

Project Name: Regional
Project Code: REG **Site ID:** T270 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

| | | | |
|------------------------|---------------------------|-------------------|----------------|
| Desc. By: | G.G. Murtha | Locality: | |
| Date Desc.: | 04/09/79 | Elevation: | 10 metres |
| Map Ref.: | Sheet No. : 8162 1:100000 | Rainfall: | 0 |
| Northing/Long.: | 146.083333333333 | Runoff: | No runoff |
| Easting/Lat.: | -17.6833333333333 | Drainage: | Poorly drained |

Geology

| | | | |
|----------------------|----------|------------------------------------|---------|
| ExposureType: | Soil pit | Conf. Sub. is Parent. Mat.: | No Data |
| Geol. Ref.: | QA | Substrate Material: | No Data |

Land Form

| | | | |
|-------------------------|---------------------|------------------------|----------------|
| Rel/Slope Class: | Level plain <9m <1% | Pattern Type: | Alluvial plain |
| Morph. Type: | Flat | Relief: | 0 metres |
| Elem. Type: | Swamp | Slope Category: | Level |
| Slope: | 0 % | Aspect: | 0 degrees |

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

| | | | |
|--|--|--------------------------------|-------------------|
| Australian Soil Classification: | | Mapping Unit: | N/A |
| Mesotrophic Dermosolic Oxyaquic Hydrosol | | Principal Profile Form: | Gn3.91 |
| ASC Confidence: | | Great Soil Group: | No suitable group |
| All necessary analytical data are available. | | | |

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

| | | |
|-----|-------------|--|
| A11 | 0 - 0.1 m | Dark greyish brown (10YR4/2-Moist); ; Clay loam; Strong grade of structure, 5-10 mm, Subangular blocky; Wet; Moderately plastic; Normal plasticity; Abundant, fine (1-2mm) roots; |
| A12 | 0.1 - 0.2 m | Dark greyish brown (10YR4/2-Moist); ; Clay loam (Heavy); Strong grade of structure, 5-10 mm, Subangular blocky; Wet; Moderately plastic; Normal plasticity; Many, very fine (0-1mm) roots; Gradual change to - |
| B21 | 0.2 - 0.3 m | Light brownish grey (10YR6/2-Moist); ; Light clay; Strong grade of structure, 5-10 mm, Subangular blocky; Wet; Moderately plastic; Normal plasticity; Common, very fine (0-1mm) roots; |
| B22 | 0.3 - 0.6 m | Dark grey (5Y4/1-Moist); ; Medium clay; Strong grade of structure, Subangular blocky; Wet; Moderately plastic; Normal plasticity; Diffuse change to - |
| B23 | 0.6 - 0.9 m | Dark grey (10YR4/1-Moist); ; Medium heavy clay; Strong grade of structure, Subangular blocky; Wet; Moderately plastic; Normal plasticity; |

Morphological Notes

Observation Notes

Site Notes

COWLEY

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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 Cmol (+)/kg | Acidity | | % | |
| 0 - 0.1 | 4.5A | 0.316A | 1.7H | 3.83 | 0.36 | 0.7 | 3.7F | 6.1A 25.3C | 10.3F | 11.48 2.77 |
| 0.1 - 0.2 | 4.8A | 0.233A | 1.18H | 3.5 | 0.27 | 0.76 | 3.3F | 5.9A 20C | 9F | 12.88 3.80 |
| 0.2 - 0.3 | 5A | 0.21A | 1.13H | 3.2 | 0.25 | 0.8 | 2.4F | 5.5A 14.3C | 7.8F | 14.55 5.59 |
| 0.3 - 0.6 | 5.3A | 0.126A | 0.93H | 3.59 | 0.27 | 0.7 | 2.2F | 5.6A 12.2C | 7.7F | 12.50 5.74 |
| 0.6 - 0.9 | 5.3A | 0.12A | | | | | 2.2F | 13.9C | | |

| Depth m | CaCO3 | Organic | Avail. | Total | Total | Total | Bulk Density Mg/m3 | Particle | | Size | Analysis | |
|------------|-------|---------|------------|--------|--------|--------|--------------------------|----------|----|---------|----------|------|
| | % | C % | P mg/kg | P % | N % | K % | | GV | CS | FS % | Silt | Clay |
| 0 - 0.1 | | 6.39D | 78B | 0.095A | 0.39A | 2.06A | | 0 | 6A | 5 | 42 | 47 |
| 0.1 - 0.2 | | 4.21D | 65B | | 0.26A | | | 0 | 3A | 7 | 34 | 56 |
| 0.2 - 0.3 | | 2.84D | 70B | | 0.17A | | | 0 | 4A | 13 | 35 | 48 |
| 0.3 - 0.6 | | 1.98D | 59B | | 0.11A | | | 0 | 3A | 11 | 36 | 51 |
| 0.6 - 0.9 | | | | 0.027A | | 0.98A | | 0 | 6A | 14 | 30 | 50 |

[illegible]

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Laboratory Analyses Completed for this profile

| | |
|-----------|---|
| 10A1 | Total sulfur - X-ray fluorescence |
| 15A2_CEC | Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts |
| 15D1_CEC | CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach |
| 15E1_CA | Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) by compulsive exchange, no pretreatment for soluble |
| 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_NA | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15G_C | Exchange acidity (hydrogen and aluminium) - meq per 100g of soil - By 1M KCl exch. acidity by titration to pH 8.4 |
| 15J1 | Effective CEC |
| 17A1 | Total potassium - X-ray fluorescence |
| 2A1 | Air-dry moisture content |
| 3A1 | EC of 1:5 soil/water extract |
| 4A1 | pH of 1:5 soil/water suspension |
| 6A1_UC | Organic carbon (%) - Uncorrected Walkley and Black method |
| 7A2 | Total nitrogen - semimicro Kjeldahl , automated colour |
| 9A1 | Total phosphorus - X-ray fluorescence |
| 9G_BSES | Available P (mg/kg) - Acid P - 0.005M H ₂ SO ₄ (BSES) |
| MIN_EC | Exchange Capacity - Minerology |
| P10_CF_C | Clay (%) - Coventry and Fett pipette method |
| P10_CF_CS | Coarse sand (%) - Coventry and Fett pipette method |
| P10_CF_FS | Fine sand (%) - Coventry and Fett pipette method |
| P10_CF_Z | Silt (%) - Coventry and Fett pipette method |
| P10_GRAV | Gravel (%) |
| XRD_C_Ch2 | Chloritized 2:1 minerals - X-Ray Diffraction |
| XRD_C_Gb | Gibbsite - X-Ray Diffraction |
| XRD_C_II | Illite - X-Ray Diffraction |
| XRD_C_K2O | K ₂ O - X-Ray Diffraction or Clay Fraction (air dry) |
| XRD_C_Ka | Kaolin - X-Ray Diffraction |