Project Name: BAGO-MARAGLE FOREST SOIL SURVEY

Project Code: BGM_FSS Site ID: 0134 Observation ID: 1

Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: N.J. McKenzie Locality:

Date Desc.: 16/05/96 Elevation: 455 metres Sheet No.: 8526 DGPS Map Ref.: Rainfall: No Data Northing/Long.: 6061774 AMG zone: 55 Runoff: No Data 613405 Datum: AGD66 Rapidly drained Easting/Lat.: Drainage:

Geology

ExposureType: Soil pit Conf. Sub. is Parent. Mat.: Probable Geol. Ref.: Os Substrate Material: Schist

Land Form

Rel/Slope Class:No DataPattern Type:No DataMorph. Type:Upper-slopeRelief:No DataElem. Type:HillslopeSlope Category:No DataSlope:28 %Aspect:45 degrees

Surface Soil Condition (dry): Firm

Erosion: Partial, Minor (sheet)

Soil Classification

Australian Soil Classification:Mapping Unit:N/AAcidic Lithic Bleached-Orthic Tenosol Thin ModeratelyPrincipal Profile Form:Gn4.2

gravelly Clay-loamy Clayey Shallow

ASC Confidence: Great Soil Group: N/A

All necessary analytical data are available.

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: 2-10%, medium gravelly, 6-20mm, angular, Quartz; 2-10%, coarse gravelly, 20-60mm, angular, Quartz

Profile Morphology

O1 0 - 0.01 m Organic Layer; ;

A1 0.01 - 0.04 m Dark reddish brown (5YR3/2-Moist); ; Medium sandy clay loam; Weak grade of structure, 2-5 mm,

Granular; Rough-ped fabric; Moderately moist; Loose consistence; 20-50%, medium gravelly, 6-20mm, angular platy, dispersed, Schist, coarse fragments; Field pH 4.5 (Raupach); Few, very

fine (0-1mm) roots; Few, fine (1-2mm) roots; Abrupt, Smooth change to -

A2 0.04 - 0.19 m Light brown (7.5YR6/4-Moist); Pink (7.5YR8/4-Dry); ; Silty clay loam; Massive grade of structure;

Rough-ped fabric; Dry; Firm consistence; 50-90%, medium gravelly, 6-20mm, angular platy, dispersed, Schist, coarse fragments; Field pH 5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots;

Clear, Smooth change to -

B2 0.19 - 0.46 m Reddish yellow (5YR6/6-Moist); ; Light clay; Massive grade of structure; Rough-ped fabric;

Moderately moist; Weak consistence; 90-100%, coarse gravelly, 20-60mm, angular platy, stratified, Schist, 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; Clear, Smooth change to -

Morphological Notes

A1 Minimal accumulation of organic matter in very rocky material.

A2 Originally thought this was a C1 horizon. Quite a few roots and more pale than the layer

below. Hydrophobic and very rocky.

B2 Redder material is forming in layers between large and abundant coarse fragments.

Incipient B2 - originally named a C2. some roots penetrate.

Observation Notes

Sedimentary ridge, recently burnt. Large rocks not included in bulk sample. Minimal profile development. High silt content in sieved textures. Very warm aspect.

Site Notes

COMP 121H 312-1 93.5D,160M FROM RD/CK

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Laboratory Test Results:

Laboratory	16311/6	Suits.										
Depth	pН	1:5 EC		hangeable Mg	Cations K	Na	Exchangeable Acidity	CEC		ECEC	ES	P
m		dS/m	ou .	y		Cmol (+					%	
0 - 0.01	2.440		1 CELL	0.6	0.55	0.00	4.70.1			0.005		
0.01 - 0.04	3.41C		1.65H	0.6	0.55	0.08	4.79J 1.56K			9.22E		
0.04 - 0.19	3.8C		0.18H	0.17	0.26	0.05	3.34J 0K			4E		
0.19 - 0.46	3.97C		0.14H	0.23	0.12	0.05	2.38J 0K			2.92E		
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	K	Density	Pa GV	rticle CS	FS	Analysis Silt C	lay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.01												
0.01 - 0.04		8.07B		311.4B	-			54.3				
0.04 - 0.19		1.76B		289.2B	0.1	Α		37.63				
0.19 - 0.46		0.54B		285.6B	0.0	7A		43.7				
Depth	COLE		Gravimetric/Volumetric Water Contents						K sat		K unsat	
m		Sat.	0.05 Bar		0.5 Bar g - m3/m	1 Bar 3	5 Bar 15	Bar	mm	/h	mm/h	

0 - 0.01 0.01 - 0.04 0.04 - 0.19 0.19 - 0.46

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Laboratory Analyses Completed for this profile

15_NR Sum of Ex. cations + Ex. acidity - Not recorded

Exchangeable AI - by compulsive exchange, no pretreatment for soluble salts

15E1_AL 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

Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts 15E1_K 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

Air-dry moisture content 2A1

pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1 4B2 6B2 Total organic carbon - high frequency induction furnace, volumetric

7A2

Total nitrogen - semimicro Kjeldahl , automated colour Total Phosphorus (ppm) - semimicro kjeldahl, automated colour 9A3

P10_GRAV Gravel (%)