Project Name: **Regional**
Project Code: **REG** **Site ID:** **T374** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: M.G. Cannon
Date Desc.: 24/11/83
Map Ref.: Sheet No. : 8061 1:100000
Northing/Long.: 145.975
Easting/Lat.: -18.2166666666667
Locality:
Elevation: 5 metres
Rainfall: 2250
Runoff: Very slow
Drainage: Rapidly drained

Geology

ExposureType: Undisturbed soil core
Geol. Ref.: QR
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Sand

Land Form

Rel/Slope Class: Level plain <9m <1%
Morph. Type: No Data
Elem. Type: Beach ridge
Slope: 0 %
Pattern Type: Beach ridge plain
Relief: 3 metres
Slope Category: Level
Aspect: No Data

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:
Melanic Regolithic Chernic Tenosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Uc5.11
Great Soil Group: Siliceous sand

Site Disturbance: No effective disturbance. Natural

Vegetation:

Mid Strata - Tree, 6.01-12m, Sparse. *Species includes - Panicum species, Acacia aulacocarpa
Tall Strata - Tree, 20.01-35m, Mid-dense. *Species includes - Acacia mangium, Eucalyptus pellita, Eucalyptus

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.1 m	Black (10YR2/1-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Loamy sand; Massive grade of structure; Earthy fabric; Moderately moist; Loose consistence; Few, very fine (0-1mm) roots;
A11	0.1 - 0.2 m	Black (10YR2/1-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Loamy sand; Massive grade of structure; Earthy fabric; Moderately moist; Loose consistence; Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A12	0.2 - 0.3 m	Brown (7.5YR4/4-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Loamy sand; Massive grade of structure; Earthy fabric; Moderately moist; Loose consistence; Few, very fine (0-1mm) roots;
A12	0.3 - 0.4 m	Brown (7.5YR4/4-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Loamy sand; Massive grade of structure; Earthy fabric; Moderately moist; Loose consistence; Few, very fine (0-1mm) roots; Diffuse, Broken change to -
AB	0.4 - 0.6 m	Brown (7.5YR5/4-Moist); Mottles, 5YR46, 0-2% , 0-5mm, Distinct; Mottles, 0-2% , 0-5mm, Distinct; Loamy sand; Massive grade of structure; Earthy fabric; Moderately moist; Loose consistence; Few, very fine (0-1mm) roots; Diffuse, Broken change to -
B21	0.6 - 0.9 m	Yellowish red (5YR5/8-Moist); Mottles, 10YR78, 2-10% , 5-15mm, Distinct; Mottles, 2-10% , 5-15mm, Distinct; Sand; Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few, very fine (0-1mm) roots;
B21	0.9 - 1.2 m	Yellowish red (5YR5/8-Moist); Mottles, 10YR78, 2-10% , 5-15mm, Distinct; Mottles, 2-10% , 5-15mm, Distinct; Sand; Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few, very fine (0-1mm) roots; Diffuse, Broken change to -
B22	1.2 - 1.5 m	Yellowish red (5YR5/8-Moist); Mottles, 10YR78, 20-50% , 5-15mm, Distinct; Mottles, 20-50% , 5-15mm, Distinct; Sand; Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Diffuse, Broken change to -

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C	1.5 - 1.8 m	Yellow (10YR7/8-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sand; Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;

Morphological Notes

Observation Notes

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	5.6A	0.029A	1.12H	0.4	0.07	<0.02	0.78F	2.9A 6.3C	2.4F	
0.1 - 0.2	5.6A	0.016A								
0.2 - 0.3	5.6A	0.011A								
0.3 - 0.4	5.6A	0.011A	0.37H	0.22	<0.02	<0.02	0.8F	2A 4C	1.4F	
0.4 - 0.6	5.6A	0.018A								
0.6 - 0.9	5.8A	0.005A	0.28H	0.26	<0.02	<0.02	0.23F	1.2A 1.6C	0.8F	
0.9 - 1.2	5.8A	0.004A								
1.2 - 1.5	5.4A	0.004A	0.35H	0.32	0.04	<0.02	0.25F	1.3A 1.5C	1F	
1.5 - 1.8	5.6A	0.006A								

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		1.89C	4B	0.009A	0.11A	0.46A		2	71A	11	5	13
0.1 - 0.2								1	67A	12	6	16
0.2 - 0.3								2	64A	14	4	18
0.3 - 0.4		0.91C	3B	0.009A	0.05A	0.52A		1	64A	12	7	18
0.4 - 0.6								1	66A	13	4	18
0.6 - 0.9		0.14C	3B	0.005A		0.51A		3	70A	12	3	15
0.9 - 1.2								3	66A	16	3	15
1.2 - 1.5		0.09C						3	64A	19	2	15
1.5 - 1.8								6	66A	19	2	13

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									

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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 (%)