Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0040** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By:	P. Ryan	**Locality:**	
Date Desc.:	16/12/95	**Elevation:**	1206 metres
Map Ref.:	Sheet No. : 8526 DGPS	**Rainfall:**	No Data
Northing/Long.:	6031283 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	615521 Datum: AGD66	**Drainage:**	Well drained

Geology

ExposureType:	Soil pit	**Conf. Sub. is Parent. Mat.:**	Probable
Geol. Ref.:	Os	**Substrate Material:**	Schist

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:	23 %	**Aspect:**	180 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
No Available Class Mesotrophic Red Dermosol Thin Slightly gravelly Clay-loamy Clayey Very deep

Mapping Unit: N/A
Principal Profile Form: Gn4.11

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: No suitable group

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: 2-10%, coarse gravelly, 20-60mm, angular tabular, Schist

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A1	0.01 - 0.09 m	Dark reddish brown (5YR2.5/2-Moist); ; Silty clay loam; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, subangular tabular, Schist, coarse fragments; Field pH 5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
A3	0.09 - 0.16 m	Dark reddish brown (5YR3/2-Moist); Biological mixing, 5YR44, 10-20% , Distinct; Silty clay loam; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subrounded platy, Schist, coarse fragments; Field pH 5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.16 - 0.38 m	Yellowish red (5YR4/6-Moist); Biological mixing, 7.5YR32, 2-10% , Distinct; Silty clay; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subangular tabular, Schist, coarse fragments; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B22	0.38 - 0.58 m	Red (2.5YR4/6-Moist); Biological mixing, 5YR32, 0-2% , Faint; Light clay; Moderate grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 10-20%, medium gravelly, 6-20mm, rounded tabular, Schist, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change to -
B23	0.58 - 0.81 m	Red (2.5YR4/6-Moist); ; Light clay; Weak grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 20-50%, medium gravelly, 6-20mm, subangular tabular, Schist, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Broken change to -
B31	0.81 - 1.11 m	Red (2.5YR4/6-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 20-50%, coarse gravelly, 20-60mm, subangular tabular, Schist, coarse fragments; Field pH 4.5 (Raupach); Clear change to -

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B32	1.11 - 1.61 m	Reddish yellow (7.5YR6/8-Moist); ; Fine sandy loam; Earthy fabric; Moderately moist; Very weak consistence; 10-20%, medium gravelly, 6-20mm, angular tabular, Schist, coarse fragments; Field pH 7 (Raupach);

Morphological Notes

B23	Gravel content increases in this layer and next. Possible colluvial origin.
B31	Gravel content increases.
B32	Weathering in situ substrate.

Observation Notes

Site Notes

COMP 19H,3185-1,105DEG,100M FROM 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 - 0.09	4.82C		11.08H	1.55	0.89	0.02	0.56J 0K		14.1E	
0.09 - 0.16	4.68C		5.12H	0.95	0.66	0.01	0.9J 0K		7.65E	
0.16 - 0.38	4.59C		4.06H	0.81	0.52	0	0.85J 0K		6.24E	
0.38 - 0.58	4.67C		4.38H	0.76	0.71	0.03	0.42J 0K		6.29E	
0.58 - 0.81	4.78C		4H	0.68	0.63	0	0.18J 0K		5.49E	
0.81 - 1.11	4.83C		3.01H	0.6	0.6	0	0.14J 0K		4.36E	
1.11 - 1.61	5.08C		1.09H	0.25	0.21	0	0.04J 0K		1.59E	

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 - 0.09		5.67B		562.3B	0.26A		0.99	44.98				
0.09 - 0.16		2.56B		374.5B	0.12A		1.31	37.18				
0.16 - 0.38		1.18B		271.1B	0.07A		1.35	40.81				
0.38 - 0.58		0.62B		229B	0.05A		1.17	48.22				
0.58 - 0.81		0.37B		195B	0.03A		1.22	43.3				
0.81 - 1.11		0.21B		198.6B	0.02A			40.18				
1.11 - 1.61		0.06B		68.5B	0.01A			17.55				

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 - 0.09										
0.09 - 0.16										
0.16 - 0.38										
0.38 - 0.58										
0.58 - 0.81										
0.81 - 1.11										
1.11 - 1.61										

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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