Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0070** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 21/02/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6022208 AMG zone: 55
Easting/Lat.: 612458 Datum: AGD66
Locality:
Elevation: 854 metres
Rainfall: No Data
Runoff: No Data
Drainage: No Data

Geology

ExposureType: No Data
Geol. Ref.: DGA
Conf. Sub. is Parent. Mat.: Probable
Substrate Material: Adamellite

Land Form

Rel/Slope Class: No Data
Morph. Type: Mid-slope
Elem. Type: Hillslope
Slope: 40 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 180 degrees

Surface Soil Condition (dry): Loose

Erosion: Partial, Minor (sheet)

Soil Classification

Australian Soil Classification:
Haplic Mesotrophic Red Dermosol Medium Slightly gravelly Clay-loamy Clayey Very deep
Mapping Unit: N/A
Principal Profile Form: Dr4.11
ASC Confidence:
All necessary analytical data are available.
Great Soil Group: N/A

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.05 m	Organic Layer; ;
A1	0.05 - 0.28 m	Brown (7.5YR4/4-Moist); Biological mixing, 7.5YR32, 2-10% , Faint; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Dry; Firm consistence; 2-10%, cobbly, 60-200mm, rounded tabular, dispersed, Adamellite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Sharp, Smooth change to -
B21	0.28 - 0.7 m	Reddish brown (5YR4/4-Moist); Mottles, 7.5YR54, 20-50% , Faint; Biological mixing, 7.5YR42, 20-50% , Distinct; Light clay; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Wavy change to -
B22	0.7 - 1.25 m	Red (2.5YR4/6-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 2-10%, coarse gravelly, 20-60mm, rounded tabular, dispersed, Adamellite, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to
B23	1.25 - 1.75 m	Red (2.5YR4/6-Moist); ; Moderate grade of structure; Earthy fabric; Moderately moist; Firm consistence; 2-10%, dispersed, Adamellite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Smooth change to -

Morphological Notes

A1	A1 below the O1 is pale - not much mixing. O1 is a terracette of litter.
B21	Mid-section of layer may have more organic matter (ex tree site?). Drilled out by worms.
B23	Much more friable red layer similar to "red earths" of the plateau - hard to auger due to dryness.

Observation Notes

Gradational profile with possible complex mixing between 0.3m and 0.6m - worms very active in this layer. Grades into familiar Bago red earth at depth - more like granodiorite profile.

Site Notes

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COMP 41H,11809-1,BRG105,210M FR11785-1

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0070 **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 - 0.05	3.27C		8.95H	3.17	1.02	0.04	5.47J 10.5K		29.15E	
0.05 - 0.28	4.28C		1.57H	0.89	0.67	0.03	2.03J 0K		5.2E	
0.28 - 0.7	4.64C		2.04H	1.29	0.83	0.03	0.89J 0K		5.08E	
0.7 - 1.25	4.82C		0.94H	2.21	1.02	0.03	0.34J 0K		4.54E	
1.25 - 1.75	4.33C		0.52H	3.04	1.05	0.08	1.41J 0K		6.1E	

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 - 0.05		17.99B		369.7B	0.49A			28.06				
0.05 - 0.28		1.78B		166.1B	0.09A		1.37	26.83				
0.28 - 0.7		1.35B		151.5B	0.07A		1.28	24.83				
0.7 - 1.25		0.5B		102.5B	0.02A		1.41	27.79				
1.25 - 1.75		0.35B		135.6B	0.02A			21.4				

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 - 0.05										
0.05 - 0.28										
0.28 - 0.7										
0.7 - 1.25										
1.25 - 1.75										

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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