

Project Name: Regional
Project Code: REG **Site ID:** T128 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	R.F. Isbell	Locality:	.5KM from west end of airstrip at McDonnell:
Date Desc.:	13/07/70	Elevation:	No Data
Map Ref.:	Sheet No. : 7374 1:100000	Rainfall:	1680
Northing/Long.:	142.466666666667	Runoff:	Rapid
Easting/Lat.:	-11.65	Drainage:	Well drained

Geology

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

Land Form

Rel/Slope Class:	Undulating rises 9-30m 3-10%	Pattern Type:	Rises
Morph. Type:	Mid-slope	Relief:	15 metres
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Ferric Dystrophic 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:

Mid Strata - Tree, 3.01-6m, Very sparse. *Species includes - Grevillea glauca, Acacia species
 Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - Eucalyptus tetrodonta, Eucalyptus polycarpa,

Panicum species

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.1 m	Dark red (2.5YR3/6-Moist); Yellowish red (5YR4/6-Dry); ; Loamy sand (Heavy); Single grain grade of structure; Dry; Loose consistence; Many, fine (1-2mm) roots; Gradual change to -
A3	0.1 - 0.2 m	Dark red (2.5YR3/6-Moist); Red (2.5YR4/6-Dry); ; Sandy loam; Weak grade of structure, 10-20 mm, Angular blocky; Dry; Very firm consistence; Few, fine (1-2mm) roots; Gradual change to -
A3	0.2 - 0.3 m	Dark red (2.5YR3/6-Moist); Dark red (2.5YR3/6-Dry); ; Sandy loam (Heavy); Massive grade of structure; Dry; Very firm consistence; Gradual change to -
B1	0.3 - 0.4 m	Dark red (2.5YR3/6-Moist); ; Sandy clay loam (Light); Massive grade of structure; Moderately moist; Very weak consistence; Gradual change to -
B2	0.4 - 0.5 m	Dark red (2.5YR3/6-Moist); ; Sandy clay loam; Massive grade of structure; Moderately moist; Weak consistence; Gradual change to -
B2	0.5 - 0.6 m	Dark red (2.5YR3/6-Moist); ; Sandy clay loam; Massive grade of structure; Moderately moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, Charcoal, coarse fragments; Gradual change to -
B2	0.6 - 0.75 m	Dark red (2.5YR3/8-Moist); ; Sandy clay loam; Massive grade of structure; Moderately moist; Weak consistence; Gradual change to -
B2	0.75 - 0.9 m	Dark red (2.5YR3/8-Moist); ; Sandy clay loam; Massive grade of structure; Moderately moist; Weak consistence; Gradual change to -
	0.9 - 1.2 m	Red (10R4/8-Moist); ; Sandy clay loam; Massive grade of structure; Firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Gradual change to -
	1.2 - 1.5 m	Red (10R4/8-Moist); , 5YR58, 0-2% , 5-15mm, Distinct; , 0-2% , 5-15mm, Distinct; Clay loam; Massive grade of structure; Firm consistence; Very few (0 - 2 %), Argillaceous, Medium (2 -6 mm), Nodules; Gradual change to -
	1.5 - 1.8 m	Red (10R4/8-Moist); , 5YR58, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Clay loam; Massive grade of structure; Firm consistence; Very few (0 - 2 %), Argillaceous, Medium (2 -6 mm), Nodules; Gradual change to -

Project Name: Regional
Project Code: REG **Site ID:** T128 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

