

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0161 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: P. Ryan	Locality:
Date Desc.: 10/04/97	Elevation: 1031 metres
Map Ref.: Sheet No. : 8526 DGPS	Rainfall: No Data
Northing/Long.: 6030267 AMG zone: 55	Runoff: No Data
Easting/Lat.: 614291 Datum: AGD66	Drainage: Moderately well drained

Geology

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

Land Form

Rel/Slope Class: No Data	Pattern Type: Pediment
Morph. Type: Lower-slope	Relief: No Data
Elem. Type: Pediment	Slope Category: No Data
Slope: 6 %	Aspect: 90 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Acidic Mesotrophic Red Dermosol Medium Non-gravelly Clayey Clayey Giant	Principal Profile Form: Gn3.11
ASC Confidence:	Great Soil Group: No suitable group

All necessary analytical data are available.

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
A1	0.01 - 0.19 m	Dark brown (7.5YR3/2-Moist); ; Silty clay; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; Field pH 5.5 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear change to -
B21	0.19 - 0.54 m	Reddish brown (5YR4/4-Moist); Biological mixing, 5YR33, 10-20% , Faint; Silty clay; Strong grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules, strong, segregations;Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual change to -
B22	0.54 - 0.77 m	Yellowish red (5YR4/6-Moist); ; Silty clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Very few (0 - 2 %), Manganiferous, Medium (2 - 6 mm), Soft segregations, weak, segregations;Field pH 5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse change to -
B23	0.77 - 0.99 m	Yellowish red (5YR5/8-Moist); Substrate influence, 2.5YR48, 2-10% , Faint; Clay loam; Weak grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual change to -
B31	0.99 - 1.53 m	Yellowish brown (10YR5/6-Moist); Substrate influence, 10YR54, 10-20% , Faint; Substrate influence, 2.5YR48, 2-10% , Distinct; Clay loam; Moderate grade of structure, 2-5 mm, Polyhedral; 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 4.5 (Raupach); Few, very fine (0-1mm) roots; Clear change to -
2B21	1.53 - 1.62 m	Yellowish red (5YR4/6-Moist); ; Coarse sandy clay loam; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Weak consistence; 20-50%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations, weak, segregations;Field pH 5 (Raupach); Abrupt change to -

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0161 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

2B22	1.62 - 1.8 m	Yellowish brown (10YR5/8-Moist); Substrate influence, 2.5YR48, 20-50% , Distinct; Fine sandy loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations, weak, segregations; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Fragments, weak, segregations; Field pH 4.5 (Raupach); Abrupt change to -
2B23	1.8 - 1.88 m	Yellowish red (5YR4/6-Moist); ; Coarse sandy loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Nodules, strong, segregations; Field pH 5 (Raupach); Abrupt change to -
3B2	1.88 - 2.31 m	Yellowish brown (10YR5/8-Moist); Substrate influence, 7.5YR58, 20-50% , Distinct; Substrate influence, 10YR76, 10-20% , Distinct; Fine sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations, weak, segregations; Field pH 4.5 (Raupach); Abrupt change to -
3B2	2.31 - 2.36 m	White (2.5Y8/2-Moist); ; Coarse sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Weak consistence; 20-50%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules, weak, segregations; Field pH 4.5 (Raupach); Abrupt change to -
3B2	2.36 - 3.56 m	Strong brown (7.5YR5/8-Moist); Substrate influence, 2.5Y74, 2-10% , Distinct; Fine sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Nodules, weak, segregations; Field pH 4.5 (Raupach); Diffuse change to -
3B3	3.56 - 4.44 m	Yellowish brown (10YR5/8-Moist); Substrate influence, 10YR82, 10-20% , Distinct; Fine sandy loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules, weak, segregations; Field pH 5 (Raupach); Clear change to -
3C	4.44 - 5.78 m	Yellowish brown (10YR5/6-Moist); Substrate influence, 2.5Y82, 2-10% , Distinct; Fine sandy loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence;

Morphological Notes

A1	Highly aggregated - faunal casting.
B21	Minor Mn nodules.
B23	Faint red mottling starts. Increased mica.
2B21	Coarse sand layer, sand size increasing with depth.
2B22	Fine texture layer. Start of Mn segregation.
2B23	Stone layer - quartz gravel and sand. One place of ferruginised sandstone plus a piece of mafic igneous rock.
3B2	Start of orange fine sandy layers with Mn segregation. Plenty of old root channels macropores - all signs of old buried B hor. PM maybe either metasediment, colluvium or granodiorite.
3B2	Coarse sand layer or possibly a remnant vein of quartz-rich intrusion.
3B2	Same as layer 9. More evidence of granodiorite origin.
3B3	Increase in pale mottle. Base of layer is another quartz-rich intrusion vein.
3C	Weathering granodiorite - low quartz content.

Observation Notes

Site is on a colluvial pediment west of Nurenmeremong. It has a low radiometric K signal.

Site Notes

NEW MARAGLE RD - LOW "K" AREA, 1.2KM S

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS Site ID: 0161 Observation ID: 1
Agency Name: CSIRO Division of Soils (ACT)

Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Exchangeable Cations			Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
			Ca	Mg	K					
0 - 0.01										
0.01 - 0.19	4.71C		4.15H	2.29	0.75	0	1.66J 0K		8.84E	
0.19 - 0.54	4.39C		1.57H	1.87	0.38	0	1.65J 0K		5.47E	
0.54 - 0.77	4.26C		1.16H	2.24	0.25	0	1.47J 0K		5.12E	
0.77 - 0.99	4.13C		0.61H	1.84	0.12	0	2.06J 0K		4.63E	
0.99 - 1.53	4.13C		0.65H	1.74	0.07	0	1.83J 0K		4.29E	
1.53 - 1.62	4.24C		0.71H	1.47	0.11	0	0.92J 0K		3.21E	
1.62 - 1.8	4.28C		1.34H	2.61	0.23	0	0.96J 0K		5.14E	
1.8 - 1.88	4.36C		0.67H	1.22	0.13	0	0.49J 0K		2.5E	
1.88 - 2.31	4.21C		2.79H	5.19	0.43	0.07	2.31J 0K		10.78E	
2.31 - 2.36	4.2C		1.68H	2.89	0.29	0	1.52J 0K		6.38E	
2.36 - 3.56	4.19C		3.79H	6.35	0.35	0.07	3.08J 0K		13.63E	
3.56 - 4.44	4.27C		4.6H	7.44	0.29	0.08	2.61J 0K		15.03E	
4.44 - 5.78	4.67C		7.62H	8.98	0.32	0.07	0.54J 0K		17.52E	

Depth m	CaCO3	Organic	Avail.	Total	Total	Total	Bulk Density Mg/m3	Particle		Size FS %	Analysis	
	%	C %	P mg/kg	P %	N %	K %		GV	CS		Silt	Clay
0 - 0.01												
0.01 - 0.19		3.35B		899.7B	0.17A		0.91	4.52				
0.19 - 0.54		0.98B		605.2B	0.06A		1.38	2.64				
0.54 - 0.77		0.35B		528.7B	0.03A		1.27	2.96				
0.77 - 0.99		0.18B		475.7B	0.02A		1.53	2.48				
0.99 - 1.53		0.12B		395.3B	0.01A			3.03				
1.53 - 1.62		0.11B		451.2B	0.01A			14.63				
1.62 - 1.8		0.13B		402.8B	0.02A			3.86				
1.8 - 1.88		0.11B		429.2B	0.02A			53.48				
1.88 - 2.31		0.11B		403.9B	0.01A			0.63				
2.31 - 2.36		0.05B		62B	0A			0				
2.36 - 3.56		0.12B		165.8B	0.01A			0.24				
3.56 - 4.44		0.04B		227.5B	0A			0.9				
4.44 - 5.78		0.03B		179.3B	0A			0				

[illegible]

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0161 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

0.01 - 0.19
0.19 - 0.54
0.54 - 0.77
0.77 - 0.99
0.99 - 1.53
1.53 - 1.62
1.62 - 1.8
1.8 - 1.88
1.88 - 2.31
2.31 - 2.36
2.36 - 3.56
3.56 - 4.44
4.44 - 5.78

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0161 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

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