

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0096 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: N.J. McKenzie	Locality:
Date Desc.: 16/04/96	Elevation: 1111 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6041551 AMG zone: 55	Runoff: No Data
Easting/Lat.: 605404 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: 9 %	Aspect: 180 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Melanic-Acidic Eutrophic Red Ferrosol Medium Moderately gravelly Clay-loamy Clayey Deep	Principal Profile Form: Dr4.11
ASC Confidence:	Great Soil Group: N/A

All necessary analytical data are available.

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.11 m	Dark reddish brown (5YR3/2-Moist); ; Clay loam; Strong grade of structure, 2-5 mm, Granular; 10-20 mm, Polyhedral; Rough-ped fabric; Moist; Very weak consistence; 20-50%, coarse gravelly, 20-60mm, subangular platy, 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; Gradual, Smooth change to -
A12	0.11 - 0.22 m	Dusky red (2.5YR3/2-Moist); ; Clay loam; Strong grade of structure, 2-5 mm, Granular; 10-20 mm, Polyhedral; Rough-ped fabric; Moist; Very weak consistence; 20-50%, coarse gravelly, 20-60mm, subangular platy, dispersed, Basalt, coarse fragments; 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; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
B21	0.22 - 0.6 m	Dark reddish brown (2.5YR3/4-Moist); ; Light clay; Moderate grade of structure, 10-20 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 50-90%, cobbly, 60-200mm, subrounded, dispersed, Basalt, 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; Few, medium (2-5mm) roots; Diffuse, Smooth change to -
B22	0.6 - 1 m	Red (2.5YR4/6-Moist); ; Light medium clay; Moderate grade of structure, 10-20 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 50-90%, cobbly, 60-200mm, subrounded, dispersed, Basalt, 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; Gradual, Smooth change to -
B23	1 - 1.25 m	Strong brown (7.5YR4/6-Moist); ; Light medium clay; Moderate grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 50-90%, cobbly, 60-200mm, subrounded, dispersed, Basalt, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

A11 Very fine and granular with many coarse fragments.

A12 Very similar to layer 1 but including large basalt floaters.

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B21 Layer is extremely silty to texture - possibly 35-40%. Red maxima. Structure grade is difficult - maybe only weak. Earthy fabric.

B22 Similar to site 4 but more rocks and pedality is stronger. Macropores become more obvious as bulk density increases down profile.

B23 Yellow and more heavily textured. Hit basalt but it may be a large floater. Silty nature not evident.

Observation Notes

Very rocky profile with very silty B2/1. At head of back-cutting creek. Rocky ferrosol.

Site Notes

COMP 113H, 8344-1, BRG236, 540M FR BM095

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Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.11	5.15C		20.68H	2.98	1.41	0.13	0.38J 0K		25.58E	
0.11 - 0.22	5.23C		16.62H	2.51	1.52	0.07	0.27J 0K		21E	
0.22 - 0.6	4.9C		5.77H	2.78	0.94	0.06	0.53J 0K		10.07E	
0.6 - 1	4.48C		3.81H	3.45	0.63	0.08	1.85J 0K		9.82E	
1 - 1.25	4.58C		3.39H	3.27	0.66	0.21	0.91J 0K		8.45E	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
m	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS	Silt Clay
0 - 0.11		8.73B		3480.7B	0.39A		0.68	25.22			
0.11 - 0.22		5.74B		3640B	0.24A		0.78	26.82			
0.22 - 0.6		1.49B		2464.3B	0.06A		0.84	24.3			
0.6 - 1		1.08B		2524.8B	0.01A		1.01	27.85			
1 - 1.25		0.59B		3580.7B	0A			28.87			

[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