

Project Name: Regional
Project Code: REG **Site ID:** T290 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.G. Murtha	Locality:	On alluvium of Cowley Creek north west of Warrubullen siding:
Date Desc.:	20/08/80	Elevation:	20 metres
Map Ref.:	Sheet No. : 8162 1:100000	Rainfall:	3500
Northing/Long.:	146.016666666667	Runoff:	Very slow
Easting/Lat.:	-17.7	Drainage:	Imperfectly 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:	0 metres
Elem. Type:	Valley flat	Slope Category:	Level
Slope:	0 %	Aspect:	0 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:	Bleached-Acidic Dystrophic Yellow Dermosol	Mapping Unit:	N/A
ASC Confidence:	All necessary analytical data are available.	Principal Profile Form:	Gn3.71
		Great Soil Group:	Gleyed podzolic soil

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.1 m	Brown (10YR5/3-Moist); , 7.5YR44, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Silty clay loam (Heavy); Moderate grade of structure, 5-10 mm, Cast; Wet; Moderately plastic; Normal plasticity; 2-10%, medium gravelly, 6-20mm, Quartz, coarse fragments; Gradual change to -
A3	0.1 - 0.2 m	Pale olive (5Y6/3-Moist); , 7.5YR44, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Silty light clay; Moderate grade of structure, 5-10 mm, Cast; Moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, Quartz, coarse fragments; Diffuse change to -
B1	0.2 - 0.3 m	Pale olive (5Y6/3-Moist); , 7.5YR44, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Light medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules;
B1	0.3 - 0.5 m	Pale olive (5Y6/3-Moist); , 7.5YR44, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moist; Weak consistence; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Clear change to -
B21	0.5 - 0.6 m	Olive yellow (2.5Y6/6-Moist); , 7.5YR44, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, Quartz, coarse fragments; Diffuse change to -
B22	0.6 - 0.9 m	Brownish yellow (10YR6/6-Moist); , 2.5Y74, 10-20% , 0-5mm, Distinct; , 5YR66, 10-20% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moist; Weak consistence; Very few (0 - 2 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Diffuse change to -
B22	0.9 - 1.1 m	Brownish yellow (10YR6/8-Moist); , 2.5Y80, 10-20% , 5-15mm, Distinct; , 5YR58, 10-20% , 5-15mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moist; Weak consistence; 2-10%, medium gravelly, 6-20mm, Quartz, coarse fragments; Gradual change to -
	1.2 - 1.5 m	Brownish yellow (10YR6/8-Moist); , 2.5Y80, 2-10% , 0-5mm, Distinct; , 5YR58, 2-10% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderately plastic; Normal plasticity;

Morphological Notes

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Observation Notes

Site Notes

WARRUBULLEN

Laboratory Test Results:

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size	Analysis		
m	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS	Silt Clay
0 - 0.1		1.18D	21B	0.026A	0.11A	1.2A		<2	4A	51	28 18
0.1 - 0.2		0.63D	11B		0.09A			<2	3A	46	30 21
0.2 - 0.3								<2	4A	45	28 23
0.3 - 0.5		0.53D	11B					<2	5A	47	24 24
0.5 - 0.6		0.87D		0.032A	0.08A	2.44A		6	7A	27	33 34
0.6 - 0.9		0.23D						<2	4A	20	38 38
0.9 - 1.2											
1.2 - 1.5								<2	8A	21	36 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 ₄ Digest
12_HF_FE	Total element - Fe(%) - HF/HClO ₄ Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO ₄ Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO ₄ 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
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 ₂ SO ₄ (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_Gt	Geothite - X-Ray Diffraction
XRD_C_Il	Illite - X-Ray Diffraction
XRD_C_K2O	K ₂ O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction