

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0037 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

| | | | |
|------------------------|-----------------------|-------------------|--------------|
| Desc. By: | P. Ryan | Locality: | |
| Date Desc.: | 22/11/95 | Elevation: | 1537 metres |
| Map Ref.: | Sheet No. : 8526 DGPS | Rainfall: | No Data |
| Northing/Long.: | 6032992 AMG zone: 55 | Runoff: | No Data |
| Easting/Lat.: | 616220 Datum: AGD66 | Drainage: | Well drained |

Geology

| | | | |
|----------------------|----------|------------------------------------|-----------|
| ExposureType: | Soil pit | Conf. Sub. is Parent. Mat.: | Probable |
| Geol. Ref.: | Os | Substrate Material: | Sandstone |

Land Form

| | | | |
|-------------------------|------------------------|------------------------|-------------|
| Rel/Slope Class: | No Data | Pattern Type: | No Data |
| Morph. Type: | Open depression (vale) | Relief: | No Data |
| Elem. Type: | Drainage depression | Slope Category: | No Data |
| Slope: | 17 % | Aspect: | 270 degrees |

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

| | | |
|--|--------------------------------|-------------------|
| Australian Soil Classification: | Mapping Unit: | N/A |
| Melacic Dystrophic Red Dermosol Medium Slightly gravelly Clayey Clayey Deep | Principal Profile Form: | Uf6.11 |
| ASC Confidence: All necessary analytical data are available. | Great Soil Group: | No suitable group |

Site Disturbance: No effective disturbance other than grazing by hoofed animals

Vegetation:

Surface Coarse Fragments: 2-10%, medium gravelly, 6-20mm, subangular tabular, Sandstone; 2-10%, coarse gravelly, 20-60mm, subangular tabular, Sandstone

Profile Morphology

| | | |
|-----|---------------|--|
| O1 | 0 - 0.03 m | Organic Layer; ; |
| A1 | 0.03 - 0.17 m | Black (5YR2.5/1-Moist); Biological mixing, 5YR32, 2-10% , Faint; Light clay; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subrounded tabular, Sandstone, coarse fragments; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Wavy change to - |
| A3 | 0.17 - 0.26 m | Dark reddish brown (5YR3/2-Moist); Biological mixing, 5YR2.51, 10-20% , Faint; Light clay; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, subangular tabular, Sandstone, coarse fragments; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Clear, Smooth change to - |
| B21 | 0.26 - 0.41 m | Dark reddish brown (5YR3/4-Moist); Biological mixing, 5YR32; Light medium clay; Strong grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, subangular tabular, Sandstone, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Gradual, Smooth change to - |
| B22 | 0.41 - 0.69 m | Dark reddish brown (2.5YR3/4-Moist); ; Light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse, Smooth change to - |
| B23 | 0.69 - 1.43 m | Red (2.5YR4/6-Moist); ; Light medium clay; Weak grade of structure, 5-10 mm, Angular blocky; Rough-ped fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subrounded tabular, Sandstone, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear change to - |

Morphological Notes

B23 Auger was stopped by weathering substrate.

Observation Notes

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Downslope of site the drainage line changes into a soak.

Site Notes

COMP 36H, 2514-1, BRG 274DEG, 525M

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Laboratory Test Results:

| Depth m | pH | 1:5 EC dS/m | Ca | Exchangeable Mg | Cations K | Na Cmol (+)/kg | Exchangeable Acidity | CEC | ECEC | ESP % |
|-------------|-------|----------------|-------|--------------------|--------------|-------------------|-------------------------|-----|--------|----------|
| 0 - 0.03 | | | | | | | | | | |
| 0.03 - 0.17 | 4.01C | | 1.97H | 0.85 | 0.82 | 0.05 | 6.8J 0K | | 10.48E | |
| 0.17 - 0.26 | 4.06C | | 0.12H | 0.54 | 0.86 | 0.03 | 4.59J 0K | | 6.13E | |
| 0.26 - 0.41 | 4.2C | | 0.43H | 0.9 | 0.99 | 0.02 | 2.93J 0K | | 5.26E | |
| 0.41 - 0.69 | 4.04C | | 0.06H | 0.74 | 0.92 | 0.03 | 3.74J 0K | | 5.49E | |
| 0.69 - 1.43 | 3.94C | | 0.02H | 0.66 | 0.87 | 0.01 | 4.36J 0K | | 5.92E | |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle GV | Particle CS | Size FS | Analysis Silt | Analysis Clay |
|-------------|-------|-----------|----------|---------|---------|---------|--------------|-------------|-------------|---------|---------------|---------------|
| m | % | % | mg/kg | % | % | % | Mg/m3 | | | % | | |
| 0 - 0.03 | | | | | | | | | | | | |
| 0.03 - 0.17 | | 8.11B | | 448.9B | 0.27A | | 0.85 | 45.91 | | | | |
| 0.17 - 0.26 | | 3.23B | | 447.2B | 0.14A | | 0.85 | 25.37 | | | | |
| 0.26 - 0.41 | | 1.98B | | 424.8B | 0.09A | | 1.09 | 28.69 | | | | |
| 0.41 - 0.69 | | 0.85B | | 427B | 0.06A | | 1.19 | 33.93 | | | | |
| 0.69 - 1.43 | | 0.45B | | 450.6B | 0.04A | | 1.23 | 27.27 | | | | |

[illegible]

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Laboratory Analyses Completed for this profile

| | |
|----------|---|
| 15_NR | Sum of Ex. cations + Ex. acidity - Not recorded |
| 15E1_AL | Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts |
| 15E1_CA | Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble |
| 15E1_H | Exchangeable H - 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_NA | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 2A1 | Air-dry moisture content |
| 4B2 | pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1 |
| 6B2 | Total organic carbon - high frequency induction furnace, volumetric |
| 7A2 | Total nitrogen - semimicro Kjeldahl , automated colour |
| 9A3 | Total Phosphorus (ppm) - semimicro kjeldahl, automated colour |
| P10_GRAV | Gravel (%) |
| P3A1 | Bulk density - g/cm3 |