Project Name: CAN
Project Code: CAN **Site ID:** CP151 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (NSW)

Site Information

Desc. By: G.A. Stewart
Locality: Bundy ~21KM up Castlereagh Highway turn off to Carinda
Date Desc.: 12/06/79
Elevation: 160 metres
Map Ref.: Sheet No. : SH8536 1:100000
Rainfall: 500
Northing/Long.: 148.233333333333
Runoff: Very slow
Easting/Lat.: -30.7833333333333
Drainage: Imperfectly drained

Geology

ExposureType: No Data
Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: No Data
Substrate Material: Slightly porous, Unconsolidated material (unidentified)

Land Form

Rel/Slope Class: Level plain <9m <1%
Pattern Type: Alluvial plain
Morph. Type: Flat
Relief: No Data
Elem. Type: Plain
Slope Category: Level
Slope: 0 %
Aspect: No Data

Surface Soil Condition (dry): Soft, Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:
Epicalcareous-Endohypersodic Self-Mulching Black Vertosol
Mapping Unit: N/A
Principal Profile Form: Ug5.16

ASC Confidence:
Analytical data are incomplete but reasonable confidence.
Great Soil Group: Black earth

Site Disturbance: Complete clearing. Pasture, native or improved, but never cultivated

Vegetation: Low Strata - Sod grass, , Mid-dense. *Species includes - None recorded
Tall Strata - Tree, , Isolated plants. *Species includes - Acacia species

Surface Coarse Fragments: 0-2%, medium gravelly, 6-20mm, rounded,

Profile Morphology

0 - 0.1 m	Dark brown (7.5YR3/2-Moist); ; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 7.1 (pH meter);
0.1 - 0.2 m	Dark brown (7.5YR3/2-Moist); ; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.3 (pH meter);
0.2 - 0.3 m	Dark brown (7.5YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.7 (pH meter);
0.3 - 0.4 m	Dark brown (7.5YR3/2-Moist); , 10YR32, 0-2% ; , 0-2% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Concretions; Field pH 8.9 (pH meter);
0.4 - 0.5 m	Dark brown (7.5YR3/2-Moist); , 10YR32, 2-10% ; , 2-10% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.9 (pH meter);
0.5 - 0.6 m	Dark brown (7.5YR3/2-Moist); , 10YR32, 10-20% ; , 10-20% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.9 (pH meter);
0.6 - 0.7 m	Dark brown (7.5YR3/2-Moist); , 10YR32, 20-50% ; , 20-50% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.7 (pH meter);
0.7 - 0.8 m	Very dark greyish brown (10YR3/2-Moist); , 7.5YR32, 10-20% ; , 10-20% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Concretions; Field pH 8.6 (pH meter);

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0.8 - 0.9 m	Brown (7.5YR4/2-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Common (10 - 20 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.2 (pH meter);
0.9 - 1 m	Brown (7.5YR4/2-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Common (10 - 20 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.1 (pH meter);
1 - 1.1 m	Brown (7.5YR4/2-Moist); , 7.5YR34, 2-10% ; , 2-10% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Common (10 - 20 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8 (pH meter);
1.1 - 1.2 m	Brown (7.5YR4/2-Moist); , 7.5YR34, 20-50% ; , 20-50% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Concretions; Common (10 - 20 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 7.9 (pH meter);
1.2 - 1.3 m	Dark brown (7.5YR3/4-Moist); , 7.5YR42, 20-50% ; , 20-50% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Common (10 - 20 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.1 (pH meter);
1.3 - 1.4 m	Dark brown (7.5YR3/4-Moist); , 7.5YR42, 0-2% ; , 0-2% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Common (10 - 20 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.1 (pH meter);
1.4 - 1.5 m	Dark brown (7.5YR3/4-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.1 (pH meter);
1.5 - 1.6 m	Dark brown (7.5YR3/4-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Concretions; Field pH 8.3 (pH meter);
1.6 - 1.7 m	Dark brown (7.5YR3/4-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.4 (pH meter);
1.7 - 1.8 m	Dark brown (7.5YR3/4-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.4 (pH meter);
1.8 - 1.9 m	Dark brown (7.5YR3/4-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.5 (pH meter);
1.9 - 2 m	Dark brown (7.5YR3/4-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Very firm consistence; Many (20 - 50 %), Calcareous, , Concretions; Field pH 8.5 (pH meter);

