Project Name: **Regional**
Project Code: **REG** **Site ID:** **T394** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: M.D. Laffan
Date Desc.: 25/10/83
Map Ref.: Sheet No. : 8062 1:100000
Northing/Long.: 145.6375
Easting/Lat.: -17.6
Locality:
Elevation: 810 metres
Rainfall: 4000
Runoff: No Data
Drainage: Well drained

Geology

ExposureType: Existing vertical exposure
Geol. Ref.: CZA
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Basalt

Land Form

Rel/Slope Class: Steep low hills 30-90m 32-56%
Morph. Type: Upper-slope
Elem. Type: Hillslope
Slope: 45 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 320 degrees

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Dystrophic Red Ferrosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn3.11
Great Soil Group: Krasnozem

Site Disturbance: Limited clearing, for example selective logging

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.05 m	Dark reddish brown (5YR3/2-Moist); Mottles; Mottles; Clay loam; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Dry; Weak consistence; Common, medium (2-5mm) roots; Diffuse change to -
B21	0.05 - 0.1 m	Dark reddish brown (5YR3/4-Moist); Mottles; Mottles; Light clay; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Firm consistence; Common, medium (2-5mm) roots;
B21	0.1 - 0.2 m	Dark reddish brown (5YR3/4-Moist); Mottles; Mottles; Light clay; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Firm consistence; Common, medium (2-5mm) roots;
B21	0.2 - 0.3 m	Dark reddish brown (5YR3/4-Moist); Mottles; Mottles; Light clay; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Firm consistence; Common, medium (2-5mm) roots; Diffuse change to -
B22	0.3 - 0.5 m	Dark reddish brown (5YR3/3-Moist); Mottles; Mottles; Light medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; Common, fine (1-2mm) roots;
B22	0.5 - 0.6 m	Dark reddish brown (5YR3/3-Moist); Mottles; Mottles; Light medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; Common, fine (1-2mm) roots; Diffuse change to -
B31	0.6 - 0.9 m	Dark brown (7.5YR3/3-Moist); Mottles; Mottles; Light medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Common, fine (1-2mm) roots;
B31	0.9 - 1.2 m	Dark brown (7.5YR3/3-Moist); Mottles; Mottles; Light medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Common, fine (1-2mm) roots; Diffuse change to -
B32	1.2 - 1.5 m	Dark brown (7.5YR3/2-Moist); Mottles; Mottles; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, undisturbed, Sand, coarse fragments; Few, very fine (0-1mm) roots;

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B32	1.5 - 1.8 m	Dark brown (7.5YR3/2-Moist); Mottles; Mottles; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, undisturbed, Sand, coarse fragments; Few, very fine (0-1mm) roots;
B32	1.8 - 2.1 m	Dark brown (7.5YR3/2-Moist); Mottles; Mottles; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, undisturbed, Sand, coarse fragments; Few, very fine (0-1mm) roots; Diffuse change to -

Morphological Notes

Observation Notes

RAINFOREST 1A:PARENT MATERIAL STRONGLY WEATHERED BROWN BASALT:FEW WORM CASTS IN B21 + B22 HORIZONS:

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.05	4.4D	0.13A	4.4H	2.3	0.34	0.07	0.96F	5.1A	8.1F	1.37
	5.4A							27C		0.26
0.05 - 0.1	5.3A	0.076A								
0.1 - 0.2	5.2A	0.044A								
0.2 - 0.3	4.4D	0.027A	0.24H	0.37	0.11	0.11	1.48F	2.4A	2.3F	4.58
	5.2A							14C		0.79
0.3 - 0.5	5.1A	0.018A								
0.5 - 0.6	4.2D	0.016A	0.05H	0.43	0.12	0.12	1.51F	1.9A	2.2F	6.32
	5.1A							10C		1.20
0.6 - 0.9	5.1A	0.013A								
0.9 - 1.2	4D	0.012A	0.05H	0.3	0.07	0.25	3.56F	2.1A	4.2F	11.90
	5.1A							10C		2.50
1.2 - 1.5	4.9A	0.016A								
1.5 - 1.8	3.9D	0.014A	<0.02H	0.13	0.03	0.21	4.92F	2.1A	5.3F	10.00
	4.9A							10C		2.10
1.8 - 2.1	4.9A	0.016A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.05		7.45C	17B	0.25A	0.44A	0.06A		2	2A	5	35	58
0.05 - 0.1												
0.1 - 0.2												
0.2 - 0.3		2.49C	9B	0.23A		0.04A		0	2A	3	34	61
0.3 - 0.5		1.52C										
0.5 - 0.6		0.69C						0	1A	7	32	61
0.6 - 0.9		0.37C						1	1A	9	36	53
0.9 - 1.2				0.17A		0.02A		1	1A	12	45	43
1.2 - 1.5												
1.5 - 1.8				0.17A		0.01A						
1.8 - 2.1								2		15	42	43

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
m		g/g - m3/m3						mm/h	mm/h
0 - 0.05									
0.05 - 0.1									
0.1 - 0.2									
0.2 - 0.3									
0.3 - 0.5									
0.5 - 0.6									
0.6 - 0.9									
0.9 - 1.2									
1.2 - 1.5									
1.5 - 1.8									
1.8 - 2.1									

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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_CEC	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
15E1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble
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
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
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
4C1	pH of 1:5 soil/1M potassium chloride extract - direct
5A2	Chloride - 1:5 soil/water extract, automated colour
6B3	Total organic carbon - high frequency induction furnace, infrared
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)
9H1	Phosphate retention
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 (%)