

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0022 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

| | | | |
|------------------------|-----------------------|-------------------|--------------|
| Desc. By: | P. Ryan | Locality: | |
| Date Desc.: | 15/02/96 | Elevation: | 1246 metres |
| Map Ref.: | Sheet No. : 8526 DGPS | Rainfall: | No Data |
| Northing/Long.: | 6023737 AMG zone: 55 | Runoff: | No Data |
| Easting/Lat.: | 621036 Datum: AGD66 | Drainage: | Well drained |

Geology

| | | | |
|----------------------|---------|------------------------------------|--------------|
| ExposureType: | No Data | Conf. Sub. is Parent. Mat.: | Probable |
| Geol. Ref.: | Dga | Substrate Material: | Granodiorite |

Land Form

| | | | |
|-------------------------|-------------|------------------------|-------------|
| Rel/Slope Class: | No Data | Pattern Type: | No Data |
| Morph. Type: | Lower-slope | Relief: | No Data |
| Elem. Type: | Hillslope | Slope Category: | No Data |
| Slope: | 35 % | Aspect: | 225 degrees |

Surface Soil Condition (dry): Loose

Erosion: Partial, Minor (sheet)

Soil Classification

| | | |
|---|--------------------------------|----------------------|
| Australian Soil Classification: | Mapping Unit: | N/A |
| Haplic Dystrophic Brown Kandosol Thin Slightly gravelly Loamy Clayey Very deep | Principal Profile Form: | Gn4.34 |
| ASC Confidence: | Great Soil Group: | Yellow podzolic soil |

All necessary analytical data are available.

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: 2-10%, coarse gravelly, 20-60mm, subangular, Granodiorite; 2-10%, coarse gravelly, 20-60mm, subangular tabular,
Granodiorite; 2-10%, fine gravelly, 2-6mm, subangular tabular, Coal

Profile Morphology

| | | |
|-----|---------------|--|
| A1 | 0 - 0.08 m | Dark brown (7.5YR3/2-Moist); ; Coarse sandy loam; Weak grade of structure, 2-5 mm, Granular; Rough-ped fabric; Moist; Very weak consistence; 2-10%, coarse gravelly, 20-60mm, subangular, Granodiorite, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to - |
| A2 | 0.08 - 0.22 m | Dark yellowish brown (10YR4/4-Moist); ; Coarse sandy clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, subangular, Granodiorite, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change |
| B21 | 0.22 - 0.54 m | Brown (7.5YR4/4-Moist); ; Coarse sandy clay; Weak grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Diffuse, Smooth change to - |
| B22 | 0.54 - 0.82 m | Strong brown (7.5YR4/6-Moist); ; Coarse sandy clay; Massive grade of structure; Earthy fabric; Moist; Very weak consistence; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Wavy change to - |
| BC | 0.82 - 1.55 m | Strong brown (7.5YR5/6-Moist); ; Coarse sandy clay loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, coarse fragments; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse change to - |
| C | 1.55 - 2.7 m | Light brownish grey (10YR6/2-Moist); ; Loamy coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; 20-50%, medium gravelly, 6-20mm, subrounded, Granodiorite, coarse fragments; Field pH 5.5 (Raupach); |

Morphological Notes

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|----|---|
| A1 | Thinness and consistence evidence of recent colluvial activity. |
| A2 | Structure due primarily to casting. |

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BC Start of in situ weathering PM.

Observation Notes

In young ash regen. stand. Litter terracettes have dammed loose surface soil. Aplite and dolerite form most of coarse gravel.
Upper 80cm probably of colluvial origin.

Site Notes

COMP 25H,9733-1,262DEG,50M FROM ROAD

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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 - 0.08 | 4.55C | | 9.43H | 0.9 | 0.56 | 0.07 | 1.41J 0K | | 12.38E | |
| 0.08 - 0.22 | 4.76C | | 3.21H | 0.77 | 0.44 | 0.03 | 0.53J 0K | | 4.99E | |
| 0.22 - 0.54 | 4.2C | | 1.72H | 0.88 | 0.6 | 0.04 | 1.65J 0K | | 4.9E | |
| 0.54 - 0.82 | 3.87C | | 0.27H | 0.53 | 0.64 | 0.03 | 3.5J 0K | | 4.97E | |
| 0.82 - 1.55 | 3.89C | | 0H | 0.16 | 0.46 | 0.02 | 2.25J 0K | | 2.89E | |
| 1.55 - 2.7 | 4.15C | | 0H | 0.03 | 0.34 | 0.05 | 0.61J 0K | | 1.02E | |

| Depth | CaCO3 | Organic | Avail. | Total | Total | Total | Bulk | Particle | | Size | Analysis | |
|-------------|-------|---------|--------|--------|-------|-------|---------|----------|----|------|----------|------|
| m | % | C | P | P | N | K | Density | GV | CS | FS | Silt | Clay |
| | | % | mg/kg | % | % | % | Mg/m3 | | | % | | |
| 0 - 0.08 | | 7.82B | | 221.5B | 0.25A | | 0.82 | 36.35 | | | | |
| 0.08 - 0.22 | | 2.7B | | 131.4B | 0.09A | | 1.04 | 34.53 | | | | |
| 0.22 - 0.54 | | 1.15B | | 127B | 0.04A | | 1.02 | 28.24 | | | | |
| 0.54 - 0.82 | | 0.53B | | 130.8B | 0.03A | | 1.11 | 29.13 | | | | |
| 0.82 - 1.55 | | 0.23B | | 92.5B | 0.01A | | 1.30 | 33.16 | | | | |
| 1.55 - 2.7 | | 0.09B | | 59.8B | 0A | | | 30.82 | | | | |

[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 |