Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0060** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 12/03/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6044935 AMG zone: 55
Easting/Lat.: 611921 Datum: AGD66
Locality:
Elevation: 1141 metres
Rainfall: No Data
Runoff: No Data
Drainage: Moderately well 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: No Data
Elem. Type: Bench
Slope: 4 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 45 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Magnesic Red Kandosol Thin 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

O1	0 - 0.01 m	Organic Layer; ;
A1	0.01 - 0.1 m	Dark reddish brown (5YR3/3-Moist); ; Silty clay loam; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Firm consistence; Field pH 5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
B1	0.1 - 0.24 m	Reddish brown (2.5YR4/4-Moist); Biological mixing, 5YR43, 2-10% , Faint; Silty clay loam; Moderate grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 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 -
B21	0.24 - 0.61 m	Red (2.5YR4/6-Moist); ; Light clay; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 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; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.61 - 1.31 m	Red (2.5YR4/6-Moist); ; Light clay; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change to -
B23	1.31 - 1.71 m	Brownish yellow (10YR6/6-Moist); Substrate influence, 10YR71, 10-20% , Distinct; Light clay; Earthy fabric; Moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Clear, Smooth change to -
C1	1.71 - 2.26 m	Light grey (10YR7/1-Moist); ; Medium sandy clay loam; Moist; Weak consistence; Field pH 5 (Raupach); Diffuse, Smooth change to -
C2	2.26 - 3.01 m	Light grey (10YR7/1-Moist); Substrate influence, 10YR81, 10-20% , Distinct; Medium sandy clay loam; Wet; Weak consistence; Field pH 5 (Raupach);

Morphological Notes

A1 More dense than most sites - silty and without coarse sand,low OM.

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B1	As per layer 1.
B21	Typical red B2 of Sgg but without noticeable pedality.
B22	Typical red B2 of Sgg but without noticeable pedality.
B23	Sharp colour change due to occasional watertables - mottled yellow and heavier texture. Some quartz CFs.
C1	Weathered Sgg - very high percentage of muscovite (silver grey colour).
C2	As per layer six but white mottles becoming common with depth. Water table may be shallower than 2.8m.

Observation Notes

Residual bench between drainage lines lines could be depositional (no). Very acid profile low in OM.

Site Notes

COMP 95H,45517-2,BRG 90D,140M FR RD

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0060 **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 - 0.01										
0.01 - 0.1	3.66C		0.47H	0.57	0.69	0.01	10.51J 0K		12.26E	
0.1 - 0.24	3.89C		0H	0.38	0.66	0.01	6.73J 0K		7.78E	
0.24 - 0.61	3.92C		0H	0.65	0.67	0.01	5.68J 0K		7.01E	
0.61 - 1.31	3.93C		0H	0.48	0.41	0.04	4.88J 0K		5.81E	
1.31 - 1.71	3.88C		0H	0.27	0.18	0.05	4.39J 0K		4.89E	
1.71 - 2.26	3.88C		0H	0.2	0.11	0.07	2.87J 0K		3.25E	
2.26 - 3.01	3.93C		0H	0.13	0.07	0.05	1.74J 0K		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 - 0.01												
0.01 - 0.1		6.5B		443.9B	0.2A		1.01	32.54				
0.1 - 0.24		2.47B		388.6B	0.1A		1.14	34.41				
0.24 - 0.61		0.76B		329.9B	0.05A		1.21	27.93				
0.61 - 1.31		0.25B		257.8B	0.02A		1.33	34.29				
1.31 - 1.71		0.2B		167.6B	0.01A			39.92				
1.71 - 2.26		0.1B		162.1B	0.01A			17.03				
2.26 - 3.01		0.05B		124.5B	0A			16.03				

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 - 0.01									
0.01 - 0.1									
0.1 - 0.24									
0.24 - 0.61									
0.61 - 1.31									
1.31 - 1.71									
1.71 - 2.26									
2.26 - 3.01									

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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