

**Project Name:** BAGO-MARAGLE FOREST SOIL SURVEY  
**Project Code:** BGM\_FSS **Site ID:** 0118 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

#### Site Information

<b>Desc. By:</b> N.J. McKenzie	<b>Locality:</b>
<b>Date Desc.:</b> 26/04/96	<b>Elevation:</b> 1220 metres
<b>Map Ref.:</b> Sheet No. : 8526 DGPS	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6053173 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 604709 Datum: AGD66	<b>Drainage:</b> Imperfectly drained

#### Geology

<b>ExposureType:</b> No Data	<b>Conf. Sub. is Parent. Mat.:</b> No Data
<b>Geol. Ref.:</b> Sgg	<b>Substrate Material:</b> No Data

#### Land Form

<b>Rel/Slope Class:</b> No Data	<b>Pattern Type:</b> No Data
<b>Morph. Type:</b> Lower-slope	<b>Relief:</b> No Data
<b>Elem. Type:</b> Hillslope	<b>Slope Category:</b> No Data
<b>Slope:</b> 8 %	<b>Aspect:</b> 90 degrees

**Surface Soil Condition (dry):** Firm

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Dystrophic Red Kandosol	<b>Principal Profile Form:</b> Gn2.11
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> N/A
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 - 0.15 m	Dark reddish brown (5YR3/2-Moist); Biological mixing, 5YR33, 20-50% , Faint; Silty clay loam; Strong grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 0-2%, cobbly, 60-200mm, angular, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Clear, Smooth change to -
B1	0.15 - 0.3 m	Reddish brown (5YR4/4-Moist); Biological mixing, 5YR42, 20-50% , Faint; Silty clay loam; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Common, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -
B21	0.3 - 0.56 m	Yellowish red (5YR4/6-Moist); Biological mixing, 5YR32, 2-10% , Distinct; Light clay; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moist; Weak consistence; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Gradual, Smooth change to -
B22	0.56 - 0.96 m	Yellowish red (5YR5/6-Moist); ; Light clay; Weak grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Moist; Weak consistence; 2-10%, cobbly, 60-200mm, angular, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Field pH 6 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Abrupt, Wavy change to -
2D1	0.96 - 1.47 m	Light yellowish brown (10YR6/4-Moist); Substrate influence, 10YR82, 20-50% , Distinct; Clayey sand; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Weak consistence; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Smooth change to -
2D2	1.47 - 1.8 m	Dark grey (10YR4/1-Moist); Substrate influence, 10YR74, 20-50% , Distinct; Substrate influence, 7.5YR68, 20-50% , Prominent; Sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Wet; Very weak consistence; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Soft segregations, weak, segregations;Common (10 - 20 %), Ferruginous, Very coarse (20 - 60 mm), Soft segregations, weak, segregations;Field pH 4.5 (Raupach); Clear, Smooth change to -

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3B21	1.8 - 2.52 m	Brownish yellow (10YR6/6-Moist); Substrate influence, 7.5YR68, 20-50% , Faint; Substrate influence, 2.5Y76, 10-20% , Faint; Silty clay loam; Earthy fabric; Moist; Very weak consistence; Common cutans, 10-50% of ped faces or walls coated, faint; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations, weak, segregations;Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Soft segregations, weak, segregations;Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Veins, weak, segregations;Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Veins, weak, segregations;Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Tubules, weak, segregations;Field pH 6 (Raupach); Diffuse, Smooth change to -
3B22	2.52 - 3.02 m	Brownish yellow (10YR6/8-Moist); Substrate influence, 10YR64, 10-20% , Faint; Silty clay loam; Earthy fabric; Moist; Very weak consistence; Common cutans, 10-50% of ped faces or walls coated, faint; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations, weak, segregations;Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Soft segregations, weak, segregations;Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Veins, weak, segregations;Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Veins, weak, segregations;Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Tubules, weak, segregations;Field pH 6 (Raupach);

**Morphological Notes**

3B21      Well structured dark A1.

3B22      Transitional to B2.

**Observation Notes**

Site is 10m above drainage where there is an abrupt change to teatree.

**Site Notes**

COMP 37H 13583-1 251D 360M FROM INTER

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Ca	Exchangeable	Cations	Exchangeable	CEC	ECEC	ESP
m		dS/m		Mg	K	Na	Acidity		%
						Cmol	(+)/kg		
0 - 0.02									
0.02 - 0.15	4C		1.02H	0.56	0.71	0.14	7.62J 0K	10.04E	
0.15 - 0.3	4.2C		1.38H	0.53	0.65	0.1	3.57J 0K	6.22E	
0.3 - 0.56	4C		0.35H	0.19	0.26	0.09	4.54J 0K	5.45E	
0.56 - 0.96	4C		0.09H	0.09	0.16	0.06	3.27J 0K	3.68E	
0.96 - 1.47	4.34C		0.01H	0.04	0.05	0.09	0.6J 0K	0.78E	
1.47 - 1.8	4.04C		0.11H	0.08	0.08	0.08	3J 0K	3.34E	
1.8 - 2.52	3.97C		0.49H	0.35	0.23	0.12	5.67J 0K	6.86E	
2.52 - 3.02	3.95C		1.44H	0.92	0.25	0.15	7.75J 0K	10.51E	

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 - 0.15		6.78B		472B	0.3A		0.68	18.03				
0.15 - 0.3		2.8B		343.5B	0.15A		1.04	7.7				
0.3 - 0.56		1.32B		276.8B	0.07A		1.17	3.61				
0.56 - 0.96		0.39B		207B	0.03A		1.20	8.91				
0.96 - 1.47		0.17B		352.4B	0.02A			10.89				
1.47 - 1.8		0.16B		595.3B	0.02A			18.06				
1.8 - 2.52		0.07B		1048B	0.01A			3.99				
2.52 - 3.02		0.08B		1531.5B	0.01A			3.14				

[illegible]

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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