

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0098 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: N.J. McKenzie	Locality:
Date Desc.: 17/04/96	Elevation: 1216 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6044485 AMG zone: 55	Runoff: No Data
Easting/Lat.: 604537 Datum: AGD66	Drainage: Rapidly drained

Geology

ExposureType: No Data	Conf. Sub. is Parent. Mat.: Probable
Geol. Ref.: TB	Substrate Material: Basalt

Land Form

Rel/Slope Class: No Data	Pattern Type: No Data
Morph. Type: Upper-slope	Relief: No Data
Elem. Type: Hillslope	Slope Category: No Data
Slope: 20 %	Aspect: 270 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Melanic Eutrophic Red Dermosol Medium Gravelly Clay-loamy Clayey Deep	Principal Profile Form: Dr4.11

ASC Confidence:	Great Soil Group: 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

O1	0 - 0.01 m	Organic Layer; ;
A11	0.01 - 0.14 m	Dark reddish brown (5YR3/2-Moist); ; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Granular; Rough-ped fabric; Dry; Firm consistence; 10-20%, medium gravelly, 6-20mm, subrounded tabular, dispersed, Basalt, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
A12	0.14 - 0.26 m	Dusky red (2.5YR3/2-Moist); Biological mixing, 2.5YR46, 20-50% , Distinct; Light clay; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 10-20%, medium gravelly, 6-20mm, subrounded tabular, dispersed, Basalt, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Clear, Smooth change to -
B21	0.26 - 0.56 m	Red (2.5YR4/6-Moist); ; Light clay; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 10-20%, medium gravelly, 6-20mm, subrounded, dispersed, Basalt, coarse fragments; Common cutans, 10-50% 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; Clear, Smooth change to -
B22	0.56 - 1.36 m	Red (2.5YR4/6-Moist); ; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; 20-50 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 20-50%, coarse gravelly, 20-60mm, subrounded, dispersed, Basalt, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots;

Morphological Notes

A11	Moderately compact A1/2 compared to other basaltic sites.
A12	Some mixing from below by worms.
B21	Again a silty B2/1 with a light feel when textured. Red maxima for profile.
B22	Coarse fragments becoming larger and soil is more dense with fewer macropores compared with other upper slope/crest basalt derived soils. Layer probably continues for a half metre or more.

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Site is on break of slope. More dense and less biological activity in profile may be due to site being less wet than other TB sites (eg profile no. 097).

Site Notes

COMP 84H 6326-1, BRG156, 280M FR INTER.

Observation Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Comol (+)/kg				%
0 - 0.01										
0.01 - 0.14	4.99C		20.23H	3.92	1.85	0.06	0.79J 0K		26.85E	
0.14 - 0.26	4.82C		10.95H	2.63	1.21	0.08	0.95J 0K		15.82E	
0.26 - 0.56	4.88C		7.79H	2.98	0.95	0.03	0.64J 0K		12.38E	
0.56 - 1.36	4.75C		5.17H	3.39	1.11	0.05	0.46J 0K		10.18E	

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 - 0.01												
0.01 - 0.14		8.83B		2528.2B	0.34A		0.77	35.53				
0.14 - 0.26		4.04B		2118.7B	0.16A		0.88	39.7				
0.26 - 0.56		1.58B		1640.5B	0.04A		1.07	30.18				
0.56 - 1.36		0.75B		1628.8B	0.01A		1.11	29.77				

[illegible]

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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