Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0106** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 23/04/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6048883 AMG zone: 55
Easting/Lat.: 612151 Datum: AGD66
Locality:
Elevation: 1085 metres
Rainfall: No Data
Runoff: No Data
Drainage: Rapidly drained

Geology

ExposureType: No Data
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: 7 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 0 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Dystrophic Red Kandosol Medium Non-gravelly Silty Clayey Very deep
Mapping Unit: N/A
Principal Profile Form: Gn2.11
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

A11	0 - 0.09 m	Dark reddish brown (5YR3/2-Moist); ; Silty clay loam; Moderate grade of structure, 20-50 mm, Polyhedral; 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Smooth change to -
A12	0.09 - 0.2 m	Dark reddish brown (5YR3/3-Moist); Biological mixing, 5YR2.52, 20-50% , Faint; Light clay; Moderate grade of structure, 10-20 mm, Polyhedral; 20-50 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated, faint; 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; Diffuse, Smooth change to -
B21	0.2 - 0.6 m	Dark red (2.5YR3/6-Moist); Biological mixing, 5YR33, 0-2% , Distinct; Light clay; Weak grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse, Smooth change to -
B22	0.6 - 1.85 m	Dark red (2.5YR3/6-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse, Smooth change to -
B23	1.85 - 2.75 m	Red (2.5YR4/6-Moist); ; Silty clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Diffuse, Smooth change to -
B3	2.75 - 3 m	Red (2.5YR4/6-Moist); ; Silty clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach);

Morphological Notes

A11	Moderate density - may be due to grazing . Very silty.
A12	Transitional horizon with mixing of colours etc due to earthworms.
B21	Whole coloured B2 with pedality diminishing with depth.
B22	Clay content starts to decline but silt remains high and may even increase.

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B23	Micas are prevalent and increase slightly with depth.
B3	Sllight change may be due to grittiness - hint of a BC. This layer is a B24 more than a B31.

Observation Notes

Extremely uniform deep red profile with mod. stong weathering to depth. Siltiness is high . Stable surface and well drained. Micas increase slightly with depth.

Site Notes

COMP 60H 29858-1 18D 60M FROM TRACK

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0106 **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 - 0.09	5C		19.39H	2.06	1.26	0.07	0.34J 0K		23.11E	
0.09 - 0.2	5.14C		11.07H	1.75	0.55	0.16	0.1J 0K		13.63E	
0.2 - 0.6	4.74C		4.66H	2.67	0.7	0.14	0.76J 0K		8.93E	
0.6 - 1.85	3.98C		0.32H	0.45	0.34	0.12	5.47J 0K		6.7E	
1.85 - 2.75	3.93C		0.03H	0.32	0.2	0.12	5.43J 0K		6.11E	
2.75 - 3	3.96C		0H	0.22	0.15	0.12	4.71J 0K		5.2E	

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 - 0.09		6.92B		651.9B	0.3A		0.78	34.89				
0.09 - 0.2		2.36B		656.9B	0.18A		1.09	40.1				
0.2 - 0.6		0.81B		451.9B	0.08A		1.09	32.45				
0.6 - 1.85		0.25B		388.2B	0.04A		1.10	28.31				
1.85 - 2.75		0.19B		288.4B	0.03A			31.32				
2.75 - 3		0.15B		223.6B	0.03A			27.61				

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 - 0.09										
0.09 - 0.2										
0.2 - 0.6										
0.6 - 1.85										
1.85 - 2.75										
2.75 - 3										

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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