

Project Name: Regional
Project Code: REG **Site ID:** T149 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G. Smith	Locality:	5.6KM west of gate on new road west of Yarrowmere 3.4KM west of Thirlestone turnoff:
Date Desc.:	09/08/70	Elevation:	No Data
Map Ref.:	Sheet No. : 8054 1:100000	Rainfall:	480
Northing/Long.:	145.55	Runoff:	Slow
Easting/Lat.:	-21.5333333333333	Drainage:	Well drained

Geology

Exposure Type:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Qs	Substrate Material:	Undisturbed soil core, Sandstone

Land Form

Rel/Slope Class:	Undulating rises 9-30m 3-10%	Pattern Type:	Rises
Morph. Type:	No Data	Relief:	24 metres
Elem. Type:	No Data	Slope Category:	No Data
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Sodic Mesotrophic Red Kandosol	Principal Profile Form:	Gn2.11
ASC Confidence:	Great Soil Group:	Red earth
All necessary analytical data are available.		

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

Vegetation:

Tall Strata - Tree, 3.01-6m, Sparse. *Species includes - Eucalyptus pellita, Eucalyptus species, Grevillea

species

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.05 m	Dark red (2.5YR3/5-Moist); Red (2.5YR4/5-Dry); ; Sandy clay loam (Light); Massive grade of structure; Dry; Loose consistence; Clear change to -
A12	0.05 - 0.1 m	Dark red (2.5YR3/6-Moist); Red (2.5YR4/6-Dry); ; Sandy loam (Heavy); Massive grade of structure; Dry; Loose consistence; Gradual change to -
B1	0.1 - 0.2 m	Dark red (2.5YR3/8-Moist); Red (2.5YR4/7-Dry); ; Sandy clay loam (Light); Massive grade of structure; Dry; Strong consistence; Gradual change to -
B1	0.2 - 0.3 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Gradual change to -
B1	0.3 - 0.4 m	Red (10R4/8-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Gradual change to -
B21	0.4 - 0.5 m	Red (10R4/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Gradual change to -
B21	0.5 - 0.6 m	Dark red (10R3/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Strong consistence; Few (2 - 10 %), Argillaceous, Medium (2 -6 mm), Nodules; Gradual change to -
B21	0.6 - 0.75 m	Red (10R4/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Few (2 - 10 %), Argillaceous, Medium (2 -6 mm), Nodules; Gradual change to -
B21	0.75 - 0.9 m	Red (10R4/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Dry; Strong consistence; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Nodules; Gradual change to -
B21	0.9 - 1.2 m	Red (10R4/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Dry; Very strong consistence; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Nodules; Gradual change to -
B21	1.2 - 1.5 m	Red (10R4/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Dry; Very strong consistence; Common (10 - 20 %), Argillaceous, Very coarse (20 - 60 mm), Nodules; Gradual change to -

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B22	1.5 - 1.8 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Dry; Strong consistence; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Nodules; Gradual change to -
B22	1.8 - 2.1 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Dry; Strong consistence; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Nodules; Gradual change to -
	2.1 - 2.4 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Strong consistence; Common (10 - 20 %), Argillaceous, Coarse (6 - 20 mm), Nodules; Gradual change to -
	2.4 - 2.55 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Strong consistence; Many (20 - 50 %), , Coarse (6 - 20 mm), Concretions; Gradual change to -
	2.55 - 2.7 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; 2-10%, Sandstone, coarse fragments; Many (20 - 50 %), , Coarse (6 - 20 mm), Nodules; Gradual change to -
	2.7 - 3 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Rigid consistence; 2-10%, Sandstone, coarse fragments; Few (2 - 10 %), , Coarse (6 - 20 mm), Nodules; Gradual change to -
	3 - 3.3 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Rigid consistence; 2-10%, Sandstone, coarse fragments; Few (2 - 10 %), , Coarse (6 - 20 mm), Nodules; Gradual change to -
	3.3 - 3.6 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Very strong consistence; Gradual change to -
	3.6 - 3.9 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Very strong consistence; 0-2%, Sandstone, coarse fragments; Gradual change to -
	3.9 - 4.2 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Very strong consistence; 0-2%, Sandstone, coarse fragments; Very few (0 - 2 %), Argillaceous, , Nodules; Gradual change to -
	4.2 - 4.5 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Very strong consistence; Gradual change to -
	4.5 - 4.8 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Very strong consistence; Gradual change to -
	4.8 - 5.1 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Very strong consistence; 0-2%, Sandstone, coarse fragments; Gradual change to -
	5.1 - 5.4 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Very strong consistence; Few (2 - 10 %), Argillaceous, Very coarse (20 - 60 mm), Nodules; Gradual change to -
	5.4 - 5.7 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Very strong consistence; Gradual change to -
	5.7 - 6 m	Red (10R4/8-Moist); ; Fine sandy clay loam; Massive grade of structure; Very strong consistence; Gradual change to -
	6 - 6.5 m	Red (10R4/8-Moist); ; Sandy loam; Massive grade of structure; Strong consistence; Gradual change to -
	6.5 - 6.75 m	Red (10R4/8-Moist); ; Loamy sand; Massive grade of structure; Strong consistence; Gradual change to -

Morphological Notes

Observation Notes

0-5CM A12 MATERIAL ADMIXED:

Site Notes

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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	Acidity		%
						Cmol (+)/kg			
0 - 0.05	6.5A	0.026A	1.4B	0.95	0.25	0.09	2.4F	5.1F	
0.05 - 0.1	6.6A	0.017A	2.2B	0.67	0.2	0.14	1.3F	4.5F	
0.1 - 0.2	6.5A	0.02A	1.7B	0.52	0.16	0.12	1.2F	3.7F	
0.2 - 0.3	6.5A	0.014A	1.4B	0.26	0.14	0.12	1F	2.9F	
0.3 - 0.4	6.5A	0.017A	1.5B	0.22	0.12	0.14	1.1F	3.1F	
0.4 - 0.5	6.5A	0.014A							
0.5 - 0.6	6.4A	0.014A							
0.6 - 0.75	6.4A	0.014A	1.6B	0.21	0.03	0.14	0.6F	2.6F	
0.75 - 0.9	6.5A	0.014A							
0.9 - 1.2	6.5A	0.014A							
1.2 - 1.5	6.6A	0.011A							
1.5 - 1.8	6.5A	0.011A							
1.8 - 2.1	6.6A	0.011A							
2.1 - 2.4	6.7A	0.011A							
2.4 - 2.55	6.8A	0.011A							
2.55 - 2.7	6.8A	0.014A	1.8B	0.23	0.03	0.22			
2.7 - 3	6.8A	0.014A							
3 - 3.3	6.8A	0.014A							
3.3 - 3.6	6.6A	0.011A							
3.6 - 3.9	6.7A	0.011A							
3.9 - 4.2	6.7A	0.011A							
4.2 - 4.5	6.9A	0.014A	2.3B	0.37	0.03	0.22	1F	3.9F	
4.5 - 4.8	6.9A	0.014A							
4.8 - 5.1	6.8A	0.017A							
5.1 - 5.4	6.7A	0.017A							
5.4 - 5.7	6.8A	0.02A							
5.7 - 6	7A	0.017A							
6 - 6.5	6.9A	0.017A							
6.5 - 6.75	6.7A	0.023A	0.56B	2.6	0.03	0.35	0.6F	4.1F	

[illegible]

3 - 3.3								
3.3 - 3.6								
3.6 - 3.9								
3.9 - 4.2								
4.2 - 4.5	0.007A	0.06A	<2	34A	29	6	31	
4.5 - 4.8								
4.8 - 5.1								
5.1 - 5.4								
5.4 - 5.7								
5.7 - 6								
6 - 6.5								
6.5 - 6.75			<2	44A	34	5	17	

[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/HClO4 Digest
12_HF_FE	Total element - Fe(%) - HF/HClO4 Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO4 Digest
13C1_FE	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
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 H2SO4 (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_Hm	Hematite - X-Ray Diffraction
XRD_C_Il	Illite - X-Ray Diffraction
XRD_C_Is	Interstratified clay minerals - X-Ray Diffraction
XRD_C_K2O	K2O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction