Project Name: **Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD**
Project Code: **DLR** **Site ID:** **T541** **Observation ID:** **1**
Agency Name: **QLD Department of Primary Industries**

Site Information

Desc. By: M.G. Cannon
Date Desc.: 12/12/91
Map Ref.: Sheet No. : 8156 GPS
Northing/Long.: 7700180 AMG zone: 55
Easting/Lat.: 418532 Datum: AGD66
Locality:
Elevation: 230 metres
Rainfall: No Data
Runoff: Moderately rapid
Drainage: Poorly 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: Plain
Relief: No Data
Slope Category: Level
Aspect: 90 degrees

Surface Soil Condition (dry): Hardsetting, Cracking

Erosion: 2 m2 m;

Soil Classification

Australian Soil Classification:
Sodic Calcic Brown Dermosol Thin Non-gravelly Clay-loamy Clayey Very deep
Mapping Unit: N/A
Principal Profile Form: Uf6.34

ASC Confidence:
All necessary analytical data are available.
Great Soil Group: No suitable

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

Vegetation: Low Strata - Tussock grass, 0.26-0.5m, Sparse. *Species includes - Cyperus species, Sporobolus species, Aristida

Mid Strata - Tree, 1.01-3m, Isolated plants. *Species includes - Eremophila mitchellii

Tall Strata - Tree, 3.01-6m, Sparse. *Species includes - Acacia argyrodendron, Eucalyptus brownii

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.03 m	Yellowish brown (10YR5/4-Moist); ; Light medium clay; Moderate grade of structure, 2-5 mm, Platy; Earthy fabric; Dry; Very firm consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.03); Common, fine (1-2mm) roots; Clear, Wavy change to -
B11	0.03 - 0.19 m	Yellowish brown (10YR5/4-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.1); Common, fine (1-2mm) roots; Diffuse change to -
B12	0.19 - 0.39 m	Light olive brown (2.5Y5/4-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.3); Few, very fine (0-1mm) roots; Diffuse change to -
B21	0.39 - 0.62 m	Dark greyish brown (2.5Y4/3-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 8.5 (Raupach, 0.5); Few, very fine (0-1mm) roots; Diffuse change to -
B22k	0.62 - 0.94 m	Brown (10YR4/3-Moist); Mottles, 5YR46, 2-10% , 5-15mm, Distinct; Mottles, 2-10% ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Field pH 9.5 (Raupach, 0.8); Diffuse change to -
B23	0.94 - 1.18 m	Brown (7.5YR5/4-Moist); Mottles, 5YR46, 2-10% , 5-15mm, Distinct; Mottles, 2-10% ; Medium heavy clay; Strong grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Field pH 9.5 (Raupach, 1.1); Diffuse change to -

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B24	1.18 - 1.53 m	Yellowish brown (10YR5/4-Moist); Mottles, 5YR46, 2-10% , 5-15mm, Distinct; Mottles, 10YR53, 2-10% ; Medium heavy clay; Strong grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Dry; Strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Laminae; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Field pH 9.5 (Raupach, 1.4); Diffuse change to -
B25	1.53 - 1.9 m	Yellowish brown (10YR5/4-Moist); Mottles, 10YR53, 2-10% , 5-15mm, Distinct; Mottles, 10YR58, 2-10% ; Medium heavy clay; Strong grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Laminae; , Calcareous, , ; , Gypseous, , ; Field pH 7.5 (Raupach, 1.8);

Morphological Notes

Observation Notes

DLR1047

Site 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 - 0.03	6.32A	0.06A	4.1B	4.3	0.83	0.25		11I		2.27
			4.44J	4.73	0.3	0.13				1.18
0.03 - 0.19	6.69A	0.03A	3.7B	5.3	0.52	0.49		11.2I		4.38
			4.01J	5.53	0.13	0.26				2.32
0.19 - 0.39	6.99A	0.05A								
0.39 - 0.62	8.53A	0.2A	3.5B	7.9	0.25	3		12.5D		24.00
			3.6J	6.69	0.02	1		14.3I		20.98
										8.00
										6.99
0.62 - 0.94	9.54A	0.43A								
0.94 - 1.18	9.63A	0.49A								
1.18 - 1.53	9.26A	0.49A								
1.53 - 1.9	7.95A	0.51A	1.36J	8.02	0.02	2.6		18.7I		13.90

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 - 0.03		1.2B		0.024A	0.07A	0.616A			17A	44	10	28
0.03 - 0.19		0.5B		0.02A	0.03A	0.574A			16A	41	11	32
0.19 - 0.39												
0.39 - 0.62		0.3B		0.014A	0.01A	0.589A			15A	42	11	31
0.62 - 0.94												
0.94 - 1.18												
1.18 - 1.53												
1.53 - 1.9									6A	47	13	34

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 - 0.03									
0.03 - 0.19									
0.19 - 0.39									
0.39 - 0.62									
0.62 - 0.94									
0.94 - 1.18									
1.18 - 1.53									
1.53 - 1.9									

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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
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