Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0127** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By:	P. Ryan	**Locality:**	
Date Desc.:	14/05/96	**Elevation:**	1128 metres
Map Ref.:	Sheet No. : 8526 DGPS	**Rainfall:**	No Data
Northing/Long.:	6047099 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	599088 Datum: AGD66	**Drainage:**	Well drained

Geology

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

Land Form

Rel/Slope Class:	No Data	**Pattern Type:**	No Data
Morph. Type:	Lower-slope	**Relief:**	No Data
Elem. Type:	Hillslope	**Slope Category:**	No Data
Slope:	9 %	**Aspect:**	315 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:
Melanic-Acidic Mesotrophic Brown Kandosol Medium Slightly gravelly Clay-loamy Clay-loamy Deep

Mapping Unit: N/A
Principal Profile Form: Um6.12

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: No suitable group

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A11	0.01 - 0.11 m	Black (5YR2.5/1-Moist); ; Clay loam; Moderate grade of structure, <2 mm, Granular; 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, subrounded tabular, Granodiorite, coarse fragments; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
A12	0.11 - 0.22 m	Dark brown (7.5YR3/2-Moist); ; Clay loam; Moderate grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 2-10%, coarse gravelly, 20-60mm, subrounded tabular, Granodiorite, coarse fragments; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Wavy change to -
B1	0.22 - 0.34 m	Dark reddish brown (5YR3/3-Moist); Biological mixing, 7.5YR32, 2-10% , Faint; Medium sandy clay loam; Moderate grade of structure, 10-20 mm, Angular blocky; 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 2-10%, coarse gravelly, 20-60mm, subrounded tabular, Granodiorite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6.5 (Raupach); Few, very fine (0-1mm) roots; Clear, Tongued change to -
B2	0.34 - 0.71 m	Brown (7.5YR4/4-Moist); Biological mixing, 7.5YR34, 0-2% , Faint; Coarse sandy clay loam; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 10-20%, coarse gravelly, 20-60mm, subangular, Granodiorite, coarse fragments; Field pH 5.5 (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 -
C	0.71 - 1.36 m	Yellowish brown (10YR5/8-Moist); ; Loamy coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; 10-20%, cobbly, 60-200mm, subangular, Granodiorite, coarse fragments; Field pH 6.5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

A11	This and next layer may have been displaced during logging operations.
B1	Tongue of material follows old root channel. Charcoal associated with old root channel.

Observation Notes

Site Notes

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COMP 78H 37249-1 157D 350M FROM CK/RD

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0127 **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 - 0.11	4.88C		10.2H	1.82	1.12	0.07	2.12J 0K		15.33E	
0.11 - 0.22	4.77C		4.57H	0.95	0.76	0.06	2.04J 0K		8.38E	
0.22 - 0.34	4.6C		1.11H	0.5	0.3	0.04	1.54J 0K		3.48E	
0.34 - 0.71	4.49C		0.69H	0.47	0.26	0.04	0.54J 0K		1.99E	
0.71 - 1.36	4.67C		0.35H	0.25	0.2	0.03	0.14J 0K		0.98E	

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 - 0.11		8.04B		523.1B	0.28A		0.75	17				
0.11 - 0.22		5.03B		450.2B	0.19A		0.98	13.26				
0.22 - 0.34		2.31B		299.6B	0.07A		1.16	6.57				
0.34 - 0.71		0.3B		218.6B	0.02A		1.57	15.74				
0.71 - 1.36		0.14B		220.8B	0.01A			19.03				

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 - 0.11										
0.11 - 0.22										
0.22 - 0.34										
0.34 - 0.71										
0.71 - 1.36										

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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