

Project Name: Regional
Project Code: REG **Site ID:** T97 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.G. Murtha	Locality:	Mt.Stuart 5.6KM from highway:in quarry face 23M east of road:
Date Desc.:	23/02/70	Elevation:	335 metres
Map Ref.:	Sheet No. : 8259 1:100000	Rainfall:	1067
Northing/Long.:	146.783333333333	Runoff:	Moderately rapid
Easting/Lat.:	-19.35	Drainage:	No Data

Geology

ExposureType:	Existing vertical exposure	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	P-Mg	Substrate Material:	Existing vertical exposure, Granite

Land Form

Rel/Slope Class:	Steep mountains >300m 32-56%	Pattern Type:	Mountains
Morph. Type:	Upper-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	Steep
Slope:	36 %	Aspect:	0 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Haplic Mesotrophic Red Kandosol	Mapping Unit:	N/A
ASC Confidence:	Analytical data are incomplete but reasonable confidence.	Principal Profile Form:	Gn2.14
		Great Soil Group:	Red earth

Site Disturbance: No effective disturbance other than grazing by hoofed animals

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - None recorded
 Mid Strata - Tree, 3.01-6m, Isolated plants. *Species includes - Grevillea species
 Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - Eucalyptus drepanophylla, Eucalyptus polycarpa,
 Eucalyptus acmenoides

Surface Coarse Fragments: 50-90%, cobbly, 60-200mm, , Granite

Profile Morphology

A1	0 - 0.1 m	Dark reddish brown (5YR3/2-Moist); Brown (7.5YR4/2-Dry); ; Loam; Moderate grade of structure, 2-5 mm, Granular; Dry; Weak consistence; 50-90%, cobbly, 60-200mm, Granite, coarse fragments; Gradual change to -
A2	0.1 - 0.2 m	Dark reddish brown (5YR3/3-Moist); Reddish brown (5YR5/3-Dry); ; Clay loam (Light); Moderate grade of structure, 2-5 mm, Granular; Dry; Firm consistence; 50-90%, cobbly, 60-200mm, Granite, coarse fragments;
A2	0.2 - 0.25 m	Dark reddish brown (5YR3/4-Moist); Reddish brown (5YR4/3-Dry); ; Clay loam (Light); Massive grade of structure; Earthy fabric; Dry; Very firm consistence; 10-20%, Granite, coarse fragments; Clear change to -
B1	0.25 - 0.3 m	Reddish brown (2.5YR4/4-Moist); Reddish brown (5YR5/3-Dry); ; Clay loam; Massive grade of structure; Earthy fabric; Dry; Very firm consistence; Clear change to -
B2	0.3 - 0.45 m	Dark red (2.5YR3/6-Moist); Reddish brown (2.5YR5/4-Dry); ; Light clay (Light); Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Dry; Very firm consistence; 0-2%, coarse fragments;
B2	0.45 - 0.6 m	Red (2.5YR4/6-Moist); ; Light medium clay; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Dry; Very firm consistence; 0-2%, Granite, coarse fragments; Diffuse change to -
BC	0.6 - 0.75 m	Red (2.5YR4/6-Moist); ; Light medium clay; Massive grade of structure; Earthy fabric; Dry; Very firm consistence; 10-20%, Granite, coarse fragments;
C	0.75 - 0.9 m	Red (2.5YR4/8-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Dry; Very firm consistence; 50-90%, Granite, coarse fragments;
C	0.9 - 1.2 m	;

Morphological Notes

C Weathered granite (gritty SCL):much rock fabric evident:

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Observation Notes

45-120CM WEATHERED GRANITE INCREASING DOWN PROFILE:

Site Notes

MT.STUART

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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	6.1A	0.053A	7.8B	2.4	0.64	0.18			
0.1 - 0.2	6.3A	0.041A	5.3B	1.6	0.47	0.14			
0.2 - 0.25	6.4A	0.044A	4.1B	1.5	0.55	0.13			
0.25 - 0.3	6.4A	0.038A	3.4B	1.5	0.42	0.13			
0.3 - 0.45	6.4A	0.032A	2.9B	1.8	0.37	0.13			
0.45 - 0.6	6.3A	0.032A	3.5B	2.4	0.43	0.17			
0.6 - 0.75	6.4A	0.023A	3.3B	2.7	0.4	0.17			
0.75 - 0.9	6.4A	0.02A							
0.9 - 1.2	6.5A	0.017A							

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 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
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
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
XRD_C_Hm	Hematite - X-Ray Diffraction
XRD_C_Is	Interstratified clay minerals - X-Ray Diffraction
XRD_C_K2O	K2O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction