

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0104 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	19/04/96	Elevation:	1156 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6057056 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	608235 Datum: AGD66	Drainage:	Well 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:	26 %	Aspect:	90 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Acidic Dystrophic Red Kandosol Medium Non-gravelly Clay-loamy Clayey Very deep	Principal Profile Form:	Gn2.11
ASC Confidence:	Great Soil Group:	Red earth

All necessary analytical data are available.

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.04 m	Organic Layer; ;
A1f	0.04 - 0.14 m	(2.5YR2.5/1-Moist); ; Clay loam; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, subrounded, coarse fragments; 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 -
A3f	0.14 - 0.25 m	Dark reddish brown (5YR3/2-Moist); Biological mixing, 5YR43, 10-20% , Distinct; Clay loam; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Wavy change to -
B1	0.25 - 0.38 m	Dark reddish brown (5YR3/4-Moist); Biological mixing, 5YR32, 2-10% , Distinct; Silty clay; Moderate grade of structure, 5-10 mm, Polyhedral; 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Gradual, Irregular change to -
B21	0.38 - 0.69 m	Reddish brown (5YR4/4-Moist); Biological mixing, 5YR33, 2-10% , Faint; Silty clay; Weak grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.69 - 1.74 m	Dark red (2.5YR3/6-Moist); ; Silty clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Diffuse change to -
B23	1.74 - 2.39 m	Yellowish red (5YR4/6-Moist); ; Sandy loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Field pH 4.5 (Raupach); Clear change to -
C	2.39 - 3.04 m	Yellowish brown (10YR5/4-Moist); ; Coarse sandy loam; Sandy (grains prominent) fabric; Moderately moist; Very firm consistence; 10-20%, medium gravelly, 6-20mm, subrounded tabular, coarse fragments; Field pH 4.5 (Raupach);

Morphological Notes

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A1f Structure due to casting.

A3f Structure due to casting - subplastic.

B1 Structure due to casting.

B21 Large (25cm dia) infilled root channel.

B23 Muscovite mica becomes common.

C Abrupt change to C horizon - mica rich. Change in colour at base.

Observation Notes

Lower slope of a protected gully. Very rich soil faunal activity.

Site Notes

COMP 45H 21679-1 131D 100M FR BC RD

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Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol	Exchangeable Acidity (+)/kg	CEC	ECEC	ESP %
0 - 0.04										
0.04 - 0.14	4.37C		5.33H	1.62	0.97	0.05	5.51J 0K		13.48E	
0.14 - 0.25	4.62C		3.84H	1.25	0.94	0.03	2.77J 0K		8.84E	
0.25 - 0.38	4.52C		2.46H	1.37	0.91	0.01	2.51J 0K		7.26E	
0.38 - 0.69	4.23C		0.85H	1.11	0.68	0.02	3.02J 0K		5.68E	
0.69 - 1.74	3.98C		0.22H	0.76	0.68	0.09	5.18J 0K		6.93E	
1.74 - 2.39	3.95C		0.04H	0.44	0.37	0.09	3.63J 0K		4.57E	
2.39 - 3.04	4.06C		0H	0.14	0.13	0.11	1.48J 0K		1.86E	

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 - 0.04												
0.04 - 0.14		8.57B		989.5B	0.41A		0.60	41.83				
0.14 - 0.25		4.84B		746.7B	0.23A		0.74	35.85				
0.25 - 0.38		3.15B		832.4B	0.14A		0.86	28.65				
0.38 - 0.69		1.36B		359.3B	0.05A		0.93	26.54				
0.69 - 1.74		0.49B		349.2B	0.03A		0.99	28.38				
1.74 - 2.39		0.15B		267.7B	0.02A			22.85				
2.39 - 3.04		0.06B		335B	0.01A			18.71				

[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