Project Name: **Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD**
Project Code: **DLR** **Site ID:** **T546** **Observation ID:** **1**
Agency Name: **QLD Department of Primary Industries**

Site Information

Desc. By: M.G. Cannon
Date Desc.: 02/03/92
Map Ref.: Sheet No. : 8256 GPS
Northing/Long.: 7722176 AMG zone: 55
Easting/Lat.: 455390 Datum: AGD66
Locality:
Elevation: 245 metres
Rainfall: No Data
Runoff: Very rapid
Drainage: Very poorly drained

Geology

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

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%
Morph. Type: Simple-slope
Elem. Type: Footslope
Slope: 3 %
Pattern Type: Plain
Relief: No Data
Slope Category: Very gently sloped
Aspect: No Data

Surface Soil Condition (dry): Hardsetting

Erosion: 3 m,90 m;

Soil Classification

Australian Soil Classification:
Eutrophic Mottled-Subnatric Brown Sodosol Thin Moderately gravelly Loamy Clayey Very deep
Mapping Unit: N/A
Principal Profile Form: Dy3.32
ASC Confidence:
All necessary analytical data are available.
Great Soil Group: Soloth

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

Vegetation: Low Strata - Tussock grass, 0.26-0.5m, Sparse. *Species includes - Aristida species, Sporobolus species, Pennisetum species Mid Strata - Tree, 1.01-3m, Sparse. *Species includes - Acacia argyrodendron, Eremophila mitchellii, Bursaria incana

Tall Strata - Tree, 3.01-6m, Mid-dense. *Species includes - Acacia argyrodendron

Surface Coarse Fragments: 20-50%, medium gravelly, 6-20mm, subrounded, Ironstone

Profile Morphology

A1j	0 - 0.08 m	Greyish brown (10YR5/2-Moist); ; Sandy loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 0.05); Many, fine (1-2mm) roots; Abrupt, Wavy change to -
B1	0.08 - 0.2 m	Brown (10YR5/3-Moist); Biological mixing, 10YR58, 2-10% , 0-5mm, Distinct; Biological mixing, 2-10% ; Fine sandy clay loam; Massive grade of structure; Earthy fabric; Dry; Strong consistence; 2-10%, medium gravelly, 6-20mm, subrounded, dispersed, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 0.15); Clear, Wavy change to -
B21	0.2 - 0.4 m	Brown (10YR5/3-Moist); Mottles, 10YR68, 10-20% , 5-15mm, Distinct; Mottles, 10-20% ; Light clay; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very strong consistence; 10-20%, coarse gravelly, 20-60mm, angular, dispersed, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 0.3); Common, coarse (>5mm) roots; Gradual, Wavy change to -
B22	0.4 - 0.7 m	Greyish brown (10YR5/2-Moist); Mottles, 10YR58, 20-50% , 5-15mm, Distinct; Mottles, 20-50% ; Medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very strong consistence; , Calcareous, , ; , Gypseous, , ; Field pH 7 (Raupach, 0.55); Abrupt, Wavy change to -
2B21	0.7 - 0.9 m	Dark grey (10YR4/1-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; , Calcareous, , ; , Gypseous, , ; Field pH 7 (Raupach, 0.8); Diffuse, Wavy change to -
2B22	0.9 - 1.2 m	Dark greyish brown (10YR4/2-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; , Calcareous, , ; , Gypseous, , ; Field pH 7 (Raupach, 1.05); Diffuse, Wavy change to -
2B23	1.2 - 1.5 m	Greyish brown (10YR5/2-Moist); Mechanical; Mechanical; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Strong consistence; , Calcareous, , ; , Gypseous, , ; Field pH 7.5 (Raupach, 1.3); Clear, Wavy change to -

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2B24	1.5 - 1.8 m	Grey (10YR5/1-Moist); Mechanical, 10YR66, 20-50% , 30-mm, Distinct; Mechanical, 20-50% ; Sandy light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Dry; Strong consistence; , Calcareous, , ; , Gypseous, , ; Field pH 7.5 (Raupach,

Morphological Notes

Observation Notes

DLR1052;(MOTTLED);WATER REPELLANT SURFACE;SAND LENSE BETWEEN 68 AND 70cm. B HORIZON DISPERSIVE. / ALSO TEOBL (2% - YELLOWOOD).

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 - 0.08	5.21A	0.31A	3.2B	2.4	0.17	1.1		8.6I		12.79
			3.47J	3.08	0.04	0.2				2.33
0.08 - 0.2	6.27A	0.27A								
0.2 - 0.4	5.62A	0.35A	2.17J	3.51	0	0.36		7.2D		5.00
								8I		4.50
0.4 - 0.7	5.28A	0.58A	2B	4	0.06	4.3				
0.7 - 0.9	5.26A	0.47A	2.21J	4.25	0	1.44		13.9I		10.36
0.9 - 1.2	5.18A	0.4A								
1.2 - 1.5	6.27A	0.46A								
1.5 - 1.8	4.9A	0.55A	1.44J	3.39	0.02	1.38		10.1I		13.66

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		1.6B		0.025A	0.08A	0.113A			22A	43	12	22
0.08 - 0.2												
0.2 - 0.4	0.1A	0.5B							25A	18	9	47
0.4 - 0.7												
0.7 - 0.9									14A	27	14	45
0.9 - 1.2												
1.2 - 1.5												
1.5 - 1.8									25A	34	10	32

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 - 0.2									
0.2 - 0.4									
0.4 - 0.7									
0.7 - 0.9									
0.9 - 1.2									
1.2 - 1.5									
1.5 - 1.8									

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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