

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0047 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	11/03/96	Elevation:	1218 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6038561 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	615937 Datum: AGD66	Drainage:	Well drained

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	Probable
Geol. Ref.:	Tb	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:	11 %	Aspect:	90 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Acidic Magnesic Red Kandosol Thin Slightly 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 - 0.03 m	Organic Layer; ;
A1	0.03 - 0.12 m	Dark brown (7.5YR3/3-Moist); Biological mixing, 5YR46, 2-10% , Faint; Clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Common, coarse (>5mm) roots; Clear, Smooth change to -
A3	0.12 - 0.29 m	Reddish brown (5YR4/3-Moist); Biological mixing, 5YR46, 10-20% , Faint; Clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 10-20 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Wavy change to -
B21	0.29 - 0.61 m	Red (2.5YR4/6-Moist); Biological mixing, 5YR43, 2-10% , Faint; Clay loam; Weak grade of structure, 5-10 mm, Angular blocky; Rough-ped fabric; Moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded tabular, Granodiorite, coarse fragments; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B22	0.61 - 1.53 m	Red (2.5YR4/8-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, subangular tabular, Granodiorite, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Gradual change to -
B3	1.53 - 2.53 m	Yellowish red (5YR4/6-Moist); ; Clayey coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; Field pH 4.5 (Raupach); Clear change to -
C	2.53 - 3.03 m	Yellowish brown (10YR5/4-Moist); ; Loamy coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; 10-20%, medium gravelly, 6-20mm, subrounded, Granodiorite, coarse fragments; Field pH 4.5 (Raupach);

Morphological Notes

A1	Low organic levels indicate recent disturbance.
A3	Pedality due to faunal activity.

B3	Texture becomes very coarse and consistence weakens.
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Observation Notes

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Site Notes

COMP117H,110272-1,BRG6D,180M FR11242-1

PM is Sgg. Tb boundary is to the west across creek. Site has thick colluvial mantle.

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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 - 0.03										
0.03 - 0.12	3.99C		0.62H	0.32	0.35	0	3.91J OK		5.19E	
0.12 - 0.29	4.07C		0.01H	0.25	0.28	0	2.8J OK		3.33E	
0.29 - 0.61	4.08C		0H	0.15	0.27	0	1.95J OK		2.37E	
0.61 - 1.53	3.92C		0H	0.07	0.14	0	1.87J OK		2.09E	
1.53 - 2.53	3.96C		0H	0.04	0.08	0	1.37J OK		1.49E	
2.53 - 3.03	4.12C		0H	0.03	0.07	0	0.89J OK		0.99E	

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 - 0.03												
0.03 - 0.12		3.31B		317.7B	0.12A		1.22	27.82				
0.12 - 0.29		1.74B		350.2B	0.08A		1.36	29.3				
0.29 - 0.61		0.4B		136.2B	0.02A		1.41	27.66				
0.61 - 1.53		0.09B		1254.5B	0.01A		1.57	16.58				
1.53 - 2.53		0.07B		192.6B	0.01A			10.69				
2.53 - 3.03		0.06B		227.6B	0.01A			10.18				

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 - 0.03
 0.03 - 0.12
 0.12 - 0.29
 0.29 - 0.61
 0.61 - 1.53
 1.53 - 2.53
 2.53 - 3.03

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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