1.8 - 2 m	Red (10R4/8-Moist); , 5YR58, 0-2% , 5-15mm, Distinct; , 0-2% , 5-15mm, Distinct; Clay loam; Massive grade of structure; Firm consistence; Very few (0 - 2 %), Ferruginous, Fine (0 - 2 mm), Nodules; Clear change to -
2 - 2.3 m	Red (10R4/8-Moist); ; Sandy clay loam; Massive grade of structure; Firm consistence; 10-20%, coarse gravelly, 20-60mm, Sandstone, coarse fragments; Many (20 - 50 %), Ferruginous, Very coarse (20 - 60 mm), Nodules; Gradual change to -
2.3 - 2.6 m	Red (10R4/8-Moist); ; Sandy loam; Massive grade of structure; Firm consistence; 10-20%, coarse gravelly, 20-60mm, rounded, Sandstone, coarse fragments; Common (10 - 20 %), Ferruginous, Very coarse (20 - 60 mm), Nodules; Clear change to -
2.6 - 2.9 m	Red (10R4/8-Moist); ; Sandy clay loam; Massive grade of structure; Firm consistence; 2-10%, coarse gravelly, 20-60mm, Sandstone, coarse fragments; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Gradual change to -
2.9 - 3.2 m	Red (10R4/8-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Firm consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 - 6 mm), Nodules; Gradual change to -
3.2 - 3.5 m	Red (10R4/8-Moist); ; Sandy clay loam; Massive grade of structure; Weak consistence; 10-20%, medium gravelly, 6-20mm, Quartz, coarse fragments; Gradual change to -
3.5 - 3.8 m	Red (10R4/8-Moist); ; Coarse sandy clay loam; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; Gradual change to -
3.8 - 4.1 m	Red (10R4/8-Moist); ; Coarse sandy clay loam; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; Gradual change to -
4.1 - 4.4 m	Red (10R4/8-Moist); ; Coarse sandy clay loam; Massive grade of structure; Weak consistence; 10-20%, medium gravelly, 6-20mm, Quartz, coarse fragments; Gradual change to -
4.4 - 4.7 m	Red (10R4/8-Moist); ; Coarse sandy clay loam; Massive grade of structure; Weak consistence; Gradual change to -
4.7 - 5 m	Red (10R4/8-Moist); ; Coarse sandy clay loam; Massive grade of structure; Weak consistence; 10-20%, medium gravelly, 6-20mm, subangular, Quartz, coarse fragments; Gradual change to -
5 - 5.25 m	Red (2.5YR4/8-Moist); ; Coarse sandy clay loam; Massive grade of structure; Weak consistence; Gradual change to -
5.25 - 5.5 m	Red (2.5YR4/8-Moist); ; Coarse sandy clay loam; Massive grade of structure; Weak consistence; Gradual change to -
5.5 - 5.8 m	Red (2.5YR5/8-Moist); , 10YR78, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Weak consistence; 10-20%, fine gravelly, 2-6mm, Quartz, coarse fragments; Gradual change to -
5.8 - 5.9 m	Red (2.5YR5/8-Moist); , 10YR78, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Weak consistence; 2-10%, fine gravelly, 2-6mm, Quartz, coarse fragments; Gradual change to -
D 5.9 - 6.15 m	Red (2.5YR5/8-Moist); , 10YR78, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Moderately moist; Weak consistence; Gradual change to -
6.15 - 6.4 m	Yellow (2.5Y7/6-Moist); , 2.5YR58; , 5YR66; Sandy medium clay; Massive grade of structure; Weak consistence; Clear change to -
6.4 - 6.6 m	Yellow (2.5Y7/6-Moist); , 2.5YR58; , 10YR33; Sandy medium clay; Massive grade of structure; Weak consistence; 0-2%, coarse gravelly, 20-60mm, Sandstone, coarse fragments;

Morphological Notes

Observation Notes

440-500CM FINE 2-3CM BANDS OF FERRUGINOUS SST:>590CM PROBABLY DIFFERENT NATURE FROM SOIL PM:

Site Notes

HEATHLANDS

Project Name: Regional
Project Code: REG **Site ID:** T128 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

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 - 0.1	5.7A	0.035A	0.37B	0.34	0.07	0.11	3.2F	2C	4.1F	5.50
0.1 - 0.2	5.8A	0.023A								
0.2 - 0.3	5.9A	0.02A	0.09B	0.39	0.03	0.08	3.4F	1.1C	4F	7.27
0.3 - 0.4	6A	0.02A								
0.4 - 0.5	6.3A	0.014A								
0.5 - 0.6	6.1A	0.014A	0.07B	0.37	0.02	0.06	2.2F	0.2C	2.7F	30.00
0.6 - 0.75	6A	0.014A								
0.75 - 0.9	6.2A	0.017A								
0.9 - 1.2	5.6A	0.098A	0.07B	0.45	0.03	0.16	0.9F	0.1C	1.6F	160.00
1.2 - 1.5	6.1A	0.017A								
1.5 - 1.8	5.9A	0.02A								
1.8 - 2	5.2A	0.026A	0.1B	0.42	0.03	0.07	1.6F	2.95A 2.3C	2.2F	2.37 3.04
2 - 2.3	5.7A	0.044A								
2.3 - 2.6	5.7A	0.023A								
2.6 - 2.9	5.6A	0.02A								
2.9 - 3.2	5.7A	0.032A								
3.2 - 3.5	5.8A	0.017A								
3.5 - 3.8	6.1A	0.011A								
3.8 - 4.1	5.2A	0.029A								
4.1 - 4.4	5.9A	0.02A								
4.4 - 4.7	5.9A	0.023A								
4.7 - 5	5.9A	0.02A								
5 - 5.25	5.9A	0.017A								
5.25 - 5.5	5.1A	0.032A								
5.5 - 5.8	5.5A	0.029A								
5.8 - 5.9	5.5A	0.02A								
5.9 - 6.15	5.5A	0.017A								
6.15 - 6.4	6A	0.017A								
6.4 - 6.6	5.5A	0.017A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1		0.94D	<2A 2B	0.011A	0.05A	0.03A		0	62A	24	2	12
0.1 - 0.2								<2	52A	29	2	18
0.2 - 0.3		0.69D	<2A <2B	0.01A	0.05A	0.03A		0	49A	29	2	20
0.3 - 0.4								0	48A	29	2	21
0.4 - 0.5												
0.5 - 0.6		0.37D	<2B	0.01A	0.02A	0.03A		<2	49A	30	1	20
0.6 - 0.75												
0.75 - 0.9								<2	47A	31	1	21
0.9 - 1.2			<2B	0.011A		0.03A		<2	42A	31	2	25
1.2 - 1.5												
1.5 - 1.8								0	38A	18	1	43
1.8 - 2			<2B	0.017A		0.04A		<2	40A	22	4	34
2 - 2.3								64	45A	22	2	31
2.3 - 2.6								47	57A	20	2	20

Observation ID: 1

[illegible]

Project Name: Regional
Project Code: REG **Site ID:** T128 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

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_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
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)
9H1	Phosphate retention
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_K2O	K ₂ O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction