

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0124 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	08/05/96	Elevation:	1179 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6046350 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	605586 Datum: AGD66	Drainage:	Rapidly drained

Geology

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

Land Form

Rel/Slope Class:	No Data	Pattern Type:	No Data
Morph. Type:	Crest	Relief:	No Data
Elem. Type:	Hillcrest	Slope Category:	No Data
Slope:	9 %	Aspect:	270 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Acidic-Mottled Mesotrophic Yellow Kandosol Medium Slightly gravelly Silty Clayey Very deep	Principal Profile Form:	Gn2.21

ASC Confidence:	Great Soil Group:	N/A
All necessary analytical data are available.		

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

Vegetation:

Surface Coarse Fragments: 2-10%, cobbly, 60-200mm, subangular, Granodiorite

Profile Morphology

O1	0 - 0.02 m	Organic Layer; ;
A1	0.02 - 0.12 m	Brown (7.5YR4/2-Moist); Biological mixing, 7.5YR66, 2-10% , Distinct; Silty clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, angular, dispersed, Granodiorite, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
A3	0.12 - 0.22 m	Brown (7.5YR4/2-Moist); Biological mixing, 7.5YR54, 20-50% , Faint; Silty clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, angular, dispersed, Granodiorite, coarse fragments; Common cutans, 10-50% 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 -
B21	0.22 - 0.52 m	Yellowish red (5YR5/6-Moist); Biological mixing, 7.5YR42, 2-10% , Faint; Light clay; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, angular, dispersed, Granodiorite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B22	0.52 - 0.87 m	Reddish yellow (7.5YR6/6-Moist); Biological mixing, 7.5YR32, 2-10% , Prominent; Silty clay loam; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moderately moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, angular, dispersed, Granodiorite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; 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 -
C1	0.87 - 1.77 m	Pale yellow (2.5Y7/4-Moist); Mottles, 10YR44, 10-20% , Distinct; Clayey sand; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 5 (Raupach); Clear, Smooth change to -
C2	1.72 - 2.32 m	Pale yellow (2.5Y7/4-Moist); Substrate influence, 10YR83, 20-50% , Faint; Clayey sand; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 6 (Raupach); Gradual, Smooth change to -

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C3 2.32 - 3.02 m Yellowish brown (10YR5/4-Moist); Substrate influence, 10YR64, 20-50% , Distinct; Clayey sand; Massive grade of structure; Moderately moist; Very weak consistence; Field pH 5.5 (Raupach);

Morphological Notes

A1 Rocks and many roots from adjacent stump and saplings.

A3 More an A1 than B1 with good structure due to worms.
B21 An earthy yellow brown B21 with some very large infilled root channels from nearby stump.

B22 Similar to 3 but fewer macropores and roots.
C1 Beginning of C and a relatively shallow depth. One large rotten cobble of granodiorite augered through at base of layer (see slide).
C2 More pale C horizon.

C3 C3 horizon yellowing and suggestive of R horizon not far below.

Observation Notes

Residual site on edge of crest. As with BM123 profile is yellow - brown and without strong structure. Suggests youthful. Again many angular CFs in upper profile. Site is being cut by Paddys Riv

Site Notes

40445-1 COMP85H 280M FR P.RIV.90M,187D

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Cations		Exchangeable	CEC	ECEC	ESP
m		dS/m		Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.02									
0.02 - 0.12	4.44C		4.13H	1.05	0.76	0.06	2.93J 0K	8.94E	
0.12 - 0.22	4.37C		1.03H	0.63	0.54	0.04	1.66J 0K	3.9E	
0.22 - 0.52	4.19C		0.32H	0.59	0.64	0.04	1.64J 0K	3.24E	
0.52 - 0.87	4.22C		0.46H	0.57	0.64	0.05	1.12J 0K	2.84E	
0.87 - 1.77	4.54C		0.09H	0.09	0.23	0.04	0.42J 0K	0.87E	
1.72 - 2.32	4.59C		0.06H	0.06	0.16	0.03	0.22J 0K	0.53E	
2.32 - 3.02	4.13C		0.09H	0.06	0.21	0.05	1.13J 0K	1.54E	

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 - 0.02												
0.02 - 0.12		5.31B		633.9B	0.23A		0.80	11.2				
0.12 - 0.22		1.92B		518.7B	0.1A		1.07	5.75				
0.22 - 0.52		0.72B		500B	0.04A		1.30	6.44				
0.52 - 0.87		0.38B		733.1B	0.02A		1.39	5.78				
0.87 - 1.77		0.17B		989.4B	0.01A			6.7				
1.72 - 2.32		0.08B		911.4B	0A			4.8				
2.32 - 3.02		0.04B		576.8B	0A			7.78				

[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
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