

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0094 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	16/04/96	Elevation:	1162 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6041496 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	608773 Datum: AGD66	Drainage:	Well drained

Geology

ExposureType:	Soil pit	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:	Upper-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	13 %	Aspect:	180 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Acidic Mesotrophic Brown Kandosol Medium Gravelly Clay-loamy Clay-loamy Very deep	Principal Profile Form:	Um7.11
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 - 0.02 m	Organic Layer; ;
A1	0.02 - 0.17 m	Dark brown (7.5YR3/2-Moist); Biological mixing, 7.5YR44, 2-10% , Faint; Clay loam, sandy; Moderate grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Very weak consistence; 10-20%, coarse gravelly, 20-60mm, subangular tabular, Granodiorite, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Many, coarse (>5mm) roots; Abrupt, Smooth change to -
B21	0.17 - 0.37 m	Brown (7.5YR4/4-Moist); Biological mixing, 7.5YR32, 10-20% , Distinct; Clay loam, sandy; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 10-20%, medium gravelly, 6-20mm, subrounded, Granodiorite, coarse fragments; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Common, coarse (>5mm) roots; Diffuse, Irregular change to -
B22	0.37 - 0.62 m	Strong brown (7.5YR4/6-Moist); Biological mixing, 7.5YR43, 2-10% , Faint; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 10-20%, medium gravelly, 6-20mm, subangular, Granodiorite, coarse fragments; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Gradual, Wavy change to -
B31	0.62 - 0.92 m	Strong brown (7.5YR5/6-Moist); ; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 2-10%, cobbly, 60-200mm, subangular, Granodiorite, coarse fragments; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Irregular change to -
B32	0.92 - 1.47 m	Strong brown (7.5YR5/6-Moist); ; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Very weak consistence; 2-10%, cobbly, 60-200mm, subangular, Granodiorite, coarse fragments; Field pH 4.5 (Raupach); Gradual change to -
B33	1.47 - 1.97 m	Yellowish red (5YR5/8-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Field pH 4.5 (Raupach); Clear change to -
C1	1.97 - 2.32 m	Yellowish brown (10YR5/8-Moist); ; Medium sandy clay loam; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Field pH 4.5 (Raupach); Clear change to -

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C2 2.32 - 2.52 m Red (2.5YR5/8-Moist); ; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Field pH 5 (Raupach); Clear change to -

Morphological Notes

B22 Signs of old root channels causing mixed colours.

B31 As per layer 3.

B32 Weathered PM has veins of mafic minerals.

B33 A finer grained, more mafic material.

C1 Back to granodiorite texture.

C2 Ferruginous weathered PM. Hit rock with auger.

Observation Notes

A flattish slope possibly used for a log dump in the past. Ash above and below.

Site Notes

COMP 114H 55839-1

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable	Cations	Exchangeable	CEC	ECEC	ESP
m		dS/m		Mg	K	Na	Acidity		%
						Cmol	(+)/kg		
0 - 0.02									
0.02 - 0.17	4.6C		3.57H	0.69	0.55	0.08	1.17J 0K	6.07E	
0.17 - 0.37	4.47C		0.78H	0.32	0.51	0.05	1.12J 0K	2.77E	
0.37 - 0.62	4.44C		0.51H	0.52	0.3	0.05	0.64J 0K	2.02E	
0.62 - 0.92	4.19C		0.21H	0.43	0.41	0.02	1.19J 0K	2.26E	
0.92 - 1.47	4.1C		0.02H	0.2	0.23	0.53	1.36J 0K	2.35E	
1.47 - 1.97	4.06C		0H	0.24	0.22	0.18	1.66J 0K	2.29E	
1.97 - 2.32	4.02C		0H	0.1	0.18	0.24	1.89J 0K	2.42E	
2.32 - 2.52	4.16C		0H	0.05	0.11	0.1	0.85J 0K	1.1E	

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 - 0.02												
0.02 - 0.17		3.97B		672.7B	0.19A		0.87	34.75				
0.17 - 0.37		1.2B		388.7B	0.06A		1.04	22.77				
0.37 - 0.62		0.53B		312.7B	0.03A		1.39	21.65				
0.62 - 0.92		0.28B		284B	0.02A		1.33	22.77				
0.92 - 1.47		0.12B		341.2B	0.01A			16.53				
1.47 - 1.97		0.08B		339.8B	0.01A			18.31				
1.97 - 2.32		0.09B		357.5B	0A			17.03				
2.32 - 2.52		0.1B		409.4B	0.01A			16.41				

[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