

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS **Site ID:** 0139 **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>	21/05/96	<b>Elevation:</b>	495 metres
<b>Map Ref.:</b>	Sheet No. : 8526 DGPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6059888 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	613608 Datum: AGD66	<b>Drainage:</b>	Well drained

#### Geology

<b>ExposureType:</b>	No Data	<b>Conf. Sub. is Parent. Mat.:</b>	Probable
<b>Geol. Ref.:</b>	Os	<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>	13 %	<b>Aspect:</b>	270 degrees

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

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Melanic Mesotrophic Red Kandosol Medium Gravelly Clay-loamy Clayey Very deep	<b>Principal Profile Form:</b>	Gn3.11
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	No suitable group

All necessary analytical data are available.

**Site Disturbance:** No effective disturbance other than grazing by hoofed animals

#### Vegetation:

**Surface Coarse Fragments:** 2-10%, coarse gravelly, 20-60mm, subangular, Coal

#### Profile Morphology

O1	0 - 0.03 m	Organic Layer; ;
A1	0.03 - 0.17 m	Black (5YR2.5/1-Moist); ; Clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Wavy change to -
A3	0.17 - 0.3 m	Dark reddish brown (5YR3/2-Moist); Biological mixing, 5YR2.52, 2-10% , Faint; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subangular, Coal, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Gradual, Smooth change to -
B21	0.3 - 0.43 m	Reddish brown (5YR4/3-Moist); Biological mixing, 5YR2.52, 0-2% , Faint; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Smooth-ped fabric; Moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subrounded tabular, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Wavy change to -
B22	0.43 - 0.64 m	Yellowish red (5YR4/6-Moist); Biological mixing, 5YR33, 2-10% , Faint; Light medium clay; Weak grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Moist; Very weak consistence; 10-20%, fine gravelly, 2-6mm, subrounded tabular, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Wavy change to -
B23	0.64 - 1.58 m	Yellowish red (5YR4/6-Moist); ; Light clay; Weak grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 20-50%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (Raupach); Few, very fine (0-1mm) roots;

#### Morphological Notes

A1	Layers 1-5 are colluvial with dispersed small gravel. Large pieces of charcoal and burnt wood fragments were found through layers 1-4.
B22	Large infilled root channel on side of pit.

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B23      Gravel content increases. Burnt tree stem found in upright position in this layer.

**Observation Notes**

Site is in open drainage line - no water flow.

**Site Notes**

COMP 121H 1194-1 310D 190M FROM TRACK

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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 - 0.03										
0.03 - 0.17	4.89C		18.87H	4.47	1.09	0.09	0.29J 0K		24.8E	
0.17 - 0.3	5.05C		4.61H	1.59	0.83	0.06	0.12J 0K		7.21E	
0.3 - 0.43	4.93C		2.41H	1.14	0.64	0.05	0.08J 0K		4.33E	
0.43 - 0.64	4.78C		1.95H	1.1	0.56	0.07	0.14J 0.09K		3.91E	
0.64 - 1.58	4.93C		2.61H	1.35	0.56	0.05	0.08J 0K		4.64E	

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 - 0.03												
0.03 - 0.17		8.93B		647.8B	0.36A		0.71	29.36				
0.17 - 0.3		1.05B		422.6B	0.09A		1.15	28.21				
0.3 - 0.43		0.44B		268.4B	0.04A		1.35	23.74				
0.43 - 0.64		0.29B		218.8B	0.03A		1.43	36.94				
0.64 - 1.58		0.21B		207.5B	0.02A			31.89				

[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