Project Name: LBV

Project Code: LBV Site ID: B28 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: I. Nankivell Locality:
Date Desc.: 17/08/49 Elevation

 Date Desc.:
 17/08/49
 Elevation:
 17 metres

 Map Ref.:
 Sheet No.: 8358
 1:100000
 Rainfall:
 750

 Northing/Long.:
 147.099444444445
 Runoff:
 Slow

Easting/Lat.: -19.780555555555 Drainage: Imperfectly drained

Geology

ExposureType: Soil pit Conf. Sub. is Parent. Mat.: No Data

Geol. Ref.: CZA Substrate Material: Auger boring, 1 m deep, Slightly porous,

Unconsolidated material (unidentified)

Land Form

Rel/Slope Class: Gently undulating plains <9m Pattern Type: Alluvial plain

1-3%

Morph. Type:No DataRelief:No DataElem. Type:PlainSlope Category:No DataSlope:0 %Aspect:No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:Mapping Unit:N/ACalcic Subnatric Black SodosolPrincipal Profile Form:Dd1.43ASC Confidence:Great Soil Group:Solodic soil

All necessary analytical data are available.

<u>Site Disturbance:</u> No effective disturbance other than grazing by hoofed animals

Vegetation: Low Strata - Tussock grass, , Mid-dense. *Species includes - Heteropogon contortus, Chloris species

Tall Strata - Tree, 6.01-12m, Very sparse. *Species includes - Eucalyptus papuana, Eucalyptus tessellaris,

Eucalyptus

polycarpa

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.09 m	Grey (10YR5/1-Moist); ; Loam; Massive grade of structure; Coarse, (10 - 20) mm crack; Dry; Weak consistence; Field pH 6.3 (pH meter); Abrupt change to -
B21	0.1 - 0.33 m	Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 20-50 mm, Angular blocky; Coarse, (10 - 20) mm crack; Dry; Strong consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 7.2 (pH meter); Diffuse change to -
B22	0.36 - 0.48 m	Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Coarse, (10 - 20) mm crack; Dry; Strong consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, , Nodules; Field pH 8.7 (pH meter); Diffuse change to -
B23	0.48 - 0.61 m	Brown (10YR5/3-Moist); , 10YR42; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Coarse, (10 - 20) mm crack; Moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Calcareous, , Nodules; Field pH 9.1 (pH meter); Diffuse change to -
В3	0.61 - 0.79 m	Greyish brown (2.5Y5/3-Moist); ; Light clay; Weak grade of structure, 10-20 mm, Angular blocky; Very coarse, (20 - 50) mm crack; Moist; Weak consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, , Nodules; Field pH 9.1 (pH meter); Diffuse change to -
B3	0.79 - 1.09 m	Greyish brown (2.5Y5/3-Moist); ; Sandy medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Moist; Weak consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, , Nodules; Field pH 8.9 (pH meter); Diffuse change to -
С	1.09 - 1.68 m	Greyish brown (2.5Y5/3-Moist); , 10YR52; Sandy medium clay; Massive grade of structure; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, , Nodules; Field pH 8.9 (pH meter);

Morphological Notes

Observation Notes

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MICRO-RELIEF HEXAGONAL CRACKING AROUND COLUMNS 150-200MM IN DIAMETER

Site Notes BURDEKIN VALLE

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Laboratory Test Results:

Depth	рН	1:5 EC		hangeable	Cations K	Na	Exchangeable	CEC		ECEC	E	SP
m		dS/m	Ca	Mg	ĸ	Cmol (Acidity +)/kg				(%
0 - 0.09	6.3H	0.02B		2.6	0.15	0.3	4.3D			11E		
0.1 - 0.33	7.3H	0.04B	9.3K	7.8	0.12	2.9	3.4D			23.5E		
0.36 - 0.48	8.7H	0.1B	8.3K	8.9	0.27	4.9				22.5E		
0.48 - 0.61	9.1H	0.27B	}									
0.61 - 0.79	9.1H	0.26B	2.3K	9.2	0.23	6				17.7E		
0.79 - 1.09	8.9H	0.2B										
1.09 - 1.68	8.9H	0.17B	}									
Depth	CaCO3	Organic	Avail.	Total	Total	Tota	al Bulk	D	article	Size A	Analysis	
Бериі	04000	C	P	P	N	K		GV.	CS	FS	Silt	
m	%	%	mg/kg	%	%	%		•	••	%	•	- ,
							_					
0 - 0.09	0.790	0.89E	7C	0.009F	0.0	6B			14C	44	22	17
0.1 - 0.33									8C	30	21	41
0.36 - 0.48	0.120							3	9C	31	23	39
0.48 - 0.61	0.790							5	8C	29	24	41
0.61 - 0.79	0.4C							3	12C	40	18	31
0.79 - 1.09	0.060											
1.09 - 1.68	0.0920	C						2	15C	45	15	27
Depth	COLE Gravimetric/Volumetric Water Contents K sat K un									K unsat		
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar 15	Bar				
m				g/g	g - m3/m	3			mm/	/h	mm/h	

0 - 0.09 0.1 - 0.33 0.36 - 0.48 0.48 - 0.61

0.61 - 0.79 0.79 - 1.09 1.09 - 1.68

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Laboratory Analyses Completed for this profile

15_NR Sum of Ex. cations + Ex. acidity - Not recorded

15_NR_CA Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded

15_NR_H Hydrogen Cation - meg per 100g of soil - Not recorded

15_NR_K Exch. basic cations (K++) - meq per 100g of soil - Not recorded Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded 15_NR_MG Exch. basic cations (Na++) - med per 100g of soil - Not recorded Calcium Carbonate (CaCO3) - Not recorded 15_NR_NA

19B_NR

Loss on Ignition (%) 2_LOI Air-dry moisture content 2A1

3_NR Electrical conductivity or soluble salts - Not recorded

4_NR pH of soil - Not recorded

5_NR Water soluble Chloride - Cl(%) - Not recordede

Organic carbon (%) - Not recorded 6Z 7_NR Total nitrogen (%) - Not recorded Available P (mg/kg) - Not recorded Total element - P(%) - Not recorded 9_NR 9A_NR

P10_GRAV Gravel (%)

P10_NR_C Clay (%) - Not recorded

Coarse sand (%) - Not recorded Fine sand (%) - Not recorded P10_NR_CS P10_NR_FS P10_NR_Z Silt (%) - Not recorded