Project Name: NAR
Project Code: NAR **Site ID:** B813 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: G.D. Hubble
Date Desc.: 05/07/73
Map Ref.: Sheet No. : 9046 1:100000
Northing/Long.: 150.795833333333
Easting/Lat.: -25.6958333333333
Locality:
Elevation: 320 metres
Rainfall: 716
Runoff: Moderately rapid
Drainage: Well drained

Geology

ExposureType: Undisturbed soil core
Geol. Ref.: PLa
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Undisturbed soil core, 1.5 m deep,No Data

Land Form

Rel/Slope Class: Undulating low hills 30-90m 3-10%
Morph. Type: Upper-slope
Elem. Type: Hillslope
Slope: 5.2 %
Pattern Type: Low hills
Relief: 35 metres
Slope Category: No Data
Aspect: No Data

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Sodic Calcic Red Dermosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn3.13
Great Soil Group: No suitable group

Site Disturbance: Extensive clearing, for example poisoning, ringbarking

Vegetation:

Tall Strata - Tree, 6.01-12m, Isolated plants. *Species includes - Acacia harpophylla

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.05 m	Dark reddish brown (5YR3/4-Moist); ; Clay loam (Heavy); Moderate grade of structure, 2-5 mm, Polyhedral; Moderate grade of structure, 2-5 mm, Polyhedral; Moist; Weak consistence; Abundant, very fine (0-1mm) roots; Clear change to -
B1	0.05 - 0.1 m	Dark red (2.5YR3/6-Moist); ; Light clay; Moderate grade of structure, 10-20 mm, Polyhedral; 5-10 mm, Polyhedral; Moist; Firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Abundant, very fine (0-1mm) roots;
B1	0.1 - 0.2 m	Dark red (2.5YR3/6-Moist); ; Light medium clay; Strong grade of structure, 20-50 mm, Polyhedral; 2-5 mm, Polyhedral; Moist; Firm consistence; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Nodules; Abundant, very fine (0-1mm) roots; Gradual change to -
B2	0.2 - 0.3 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Polyhedral; 2-5 mm, Polyhedral; Moist; Firm consistence; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Nodules; Many, very fine (0-1mm) roots;
B2	0.3 - 0.5 m	Dark red (2.5YR3/6-Moist); ; Medium heavy clay; Strong grade of structure, 20-50 mm, Polyhedral; 2-5 mm, Polyhedral; Dry; Strong consistence; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Many, very fine (0-1mm) roots; Gradual change to -
B2	0.5 - 0.6 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Polyhedral; 2-5 mm, Polyhedral; Dry; Very firm consistence; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Many, very fine (0-1mm) roots; Clear change to -
B3k	0.6 - 0.75 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Polyhedral; Dry; Firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Common (10 - 20 %), Calcareous, , Soft segregations; Common, very fine (0-1mm) roots; Diffuse change to -
B3k	0.75 - 0.9 m	Yellowish red (5YR4/5-Moist); ; Light clay (Heavy); Strong grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Polyhedral; Dry; Firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Common, very fine (0-1mm) roots;

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B3k	0.9 - 1.05 m	Yellowish red (5YR4/8-Moist); , 10YR76; Light clay; Strong grade of structure, 10-20 mm, Polyhedral; 2-5 mm, Polyhedral; Dry; Firm consistence; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Few, very fine (0-1mm) roots; Gradual change to -
BC	1.05 - 1.2 m	Strong brown (7.5YR5/7-Moist); , 10YR77; Light medium clay; Strong grade of structure, 10-20 mm, Polyhedral; Massive grade of structure, 2-5 mm, Polyhedral; Dry; Firm consistence; 2-10%, medium gravelly, 6-20mm, angular, Substrate material, coarse fragments; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Few, very fine (0-1mm) roots;
BC	1.2 - 1.5 m	Brownish yellow (10YR6/6-Moist); , 2.5YR46; Medium clay; Massive grade of structure; Moist; Firm consistence; 50-90%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Very few (0 - 2 %), Calcareous, , Soft segregations; Few, very fine (0-1mm) roots;
C	1.5 - 1.8 m	Yellow (10YR7/6-Moist); , 2.5YR46; , 7.5YR56; Medium clay; Massive grade of structure; Moist; Firm consistence; 50-90%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Few, very fine (0-1mm) roots;
C	1.8 - 1.85 m	Yellow (10YR7/6-Moist); , 2.5YR46; , 7.5YR56; Medium clay; Massive grade of structure; Moist; Firm consistence; 50-90%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Few, very fine (0-1mm) roots;
C	1.85 - 2.1 m	Yellow (10YR7/6-Moist); , 10YR58; , 2.5YR46; Light medium clay; Massive grade of structure; Moist; Firm consistence; 50-90%, medium gravelly, 6-20mm, Substrate material, coarse fragments;
C	2.1 - 2.4 m	Yellow (10YR7/6-Moist); , 7.5YR56; , 10YR82; Light medium clay; Moist; Firm consistence; 50-90%, coarse gravelly, 20-60mm, Substrate material, coarse fragments;

