

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS **Site ID:** 0111 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

#### Site Information

<b>Desc. By:</b> P. Ryan	<b>Locality:</b>
<b>Date Desc.:</b> 24/04/96	<b>Elevation:</b> 1127 metres
<b>Map Ref.:</b> Sheet No. : 8526 DGPS	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6056441 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 609971 Datum: AGD66	<b>Drainage:</b> Well drained

#### Geology

<b>ExposureType:</b> Soil pit	<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> Lower-slope	<b>Relief:</b> No Data
<b>Elem. Type:</b> Footslope	<b>Slope Category:</b> No Data
<b>Slope:</b> 5 %	<b>Aspect:</b> 45 degrees

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

**Erosion:** Stable, Minor (sheet)

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Acidic Magnesic Red Dermosol Thin Non-gravelly Clay-loamy Clayey Deep	<b>Principal Profile Form:</b> Uf6.12
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> No suitable group
All necessary analytical data are available.	

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

#### Vegetation:

**Surface Coarse Fragments:** 20-50%, fine gravelly, 2-6mm, subangular tabular, Coal; 20-50%, fine gravelly, 2-6mm, angular tabular, Coal

#### Profile Morphology

O1	0 - 0.05 m	Organic Layer; ;
AB	0.05 - 0.12 m	Dark reddish brown (5YR3/3-Moist); Mechanical, 5YR46, 20-50% , Distinct; Clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, subangular tabular, Coal, coarse fragments; Field pH 4.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Gradual, Wavy change to -
B1	0.12 - 0.22 m	Dark reddish brown (5YR3/4-Moist); Biological mixing, 5YR32, 2-10% , Distinct; Silty clay; Moderate grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, subangular tabular, Coal, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Diffuse, Wavy change to -
B21	0.22 - 0.5 m	Dark red (2.5YR3/6-Moist); Biological mixing, 5YR2.52, 2-10% , Distinct; Silty clay; Moderate grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.5 - 0.79 m	Red (2.5YR4/6-Moist); Biological mixing, 5YR32, 0-2% , Distinct; Silty clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Diffuse, Smooth change to -
B23	0.79 - 1.1 m	Red (2.5YR4/6-Moist); ; Silty clay; 2-10%, medium gravelly, 6-20mm, subrounded, coarse fragments; 0-2%, fine gravelly, 2-6mm, subrounded tabular, Quartz, coarse fragments; Field pH 4 (Raupach); Few, very fine (0-1mm) roots; Abrupt change to -

#### Morphological Notes

AB	Very little OM mechanical mixing with B horizon. Charcoal and fungi indicate hot fire.
B21	Large number of roots.

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS      **Site ID:** 0111      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

B22                      Very few roots.

B23                      Auger hit rock at base of layer. Prescence of quartz pebbles may mean these have been deposited. Large roots reappear.

**Observation Notes**

Lower slope below basalt flow site has been burnt in the last 10 yrs. Very little A hor. so possible post fire erosion although few signs exist. Possible old river terrace.

**Site Notes**

16H 5547-1 240M FR CK/RD 80M 329D FR R

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY  
Project Code: BGM\_FSS Site ID: 0111 Observation ID: 1  
Agency Name: CSIRO Division of Soils (ACT)

**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 - 0.05										
0.05 - 0.12	4.12C		2.68H	0.58	0.47	0.07	1.68J 0K		5.48E	
0.12 - 0.22	4.07C		1.22H	0.62	1.05	0.11	6.2J 0K		9.21E	
0.22 - 0.5	3.98C		0.2H	0.56	0.86	0.06	6.34J 0K		8.02E	
0.5 - 0.79	3.97C		0.01H	0.5	0.81	0.11	6.18J 0K		7.62E	
0.79 - 1.1	3.99C		0H	0.6	0.74	0.11	5.98J 0K		7.44E	

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 - 0.05									
0.05 - 0.12		11.63B		601.2B	0.33A		0.71	23.77	
0.12 - 0.22		4.03B		848.2B	0.18A		0.96	11.66	
0.22 - 0.5		1.81B		583.3B	0.1A		0.98	6.35	
0.5 - 0.79		0.65B		412.6B	0.05A		1.13	0	
0.79 - 1.1		0.36B		404.3B	0.03A			8.32	

[illegible]

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS      **Site ID:** 0111      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

**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