Project Name: **Regional**
Project Code: **REG** **Site ID:** **T153** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: G. Smith
Date Desc.: 29/09/70
Map Ref.: Sheet No. : 7361 1:100000
Northing/Long.: 142.083333333333
Easting/Lat.: -18.0833333333333
Locality: 23.2KM west of Croydon Pub on Normanton Road:
Elevation: No Data
Rainfall: 0
Runoff: Very slow
Drainage: Imperfectly drained

Geology

ExposureType: Undisturbed soil core
Geol. Ref.: Pge
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Undisturbed soil core, 2.4 m deep,No Data

Land Form

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

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Bleached-Sodic Mesotrophic Grey Kandosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn2.94
Great Soil Group: Grey earth

Site Disturbance:

Vegetation:

Tall Strata - Tree, 3.01-6m, Very sparse. *Species includes - Melaleuca viridiflora, Eucalyptus species

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.05 m	Dark grey (10YR4/1-Moist); ; Loamy sand; Single grain grade of structure; Moist; Very weak consistence; Few, fine (1-2mm) roots; Clear change to -
A11	0.05 - 0.1 m	Dark grey (10YR4/1-Moist); ; Loamy sand; Single grain grade of structure; Moist; Very weak consistence; Few, fine (1-2mm) roots; Clear change to -
A21	0.1 - 0.2 m	Light brownish grey (10YR6/2-Moist); Pinkish grey (7.5YR7/2-Dry); ; Sand (Heavy); Massive grade of structure; Dry; Very strong consistence; Common, medium (2-5mm) roots; Gradual change to -
A22	0.2 - 0.3 m	Pale brown (10YR6/3-Moist); Pinkish grey (7.5YR7/2-Dry); ; Sand (Heavy); Massive grade of structure; Dry; Very strong consistence; Few, fine (1-2mm) roots; Gradual change to -
A23	0.3 - 0.4 m	Pale brown (10YR6/3-Moist); Pinkish grey (7.5YR7/2-Dry); ; Sand (Heavy); Massive grade of structure; Dry; Rigid consistence; Few, fine (1-2mm) roots; Gradual change to -
A3	0.4 - 0.5 m	Pale brown (10YR6/3-Moist); , 10YR68, 2-10% ; , 2-10% ; Sandy loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Concretions; FewGradual change to -
B1	0.5 - 0.6 m	Brownish yellow (10YR6/5-Moist); , 10YR68, 2-10% , 5-15mm, Prominent; , 2-10% , 5-15mm, Prominent; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Concretions; Gradual change to -
B21	0.6 - 0.7 m	Light grey (10YR7/2-Moist); , 10YR68, 2-10% , 5-15mm, Prominent; , 2-10% , 5-15mm, Prominent; Sandy medium clay; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Concretions; Gradual change to -
B21	0.7 - 0.8 m	Light grey (10YR7/2-Moist); , 10YR68, 10-20% ; , 10-20% ; Sandy medium clay; Massive grade of structure; Earthy fabric; Dry; Rigid consistence; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Concretions; Gradual change to -

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B21	0.8 - 0.9 m	Light grey (10YR7/2-Moist); , 7.5YR78, 20-50% , 15-30mm, Distinct; , 20-50% , 15-30mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Concretions; Gradual change to -
B21	0.9 - 1 m	Light grey (10YR7/2-Moist); , 7.5YR78, 20-50% , 15-30mm, Distinct; , 20-50% , 15-30mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Very few (0 - 2 %), Manganiferous, , Concretions; Gradual change to -
B22	1 - 1.1 m	Light grey (10YR7/2-Moist); , 7.5YR78, 10-20% , Distinct; , 10-20% , Distinct; Light medium clay; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Few (2 - 10 %), Manganiferous, , Concretions; Gradual change to -
B22	1.1 - 1.2 m	Light grey (10YR7/2-Moist); , 10YR66; Light medium clay; Massive grade of structure; Earthy fabric; Dry; Strong consistence; Few (2 - 10 %), Manganiferous, , Concretions; Gradual change to -
	1.2 - 1.35 m	Light grey (10YR7/2-Moist); , 0-2% ; , 0-2% ; Sandy medium clay (Heavy); Massive grade of structure; Earthy fabric; Strong consistence; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Concretions; Gradual change to -
	1.35 - 1.5 m	Light grey (2.5Y7/2-Moist); , 0-2% ; , 0-2% ; Sandy medium clay (Heavy); Massive grade of structure; Earthy fabric; Rigid consistence; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Concretions; Gradual change to -
C	1.5 - 1.8 m	Light grey (2.5Y7/2-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric; Dry; Rigid consistence; Common (10 - 20 %), Ferruginous, Very coarse (20 - 60 mm), Concretions; Gradual change to -
	1.8 - 2.1 m	Light grey (2.5Y7/2-Moist); ; Medium clay; Massive grade of structure; Rigid consistence; Very many (50 - 100 %), Ferruginous, Very coarse (20 - 60 mm), Concretions; Gradual change to -
	2.1 - 2.2 m	Light grey (2.5Y7/2-Moist); ; Medium heavy clay; Massive grade of structure; Rigid consistence; Many (20 - 50 %), Ferruginous, , Concretions; Gradual change to -
	2.2 - 2.35 m	Light grey (2.5Y7/2-Moist); ; Medium heavy clay; Massive grade of structure; Rigid consistence; Clear change to -
	2.35 - 2.45 m	Light grey (2.5Y7/2-Moist); ; Medium heavy clay; Massive grade of structure; Rigid consistence;

Morphological Notes

Observation Notes

>60CM INCREASING Y MATRIX:40-90CM CONC. INSIDE MOTTLE:180-210CM CONSISTS OF CONC.& COARSE MOTTLES &SANDY LENSES:

Site Notes

CROYDON

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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 - 0.05	6.5A	0.032A	1.2B	0.36	0.1	0.18	0.9F		2.7F	
0.05 - 0.1	6.5A	0.032A	0.92B	0.21	0.08	0.2	0.3F		1.7F	
0.1 - 0.2	6.7A	0.017A	0.66B	0.15	0.07	0.17	0.5F		1.6F	
0.2 - 0.3	6.6A	0.014A	0.36B	0.14	0.08	0.18	0.05F		0.8F	
0.3 - 0.4	6.2A	0.011A	0.32B	0.17	0.07	0.17				
0.4 - 0.5	6.2A	0.017A	0.46B	0.29	0.11	0.18	0.5F		1.5F	
0.5 - 0.6	6A	0.017A	0.76B	0.46	0.15	0.18	0.7F		2.3F	
0.6 - 0.7	6.2A	0.017A								
0.7 - 0.8	6.3A	0.014A	1B	0.08	0.13	0.18	0.5F		1.9F	
0.8 - 0.9	6.5A	0.017A								
0.9 - 1	6.7A	0.017A	1.1B	1.2	0.15	0.18	0.9F		3.5F	
1 - 1.1	6.7A	0.017A								
1.1 - 1.2	6.7A	0.02A	1B	1.67	0.19	0.26	0.5F	3.18A	3.6F	8.18
1.2 - 1.35	6.2A	0.089A	0.76B	1.7	0.2	0.42	1.1F		4.2F	
1.35 - 1.5	6.8A	0.026A								
1.5 - 1.8	6.9A	0.029A	0.26B	1.5	0.22	0.4				
1.8 - 2.1	6.5A	0.041A								
2.1 - 2.2	6.1A	0.044A	0.26B	2.7	0.21	1.6				
2.2 - 2.35	5.9A	0.05A								
2.35 - 2.45	6.4A	0.035A								

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		0.43D	2.8B	0.005A	0.03A	0.43A		0	58A	35	4	3
0.05 - 0.1		0.12D	<2B	0.006A	0.03A	0.43A		0	50A	43	4	3
0.1 - 0.2		0.07D	<2B	0.005A		0.45A		0	52A	41	4	3
0.2 - 0.3			<2B	0.005A		0.47A		0	49A	43	4	4
0.3 - 0.4												
0.4 - 0.5				0.005A		0.57A		<2	47A	37	4	12
0.5 - 0.6								2	45A	35	3	17
0.6 - 0.7												
0.7 - 0.8			<2B	0.006A		0.59A		2	45A	29	3	23
0.8 - 0.9												
0.9 - 1								2	48A	23	3	26
1 - 1.1												
1.1 - 1.2								2	46A	23	3	28
1.2 - 1.35				0.007A		0.64A		2	49A	23	3	25
1.35 - 1.5												
1.5 - 1.8								2	50A	24	3	23
1.8 - 2.1												
2.1 - 2.2												
2.2 - 2.35												
2.35 - 2.45												

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									

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0.05 - 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.5
0.5 - 0.6
0.6 - 0.7
0.7 - 0.8
0.8 - 0.9
0.9 - 1
1 - 1.1
1.1 - 1.2
1.2 - 1.35
1.35 - 1.5
1.5 - 1.8
1.8 - 2.1
2.1 - 2.2
2.2 - 2.35
2.35 - 2.45

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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_MN	Total element - Mn(mg/kg) - HF/HClO4 Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO4 Digest
13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15A2_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_CEC	Exchangeable bases- 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
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
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 H2SO4 (BSES)
MIN_EC	Exchange Capacity - Minerology
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 (%)
XRD_C_Il	Illite - X-Ray Diffraction
XRD_C_Is	Interstratified clay minerals - X-Ray Diffraction
XRD_C_K2O	K2O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction