Project Name: DD
Project Code: DD **Site ID:** B238 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: G.D. Hubble
Date Desc.: 04/10/54
Map Ref.: Sheet No. : 9142 1:100000
Northing/Long.: 151.3875
Easting/Lat.: -27.6583333333333
Locality:
Elevation: 376 metres
Rainfall: 610
Runoff: Slow
Drainage: Imperfectly drained

Geology

ExposureType: Soil pit
Geol. Ref.: Qpc
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Auger boring, 3 m deep,Unconsolidated material (unidentified)

Land Form

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

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:
Haplic Self-Mulching Black Vertosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Ug5.16
Great Soil Group: Black earth

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

Vegetation:

Tall Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - None Recorded

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

AB	0 - 0.07 m	Very dark grey (10YR3/1-Moist); ; Heavy clay; Strong grade of structure, 5-10 mm, Granular; Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 6.6 (pH meter); Many, fine (1-2mm) roots; Clear change to -
B2	0.07 - 0.51 m	Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Field pH 6.9 (pH meter); Common, fine (1-2mm) roots; Gradual change to -
B2	0.51 - 0.79 m	Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moderately moist; Firm consistence; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Field pH 7.6 (pH meter); Few, very fine (0-1mm) roots; Gradual change to -
B2	0.81 - 1.07 m	Dark grey (10YR4/1-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moist; Firm consistence; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.6 (pH meter); Diffuse change to -
B2	1.07 - 1.83 m	Grey (10YR5/1-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moist; Firm consistence; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8.7 (pH meter); Diffuse change to -
B2	1.83 - 2.74 m	Grey (10YR5/1-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moist; Firm consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8.7 (pH

Morphological Notes

Observation Notes

0-7CM GRANULAR GRADING TO MEDIUM BLOCKY STRUCTURE:DIAGONAL SHEAR PLANES:HIGHLY POLISHED FACES:

Site Notes

DARLING DOWNS

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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 - 0.07	6.6H	0.029B	24.9K	22.7	1.5	0.74	10.4D			
0.07 - 0.51	6.9H	0.042B								
0.51 - 0.79	7.6H	0.081B	29.1K	30.7	0.7	2.4	2.4D			
0.81 - 1.07	8.6H	0.11B								
1.07 - 1.83	8.7H	0.11B	27.2K	30.7	0.81	2.8				
1.83 - 2.74	8.7H	0.111B								

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 - 0.07		3.32A	51C	0.083F	0.22B		1.10	0.1	3C	16	15	61
0.07 - 0.51		1.79A		0.043F	0.1B		1.10	0	1C	12	13	70
0.51 - 0.79		1.39A		0.057F	0.08B		1.10	0.1	1C	12	15	69
0.81 - 1.07	1.4C	0.68A		0.033F	0.03B			0.8	1C	11	16	70
1.07 - 1.83	0.81C	0.16A		0.043F	0.01B		1.10	2	1C	10	74	74
1.83 - 2.74												

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 - 0.07				0.52C				0.31C	
0.07 - 0.51				0.56C				0.35C	
0.51 - 0.79				0.56C				0.37C	
0.81 - 1.07									
1.07 - 1.83				0.53C				0.33C	
1.83 - 2.74									

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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