

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS **Site ID:** 0059 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

#### Site Information

<b>Desc. By:</b> N.J. McKenzie	<b>Locality:</b>
<b>Date Desc.:</b> 12/03/96	<b>Elevation:</b> 1247 metres
<b>Map Ref.:</b> Sheet No. : 8526 DGPS	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6042661 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 611475 Datum: AGD66	<b>Drainage:</b> Rapidly drained

#### Geology

<b>ExposureType:</b> No Data	<b>Conf. Sub. is Parent. Mat.:</b> Probable
<b>Geol. Ref.:</b> Sgg	<b>Substrate Material:</b> Granodiorite

#### Land Form

<b>Rel/Slope Class:</b> No Data	<b>Pattern Type:</b> No Data
<b>Morph. Type:</b> Upper-slope	<b>Relief:</b> No Data
<b>Elem. Type:</b> Hillslope	<b>Slope Category:</b> No Data
<b>Slope:</b> 16 %	<b>Aspect:</b> 270 degrees

**Surface Soil Condition (dry):** Firm

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Acidic Mesotrophic Red Kandosol Medium Non-gravelly Peaty Clay-loamy Deep	<b>Principal Profile Form:</b> Um6.

<b>ASC Confidence:</b>	<b>Great Soil Group:</b> N/A
All necessary analytical data are available.	

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.11 m	Black (5YR2.5/1-Moist); ; Loamy peat; Moderate grade of structure, 2-5 mm, Granular; Rough-ped fabric; Moist; Very weak consistence; Field pH 3.5 (Raupach); Few, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Abrupt, Wavy change to -
A12	0.11 - 0.23 m	Dark reddish brown (5YR2.5/2-Moist); ; Clay loam; Moderate grade of structure, 2-5 mm, Granular; 10-20 mm, Subangular blocky; Earthy fabric; Moderately moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
B21	0.23 - 0.52 m	Dark reddish brown (5YR3/4-Moist); ; Clay loam; Weak grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Granular; Earthy fabric; Moderately moist; Very weak consistence; 2-10%, coarse gravelly, 20-60mm, subangular, dispersed, Granodiorite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.52 - 0.9 m	Reddish brown (5YR4/4-Moist); Mottles, 5YR4/3, 20-50% , Distinct; Clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 20-50%, coarse gravelly, 20-60mm, subangular, dispersed, Granodiorite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change to -
B23	0.9 - 1.3 m	Yellowish brown (10YR5/4-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 50-90%, coarse gravelly, 20-60mm, subangular, dispersed, Granodiorite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots;

#### Morphological Notes

A11	V. organic acid layer may be and old decaying log.
A12	Original surface? Very low density and crumbly.
B21	V. low BD and v. soft in parts. Burrow @0.45 into profile that extends >0.5m. Rhizomorph sampled-abundant fungi and peat like feel (cheese).

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B22                      Several large soft areas that appear to be old large former roots.

B23                      Paler soil amongst very large stones - impossible to auger.

**Observation Notes**

Profile has probably been disturbed by logging. V. mixed profile with lots of organic matter and soft soil. Even age ash

**Site Notes**

COMP 96H, 52784-1, B318.5, 140M FR RD

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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 - 0.11	3.16C		9.06H	3.01	1.94	0.06	13.38J		35.02E	
0.11 - 0.23	4.88C		7.83H	1.27	1.24	0.02	7.57K 1.78J 0K		12.15E	
0.23 - 0.52	5.09C		2.47H	1.37	0.64	0.01	0.26J 0K		4.76E	
0.52 - 0.9	4.51C		0.69H	0.64	0.38	0	0.36J 0K		2.07E	
0.9 - 1.3	4.58C		0.88H	0.69	0.47	0.01	0.6J 0K		2.65E	

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 - 0.11		29.1B		1152.3B	0.52A		0.80	23.64				
0.11 - 0.23		5.62B		1851B	0.19A			23.6				
0.23 - 0.52		1.29B		677B	0.07A		1.07	16.46				
0.52 - 0.9		0.36B		390.8B	0.02A		1.23	17.34				
0.9 - 1.3		0.51B		395B	0.03A			11.43				

[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