Project Name: **Regional**
Project Code: **REG** **Site ID:** **T364** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: M.G. Cannon
Date Desc.: 23/11/83
Map Ref.: Sheet No. : 8161 1:100000
Northing/Long.: 146.125
Easting/Lat.: -18.3958333333333
Locality:
Elevation: 25 metres
Rainfall: 2250
Runoff: Moderately rapid
Drainage: Moderately well drained

Geology

ExposureType: Undisturbed soil core
Geol. Ref.: QA
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Unconsolidated material (unidentified)

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%
Morph. Type: No Data
Elem. Type: Fan
Slope: 1.5 %
Pattern Type: Plain
Relief: No Data
Slope Category: Very gently sloped
Aspect: No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:
Haplic Mesotrophic Yellow Kandosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn2.21
Great Soil Group: Yellow earth

Site Disturbance: No effective disturbance. Natural

Vegetation:

Mid Strata - Tree, 3.01-6m, Isolated plants. *Species includes - Planchonia careya

Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - Eucalyptus alba, Eucalyptus acmenoides

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.1 m	Very dark grey (10YR3/1-Moist); Pale brown (10YR6/3-Dry); Mottles, 0-0% ; Mottles, 0-0% ; Coarse sandy clay loam (Light); Weak grade of structure, 2-5 mm, Granular; Smooth-ped fabric; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Clear, Smooth change to -
AB	0.1 - 0.2 m	Brown (10YR4/3-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sandy clay loam; Massive grade of structure; Earthy fabric; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Gradual, Wavy change to -
B1	0.2 - 0.3 m	Yellowish brown (10YR5/4-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Clay loam, sandy (Heavy); Massive grade of structure; Earthy fabric; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;
B1	0.3 - 0.4 m	Yellowish brown (10YR5/4-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Clay loam, sandy (Heavy); Massive grade of structure; Earthy fabric; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Diffuse, Wavy change to -
B21	0.4 - 0.6 m	Yellowish brown (10YR5/8-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sandy medium clay (Heavy); Massive grade of structure; Earthy fabric; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Diffuse, Smooth change to -
B22	0.6 - 0.9 m	Olive yellow (2.5Y6/6-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sandy medium clay (Light); Massive grade of structure; Earthy fabric; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Clear, Smooth change to -
D1	0.9 - 1.2 m	Brownish yellow (10YR6/6-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sandy clay loam (Light); Massive grade of structure; Earthy fabric; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;
D1	1.2 - 1.5 m	Brownish yellow (10YR6/6-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sandy clay loam (Light); Massive grade of structure; Earthy fabric; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Clear, Smooth change to -

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D2	1.5 - 1.8 m	Brownish yellow (10YR6/8-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sand; Massive grade of structure; Sandy (grains prominent) fabric; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Clear, Smooth change to -
D3	1.8 - 1.9 m	Very pale brown (10YR7/4-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Coarse sand; Massive grade of structure; Sandy (grains prominent) fabric; 50-90%, medium gravelly, 6-20mm, subangular, dispersed, Sand, coarse fragments; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Nodules; Abrupt, Smooth change to -

Morphological Notes

Observation Notes

AT DEPTH OF 30CM IS 500MM PINK GRANITE ROCK:

Site Notes

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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 - 0.1	6.3A	0.02A	3.48H	0.93	0.21	0.02	<0.05F	5A	4.6F	0.40
								6.3C		0.32
0.1 - 0.2	6.6A	0.02A								
0.2 - 0.3	6.8A	0.016A	2.02H	0.78	0.15	<0.02	0.06F	3.4A	3F	
								4.4C		
0.3 - 0.4	6.3A	0.019A								
0.4 - 0.6	6A	0.016A	1.75H	1.27	0.09	0.02	0.23F	3.7A	3.4F	0.54
								5.7C		0.35
0.6 - 0.9	6.1A	0.014A								
0.9 - 1.2	5.9A	0.013A								
1.2 - 1.5	6A	0.013A	0.7H	1.09	0.16	0.02	0.27F	2.6A	2.2F	0.77
								3.7C		0.54
1.5 - 1.8	6.1A	0.01A								
1.8 - 1.9	6.1A	0.013A								

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 - 0.1		1.63C	7B	0.01A	0.07A	3.4A		7	49A	25	13	12
0.1 - 0.2								11	43A	27	14	16
0.2 - 0.3		0.55C	2B	0.006A	0.03A	3.42A		12	37A	28	14	21
0.3 - 0.4				0.005A		3.26A		13	35A	25	13	27
0.4 - 0.6		0.22C	3B					7	33A	28	10	29
0.6 - 0.9								1	31A	32	11	26
0.9 - 1.2								2	41A	32	8	19
1.2 - 1.5		0.21C	3B	0.007A		3.4A		0	34A	37	9	20
1.5 - 1.8								2	64A	16	5	14
1.8 - 1.9								44	55A	19	11	15

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 - 0.1										
0.1 - 0.2										
0.2 - 0.3										
0.3 - 0.4										
0.4 - 0.6										
0.6 - 0.9										
0.9 - 1.2										
1.2 - 1.5										
1.5 - 1.8										
1.8 - 1.9										

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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
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
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 (%)