

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0123 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: N.J. McKenzie	Locality:
Date Desc.: 08/05/96	Elevation: 1171 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6046991 AMG zone: 55	Runoff: No Data
Easting/Lat.: 605829 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: 16 %	Aspect: 90 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Acidic-Mottled Dystrophic Brown Kandosol Medium Very gravelly Silty Clayey Very deep	Principal Profile Form: Gn2.41

ASC Confidence:

All necessary analytical data are available.

Great Soil Group: N/A

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 - 0.18 m	Dark reddish brown (5YR3/2-Moist); ; Silty clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 20-50 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 50-90%, coarse gravelly, 20-60mm, angular, dispersed, Granodiorite, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Common, coarse (>5mm) roots; Clear, Wavy change to -
B1	0.18 - 0.37 m	Brown (7.5YR4/4-Moist); Biological mixing, 5YR32, 20-50% , Distinct; Silty clay loam; Moderate grade of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 20-50%, coarse gravelly, 20-60mm, angular, 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 -
B21	0.37 - 0.67 m	Brown (7.5YR4/4-Moist); Biological mixing, 5YR32, 0-2% , Distinct; Light clay; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 2-10%, cobbly, 60-200mm, angular platy, dispersed, Granodiorite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B22	0.67 - 1.4 m	Brown (7.5YR5/4-Moist); Biological mixing, 5YR32, 0-2% , Distinct; Light clay; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, angular platy, dispersed, Granodiorite, coarse fragments; 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; Few, coarse (>5mm) roots; Clear, Smooth change to -
BC	1.4 - 1.97 m	Reddish yellow (7.5YR6/6-Moist); Substrate influence, 10YR66, 20-50% , Faint; Clayey sand; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 5.5 (Raupach); Diffuse, Smooth change to -
C	1.97 - 2.6 m	Yellowish brown (10YR5/4-Moist); ; Sandy loam; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 6 (Raupach);

Morphological Notes

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A1 Well structured A1 and very rocky with abundant worms.

B1 Again very rocky with predominantly platy CFs (ex-foliated?)
B21 Earthy 7.5YR horizon - suggests a relatively young profile.
B22 Similar to layer 3 but a faint hint of coarse weak structure (200mm) during sampling.
BC Transitional to C horizon.

C Base of C is probably parent material and R horizon.

Observation Notes

Relatively young profile evident by less red colours. The platy CFs may be caused by exfoliation from boulders upslope and transport (with ice actions?)

Site Notes

COMP69H,7D,420M FR W END OF HH BRIDGE

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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				CMol (+)/kg				%
0 - 0.02										
0.02 - 0.18	4.07C		1.55H	0.51	0.45	0.07	4.51J 0K		7.09E	
0.18 - 0.37	4.3C		0.25H	0.26	0.39	0.05	1.72J 0K		2.67E	
0.37 - 0.67	4.12C		0.17H	0.31	0.38	0.04	2.07J 0K		2.98E	
0.67 - 1.4	4.04C		0.37H	0.36	0.3	0.05	2.22J 0K		3.29E	
1.4 - 1.97	4.08C		0.14H	0.11	0.22	0.06	1.19J 0K		1.72E	
1.97 - 2.6	4.23C		0.06H	0.07	0.11	0.04	0.55J 0K		0.82E	

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 - 0.02												
0.02 - 0.18		4.6B		596.4B	0.22A				29.08			
0.18 - 0.37		1.84B		402B	0.09A				3.62			
0.37 - 0.67		0.62B		248.4B	0.03A		1.32		4.16			
0.67 - 1.4		0.29B		273.8B	0.02A		1.19		7.03			
1.4 - 1.97		0.1B		225.3B	0.01A				8.9			
1.97 - 2.6		0.08B		327.4B	0A				7.97			

[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