

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0032 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	20/12/95	Elevation:	1051 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6027537 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	619389 Datum: AGD66	Drainage:	Well drained

Geology

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

Land Form

Rel/Slope Class:	No Data	Pattern Type:	No Data
Morph. Type:	Mid-slope	Relief:	No Data
Elem. Type:	No Data	Slope Category:	No Data
Slope:	18 %	Aspect:	315 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Acidic Magnesic Red Kandosol Thin Gravelly Loamy Clay-loamy 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: 2-10%, , ,

Profile Morphology

O1	0 - 0.02 m	Organic Layer; ;
A11	0.02 - 0.08 m	Dark reddish brown (5YR3/3-Moist); Mechanical, 2.5YR48, 20-50% , Prominent; Loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, coarse fragments; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Broken change to -
A12	0.08 - 0.18 m	Dark reddish brown (5YR3/2-Moist); Biological mixing, 5YR33, 10-20% , Faint; Loam; Moderate grade of structure, 2-5 mm, Polyhedral; 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subangular, Coal, coarse fragments; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Wavy change to -
B21	0.18 - 0.52 m	Dark reddish brown (2.5YR3/4-Moist); Biological mixing, 2.5YR33, 2-10% , Faint; Clay loam; Weak grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Smooth change to -
B22	0.52 - 1.02 m	Dark reddish brown (2.5YR3/4-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots;
B22	1.02 - 1.47 m	Red (2.5YR4/6-Moist); ; Clay loam; Earthy fabric; Moist; Weak consistence; Field pH 4.5 (Raupach); Diffuse change to -
B3	1.47 - 2.02 m	Dark reddish brown (2.5YR3/4-Moist); ; Earthy fabric; Moist; Weak consistence; 10-20%, coarse gravelly, 20-60mm, Granodiorite, coarse fragments; Field pH 4.5 (Raupach);

Morphological Notes

A11	A mixture of surface and weathered gravel. Possibly infilling a hollow or mixed into A horizon. Layer is not continuous.
A12	Layer may be partially buried.
B3	Small amounts of weathered parent material above substrate.

Observation Notes

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Site Notes

COMP 20H,3496-1,255DEG,375M FROM RD

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.02										
0.02 - 0.08	4.66C		1.67H	1.05	1.45	0.05	1.3J OK		5.52E	
0.08 - 0.18	4.3C		0.09H	0.52	1.05	0.08	2.49J OK		4.22E	
0.18 - 0.52	3.95C		0H	0.63	0.54	0.08	4.13J OK		5.37E	
0.52 - 1.02	3.96C		0H	0.6	0.75	0.07	3.89J OK		5.31E	
1.02 - 1.47	3.96C		0H	0.54	0.83	0.09	4.74J OK		6.2E	
1.47 - 2.02	3.95C		0H	0.33	0.95	0.13	5.02J OK		6.44E	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.02												
0.02 - 0.08		3.55B		252.7B	0.14A			18.5				
0.08 - 0.18		1.93B		178.1B	0.08A			21.2				
0.18 - 0.52		0.77B		116.2B	0.04A			15.33				
0.52 - 1.02		0.28B		106.9B	0.02A			19.54				
1.02 - 1.47		0.24B		131B	0.02A			29.52				
1.47 - 2.02		0.23B		131.6B	0.02A			4.03				

Depth	COLE	Sat.	Gravimetric/Volumetric Water Contents	K sat	K unsat
m			0.05 Bar 0.1 Bar 0.5 Bar 1 Bar 5 Bar 15 Bar	mm/h	mm/h
			g/g - m3/m3		

0 - 0.02
 0.02 - 0.08
 0.08 - 0.18
 0.18 - 0.52
 0.52 - 1.02
 1.02 - 1.47
 1.47 - 2.02

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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 (Ca ²⁺ ,Mg ²⁺ ,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 (%)