Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0044** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By:	P. Ryan	**Locality:**	
Date Desc.:	13/03/96	**Elevation:**	1182 metres
Map Ref.:	Sheet No. : 8526 DGPS	**Rainfall:**	No Data
Northing/Long.:	6040005 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	615167 Datum: AGD66	**Drainage:**	Moderately well 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:	Crest	**Relief:**	No Data
Elem. Type:	Hillcrest	**Slope Category:**	No Data
Slope:	1 %	**Aspect:**	0 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Haplic Eutrophic Red Ferrosol Medium Slightly gravelly Loamy Clayey Deep

Mapping Unit: N/A
Principal Profile Form: Gn3.21

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: Chocolate soil

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A1	0.01 - 0.14 m	Dark reddish brown (5YR3/2-Moist); Biological mixing, 10YR44, 2-10% , Faint; Loam; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Very weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, 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; Clear, Wavy change to -
B21	0.14 - 0.4 m	Dark reddish brown (5YR3/4-Moist); Biological mixing, 7.5YR32, 2-10% , Faint; Clay loam; Moderate grade of structure, Subangular blocky; 10-20 mm, Subangular blocky; Rough-ped fabric; Moderately moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, coarse fragments; 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	0.4 - 0.56 m	Dark brown (7.5YR3/4-Moist); ; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subrounded, 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; Gradual, Irregular change to -
B23	0.56 - 0.78 m	Dark brown (7.5YR3/4-Moist); ; Light clay; Strong grade of structure, 10-20 mm, Subangular blocky; 2-5 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 20-50%, fine gravelly, 2-6mm, subrounded, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Tongued change to -
B3	0.78 - 1.36 m	Dark brown (7.5YR3/4-Moist); ; Light clay; Strong grade of structure, 10-20 mm, Subangular blocky; 2-5 mm, Polyhedral; Smooth-ped fabric; Moist; Firm consistence; 20-50%, medium gravelly, 6-20mm, subrounded tabular, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots;

Morphological Notes

A1	Strong aggregration gives sub-plasticfeatures. Possibly colluvial origin.
B21	A light, friable layer which may have had a lot of faunal pedoturbation. Possibly of colluvial origin.

Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0044** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

B22	Texture and consistence increase gravel content also increases indicating less disturbance.
B23	Basalt floaters common in this layer.
B3	Auger stopped by floaters, layer could continue.

Observation Notes

Basalt pm has a near - pisolithic structure producing common small gravel.

Site Notes

COMP1174H 9356-1,316D 240M fr 9602-1

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0044 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

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 - 0.14	4.31C		2.96H	1.37	0.89	0.05	5.39J 0K		10.66E	
0.14 - 0.4	4.78C		2.34H	1.51	0.68	0.03	0.93J 0K		5.49E	
0.4 - 0.56	5.03C		3.74H	2.89	1.33	0.02	0.2J 0K		8.18E	
0.56 - 0.78	4.84C		3.35H	3.27	1.3	0.04	0.45J 0K		8.42E	
0.78 - 1.36	4.63C		3.35H	2.76	0.88	0.17	0.98J 0K		8.14E	

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 - 0.14		8.45B		4742.9B	0.33A		0.68	37.37				
0.14 - 0.4		2.98B		3952.3B	0.12A		1.08	15.88				
0.4 - 0.56		0.75B		3661.8B	0.03A		1.01	28.63				
0.56 - 0.78		0.64B		3546.7B	0.01A			36.19				
0.78 - 1.36		0.38B		3099.4B	0A			34.71				

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 - 0.14										
0.14 - 0.4										
0.4 - 0.56										
0.56 - 0.78										
0.78 - 1.36										

Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0044** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

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 (%)
P10_S_0.48	0.48 micron (cumulative %) - Sedigraph
P10_S_1	1 micron (cumulative %) - Sedigraph
P10_S_1000	1000 micron (cumulative %) - Sedigraph
P10_S_125	125 micron (cumulative %) - Sedigraph
P10_S_15.6	15.6 micron (cumulative %) - Sedigraph
P10_S_2	2 micron (cumulative %) - Sedigraph
P10_S_20	20 micron (cumulative %) - Sedigraph
P10_S_2000	2000 micron (cumulative %) - Sedigraph
P10_S_250	250 micron (cumlative %) - Sedigraph
P10_S_3.9	3.9 micron (cumulative %) - Sedigraph
P10_S_31.2	31.2 micron (cumulative %) - Sedigraph
P10_S_500	500 micron (cumulative %) - Sedigraph
P10_S_53	53 micron (cumulative %) - Sedigraph
P10_S_63	63 micron (cumulative %) - Sedigraph
P10_S_7.8	7.8 micron (cumulative %) - Sedigraph
P3A1	Bulk density - g/cm3