Morphological Notes

Observation Notes

AFFINITIES WITH EUCHROZEM BUT ALKALINE SUBSOIL. CARBONATE INCLUDES SOMEBRITTLE NODULES. SOLUM CLAYS KAOLINITIC BUT VERY PLASTIC. 105-240CM FRAGMENTED WEATHERED REGOLITH BRITTLE, BUT MEDIUM CLAY TEXTURE. SIMILAR MATERIAL CONTINUES TO 4.5M.

Site Notes

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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 - 0.05	6.6H	0.38A	13.7K	3.2	5.7	0.17	13.7D			
0.05 - 0.1	5.9H	0.22A	9.8K	1	2.9	0.06	15.8D			
0.1 - 0.2	5.6H	0.195A								
0.2 - 0.3	5.7H	0.255A								
0.3 - 0.5	5.7H	0.084A	12.3K	10	0.81	0.93	10D			
0.5 - 0.6	7.2H	0.084A								
0.6 - 0.75	8.8H	0.16A	12.6K	10.3	0.79	1	0D			
0.75 - 0.9	9H	0.25A								
0.9 - 0.05	9.1H	0.78A	4.5K	10.7	0.22	3.3	0D			
1.05 - 1.2	9.1H	1.16A								
1.2 - 1.5	8.6H	1.32A								
1.5 - 1.8	8.4H	1.48A								
1.8 - 1.85	8.2H	1.58A								
1.85 - 2.1	8.5H	1.56A								
2.1 - 2.4	7.9H	1.46A								

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 - 0.05		4.6A	104B	1400F	0.485B	0.89B	1.00		4C	14	44	35
0.05 - 0.1		2.25A	32B	1200F	0.286B	0.71B	1.10		4C	14	25	55
0.1 - 0.2		1.43A	34B	990F	0.203B	0.6B	1.00		3C	14	26	57
0.2 - 0.3		0.87A	8B	630F	0.146B	0.61B	1.10		3C	12	22	65
0.3 - 0.5		0.43A	5B	300F	0.064B	0.45B	1.30		3C	10	25	64
0.5 - 0.6							1.30					
0.6 - 0.75	21.9C	0.2A	4B		0.026B		1.50		1C	6	19	51
0.75 - 0.9							1.70					
0.9 - 0.05	14.7C		<1B				1.30		0C	3	21	63
1.05 - 1.2	1.5C						1.50		0C	2	27	68
1.2 - 1.5							1.60					
1.5 - 1.8	0.03C		3B				1.40		0C	2	38	63
1.8 - 1.85							1.20					
1.85 - 2.1												
2.1 - 2.4												

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 - 0.05									
0.05 - 0.1									
0.1 - 0.2									
0.2 - 0.3									
0.3 - 0.5									
0.5 - 0.6									
0.6 - 0.75									
0.75 - 0.9									
0.9 - 0.05									
1.05 - 1.2									
1.2 - 1.5									

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1.5 - 1.8
1.8 - 1.85
1.85 - 2.1
2.1 - 2.4

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Laboratory Analyses Completed for this profile

10A_NR	Total element - S(%) - Not recorded
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
17A_NR	Total element - K(%) - Not recorded
19B_NR	Calcium Carbonate (CaCO3) - Not recorded
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
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
9A_NR	Total element - P(%) - Not recorded
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)
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