

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0119 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: N.J. McKenzie	Locality:
Date Desc.: 06/05/96	Elevation: 1185 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6052206 AMG zone: 55	Runoff: No Data
Easting/Lat.: 606962 Datum: AGD66	Drainage: Well drained

Geology

ExposureType: No Data	Conf. Sub. is Parent. Mat.: Probable
Geol. Ref.: Sgg	Substrate Material: Granodiorite

Land Form

Rel/Slope Class: No Data	Pattern Type: No Data
Morph. Type: Lower-slope	Relief: No Data
Elem. Type: Hillslope	Slope Category: No Data
Slope: 4 %	Aspect: No Data

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Acidic Dystrophic Red Kandosol Medium Non-gravelly Silty Silty Very deep	Principal Profile Form: Um6.

ASC Confidence: All necessary analytical data are available.	Great Soil Group: N/A
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Site Disturbance: No effective disturbance other than grazing by hoofed animals

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.02 m	Organic Layer; ;
A1	0.02 - 0.16 m	Dark reddish brown (5YR3/3-Moist); ; Silty clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; Many cutans, >50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
B21	0.16 - 0.44 m	Dark reddish brown (2.5YR3/4-Moist); Biological mixing, 2.5YR32, 2-10% , Distinct; Silty clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; 20-50 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B22	0.44 - 0.77 m	Reddish brown (2.5YR4/4-Moist); Biological mixing, 5YR32, 2-10% , Distinct; Silty clay loam; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moist; Weak consistence; 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; Gradual, Smooth change to -
B23	0.77 - 1.57 m	Red (2.5YR4/6-Moist); ; Silty clay loam; Weak 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 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Abrupt, Smooth change to -
C1	1.57 - 2.32 m	Light yellowish brown (10YR6/4-Moist); ; Sandy loam; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 5.5 (Raupach); Diffuse, Smooth change to -
C2	2.42 - 3.02 m	Light yellowish brown (10YR6/4-Moist); Substrate influence, 10YR44, 20-50% , Faint; Sandy loam; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 5.5 (Raupach);

Morphological Notes

A1	Not a particularly dark or organic A1 but abundant large (8mm) pores caused by stubby worms.
B21	Typical polyhedral structure associated with worm activity.

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B22 "Blind crickets" colony at 65 -75cm. Density increasing and pedality declining.
B23 Relatively dense and earthy B23. Mica flakes evident in earthy matrix.
C1 Very sharp contrast with solum. C horizons have abundant mafic minerals and sandy texture.
C2 Very similar to 5 but may be more mafic minerals.

Observation Notes

Site is not far from outcropping granodiorite. Solum transition to C is very sharp. Snow gums and Mt. gums and cool elevated

Site Notes

COMP 35H 16793-1 30.5D 275M FR INTER

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable	Cations	Na	Exchangeable	CEC	ECEC	ESP
m		dS/m		Mg	K	cmol (+)/kg	Acidity			%
0 - 0.02										
0.02 - 0.16	4.2C		2.27H	1.16	0.79	0.07	4.78J 0K		9.07E	
0.16 - 0.44	4.11C		0.55H	0.85	0.65	0.03	4.33J 0K		6.42E	
0.44 - 0.77	3.98C		0.82H	0.67	0.54	0.08	4J 0K		6.11E	
0.77 - 1.57	3.96C		0.05H	0.39	0.61	0.07	4.45J 0K		5.57E	
1.57 - 2.32	4.13C		0.09H	0.09	0.27	0.04	1.06J 0K		1.55E	
2.42 - 3.02	4.13C		0.11H	0.08	0.15	0.04	1.01J 0K		1.4E	

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
	%	C	P	P	N	K		Density	GV		CS	FS
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.02												
0.02 - 0.16		4.08B		446.4B	0.22A		1.03	9.65				
0.16 - 0.44		1.9B		376B	0.12A		1.06	4.84				
0.44 - 0.77		0.75B		379.8B	0.06A		1.09	0				
0.77 - 1.57		0.26B		297.2B	0.04A		1.38	4.92				
1.57 - 2.32		0.09B		282.4B	0.01A			6.43				
2.42 - 3.02		0.04B		240.4B	0.01A			7.54				

[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