Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0065** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: P. Ryan
Date Desc.: 15/12/95
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6026377 AMG zone: 55
Easting/Lat.: 611001 Datum: AGD66
Locality:
Elevation: 798 metres
Rainfall: No Data
Runoff: No Data
Drainage: Well drained

Geology

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

Land Form

Rel/Slope Class: No Data
Morph. Type: Mid-slope
Elem. Type: Hillslope
Slope: 12 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 90 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Paralithic Bleached-Orthic Tenosol Thin Non-gravelly Clay-loamy Clayey Very deep
Mapping Unit: N/A
Principal Profile Form: Gn3.84
ASC Confidence:
All necessary analytical data are available.
Great Soil Group: Soloth

Site Disturbance: Limited clearing, for example selective logging

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A1	0.01 - 0.09 m	Black (10YR2/1-Moist); Biological mixing, 10YR61, 2-10% , Distinct; Coarse sandy clay loam; Single grain grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Abrupt, Smooth change to -
A21j	0.09 - 0.24 m	Brown (10YR4/3-Moist); Pale yellow (2.5Y7/3-Dry); Biological mixing, 10YR32, 2-10% , Faint; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Clear, Wavy change to -
A22e	0.24 - 0.58 m	Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/3-Dry); ; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Firm consistence; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Clear, Irregular change to -
B2t	0.58 - 0.91 m	Strong brown (7.5YR5/6-Moist); Substrate influence, 10YR54, 10-20% , Faint; Coarse sandy clay; Weak grade of structure, 20-50 mm, Prismatic; Smooth-ped fabric; Moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Diffuse, Irregular change to -
B3	0.91 - 1.16 m	Yellowish brown (10YR5/4-Moist); Substrate influence, 10YR64, 2-10% , Faint; Substrate influence, 2.5Y63, 2-10% , Faint; Coarse sandy clay; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Firm consistence; Field pH 4.5 (Raupach); Diffuse change to -
C1	1.16 - 2.01 m	Yellowish brown (10YR5/4-Moist); Substrate influence, 10YR56, 2-10% , Faint; Substrate influence, 2.5Y63, 2-10% , Faint; Coarse sandy clay; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; Field pH 4.5 (Raupach);
C2	2.01 - 2.71 m	Dark yellowish brown (10YR4/6-Moist); ; Coarse sandy clay loam; Sandy (grains prominent) fabric; Moist; Weak consistence; Field pH 5 (Raupach);
C2	2.71 - 3.01 m	Dark yellowish brown (10YR4/6-Moist); ; Coarse sandy loam; Sandy (grains prominent) fabric; Wet; Very weak consistence; Field pH 5 (Raupach);

Morphological Notes

A1 Six 15mm spheriods of fungal hyphae rich soil have pale grey colour.

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A21j	Roots restricted at bottom of layer.
A22e	Insipient hardpan? (densipan)
B3	Muscovite mica present.
C1	Mica as above.
C2	Mica as above.
C2	Water table has not affected soil colour. Mica as above.

Observation Notes

Thick colluvial mantle, derived from adamellite. No substrate encountered.

Site Notes

COMP 31H,78605-1,51DEG,460M FR CK-FEN

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.01										
0.01 - 0.09	4.34C		2.84H	0.51	0.11	0.06	0.11J 0.15K		3.78E	
0.09 - 0.24	4.2C		0.74H	0.29	0.14	0.03	0.44J 0K		1.63E	
0.24 - 0.58	4.19C		0.59H	0.43	0.25	0.02	0.59J 0K		1.88E	
0.58 - 0.91	4.1C		1.96H	1.68	0.77	0.07	1.93J 0K		6.41E	
0.91 - 1.16	3.96C		2.14H	1.98	0.84	0.09	2.49J 0K		7.54E	
1.16 - 2.01	4.1C		3.28H	3.19	0.82	0.12	2.06J 0K		9.46E	
2.01 - 2.71	4.4C		5.33H	4.54	0.72	0.19	0.95J 0K		11.72E	
2.71 - 3.01	4.48C		6.66H	5.5	0.47	0.23	0.61J 0K		13.46E	

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		4.8B		272.3B	0.15A		1.02	15.28				
0.09 - 0.24		0.5B		177.8B	0.03A		1.41	12.55				
0.24 - 0.58		0.15B		191.1B	0.01A		1.68	21.88				
0.58 - 0.91		0.14B		142.7B	0.01A		1.74	19.15				
0.91 - 1.16		0.21B		128.2B	0.01A			27.22				
1.16 - 2.01		0.12B		124B	0.01A			27.06				
2.01 - 2.71		0.06B		211.7B	0A			22.17				
2.71 - 3.01		0.06B		251.5B	0A			37.29				

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 - 0.24										
0.24 - 0.58										
0.58 - 0.91										
0.91 - 1.16										
1.16 - 2.01										
2.01 - 2.71										
2.71 - 3.01										

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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