Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0144** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: P. Ryan
Date Desc.: 23/05/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6061405 AMG zone: 55
Easting/Lat.: 614423 Datum: AGD66
Locality:
Elevation: 629 metres
Rainfall: No Data
Runoff: No Data
Drainage: Rapidly drained

Geology

ExposureType: Soil pit
Geol. Ref.: Os
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Schist

Land Form

Rel/Slope Class: No Data
Morph. Type: Mid-slope
Elem. Type: Hillslope
Slope: 72 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 315 degrees

Surface Soil Condition (dry): Firm

Erosion: Active, Moderate (sheet)

Soil Classification

Australian Soil Classification:
Acidic Orthic Tenosol Medium Moderately gravelly Clay-loamy Clayey Moderately deep

Mapping Unit: N/A
Principal Profile Form: Um5.21

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: No suitable group

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: 20-50%, fine gravelly, 2-6mm, angular tabular, ; 20-50%, medium gravelly, 6-20mm, angular platy,

Profile Morphology

A11	0 - 0.16 m	Dark brown (7.5YR3/3-Moist); Mechanical, 7.5YR44, 10-20% , Distinct; Clay loam; Weak grade of structure, <2 mm, Granular; Rough-ped fabric; Moderately moist; Very weak consistence; 20-50%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 6 (Raupach); Abundant, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Irregular change to -
A12	0.16 - 0.26 m	Dark brown (7.5YR3/2-Moist); ; Clay loam; Weak grade of structure, <2 mm, Granular; Rough-ped fabric; Moderately moist; Very weak consistence; 20-50%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Broken change to -
B2	0.26 - 0.44 m	Reddish brown (5YR4/4-Moist); ; Silty clay; Weak grade of structure, <2 mm, Granular; Rough-ped fabric; Moist; Very weak consistence; 20-50%, medium gravelly, 6-20mm, subangular tabular, coarse fragments; Field pH 5.5 (Raupach); Abundant, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Broken change to -
BC	0.44 - 0.8 m	Yellowish red (5YR4/6-Moist); ; Silty clay; Weak grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Moist; Weak consistence; 50-90%, medium gravelly, 6-20mm, subangular tabular, 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; Clear, Irregular change to -

Morphological Notes

A11	Layers 1 to 4 of colluvial origin - low coherence.
A12	Dark organic content may indicate previous A1 horizon.
BC	Jumble of large gravel and soil material with poor coherence. Substrate is striking parallel to ridge and dipping into ridge.

Observation Notes

Very steep slope! Active colluvial movement.

Site Notes

COMP 121H 501-1 252D 250M FROM BM 143

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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 - 0.16	4.56C		4.19H	1.7	1.03	0.07	1.88J 0K		8.86E	
0.16 - 0.26	4.57C		2.23H	1.56	0.69	0.08	1.34J 0K		5.89E	
0.26 - 0.44	4.13C		0.21H	0.75	0.3	0.05	1.53J 0K		2.84E	
0.44 - 0.8	4.11C		0.11H	0.85	0.3	0.05	1.17J 0K		2.48E	

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 - 0.16		3.85B		496.3B	0.15A		0.96	47.72				
0.16 - 0.26		2.23B		407.9B	0.11A			45.01				
0.26 - 0.44		0.64B		267.4B	0.06A			51.77				
0.44 - 0.8		0.3B		265.6B	0.05A			63.08				

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 - 0.16										
0.16 - 0.26										
0.26 - 0.44										
0.44 - 0.8										

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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