

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0156 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: P. Ryan	Locality:
Date Desc.: 08/04/97	Elevation: 1114 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6042227 AMG zone: 55	Runoff: No Data
Easting/Lat.: 603869 Datum: AGD66	Drainage: Poorly drained

Geology

ExposureType: Undisturbed soil core	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: Tb	Substrate Material: Granodiorite

Land Form

Rel/Slope Class: No Data	Pattern Type: No Data
Morph. Type: Flat	Relief: No Data
Elem. Type: Valley flat	Slope Category: No Data
Slope: 0 %	Aspect: 225 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Melacic Kandosolic Redoxic Hydrosol Medium Non-gravelly Silty Clay-loamy Moderately deep	Principal Profile Form: Uf3.
ASC Confidence: All necessary analytical data are available.	Great Soil Group: Wiesenboden

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.03 m	Organic Layer; ;
A11	0.03 - 0.12 m	Very dark brown (10YR2/2-Moist); ; Silty clay loam; Moderate grade of structure, 10-20 mm, Angular blocky; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Root linings; Field pH 4.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Clear change to -
A12	0.12 - 0.21 m	Very dark grey (10YR3/1-Moist); ; Silty clay loam; Moderate grade of structure, 10-20 mm, Angular blocky; 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Root linings; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear change to -
A2	0.21 - 0.39 m	Brown (10YR5/3-Moist); Substrate influence, 10YR56, 2-10% , Faint; Silty clay; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; Field pH 4 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear change to -
B2	0.39 - 0.68 m	Yellowish brown (10YR5/6-Moist); Substrate influence, 10YR53, 10-20% , Faint; Silty clay; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Clear change to -
C11	0.68 - 0.98 m	Grey (10YR6/1-Moist); Substrate influence, 10YR56, 0-2% , Faint; Medium sandy clay loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Clear change to -
C12	0.98 - 1.58 m	Light brownish grey (2.5Y6/2-Moist); Substrate influence, 10YR56, 2-10% , Faint; Medium sandy clay loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Weak consistence; Field pH 5.5 (Raupach); Gradual change to -
C2	1.58 - 2.28 m	; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Weak consistence; Field pH 6 (Raupach); Clear change to -

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C3 2.28 - 3.63 m ; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Weak consistence; Field pH 7 (Raupach);

Morphological Notes

A11 Organic rich. Basalt colluvium?

A2 Pale A2 horizon.

B2 Muscovite and quartz in sand fraction.

C11 At top of layer there is a layer of 2-6mm quartz gravel. Remainder of layer is pale weathered granodiorite. Muscovite rich, quartz poor.

C12 Weathering granodiorite with some brown mottling. Muscovite rich, quartz poor.

C2 Less weathered granodiorite, sandy with banded Fe-stained areas.

C3 Weathered granodiorite - no Fe-staining

Observation Notes

Site is in a broad drainage line supposedly with basalt on either side. A surprising shallow profile with little influence of basalt.

Site Notes

BURRA RD, HEAD OF MCCABES GULLY

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Laboratory Test Results:

[illegible]

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 - 0.03												
0.03 - 0.12		5.07B		1072.1B	0.39A		0.81	5.68				
0.12 - 0.21		2.5B		560.1B	0.18A		0.96	4.4				
0.21 - 0.39		0.94B		287.7B	0.08A		1.26	6.28				
0.39 - 0.68		0.57B		319.5B	0.05A		1.38	14.71				
0.68 - 0.98		0.14B		352.3B	0.02A			5.07				
0.98 - 1.58		0.11B		314.4B	0.01A			7.87				
1.58 - 2.28								8				
2.28 - 3.63								8.36				

[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