

Project Name: Regional
Project Code: REG **Site ID:** T430 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: M.G. Cannon	Locality: 500m to south west Glen Ewin Davidson Road Tully:
Date Desc.: 23/09/85	Elevation: No Data
Map Ref.: Sheet No. : 8062 1:100000	Rainfall: 3000
Northing/Long.: 145.779166666667	Runoff: Slow
Easting/Lat.: -17.9611111111111	Drainage: No Data

Geology

ExposureType: Undisturbed soil core	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: No Data
Elem. Type: Prior stream	Slope Category: Level
Slope: <1 %	Aspect: No Data

Surface Soil Condition (dry): Self-mulching, Soft

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Mottled Dystrophic Yellow Dermosol	Principal Profile Form: Gn3.71
ASC Confidence:	Great Soil Group: No suitable group
All necessary analytical data are available.	

Site Disturbance: Limited clearing, for example selective logging

Vegetation:

Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - Eucalyptus tessellaris, Melaleuca species

Surface Coarse Fragments:

Profile Morphology

A11f	0 - 0.08 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Clay loam, fine sandy; Strong grade of structure, 2-5 mm, Cast; Strong grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few, fine (1-2mm) roots; Gradual, Wavy change to -
A12	0.08 - 0.16 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Clay loam, fine sandy; Strong grade of structure, 2-5 mm, Cast; Strong grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few, very fine (0-1mm) roots; Gradual, Wavy change to -
A3	0.16 - 0.28 m	Dark greyish brown (10YR4/2-Moist); Brown (10YR4/3-Dry); ; Clay loam, fine sandy (Heavy); Moderate grade of structure, 2-5 mm, Subangular blocky; Moderate grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few, very fine (0-1mm) roots; Gradual, Wavy change to -
AB	0.28 - 0.43 m	Dark greyish brown (10YR4/2-Moist); , 10YR56, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Coarse sandy medium clay (Heavy); Moderate grade of structure, 2-5 mm, Subangular blocky; Moderate grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B1	0.43 - 0.58 m	Brownish yellow (10YR6/6-Moist); , 10YR42, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Coarse sandy medium clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Moderate grade of structure, <2 mm, Subangular blocky; Smooth-ped fabric; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B21	0.58 - 0.74 m	Brownish yellow (10YR6/8-Moist); ; Fine sandy clay loam; Weak grade of structure, 2-5 mm, Subangular blocky; Moderate grade of structure, <2 mm, Subangular blocky; Earthy fabric; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Moist; Very weak consistence; Few, very fine (0-1mm) roots;

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	0.75 - 0.95 m	Brownish yellow (10YR6/8-Moist); ; Fine sandy loam; Weak grade of structure, 2-5 mm, Subangular blocky; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Very weak consistence; Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B22	0.95 - 1.2 m	Brownish yellow (10YR6/6-Moist); , 10YR68, 2-10% , 5-15mm, Distinct; , 10YR72, 2-10% , 5-15mm, Distinct; Fine sandy loam; Weak grade of structure, 2-5 mm, Subangular blocky; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Very weak consistence; Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B23	1.2 - 1.4 m	Brownish yellow (10YR6/6-Moist); , 10YR68, 10-20% , 15-30mm, Distinct; , 10YR72, 10-20% , 15-30mm, Distinct; Fine sandy loam; Weak grade of structure, 2-5 mm, Subangular blocky; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Loose consistence; Gradual, Wavy change to -
B24	1.4 - 1.6 m	Light brownish grey (10YR6/2-Moist); , 10YR66, 20-50% , 15-30mm, Distinct; , 10YR68, 20-50% , 15-30mm, Distinct; Fine sandy loam; Weak grade of structure, 2-5 mm, Subangular blocky; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Loose consistence; Clear, Wavy change to -
B25	1.6 - 1.7 m	Brownish yellow (10YR6/8-Moist); , 10YR62, 2-10% , 5-15mm, Distinct; , 10YR66, 2-10% , 5-15mm, Distinct; Loamy fine sand; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) macropores, Moist; Loose consistence; Clear, Wavy change to -
B26	1.7 - 1.8 m	Light grey (10YR7/2-Moist); , 10YR68, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Loamy fine sand; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) macropores, Moist; Loose consistence; Abrupt, Wavy change to -
D	1.8 - 1.9 m	Light grey (2.5Y7/2-Moist); , 10YR68, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Silty light clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Many (>5 per 100mm2) macropores, Moist; Very weak consistence; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;

Morphological Notes

Observation Notes

Site Notes

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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 - 0.08	5.16A	0.125A	3.92H	1.94	0.67	0.1	0.93F	4.6A 15C	7.6F	2.17 0.67
0.08 - 0.16	5.01A	0.058A								
0.16 - 0.28	4.95A	0.041A	0.76H	0.59	0.16	0.05	1.87F	4.7A 9C	3.4F	1.06 0.56
0.28 - 0.43	5.02A	0.027A								
0.43 - 0.58	5A	0.022A	0.34H	0.4	0.09	0.07	2.84F	3.2A 5C	3.7F	2.19 1.40
0.58 - 0.75	5.12A	0.022A								
0.75 - 0.95	5.22A	0.02A	0.07H	0.3	0.05	0.07	2.02F	2.8A 4C	2.5F	2.50 1.75
0.95 - 1.2	5.35A	0.018A								
1.2 - 1.4	5.43A	0.017A								
1.4 - 1.6	5.56A	0.015A	0.09H	0.46	0.12	0.09	1.91F	2.7A 3C	2.7F	3.33 3.00
1.6 - 1.7	5.6A	0.017A								
1.7 - 1.8	5.36A	0.017A								
1.8 - 1.9	5.59A	0.017A	0.31H	1.17	0.17	0.14	2.56F	4.2A 6C	4.4F	3.33 2.33

Depth m	CaCO3	Organic	Avail.	Total	Total	Total	Bulk Density Mg/m3	Particle		Size FS %	Analysis	
	%	C %	P mg/kg	P %	N %	K %		GV	CS		Silt	Clay
0 - 0.08		3.88C	40A 43B	0.044A	0.23A	2.66A		0	7D	36	25	32
0.08 - 0.16								0	5D	37	23	35
0.16 - 0.28		1.68C	6A 9B	0.019A	0.05A	2.65A		0	4D	37	24	35
0.28 - 0.43								0	3D	37	23	37
0.43 - 0.58		0.69C	5A 5B	0.014A	0.03A	2.57A		0	3D	39	23	35
0.58 - 0.75								0	5D	48	19	28
0.75 - 0.95		0.29C	2A 5B	0.009A	0.01A	3.07A		0	10D	60	13	17
0.95 - 1.2								0	9D	53	15	23
1.2 - 1.4								0	11D	60	13	16
1.4 - 1.6		0.1C	3A 5B	0.007A		3.51A		0	4D	67	14	15
1.6 - 1.7								0	4D	71	12	13
1.7 - 1.8								0	1D	64	17	18
1.8 - 1.9			1A 4B	0.008A		2.77A		0	2D	48	27	23

[illegible]

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0.28 - 0.43
0.43 - 0.58
0.58 - 0.75
0.75 - 0.95
0.95 - 1.2
1.2 - 1.4
1.4 - 1.6
1.6 - 1.7
1.7 - 1.8
1.8 - 1.9

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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
13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
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 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
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
6B3	Total organic carbon - high frequency induction furnace, infrared
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)
9H1	Phosphate retention
P10_GRAV	Gravel (%)
P10_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance