Project Name: **Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD**
Project Code: **DLR** **Site ID:** **T548** **Observation ID:** **1**
Agency Name: **QLD Department of Primary Industries**

Site Information

Desc. By: M.G. Cannon
Date Desc.: 03/03/92
Map Ref.: Sheet No. : 8156 GPS
Northing/Long.: 7725740 AMG zone: 55
Easting/Lat.: 444437 Datum: AGD66
Locality:
Elevation: 300 metres
Rainfall: No Data
Runoff: Slow
Drainage: Rapidly drained

Geology

ExposureType: No Data
Geol. Ref.: TlTu
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: No Data

Land Form

Rel/Slope Class: Steep low hills 30-90m 32-56%
Morph. Type: Lower-slope
Elem. Type: Pediment
Slope: 2 %
Pattern Type: Hills
Relief: No Data
Slope Category: Very gently sloped
Aspect: 270 degrees

Surface Soil Condition (dry): Hardsetting

Erosion: 3 m,40 m;

Soil Classification

Australian Soil Classification:
Haplic Mesotrophic Red Kandosol Medium Non-gravelly Clay-loamy Clayey Very deep
Mapping Unit: N/A
Principal Profile Form: Gn2.12
ASC Confidence:
Analytical data are incomplete but reasonable confidence.
Great Soil Group: Red earth

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

Vegetation: Low Strata - Tussock grass, 0.26-0.5m, Very sparse. *Species includes - Aristida species, Eriachne obtusa, Chrysopogon fallax Mid Strata - Tree, 3.01-6m, Closed or dense. *Species includes - Acacia curvinervia, Eucalyptus crebra, Petalostigma

Tall Strata - Tree, 6.01-12m, Isolated plants. *Species includes - Eucalyptus crebra, Eucalyptus setosa

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.12 m	Dark reddish brown (5YR3/2-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 0.05); Many, fine (1-2mm) roots; Clear, Smooth change to -
A3	0.12 - 0.35 m	Dark reddish brown (2.5YR3/3-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , ; , Gypseous, , ; Field pH 5.7 (Raupach, 0.25); Many, fine (1-2mm) roots; Clear, Wavy change to -
B21	0.35 - 0.56 m	Dark reddish brown (2.5YR3/4-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.45); Common, fine (1-2mm) roots; Gradual, Wavy change to -
B22	0.56 - 0.85 m	Red (2.5YR4/8-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Dry; Very weak consistence; , Calcareous, , ; , Gypseous, , ; Field pH 7 (Raupach, 0.7); Common, very fine (0-1mm) roots; Diffuse, Wavy change to -
B22	0.85 - 1.3 m	Red (2.5YR4/8-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Dry; Loose consistence; 10-20%, medium gravelly, 6-20mm, subrounded, dispersed, Ferricrete, coarse fragments; Very few (0 - 2 %), Argillaceous, Coarse (6 - 20 mm), Concretions; , Calcareous, , ; , Gypseous, , ; Field pH 7 (Raupach, 1.1); Common, very fine (0-1mm) roots; Diffuse, Wavy change to -
B23	1.3 - 1.65 m	Red (2.5YR4/6-Moist); Mechanical, 2.5Y66, 2-10% , 5-15mm, Distinct; Mechanical, 2-10% ; Clay loam; Massive grade of structure; Earthy fabric; Dry; Loose consistence; 20-50%, medium gravelly, 6-20mm, subrounded, dispersed, Ferricrete, coarse fragments; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Concretions; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 1.4); Common, very fine (0-1mm) roots; Diffuse, Wavy change to -
B24	1.65 - 2 m	Red (2.5YR4/6-Moist); Mechanical, 2.5Y66, 10-20% , 5-15mm, Distinct; Mechanical, 10-20% ; Clay loam; Massive grade of structure; Earthy fabric; Dry; Loose consistence; 20-50%, medium gravelly, 6-20mm, subrounded, dispersed, Ferricrete, coarse fragments; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Concretions; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 1.8);

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Observation Notes

DLR1054

Site Notes

Morphological Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.12	5.93A	0.02A	2.6B	1.2	0.72	0.08		6.1I		1.31
			2.27J	1.15	0.23	0.05				0.82
0.12 - 0.35	6A	0.01A								
0.35 - 0.56	6.29A	0.01A	1.9B	1.3	0.64	0.07		6D		1.17
			1.81J	1.21	0.16	0.02		4.9I		1.43
										0.33
										0.41
0.56 - 0.85	6.47A	0.01A								
0.85 - 1.3	6.57A	0.01A	1.64J	2.28	0.02	0.03		5.7I		0.53
1.3 - 1.65	6.33A	0.01A								
1.65 - 2	6.5A	0.01A	0.3J	2.31	0.02	0.07		4.6I		1.52

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 - 0.12	0.1A	1.5B		0.022A	0.07A	0.185A			16A	47	17	20
0.12 - 0.35												
0.35 - 0.56	0.1A	0.3B		0.018A	0.02A	0.207A			15A	33	13	39
0.56 - 0.85												
0.85 - 1.3									9A	28	13	50
1.3 - 1.65												
1.65 - 2									15A	33	13	39

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 - 0.12									
0.12 - 0.35									
0.35 - 0.56									
0.56 - 0.85									
0.85 - 1.3									
1.3 - 1.65									
1.65 - 2									

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
10B	Extractable sulfur(mg/kg) - Phosphate extractable sulfur
12A1_CU	DTPA - extractable copper, zinc, manganese and iron
12A1_FE	DTPA - extractable copper, zinc, manganese and iron
12A1_MN	DTPA - extractable copper, zinc, manganese and iron
12A1_ZN	DTPA - extractable copper, zinc, manganese and iron
15A2_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_K	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_MG	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_NA	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15D2_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; automatic extractor
15F1_CA	Exchangeable bases by 0.01M silver-thiourea (AgTU)+, no pretreatment for soluble salts
15F1_K	Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts
15F1_MG	Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts
15F1_NA	Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts
15F3	CEC by 0.01M silver-thiourea (AgTU)+
15N1	Exchangeable sodium percentage (ESP)
17A1	Total potassium - X-ray fluorescence
19A1	Carbonates - rapid titration
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
6B2	Total organic carbon - high frequency induction furnace, volumetric
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A1	Total phosphorus - X-ray fluorescence
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_CS	Coarse sand (%) - Coventry and Fett pipette method
P10_CF_FS	Fine sand (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method