

**Project Name:** Regional  
**Project Code:** REG **Site ID:** T178 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	G. Smith	<b>Locality:</b>	5.8KM north of Olive Vale on Lakefield Road running north from Laura:7.8KM from Kennedy Highway:
<b>Date Desc.:</b>	04/11/70	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 7766 1:100000	<b>Rainfall:</b>	910
<b>Northing/Long.:</b>	144.425	<b>Runoff:</b>	Very slow
<b>Easting/Lat.:</b>	-15.5041666666667	<b>Drainage:</b>	Well drained

**Geology**

<b>Exposure Type:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	Tf	<b>Substrate Material:</b>	No Data

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	Rises
<b>Morph. Type:</b>	Crest	<b>Relief:</b>	15 metres
<b>Elem. Type:</b>	Hillcrest	<b>Slope Category:</b>	Gently inclined
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Firm

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Manganic Mesotrophic Red Kandosol	<b>Principal Profile Form:</b>	Gn2.14
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	Red earth
All necessary analytical data are available.		

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

**Vegetation:**

Tall Strata - Tree, 12.01-20m, Sparse. \*Species includes - Eucalyptus tetrodonta, Eucalyptus polycarpa

**Surface Coarse Fragments:** No surface coarse fragments

**Profile Morphology**

A11	0 - 0.05 m	Dark reddish brown (5YR3/3-Moist); Reddish brown (5YR4/4-Dry); ; Loamy sand; Massive grade of structure; Dry; Strong consistence; Clear change to -
A21	0.05 - 0.1 m	Dark red (2.5YR3/5-Moist); Red (2.5YR4/6-Dry); ; Loamy sand; Massive grade of structure; Dry; Strong consistence; Gradual change to -
A22	0.1 - 0.2 m	Dark red (2.5YR3/8-Moist); Red (2.5YR4/6-Dry); ; Loamy sand; Massive grade of structure; Dry; Very strong consistence; Gradual change to -
A22	0.2 - 0.3 m	Dark red (2.5YR3/8-Moist); ; Loamy sand; Massive grade of structure; Dry; Very strong consistence; Gradual change to -
B1	0.3 - 0.4 m	Dark red (10R3/8-Moist); ; Loamy sand (Heavy); Massive grade of structure; Earthy fabric; Dry; Rigid consistence; Gradual change to -
B1	0.4 - 0.5 m	Dark red (10R3/8-Moist); ; Sandy loam (Light); Massive grade of structure; Dry; Strong consistence; Gradual change to -
B21	0.5 - 0.6 m	Dark red (10R3/8-Moist); ; Sandy clay loam (Light); Massive grade of structure; Dry; Strong consistence; Gradual change to -
B21	0.6 - 0.75 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Dry; Very strong consistence; Gradual change to -
B21	0.75 - 0.9 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Dry; Very strong consistence; Gradual change to -
B22	0.9 - 1.2 m	Dark red (10R3/8-Moist); ; 0-2% , 5-15mm, Distinct; , 0-2% , 5-15mm, Distinct; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very strong consistence; Gradual change to -
B22	1.2 - 1.5 m	Dark red (10R3/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Dry; Rigid consistence; Gradual change to -
B22	1.5 - 1.8 m	Dark red (10R3/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Dry; Rigid consistence; Gradual change to -

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1.8 - 2.1 m	Dark red (10R3/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Rigid consistence; Gradual change to -
2.1 - 2.4 m	Dark red (10R3/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Rigid consistence; Gradual change to -
2.4 - 2.7 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Rigid consistence; Gradual change to -
2.7 - 3 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Rigid consistence; Gradual change to -
3 - 3.3 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Very strong consistence; Gradual change to -
3.3 - 3.6 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Very strong consistence; Gradual change to -
3.6 - 3.9 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Very strong consistence; Gradual change to -
3.9 - 4.2 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Very strong consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Quartz, coarse fragments; Gradual change to -
4.2 - 4.3 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Very strong consistence; 20-50%, medium gravelly, 6-20mm, rounded, Quartz, coarse fragments; Many (20 - 50 %), Manganiferous, Coarse (6 - 20 mm), Nodules; Clear change to -
4.3 - 4.45 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Very strong consistence; 50-90%, coarse gravelly, 20-60mm, Quartz, coarse fragments; Gradual change to -
4.45 - 4.55 m	Dark red (10R3/8-Moist); ; Sandy clay loam; Massive grade of structure; Very strong consistence;

#### **Morphological Notes**

#### **Observation Notes**

#### **Site Notes**

LAURA

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**Laboratory Test Results:**

Depth  m	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
		Ca dS/m	Mg	K	Na Cmol (+)/kg	Acidity			%
0 - 0.05	6.1A	0.029A	1.8B	0.66	0.09	0.17	1.9F		4.6F
0.05 - 0.1	6.3A	0.017A	1.2B	0.42	0.06	0.12	0.4F		2.2F
0.1 - 0.2	6.4A	0.014A	0.8B	0.34	0.08	0.17	0.4F		1.8F
0.2 - 0.3	6.5A	0.011A	0.4B	0.31	0.04	0.14	0.7F		1.6F
0.3 - 0.4	6.5A	0.011A	0.4B	0.36	0.04	0.14	0.4F		1.3F
0.4 - 0.5	6.3A	0.017A							
0.5 - 0.6	6.4A	0.011A							
0.6 - 0.75	6.3A	0.011A	0.56B	0.84	0.04	0.12	0.4F		2F
0.75 - 0.9	6.2A	0.008A							
0.9 - 1.2	6.1A	0.017A							
1.2 - 1.5	6.2A	0.011A	0.4B	1.3	0.03	0.12	0.7F		2.6F
1.5 - 1.8	6.3A	0.011A							
1.8 - 2.1	6.4A	0.011A	0.22B	2.09	0.04	0.14	0.7F	2.38A	3.2F
2.1 - 2.4	6.4A	0.017A							5.88
2.4 - 2.7	6.2A	0.008A	0.12B	1.9	0.03	0.14	0.7F		2.9F
2.7 - 3	6.4A	0.011A							
3 - 3.3	6.4A	0.011A							
3.3 - 3.6	6.4A	0.011A							
3.6 - 3.9	6.4A	0.008A	0.12B	1.8	0.03	0.12	0.4F		2.5F
3.9 - 4.2	6.1A	0.032A							
4.2 - 4.3	6.6A	0.011A	0.12B	1.6	0.04	0.12			
4.3 - 4.45	6.5A	0.011A							
4.45 - 4.55	6.4A	0.014A	0.12B	1.6	0.04	0.17			

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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 <sub>4</sub> Digest
12_HF_FE	Total element - Fe(%) - HF/HClO <sub>4</sub> Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO <sub>4</sub> Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO <sub>4</sub> Digest
13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15A2_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_CEC	Exchangeable bases- 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 H <sub>2</sub> SO <sub>4</sub> (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 (%)