Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0043** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 12/03/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6039791 AMG zone: 55
Easting/Lat.: 615298 Datum: AGD66
Locality:
Elevation: 1187 metres
Rainfall: No Data
Runoff: No Data
Drainage: Rapidly drained

Geology

ExposureType: Soil pit
Geol. Ref.: Tb
Conf. Sub. is Parent. Mat.: Probable
Substrate Material: Basalt

Land Form

Rel/Slope Class: No Data
Morph. Type: Upper-slope
Elem. Type: Hillslope
Slope: 14 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 270 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:
Haplic Eutrophic Red Dermosol Medium Non-gravelly Peaty Clayey Moderately deep
Mapping Unit: N/A
Principal Profile Form: Gn2.11

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

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A11	0.01 - 0.06 m	Dark reddish brown (5YR2.5/2-Moist); ; Loamy peat; Moderate grade of structure, <2 mm, Granular; Rough-ped fabric; Dry; Weak consistence; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.06 - 0.16 m	Dark reddish brown (5YR3/2-Moist); ; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Earthy fabric; Dry; Weak consistence; 10-20%, medium gravelly, 6-20mm, subangular tabular, dispersed, Basalt, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Common, coarse (>5mm) roots; Gradual, Smooth change to -
B21	0.16 - 0.41 m	Dark reddish brown (2.5YR3/4-Moist); ; Light clay; Weak grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Granular; Earthy fabric; Dry; Weak consistence; 20-50%, medium gravelly, 6-20mm, subangular tabular, dispersed, Basalt, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B22	0.41 - 0.91 m	Dark red (2.5YR3/6-Moist); ; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 50-90%, coarse gravelly, 20-60mm, angular tabular, stratified, Basalt, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Abrupt, Irregular change to -

Morphological Notes

A11	Strongly hydrophobic.
A12	Soft earthy horizon with many Tb coarse fragments.
B21	Very difficult to sample - no bulk density

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B22	Almost all tabular Tb

Observation Notes

Shallow rocky soil on erosional edge of crest. Erosion >> pedogenesis high OM in layer 1.

Site Notes

COMP 117H,96002-1,349D 1010M FROM RD

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.01										
0.01 - 0.06	4.72C		10.57H	1.4	0.54	0.01	0.62J 0K		13.13E	
0.06 - 0.16	4.2C		1.59H	0.87	0.77	0.04	6.48J 0K		9.74E	
0.16 - 0.41	4.95C		6.91H	2.3	1.26	0.04	0.57J 0K		11.08E	
0.41 - 0.91	5C		6.98H	3	1.03	0.03	0.29J 0K		11.32E	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.01												
0.01 - 0.06		21.25B		768.1B	0.7A			24.4				
0.06 - 0.16		5.66B		3926B	0.26A		0.67	27.23				
0.16 - 0.41		1.98B		1823.4B	0.1A			25.53				
0.41 - 0.91		1.06B		1805.1B	0.05A			25.26				

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m		g/g - m3/m3							mm/h	mm/h
0 - 0.01										
0.01 - 0.06										
0.06 - 0.16										
0.16 - 0.41										
0.41 - 0.91										

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Laboratory Analyses Completed for this profile

13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
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