

Project Name: Regional
Project Code: REG **Site ID:** T258 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.G. Murtha	Locality:	1.6KM south of Big Maria Creek on highway:
Date Desc.:	14/09/77	Elevation:	140 metres
Map Ref.:	Sheet No. : 8062 1:100000	Rainfall:	4000
Northing/Long.:	146	Runoff:	Very rapid
Easting/Lat.:	-17.8333333333333	Drainage:	Well drained

Geology

ExposureType:	Existing vertical exposure	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	PZB	Substrate Material:	Existing vertical exposure, 2.1 m deep, Porous, Metamorphic rock (unidentified)

Land Form

Rel/Slope Class:	Rolling low hills 30-90m 10-	Pattern Type:	Hills
Morph. Type:	Mid-slope	Relief:	60 metres
Elem. Type:	Hillslope	Slope Category:	Moderately inclined
Slope:	21 %	Aspect:	270 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Acidic Dystrophic Red Dermosol	Principal Profile Form:	Um4.41
ASC Confidence:	Great Soil Group:	Red podzolic soil
All necessary analytical data are available.		

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.1 m	Reddish brown (5YR4/3-Moist); Reddish brown (5YR5/4-Dry); ; Clay loam, fine sandy; Strong grade of structure, 5-10 mm, Cast; Dry; Weak consistence; 2-10%, coarse gravelly, 20-60mm, Metamorphic rock (unidentified), coarse fragments; Many, fine (1-2mm) roots; Gradual change to -
A3	0.1 - 0.2 m	Yellowish red (5YR4/8-Moist); Yellowish red (5YR5/6-Dry); ; Clay loam, fine sandy; Moderate grade of structure, 5-10 mm, Subangular blocky; Dry; Very firm consistence; 2-10%, coarse gravelly, 20-60mm, Metamorphic rock (unidentified), coarse fragments; Gradual change to -
B1	0.2 - 0.3 m	Red (2.5YR4/6-Moist); Red (2.5YR5/8-Dry); ; Clay loam, fine sandy (Heavy); Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very firm consistence; 10-20%, coarse gravelly, 20-60mm, Metamorphic rock (unidentified), coarse fragments;
B2	0.3 - 0.45 m	Red (2.5YR4/6-Moist); ; Light clay (Heavy); Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very firm consistence; 10-20%, coarse gravelly, 20-60mm, Metamorphic rock (unidentified), coarse fragments;
B2	0.45 - 0.6 m	Red (2.5YR4/6-Moist); ; Light clay (Heavy); Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very firm consistence; 10-20%, coarse gravelly, 20-60mm, Metamorphic rock (unidentified), coarse fragments; Diffuse change to -
B2	0.6 - 0.9 m	Red (2.5YR4/6-Moist); ; Light clay (Heavy); Moderate grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very firm consistence; 10-20%, coarse gravelly, 20-60mm, Metamorphic rock (unidentified), coarse fragments;
B2	0.9 - 1.2 m	Red (10R4/6-Moist); ; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very firm consistence; 20-50%, cobbly, 60-200mm, Metamorphic rock (unidentified), coarse fragments;
B3	1.2 - 1.5 m	Red (10R4/7-Moist); ; Clay loam, fine sandy (Heavy); Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very firm consistence; 20-50%, cobbly, 60-200mm, Metamorphic rock (unidentified), coarse fragments;
	1.5 - 1.8 m	Red (10R4/7-Moist); ; Clay loam, fine sandy (Heavy); Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Very firm consistence; 50-90%, cobbly, 60-200mm, Metamorphic rock (unidentified), coarse fragments;

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1.8 - 2.1 m Red (10R4/7-Moist); ; Clay loam, fine sandy (Heavy); Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Very firm consistence; 50-90%, cobbly, 60-200mm, Metamorphic rock (unidentified), coarse fragments;

C 2.1 - 2.25 m ;

Morphological Notes

C Weathered parent material:

Observation Notes

WEATHERED PARENT MATERIAL SLOWLY INCREASES DOWN PROFILE:DEEP STRONGLY WEATHERED SAPROLITE:

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.1	4.9A	<0.05A	0.2B	0.34	0.06	0.04	1.9F	2.23A 4.6C	1.79 0.87
0.1 - 0.2	4.8A	<0.05A	0.08B	0.15	0.06	0.02	1.6F	3C	0.67
0.2 - 0.3	5A	<0.05A	0.08B	0.15	0.06	0.02	1.2F	2C	1.00
0.3 - 0.45	5.1A	<0.05A	0.04B	0.15	0.02	0.02	0.78F	1F	
0.45 - 0.6	5A	<0.05A	0.04B	0.11	0.02	0.02	0.96F	1.4C	1.43
0.6 - 0.9	5A	<0.05A	0.04B	0.11	0.02	0.02	1F	1.78A 1.3C	1.12 1.54
0.9 - 1.2	5.1A	<0.05A	0.04B	0.11	0.02	0.03	1.33F	1.5C	2.00
1.2 - 1.5	5.2A	<0.05A	0.04B	0.07	0.02	0.03	1.15F	1.4C	2.14
1.5 - 1.8	5A	<0.05A					1.7F		
1.8 - 2.1	4.9A	<0.05A					1.9F		
2.1 - 2.25	5A	<0.05A					1.4F		

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
12_HF_CU	Total element - Cu(mg/kg) - HF/HClO4 Digest
12_HF_FE	Total element - Fe(%) - HF/HClO4 Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO4 Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO4 Digest
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_CEC	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_K	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_MG	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_NA	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
15G_C	Exchange acidity (hydrogen and aluminium) - meq per 100g of soil - By 1M KCl exch. acidity by titration to pH 8.4
15J1	Effective CEC
17A1	Total potassium - X-ray fluorescence
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A1	Total phosphorus - X-ray fluorescence
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)
MIN_EC	Exchange Capacity - Minerology
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_CS	Coarse sand (%) - Coventry and Fett pipette method
P10_CF_FS	Fine sand (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method
P10_GRAV	Gravel (%)
XRD_C_Gt	Goethite - X-Ray Diffraction
XRD_C_Hm	Hematite - X-Ray Diffraction
XRD_C_Il	Illite - X-Ray Diffraction
XRD_C_K2O	K2O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction