

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS **Site ID:** 0009 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

**Site Information**

<b>Desc. By:</b>	N.J. McKenzie	<b>Locality:</b>	
<b>Date Desc.:</b>	19/12/95	<b>Elevation:</b>	1055 metres
<b>Map Ref.:</b>	Sheet No. : 8526 DGPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6031546 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	619765 Datum: AGD66	<b>Drainage:</b>	Well drained

**Geology**

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	Probable
<b>Geol. Ref.:</b>	SGG	<b>Substrate Material:</b>	Schist

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	No Data
<b>Morph. Type:</b>	Open depression (vale)	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Drainage depression	<b>Slope Category:</b>	No Data
<b>Slope:</b>	21 %	<b>Aspect:</b>	135 degrees

**Surface Soil Condition (dry):** Firm

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Acidic Mesotrophic Red Kandosol Medium Slightly gravelly Loamy Clayey Very deep		<b>Principal Profile Form:</b>	N/A

<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	N/A
All necessary analytical data are available.			

**Site Disturbance:** No effective disturbance. Natural

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

A11	0 - 0.16 m	Dark reddish brown (5YR2.5/2-Moist); ; Loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, subangular, dispersed, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
A3	0.16 - 0.3 m	Dark reddish brown (5YR3/3-Moist); Biological mixing, 5YR31, 20-50% , Distinct; Clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subangular, dispersed, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
B21	0.3 - 0.6 m	Reddish brown (5YR4/4-Moist); Biological mixing, 5YR31, 2-10% , Distinct; Clay loam; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, subangular, dispersed, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.6 - 1.2 m	Dark red (2.5YR3/6-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moist; Firm consistence; 2-10%, coarse gravelly, 20-60mm, subangular, dispersed, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change to -
B23	1.2 - 1.6 m	Yellowish red (5YR4/6-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Gradual, Smooth change to -
B3	1.6 - 2.3 m	Brownish yellow (10YR6/6-Moist); Substrate influence, 5YR56, 10-20% , Faint; Light clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (Raupach);

**Morphological Notes**

B23 Fair bit of mica present.

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B3      Same as layer 5.

**Observation Notes**

Metasediment gravel but granodiorite occurs upslope.

**Site Notes**

COMP 15H 3044-1, BRG 63, 200M

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.16	4.71C		11.01H	1.75	1.12	0.15	1.56J 0K	15.58E	
0.16 - 0.3	4.88C		4.97H	0.92	1.12	0.06	0.92J 0K	7.99E	
0.3 - 0.6	4.85C		1.95H	0.62	0.77	0.04	0.39J 0K	3.78E	
0.6 - 1.2	4.56C		1.27H	0.75	0.6	0.01	0.78J 0K	3.41E	
1.2 - 1.6	4.49C		2H	0.82	0.44	0.03	0.47J 0K	3.76E	
1.6 - 2.3	4.25C		1.23H	1.18	0.34	0.02	0.71J 0K	3.47E	

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 - 0.16		8.53B		749.8B	0.32A		0.76	41.75				
0.16 - 0.3		3.39B		599.2B	0.17A		1.03	43.2				
0.3 - 0.6		1.16B		220.7B	0.07A		1.19	32.4				
0.6 - 1.2		0.54B		212.3B	0.04A		1.63	31.11				
1.2 - 1.6		0.28B		150.7B	0.02A			43.36				
1.6 - 2.3		0.17B		74.5B	0.01A			40.98				

[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