

Project Name: BAGO-MARAGLE ESM
Project Code: BGM_ESM **Site ID:** 1028 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

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|------------------------|-----------------------|-------------------|--------------|
| Desc. By: | P. Ryan | Locality: | |
| Date Desc.: | 06/04/95 | Elevation: | 1227 metres |
| Map Ref.: | Sheet No. : 8526 DGPS | Rainfall: | No Data |
| Northing/Long.: | 6048590 AMG zone: 55 | Runoff: | Slow |
| Easting/Lat.: | 601835 Datum: AGD66 | Drainage: | Well drained |

Geology

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

Land Form

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|-------------------------|-----------|------------------------|------------|
| Rel/Slope Class: | No Data | Pattern Type: | No Data |
| Morph. Type: | Mid-slope | Relief: | No Data |
| Elem. Type: | Hillslope | Slope Category: | No Data |
| Slope: | 15 % | Aspect: | 45 degrees |

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

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| Australian Soil Classification: | Mapping Unit: | N/A |
| Acidic Dystrophic Red Kandosol Medium Non-gravelly Clay-loamy 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

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|-----|---------------|---|
| O1 | 0 - 0.03 m | Organic Layer; ; |
| A1 | 0.03 - 0.15 m | Dark reddish brown (5YR3/2-Moist); Biological mixing, 2-10% , Faint; Clay loam; Strong grade of structure, 2-5 mm, Polyhedral; 100-200 mm, Prismatic; Smooth-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Coarse (>5mm) macropores, Moist; Weak consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to - |
| B1 | 0.15 - 0.28 m | Dark reddish brown (5YR3/4-Moist); Biological mixing, 10-20% , Faint; Light clay; Moderate grade of structure, 5-10 mm, Polyhedral; 50-100 mm, Columnar; Smooth-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Coarse (>5mm) macropores, Moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, angular tabular, dispersed, Coal, coarse fragments; 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; Gradual, Irregular change to - |
| B21 | 0.28 - 0.67 m | Red (2.5YR4/6-Moist); Biological mixing, 2-10% , Distinct; Clay loam; Massive grade of structure; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Coarse (>5mm) macropores, Dry; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular tabular, dispersed, Coal, coarse fragments; Field pH 4.5 (pH meter); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Common, coarse (>5mm) roots; Diffuse, Irregular change to - |
| B22 | 0.67 - 1.33 m | Red (2.5YR4/6-Moist); Biological mixing, 0-2% , Distinct; Clay loam, sandy; Massive grade of structure; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Medium (2-5mm) macropores, Moderately moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Field pH 4.5 (pH meter); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Abrupt change to - |
| BC | 1.33 - 1.88 m | Yellowish red (5YR4/6-Moist); ; Coarse sandy loam; Sandy (grains prominent) fabric; Moderately moist; 2-10%, coarse gravelly, 20-60mm, dispersed, Granodiorite, coarse fragments; Field pH 5 (pH meter); Diffuse change to - |

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|----|---------------|--|
| C1 | 1.88 - 2.48 m | Dark yellowish brown (10YR4/4-Moist); Substrate influence, 2-10% , Faint; Loamy sand; Sandy (grains prominent) fabric; Moderately moist; Field pH 5 (pH meter); Clear change to - |
| C2 | 2.48 - 3.48 m | Light brownish grey (2.5Y6/3-Moist); ; Loamy coarse sand; Sandy (grains prominent) fabric; Moderately moist; 10-20%, medium gravelly, 6-20mm, Granodiorite, coarse fragments; Field pH 5.5 (pH meter); Clear change to - |
| C3 | 3.48 - 3.73 m | Yellowish brown (10YR5/4-Moist); ; Loamy coarse sand; Sandy (grains prominent) fabric; Moderately moist; 10-20%, medium gravelly, 6-20mm, subrounded, Granodiorite, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Fragments, strong, segregations; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Veins, strong, segregations; Field pH 5.5 (pH meter); |

Morphological Notes

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| B21 | Dry pit face has lattice of cracks. |
| B22 | Presents of cracks as above. Some of these have roots on the interface. |
| BC | Pale strongly weathered coarse fragment at top of layer. |
| C2 | This layer is paler than the one above or below. This would indicate a weathered top. |

Observation Notes

PGP centre peg is in north west of pit. Dry ash site.

Site Notes

PGP13, BAGO S.F., COMPT 45

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[illegible]

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Laboratory Analyses Completed for this profile

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|----------|---|
| 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 |
| 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/cm3 |