

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS **Site ID:** 0086 **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>	14/03/96	<b>Elevation:</b>	1144 metres
<b>Map Ref.:</b>	Sheet No. : 8526 DGPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6047649 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	614565 Datum: AGD66	<b>Drainage:</b>	Moderately well drained

#### Geology

<b>ExposureType:</b>	No Data	<b>Conf. Sub. is Parent. Mat.:</b>	Probable
<b>Geol. Ref.:</b>	Tb	<b>Substrate Material:</b>	Basalt

#### Land Form

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	No Data
<b>Morph. Type:</b>	Lower-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	No Data
<b>Slope:</b>	36 %	<b>Aspect:</b>	270 degrees

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

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Haplic Mesotrophic Red Ferrosol Medium Slightly gravelly Clay-loamy Clayey Very deep	<b>Principal Profile Form:</b>	Um6.13
<b>ASC Confidence:</b> All necessary analytical data are available.	<b>Great Soil Group:</b>	Krasnozern

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

O1	0 - 0.03 m	Organic Layer; ;
A1	0.03 - 0.21 m	Dark reddish brown (5YR2.5/2-Moist); Biological mixing, 5YR33, 10-20% , Faint; Clay loam; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Common, coarse (>5mm) roots; Clear, Wavy change to -
B21	0.21 - 0.39 m	Dark reddish brown (5YR3/4-Moist); Biological mixing, 5YR32, 2-10% , Distinct; Clay loam; Moderate grade of structure, 5-10 mm, Subangular blocky; 2-5 mm, Granular; Rough-ped fabric; Moist; Weak consistence; 10-20%, medium gravelly, 6-20mm, subrounded tabular, coarse fragments; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Many, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.39 - 0.7 m	Dark reddish brown (5YR3/4-Moist); ; Clay loam; Moderate grade of structure, 2-5 mm, Granular; 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subrounded tabular, coarse fragments; Field pH 6.5 (Raupach); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B23	0.7 - 1.33 m	Dark red (2.5YR3/6-Moist); ; Light clay; Moderate grade of structure, 2-5 mm, Granular; 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, subrounded tabular, coarse fragments; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse change to -
B3	1.33 - 2.03 m	Strong brown (7.5YR4/6-Moist); ; Moderate grade of structure; Smooth-ped fabric; Wet; Firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (Raupach);

#### Morphological Notes

A1	Structure due to faunal casting.
B21	Next 3 layers have a fluffy loose consistence and crumb structure. Could be related to colluvial origins.
B3	Auger hit root at 2m but soil was already saturated.

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**Site Notes**

275M WSW UP CREEK FROM ROAD 4018-1

Pit just above creek. Basalt colluvium is PM.



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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 - 0.21	4.98C		16.03H	3.09	1.38	0.07	1.6J 0K		22.17E	
0.21 - 0.39	5.17C		9.9H	2.71	1.64	0.08	0.74J 0K		15.06E	
0.39 - 0.7	5.14C		4.39H	1.65	1.44	0.08	0.46J 0K		8.02E	
0.7 - 1.33	5.06C		2.33H	0.82	0.82	0.04	0.53J 0K		4.54E	
1.33 - 2.03	4.57C		4.54H	5.64	0.24	0.06	0.42J 0K		10.9E	

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 - 0.03											
0.03 - 0.21		9.26B		3406.6B	0.38A		0.58	46.15			
0.21 - 0.39		5.27B		2966.8B	0.25A		0.74	34.58			
0.39 - 0.7		3.45B		2631.3B	0.16A		0.69	29.59			
0.7 - 1.33		2.52B		2714B	0.12A		0.80	25.33			
1.33 - 2.03		0.37B		1443.8B	0.02A			53.69			

[illegible]

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**Laboratory Analyses Completed for this profile**

13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
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