Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0100** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: P. Ryan
Date Desc.: 17/04/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6044709 AMG zone: 55
Easting/Lat.: 605188 Datum: AGD66
Locality:
Elevation: 1166 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: Granodiorite

Land Form

Rel/Slope Class: No Data
Morph. Type: Mid-slope
Elem. Type: Hillslope
Slope: 19 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 315 degrees

Surface Soil Condition (dry): Firm

Erosion: Partial, Minor (sheet)

Soil Classification

Australian Soil Classification:
Acidic Magnesic Red Kandosol Thin Non-gravelly Clay-loamy Clayey Very deep

ASC Confidence:
All necessary analytical data are available.

Mapping Unit: N/A
Principal Profile Form: Gn2.11
Great Soil Group: Red earth

Site Disturbance: No effective disturbance. Natural

Vegetation:

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

Profile Morphology

O1	0 - 0.03 m	Organic Layer; ;
A1	0.03 - 0.08 m	Dark reddish brown (5YR3/3-Moist); ; Clay loam; Moderate grade of structure, <2 mm, Granular; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; Field pH 5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
B1	0.08 - 0.24 m	Dark reddish brown (5YR3/3-Moist); ; Silty clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Firm consistence; Field pH 2 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B21	0.24 - 0.52 m	Dark reddish brown (2.5YR3/4-Moist); ; Light clay; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; Field pH 5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.52 - 0.8 m	Dark reddish brown (2.5YR3/4-Moist); ; Light medium clay; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Irregular change to -
B23	0.8 - 1.43 m	Red (2.5YR4/6-Moist); ; Light medium clay; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 10-20%, medium gravelly, 6-20mm, subangular, coarse fragments; Field pH 5.5 (Raupach); Clear change to -
B3	1.43 - 1.73 m	Yellowish brown (10YR5/6-Moist); ; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; Field pH 5.5 (Raupach); Gradual change to -
C	1.73 - 2.83 m	Light olive brown (2.5Y5/4-Moist); ; Clayey coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Field pH 6 (Raupach);

Morphological Notes

B23 Abrupt increase in gravel. This gravel decreases in layer below.

Observation Notes

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Site on slope above Paddys River. Downslope 50m is Hume and Hovell track. Granodiorite PM with fine grain material with hornblende phenocrysts at 90cm.

Site Notes

COMP 85H 45738-3 17D 640M FROM BM099

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Project Code: BGM_FSS **Site ID:** 0100 **Observation ID:** 1
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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 - 0.03										
0.03 - 0.08	4.08C		0.26H	0.13	0.21	0.01	2.09J 0K		2.7E	
0.08 - 0.24	4.02C		0H	0.44	0.45	0.02	4.24J 0K		5.15E	
0.24 - 0.52	4.02C		0H	1	0.64	0.07	4.3J 0K		6E	
0.52 - 0.8	4.01C		0H	0.84	0.59	0.01	4.59J 0K		6.02E	
0.8 - 1.43	4.02C		0H	0.43	0.42	0	3.12J 0K		3.98E	
1.43 - 1.73	4.16C		0H	0.14	0.13	0.03	1.07J 0K		1.36E	
1.73 - 2.83	4.28C		0H	0.15	0.07	0.01	0.57J 0K		0.8E	

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 - 0.03												
0.03 - 0.08		4.09B		384.9B	0.17A		0.95	31.86				
0.08 - 0.24		1.4B		243.9B	0.06A		1.13	24.54				
0.24 - 0.52		0.91B		446B	0.06A		1.05	24.33				
0.52 - 0.8		0.73B		343.7B	0.05A		1.27	23.25				
0.8 - 1.43		0.16B		301.7B	0.02A			20.76				
1.43 - 1.73		0.07B		279.7B	0A			4.44				
1.73 - 2.83		0.09B		435.8B	0.01A			5.31				

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 - 0.03										
0.03 - 0.08										
0.08 - 0.24										
0.24 - 0.52										
0.52 - 0.8										
0.8 - 1.43										
1.43 - 1.73										
1.73 - 2.83										

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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