

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0149 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	13/03/97	Elevation:	1148 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6044265 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	607872 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:	Flat	Relief:	No Data
Elem. Type:	Hillcrest	Slope Category:	No Data
Slope:	2 %	Aspect:	45 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Melacic Dystrophic Brown Kandosol Thin Slightly gravelly Clay-loamy Clayey Very deep	Principal Profile Form:	Gn4.81
ASC Confidence: All necessary analytical data are available.	Great Soil Group:	Red podzolic soil

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: 2-10%, coarse gravelly, 20-60mm, rounded tabular, Granodiorite; 2-10%, coarse gravelly, 20-60mm, angular tabular, Quartz

Profile Morphology

O1	0 - 0.02 m	Organic Layer; ;
A1	0.02 - 0.09 m	(7.5YR2.5/2-Moist); Biological mixing, 10YR33, 2-10% , Faint; Clay loam, sandy; Strong grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Rough-ped fabric; Dry; Firm consistence; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
A3	0.09 - 0.22 m	Dark brown (7.5YR3/2-Moist); Biological mixing, 10YR32, 10-20% , Faint; Biological mixing, 7.5YR46, 0-2% , Distinct; Clay loam; Strong grade of structure, 10-20 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Dry; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (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 -
B21	0.22 - 0.42 m	Strong brown (7.5YR4/6-Moist); Biological mixing, 7.5YR32, 2-10% , Distinct; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Irregular change to -
B22	0.42 - 0.68 m	Strong brown (7.5YR5/6-Moist); Biological mixing, 7.5YR32, 0-2% , Distinct; Coarse sandy clay loam; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Moderately moist; Weak consistence; 0-2%, subangular tabular, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Irregular change to -
B3	0.68 - 0.87 m	Yellowish brown (10YR5/8-Moist); ; Coarse sandy loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Clear, Smooth change to -
C1	0.87 - 1.82 m	Light olive brown (2.5Y5/4-Moist); ; Clayey coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Field pH 5 (Raupach);
C1	1.82 - 2.62 m	Light olive brown (2.5Y5/4-Moist); ; Clayey coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Field pH 5.5 (Raupach); Diffuse change to -

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C2 2.62 - 3.12 m Red (2.5YR5/6-Moist); ; Clayey coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; 2-10%, medium gravelly, 6-20mm, subrounded tabular, coarse fragments; Field pH 4.5 (Raupach);

Morphological Notes

B22 Weathered coarse fragment of intermediate igneous origin.
B3 Old root channel containing large Witchety Grub.
C1 Weathered granodiorite.

C1 Continuation of 6.

C2 Increase in Feldspar Phenocrist and Mafic minerals.

Observation Notes

Site was selected on basis of radio-magnetic coverage which indicated a dyke. Site is similar to BM93.

Site Notes

DYKE ON ASH CK RD. 60M 196DEG FROM RD

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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 - 0.02										
0.02 - 0.09	4.16C		3.43H	0.69	0.42	0	5.66J 0K		10.19E	
0.09 - 0.22	4.18C		0.07H	0.04	0.11	0	2.15J 0K		2.37E	
0.22 - 0.42	4.28C		0.12H	0.29	0.44	0	1.72J 0K		2.56E	
0.42 - 0.68	4.33C		0.25H	0.29	0.46	0	0.86J 0K		1.87E	
0.68 - 0.87	4.35C		0.08H	0.1	0.3	0	0.57J 0K		1.06E	
0.87 - 1.82	4.6C		0.04H	0.04	0.15	0	0.15J 0.15K		0.53E	
1.82 - 2.62	4.59C		0.04H	0.04	0.08	0	0.25J 0.06K		0.47E	
2.62 - 3.12	4.51C		0.04H	0.06	0.2	0.01	0.28J 0.69K		1.29E	

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 - 0.09		7.9B		359.9B	0.24A		0.92	9.73				
0.09 - 0.22		3.59B		325.7B	0.14A		1.13	6.18				
0.22 - 0.42		1.27B		284.6B	0.06A		1.28	5.47				
0.42 - 0.68		0.42B		262.5B	0.02A		1.37	4.15				
0.68 - 0.87		0.26B		276.7B	0.01A			5.92				
0.87 - 1.82		0.09B		354B	0.01A			7.6				
1.82 - 2.62		0.05B		304.1B	0A			8.61				
2.62 - 3.12		0.04B		293.4B	0A			8.9				

[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