

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0107 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: N.J. McKenzie	Locality:
Date Desc.: 23/04/96	Elevation: 1078 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6052029 AMG zone: 55	Runoff: No Data
Easting/Lat.: 611588 Datum: AGD66	Drainage: Rapidly 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: Mid-slope	Relief: No Data
Elem. Type: Hillslope	Slope Category: No Data
Slope: 18 %	Aspect: 0 degrees

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

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.19 m	Dark reddish brown (5YR3/2-Moist); Biological mixing, 5YR44, 20-50% , Distinct; Silty clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Clear, Smooth change to -
B21	0.19 - 0.54 m	Red (2.5YR4/6-Moist); Biological mixing, 5YR32, 2-10% , Distinct; Silty clay loam; Weak grade of structure, 10-20 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 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; Diffuse, Smooth change to -
B22	0.54 - 1.3 m	Red (2.5YR4/6-Moist); ; Silty clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, angular platy, dispersed, Granodiorite, 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; Clear, Smooth change to -
C1	1.3 - 1.95 m	Yellow (10YR7/6-Moist); ; Loamy sand; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 7 (Raupach); Gradual, Smooth change to -
C2	1.95 - 2.7 m	Light yellowish brown (10YR6/4-Moist); Substrate influence, 10YR76, 20-50% , Distinct; Loamy sand; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 6 (Raupach); Diffuse, Smooth change to -
C3	2.7 - 3 m	Pale brown (10YR6/3-Moist); ; Loamy sand; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 7 (Raupach);

Morphological Notes

A1	Mod. to strong structure due to abundant worm activity. Fair degree of B2 mixed in as casts.
B21	Well developed macropores through to layer 3. Much lighter colour/texture and more earthy fabric than site BM106.
B22	Earthy B22.

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C1 Sharp contrast into sandy C horizon with abundant mafic minerals.

C2 Very similar to 4 but with slightly different colours.

C3 Similar to 5 but slightly harder to auger.

Observation Notes

Ridgeline running north. Large worm population. Sharp contrast between B and C. Presume soil is quite young. Light texture and more earthy fabric.

Site Notes

COMP 32H 17343-1 301D 300M FROM RD/CK

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Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Cations Mg K		Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.19	4.47C		5.94H	0.19	1.17	0.13	1.9J 0K		9.34E	
0.19 - 0.54	4.18C		0.37H	0.33	0.42	0.12	2.67J 0K		3.9E	
0.54 - 1.3	4.11C		0.23H	0.5	0.25	0.09	2.45J 0K		3.53E	
1.3 - 1.95	4.45C		0H	0.09	0.06	0.08	0.22J 0K		0.45E	
1.95 - 2.7	4.46C		0H	0.08	0.14	0.09	0.17J 0K		0.47E	
2.7 - 3	4.58C		0H	0.06	0	0.08	0.09J 0K		0.22E	

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
		%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.19		3.98B		361.9B	0.2A		0.89	33.3				
0.19 - 0.54		0.82B		702.5B	0.06A		1.18	20.65				
0.54 - 1.3		0.3B		249.4B	0.02A		1.22	13.62				
1.3 - 1.95		0.06B		89.5B	0.01A			5.76				
1.95 - 2.7		0.05B		154.5B	0.01A			3.55				
2.7 - 3		0.04B		104.6B	0.01A			3.01				

[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