

Project Name: BAGO-MARAGLE ESM
Project Code: BGM_ESM **Site ID:** 1002 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: P. Ryan	Locality:
Date Desc.: 12/12/94	Elevation: 1145 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6056545 AMG zone: 55	Runoff: Slow
Easting/Lat.: 603033 Datum: AGD66	Drainage: Well drained

Geology

ExposureType: Soil pit	Conf. Sub. is Parent. Mat.: Probable
Geol. Ref.: SGGH	Substrate Material: Granodiorite

Land Form

Rel/Slope Class: No Data	Pattern Type: No Data
Morph. Type: Mid-slope	Relief: No Data
Elem. Type: Hillslope	Slope Category: No Data
Slope: 5 %	Aspect: 315 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Acidic Dystrophic Red Dermosol Thin Non-gravelly Clayey Clayey 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:

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A1	0.01 - 0.09 m	Dark reddish brown (5YR3/3-Moist); Biological mixing, 10-20% , Faint; Light clay; Strong grade of structure, 5-10 mm, Polyhedral; 100-200 mm, Lenticular; Rough-ped fabric; Moderately moist; Weak consistence; Moderately plastic; Slightly sticky; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (pH meter); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Abrupt, Smooth change to -
A3	0.09 - 0.19 m	Reddish brown (5YR4/4-Moist); Biological mixing, 10-20% , Faint; Light clay; Moderate grade of structure, 5-10 mm, Polyhedral; 100-200 mm, Lenticular; Rough-ped fabric; Moderately moist; Weak consistence; Moderately plastic; Slightly sticky; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (pH meter); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Wavy change to -
B1	0.19 - 0.33 m	Yellowish red (5YR4/6-Moist); Biological mixing, 2-10% , Faint; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; 100-200 mm, Lenticular; Smooth-ped fabric; Moderately moist; Weak consistence; Moderately plastic; Slightly sticky; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 5 (pH meter); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B21	0.33 - 0.61 m	Dark reddish brown (5YR3/4-Moist); Biological mixing, 2-10% , Faint; Light clay; Weak grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Weak consistence; Very plastic; Slightly sticky; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (pH meter); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Diffuse, Smooth change to -
B22	0.61 - 1.01 m	Red (2.5YR4/6-Moist); ; Light clay; Moderate grade of structure, 2-5 mm, Polyhedral; 50-100 mm, Columnar; Smooth-ped fabric; Moderately moist; Weak consistence; Very plastic; Slightly sticky; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 5 (pH meter); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots;
B22	1.01 - 1.51 m	Red (2.5YR4/6-Moist); ; Clay loam; Moist; Very plastic; Superplastic; Slightly sticky; Field pH 5 (pH meter);

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B23	1.51 - 2.71 m	Dark reddish brown (5YR3/4-Moist); Substrate influence, 2-10% , Faint; Light clay; Moist; Very plastic; Moderately sticky; 2-10%, medium gravelly, 6-20mm, subangular, dispersed, Granodiorite, coarse fragments; Field pH 4.5 (pH meter);
B3	2.71 - 3.41 m	Yellowish red (5YR4/6-Moist); Substrate influence, 10-20% , Distinct; Coarse sandy clay loam; Moist; Slightly plastic; Slightly sticky; 10-20%, medium gravelly, 6-20mm, dispersed, Granodiorite, coarse fragments; Field pH 5 (pH meter);
C	3.41 - 3.81 m	Brownish yellow (10YR6/6-Moist); Substrate influence, 10-20% , Faint; Coarse sandy clay loam; Moist; Slightly plastic; Slightly sticky; 10-20%, medium gravelly, 6-20mm, dispersed, Granodiorite, coarse fragments;

Morphological Notes

A1	High faunal activity has produced strong structure.
B22	Superplastic - LMC goes to CL after 3-5 minutes.
C	Weathered saprolite - no substrate contact.

Observation Notes

Upslope from trial. Auger samples from 1 metre. Substrate >3.8 m.

Site Notes

VI/1.44 ALPINE ASH GROWTH PLOT-JIFFY P

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Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Exchangeable Cations			Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
			Ca	Mg	K					
0.01 - 0.09	3.84C 4.75A		2.85H	2.04	1.8	0.22	7.29J 0K		14.2E	
0.09 - 0.19	3.82C 4.8A		0.77H	1	1.24	0.14	5.6J 0K		8.75E	
0.19 - 0.33										
0.31 - 0.39	3.8C 4.72A		0.14H	0.7	0.84	0.12	5.78J 0K		7.58E	
0.71 - 0.81	3.71C 4.72A		0.06H	0.3	0.66	0.08	6.38J 0K		7.47E	
1.21 - 1.31	3.65C 4.77A		0.1H	0.4	0.44	0.11	5.35J 0K		6.4E	
2.01 - 2.21	3.69C 4.8A		0.09H	0.33	0.33	0.25	5.03J 0K		6.02E	
2.91 - 3.11	3.73C 4.75A		0.04H	0	0.1	0.03	0.93J 0K		1.1E	

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
	%	C	P	P	N	K		Density	GV		CS	FS
m		%	mg/kg	%	%	%	Mg/m3			%		
0.01 - 0.09		6.64B		462.1B	0.2A		0.89	10.26				
0.09 - 0.19		3.46B		512.7B	0.14A		1.04	15.96				
0.19 - 0.33							1.08					
0.31 - 0.39		1.39B		923.1B	0.06A		1.08	5.75				
0.71 - 0.81		0.43B		265B	0.03A		1.08	7.07				
1.21 - 1.31		0.28B		200.8B	0.02A			6.48				
2.01 - 2.21		0.37B		229.5B	0.03A			4.54				
2.91 - 3.11		0.14B		138.6B	0.01A			7.15				

[illegible]

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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
4A1	pH of 1:5 soil/water suspension
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