Project Name: BAGO-MARAGLE ESM

Project Code: BGM\_ESM Site ID: 1018 Observation ID: 1

Agency Name: CSIRO Division of Soils (ACT)

**Site Information** 

Desc. By: P. Ryan Locality:

Date Desc.: Elevation: 03/04/95 1223 metres Map Ref.: Sheet No.: 8526 DGPS Rainfall: No Data Northing/Long.: 6050915 AMG zone: 55 Runoff: Very slow Easting/Lat.: 604373 Datum: AGD66 Drainage: Well drained

Geology

ExposureType: Soil pit Conf. Sub. is Parent. Mat.: Probable Geol. Ref.: SGGH Substrate Material: Granodiorite

**Land Form** 

Rel/Slope Class:No DataPattern Type:No DataMorph. Type:CrestRelief:No DataElem. Type:HillcrestSlope Category:No DataSlope:4 %Aspect:0 degrees

Surface Soil Condition (dry): Firm

**Erosion:** 

**Soil Classification** 

Australian Soil Classification: Mapping Unit: N/A
Acidic Dystrophic Red Kandosol Medium Non-gravelly ClayPrincipal Profile Form: Um7.11

loamy Clay-loamy Very deep

ASC Confidence: Great Soil Group: Red earth

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 - 0.19 m Dark brown (7.5YR3/2-Moist); Biological mixing, 2-10%, Faint; Medium sandy clay loam; Strong grade of structure, 2-5 mm, Polyhedral; 50-100 mm, Prismatic; Rough-ped fabric; Dry; Firm consistence; Field pH 5 (pH meter); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots;

Few, medium (2-5mm) roots; Clear, Smooth change to -

B1 0.19 - 0.31 m Dark reddish brown (5YR3/3-Moist); Biological mixing, 2-10%, Faint; Medium sandy clay loam;

Moderate grade of structure, 2-5 mm, Polyhedral; 50-100 mm, Columnar; Rough-ped fabric; Dry; Firm consistence; Field pH 5 (pH meter); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Smooth change to -

B21 0.31 - 0.57 m Dark reddish brown (5YR3/4-Moist); Biological mixing, 2-10%, Distinct; Coarse sandy clay

loam; Weak grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Dry; Weak consistence; 0-2%, coarse gravelly, 20-60mm, subangular tabular, dispersed, Granodiorite, coarse fragments;

Field pH 5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -

B22 0.57 - 0.77 m Yellowish red (5YR4/6-Moist); Biological mixing, 2-10%, Distinct; Coarse sandy clay loam;

Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, subangular tabular, dispersed, Granodiorite, coarse fragments; 2-10%, coarse gravelly, 20-60mm, subangular tabular, dispersed, Quartz, coarse fragments; Field pH 5

(pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -

B23 0.77 - 1.32 m Yellowish red (5YR4/6-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric;

Moderately moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, subangular tabular, dispersed, Granodiorite, coarse fragments; 2-10%, coarse gravelly, 20-60mm, subangular tabular, dispersed, Quartz, coarse fragments; Field pH 4.5 (pH meter); Few, very fine (0-1mm)

roots; Gradual change to -

C 1.32 - 2.67 m Brown (10YR5/3-Moist); ; Loamy coarse sand; Sandy (grains prominent) fabric; Moderately

moist; 2-10%, medium gravelly, 6-20mm, subangular tabular, dispersed, Quartz, coarse

fragments; Field pH 5.5 (pH meter);

**Morphological Notes** 

Quartz gravel appears in lower part of layer. Quartz probably derived from veins.

Quartz gravel increase at 2.65 m.

**Observation Notes** 

Project Name: BAGO-MARAGLE ESM
Project Code: BGM\_ESM Site ID: 101
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PGP centre post 8m west of pit. Site has recently been logged.

Site Notes

PGP 10, BAGO S.F., COMPT 47

1018 Observation ID: 1

Project Name: BAGO-MARAGLE ESM
Project Code: BGM\_ESM Site ID: 101
Agency Name: CSIRO Division of Soils (ACT)

## **Laboratory Test Results:**

Laboratory	T C St IVC	Suits.								
Depth	рН	1:5 EC		hangeable Vig	Cations K	Na	Exchangeable Acidity	CEC	ECI	EC ESP
m		dS/m	_			Cmol (	mol (+)/kg			%
0.02 - 0.1	4C 4.8A		0.32H	0.05	0.44	0.04	7.03J 0K		7.89	9E
0.19 - 0.31	4.21C 5.13A		0.31H	0.33	0.36	0.04	2.54J 0K		3.58	8E
0.32 - 0.4	4.13C 5A		0.17H	0.33	0.35	0.03	2.85J 0K		3.72	2E
0.62 - 0.72	4.07C 5.06A		0.12H	0.15	0.23	0.03	2.31J 0K		2.83	3E
0.87 - 1.07	4.08C 5.09A		0.06H	0.3	0.3	0.03	2.27J 0K		2.9	5E
1.82 - 2.02	4.23C 5.25A		0.78H	0.39	0.23	0	0.55J 0K		1.9	5E
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	∣ Tota K		Pai GV	rticle Siz	e Analysis S Silt Clay
m	%	%	mg/kg	%	%	%	Mg/m3		9/	
0.02 - 0.1 0.19 - 0.31 0.32 - 0.4 0.62 - 0.72 0.87 - 1.07 1.82 - 2.02		6.2B 1.96B 1.17B 0.5B 0.23B 0.03B		506.4E 367.8E 334.4E 298.6E 311.7E 191.2E	3 0.0 3 0.0 3 0.0 3 0.0	25A 1A 17A 14A 13A 11A	0.93 1.15 1.20 1.22 1.39	9.02 5.75 9.53 12.14 3.74 10.47		
Depth	COLE				olumetric '				K sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar /g - m3/m	1 Bar 13	5 Bar 15	Bar	mm/h	mm/h

0.02 - 0.1 0.19 - 0.31 0.32 - 0.4 0.62 - 0.72 0.87 - 1.07 1.82 - 2.02

**BAGO-MARAGLE ESM Project Name:** 

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## **Laboratory Analyses Completed for this profile**

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

15E1\_AL 15E1\_CA Exchangeable AI - by compulsive exchange, no pretreatment for soluble salts

Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble

Exchangeable H - by compulsive exchange, no pretreatment for soluble salts 15E1\_H

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/water suspension 4A1

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 (%)

Bulk density - g/cm3 P3A1