

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0083 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: N.J. McKenzie	Locality:
Date Desc.: 19/02/96	Elevation: 1119 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6026999 AMG zone: 55	Runoff: No Data
Easting/Lat.: 613907 Datum: AGD66	Drainage: Rapidly drained

Geology

ExposureType: No Data	Conf. Sub. is Parent. Mat.: Probable
Geol. Ref.: DGA	Substrate Material: Adamellite

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: 22 %	Aspect: 45 degrees

Surface Soil Condition (dry): Firm

Erosion: Stable, No sheet erosion (sheet)

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Bleached-Acidic Magnesic Red Kandosol Thin Moderately gravelly Clay-loamy Clayey Deep	Principal Profile Form: Dr4.21

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: 20-50%, fine gravelly, 2-6mm, angular, Quartz

Profile Morphology

A1	0 - 0.08 m	Very dark greyish brown (10YR3/2-Moist); Light brownish grey (10YR6/2-Dry); Biological mixing, 7.5YR6/6, 2-10% , Distinct; Medium sandy clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; 5-10 mm, Granular; Rough-ped fabric; Moderately moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 0-2%, coarse gravelly, 20-60mm, 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; Clear, Smooth change to -
A2	0.08 - 0.15 m	Reddish yellow (7.5YR6/6-Moist); Biological mixing, 10YR3/2, 10-20% , Distinct; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Wavy change to -
B21	0.15 - 0.38 m	Yellowish red (5YR4/6-Moist); Biological mixing, 10YR3/2, 2-10% , Distinct; Light clay; Weak grade of structure, 10-20 mm, Polyhedral; Earthy fabric; Moderately moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 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 -
B22	0.38 - 0.65 m	Yellowish red (5YR5/6-Moist); ; Light clay; Weak grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Granular; Earthy fabric; Moderately moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 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; Abrupt, Wavy change to -
C	0.65 - 1.45 m	Strong brown (7.5YR5/8-Moist); ; Sandy loam; Massive grade of structure; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

A1 Quite a thin A1 with clear casts from A2 throughout.

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A2 A2 horizon (dry site with warm northerly aspect).

B21 Light clay.

B22 Light clay.

C Colour is complex due to primary minerals. Saprolite with equal feldspar and quartz.

Observation Notes

Warm, north site. A2 horizon. Clear saprolite. Thin A horizon. Well developed porosity in dense B2 horizon.

Site Notes

COMP 38H, 4043-1, BRG240 150M FROM 3986

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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 - 0.08	4.29C		1.22H	0.48	0.5	0.08	2.49J 0K		4.78E	
0.08 - 0.15	4.11C		0.15H	0.38	0.58	0.01	1.87J 0K		3E	
0.15 - 0.38	4.06C		0.03H	0.52	0.65	0.02	2.56J 0K		3.79E	
0.38 - 0.65	4.1C		0H	0.38	0.7	0.04	2.19J 0K		3.31E	
0.65 - 1.45	4.19C		0H	0.37	0.81	0.04	1.35J 0K		2.57E	

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 - 0.08		2.57B		105.7B	0.13A		1.14	22.01	
0.08 - 0.15		1.38B		34.8B	0.07A		1.35	30.87	
0.15 - 0.38		1.04B		33.5B	0.06A		1.30	29.09	
0.38 - 0.65		0.43B		106.4B	0.02A		1.41	26.67	
0.65 - 1.45		0.11B		58B	0.01A			28.01	

[illegible]

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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