Project Name: BAGO-MARAGLE FOREST SOIL SURVEY

Project Code: BGM\_FSS Site ID: 0028 Observation ID: 1

Agency Name: CSIRO Division of Soils (ACT)

**Site Information** 

Desc. By: P. Ryan Locality:

Date Desc.: Elevation: 20/02/96 1079 metres Map Ref.: Sheet No.: 8526 DGPS Rainfall: No Data Northing/Long.: 6027076 AMG zone: 55 Runoff: No Data Easting/Lat.: 612372 Datum: AGD66 Well drained Drainage:

**Geology** 

 ExposureType:
 No Data
 Conf. Sub. is Parent. Mat.:
 Probable

 Geol. Ref.:
 Sgg
 Substrate Material:
 Sandstone

**Land Form** 

Rel/Slope Class:No DataPattern Type:No DataMorph. Type:Upper-slopeRelief:No DataElem. Type:HillslopeSlope Category:No DataSlope:12 %Aspect:90 degrees

Surface Soil Condition (dry): Firm

**Erosion:** 

**Soil Classification** 

 Australian Soil Classification:
 Mapping Unit:
 N/A

 Acidic Magnesic Red Dermosol Medium Slightly gravelly
 Principal Profile Form:
 Gn4.11

Clay-loamy Clayey Moderately deep

ASC Confidence: Great Soil Group: 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 - 0.15 m Dark reddish brown (5YR3/2-Moist); Biological mixing, 5YR31, 2-10%, Faint; Clay loam;

Moderate grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subangular,

Sandstone, coarse fragments; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Few,

fine (1-2mm) roots; Abrupt, Wavy change to -

B21 0.15 - 0.35 m Yellowish red (5YR4/6-Moist); Biological mixing, 5YR32, 2-10%, Faint; Light clay; Moderate

grade of structure, 5-10 mm, Subangular blocky; 2-5 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subrounded, Sandstone, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse, Irregular

change to -

B22 0.35 - 0.62 m Red (2.5YR4/6-Moist); Clay loam; Weak grade of structure, 5-10 mm, Subangular blocky;

Rough-ped fabric; Moderately moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subrounded, Sandstone, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Irregular change to -

BC 0.62 - 0.96 m Red (2.5YR4/6-Moist); ; Medium sandy clay loam; Massive grade of structure; Earthy fabric;

Moderately moist; Weak consistence; 20-50%, coarse gravelly, 20-60mm, subrounded tabular, Sandstone, coarse fragments; Field pH 5 (Raupach); Common, very fine (0-1mm) roots; Few,

fine (1-2mm) roots; Gradual, Irregular change to -

**Morphological Notes** 

A1 Large root channel.

B21 Another large root channel.

BC Marked increase in CF's above substrate.

**Observation Notes** 

PM ordovician seds. instead of adamellite

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COMP 31H,77638-2, 249D,750M FROM RD-CK

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## **Laboratory Test Results:**

Editoriatory root resource										
Depth	рН	1:5 EC		hangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m	Ca i	wig	K	Cmol (				%
0 - 0.02										
0.02 - 0.15	4.06C		3.77H	1.39	0.82	0.03	3.63J 0K		9.64E	
0.15 - 0.35	3.84C		0.11H	0.55	8.0	0.02	4.13J 0K		5.6E	
0.35 - 0.62	3.92C		0H	0.51	0.85	0.03	2.75J 0K		4.15E	
0.62 - 0.96	4.02C		0H	0.17	0.4	0.01	1.13J 0K		1.71E	
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Tota K		Par GV	rticle Size CS FS	Analysis Silt Clay
m	%	%	mg/kg	%	%	%	Mg/m3		%	
0 - 0.02										
0.02 - 0.15		5.58B		381.2B	0.1	9A	0.93	28.77		
0.15 - 0.35		1.92B		265.5B	0.0	7A	1.33	29.53		
0.35 - 0.62		0.73B		235.9B			1.36	24.5		
0.62 - 0.96		0.27B		224.3B		-	1.00	33.53		
0.02 - 0.90		0.276		224.30	0.0	IA		33.33		
Depth	COLE		Grav	imetric/Vo	lumetric \	Water Co			K sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar g - m3/m	1 Bar 13	5 Bar 15	Bar	mm/h	mm/h
				9'	J	- <del>-</del>				

0 - 0.02 0.02 - 0.15 0.15 - 0.35 0.35 - 0.62 0.62 - 0.96

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## **Laboratory Analyses Completed for this profile**

15\_NR Sum of Ex. cations + Ex. acidity - Not recorded

Exchangeable AI - by compulsive exchange, no pretreatment for soluble salts

15E1\_AL 15E1\_CA Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble

Exchangeable H - by compulsive exchange, no pretreatment for soluble salts 15E1\_H

Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts 15E1\_K 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

Air-dry moisture content 2A1

pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1 4B2 6B2 Total organic carbon - high frequency induction furnace, volumetric

7A2

Total nitrogen - semimicro Kjeldahl , automated colour Total Phosphorus (ppm) - semimicro kjeldahl, automated colour 9A3

P10\_GRAV Gravel (%)

P3A1 Bulk density - g/cm3