

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T372 **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>	27/01/84	<b>Elevation:</b>	40 metres
<b>Map Ref.:</b>	Sheet No. : 8161 1:100000	<b>Rainfall:</b>	2250
<b>Northing/Long.:</b>	146.134722222222	<b>Runoff:</b>	Slow
<b>Easting/Lat.:</b>	-18.4458333333333	<b>Drainage:</b>	Poorly drained

**Geology**

<b>ExposureType:</b>	Undisturbed soil core	<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>	Gently undulating plains <9m 1-3%	<b>Pattern Type:</b>	Rises
<b>Morph. Type:</b>	Flat	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Fan	<b>Slope Category:</b>	Level
<b>Slope:</b>	0.5 %	<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 Mottled-Mesonatric Grey Sodosol		<b>Principal Profile Form:</b>	Gn3.04
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	Soloth

All necessary analytical data are available.

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

**Vegetation:**

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

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

**Profile Morphology**

A1	0 - 0.06 m	Dark greyish brown (10YR4/2-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sandy clay loam (Light); Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; Common, medium (2-5mm) roots; Abrupt, Smooth change to -
A2cb	0.06 - 0.1 m	Light brownish grey (10YR6/2-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sandy clay loam (Light); Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; Common, medium (2-5mm) roots;
A2cb	0.1 - 0.15 m	Light brownish grey (10YR6/2-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Sandy clay loam (Light); Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; Common, medium (2-5mm) roots; Clear, Irregular change to -
B1sb	0.15 - 0.2 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5Y68, 20-50% , 5-15mm, Distinct; Mottles, 20-50% , 5-15mm, Distinct; Sandy clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Common, medium (2-5mm) roots;
B1sb	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; Sandy clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Common, medium (2-5mm) roots;
B1sb	0.3 - 0.6 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5Y68, 20-50% , 5-15mm, Distinct; Mottles, 20-50% , 5-15mm, Distinct; Sandy clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Common, medium (2-5mm) roots; Clear, Irregular change to -
B21	0.6 - 0.9 m	Light brownish grey (10YR6/2-Moist); Mottles, 10YR58, 10-20% , 5-15mm, Distinct; Mottles, 10-20% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 50-100 mm, Angular blocky; Earthy fabric; Moderately moist; Very firm consistence; 20-50%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few, medium (2-5mm) roots;

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B21	0.9 - 1.1 m	Light brownish grey (10YR6/2-Moist); Mottles, 10YR58, 10-20% , 5-15mm, Distinct; Mottles, 10-20% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 50-100 mm, Angular blocky; Earthy fabric; Moderately moist; Very firm consistence; 20-50%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few, medium (2-5mm) roots; Clear, Smooth change to -
B22	1.1 - 1.2 m	Light brownish grey (10YR6/2-Moist); Mottles, 10YR58, 10-20% , 5-15mm, Distinct; Mottles, 10-20% , 5-15mm, Distinct; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few, medium (2-5mm) roots;
B22	1.2 - 1.3 m	Light brownish grey (10YR6/2-Moist); Mottles, 10YR58, 10-20% , 5-15mm, Distinct; Mottles, 10-20% , 5-15mm, Distinct; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few, medium (2-5mm) roots; Gradual, Irregular change to -
2Bb	1.3 - 1.5 m	Light brownish grey (10YR6/2-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Medium clay; Weak grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations;
2Bb	1.5 - 1.6 m	Light brownish grey (10YR6/2-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Medium clay; Weak grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Clear, Smooth change to -
	1.6 - 1.7 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 0-0% ; Mottles, 0-0% ; Medium clay; Massive grade of structure; Sandy (grains prominent) fabric; Very strong consistence; Duripan, Moderately cemented, Continuous, Massive;

#### **Morphological Notes**

#### **Observation Notes**

PAN STOPPED PROLINE:

#### **Site Notes**

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations			Na	Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity			%
						Cmol	(+)/kg			
0 - 0.06	5.6A	0.046A	0.49H	0.46	0.1	0.05	0.69F	2.1A 3.9C	1.8F	2.38 1.28
0.06 - 0.1	5.4A	0.027A								
0.1 - 0.15	5.4A	0.025A	0.08H	0.64	0.11	0.1	0.65F	2.3A 2C	1.6F	4.35 5.00
0.15 - 0.2	5.5A	0.024A								
0.2 - 0.3	5.5A	0.026A	<0.02H	1.13	0.07	0.11	0.7F	2.3A 2.2C	2F	4.78 5.00
0.3 - 0.6	6.1A	0.02A	0.07H	1.13	0.05	0.17	0.25F	2A 1.9C	1.7F	8.50 8.95
0.6 - 0.9	6.2A	0.036A	0.76H	3.42	0.04	0.82	0.38F	6.1A 6.5C	5.4F	13.44 12.62
0.9 - 1.1	6.2A	0.053A								
1.1 - 1.2	6A	0.088A	1.58H	6.53	0.03	1.36	0.31F	5.4A 9C	9.8F	25.19 15.11
1.2 - 1.3	6.1A	0.077A								
1.3 - 1.5	6A	0.105A	1.6H	5	<0.02	0.61	0.55F	8.8A 11.8C	7.8F	6.93 5.17
1.5 - 1.6	6A	0.124A								
1.6 - 1.7	6A	0.134A								

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 - 0.06		1.55C	2B	0.003A	0.05A	2.16A		0	29A	40	23	8
0.06 - 0.1								1	28A	39	25	9
0.1 - 0.15		0.38C	4B					3	26A	38	25	1
0.15 - 0.2								3	23A	40	23	1
0.2 - 0.3		0.13C		0.001A	<0.01A	2.4A		5	25A	39	23	1
0.3 - 0.6		0.06C	1.5B	0.001A		2.78A		3	26A	41	23	1
0.6 - 0.9		0.06C	1B					6	24A	29	21	2
0.9 - 1.1								6	26A	29	17	2
1.1 - 1.2		0.05C						9	15A	34	21	3
1.2 - 1.3								6	17A	33	22	2
1.3 - 1.5		0.07C		0.002A		2.56A		2	9A	35	30	2
1.5 - 1.6								1	11A	34	29	2
1.6 - 1.7								12	21A	33	30	

[illegible]

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1.1 - 1.2  
1.2 - 1.3  
1.3 - 1.5  
1.5 - 1.6  
1.6 - 1.7

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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
5A2	Chloride - 1:5 soil/water extract, automated colour
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 (%)