

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0163 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	11/04/97	Elevation:	1289 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6033915 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	617055 Datum: AGD66	Drainage:	Well drained

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	Probable
Geol. Ref.:	Os	Substrate Material:	Sandstone

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:	8 %	Aspect:	270 degrees

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Acidic Dystrophic Red Dermosol Thin Gravelly Loamy Clay-loamy Very deep	Principal Profile Form:	Gn3.11
ASC Confidence:	Great Soil Group:	No suitable group
All necessary analytical data are available.		

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: 10-20%, fine gravelly, 2-6mm, angular tabular, Coal; 10-20%, medium gravelly, 6-20mm, angular tabular, Coal

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A1	0.01 - 0.09 m	(7.5YR2.5/2-Moist); ; Loam; Moderate grade of structure, <2 mm, Granular; Rough-ped fabric; Dry; Loose consistence; 10-20%, fine gravelly, 2-6mm, angular tabular, Coal, coarse fragments; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Abrupt, Smooth change to -
A3	0.09 - 0.2 m	Dark reddish brown (5YR3/2-Moist); Dark brown (7.5YR3/4-Dry); Biological mixing, 5YR34, 2-10% , Faint; Silty clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Rough-ped fabric; Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, angular tabular, Coal, coarse fragments; Field pH 5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Irregular change to -
B1	0.2 - 0.36 m	Dark reddish brown (5YR3/4-Moist); ; Silty clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Rough-ped fabric; Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, angular, Coal, coarse fragments; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Clear, Smooth change to -
B21	0.36 - 0.66 m	Dark red (2.5YR3/6-Moist); ; Silty clay loam; Moderate grade of structure, 20-50 mm, Angular blocky; 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Very firm consistence; 2-10%, fine gravelly, 2-6mm, angular tabular, Coal, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Irregular change to -
B22	0.66 - 0.96 m	Red (2.5YR4/6-Moist); ; Silty clay loam; Moderate grade of structure, 20-50 mm, Angular blocky; 2-5 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular tabular, Coal, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots;
B22	0.96 - 1.91 m	Red (2.5YR4/6-Moist); ; Silty clay loam; Moderate grade of structure; Smooth-ped fabric; Moderately moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, angular tabular, Coal, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Clear change to -

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B23 1.91 - 2.71 m Red (2.5YR4/6-Moist); ; Silty clay loam; Weak grade of structure; Earthy fabric; Moderately moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, subangular, coarse fragments; Field pH 4.5 (Raupach); Clear change to -
2.71 - 2.81 m Red (2.5YR4/6-Moist); ; Medium sandy clay loam; 10-20%, medium gravelly, 6-20mm, subangular, coarse fragments; Field pH 4.5 (Raupach);

Morphological Notes

A1 Mixing of organic matter and soil by fauna.
A3 Possible pale A2 horizon.

B1 Large infill root channel.

B21 2 large infill root channels.

B22 One large infill root channel.

B23 Increase in sandstone gravel.

Gravel content prevents auger penetration.

Observation Notes

New ash growth plot, young regeneration - bmp10. Stan's trail east of Nuremeremo-ng. This could be a major aeolian dust deposition site.

Site Notes

STAN'S TRAIL, COMP 9, YOUNG ASH PLOT 1

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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 - 0.01										
0.01 - 0.09	4.31C		5.58H	2.06	1.22	0	7.43J 0K		16.29E	
0.09 - 0.2	4.14C		0.76H	0.42	0.75	0	8.36J 0K		10.29E	
0.2 - 0.36	4.13C		0.47H	0.74	0.54	0	4.95J 0K		6.71E	
0.36 - 0.66	4.04C		0.3H	0.78	0.77	0	5.81J 0K		7.66E	
0.66 - 0.96	3.95C		0.18H	0.56	0.65	0	6.18J 0K		7.56E	
0.96 - 1.91	3.89C		0.03H	0.14	0.68	0	6.79J 0K		7.64E	
1.91 - 2.71	3.93C		0.02H	0.09	0.41	0	4.96J 0K		5.48E	
2.71 - 2.81	4.01C		0.04H	0.11	0.25	0	2.82J 0K		3.22E	

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
		%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.01												
0.01 - 0.09		15.86B		521.1B	0.42A		0.52	10.98				
0.09 - 0.2		7.98B		418.1B	0.28A		0.88	3.01				
0.2 - 0.36		2.16B		311.8B	0.11A		1.00	2.46				
0.36 - 0.66		1.12B		285.9B	0.06A		1.17	2.92				
0.66 - 0.96		0.91B		237B	0.06A		1.69	2.11				
0.96 - 1.91		0.43B		295.8B	0.03A			1.02				
1.91 - 2.71		0.17B		297.1B	0.02A			1.34				
2.71 - 2.81		0.14B		272.9B	0.02A			19.61				

[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