Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0121** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By:	N.J. McKenzie	**Locality:**	
Date Desc.:	07/05/96	**Elevation:**	1168 metres
Map Ref.:	Sheet No. : 8526 DGPS	**Rainfall:**	No Data
Northing/Long.:	6047079 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	604613 Datum: AGD66	**Drainage:**	Imperfectly drained

Geology

ExposureType:	No Data	**Conf. Sub. is Parent. Mat.:**	Probable
Geol. Ref.:	No Data	**Substrate Material:**	Granodiorite

Land Form

Rel/Slope Class:	No Data	**Pattern Type:**	No Data
Morph. Type:	Lower-slope	**Relief:**	No Data
Elem. Type:	Hillslope	**Slope Category:**	No Data
Slope:	3 %	**Aspect:**	135 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Acidic-Mottled Dystrophic Grey Kandosol Medium Non-gravelly Silty Silty Very deep

Mapping Unit: N/A
Principal Profile Form: Um6.14

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: N/A

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A1	0.01 - 0.15 m	Very dark greyish brown (10YR3/2-Moist); ; Silty clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
B1	0.11 - 0.33 m	Yellowish brown (10YR5/4-Moist); Biological mixing, 10YR32, 20-50% , Distinct; Silty clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, subangular platy, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
B2	0.33 - 0.61 m	Light brownish grey (10YR6/2-Moist); Substrate influence, 7.5YR58, 20-50% , Faint; Biological mixing, 10YR32, 2-10% , Distinct; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Clear, Wavy change to -
C1	0.61 - 1.36 m	Light brownish grey (10YR6/2-Moist); Mottles, 10YR82, 20-50% , Distinct; Substrate influence, 7.5YR58, 10-20% , Prominent; Sandy loam; Massive grade of structure; Moist; Weak consistence; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Soft segregations, weak, segregations;Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
C2	1.36 - 2.26 m	Brownish yellow (10YR6/6-Moist); Substrate influence, 7.5YR68, 10-20% , Distinct; Mottles, 10YR82, 10-20% , Distinct; Medium sandy clay loam; Massive grade of structure; Wet; Weak consistence; Field pH 5 (Raupach); Gradual, Smooth change to -
C3	2.26 - 2.86 m	Yellowish brown (10YR5/6-Moist); Substrate influence, 10YR64, 10-20% , Distinct; Medium sandy clay loam; Massive grade of structure; Wet; Weak consistence; Field pH 5 (Raupach);

Morphological Notes

A1 Moderate structure in A1 with much worm activity.

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B1	Large worm channels backfilled with A1. Moderate structure os due to worms. Very pale yellow most iron is Fe2+ or gone.
B2	Pale yellow earthy B2.
C1	C horizon has some Fe staining but most has been removed saprolite rather than tranported colluvium.
C2	Yellowing and iron still in situ with micas and mafic minerals evident.
C3	Similar to layer 5 but stonger yellowing.

Observation Notes

Site Notes

COMP 72H 4179-1 90M FR/SADDLE 182DEG

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Project Code: BGM_FSS **Site ID:** 0121 **Observation ID:** 1
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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations Ca	Mg	K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.01										
0.01 - 0.15	3.93C		1.48H	0.7	0.61	0.06	4.64J 0K		7.49E	
0.11 - 0.33	3.99C		0.05H	0.17	0.16	0.07	2.47J 0K		2.91E	
0.33 - 0.61	4C		0.05H	0.14	0.19	0.03	1.89J 0K		2.3E	
0.61 - 1.36	4.03C		0.07H	0.09	0.12	0.03	1.79J 0K		2.1E	
1.36 - 2.26	3.91C		0.07H	0.1	0.15	0.04	2.18J 0K		2.54E	
2.26 - 2.86	3.9C		5.2H	2.28	0.42	0.13	5.5J 0K		13.53E	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.01												
0.01 - 0.15		4.57B		393.2B	0.24A		0.86	8.54				
0.11 - 0.33		1.12B		206.4B	0.09A		1.08	7.43				
0.33 - 0.61		0.31B		130.3B	0.02A		1.40	5.22				
0.61 - 1.36		0.31B		117.1B	0.03A		1.27	7.22				
1.36 - 2.26		0.08B		105.9B	0.01A			5.99				
2.26 - 2.86		0.07B		149.8B	0.01A			6.55				

Depth	COLE	Gravimetric/Volumetric Water Contents Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	K sat	K unsat
m		g/g - m3/m3							mm/h	mm/h
0 - 0.01										
0.01 - 0.15										
0.11 - 0.33										
0.33 - 0.61										
0.61 - 1.36										
1.36 - 2.26										
2.26 - 2.86										

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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