

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0089 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	15/04/96	Elevation:	1122 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6041427 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	607632 Datum: AGD66	Drainage:	Well drained

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	Probable
Geol. Ref.:	Tb	Substrate Material:	Basalt

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:	22 %	Aspect:	90 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Humose-Acidic Eutrophic Red Dermosol Medium Slightly gravelly Clay-loamy Clayey Deep	Mapping Unit:	N/A
ASC Confidence:	All necessary analytical data are available.	Principal Profile Form:	Um6.33
Site Disturbance:	No effective disturbance. Natural	Great Soil Group:	Chocolate soil

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.05 m	Organic Layer; ;
A1	0.05 - 0.16 m	Dark reddish brown (2.5YR3/3-Moist); Brown (7.5YR4/4-Dry); ; Silty clay loam; Moderate grade of structure, <2 mm, Granular; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Very weak consistence; 2-10%, coarse gravelly, 20-60mm, subrounded tabular, Basalt, coarse fragments; Field pH 4.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Wavy change to -
B21	0.16 - 0.3 m	Dark reddish brown (2.5YR3/4-Moist); ; Silty clay; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Very weak consistence; 2-10%, coarse gravelly, 20-60mm, subrounded tabular, Basalt, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B22	0.3 - 0.51 m	Dark reddish brown (2.5YR3/4-Moist); ; Silty clay; Strong grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Smooth-ped fabric; Moist; Very weak consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B23	0.51 - 0.79 m	Dark reddish brown (2.5YR3/4-Moist); Biological mixing, 5YR32, 2-10% , Faint; Silty clay loam; Strong grade of structure, 2-5 mm, Polyhedral; 10-20 mm, Subangular blocky; Smooth-ped fabric; Moist; Weak consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Irregular change to -
B3	0.79 - 1.5 m	Dark reddish brown (2.5YR3/4-Moist); ; Silty clay loam; Strong grade of structure, 2-5 mm, Polyhedral; 10-20 mm, Subangular blocky; Smooth-ped fabric; Moist; Weak consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots;

Morphological Notes

A1	Even after rain there are patches of dry hydrophobic soil below the litter. Little OM accumulation so there could be active disturbance by lyrebirds and wombats
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B21 Rest of profile is very moist.

B3 Increase in large CFs.

Observation Notes

Hillslope with wombat holes and lyrebird activity. Site below mountain gum bole.

Site Notes

COMP 114H 42D 290M FR/CR/RD 8576-1

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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 - 0.05										
0.05 - 0.16	4.52C		4.44H	2.22	1.29	0.21	2.52J OK		10.67E	
0.16 - 0.3	4.66C		4.46H	3.12	1.96	0.13	2.28J OK		11.95E	
0.3 - 0.51	4.56C		4.53H	3.57	1.7	0.13	1.68J OK		11.6E	
0.51 - 0.79	4.53C		4.58H	3.24	1.08	0.1	1.24J OK		10.23E	
0.79 - 1.5	4.49C		4.36H	3.5	0.84	0.15	1.39J OK		10.22E	

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 - 0.05											
0.05 - 0.16		5.21B		2854.7B	0.16A		0.54	49.09			
0.16 - 0.3		2.61B		2774.4B	0.14A		0.91	27.01			
0.3 - 0.51		1.31B		1667.2B	0.1A		0.88	23.35			
0.51 - 0.79		0.84B		1465.3B	0.08A		0.89	26.71			
0.79 - 1.5		0.6B		1910.7B	0.06A			36.45			

[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