

Project Name: Regional
Project Code: REG **Site ID:** T181 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.G. Murtha	Locality:	1.3KM south of Leichhardt Creek:
Date Desc.:	19/11/70	Elevation:	15 metres
Map Ref.:	Sheet No. : 8159 1:100000	Rainfall:	1140
Northing/Long.:	146.5	Runoff:	Slow
Easting/Lat.:	-19.132222222222	Drainage:	Poorly drained

Geology

ExposureType:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Qa	Substrate Material:	Undisturbed soil core, 3 m deep, Unconsolidated material

Land Form

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

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	N/A
Bleached-Sodic Mesotrophic Grey Dermosol	Principal Profile Form: Dy3.41
ASC Confidence:	Great Soil Group: Soloth

Analytical data are incomplete but reasonable confidence.

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

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - None recorded
Tall Strata - Tree, 3.01-6m, Very sparse. *Species includes - Melaleuca viridiflora, Eucalyptus drepanophylla, Eucalyptus tessellaris

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.04 m	Very dark greyish brown (10YR3/2-Moist); ; Silty loam; Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; Clear change to -
A2	0.04 - 0.1 m	Greyish brown (10YR5/2-Moist); , 10YR56, 2-10% , 0-5mm; , 2-10% , 0-5mm; Silty loam; Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; 0-2%, Quartz, coarse fragments;
A2	0.1 - 0.2 m	Light brownish grey (10YR6/2-Moist); , 10YR56, 2-10% , 0-5mm; , 2-10% , 0-5mm; Silty loam; Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; 0-2%, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Very coarse (20 - 60 mm), Nodules; Gradual change to -
A3	0.2 - 0.3 m	Light yellowish brown (10YR6/4-Moist); Very pale brown (10YR8/4-Dry); , 10YR56, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Silty clay loam; Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; 0-2%, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Very coarse (20 - 60 mm), Nodules; Gradual change to -
B1	0.3 - 0.45 m	Pale brown (10YR6/3-Moist); , 10YR58, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Silty medium clay; Weak grade of structure, 5-10 mm, Angular blocky; Dry; Firm consistence; 0-2%, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, , Concretions; Abrupt change to -
B2	0.45 - 0.6 m	Light brownish grey (10YR6/2-Moist); Light brownish grey (10YR6/2-Dry); , 10YR56, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Dry; Very strong consistence; 0-2%, Quartz, coarse fragments;
B2	0.6 - 0.75 m	Light brownish grey (10YR6/2-Moist); Light brownish grey (10YR6/2-Dry); , 10YR56, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Dry; Very strong consistence; 0-2%, Quartz, coarse fragments;

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B2	0.75 - 0.9 m	Light brownish grey (10YR6/2-Moist); Light brownish grey (10YR6/2-Dry); , 10YR56, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Dry; Very strong consistence; 0-2%, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Gradual change to -
	0.9 - 1.2 m	Greyish brown (10YR5/2-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Very strong consistence; 0-2%, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Gradual change to -
BC	1.2 - 1.5 m	Greyish brown (10YR5/2-Moist); , 10YR58, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Fine sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Dry; Very strong consistence; 0-2%, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules;
	1.5 - 1.8 m	Greyish brown (10YR5/2-Moist); , 10YR58, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Fine sandy medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very strong consistence; 0-2%, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, , Nodules;
D	1.8 - 2.02 m	Dark grey (10YR4/1-Moist); , 10YR58; Silcrete, Moderately cemented, Continuous, Massive;
	2.02 - 2.25 m	White (10YR8/1-Moist); , 10YR58; Sand; Clear change to -
	2.25 - 2.7 m	Pale brown (10YR6/3-Moist); ; Fine sand; Diffuse change to -
	2.7 - 3 m	; Coarse sand;

Morphological Notes

Band of gravel at 270CM then apedal KS:

Observation Notes

0-10CM WORM ACTIVITY:45-75CM SOME COARSE SLICKENSIDE FACES:150-180CM SOME BLACK COATING TO PED FACES:

Site Notes

ROLLINGSTONE

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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 - 0.04	6.4A	0.038A	3.9B	1.6	0.37	0.25		6.6C	3.79
0.04 - 0.1	6.2A	0.026A							
0.1 - 0.2	6.1A	0.026A	1.2B	1.2	0.19	0.25		4.4C	5.68
0.2 - 0.3	6.1A	0.023A							
0.3 - 0.45	6A	0.023A							
0.45 - 0.6	6.2A	0.023A	1.5B	3.8	0.26	1.4		9.9C	14.14
0.6 - 0.75	6.3A	0.023A							
0.75 - 0.9	6.1A	0.047A	2.3B	5.5	0.15	2.1		10.5C	20.00
0.9 - 1.2	5.7A	0.13A							
1.2 - 1.5	5.8A	0.327A							
1.5 - 1.8	6.1A	0.452A							

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 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
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
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
9B_9C	Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO ₃ extractable
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H ₂ SO ₄ (BSES)
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 (%)