

Project Name: BAGO-MARAGLE ESM
Project Code: BGM_ESM **Site ID:** 1003 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

| | | | |
|------------------------|-----------------------|-------------------|--------------|
| Desc. By: | P. Ryan | Locality: | |
| Date Desc.: | 13/12/94 | Elevation: | 1142 metres |
| Map Ref.: | Sheet No. : 8526 DGPS | Rainfall: | No Data |
| Northing/Long.: | 6055924 AMG zone: 55 | Runoff: | Slow |
| Easting/Lat.: | 602760 Datum: AGD66 | Drainage: | Well drained |

Geology

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

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: | 9 % | Aspect: | 270 degrees |

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

| | | |
|--|--------------------------------|-----------|
| Australian Soil Classification: | Mapping Unit: | N/A |
| Acidic Dystrophic Red Kandosol Medium Non-gravelly Clayey Clayey Very deep | Principal Profile Form: | Gn2.11 |
| ASC Confidence: | Great Soil Group: | Red earth |

All necessary analytical data are available.

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

| | | |
|-----|---------------|---|
| A1 | 0 - 0.14 m | Dark reddish brown (5YR3/2-Moist); Biological mixing, 20-50% , Faint; Light clay; Strong grade of structure, 5-10 mm, Polyhedral; 100-200 mm, Lenticular; Rough-ped fabric; Moderately moist; Weak consistence; Moderately plastic; Slightly sticky; Field pH 5.5 (pH meter); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Abrupt, Wavy change to - |
| B1 | 0.14 - 0.42 m | Dark reddish brown (2.5YR3/4-Moist); Biological mixing, 2-10% , Faint; Light clay; Weak grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Weak consistence; Moderately plastic; Slightly sticky; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (pH meter); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Common, coarse (>5mm) roots; Diffuse, Smooth change to - |
| B21 | 0.42 - 0.95 m | Dark red (2.5YR3/6-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; Moderately plastic; Slightly sticky; 0-2%, medium gravelly, 6-20mm, subrounded platy, dispersed, Granodiorite, coarse fragments; 0-2%, medium gravelly, 6-20mm, angular, dispersed, Quartz, coarse fragments; Field pH 5 (pH meter); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; |
| B21 | 0.95 - 1.5 m | Dark red (2.5YR3/6-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Moderately plastic; Superplastic; Slightly sticky; Field pH 4.5 (pH meter); |
| B22 | 1.5 - 3.7 m | Dark reddish brown (5YR3/4-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Moderately moist; Slightly plastic; Slightly sticky; Field pH 4.5 (pH meter); |
| B3 | 3.7 - 4 m | Dark brown (7.5YR3/4-Moist); ; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Slightly plastic; Very sticky; Field pH 5 (pH meter); |

Morphological Notes

B3 No substrate to 4 metres.

Observation Notes

Pit is on southern side and midslope of trial.

Site Notes

VI/1,437 ALPINE ASH GROWTH PLOT

Observation ID: 1

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 | 4.13C 5.1A | | 2.87H | 1.7 | 1.26 | 0.11 | 4.73J 0K | | 10.68E | |
| 0.15 - 0.25 | 3.92C 4.96A | | 0.54H | 1.08 | 1.05 | 0.13 | 5.32J 0K | | 8.11E | |
| 0.3 - 0.38 | 3.75C 4.73A | | 0.15H | 0.58 | 0.92 | 0.12 | 6.22J 0K | | 8E | |
| 0.6 - 0.7 | 3.72C 4.71A | | 0.08H | 0.66 | 0.78 | 0.44 | 6.73J 0K | | 8.68E | |
| 1.1 - 1.3 | 3.72C 4.74A | | 0.06H | 0.18 | 0.48 | 0.07 | 4.05J 0K | | 4.83E | |
| 2.2 - 2.4 | 3.66C 4.72A | | 0.06H | 0.12 | 0.29 | 0.1 | 4.57J 0K | | 5.15E | |
| 3.7 - 3.9 | 3.78C 4.77A | | 0.08H | 0.05 | 0.31 | 0.16 | 3.17J 0K | | 3.76E | |

| 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 | | 6.24B | | 399.2B | 0.22A | | 0.93 | 12.75 | | | | |
| 0.15 - 0.25 | | | | 294B | 0.1A | | 0.97 | 1 | | | | |
| 0.3 - 0.38 | | 1.31B | | 230.8B | 0.06A | | | 2.52 | | | | |
| 0.6 - 0.7 | | 0.5B | | 234.8B | 0.04A | | 1.05 | 4.61 | | | | |
| 1.1 - 1.3 | | 0.29B | | 191.4B | 0.03A | | | 4.01 | | | | |
| 2.2 - 2.4 | | 0.24B | | 193.5B | 0.02A | | | 2.82 | | | | |
| 3.7 - 3.9 | | 0.38B | | 122B | 0.02A | | | 5.45 | | | | |

[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 (Ca ²⁺ ,Mg ²⁺ ,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 |
| 4A1 | pH of 1:5 soil/water suspension |
| 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/cm ³ |