Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0025** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By:	P. Ryan	**Locality:**	
Date Desc.:	16/12/95	**Elevation:**	700 metres
Map Ref.:	Sheet No. : 8526 DGPS	**Rainfall:**	No Data
Northing/Long.:	6030114 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	609583 Datum: AGD66	**Drainage:**	Moderately well drained

Geology

ExposureType:	Soil pit	**Conf. Sub. is Parent. Mat.:**	Probable
Geol. Ref.:	Sgg	**Substrate Material:**	Granite

Land Form

Rel/Slope Class:	No Data	**Pattern Type:**	No Data
Morph. Type:	Upper-slope	**Relief:**	No Data
Elem. Type:	Hillslope	**Slope Category:**	No Data
Slope:	25 %	**Aspect:**	0 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Bleached Mesotrophic Yellow Kurosol Thin Gravelly Clay-loamy Clayey Deep

Mapping Unit: N/A
Principal Profile Form: Dy5.41

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: Yellow podzolic soil

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.05 m	Very dark greyish brown (10YR3/2-Moist); ; Coarse sandy clay loam; Moderate grade of structure, 2-5 mm, Granular; 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Abrupt, Smooth change to -
A21j	0.05 - 0.18 m	Yellowish brown (10YR5/4-Moist); Biological mixing, 10YR64, 10-20% , Faint; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Irregular change to -
A22e	0.18 - 0.33 m	Light yellowish brown (10YR6/4-Moist); Very pale brown (10YR8/3-Dry); Biological mixing, 10YR54, 2-10% , Faint; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Clear, Wavy change to -
B21t	0.33 - 0.47 m	Reddish yellow (7.5YR6/6-Moist); Substrate influence, 10YR64, 10-20% , Faint; Light medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Clear, Wavy change to -
B22t	0.47 - 0.85 m	Yellowish red (5YR4/6-Moist); Substrate influence, 7.5YR54, 10-20% , Faint; Substrate influence, 10YR74, 2-10% , Distinct; Medium clay; Strong grade of structure, 20-50 mm, Prismatic; 10-20 mm, Angular blocky; Smooth-ped fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Irregular change to -
C	0.85 - 1.4 m	Yellowish brown (10YR5/6-Moist); Substrate influence, 5YR46, 2-10% , Prominent; Light clay; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 5 (Raupach);

Morphological Notes

A22e Slight cementation could indicate densipan development.

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B22t	Vertical ped surfaces provide preferential pathways for roots and water. Mottling occurs along these surfaces which are wet.
C	Root channels penetrate this layer from above causing some clay skin surfaces.

Observation Notes

Site Notes

COMP 43H,74279-1,253D,100M FROM TRACK

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0025 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

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 - 0.05	4.38C		4.87H	0.84	0.36	0.01	0.8J 0.06K		6.94E	
0.05 - 0.18	4.11C		0.64H	0.37	0.17	0.02	0.63J 0K		1.82E	
0.18 - 0.33	4.23C		0.86H	0.57	0.31	0.02	0.35J 0K		2.11E	
0.33 - 0.47	4.12C		2.53H	1.71	0.44	0.04	0.84J 0K		5.57E	
0.47 - 0.85	4.22C		3.61H	2.85	0.45	0.12	0.77J 0K		7.8E	
0.85 - 1.4	4.09C		4.18H	4.26	0.32	0.39	1.85J 0K		11E	

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 - 0.05		2.72B		345.3B	0.09A		1.29	26.78				
0.05 - 0.18		0.48B		188.3B	0.02A		1.47	31.43				
0.18 - 0.33		0.21B		125.3B	0.01A		1.62	43.59				
0.33 - 0.47		0.27B		101.8B	0.02A		1.71	48.56				
0.47 - 0.85		0.32B		119.9B	0.03A		1.73	41.42				
0.85 - 1.4		0.13B		100.6B	0.01A			27.96				

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 - 0.05										
0.05 - 0.18										
0.18 - 0.33										
0.33 - 0.47										
0.47 - 0.85										
0.85 - 1.4										

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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