Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0093** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: P. Ryan
Date Desc.: 16/04/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6042490 AMG zone: 55
Easting/Lat.: 608939 Datum: AGD66
Locality:
Elevation: 1189 metres
Rainfall: No Data
Runoff: No Data
Drainage: No Data

Geology

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

Land Form

Rel/Slope Class: No Data
Morph. Type: Simple-slope
Elem. Type: Hillslope
Slope: 8 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 135 degrees

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Dystrophic Red Kandosol Thin Non-gravelly Loamy Clayey Very deep
Mapping Unit: N/A
Principal Profile Form: Gn4.14
ASC Confidence:
All necessary analytical data are available.
Great Soil Group: Red earth

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.03 m	Organic Layer; ;
A1	0.03 - 0.12 m	(7.5YR2.5/1-Moist); ; Clay loam; Weak grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Very weak consistence; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
A2	0.12 - 0.21 m	Very dark greyish brown (10YR3/2-Moist); Biological mixing, 10-20% , Distinct; Clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 6 (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 -
B1	0.21 - 0.32 m	Brown (7.5YR4/3-Moist); Biological mixing, 7.5YR32, 2-10% , Faint; Light clay; Moderate grade of structure, 5-10 mm, Polyhedral; 10-20 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 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; Gradual, Smooth change to -
B21	0.32 - 0.61 m	Yellowish red (5YR4/6-Moist); Biological mixing, 7.5YR32, 2-10% , Faint; Medium sandy clay; Weak grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Diffuse, Smooth change to -
B22	0.61 - 0.88 m	Yellowish red (5YR4/6-Moist); ; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B3	0.88 - 1.33 m	Yellowish brown (10YR5/8-Moist); ; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, subrounded, Granodiorite, coarse fragments; Field pH 5 (Raupach); Clear change to -
C1	1.33 - 1.93 m	Yellowish brown (10YR5/4-Moist); ; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Field pH 5 (Raupach); Diffuse change to -
C2	1.93 - 3.03 m	Light brownish grey (2.5Y6/3-Moist); ; Clayey coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Field pH 4 (Raupach);

Morphological Notes

A2 Pale A2

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B22	Muscovite mica becomes common.
C1	Weathering granodiorite.
C2	As for layer 7

Observation Notes
Site is 260m west of Burra Rd junction and 20m south of road. Site has large tors.

Site Notes
COMP 100H BP ASH CK RD BURRA RD JUNC

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.03										
0.03 - 0.12	4.86C		12.63H	1.97	1.09	0.09	0.74J 0K		16.52E	
0.12 - 0.21	4.87C		5.99H	1.15	0.95	0.07	0.81J 0K		8.97E	
0.21 - 0.32	4.46C		1.99H	0.87	1.03	0.03	1.35J 0K		5.28E	
0.32 - 0.61	4.06C		0.13H	0.54	0.7	0.03	2.49J 0K		3.89E	
0.61 - 0.88	4.05C		0H	0.26	0.41	0	1.95J 0K		2.61E	
0.88 - 1.33	4.11C		0H	0.14	0.46	0.05	1.31J 0K		1.98E	
1.33 - 1.93	4.11C		0H	0.11	0.5	0.06	1.13J 0K		1.8E	
1.93 - 3.03	4.07C		0H	0.06	0.12	0.06	1.29J 0K		1.54E	

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.03												
0.03 - 0.12		7.54B		590.7B	0.35A		0.89	32.81				
0.12 - 0.21		3.15B		459.6B	0.2A		1.15	29.77				
0.21 - 0.32		1.34B		296.7B	0.08A		1.19	27.91				
0.32 - 0.61		0.58B		278B	0.05A		1.17	31.13				
0.61 - 0.88		0.24B		244.4B	0.03A		1.30	22.5				
0.88 - 1.33		0.1B		263.6B	0.02A			13.62				
1.33 - 1.93		0.07B		267.7B	0.01A			12.08				
1.93 - 3.03		0.08B		308.4B	0.01A			15.75				

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m		g/g - m3/m3							mm/h	mm/h
0 - 0.03										
0.03 - 0.12										
0.12 - 0.21										
0.21 - 0.32										
0.32 - 0.61										
0.61 - 0.88										
0.88 - 1.33										
1.33 - 1.93										
1.93 - 3.03										

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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