Project Name: **BAGO-MARAGLE FOREST SOIL SURVEY**
Project Code: **BGM_FSS** **Site ID:** **0042** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: P. Ryan
Date Desc.: 23/02/96
Map Ref.: Sheet No. : 8526 DGPS
Northing/Long.: 6035903 AMG zone: 55
Easting/Lat.: 610858 Datum: AGD66
Locality:
Elevation: 1112 metres
Rainfall: No Data
Runoff: No Data
Drainage: Well drained

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: Upper-slope
Elem. Type: Hillslope
Slope: 10 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 225 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Mesotrophic Red Kandosol Thin Gravelly Clay-loamy Clay-loamy Deep

Mapping Unit: N/A
Principal Profile Form: Gn2.41

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: Red earth

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.02 m	Organic Layer; ;
A1	0.02 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Biological mixing, 10YR52, 10-20% , Faint; Medium sandy clay loam; Weak grade of structure, 2-5 mm, Granular; Rough-ped fabric; Moderately moist; Very weak consistence; 10-20%, medium gravelly, 6-20mm, subrounded, Granodiorite, coarse fragments; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Many, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Wavy change to -
A3	0.1 - 0.32 m	Brown (7.5YR4/4-Moist); Biological mixing, 10YR32, 2-10% , Distinct; Medium sandy clay loam; Moderate grade of structure, 5-10 mm, Subangular blocky; 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded tabular, Granodiorite, coarse fragments; Field pH 4.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Common, coarse (>5mm) roots; Gradual, Smooth change to -
B21	0.32 - 0.52 m	Strong brown (7.5YR4/6-Moist); Biological mixing, 10YR52, 2-10% , Faint; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded, Granodiorite, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse, Smooth change to -
B22	0.52 - 0.74 m	Yellowish red (5YR4/6-Moist); Substrate influence, 2.5YR36, 2-10% , Distinct; Medium sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 10-20%, coarse gravelly, 20-60mm, subrounded, Granodiorite, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse, Smooth change to -
B3	0.74 - 1.07 m	Yellowish red (5YR4/6-Moist); Substrate influence, 2.5YR36, 20-50% , Distinct; Sandy loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 20-50%, coarse gravelly, 20-60mm, subrounded, Granodiorite, coarse fragments; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots;

Morphological Notes

Observation Notes

PM is a combination of weathered granodiotrite and weakly weathered apilite. The dyke boundary was in the pit!

Site Notes

COMP 28H,64229-1,246DEG,110M FR 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 - 0.02										
0.02 - 0.1	4.37C		7.63H	1.43	0.59	0	1.88J 0K		11.53E	
0.1 - 0.32	4.19C		0.57H	0.6	0.37	0	1.43J 0K		2.97E	
0.32 - 0.52	4.21C		0.51H	0.94	0.49	0	1.27J 0K		3.21E	
0.52 - 0.74	4.17C		0.11H	0.8	0.59	0.01	1.25J 0K		2.76E	
0.74 - 1.07	4.2C		0.17H	0.88	0.54	0.01	0.96J 0K		2.55E	

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 - 0.02												
0.02 - 0.1		4.72B		129.6B	0.18A		0.88	32				
0.1 - 0.32		0.86B		220.6B	0.05A		1.34	31.63				
0.32 - 0.52		0.46B		183.1B	0.03A		1.40	21.38				
0.52 - 0.74		0.27B		199.5B	0.02A		1.38	18.7				
0.74 - 1.07		0.23B		205.6B	0.02A			19.7				

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 - 0.02									
0.02 - 0.1									
0.1 - 0.32									
0.32 - 0.52									
0.52 - 0.74									
0.74 - 1.07									

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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