

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T50 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b> R.F. Isbell	<b>Locality:</b> Adjacent to Otterburn siding 3.2KM east of Mirani:
<b>Date Desc.:</b> 06/07/65	<b>Elevation:</b> 30 metres
<b>Map Ref.:</b> Sheet No. : 8655 1:100000	<b>Rainfall:</b> 1400
<b>Northing/Long.:</b> 148.883333333333	<b>Runoff:</b> Very slow
<b>Easting/Lat.:</b> -21.1625	<b>Drainage:</b> Poorly drained

#### Geology

<b>ExposureType:</b> Soil pit	<b>Conf. Sub. is Parent. Mat.:</b> No Data
<b>Geol. Ref.:</b> Qa	<b>Substrate Material:</b> Unconsolidated material (unidentified)

#### Land Form

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

**Surface Soil Condition (dry):** Hardsetting

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Eutrophic Chromosolic Oxyaquic Hydrosol	<b>Principal Profile Form:</b> Dy3.33
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> Solodic soil
All necessary analytical data are available.	

**Site Disturbance:** No effective disturbance other than grazing by hoofed animals

**Vegetation:** Low Strata - Tussock grass, 0.51-1m, Mid-dense. \*Species includes - Imperata cylindrica  
 Mid Strata - Tree, 3.01-6m, Sparse. \*Species includes - Melaleuca viridiflora  
 Tall Strata - Tree, 12.01-20m, Sparse. \*Species includes - Eucalyptus tessellaris

**Surface Coarse Fragments:** No surface coarse fragments

#### Profile Morphology

A1	0 - 0.09 m	Dark greyish brown (10YR4/2-Moist); Light brownish grey (10YR6/2-Dry); , 10YR58, 0-2% , 0-5mm, Faint; , 0-2% , 0-5mm, Faint; Sandy loam; Weak grade of structure, 5-10 mm, Subangular blocky; Firm consistence; Clear change to -
A2	0.09 - 0.18 m	Grey (10YR5/1-Moist); Light grey (10YR7/1-Dry); , 10YR58, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint; Sandy loam; Massive grade of structure; Firm consistence; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules; Abrupt change to -
B21	0.18 - 0.33 m	Grey (10YR5/1-Moist); , 10YR56, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Very plastic; Normal plasticity; Gradual change to -
B22	0.33 - 0.56 m	Greyish brown (10YR5/2-Moist); , 10YR44, 10-20% , 0-5mm, Faint; , 10-20% , 0-5mm, Faint; Heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Very plastic; Normal plasticity;
B22	0.56 - 0.76 m	Greyish brown (10YR5/2-Moist); , 10YR44, 10-20% , 0-5mm, Faint; , 10-20% , 0-5mm, Faint; Heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Very plastic; Normal plasticity; Gradual change to -
BC	0.76 - 0.97 m	Greyish brown (10YR5/2-Moist); , 10YR44, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Medium clay; Massive grade of structure; Very plastic; Normal plasticity; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, , Soft segregations; Gradual change to -
BC	0.97 - 1.17 m	Grey (10YR5/1-Moist); , 10YR58, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Medium clay; Very plastic; Normal plasticity; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules; Common (10 - 20 %), Calcareous, , Soft segregations; Gradual change to -
C	1.17 - 1.32 m	Light brownish grey (10YR6/2-Moist); , 10YR58, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Sandy medium clay; Weak consistence; Very few (0 - 2 %), Manganiferous, Medium (2 - 6 mm), Nodules; Very few (0 - 2 %), Calcareous, , Soft segregations; Clear change to -

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D      1.32 - 1.47 m      Light yellowish brown (10YR6/4-Moist); , 10YR58, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint;  
Sandy clay loam; Very strong consistence; Very few (0 - 2 %), Manganiferous, , Soft  
segregations; Very few (0 - 2 %), Calcareous, , Nodules;

**Morphological Notes**

**Observation Notes**

**Site Notes**

MIRANI

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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 Cmol (+)/kg	Acidity		%
0 - 0.09	5.5A	0.047A	2.6B	1.3	0.19	0.4		9C	4.44
0.09 - 0.18	5.8A	0.029A	2.4B	1.3	0.1	0.5		7C	7.14
0.18 - 0.33	5.5A	0.059A	5B	6.8	0.16	0.3		18C	1.67
0.33 - 0.56	5.5A	0.119A	6.5B	8	0.2	1.8		18C	10.00
0.56 - 0.76	6.3A	0.229A	6.5B	8	0.1	2.1		17C	12.35
0.76 - 0.97	7.8A	2.59A	5B	6	0.05	2		14C	14.29
0.97 - 1.17	8.6A	0.428A	6.4B	6.4	0.06	2		15C	13.33
1.17 - 1.32	8.8A	0.419A	8B	6.9	0.06	2		13C	15.38
1.32 - 1.47	8.7A	0.601A	10.5B	10		5.7		22C	25.91

[illegible][illegible]

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**Laboratory Analyses Completed for this profile**

15A2_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
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 H <sub>2</sub> SO <sub>4</sub> (BSES)
P10_GRAV	Gravel (%)
P10_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance