Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0058** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 11/01/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6026312 AMG zone: 55
Easting/Lat.: 616664 Datum: AGD66
Locality:
Elevation: 1063 metres
Rainfall: No Data
Runoff: No Data
Drainage: Well drained

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: Upper-slope
Elem. Type: Hillslope
Slope: 27 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 180 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Mesotrophic Red Kandosol Thick Gravelly Clay-loamy Clay-loamy Very deep
Mapping Unit: N/A
Principal Profile Form: Um6.

ASC Confidence:
All necessary analytical data are available.
Great Soil Group: N/A

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: 10-20%, cobbly, 60-200mm, angular tabular, Adamellite

Profile Morphology

A11	0 - 0.15 m	Dark reddish brown (5YR3/2-Moist); ; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Granular; Earthy fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 2-10%, cobbly, 60-200mm, angular tabular, dispersed, Adamellite, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change to -
A12	0.15 - 0.3 m	Reddish brown (5YR4/3-Moist); Biological mixing, 5YR32, 20-50% , Distinct; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Granular; Earthy fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 10-20%, cobbly, 60-200mm, angular tabular, dispersed, Adamellite, coarse fragments; 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; Few, medium (2-5mm) roots; Gradual, Smooth change to -
B21	0.3 - 0.6 m	Reddish brown (5YR4/4-Moist); Biological mixing, 5YR32, 2-10% , Distinct; Clay loam; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moist; Very weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 2-10%, stony, 200-600mm, angular tabular, dispersed, Adamellite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (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 -
B22	0.6 - 1 m	Yellowish red (5YR4/6-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moist; Very weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 2-10%, cobbly, 60-200mm, angular tabular, dispersed, Adamellite, coarse fragments; 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; Gradual change to -
C	1 - 1.8 m	Yellowish red (5YR5/6-Moist); ; Clayey sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Field pH 5 (Raupach);

Morphological Notes

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A11	Thick and dark.
A12	Thick and dark.
C	Last 10cm is ground rock.

Observation Notes

Site is in a slight depression below outcrop of DGA (Lyrebird nest). Much thicker A1 and redder B2 - is this aspect (CF 54/55). Abundant large CFS.

Site Notes

COMP 42H,5247-1,BRG 298,1090M FROM RD

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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 - 0.15	4.87C		10.92H	1.57	0.73	0.02	0.43J 0K		13.67E	
0.15 - 0.3	4.83C		4.11H	0.93	0.98	0.02	1.07J 0K		7.11E	
0.3 - 0.6	4.42C		1.16H	0.65	0.73	0.01	1.4J 0K		3.95E	
0.6 - 1	4.14C		0.67H	0.68	0.48	0.01	2.1J 0K		3.94E	
1 - 1.8	4.17C		0.49H	0.35	0.46	0.02	0.8J 0K		2.12E	

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 - 0.15		7.06B		460.9B	0.28A		0.97	40.33				
0.15 - 0.3		3.03B		365.2B	0.13A		1.05	48.39				
0.3 - 0.6		1.46B		313.5B	0.06A		1.15	29.55				
0.6 - 1		0.48B		329B	0.03A		1.23	33.32				
1 - 1.8		0.12B		209.6B	0.01A			25.6				

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 - 0.15										
0.15 - 0.3										
0.3 - 0.6										
0.6 - 1										
1 - 1.8										

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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