Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0148** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By:	P. Ryan	**Locality:**	
Date Desc.:	13/03/97	**Elevation:**	1363 metres
Map Ref.:	Sheet No. : 8526 DGPS	**Rainfall:**	No Data
Northing/Long.:	6045730 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	609007 Datum: AGD66	**Drainage:**	Rapidly drained

Geology

ExposureType:	Soil pit	**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:	14 %	**Aspect:**	90 degrees

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Mesotrophic Brown Dermosol Medium Moderately gravelly Clay-loamy Clayey Moderately deep

Mapping Unit: N/A
Principal Profile Form: Uf6.21

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: Chocolate soil

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: 10-20%, cobbly, 60-200mm, subrounded tabular, Basalt; 10-20%, stony, 200-600mm, subrounded tabular, Basalt

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A1	0.01 - 0.15 m	Dark reddish brown (5YR2.5/2-Moist); Biological mixing, 7.5YR33, 2-10% , Faint; Clay loam; Strong grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Polyhedral; Rough-ped fabric; Dry; Weak consistence; 20-50%, coarse gravelly, 20-60mm, subrounded tabular, Basalt, coarse fragments; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Clear, Wavy change to -
B21	0.15 - 0.44 m	Dark brown (7.5YR3/4-Moist); ; Light clay; Strong grade of structure, 5-10 mm, Subangular blocky; 2-5 mm, Polyhedral; Rough-ped fabric; Dry; Weak consistence; 20-50%, coarse gravelly, 20-60mm, subrounded tabular, Basalt, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Wavy change to -
B22	0.44 - 0.76 m	Brown (7.5YR4/4-Moist); ; Light clay; Strong grade of structure, 10-20 mm, Angular blocky; 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 50-90%, coarse gravelly, 20-60mm, subrounded tabular, Basalt, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Irregular change to -

Morphological Notes

B21	Abundant large basalt floaters.
B22	Abundant large basalt floaters plus increasing smaller gravels. Base of layer marks increasing gravel content impeding further excavation.

Observation Notes

Basalt knoll west of pine arboretum on Jimmies Rd.

Site Notes

SMALL BASALT HILL OFF SIMMIES ROAD

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.01										
0.01 - 0.15	4.67C		15.01H	2.88	1.11	0.06	2.63J 0K		21.69E	
0.15 - 0.44	4.49C		1.2H	0.91	0.9	0.05	3.88J 0K		6.94E	
0.44 - 0.76	4.46C		3.13H	1.79	0.43	0.11	2.71J 0K		8.18E	

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 - 0.01												
0.01 - 0.15		17.26B		2374.2B	0.47A		0.52	45.19				
0.15 - 0.44		4.04B		1758.8B	0.24A			32.5				
0.44 - 0.76		1.37B		1672.1B	0.1A			46.6				

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 - 0.15										
0.15 - 0.44										
0.44 - 0.76										

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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