Project Name: BL
Project Code: BL **Site ID:** B298 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: G.D. Hubble
Date Desc.: 22/10/56
Map Ref.: Sheet No. : 8850 1:100000
Northing/Long.: 148.81944
Easting/Lat.: -23.575
Locality:
Elevation: No Data
Rainfall: 635
Runoff: Moderately rapid
Drainage: Imperfectly drained

Geology

ExposureType: Soil pit
Geol. Ref.: Cz
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Auger boring, 1.9 m deep,Porous, Mudstone

Land Form

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

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:
Epicalcareous-Endohypersodic Self-Mulching Black Vertosol
Mapping Unit: N/A
Principal Profile Form: Ug5.15

ASC Confidence:
All necessary analytical data are available.
Great Soil Group: Brown clay

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

Vegetation: Low Strata - Tussock grass, , . *Species includes - Chloris species

Tall Strata - Tree, 6.01-12m, Mid-dense. *Species includes - Acacia harpophylla, Atalaya hemiglauca, Eremophila mitchellii

Surface Coarse Fragments: 0-2%, fine gravelly, 2-6mm, , Quartz

Profile Morphology

AB	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); ; Heavy clay; Strong grade of structure, 2-5 mm, Granular; Dry; Firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.7 (pH meter); Gradual change
B2	0.3 - 0.61 m	Very dark greyish brown (10YR3/2-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.9 (pH meter); Gradual change to -
B2	0.76 - 1.07 m	Reddish brown (5YR4/4-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moist; Firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.4 (pH meter); Gradual change to -
B2	1.07 - 1.37 m	Yellowish red (5YR4/6-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moist; Firm consistence; Field pH 5.5 (pH meter); Diffuse change to -
B2	1.37 - 1.57 m	Yellowish red (5YR4/6-Moist); , 7.5YR56; Heavy clay; Moderate grade of structure, Lenticular; Moist; Firm consistence; Field pH 5 (pH meter); Diffuse change to -
B3	1.68 - 1.9 m	Strong brown (7.5YR5/6-Moist); ; Medium clay; Weak grade of structure, Lenticular; Moist; Weak consistence; 0-2%, Mudstone, coarse fragments; Field pH 4.8 (pH meter); Diffuse change
C	1.98 - 2.08 m	Strong brown (7.5YR5/6-Moist); ; Light clay; Massive grade of structure; Moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, Mudstone, coarse fragments; Field pH 4.4 (pH meter);

Morphological Notes

Observation Notes

0-10CM GRANULAR GRADING TO BLOCKY STRUCTURE: ALKALINE OVER ACID CLAYS

Site Notes

BLACKWATER

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.1	8.7H	0.05B	31.7K	9.4	0.73	0.71				
0.3 - 0.61	8.9H	0.42B								
0.76 - 1.07	8.4H	0.7B	16.1K	17.6	0.28	8.2				
1.07 - 1.37	5.5H	0.6B								
1.37 - 1.57	5H	0.58B					7D			
1.68 - 1.9	4.8H	0.55B								
1.98 - 2.08	4.4H	0.54B								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1	2.22C	1.06A	16C	0.069F	0.12B		1.30	0.3	5C	28	14	47
0.3 - 0.61	4.37C	0.68A			0.07B		1.30	1	3C	23	19	47
0.76 - 1.07	0.67C				0.03B		1.30		3C	20	17	59
1.07 - 1.37					0.04B		1.30					
1.37 - 1.57									1C	22	25	55
1.68 - 1.9												
1.98 - 2.08				0.066F					1C	32	24	44

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
m		g/g - m3/m3						mm/h	mm/h
0 - 0.1				0.44C				0.25C	
0.3 - 0.61				0.45C				0.27C	
0.76 - 1.07				0.49C				0.27C	
1.07 - 1.37				0.5C				0.26C	
1.37 - 1.57									
1.68 - 1.9									
1.98 - 2.08									

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Laboratory Analyses Completed for this profile

15_NR_CA	Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded
15_NR_H	Hydrogen Cation - meq per 100g of soil - Not recorded
15_NR_K	Exch. basic cations (K++) - meq per 100g of soil - Not recorded
15_NR_MG	Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded
15_NR_NA	Exch. basic cations (Na++) - meq per 100g of soil - Not recorded
19B_NR	Calcium Carbonate (CaCO3) - Not recorded
2A1	Air-dry moisture content
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - Not recorded
5_NR	Water soluble Chloride - Cl(%) - Not recordede
6A1	Organic carbon - Walkley and Black
7_NR	Total nitrogen (%) - Not recorded
9_NR	Available P (mg/kg) - Not recorded
9A_NR	Total element - P(%) - Not recorded
P10_GRAV	Gravel (%)
P10_NR_C	Clay (%) - Not recorded
P10_NR_CS	Coarse sand (%) - Not recorded
P10_NR_FS	Fine sand (%) - Not recorded
P10_NR_Z	Silt (%) - Not recorded
P3A_NR	Bulk density - Not recorded
P3B_VL_01	0.1 BAR Moisture m3/m3 - Volumetric using suction plate
P3B_VL_15	15 BAR Moisture m3/m3 - Volumetric using pressure plate