

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0147 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	11/03/97	Elevation:	1126 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6051058 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	606944 Datum: AGD66	Drainage:	Rapidly drained

Geology

ExposureType:	Soil pit	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:	Mid-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	32 %	Aspect:	45 degrees

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Acidic Dystrophic Red Kandosol Thin Non-gravelly Loamy Clay-loamy Very deep		Principal Profile Form:	Gn2.14
ASC Confidence:		Great Soil Group:	Red podzolic soil
All necessary analytical data are available.			

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.02 m	Organic Layer; ;
A1	0.02 - 0.07 m	Dark brown (7.5YR3/2-Moist); Biological mixing, 10YR44, 2-10% , Distinct; Loam; Weak grade of structure, 2-5 mm, Granular; Earthy fabric; Dry; Very weak consistence; 0-2%, medium gravelly, 6-20mm, subangular, coarse fragments; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Abrupt, Wavy change to -
A2	0.07 - 0.23 m	Dark brown (7.5YR3/4-Moist); Yellowish brown (10YR5/4-Dry); Biological mixing, 7.5YR44, 10-20% , Faint; Medium sandy clay loam; Moderate grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Dry; Firm consistence; 2-10%, coarse gravelly, 20-60mm, angular tabular, Quartz, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Wavy change to -
B21	0.23 - 0.47 m	Strong brown (7.5YR4/6-Moist); Biological mixing, 7.5YR33, 2-10% , Faint; Clay loam; Moderate grade of structure, 5-10 mm, Subangular blocky; 2-5 mm, Polyhedral; Rough-ped fabric; Dry; Weak consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse, Smooth change to -
B22	0.47 - 1.02 m	Yellowish red (5YR4/6-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 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; Gradual, Smooth change to -
B3	1.02 - 1.42 m	Yellowish red (5YR4/6-Moist); ; Coarse sandy clay loam; Earthy fabric; Moderately moist; Weak consistence; 10-20%, medium gravelly, 6-20mm, subangular, coarse fragments; Field pH 4.5 (Raupach); Gradual change to -
C	1.42 - 2.27 m	Yellowish brown (10YR5/4-Moist); ; Clayey coarse sand; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Field pH 6 (Raupach);

Morphological Notes

A1 A1 horizon has only sporadic covreage.

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A2 Pale A2 horizon.

B3 Increase in weathering coarse fragments. Sand content increases. Possible old

Observation Notes

Followed fishing trail towards Burrong Ck. Crossed creek and placed site 40m uphill.

Site Notes

BUDDONG CK, SOUTH OF FISHING TRAIL

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Na	Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Cmol (+)/kg	Acidity			%
0 - 0.02										
0.02 - 0.07	4.69C		9.86H	1.82	0.98	0	2.4J 0K		15.06E	
0.07 - 0.23	4.4C		1.32H	0.39	0.55	0	3.76J 0K		6.02E	
0.23 - 0.47	4.45C		0.56H	0.66	0.71	0	1.9J 0K		3.84E	
0.47 - 1.02	4.16C		0.09H	0.46	0.43	0	2.68J 0K		3.65E	
1.02 - 1.42	4.14C		0.05H	0.29	0.34	0	2.23J 0K		2.91E	
1.42 - 2.27	4.54C		0.09H	0.16	0.3	0	0.43J 0.06K		1.04E	

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 - 0.02												
0.02 - 0.07		9.82B		453.8B	0.36A		0.66	11.53				
0.07 - 0.23		4.21B		315.5B	0.16A		0.87	9.29				
0.23 - 0.47		1.02B		317.2B	0.06A		1.01	4.19				
0.47 - 1.02		0.37B		272.9B	0.03A		1.23	4.06				
1.02 - 1.42		0.2B		280.1B	0.02A			13.79				
1.42 - 2.27		0.09B		477.5B	0.01A			9.88				

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
					g/g -	m3/m3			mm/h

0 - 0.02
 0.02 - 0.07
 0.07 - 0.23
 0.23 - 0.47
 0.47 - 1.02
 1.02 - 1.42
 1.42 - 2.27

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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