Morphological Notes

Observation Notes

0-30CM SOIL TENDS TO BE WATER REPELLENT:30-80CM SMALL SHINY SURFACES:80-200 SLICKENSIDES

Site Notes

COONAMBLE

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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 - 0.02	7.1A	0.06A	12.8K	2.1	0.57	0.04	9.1B	31.8J	15.5B	0.13
	8.4A	0.13A	15.9K	4.2	2.1	0.52				1.64
0.02 - 0.1	8.3A	0.12A	21.2K	8	1.6	0.65			31.5B	
	8.7A	0.16A								
0.1 - 0.15	8.7A	0.021A								
	9.1A	0.21A								
0.15 - 0.23	8.9A	0.45A								
	9.2A	0.28A								
0.23 - 0.3	8.9A	0.774A	14.5K	9	0.81	8.8			33.1B	
	9.2A	0.42A								
0.3 - 0.41	8.9A	1.01A								
	9A	0.63A								
0.46 - 0.56	8.7A	1.31A	8.5K	8	0.69	5.3			22.5B	
	9A	0.84A								
0.69 - 0.76	8.6A	1.16A	14.2K	9	0.75	5.5			29.5B	
	9.1A	1.1A								
0.91 - 1.02	8.2A	1.1A								
	9.1A	1.7A								
1.27 - 1.37	8.1A	1.16A								
	9.1A	1.9A								
1 - 1.1	8A	2.2A								
1.1 - 1.2	7.9A	2.9A								
1.2 - 1.3	8.1A	2.2A								
1.3 - 1.4	8.1A	1.8A								
1.4 - 1.5	8.1A	1.9A								
1.5 - 1.6	8.3A	1.5A								
1.6 - 1.7	8.4A	1.3A								
1.7 - 1.8	8.4A	1.3A								
1.8 - 1.9	8.5A	1.1A								
1.9 - 2	8.5A	1A								

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 - 0.02	0.06A	1.38D							24D	50	10	15
									21D	24	12	40
0.02 - 0.1	0.12A								16D	32	15	35
0.1 - 0.15	0.15A								18D	35	12	37
0.15 - 0.23	0.5A								18D	34	10	37
0.23 - 0.3	1.49A								19D	34	10	37
0.3 - 0.41	2.74A								18D	35	10	37
0.46 - 0.56												
0.69 - 0.76	8.4A								20D	31	9	39
0.91 - 1.02												
1.27 - 1.37												
1 - 1.1												
1.1 - 1.2												
1.2 - 1.3												
1.3 - 1.4												
1.4 - 1.5												

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1.5 - 1.6
1.6 - 1.7
1.7 - 1.8
1.8 - 1.9
1.9 - 2

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 - 0.02								0.17B		
0.02 - 0.1										
0.1 - 0.15										
0.15 - 0.23										
0.23 - 0.3										
0.3 - 0.41										
0.46 - 0.56										
0.69 - 0.76										
0.91 - 1.02										
1.27 - 1.37										
1 - 1.1										
1.1 - 1.2										
1.2 - 1.3										
1.3 - 1.4										
1.4 - 1.5										
1.5 - 1.6										
1.6 - 1.7										
1.7 - 1.8										
1.8 - 1.9										
1.9 - 2										

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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_CEC	CEC - 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
15G_C_AL1	Exchangeable aluminium - meq per 100g of soil - Aluminium By difference of C and A or B
15J_H	Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen)
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
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
P3B_GV_15	15 BAR Moisture g/g - Gravimetric using pressure plate