Project Name: **Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD**
Project Code: **DLR** **Site ID:** **T543** **Observation ID:** **1**
Agency Name: **QLD Department of Primary Industries**

Site Information

Desc. By: M.G. Cannon
Date Desc.: 13/12/91
Map Ref.: Sheet No. : 8156 GPS
Northing/Long.: 7730840 AMG zone: 55
Easting/Lat.: 419167 Datum: AGD66
Locality:
Elevation: 277 metres
Rainfall: No Data
Runoff: Moderately rapid
Drainage: Poorly drained

Geology

ExposureType: No Data
Geol. Ref.: Qa
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: No Data

Surface Soil Condition (dry): Firm, Cracking

Erosion: 2 m2 m;

Soil Classification

Australian Soil Classification:
Endohypersodic Massive Grey Vertosol Non-gravelly Medium fine Medium fine Very deep

Mapping Unit: N/A
Principal Profile Form: Ug3.3

ASC Confidence:
All necessary analytical data are available.

Great Soil Group: Grey clay

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

Vegetation: Low Strata - Tussock grass, 0.26-0.5m, Mid-dense. *Species includes - Panicum species
Mid Strata - , , . *Species includes - None recorded
Tall Strata - , , . *Species includes - None Recorded

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.08 m	Brown (7.5YR4/2-Moist); Biological mixing, 10YR58, 2-10% , 0-5mm, Distinct; Biological mixing, 2-10% ; Medium clay; Massive grade of structure; Smooth-ped fabric; Dry; Firm consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Laminae; , Calcareous, , ; , Gypseous, , ; Field pH 5.8 (Raupach, 0.05); Common, fine (1-2mm) roots; Clear, Wavy change to -
A2j	0.08 - 0.1 m	Dark grey (10YR4/1-Moist); Biological mixing, 10YR58, 2-10% , 0-5mm, Distinct; Biological mixing, 2-10% ; Medium clay; Massive grade of structure; Smooth-ped fabric; Dry; Very firm consistence; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Laminae; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 0.1); Common, fine (1-2mm) roots; Clear, Wavy change to
B1	0.1 - 0.35 m	Dark grey (10YR4/1-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Strong consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Laminae; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.3); Few, fine (1-2mm) roots; Gradual, Wavy change to -
B21	0.35 - 0.65 m	Greyish brown (10YR5/2-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Laminae; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.6); Few, very fine (0-1mm) roots; Diffuse change to -
B22	0.65 - 0.95 m	Greyish brown (10YR5/2-Moist); ; Medium heavy clay; Moderate grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Laminae; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.9); Few, very fine (0-1mm) roots; Diffuse change to -
	0.95 - 1.25 m	Greyish brown (10YR5/2-Moist); ; Medium heavy clay; Moderate grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Laminae; , Calcareous, , ; , Gypseous, , ; Field pH 5 (Raupach, 1.2); Diffuse change to -

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B23	1.25 - 1.55 m	Greyish brown (10YR5/2-Moist); Mottles, 10YR58, 10-20% , 0-5mm, Distinct; Mottles, 10-20% ; Medium heavy clay; Moderate grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Laminae; , Calcareous, , ; , Gypseous, , ; Field pH 5.5 (Raupach, 1.5); Diffuse change to -
	1.55 - 1.85 m	Greyish brown (10YR5/2-Moist); Mottles, 10YR58, 10-20% , 0-5mm, Distinct; Mottles, 10-20% ; Medium heavy clay; Moderate grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Very strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Laminae; , Calcareous, , ; , Gypseous, , ; Field pH 5.5 (Raupach, 1.8);

Morphological Notes

Observation Notes

DLR1049;<1CM OF WEAK SURFACE MULCH./PANICUM SPECIES IN DEPRESSION, CYPE RUS SPP, NO TREES IN DEPRESSION.

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 - 0.08	5.21A	0.13A	8.7B	5	1.7	0.3		17.7I		1.69
			8.32J	4.67	0.43	0.1				0.56
0.08 - 0.1										
0.1 - 0.35	6.28A	0.23A								
0.35 - 0.65	5.62A	1.13A	6.6B	7.5	0.99	8.3		9.5D		87.37
			5.3J	5.67	0.18	1.3		17.7I		46.89
										13.68
										7.34
0.65 - 0.95	5.33A	1.31A								
0.95 - 1.25	5.26A	1.3A	3.65J	4.95	0.11	1.32		15I		8.80
1.25 - 1.55	5.18A	1.25A								
1.55 - 1.85	4.9A	1.49A	3.48J	5.16	0.1	1.55		15I		10.33

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 - 0.08	0.1A	2.1B		0.038A	0.14A	0.893A			4A	20	25	51
0.08 - 0.1												
0.1 - 0.35												
0.35 - 0.65				0.02A		0.823A			6A	22	23	49
0.65 - 0.95												
0.95 - 1.25									8A	22	22	48
1.25 - 1.55												
1.55 - 1.85									5A	21	23	51

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 - 0.08									
0.08 - 0.1									
0.1 - 0.35									
0.35 - 0.65									
0.65 - 0.95									
0.95 - 1.25									
1.25 - 1.55									
1.55 - 1.85									

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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
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