Project Name: **Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD**
Project Code: **DLR** **Site ID:** **T534** **Observation ID:** **1**
Agency Name: **QLD Department of Primary Industries**

Site Information

Desc. By: M.G. Cannon
Date Desc.: 11/12/91
Map Ref.: Sheet No. : 8156 GPS
Northing/Long.: 7730305 AMG zone: 55
Easting/Lat.: 411558 Datum: AGD66
Locality:
Elevation: 260 metres
Rainfall: No Data
Runoff: Slow
Drainage: Imperfectly drained

Geology

ExposureType: No Data
Geol. Ref.: Tf
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Undisturbed soil core, No Data

Land Form

Rel/Slope Class: Level plain <9m <1%
Morph. Type: Flat
Elem. Type: Plain
Slope: <1 %
Pattern Type: Alluvial plain
Relief: No Data
Slope Category: Level
Aspect: 180 degrees

Surface Soil Condition (dry): Hardsetting

Erosion: 2 m,10 m;

Soil Classification

Australian Soil Classification:
Vertic Subnatric Black Sodosol Medium Non-gravelly Clay-loamy Clayey Very deep

Mapping Unit: N/A
Principal Profile Form: Dd2.33

ASC Confidence:
No analytical data are available but confidence is fair.

Great Soil Group: Solodic soil

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

Vegetation: Low Strata - Tussock grass, <0.25m, Sparse. *Species includes - Sporobolus species, Cyperus species, Aristida species

Mid Strata - Tree, 1.01-3m, Sparse. *Species includes - Eucalyptus cambageana, Eremophila mitchellii

Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - Eucalyptus cambageana, Eucalyptus brownii, Acacia harpophylla

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.07 m	Brown (10YR4/3-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Dry; Very weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.05); Few, very fine (0-1mm) roots; Clear, Wavy change to -
A2j	0.07 - 0.24 m	Dark brown (10YR3/3-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Dry; Very weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 5.5 (Raupach, 0.15); Few, very fine (0-1mm) roots; Clear, Wavy change to -
B21	0.24 - 0.52 m	Very dark greyish brown (10YR3/2-Moist); ; Medium clay; Massive grade of structure; Earthy fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 7.5 (Raupach, 0.4); Diffuse, Wavy change to -
B22	0.52 - 0.82 m	Brown (10YR4/3-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Dry; Strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; , Gypseous, , ; Field pH 9.5 (Raupach, 0.7); Diffuse, Wavy change to -
B22	0.82 - 1.1 m	Brown (10YR4/3-Moist); ; Light medium clay; Massive grade of structure; Earthy fabric; Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 9.5 (Raupach, 1); Diffuse, Wavy change to
B23	1.1 - 1.4 m	Dark yellowish brown (10YR4/4-Moist); Mottles, 7.5YR46, 2-10% , 5-15mm, Distinct; Mottles, 2-10% ; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , ; , Gypseous, , ; Field pH 9.5 (Raupach, 1.3); Diffuse, Wavy change to -

Project Name: **Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD**
Project Code: **DLR** **Site ID:** **T534** **Observation ID:** **1**
Agency Name: **QLD Department of Primary Industries**

B24	1.4 - 1.8 m	Brown (10YR4/3-Moist); Mottles, 7.5YR46, 2-10% , 5-15mm, Distinct; Mottles, 2-10% ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , ; , Gypseous, , ; Field pH 8.5 (Raupach, 1.7);

Morphological Notes

Observation Notes

DLR1040; B HORIZON DOES NOT DISPERSE IN WATER.

Site Notes

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD
Project Code: DLR **Site ID:** T534 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

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 - 0.07	5.89A	0.05A	2.1B	2.1	0.57	0.39		6.3I		6.19
			1.78J	1.88	0.12	0.2				3.17
0.07 - 0.24	5.89A	0.05A								
0.24 - 0.52	7.51A	0.17A	4.8B	4.9	0.26	2.5		12.5D		20.00
			4.33J	4.19	0.02	0.7		10.5I		23.81
										5.60
										6.67
0.52 - 0.82	8.76A	0.41A								
0.82 - 1.1	9.11A	0.42A	3.94J	7.12	0.02	1.88		15.5I		12.13
1.1 - 1.4	8.53A	0.41A								
1.4 - 1.8	7.52A	0.41A	2.02J	5.26	0.02	1.62		9.9I		16.36

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	0.1A	0.7B		0.023A	0.04A	0.164A			31A	39	14	17
0.07 - 0.24												
0.24 - 0.52	<0.1A	0.4B		0.014A	0.03A	0.151A			29A	32	13	26
0.52 - 0.82												
0.82 - 1.1									20A	33	17	29
1.1 - 1.4												
1.4 - 1.8									19A	33	17	31

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									
0.07 - 0.24									
0.24 - 0.52									
0.52 - 0.82									
0.82 - 1.1									
1.1 - 1.4									
1.4 - 1.8									

Project Name: **Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD**
Project Code: **DLR** **Site ID:** **T534** **Observation ID:** **1**
Agency Name: **QLD Department of Primary Industries**

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
5A1	Chloride - 1:5 soil/water extract, potentiometric titration
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