

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS **Site ID:** 0141 **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>	22/05/96	<b>Elevation:</b>	520 metres
<b>Map Ref.:</b>	Sheet No. : 8526 DGPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6058689 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	613473 Datum: AGD66	<b>Drainage:</b>	Moderately well drained

#### Geology

<b>ExposureType:</b>	Soil pit	<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>	Mid-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	No Data
<b>Slope:</b>	14 %	<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 Mesotrophic Red Dermosol Thin Non-gravelly Silty Clayey Very deep		<b>Principal Profile Form:</b>	Gn.
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	No suitable group
All necessary analytical data are available.			

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

O1	0 - 0.02 m	Organic Layer; ;
A1	0.02 - 0.1 m	Dark reddish brown (5YR3/2-Moist); ; Silty clay loam; Weak grade of structure, <2 mm, Granular; Rough-ped fabric; Moderately moist; Very weak consistence; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
B1	0.1 - 0.3 m	Reddish brown (5YR4/4-Moist); Biological mixing, 5YR33, 2-10% , Faint; Silty clay; Moderate grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Smooth-ped fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Irregular change to -
B21	0.3 - 0.52 m	Yellowish red (5YR4/6-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, subangular, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Irregular change to -
B22	0.52 - 0.7 m	Yellowish red (5YR5/6-Moist); Substrate influence, 10YR66, 2-10% , Faint; Medium clay; Moderate grade of structure, 5-10 mm, Polyhedral; 10-20 mm, Subangular blocky; Smooth-ped fabric; Moist; Weak consistence; 10-20%, medium gravelly, 6-20mm, subangular, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse, Irregular change to -
B31	0.7 - 1.12 m	Yellowish red (5YR5/8-Moist); Substrate influence, 5YR46, 10-20% , Faint; Substrate influence, 10YR84, 2-10% , Distinct; Medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; 10-20 mm, Subangular blocky; Smooth-ped fabric; Moist; Firm consistence; 20-50%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Clear change to -
B32	1.12 - 1.87 m	Brownish yellow (10YR6/6-Moist); Substrate influence, 7.5YR58, 2-10% , Distinct; Substrate influence, 10YR82, 2-10% , Faint; Light medium clay; Moderately moist; Firm consistence; 20-50%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 5 (Raupach); Gradual change to -

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C      1.87 - 2.22 m      Strong brown (7.5YR5/6-Moist); Substrate influence, 7.5YR82, 10-20% , Distinct; Substrate influence, 7.5YR58, 2-10% , Faint; Coarse sandy clay loam; Moderately moist; Weak consistence; 20-50%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 4.5 (Raupach);

**Morphological Notes**

A1      This layer's thinness and loose consistence would indicate regular disturbance.  
B1      Numerous 8mm pores.

B32      Pale colour alternates with yellower hues. Substrate strata has variable weathering. Pale colour possibly due to perched water table.

**Observation Notes**

Site above creek incision. Substrate more weathered than other SE slopes.

**Site Notes**

COMP 121H 1575-1 190D 300M FROM TRACK

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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 - 0.1	4.85C		20.93H	4.62	1.6	0.1	0.43J 0K		27.67E	
0.1 - 0.3	4.89C		3.73H	2.16	1.03	0.05	0.42J 0K		7.39E	
0.3 - 0.52	4.59C		3.32H	2.82	1.06	0.04	1.05J 0K		8.3E	
0.52 - 0.7	4.27C		2.15H	2.49	0.83	0.04	3.01J 0K		8.52E	
0.7 - 1.12	4.07C		0.75H	1.74	0.61	0.05	5.56J 0K		8.7E	
1.12 - 1.87	3.84C		0.1H	0.73	0.25	0.05	7.81J 0K		8.94E	
1.87 - 2.22	3.86C		0.12H	0.24	0.06	0.05	5.32J 0K		5.79E	

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 - 0.1		13.95B		925B	0.49A		0.71	20.37				
0.1 - 0.3		1.69B		692B	0.1A		1.17	19				
0.3 - 0.52		0.99B		573.9B	0.06A		1.23	17.4				
0.52 - 0.7		0.97B		584.3B	0.05A		0.98	19.31				
0.7 - 1.12		0.24B		501.2B	0.02A			12.79				
1.12 - 1.87		0.1B		286.1B	0.01A			12.86				
1.87 - 2.22		0.07B		444.2B	0A			15.61				

[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