

Project Name: Regional
Project Code: REG **Site ID:** T209 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.G. Murtha	Locality:	1.2KM along track to North Hull River from South Mission Beach Road:
Date Desc.:	17/10/73	Elevation:	20 metres
Map Ref.:	Sheet No. : 8162 1:100000	Rainfall:	3000
Northing/Long.:	146.083333333333	Runoff:	Very slow
Easting/Lat.:	-17.916666666667	Drainage:	Poorly drained

Geology

Exposure Type:	Soil pit	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	QA	Substrate Material:	Unconsolidated material (unidentified)

Land Form

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

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Dystrophic Mottled Redoxic Hydrosol	Mapping Unit:	N/A
ASC Confidence:	All necessary analytical data are available.	Principal Profile Form:	Uf6.41
		Great Soil Group:	Gleyed podzolic soil

Site Disturbance: No effective disturbance. Natural

Vegetation: Low Strata - Tussock grass, 0.51-1m, Sparse. *Species includes - None recorded
 Mid Strata - Tree, 3.01-6m, Very sparse. *Species includes - Acacia species, Melaleuca viridiflora
 Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - Eucalyptus pellita

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.1 m	Dark grey (10YR4/1-Moist); ; Light clay (Heavy); Moderate grade of structure, 5-10 mm, Subangular blocky; Moist; Very firm consistence;
B1	0.1 - 0.2 m	Greyish brown (2.5Y5/2-Moist); ; Light medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Moist; Very firm consistence;
B1	0.2 - 0.3 m	Greyish brown (2.5Y5/2-Moist); ; Medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Moist; Very firm consistence; Diffuse change to -
B21	0.3 - 0.45 m	Light grey (10YR7/1-Moist); ; 10YR66, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Medium clay; Strong grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 10-20 mm, Angular blocky; Moist; Very firm consistence;
B21	0.45 - 0.6 m	Light grey (10YR7/1-Moist); ; 10YR66, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Medium clay; Strong grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 10-20 mm, Angular blocky; Moist; Very firm consistence;
B21	0.6 - 0.8 m	Light grey (10YR7/1-Moist); ; 10YR66, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moist; Very firm consistence; Diffuse change to -
B22	0.9 - 1.05 m	Dark grey (10YR4/1-Moist); ; 10YR64, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Medium heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Moist; Very firm consistence; Gradual change to -
	1.05 - 1.2 m	Grey (2.5Y6/0-Moist); ; 2.5Y64, 20-50% , 5-15mm, Prominent; , 2.5YR58, 20-50% , 5-15mm, Prominent; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Very firm consistence;
	1.2 - 1.5 m	Grey (2.5Y6/0-Moist); ; 2.5Y64, 20-50% , 5-15mm, Prominent; , 2.5YR58, 20-50% , 5-15mm, Prominent; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Very firm consistence;

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1.5 - 1.8 m	Grey (2.5Y6/0-Moist); , 2.5Y64, 20-50% , 5-15mm, Prominent; , 2.5YR58, 20-50% , 5-15mm, Prominent; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Very firm consistence; Diffuse change to -
1.8 - 2.1 m	Grey (2.5Y6/0-Moist); , 10YR66, 20-50% , 5-15mm, Prominent; , 10YR58, 20-50% , 5-15mm, Prominent; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Very firm consistence;
2.1 - 2.4 m	Grey (2.5Y6/0-Moist); , 10YR66, 20-50% , 5-15mm, Prominent; , 10YR58, 20-50% , 5-15mm, Prominent; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Very firm consistence;
2.4 - 2.7 m	Grey (2.5Y6/0-Moist); , 10YR66, 20-50% , 5-15mm, Prominent; , 10YR58, 20-50% , 5-15mm, Prominent; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Very firm consistence;
2.7 - 3 m	;

Morphological Notes

Observation Notes

PROMINENT YB ROOT CHANNELS IN A1-B1 HORIZON

Site Notes

NORTH HULL R.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable		CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity			%
						Cmol	(+)/kg			
0 - 0.1	4.7A	<0.05A	0.2H	0.24	<0.01	0.09	4.5F	1A 1C	5F	9.00
0.1 - 0.2	4.6A	<0.05A	0.05H	0.4	0.09	0.1	4.4F	3.5A 9.4C	5F	2.86 1.06
0.2 - 0.3	4.7A	<0.05A	0.05H	0.34	0.03	0.09	4.6F	3.2A 8.5C	5.1F	2.81 1.06
0.3 - 0.45	4.8A	<0.05A	0.05H	0.38	0.03	0.08	4.8F	3.2A 7.9C	5.3F	2.50 1.01
0.45 - 0.6	4.8A	<0.05A	0.05H	0.4	0.02	0.08	2.8F	2.5A 8.2C	3.4F	3.20 0.98
0.6 - 0.9	4.6A	<0.05A								
0.9 - 1.05	4.7A	<0.05A	0.04H	0.3	0.02	0.1	3.5F	10.5C	4F	0.95
1.05 - 1.2	4.7A	<0.05A								
1.2 - 1.5	4.7A	<0.05A								
1.5 - 1.8	4.7A	<0.05A								
1.8 - 2.1	4.7A	<0.05A								
2.1 - 2.4	4.8A	<0.05A								
2.4 - 2.7	5.1A	<0.05A								
2.7 - 3	5.4A	<0.05A								

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1.2 - 1.5
1.5 - 1.8
1.8 - 2.1
2.1 - 2.4
2.4 - 2.7
2.7 - 3

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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_ZN	Total element - Zn(mg/kg) - HF/HClO4 Digest
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 (Ca ²⁺ ,Mg ²⁺ ,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
5A2	Chloride - 1:5 soil/water extract, automated colour
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_Ch2	Chloritized 2:1 minerals - X-Ray Diffraction
XRD_C_II	Illite - X-Ray Diffraction
XRD_C_K2O	K2O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction