Project Name: **Regional**
Project Code: **REG** **Site ID:** **T494** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By:
Date Desc.: 01/06/88
Map Ref.: Sheet No. : 8358 1:100000
Northing/Long.: 147.250555555556
Easting/Lat.: -19.8825
Locality: Janis Bottinger Phd. Site; approx 10cm from 492.
Elevation: No Data
Rainfall: 1091
Runoff: Slow
Drainage: Moderately well drained

Geology

ExposureType: Soil pit
Geol. Ref.: Czs
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Soil pit, 0.68 m deep,Granite

Land Form

Rel/Slope Class: Level plain <9m <1%
Morph. Type: Crest
Elem. Type: Plain
Slope: <1 %
Pattern Type: Peneplain
Relief: No Data
Slope Category: Level
Aspect: No Data

Surface Soil Condition (dry): Surface crust, Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:
Vertic Eutrophic Red Dermosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
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 - , , . *Species includes - Heteropogon triticeus

Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - Eucalyptus drepanophylla, Eucalyptus papuana

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A	0 - 0.11 m	Dark brown (7.5YR3/2-Moist); Dark brown (7.5YR3/4-Dry); ; Clay loam; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, <2 mm, Platy; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moist; Firm consistence; Moderately plastic; Superplastic; Moderately sticky; Common, very fine (0-1mm) roots; Clear, Smooth change to -
BA	0.11 - 0.31 m	Dark reddish brown (2.5YR3/4-Moist); Reddish brown (2.5YR4/4-Dry); ; Light clay; Strong grade of structure, 20-50 mm, Subangular blocky; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moist; Firm consistence; Moderately plastic; Superplastic; Moderately sticky; Few cutans, <10% of ped faces or walls coated, distinct; Common, very fine (0-1mm) roots; Gradual, Smooth change to -
Bt	0.31 - 0.5 m	Red (2.5YR4/6-Moist); Red (2.5YR4/8-Dry); ; Medium clay; Strong grade of structure, 20-50 mm, Subangular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Very firm consistence; Moderately plastic; Superplastic; Moderately sticky; Many cutans, >50% of ped faces or walls coated, distinct; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Concretions; Common, very fine (0-1mm) roots; Clear, Smooth change to -
Bct	0.5 - 0.68 m	Reddish brown (5YR4/4-Moist); Yellowish red (5YR4/6-Dry); ; Light clay; Weak grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Very firm consistence; Moderately plastic; Superplastic; Moderately sticky; Common cutans, 10-50% of ped faces or walls coated, distinct; Common, very fine (0-1mm) roots; Clear, Smooth change to -
CB	0.68 - 0.83 m	Reddish brown (5YR5/4-Moist); Light reddish brown (5YR6/4-Dry); ; Sandy clay loam; Massive grade of structure; Moist; Firm consistence; Slightly plastic; Superplastic; Slightly sticky; Common cutans, 10-50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots; Gradual, Smooth change to -
Cr	0.83 - 1 m	Brown (7.5YR5/4-Moist); Pink (7.5YR7/4-Dry); ; Sandy loam; Massive grade of structure; Moist; Weak consistence; Slightly plastic; Superplastic; Slightly sticky; Few, very fine (0-1mm) roots;

Morphological Notes

Observation Notes

MOUNDS OF 5Dra 5Uga COMPLEX; SLICKENSIDE IN Bt; SOME VERTICAL FACES (OLD ROCK FEATURES?); THE DEGREE TO WHICH THE C HORIZON HAS WEATHERED VARIES - SOME OF THE MICA'S ARE GREEN, SOME ARE

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BROWN, HEXAGONAL BOOKS OF MICA ARE LARGE >2MM x

Site Notes

HOMEHILL

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.11	6.39A	0.049A	9.35H	5.44	0.32	0.03	0.03F	12.6J	15.2E	0.24
								13.7C		0.22
0.11 - 0.31	6.13A	0.06A	8.76H	5.75	0.11	0.06	0.03F	13.5J	14.7E	0.44
								13.7C		
0.31 - 0.5	6.23A	0.065A	9.91H	7.24	0.09	0.09	0.02F	10.1J	17.4E	0.89
								17C		0.53
0.5 - 0.68	6.74A	0.049A	14.6H	9.76	0.06	0.32	<0.02F	16.3J	24.8E	1.96
								21.9C		1.46
0.68 - 0.83	7.15A	0.046A	14.2H	9.58	0.05	0.3	0.02F	17.1J	24.2E	1.75
								18.7C		1.60
0.83 - 1	7.19A	0.04A	12.8H	8.35	0.03	0.19	0.02F	13.2J	21.4E	1.44
								14.9C		1.28

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 - 0.11		1.35C	10A	0.04A	0.07A	0.23A						
			13B									
0.11 - 0.31		0.72C			0.04A							
0.31 - 0.5			2A	0.02A		0.18A						
			2B									
0.5 - 0.68		0.21C			0.01A							
0.68 - 0.83				0.09A		1.15A						
0.83 - 1		0.05C	2A									
			540B									

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 - 0.11									
0.11 - 0.31									
0.31 - 0.5									
0.5 - 0.68									
0.68 - 0.83									
0.83 - 1									

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
12_HF_FE	Total element - Fe(%) - HF/HClO4 Digest
12_XRF_CU	Total element - Cu(mg/kg) - X-Ray Fuoresence
12_XRF_MN	Total element - Mn(mg/kg) - X-Ray Fuoresence
12_XRF_ZN	Total element - Zn(mg/kg) - X-Ray Fuoresence
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15_NR	Sum of Ex. cations + Ex. acidity - Not recorded
15_NR_CEC	CEC - meq per 100g of soil - Not recorded
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
17A1	Total potassium - X-ray fluorescence
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
6B3	Total organic carbon - high frequency induction furnace, infrared
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A1	Total phosphorus - X-ray fluorescence
9B_9C	Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO3 extractable
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)