

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0101 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	19/04/96	Elevation:	1032 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6056918 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	598062 Datum: AGD66	Drainage:	Rapidly drained

Geology

ExposureType:	No Data	Conf. Sub. is Parent. Mat.:	Probable
Geol. Ref.:	TB	Substrate Material:	Basalt

Land Form

Rel/Slope Class:	No Data	Pattern Type:	No Data
Morph. Type:	Upper-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	19 %	Aspect:	315 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Haplic Eutrophic Red Ferrosol Medium Gravelly Clay-loamy Clayey Very deep	Principal Profile Form:	Dr4.11

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

Site Disturbance: No effective disturbance other than grazing by hoofed animals

Vegetation:

Surface Coarse Fragments: 2-10%, cobbly, 60-200mm, angular, Basalt

Profile Morphology

O1	0 - 0.03 m	Organic Layer; ;
A1	0.03 - 0.21 m	Dark reddish brown (5YR3/2-Moist); Biological mixing, 5YR33, 20-50% , Faint; Clay loam; Strong grade of structure, 2-5 mm, Granular; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 10-20%, coarse gravelly, 20-60mm, angular, dispersed, Basalt, coarse fragments; Common cutans, 10-50% 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; Few, coarse (>5mm) roots; Clear, Smooth change to -
B21	0.21 - 0.45 m	Dark red (2.5YR3/6-Moist); Biological mixing, 5YR32, 10-20% , Distinct; Light clay; Moderate grade of structure, 10-20 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Very weak consistence; 2-10%, coarse gravelly, 20-60mm, subangular, dispersed, Basalt, coarse fragments; 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; Gradual, Smooth change to -
B22	0.45 - 0.76 m	Dark red (2.5YR3/6-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, subangular, dispersed, Basalt, coarse fragments; 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; Gradual, Smooth change to -
B23	0.76 - 1.53 m	Red (2.5YR4/6-Moist); ; Light medium clay; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 20-50%, medium gravelly, 6-20mm, subangular, dispersed, Basalt, coarse fragments; 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; Clear, Smooth change to -
C1	1.53 - 2.28 m	Brown (7.5YR4/4-Moist); Substrate influence, 7.5YR62, 20-50% , Prominent; Light clay; Massive grade of structure; Moderately moist; Weak consistence; 20-50%, fine gravelly, 2-6mm, subrounded, dispersed, Basalt, coarse fragments; Field pH 4.5 (Raupach); Clear, Smooth change to -
C2	2.28 - 2.68 m	Dark yellowish brown (10YR4/4-Moist); ; Light clay; Massive grade of structure; Moderately moist; 10-20%, fine gravelly, 2-6mm, subrounded, dispersed, Basalt, coarse fragments; Field pH 4.5 (Raupach);

Morphological Notes

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A1	Thick, dark A1 - homogenised by abundant worm activity.
B21	B2/1 bordering on a B1 - worm activity. Colour is slightly less red than layer 3 but not a full page of hue.
B22	Red maximum.
B23	Rubbly layer - probably the base of the mobile zone.
C1	C horizon with pockets of light clay. Coarse fragments can just be ground by the auger.
C2	Ground weathered basalt.

Observation Notes

Deep, dark A1. Uniform with characteristic siltiness. Coarse fragments increase to base of mobile zone.

Site Notes

COMP 2H, 571-3,BRG61.5 80M FR RD INTER

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				mol (+)/kg				%
0 - 0.03										
0.03 - 0.21	5.04C		22.85H	4.39	1.64	0.19	0.5J 0K		29.56E	
0.21 - 0.45	5.1C		8.45H	2.63	1.74	0.09	0.27J 0K		13.18E	
0.45 - 0.76	5.02C		6.52H	3	1.17	0.06	0.21J 0K		10.97E	
0.76 - 1.53	5.05C		4.45H	2.68	0.79	0.11	0.03J 0K		8.06E	
1.53 - 2.28	4.8C		3.78H	1.89	0.84	0.21	0.2J 0K		6.92E	
2.28 - 2.68	4.75C		2.85H	1.48	0.66	0.27	0.46J 0K		5.71E	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle		Size	Analysis	
								GV	CS		FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.03												
0.03 - 0.21		11.51B		2766.4B	0.39A		0.65	45.67				
0.21 - 0.45		2.8B		946.9B	0.12A		0.83	29.75				
0.45 - 0.76		1.41B		986.1B	0.05A		0.92	19.69				
0.76 - 1.53		0.6B		1643.1B	0A		0.96	32.41				
1.53 - 2.28		0.26B		1814.5B	0A			27.08				
2.28 - 2.68		0.25B		2766.8B	0A			25.88				

[illegible]

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Laboratory Analyses Completed for this profile

13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
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