

Project Name: Regional
Project Code: REG **Site ID:** T135 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	R.F. Isbell	Locality:	1.8KM north along Mistake Road from turnoff on Jardine Road:
Date Desc.:	16/07/70	Elevation:	No Data
Map Ref.:	Sheet No. : 7474 1:100000	Rainfall:	1680
Northing/Long.:	142.583333333333	Runoff:	Rapid
Easting/Lat.:	-11.56666666666667	Drainage:	Well drained

Geology

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

Land Form

Rel/Slope Class:	Rolling rises 9-30m 10-32%	Pattern Type:	Rises
Morph. Type:	Lower-slope	Relief:	24 metres
Elem. Type:	Footslope	Slope Category:	Gently inclined
Slope:	0 %	Aspect:	90 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Melanic-Mottled Dystrophic Yellow Kandosol		Principal Profile Form:	Gn2.64
ASC Confidence:		Great Soil Group:	Yellow earth

All necessary analytical data are available.

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

Vegetation:

Tall Strata - Heath shrub, 1.01-3m, Mid-dense. *Species includes - None Recorded

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.1 m	Very dark grey (10YR3/1-Moist); Dark greyish brown (10YR4/2-Dry); ; Sand (Heavy); Single grain grade of structure; Dry; Firm consistence; Common, medium (2-5mm) roots; Gradual change to -
A12	0.1 - 0.2 m	Very dark greyish brown (10YR3/2-Moist); Dark grey (10YR4/1-Dry); ; Sand; Single grain grade of structure; Dry; Firm consistence; Few, fine (1-2mm) roots;
A13	0.2 - 0.3 m	Dark greyish brown (10YR4/2-Moist); Greyish brown (10YR5/2-Dry); ; Sand (Heavy); Single grain grade of structure; Dry; Very firm consistence; Gradual change to -
A2	0.3 - 0.4 m	Brownish yellow (10YR6/5-Moist); Yellow (10YR7/5-Dry); ; Loamy sand; Single grain grade of structure; Moderately moist; Very weak consistence;
A2	0.4 - 0.5 m	Brownish yellow (10YR6/6-Moist); Yellow (10YR7/6-Dry); ; Loamy sand; Single grain grade of structure; Moderately moist; Very weak consistence;
A2	0.5 - 0.6 m	Brownish yellow (10YR6/6-Moist); Yellow (10YR7/6-Dry); ; Loamy sand; Massive grade of structure; Moderately moist; Very weak consistence;
A3	0.6 - 0.75 m	Brownish yellow (10YR6/6-Moist); , 7.5YR78; Loamy sand; Massive grade of structure; Moderately moist; Very weak consistence;
A3	0.75 - 0.9 m	Yellow (10YR7/6-Moist); Yellow (10YR8/5-Dry); , 7.5YR78; Loamy sand (Heavy); Massive grade of structure; Moderately moist; Weak consistence; Gradual change to -
B11	0.9 - 1.2 m	Yellow (10YR7/6-Moist); , 7.5YR66; Sandy loam; Massive grade of structure; Moderately moist; Very weak consistence;
B12	1.2 - 1.5 m	Yellow (10YR7/8-Moist); , 7.5YR68, 20-50% , 15-30mm, Distinct; , 20-50% , 15-30mm, Distinct; Sandy clay loam (Light); Massive grade of structure; Moderately moist; Weak consistence;
B21	1.5 - 1.8 m	Yellow (10YR7/8-Moist); , 5YR68, 20-50% , 15-30mm, Distinct; , 2.5YR48, 20-50% , 15-30mm, Distinct; Sandy clay loam; Massive grade of structure; Moderately moist; Weak consistence;
B21	1.8 - 2.1 m	Yellow (10YR7/8-Moist); , 5YR68, 20-50% , 15-30mm, Distinct; , 2.5YR48, 20-50% , 15-30mm, Distinct; Sandy clay loam; Massive grade of structure; Moderately moist; Weak consistence;

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B22 2.1 - 2.4 m Yellow (2.5Y7/6-Moist); , 5YR68, 20-50% , 15-30mm, Distinct; , 20-50% , 15-30mm, Distinct; Sandy clay loam (Heavy); Massive grade of structure; Moderately moist; Weak consistence;

B22 2.4 - 2.7 m Reddish yellow (5YR6/8-Moist); , 2.5Y76, 20-50% , 15-30mm, Distinct; , 20-50% , 15-30mm, Distinct; Sandy clay loam (Heavy); Massive grade of structure; Moderately moist; Weak consistence;

B23 2.7 - 3 m Reddish yellow (5YR6/8-Moist); , 7.5YR37; , 2.5Y76; Sandy medium clay; Massive grade of structure; Moderately moist; Very firm consistence;

B23 3 - 3.3 m Reddish yellow (5YR6/8-Moist); , 10YR81, 10-20% , 15-30mm; , 7.5R37, 10-20% , 15-30mm; Sandy medium clay; Massive grade of structure; Moderately moist; Weak consistence;

3.3 - 3.6 m Reddish yellow (5YR6/8-Moist); , 10YR81, 10-20% , 15-30mm; , 7.5R37, 10-20% , 15-30mm; Sandy medium clay; Massive grade of structure; Weak consistence;

3.6 - 3.9 m Reddish yellow (5YR6/8-Moist); , 7.5R37; , 10YR81; Sandy medium clay; Massive grade of structure; Weak consistence;

Morphological Notes

Observation Notes

90-120CM ELONGATE MOTTLING (HORIZONTIALLY DISTRIBUTED):270-390CM HARDENED DARK RED MOTTLING:

Site Notes

HEATHLANDS

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Laboratory Test Results:

Depth m	CaCO3 %	Organic C %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle GV	Size CS %	Analysis Silt	Clay
0 - 0.1		0.94D	<2A <2B	0.004A	0.05A	0.01A		0	55A	39	1 5
0.1 - 0.2									49A	44	1 6
0.2 - 0.3		0.62D	<2A <2B	0.004A	0.05A	0.02A		0	46A	44	1 9
0.3 - 0.4								0	44A	45	1 10
0.4 - 0.5											
0.5 - 0.6		0.05D	<2B	0.005A	0.02A	0.02A		0	43A	45	1 11
0.6 - 0.75											
0.75 - 0.9								0	50A	38	1 12
0.9 - 1.2								0	46A	40	1 14
1.2 - 1.5								0	47A	36	1 17
1.5 - 1.8											
1.8 - 2.1								0	54A	23	<1 23
2.1 - 2.4											
2.4 - 2.7								0	50A	22	<1 27
2.7 - 3											
3 - 3.3								25	53A	15	1 31
3.3 - 3.6											
3.6 - 3.9								25	47A	17	1 35

Depth m	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar g/g -	0.1 Bar m3/m3	0.5 Bar	1 Bar	5 Bar		

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0.3 - 0.4

0.4 - 0.5

0.5 - 0.6

0.6 - 0.75

0.75 - 0.9

0.9 - 1.2

1.2 - 1.5

1.5 - 1.8

1.8 - 2.1

2.1 - 2.4

2.4 - 2.7

2.7 - 3

3 - 3.3

3.3 - 3.6

3.6 - 3.9

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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/HClO4 Digest
12_HF_FE	Total element - Fe(%) - HF/HClO4 Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO4 Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO4 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 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
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
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 (%)