

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS **Site ID:** 0116 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

**Site Information**

<b>Desc. By:</b>	P. Ryan	<b>Locality:</b>	
<b>Date Desc.:</b>	26/04/96	<b>Elevation:</b>	1105 metres
<b>Map Ref.:</b>	Sheet No. : 8526 DGPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6057783 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	606871 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>	Granodiorite

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	No Data
<b>Morph. Type:</b>	Crest	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillcrest	<b>Slope Category:</b>	No Data
<b>Slope:</b>	6 %	<b>Aspect:</b>	225 degrees

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

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Acidic Dystrophic Red Kandosol Medium Non-gravelly Clay-loamy Clayey Very deep	<b>Principal Profile Form:</b>	Uf6.7
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	Red earth

All necessary analytical data are available.

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

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

A1	0 - 0.12 m	Dark reddish brown (5YR2.5/2-Moist); ; Clay loam; Moderate grade of structure, 2-5 mm, Polyhedral; <2 mm, Granular; Rough-ped fabric; Moist; Very weak consistence; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
A3	0.12 - 0.2 m	Dark reddish brown (5YR3/2-Moist); Biological mixing, 7.5YR34, 2-10% , Faint; Clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Tongued change to -
B1	0.2 - 0.36 m	Dark reddish brown (5YR3/4-Moist); Biological mixing, 5YR32, 2-10% , Faint; Light clay; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Very weak consistence; Field pH 4.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Many, coarse (>5mm) roots; Gradual, Irregular change to -
B21	0.36 - 0.65 m	Yellowish red (5YR4/6-Moist); Biological mixing, 7.5YR33, 2-10% , Faint; Light clay; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped 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; Many, coarse (>5mm) roots; Gradual, Wavy change to -
B22	0.65 - 1.2 m	Yellowish red (5YR4/6-Moist); Biological mixing, 7.5YR32, 0-2% , Distinct; Light clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, subangular, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Abrupt change to -
C1	1.2 - 2.4 m	Yellowish brown (10YR5/4-Moist); Substrate influence, 10YR73, 2-10% , Faint; Sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, coarse fragments; 10-20%, fine gravelly, 2-6mm, subangular platy, coarse fragments; Field pH 4.5 (Raupach); Diffuse change to
C2	2.4 - 3 m	Reddish yellow (7.5YR6/6-Moist); Substrate influence, 10YR64, 2-10% , Faint; Sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, coarse fragments; 10-20%, fine gravelly, 2-6mm, subangular platy, coarse fragments; Field pH 4.5 (Raupach);

**Morphological Notes**

A3 Layer has a lobe down to 0.6m. Possibly old root channel or windthrow.

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B21                      Old infilled root channels.

B22                      High mica content.

C1                      High mica content variable colouring with a paler section at 1.8m -2.1metres.  
C2                      High mica content. More Fe rich than C1 . Layer continues.

**Observation Notes**

Hillcrest site with large tors to the north. Large isolated gravel were exposed in the pit and hit once by the auger in layer 5.

**Site Notes**

COMP 9H,2814-1 330.5D 300M FROM INTER

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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 - 0.12	4.58C		6.66H	1.56	0.82	0.1	3.04J 0K		12.17E	
0.12 - 0.2	4.64C		3.59H	1.29	0.83	0.07	2.17J 0K		7.95E	
0.2 - 0.36	4.34C		1.54H	0.95	0.62	0.07	2.95J 0K		6.13E	
0.36 - 0.65	4.04C		0.16H	0.35	0.35	0.07	3.83J 0K		4.77E	
0.65 - 1.2	4C		0.14H	0.33	0.3	0.06	3.04J 0K		3.87E	
1.2 - 2.4	4.06C		0.07H	0.15	0.25	0.02	1.71J 0K		2.21E	
2.4 - 3	4C		0.11H	0.31	0.09	0.05	2.33J 0K		2.89E	

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
								GV	CS		FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.12		6.22B		769B	0.26A		0.71	32.47				
0.12 - 0.2		3.71B		622.7B	0.18A		0.91	28.1				
0.2 - 0.36		2.86B		482.6B	0.12A		0.91	18.09				
0.36 - 0.65		1.01B		309.3B	0.05A		1.23	29.03				
0.65 - 1.2		0.2B		191.3B	0.02A		1.34	19.18				
1.2 - 2.4		0.07B		125.8B	0.01A			4.95				
2.4 - 3		0.06B		68.1B	0.01A			6.3				

[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