

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0049 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	14/05/96	Elevation:	1227 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6048608 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	602205 Datum: AGD66	Drainage:	Imperfectly drained

Geology

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

Land Form

Rel/Slope Class:	No Data	Pattern Type:	No Data
Morph. Type:	Open depression (vale)	Relief:	No Data
Elem. Type:	Drainage depression	Slope Category:	No Data
Slope:	4 %	Aspect:	45 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Melacic Tenosolic Redoxic Hydrosol Thick Non-gravelly Loamy Loamy Very deep	Principal Profile Form:	Um5.
ASC Confidence:	Great Soil Group:	Humic gley

All necessary analytical data are available.

Site Disturbance: No effective disturbance other than grazing by hoofed animals

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O2	0 - 0.01 m	Organic Layer; ;
O1	0.01 - 0.04 m	Organic Layer; ;
A11	0.04 - 0.18 m	Very dark grey (10YR3/1-Moist); ; Sandy loam; Weak grade of structure, <2 mm, Granular; Rough-ped fabric; Moist; Very weak consistence; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Many, medium (2-5mm) roots; Many, coarse (>5mm) roots; Sharp, Smooth change to -
A12	0.18 - 0.4 m	Black (10YR2/1-Moist); ; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Very weak consistence; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Abrupt, Smooth change to -
B2	0.4 - 0.49 m	Greyish brown (2.5Y5/2-Moist); Substrate influence, 10YR46, 10-20% , Distinct; Sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Weak consistence; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
2A1	0.49 - 0.58 m	Very dark grey (10YR3/1-Moist); ; Medium sandy clay; Massive grade of structure; Earthy fabric; Moist; Very weak consistence; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual change to -
2B2	0.58 - 0.94 m	Dark greyish brown (10YR4/2-Moist); Substrate influence, 10YR46, 10-20% , Faint; Medium sandy clay loam; Weak grade of structure, 10-20 mm, Prismatic; Rough-ped fabric; Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, angular tabular, Coal, coarse fragments; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear change to -
2B31	0.94 - 1.64 m	Greyish brown (2.5Y5/3-Moist); ; Medium sandy clay; Massive grade of structure; Sandy (grains prominent) fabric; Wet; Weak consistence; Field pH 5 (Raupach); Clear change to -
2B32	1.64 - 2.09 m	Greyish brown (2.5Y5/2-Moist); Substrate influence, 2.5Y56, 2-10% , Faint; Substrate influence, 2.5Y43, 2-10% , Distinct; Coarse sandy loam; Wet; Field pH 5 (Raupach); Gradual change to -
2B33	2.09 - 2.29 m	Dark greyish brown (2.5Y4/2-Moist); ; Coarse sandy loam; Wet; Field pH 5 (Raupach);
2C	2.29 - 2.49 m	Greyish brown (2.5Y5/2-Moist); ; 10-20%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Field pH 5 (Raupach);

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A11 Darker colour, OM rich and silty.

A12 Thin dipping mottled B horizon.

B2 Second A horizon - dipping SE. Silty.

2A1 Second B horizon - mottled with some weak structure.
2B31 Clay content higher than layer above. Mottle colour more in centre of ped.
2B32 OM increase - old A horizon?

2B33 Auger refusal due to hitting rocks. Small quartz gravel.

Observation Notes

Site is edge of swamp - drainage line. There are a series of OM-rich layers separated by layers of mottled soil-all alluvial deposits separated by periods of stability.

Site Notes

COMP 45H,30682-3,340D,80M FR RD

Morphological Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.01									
0.04 - 0.18	4.05C		2.34H	1.62	0.56	0.02	6.66J 0K	11.19E	
0.18 - 0.4	3.97C		0.82H	0.66	0.26	0.01	6.25J 0K	8E	
0.4 - 0.49	4.03C		0.24H	0.38	0.1	0	1.97J 0K	2.69E	
0.49 - 0.58	4.07C		0.34H	0.37	0.26	0.01	4.1J 0K	5.07E	
0.58 - 0.94	4.01C		0.52H	0.72	0.21	0	2.62J 0K	4.07E	
0.94 - 1.64	4.02C		0.44H	0.57	0.13	0	2.01J 0K	3.15E	
1.64 - 2.09	3.99C		0.81H	0.88	0.27	0.09	2.39J 0K	4.45E	
2.09 - 2.29	4C		0.79H	0.8	0.16	0.01	2.59J 0K	4.36E	
2.29 - 2.49	4.02C		0.53H	0.57	0.1	0	1.76J 0K	2.97E	

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 - 0.01												
0.04 - 0.18		5.99B		381.8B	0.32A		0.60	11.14				
0.18 - 0.4		4.21B		572.5B	0.25A		0.74	6.4				
0.4 - 0.49		0.4B		98.8B	0.03A		1.01	10.41				
0.49 - 0.58		2.62B		452.2B	0.12A			9.97				
0.58 - 0.94		0.49B		327B	0.03A		1.28	10.85				
0.94 - 1.64		0.29B		276.7B	0.02A			11.05				
1.64 - 2.09		0.26B		437.3B	0.02A			14.11				
2.09 - 2.29		0.45B		379.2B	0.02A			19.05				
2.29 - 2.49		0.35B		487.3B	0.02A			19.42				

[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