

Project Name: Regional
Project Code: REG **Site ID:** T46 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	R.F. Isbell	Locality:	17.6KM WNW. of Bluff Downs on Maryvale Road.
Date Desc.:	//	Elevation:	457 metres
Map Ref.:	Sheet No. : 7958 1:100000	Rainfall:	635
Northing/Long.:	145.3875	Runoff:	Moderately rapid
Easting/Lat.:	-19.6583333333333	Drainage:	No Data

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Tb	Substrate Material:	Basalt

Land Form

Rel/Slope Class:	Gently undulating plains <9m 1-3%	Pattern Type:	Plain
Morph. Type:	Flat	Relief:	No Data
Elem. Type:	Plain	Slope Category:	Very gently sloped
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Ferric Eutrophic Red Kandosol	Principal Profile Form:	Gn3.21
ASC Confidence:	Great Soil Group:	Euchrozem
All necessary analytical data are available.		

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

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - None recorded
Tall Strata - Tree, , Sparse. *Species includes - Eucalyptus crebra, Eucalyptus grandifolia, Eucalyptus

dichromophloia

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.1 m	Dark reddish brown (5YR3/3-Moist); ; Clay loam; Weak grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Weak consistence; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Nodules; Gradual change to -
B1	0.1 - 0.3 m	Dark reddish brown (5YR3/4-Moist); ; Light clay (Light); Massive grade of structure; Earthy fabric; Weak consistence; 0-2%, stony, 200-600mm, Basalt, coarse fragments; Many (20 - 50 %), Ferruginous, Fine (0 - 2 mm), Nodules; Gradual change to -
B2	0.3 - 0.46 m	Dark red (2.5YR3/6-Moist); ; Light clay; Weak grade of structure, 5-10 mm, Angular blocky; Massive grade of structure; Earthy fabric; Very firm consistence; 0-2%, stony, 200-600mm, Basalt, coarse fragments; Many (20 - 50 %), Ferruginous, Fine (0 - 2 mm), Nodules; Clear change to -
BC	0.46 - 0.61 m	Yellowish red (5YR4/6-Moist); ; Medium clay; Massive grade of structure; Earthy fabric; Very firm consistence; Many (20 - 50 %), Manganiferous, Coarse (6 - 20 mm), Nodules; Gradual change to -
C	0.61 - 0.76 m	Yellowish red (5YR4/6-Moist); ; Medium clay; Massive grade of structure; Very firm consistence; Very many (50 - 100 %), Manganiferous, Coarse (6 - 20 mm), Nodules; Field pH 6 (pH meter); Clear change to -
D	0.76 - 0.91 m	Dark red (2.5YR3/6-Moist); ; Light clay; Moderate grade of structure, <2 mm, Polyhedral; Smooth-ped fabric; Weak consistence; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Nodules; Gradual change to -
	0.91 - 1.12 m	Dark red (2.5YR3/6-Moist); ; Light medium clay; Strong grade of structure, <2 mm, Polyhedral; Smooth-ped fabric; Weak consistence; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Nodules;

Morphological Notes

Observation Notes

>76CM IS OLDER AND STRICTLY ORGANIZED SOIL:10-46CM OCCASIONAL BASALT FLOATER:

Site Notes

BLUFF DOWNS

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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 Cmol (+)/kg	Acidity		%
0 - 0.1	6.6A	0.059A	3.7B	4.4	1.85	0.05		12C	0.42
0.1 - 0.3	6.5A	0.047A	12B	4	1.53	0.45			
0.3 - 0.46	6.5A	0.047A							
0.46 - 0.61	6.8A	0.041A	9.2B	2.3	0.73	0.3		14C	2.14
0.61 - 0.76	6.8A	0.035A							
0.76 - 0.91	6.9A	0.044A							
0.91 - 1.22	7.1A	0.038A	11.6B	6.7	0.15	0.2		19C	1.05

Depth m	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density Mg/m3	Particle		Size	Analysis	
	%	%	mg/kg	%	%	%		GV	CS	FS %	Silt	Clay
0 - 0.1	6A	1.12D	66B	0.113A	0.13A			3	13D	14	30	43
0.1 - 0.3		0.58D	6B	0.053A	0.08A			5	17D	12	23	48
0.3 - 0.46												
0.46 - 0.61				2B	0.056A			7	18D	16	18	49
0.61 - 0.76												
0.76 - 0.91												
0.91 - 1.22			3B	0.039A					3D	12	24	63

[illegible]

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Laboratory Analyses Completed for this profile

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
19A1	Carbonates - rapid titration
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
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 ₂ SO ₄ (BSES)
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