Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0109** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: P. Ryan
Date Desc.: 23/04/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6053713 AMG zone: 55
Easting/Lat.: 610085 Datum: AGD66
Locality:
Elevation: 1061 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: Lower-slope
Elem. Type: Footslope
Slope: 18 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 45 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Mesotrophic Brown Kandosol Medium Slightly gravelly Clay-loamy Clay-loamy Moderately deep

ASC Confidence:
All necessary analytical data are available.

Mapping Unit: N/A
Principal Profile Form: Gn2.42
Great Soil Group: Red earth

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.03 m	Organic Layer; ;
A1	0.03 - 0.21 m	Dark brown (7.5YR3/2-Moist); Biological mixing, 10YR44, 2-10% , Faint; Clay loam; Moderate grade of structure, 2-5 mm, Polyhedral; <2 mm, Granular; Rough-ped fabric; Moderately moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subangular platy, coarse fragments; Field pH 6 (Raupach); Abundant, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Clear, Smooth change to -
A3	0.21 - 0.31 m	Dark brown (7.5YR3/3-Moist); Biological mixing, 7.5YR32, 20-50% , Distinct; Clay loam, sandy; Moderate grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, subrounded, coarse fragments; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change to -
B2	0.31 - 0.51 m	Brown (7.5YR4/3-Moist); Biological mixing, 7.5YR32, 2-10% , Distinct; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B3	0.51 - 0.62 m	Brown (10YR4/3-Moist); Biological mixing, 7.5YR32, 2-10% , Distinct; Sandy loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 10-20%, medium gravelly, 6-20mm, subangular tabular, coarse fragments; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Wavy change to -
C	0.62 - 0.93 m	Yellowish brown (10YR5/4-Moist); Biological mixing, 7.5YR33, 2-10% , Distinct; Loamy coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; 50-90%, medium gravelly, 6-20mm, subangular tabular, coarse fragments; Field pH 7 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

C Granodiorite substrate is foliated. Orientation is NW-SE. One residual boulder in pit; rest is weathered

Observation Notes

Site is on a lower slope on the eastern side of Buddong Ck. There are tors forming a knoll downslope then a steeper slope to the creek.

Site Notes

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COMP 30H 11718-1 240D 120M FROM RD

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0109 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

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 - 0.21	4.33C		2.22H	0.52	0.42	0.17	3.52J 0K		6.86E	
0.21 - 0.31	4.45C		0.55H	0.2	0.55	0.1	2.07J 0K		3.47E	
0.31 - 0.51	4.53C		0.57H	0.21	0.38	0.11	0.89J 0K		2.15E	
0.51 - 0.62	4.77C		0.71H	0.19	0.2	0.08	0.29J 0K		1.47E	
0.62 - 0.93	4.76C		0.23H	0.13	0.14	0.15	0.17J 0K		0.83E	

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 - 0.21		5.66B		1506.6B	0.17A		0.66	39.03				
0.21 - 0.31		2.59B		989.2B	0.08A		0.91	21.23				
0.31 - 0.51		0.99B		326.1B	0.07A		0.99	22.67				
0.51 - 0.62		0.49B		129.7B	0.04A			17.25				
0.62 - 0.93		0.15B		229.1B	0.02A			20.11				

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 - 0.21										
0.21 - 0.31										
0.31 - 0.51										
0.51 - 0.62										
0.62 - 0.93										

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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