

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0085 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

| | |
|---|-------------------------------|
| Desc. By: P. Ryan | Locality: |
| Date Desc.: 14/03/96 | Elevation: 1144 metres |
| Map Ref.: Sheet No. : 8526 DGPS | Rainfall: No Data |
| Northing/Long.: 6046439 AMG zone: 55 | Runoff: No Data |
| Easting/Lat.: 616541 Datum: AGD66 | Drainage: Well drained |

Geology

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|------------------------------|--|
| ExposureType: No Data | Conf. Sub. is Parent. Mat.: No Data |
| Geol. Ref.: Tb | Substrate Material: Schist |

Land Form

| | |
|---------------------------------|--------------------------------|
| Rel/Slope Class: No Data | Pattern Type: No Data |
| Morph. Type: Mid-slope | Relief: No Data |
| Elem. Type: Hillslope | Slope Category: No Data |
| Slope: 14 % | Aspect: 135 degrees |

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

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| Australian Soil Classification: | Mapping Unit: N/A |
| Acidic Dystrophic Red Kandosol Thin Slightly gravelly Clay-loamy Clayey Very deep | Principal Profile Form: Gn2.14 |
| ASC Confidence: | Great Soil Group: Red podzolic soil |
| All necessary analytical data are available. | |

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

Vegetation:

Surface Coarse Fragments: 2-10%, fine gravelly, 2-6mm, angular, Coal

Profile Morphology

| | | |
|-----|---------------|--|
| O1 | 0 - 0.01 m | Organic Layer; ; |
| A1 | 0.01 - 0.06 m | Very dark greyish brown (10YR3/2-Moist); Biological mixing, 7.5YR43, 10-20% , Faint; Clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, angular, Coal, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Abrupt, Smooth change to - |
| A2 | 0.06 - 0.19 m | Brown (7.5YR4/3-Moist); Biological mixing, 7.5YR32, 10-20% , Faint; Light clay; Moderate grade of structure, 5-10 mm, Angular blocky; 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change to - |
| B1 | 0.19 - 0.32 m | Brown (7.5YR4/4-Moist); Biological mixing, 7.5YR32, 2-10% , Faint; Biological mixing, 0-2% , Distinct; Light clay; Moderate grade of structure, 5-10 mm, Subangular blocky; 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular tabular, Coal, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Smooth change to - |
| B21 | 0.32 - 0.68 m | Yellowish red (5YR4/6-Moist); ; Light clay; Moderate grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, subangular, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Clear, Smooth change to - |
| B22 | 0.68 - 1.56 m | Strong brown (7.5YR4/6-Moist); Substrate influence, 7.5YR56, 2-10% , Faint; Biological mixing, 7.5YR2.51, 0-2% , Distinct; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, subangular, coarse fragments; Field pH 4.5 (Raupach); Diffuse change to - |
| B3 | 1.56 - 2.76 m | Strong brown (7.5YR4/6-Moist); ; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; 10-20%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 5 (Raupach); Diffuse change to - |
| C | 2.76 - 3.01 m | Yellowish brown (10YR5/4-Moist); ; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; 10-20%, medium gravelly, 6-20mm, subangular tabular, coarse fragments; Field pH 5 (Raupach); |

Morphological Notes

A1 Thinness of horizon and low organic matter content would indicate disturbance post fire.

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B22 Increase in small gravel content derived from schist. Individual sand grains are rounded.

Observation Notes

Site stand diameter classes indicate major fire 25 years ago. Soil PM is not basalt. Substrate is schist, Os metasediment.

Site Notes

4895-1 220D 200M FROM RD,COMP 119H

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Laboratory Test Results:

| Depth | pH | 1:5 EC | Ca | Exchangeable | Cations | Exchangeable | CEC | ECEC | ESP |
|-------------|-------|--------|-------|--------------|---------|--------------|-------------|--------|-----|
| m | | dS/m | | Mg | K | Na | Acidity | | % |
| | | | | | | Cmol (+)/kg | | | |
| 0 - 0.01 | | | | | | | | | |
| 0.01 - 0.06 | 4.14C | | 4.45H | 0.96 | 0.58 | 0.03 | 4.54J 0K | 10.56E | |
| 0.06 - 0.19 | 4.23C | | 1.21H | 0.78 | 0.32 | 0.02 | 2.47J 0K | 4.81E | |
| 0.19 - 0.32 | 4.27C | | 1.64H | 1.24 | 0.27 | 0 | 2.03J 0K | 5.18E | |
| 0.32 - 0.68 | 4.15C | | 1.16H | 1.21 | 0.3 | 0.02 | 2.64J 0K | 5.32E | |
| 0.68 - 1.56 | 4.07C | | 0.37H | 0.47 | 0.18 | 0 | 2.42J 0K | 3.44E | |
| 1.56 - 2.76 | 4.14C | | 0.26H | 0.44 | 0.07 | 0.02 | 1.11J 0K | 1.9E | |
| 2.76 - 3.01 | 4.25C | | 0.32H | 0.49 | 0.08 | 0.01 | 0.63J 0K | 1.54E | |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size | | Analysis | |
|-------------|-------|-----------|----------|---------|---------|---------|--------------|---------------|----|----------|-----------|
| m | % | % | mg/kg | % | % | % | Mg/m3 | GV | CS | FS % | Silt Clay |
| 0 - 0.01 | | | | | | | | | | | |
| 0.01 - 0.06 | | 6.5B | | 1785.9B | 0.24A | | 0.87 | 22.46 | | | |
| 0.06 - 0.19 | | 1.58B | | 1452B | 0.1A | | 1.33 | 29.96 | | | |
| 0.19 - 0.32 | | 1.13B | | 1132.6B | 0.08A | | 1.25 | 31.55 | | | |
| 0.32 - 0.68 | | 0.41B | | 678.3B | 0.05A | | 1.35 | 31.7 | | | |
| 0.68 - 1.56 | | 0.14B | | 587.9B | 0.02A | | 1.65 | 20.24 | | | |
| 1.56 - 2.76 | | 0.09B | | 434.5B | 0.02A | | | 15.91 | | | |
| 2.76 - 3.01 | | 0.06B | | 335.6B | 0.01A | | | 19.36 | | | |

[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 |