

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T288 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	G.G. Murtha	<b>Locality:</b>	.7KM north of rail crossing on Warrubullen Road:
<b>Date Desc.:</b>	19/08/80	<b>Elevation:</b>	20 metres
<b>Map Ref.:</b>	Sheet No. : 8162 1:100000	<b>Rainfall:</b>	3000
<b>Northing/Long.:</b>	146.016666666667	<b>Runoff:</b>	Moderately rapid
<b>Easting/Lat.:</b>	-17.7	<b>Drainage:</b>	Imperfectly 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>	No Data	<b>Pattern Type:</b>	Alluvial fan
<b>Morph. Type:</b>	Mid-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Fan	<b>Slope Category:</b>	Gently inclined
<b>Slope:</b>	9 %	<b>Aspect:</b>	90 degrees

**Surface Soil Condition (dry):**

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>	N/A	<b>Mapping Unit:</b>	N/A
<b>ASC Confidence:</b>	Confidence level not specified	<b>Principal Profile Form:</b>	Gn3.61
		<b>Great Soil Group:</b>	Yellow podzolic soil

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

**Vegetation:**

Tall Strata - Tree, 6.01-12m, Sparse. \*Species includes - None Recorded

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

**Profile Morphology**

A1	0 - 0.1 m	Dark greyish brown (10YR4/2-Moist); ; Fine sandy loam; Weak grade of structure, 10-20 mm, Subangular blocky; Wet; Weak consistence; 0-2%, medium gravelly, 6-20mm, Quartz, coarse fragments;
A1	0.1 - 0.2 m	Dark greyish brown (10YR4/2-Moist); ; Fine sandy loam; Weak grade of structure, 10-20 mm, Subangular blocky; Wet; Weak consistence; 2-10%, medium gravelly, 6-20mm, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Gradual change to -
A2	0.2 - 0.3 m	Brown (10YR5/3-Moist); Light brownish grey (10YR6/2-Dry); , 10YR64, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Fine sandy loam (Heavy); Weak grade of structure, 10-20 mm, Subangular blocky; Wet; Weak consistence; 2-10%, medium gravelly, 6-20mm, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules;
A2	0.3 - 0.45 m	Brown (10YR5/3-Moist); , 10YR64, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Fine sandy clay loam (Light); Weak grade of structure, 10-20 mm, Subangular blocky; Wet; Weak consistence; 2-10%, coarse gravelly, 20-60mm, Quartz, coarse fragments; Gradual change to -
B1	0.45 - 0.6 m	Yellow (10YR7/6-Moist); , 10YR64, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Fine sandy clay loam; Weak grade of structure, 10-20 mm, Subangular blocky; Wet; Moderately plastic; Normal plasticity; 2-10%, coarse gravelly, 20-60mm, Quartz, coarse fragments; Diffuse change to -
B21	0.6 - 0.9 m	Yellow (10YR7/6-Moist); , 7.5YR66, 10-20% , 0-5mm, Faint; , 10-20% , 0-5mm, Faint; Fine sandy medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Wet; Moderately plastic; Normal plasticity; 2-10%, coarse gravelly, 20-60mm, Metamorphic rock (unidentified), coarse fragments; Diffuse change to -
B22	0.9 - 1.2 m	Dark yellowish brown (10YR4/8-Moist); , 10YR78, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Wet; Moderately plastic; Normal plasticity; 2-10%, coarse gravelly, 20-60mm, Metamorphic rock (unidentified), coarse fragments;

**Morphological Notes**

**Observation Notes**

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**Site Notes**

WARRUBULLEN

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.1	5.2A	0.029A	0.24H	0.17	0.06	0.08	0.9F	1.75A 3.3C	1.5F	4.57 2.42
0.1 - 0.2	5.1A	0.02A	0.04H	<0.01	0.06	0.05	1.9F	1.45A 3.7C	2.1F	3.45 1.35
0.2 - 0.3	5A	0.02A								
0.3 - 0.45	5.1A	0.014A								
0.45 - 0.6	5A	0.017A	0.01H	<0.01	0.05	0.03	2.1F	1.56A 2C	2.2F	1.92 1.50
0.6 - 0.9	5A	0.014A	0.01H	0.01	<0.01	<0.01	1.9F	1.5A	1.9F	
0.9 - 1.2	4.9A	0.02A	0.01H	0.19	<0.01	0.02	4.3F	4.2A	4.5F	0.48

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle		Size	Analysis	
								GV	CS		FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1		1.17D	8B	0.008A	0.08A	0.25A		<2	14A	74	6	5
0.1 - 0.2		1.07D	7B		0.06A			0	13A	74	5	8
0.2 - 0.3								0	11A	69	9	11
0.3 - 0.45								0	16A	61	10	14
0.45 - 0.6		0.18D	6B	0.01A	0.03A	0.42A		0	12A	65	9	14
0.6 - 0.9		0.18D						0	12A	64	7	17
0.9 - 1.2								0	12A	45	8	35

[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
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
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
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)
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_K2O	K <sub>2</sub> O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction