

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T378 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	M.G. Cannon	<b>Locality:</b>	
<b>Date Desc.:</b>	24/11/83	<b>Elevation:</b>	30 metres
<b>Map Ref.:</b>	Sheet No. : 8061 1:100000	<b>Rainfall:</b>	2250
<b>Northing/Long.:</b>	145.9125	<b>Runoff:</b>	Very slow
<b>Easting/Lat.:</b>	-18.2375	<b>Drainage:</b>	Poorly drained

**Geology**

<b>Exposure Type:</b>	No Data	<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>	Flat	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	Level
<b>Slope:</b>	0.5 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):**

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Mesotrophic Dermosolic Redoxic Hydrosol		<b>Principal Profile Form:</b>	Gn3.91
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	No suitable group
All necessary analytical data are available.			

**Site Disturbance:** No effective disturbance. Natural

**Vegetation:**

Tall Strata - Tree, 6.01-12m, Mid-dense. \*Species includes - Melaleuca viridiflora

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

**Profile Morphology**

A1	0 - 0.04 m	Dark grey (10YR4/1-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Clay loam (Heavy); Moderate grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; Common, fine (1-2mm) roots; Abrupt, Smooth change to -
B2	0.04 - 0.1 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5Y68, 20-50% , 5-15mm, Distinct; Mottles, 20-50% , 5-15mm, Distinct; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; Common, fine (1-2mm) roots;
B2	0.1 - 0.2 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5Y68, 20-50% , 5-15mm, Distinct; Mottles, 20-50% , 5-15mm, Distinct; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; Common, fine (1-2mm) roots;
B2	0.2 - 0.3 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5Y68, 20-50% , 5-15mm, Distinct; Mottles, 20-50% , 5-15mm, Distinct; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; Common, fine (1-2mm) roots;
B2	0.3 - 0.4 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5Y68, 20-50% , 5-15mm, Distinct; Mottles, 20-50% , 5-15mm, Distinct; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; Common, fine (1-2mm) roots; Clear, Wavy change to -
2B21	0.4 - 0.6 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5Y68, 20-50% , 15-30mm, Distinct; Mottles, 20-50% , 15-30mm, Distinct; Medium heavy clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few, fine (1-2mm) roots;
2B21	0.6 - 0.8 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5Y68, 20-50% , 15-30mm, Distinct; Mottles, 20-50% , 15-30mm, Distinct; Medium heavy clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few, fine (1-2mm) roots; Gradual, Wavy change to -

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2B22	0.8 - 0.9 m	Grey (2.5Y5/1-Moist); Mottles, 2.5Y68, 20-50% , 30-mm, Distinct; Mottles, 20-50% , 30-mm, Distinct; Medium heavy clay; Moderate grade of structure, 50-100 mm, Prismatic; Smooth-ped fabric; Moderately moist; Strong consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few, fine (1-2mm) roots;
2B22	0.9 - 1.2 m	Grey (2.5Y5/1-Moist); Mottles, 2.5Y68, 20-50% , 30-mm, Distinct; Mottles, 20-50% , 30-mm, Distinct; Medium heavy clay; Moderate grade of structure, 50-100 mm, Prismatic; Smooth-ped fabric; Moderately moist; Strong consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few, fine (1-2mm) roots; Diffuse, Irregular change to -
3B2	1.2 - 1.5 m	Grey (2.5Y5/1-Moist); Mottles, 2.5Y68, 0-2% , 0-5mm, Faint; Mottles, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 50-100 mm, Prismatic; Smooth-ped fabric; Moderately moist; Strong consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few, fine (1-2mm) roots; Abrupt, Smooth change to -
D	1.5 - 1.8 m	Light grey (10YR7/2-Moist); White (10YR8/2-Dry); Mottles, 0-0% ; Mottles, 0-0% ; Coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Very weak consistence; 90-100%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;
D	1.8 - 2 m	Light grey (10YR7/2-Moist); White (10YR8/2-Dry); Mottles, 0-0% ; Mottles, 0-0% ; Coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Very weak consistence; 90-100%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;

#### **Morphological Notes**

#### **Observation Notes**

GRITTY D WITH COARSER STRUCTURE THAN COOM:COARSE SAND BETWEEN PRISM FACES AT 12-15CM (3B2) HORIZON:

#### **Site Notes**

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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 - 0.04	6A	0.025A	1.67H	1.15	0.12	0.09	0.48F	4A 9.1C	3.5F	2.25 0.99
0.04 - 0.1	6.2A	0.012A								
0.1 - 0.2	6.2A	0.01A	0.56H	1.25	0.09	0.08	0.9F	3.2A 5.6C	2.9F	2.50 1.43
0.2 - 0.3	6.2A	0.01A								
0.3 - 0.4	6.4A	0.008A					1.03F			
0.4 - 0.6	6.7A	0.007A	0.24H	1.58	0.04	0.18	0.35F	2.9A 3C	2.4F	6.21 6.00
0.6 - 0.8	6.9A	0.013A								
0.8 - 0.9	7A	0.018A								
0.9 - 1.2	7A	0.021A								
1.2 - 1.5	6.9A	0.017A	2.1H	6.2	0.04	0.97	0.44F	9.3A 11.9C	9.8F	10.43 8.15
1.5 - 1.8	6.9A	0.006A								
1.8 - 2	6.6A	0.006A								

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
		%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.04		1.9C	3B	0.008A	0.18A	3.04A		1	18A	34	23	25
0.04 - 0.1		0.56C			0.06A			2	15A	35	21	30
0.1 - 0.2		0.37C	2B	0.007A		2.62A		4	13A	32	20	36
0.2 - 0.3								1	9A	30	18	43
0.3 - 0.4								2	16A	32	17	35
0.4 - 0.6		0.16C	1B	0.004A		2.9A		7	29A	25	16	30
0.6 - 0.8								12	27A	20	14	40
0.8 - 0.9								12	31A	26	14	29
0.9 - 1.2								13	26A	26	16	32
1.2 - 1.5		0.07C	2B	0.001A		2.36A		11	22A	25	21	33
1.5 - 1.8								32	59A	17	16	8
1.8 - 2								35	64A	16	9	10

[illegible]

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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/HClO <sub>4</sub> Digest
12_HF_FE	Total element - Fe(%) - HF/HClO <sub>4</sub> Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO <sub>4</sub> Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO <sub>4</sub> 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 (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) by compulsive exchange, no pretreatment for soluble salts
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 H <sub>2</sub> SO <sub>4</sub> (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 (%)