

Project Name: Regional
Project Code: REG **Site ID:** T186 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: G.G. Murtha	Locality: East along Dalrymple Road .3KM from Bamford Lane:
Date Desc.: 23/11/70	Elevation: 31 metres
Map Ref.: Sheet No. : 8259 1:100000	Rainfall: 1140
Northing/Long.: 146.743888888889	Runoff: Slow
Easting/Lat.: -19.286388888889	Drainage: Poorly drained

Geology

ExposureType: Undisturbed soil core	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: Qa	Substrate Material: No Data

Land Form

Rel/Slope Class: Level plain <9m <1%	Pattern Type: Alluvial 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:	Mapping Unit: N/A
Supracalcic Subnatric Brown Sodosol	Principal Profile Form: Dy2.43
ASC Confidence:	Great Soil Group: Solodic soil
All necessary analytical data are available.	

Site Disturbance: Extensive clearing, for example poisoning, ringbarking

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - Heteropogon contortus, Stylosanthes humilis

Mid Strata - Tree, 1.01-3m, Very sparse. *Species includes - Ziziphus mauritiana

Tall Strata - Tree, 6.01-12m, Very sparse. *Species includes - Eucalyptus tessellaris, Eucalyptus polycarpa,

Eucalyptus

drepanophylla

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1/A2	0 - 0.1 m	Dark greyish brown (10YR4/2-Moist); Light grey (10YR7/2-Dry); , 10YR44, 2-10% ; , 2-10% ; Silty loam; Massive grade of structure; Dry; Very firm consistence;
A2	0.1 - 0.2 m	Greyish brown (10YR5/2-Moist); , 10YR54; Silty loam (Heavy); Massive grade of structure; Dry; Very firm consistence; Few (2 - 10 %), Ferromanganiferous, , Nodules; Abrupt change to -
B2	0.2 - 0.3 m	Dark greyish brown (2.5Y4/2-Moist); ; Heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Strong grade of structure, 5-10 mm, Angular blocky; Dry; Very strong consistence; 2-10%, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Gradual change to -
B2	0.3 - 0.45 m	Olive brown (2.5Y4/4-Moist); ; Heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Dry; Very strong consistence; 2-10%, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules;
B2	0.45 - 0.6 m	Olive brown (2.5Y4/4-Moist); ; Heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Dry; Very strong consistence; 2-10%, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Diffuse change to -
	0.6 - 0.9 m	Yellowish brown (10YR5/4-Moist); ; Heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Very strong consistence; 2-10%, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Many (20 - 50 %), Calcareous, Extremely coarse (> 60 mm), Nodules;
	0.9 - 1.2 m	Yellowish brown (10YR5/4-Moist); ; Heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Very strong consistence; 0-2%, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Many (20 - 50 %), Calcareous, Extremely coarse (> 60 mm), Nodules; Diffuse change to -

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	1.2 - 1.5 m	Greyish brown (10YR5/2-Moist); , 10YR44, 10-20% , 0-5mm, Faint; , 10-20% , 0-5mm, Faint; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very strong consistence; 0-2%, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Many (20 - 50 %), Calcareous, Extremely coarse (> 60 mm), Nodules;
	1.5 - 1.8 m	Greyish brown (10YR5/2-Moist); , 10YR44, 10-20% , 0-5mm, Faint; , 10-20% , 0-5mm, Faint; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very strong consistence; 0-2%, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Diffuse change to -
	1.8 - 2.1 m	Greyish brown (10YR5/2-Moist); , 10YR58, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very strong consistence; 0-2%, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Extremely coarse (> 60 mm), Nodules; Diffuse change to -
BC	2.1 - 2.5 m	Greyish brown (10YR5/2-Moist); , 10YR44, 10-20% , 0-5mm, Distinct; , 10YR66, 10-20% , 0-5mm, Distinct; Medium clay; Strong grade of structure, 5-10 mm, Angular blocky; Moderately moist; Very firm consistence; 0-2%, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Gradual change to -
C	2.5 - 3 m	Strong brown (7.5YR5/6-Moist); , 10YR52, 10-20% , 0-5mm, Faint; , 10-20% , 0-5mm, Faint; Fine sandy medium clay; Moderately moist; Firm consistence; 0-2%, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, , Soft segregations;

Morphological Notes

Observation Notes

0-10CM 1.5CM OF SLIGHTLY DARKER A1:

Site Notes

TOWNSVILLE

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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 - 0.1	5.3A	0.062A	2.9B	2.6	0.2	0.38		10.7C	3.55
0.1 - 0.2	6.2A	0.035A	4.6B	4.7	1.1	0.48		9.1C	5.27
0.2 - 0.3	8.5A	0.27A	12.6B	8.8	0.15	2.1		18.2C	11.54
0.3 - 0.45	9.2A	0.321A							
0.45 - 0.6	9.2A	0.547A	13.5B	10.5	0.1	3.2		16.2C	19.75
0.6 - 0.9	9.3A	0.88A							
0.9 - 1.2	9.4A	0.889A							
1.2 - 1.5	9.4A	0.91A	9.3B	10.7	0.17	7.2		16.5C	43.64
1.5 - 1.8	9.2A	0.854A							
1.8 - 2.1	9.3A	0.863A							
2.1 - 2.5	9.3A	2.39A							
2.5 - 3	9.1A	1.91A							

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
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)
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_II	Illite - X-Ray Diffraction
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction
XRD_C_St	Smectite - X-Ray Diffraction