

Project Name: Regional
Project Code: REG **Site ID:** T78 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	R.F. Isbell	Locality:	4.8KM along Virginia Park Road from Townsville-Charters Towers Highway:
Date Desc.:	20/09/68	Elevation:	274 metres
Map Ref.:	Sheet No. : 8258 1:100000	Rainfall:	635
Northing/Long.:	146.529166666667	Runoff:	Moderately rapid
Easting/Lat.:	-19.9125	Drainage:	Moderately well drained

Geology

ExposureType:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	SDr	Substrate Material:	Auger boring, 2.7 m deep, Granodiorite

Land Form

Rel/Slope Class:	Gently undulating rises 9-30m 1-3%	Pattern Type:	Rises
Morph. Type:	Crest	Relief:	30 metres
Elem. Type:	Hillcrest	Slope Category:	Gently inclined
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:	Haplic Eutrophic Red Chromosol	Mapping Unit:	N/A
ASC Confidence:	All necessary analytical data are available.	Principal Profile Form:	Dr2.12
		Great Soil Group:	Non-calcic brown soil

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

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - Heteropogon contortus, Bothriochloa ewartiana

Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - Eucalyptus drepanophylla, Eucalyptus dichromophloia

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.1 m	Dark reddish brown (5YR3/4-Moist); Reddish brown (5YR4/4-Dry); ; Sandy loam (Heavy); Massive grade of structure; Dry; Strong consistence; 0-2%, fine gravelly, 2-6mm, Sand, coarse fragments; Few, very fine (0-1mm) roots;
A1	0.1 - 0.15 m	Dark reddish brown (5YR3/4-Moist); Reddish brown (5YR4/4-Dry); ; Sandy loam (Heavy); Massive grade of structure; Dry; Strong consistence; 0-2%, fine gravelly, 2-6mm, Sand, coarse fragments; Few, very fine (0-1mm) roots; Abrupt change to -
B21	0.15 - 0.2 m	Dark red (2.5YR3/5-Moist); Dark red (2.5YR3/5-Dry); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Weak grade of structure, 20-50 mm, Prismatic; Medium, (5 - 10) mm crack; Dry; Very strong consistence; 0-2%, fine gravelly, 2-6mm, Sand, coarse fragments;
B22	0.2 - 0.3 m	Dark red (2.5YR3/5-Moist); Dark red (2.5YR3/5-Dry); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Weak grade of structure, 20-50 mm, Prismatic; Medium, (5 - 10) mm crack; Moderately moist; Very strong consistence; Gradual change to -
B23	0.3 - 0.4 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Weak grade of structure, 20-50 mm, Prismatic; Moderately moist; Very firm consistence; 0-2%, Sand, coarse fragments; Gradual change to -
B3	0.4 - 0.6 m	Dark red (2.5YR3/8-Moist); ; Medium clay; Weak grade of structure, 20-50 mm, Angular blocky; Moderately moist; Very firm consistence; 2-10%, Sand, coarse fragments; Gradual change to -
BC	0.6 - 0.7 m	Yellowish red (5YR4/6-Moist); ; Sandy medium clay; Weak grade of structure, 20-50 mm, Angular blocky; Massive grade of structure; Moderately moist; Very firm consistence; 10-20%, Sand, coarse fragments; Clear change to -
C	0.7 - 0.9 m	Yellowish red (5YR4/6-Moist); , 10YR62; Sandy clay loam; Massive grade of structure; Moderately moist; Very firm consistence; 20-50%, Sand, coarse fragments; Gradual change to -
	0.9 - 1.2 m	Yellowish red (5YR4/6-Moist); , 10YR62; Sandy clay loam; Massive grade of structure; Firm consistence;

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1.2 - 1.5 m	Yellowish red (5YR4/6-Moist); , 10YR62; Sandy clay loam; Massive grade of structure; Firm consistence;
1.5 - 1.8 m	Yellowish red (5YR4/6-Moist); , 10YR62; Sandy clay loam; Massive grade of structure; Firm consistence; Few, fine (1-2mm) roots;
1.8 - 2.1 m	Reddish brown (5YR4/4-Moist); ; Sandy clay loam; Massive grade of structure; Firm consistence; Few, fine (1-2mm) roots;
2.1 - 2.4 m	Reddish brown (5YR4/4-Moist); ; Sandy clay loam; Massive grade of structure; Firm
2.4 - 2.7 m	Reddish brown (5YR4/4-Moist); ; Sandy clay loam; Massive grade of structure; Very firm consistence;

Morphological Notes

Observation Notes

WEAK PLATY STRUCTURE IN TOP 2CM:WEATHERED ROCK FABRIC INCREASING FROM 30CM:

Site Notes

VIRGINIA PARK

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[illegible]

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2.4 - 2.7

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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
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
17A1	Total potassium - X-ray fluorescence
19A1	Carbonates - rapid titration
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5A2	Chloride - 1:5 soil/water extract, automated colour
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 H ₂ SO ₄ (BSES)
MIN_EC	Exchange Capacity - Minerology
P10_GRAV	Gravel (%)
P10_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance
XRD_C_II	Illite - X-Ray Diffraction
XRD_C_K2O	K ₂ O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_St	Smectite - X-Ray Diffraction