey (10YR3/1-Moist); ; Sandy loam; Single grain grade of structure; Moderately moist; Very weak consistence; 50-90%, coarse gravelly, 20-60mm, rounded, Substrate material, coarse fragments; |
| | 0.05 - 0.1 m | Brown (10YR4/3-Moist); ; Loamy sand; Single grain grade of structure; Loose consistence; 90-100%, coarse gravelly, 20-60mm, Substrate material, coarse fragments; |
| | 0.1 - 0.2 m | Brown (10YR5/3-Moist); ; Loamy sand; Single grain grade of structure; Loose consistence; 90-100%, coarse gravelly, 20-60mm, Substrate material, coarse fragments; |
| | 0.2 - 0.3 m | Pale brown (10YR6/3-Moist); ; Sand; Single grain grade of structure; Loose consistence; 90-100%, coarse gravelly, 20-60mm, Substrate material, coarse fragments; |
| | 0.3 - 0.4 m | Pale brown (10YR6/3-Moist); ; Sand; Single grain grade of structure; Loose consistence; 90-100%, coarse gravelly, 20-60mm, Substrate material, coarse fragments; |
| | 0.4 - 0.5 m | Pale brown (10YR6/3-Moist); ; Sand; Single grain grade of structure; Loose consistence; 90-100%, coarse gravelly, 20-60mm, Substrate material, coarse fragments; |
| | 0.5 - 0.6 m | Brown (10YR5/3-Moist); ; Clayey sand (Light); Single grain grade of structure; Loose consistence; 90-100%, coarse gravelly, 20-60mm, angular, Substrate material, coarse fragments; |
| | 0.6 - 0.7 m | Yellowish brown (10YR5/4-Moist); ; Clayey sand; Massive grade of structure; Loose consistence; 90-100%, coarse gravelly, 20-60mm, subangular, Substrate material, coarse |
| | 0.7 - 0.8 m | Yellowish brown (10YR5/4-Moist); ; Clayey sand; Massive grade of structure; Loose consistence; 90-100%, coarse gravelly, 20-60mm, subangular, Substrate material, coarse fragments; Clear change to - |
| | 0.85 - 0.9 m | Strong brown (7.5YR5/8-Moist); , 2.5YR36; Sandy clay loam; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, rounded, Substrate material, coarse fragments; |
| | 0.9 - 1 m | Strong brown (7.5YR5/8-Moist); , 2.5YR46; , 10R36; Medium clay; Weak grade of structure, 2-5 mm, Subangular blocky; Weak consistence; 10-20%, fine gravelly, 2-6mm, rounded, Substrate material, coarse fragments; |

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| | |
|---|---|
| 1 - 1.11 m | Strong brown (7.5YR5/8-Moist); , 2.5YR46; , 10R36; Medium clay; Weak grade of structure, 2-5 mm, Subangular blocky; Weak consistence; 10-20%, subangular, Substrate material, coarse fragments; Abrupt, Irregular change to - |
| 1.11 - 1.2 m | Brownish yellow (10YR6/8-Moist); , 10YR86; , 10R44; Medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; |
| 1.2 - 1.3 m | Brownish yellow (10YR6/8-Moist); , 10R44; , 5Y81; Medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; |
| 1.3 - 1.4 m | Brownish yellow (10YR6/8-Moist); , 5Y81; , 10R44; Medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; |
| 1.4 - 1.5 m | Brownish yellow (10YR6/8-Moist); , 5Y81; , 10R44; Medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; |
| 1.5 - 1.55 m | Brownish yellow (10YR6/8-Moist); , 5Y81; , 10R44; Medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; |
| 1.55 - 1.6 m | Brownish yellow (10YR6/8-Moist); , 5Y81; , 10R44; Medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; |
| 1.6 - 1.7 m | Brownish yellow (10YR6/8-Moist); , 5Y81; , 10R44; Medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; Diffuse change to - |
| 1.7 - 1.8 m | Brownish yellow (10YR6/8-Moist); , 5Y81; , 10R44; Medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; |
| 1.8 - 1.9 m | Brownish yellow (10YR6/8-Moist); , 5Y81; , 10R44; Medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; |

**Morphological Notes**

**Observation Notes**

0-111CM AL GV IS FERRUGINOUS:100-111CM AL GV FORMED FROM HARDENED RED MOTTLES:LAYERS RE NUMBERED 15/10/92

**Site Notes**

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## Laboratory Test Results:

| Depth | pH | 1:5 EC | Exchangeable Cations | | | | Exchangeable | CEC | ECEC | ESP |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ca | Mg | K | Na | Acidity | | | |
| m | | dS/m | Cmol (+)/kg | | | | | | | % |
| 0 - 0.05 | 6A | 0.196A | | | | | | | | |
| 0.05 - 0.1 | 5.7A | 0.083A | 3.27K | 0.56 | 0.24 | 0.14 | 4.21E | | | |
| 0.1 - 0.2 | 5.7A | 0.077A | | | | | | | | |
| 0.2 - 0.3 | 5.7A | 0.071A | | | | | | | | |
| 0.3 - 0.4 | 5.6A | 0.065A | 1.21K | 0.4 | 0.6 | 0.16 | 2.37E | | | |
| 0.4 - 0.5 | 5.7A | 0.068A | | | | | | | | |
| 0.5 - 0.6 | 5.7A | 0.068A | | | | | | | | |
| 0.6 - 0.7 | 5.7A | 0.063A | 0.91K | 0.45 | 0.16 | 0.07 | 1.59E | | | |
| 0.7 - 0.8 | 5.7A | 0.06A | | | | | | | | |
| 0.85 - 0.9 | | | | | | | | | | |
| 0.9 - 1 | 5.4A | 0.071A | 1.12K | 0.76 | 0.44 | 0.2 | 2.52E | | | |
| 1 - 1.11 | 5.5A | 0.065A | | | | | | | | |
| 1.11 - 1.2 | 5.5A | 0.065A | 0.91K | 0.86 | 0.21 | 0.09 | 2.07E | | | |
| 1.2 - 1.3 | 5.1A | 0.057C | | | | | | | | |
| 1.3 - 1.4 | 4.8A | 0.063A | 0.4K | 0.65 | 0.14 | 0.09 | 1.28E | | | |
| 1.4 - 1.5 | 4.3A | 0.08A | | | | | | | | |
| 1.5 - 1.55 | 4.2A | 0.086A | 0.1K | 0.05 | 0.07 | 0.05 | 0.27E | | | |
| 1.55 - 1.6 | 4A | 0.086A | | | | | | | | |
| 1.6 - 1.7 | 4A | 0.092A | 0.05K | 0.2 | 0.03 | 0.07 | 0.35E | | | |
| 1.7 - 1.8 | 4.6A | 0.104A | 0.1K | 0.15 | 0.06 | 0.08 | 0.39E | | | |
| 1.8 - 1.9 | 4.3A | 0.098A | 0.1K | 0.15 | 0.06 | 0.12 | 0.43E | | | |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size Analysis | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | GV | CS | FS | Silt | Clay |
| m | % | % | mg/kg | % | % | % | Mg/m3 | | | % | | |
| 0 - 0.05 | | | | | | | | 66 | 43D | 38 | 8 | 6 |
| 0.05 - 0.1 | | | | | | | | 71 | 41D | 41 | 6 | 8 |
| 0.1 - 0.2 | | | | | | | | 71 | 37D | 46 | 7 | 9 |
| 0.2 - 0.3 | | | | | | | | 73 | 37D | 52 | 5 | 6 |
| 0.3 - 0.4 | | | | | | | | 78 | 39D | 51 | 6 | 5 |
| 0.4 - 0.5 | | | | | | | | 79 | 43D | 44 | 6 | 7 |
| 0.5 - 0.6 | | | | | | | | 78 | 47D | 37 | 8 | 10 |
| 0.6 - 0.7 | | | | | | | | 80 | 47D | 37 | 6 | 10 |
| 0.7 - 0.8 | | | | | | | | 74 | 50D | 35 | 5 | 9 |
| 0.85 - 0.9 | | | | | | | | 56 | 60D | 17 | 6 | 18 |
| 0.9 - 1 | | | | | | | | 48 | 42D | 19 | 8 | 30 |
| 1 - 1.11 | | | | | | | | 33 | 34D | 21 | 9 | 34 |
| 1.11 - 1.2 | | | | | | | | 27 | 30D | 19 | 16 | 34 |
| 1.2 - 1.3 | | | | | | | | 16 | 25D | 22 | 17 | 34 |
| 1.3 - 1.4 | | | | | | | | 9 | 22D | 20 | 19 | 37 |
| 1.4 - 1.5 | | | | | | | | 10 | 20D | 19 | 21 | 38 |
| 1.5 - 1.55 | | | | | | | | 4 | 25D | 14 | 23 | 36 |
| 1.55 - 1.6 | | | | | | | | 6 | 33D | 11 | 25 | 29 |
| 1.6 - 1.7 | | | | | | | | 4 | 26D | 9 | 29 | 34 |
| 1.7 - 1.8 | | | | | | | | 3 | 22D | 10 | 22 | 45 |
| 1.8 - 1.9 | | | | | | | | 1 | 22D | 14 | 27 | 35 |

| Depth | COLE | Gravimetric/Volumetric Water Contents | | | | | | | K sat | K unsat |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Sat. | 0.05 Bar | 0.1 Bar | 0.5 Bar | 1 Bar | 5 Bar | 15 Bar | | |
| m | | g/g - m3/m3 | | | | | | | mm/h | mm/h |

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0 - 0.05
0.05 - 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.5
0.5 - 0.6
0.6 - 0.7
0.7 - 0.8
0.85 - 0.9
0.9 - 1
1 - 1.11
1.11 - 1.2
1.2 - 1.3
1.3 - 1.4
1.4 - 1.5
1.5 - 1.55
1.55 - 1.6
1.6 - 1.7
1.7 - 1.8
1.8 - 1.9

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**Laboratory Analyses Completed for this profile**

| | |
|---|---|
| 15_NR_CA | Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded |
| 15_NR_K | Exch. basic cations (K++) - meq per 100g of soil - Not recorded |
| 15_NR_MG | Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded |
| 15_NR_NA | Exch. basic cations (Na++) - meq per 100g of soil - Not recorded |
| 15G1_H | Hydrogen Cation - meq per 100g of soil - 1M KCl Exch. Acidity By titration to pH 8.0 |
| 2A1 | Air-dry moisture content |
| 3A_TSS | Electrical conductivity or soluble salts - Total soluble salts % |
| 3A1 | EC of 1:5 soil/water extract |
| 4A1 | pH of 1:5 soil/water suspension |
| 5A2 | Chloride - 1:5 soil/water extract, automated colour |
| P10_GRAV | Gravel (%) |
| P10_PB_C | Clay (%) - Plummet balance |
| P10_PB_CS | Coarse sand (%) - Plummet balance |
| P10_PB_FS | Fine sand (%) - Plummet balance |
| P10_PB_Z | Silt (%) - Plummet balance |