

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0061 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: N.J. McKenzie	Locality:
Date Desc.: 22/04/96	Elevation: 1150 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6044766 AMG zone: 55	Runoff: No Data
Easting/Lat.: 611824 Datum: AGD66	Drainage: Poorly 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: Flat	Relief: No Data
Elem. Type: Drainage depression	Slope Category: No Data
Slope: 2 %	Aspect: 0 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Acidic Dermosolic Redoxic Hydrosol Medium Non-gravelly Silty Clayey Very deep	Principal Profile Form: Gn4.31

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

A1	0 - 0.13 m	Dark reddish brown (5YR3/2-Moist); Substrate influence, 5YR33, 20-50% , Faint; Silty clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Wet; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
B21	0.13 - 0.52 m	Brown (7.5YR4/4-Moist); Substrate influence, 10YR42, 20-50% , Distinct; Light clay; Moderate grade of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Wet; Weak consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.52 - 1.4 m	Strong brown (7.5YR4/6-Moist); Substrate influence, 10YR52, 20-50% , Distinct; Light clay; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Wet; Weak consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Smooth change to -
B31	1.4 - 1.8 m	Light grey (10YR7/1-Moist); Substrate influence, 10YR53, 20-50% , Distinct; Substrate influence, 10YR66, 10-20% , Distinct; Medium sandy clay loam; Rough-ped fabric; Wet; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B32	1.8 - 2.35 m	Yellowish brown (10YR5/4-Moist); Substrate influence, 10YR71, 20-50% , Distinct; Substrate influence, 10YR66, 20-50% , Distinct; Medium sandy clay loam; Wet; Field pH 6 (Raupach); Diffuse, Smooth change to -
B33	2.35 - 3 m	Yellowish brown (10YR5/4-Moist); Substrate influence, 10YR62, 20-50% , Distinct; Substrate influence, 10YR66, 10-20% , Distinct; Medium sandy clay loam; Wet; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Soft segregations, weak, segregations; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Root linings, weak, segregations; Field pH 6 (Raupach);

Morphological Notes

A1	Acid organic A1 and very silty.
B21	Drab and mottles. Saturated from here down.

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B22 Drab and mottled.

B31 Bleached layer with v.low chroma. Micaceous becoming more evident. Brown mottling starts in lower portion of layer.

B32 Low chroma mottles persist and brown-grey mottles are also present.

B33 Mn nodules indicating fluctuating water table levels. Soil is dense and may not be saturated.

Observation Notes

A flat with trees surrounded by spagnum swamps - drainage lines. Saturated profile with bleaching in the B31.

Site Notes

COMP 95H,4637-1,181.5D,200M FR 45517-2

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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 - 0.13	3.66C		1.38H	0.67	0.46	0.12	8.01J 0K		10.64E	
0.13 - 0.52	3.86C		0.1H	0.69	0.25	0.09	4.64J 0K		5.77E	
0.52 - 1.4	3.85C		0.46H	1.05	0.23	0.08	4.02J 0K		5.84E	
1.4 - 1.8	4.27C		1.45H	1.06	0.2	0.13	0.08J 0.15K		3.08E	
1.8 - 2.35	4.34C		2.04H	1.25	0.22	0.13	1.09J 0K		4.74E	
2.35 - 3	4.48C		2.57H	1.33	0.25	0.12	0.59J 0K		4.85E	

Depth m	CaCO3	Organic	Avail.	Total	Total	Total	Bulk Density Mg/m3	Particle		Size FS %	Analysis	
	%	C %	P mg/kg	P %	N %	K %		GV	CS		Silt	Clay
0 - 0.13		6.57B		308.6B	0.23A		0.49	29.98				
0.13 - 0.52		0.98B		191.5B	0.05A		0.94	36.74				
0.52 - 1.4		0.48B		155.7B	0.03A		1.14	34.65				
1.4 - 1.8		0.09B		83.1B	0.01A			22.23				
1.8 - 2.35		0.1B		103.9B	0A			24.44				
2.35 - 3		0.06B		136.6B	0A			25				

[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