

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS **Site ID:** 0128 **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>	14/05/96	<b>Elevation:</b>	991 metres
<b>Map Ref.:</b>	Sheet No. : 8526 DGPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6050823 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	598886 Datum: AGD66	<b>Drainage:</b>	Rapidly drained

#### Geology

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<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>	Mid-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	No Data
<b>Slope:</b>	52 %	<b>Aspect:</b>	180 degrees

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

**Erosion:** Partial, Minor (sheet)

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Acidic Mesotrophic Red Kandosol Medium Slightly gravelly Loamy Clayey Deep	<b>Principal Profile Form:</b>	Gn3.14
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	Red podzolic soil
All necessary analytical data are available.		

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

O1	0 - 0.06 m	Organic Layer; ;
A1	0.06 - 0.19 m	Dark brown (7.5YR3/2-Moist); ; Sandy loam; Moderate grade of structure, <2 mm, Granular; Rough-ped fabric; Moist; Loose consistence; 2-10%, medium gravelly, 6-20mm, subangular tabular, coarse fragments; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Abrupt, Smooth change to -
A2	0.19 - 0.33 m	Brown (7.5YR4/4-Moist); Biological mixing, 7.5YR4/3, 2-10% , Faint; Silty clay; Strong grade of structure, 10-20 mm, Subangular blocky; 20-50 mm, Subangular blocky; Smooth-ped fabric; Moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 6.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
B21	0.33 - 0.5 m	Reddish brown (5YR4/4-Moist); ; Silty light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Smooth-ped fabric; Moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Common, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.5 - 0.96 m	Yellowish red (5YR4/6-Moist); ; Silty light medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moist; Weak consistence; 10-20%, cobbly, 60-200mm, subrounded tabular, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Diffuse, Irregular change to -
B3	0.96 - 1.21 m	Yellowish red (5YR5/8-Moist); ; Silty clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; Field pH 4.5 (Raupach);

#### Morphological Notes

A1	Layer highly mobile mixed with organic matter by lyrebirds etc. Darker organic layer just above layer 2. Fungal hyphae present.
A2	A dense pedal pale A2. Possibly older colluvium.

#### Observation Notes

Surface disturbance by lyrebirds produces mixture of organic matter and "A" horizon surface gravel includes basaltic cobbles.  
Dolerite dyke location uphill.

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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 - 0.06										
0.06 - 0.19	5.09C		18.81H	3.67	1.65	0.05	0.17J OK		24.35E	
0.19 - 0.33	4.45C		3.61H	1.74	0.81	0.04	1.41J OK		7.61E	
0.33 - 0.5	4.24C		1.66H	2.11	0.96	0.05	2.23J OK		7.02E	
0.5 - 0.96	4.09C		0.42H	1.41	1.39	0.07	3.61J OK		6.89E	
0.96 - 1.21	4.18C		0.08H	1.82	1.44	0.1	2.23J OK		5.66E	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
m	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS %	Silt Clay
0 - 0.06											
0.06 - 0.19		7.87B		321.1B	0.33A		0.54	21.62			
0.19 - 0.33		1.84B		183.4B	0.1A		1.24	7.07			
0.33 - 0.5		1.13B		170.7B	0.07A		1.11	2.99			
0.5 - 0.96		0.59B		156.7B	0.04A		1.17	2.31			
0.96 - 1.21		0.38B		140.4B	0.03A			5.9			

[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