

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0075 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	13/12/95	Elevation:	796 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6022644 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	615435 Datum: AGD66	Drainage:	Well drained

Geology

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

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:	29 %	Aspect:	270 degrees

Surface Soil Condition (dry): Other

Erosion: Stable, Not apparent (sheet)

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Acidic Mesotrophic Red Kandosol Medium Gravelly Clay-loamy Clayey Very deep	Principal Profile Form:	Gn2.14
ASC Confidence:	Great Soil Group:	N/A

All necessary analytical data are available.

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.13 m	Dark reddish brown (5YR3/2-Moist); ; Medium sandy clay loam; Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Wavy change to -
A21	0.13 - 0.28 m	Brown (7.5YR5/4-Moist); Biological mixing, 5YR31, 20-50% , Distinct; Medium sandy clay loam; Weak grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
A22	0.28 - 0.52 m	Brown (7.5YR5/4-Moist); Biological mixing, 7.5YR42, 2-10% , Distinct; Clay loam, sandy; Weak grade of structure, 10-20 mm, Polyhedral; Earthy fabric; Moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, 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 -
B2	0.52 - 1.1 m	Yellowish red (5YR4/6-Moist); Substrate influence, 2.5YR46, 10-20% , Faint; Light clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Common cutans, 10-50% 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 -
B31	1.1 - 2.1 m	Reddish yellow (7.5YR7/8-Moist); ; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Very weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Diffuse, Smooth change to -
B32	2.1 - 3 m	Brownish yellow (10YR6/6-Moist); ; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Very weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5

Morphological Notes

A11 Layer is part of a lyre-bird mound (very common at site).

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A22	Appears to be A2 due less permeable B horizon below.
B2	Significant increase in clay, redness and bulk density. Macropores sufficient to maintain flow.
B31	5 and 6 have an earthy fabric hence not C.
B32	Yellowing with depth.

Observation Notes

Site Notes

COMP42H, 11229-1, B98D, 200M FR RIDGE SPI

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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 - 0.13	4.49C		6.32H	1.35	0.78	0.06	0.62J 0.32K	9.44E	
0.13 - 0.28	4.14C		1.33H	0.56	0.44	0.04	2.03J 0K	4.39E	
0.28 - 0.52	4.06C		0.32H	0.38	0.43	0.03	1.7J 0K	2.85E	
0.62 - 1.1	4.16C		1.42H	1.15	0.88	0.04	1.92J 0K	5.4E	
1.1 - 2.1	4.1C		0.52H	0.56	0.52	0	1.48J 0K	3.07E	
2.1 - 3	4.08C		0.16H	0.48	0.63	0.06	1.11J 0K	2.44E	

Depth m	CaCO3 %	Organic C %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle		Size FS %	Analysis	
								GV	CS		Silt	Clay
0 - 0.13		5.53B		209.1B	0.27A		0.75	18				
0.13 - 0.28		1.99B		105.4B	0.09A		1.28	19.69				
0.28 - 0.52		0.85B		84.8B	0.04A		1.51	21.58				
0.62 - 1.1		0.38B		96.5B	0.02A		1.47	27.84				
1.1 - 2.1		0.12B		58.4B	0.01A			25.97				
2.1 - 3		0.12B		47.9B	0.01A			11.93				

[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