

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T518 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By:	M.G. Cannon	Locality:	
Date Desc.:	05/12/91	Elevation:	314 metres
Map Ref.:	Sheet No. : 8157 GPS	Rainfall:	No Data
Northing/Long.:	7773450 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	444574 Datum: AGD66	Drainage:	Imperfectly drained

Geology

Exposure Type:	No Data	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Cuv	Substrate Material:	Undisturbed soil core, 0.57 m deep, Igneous rock (unidentified)

Land Form

Rel/Slope Class:	Undulating hills 90-300m 3-10%	Pattern Type:	Low hills
Morph. Type:	Crest	Relief:	No Data
Elem. Type:	Hillcrest	Slope Category:	Level
Slope:	1 %	Aspect:	140 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Haplic Eutrophic Grey Dermosol Thin Moderately gravelly Clay-loamy Clayey Shallow		Principal Profile Form:	Gn3.92
ASC Confidence:		Great Soil Group:	No suitable
All necessary analytical data are available.			

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

Vegetation: Low Strata - Tussock grass, 0.26-0.5m, Mid-dense. *Species includes - Bothriochloa pertusa, Bothriochloa ewartiana

Mid Strata - , , . *Species includes - None recorded

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

Surface Coarse Fragments: 20-50%, cobbly, 60-200mm, angular, Metamorphic rock (unidentified)

Profile Morphology

A1	0 - 0.09 m	Black (7.5YR2/0-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; , Calcareous, , , , Gypseous, , , ; Field pH 6.5 (Raupach, 0.05); Common, fine (1-2mm) roots; Gradual, Wavy change to -
A3	0.09 - 0.25 m	Dark reddish brown (5YR3/2-Moist); ; Light clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; , Calcareous, , , , Gypseous, , , ; Field pH 6.5 (Raupach, 0.2); Few, fine (1-2mm) roots; Gradual, Wavy change to -
B1	0.25 - 0.38 m	Very dark grey (5YR3/1-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; , Calcareous, , , , Gypseous, , , ; Field pH 7 (Raupach, 0.3); Few, medium (2-5mm) roots; Gradual, Wavy change to -
B2	0.38 - 0.48 m	Brown (7.5YR4/2-Moist); ; Medium heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , , ; Field pH 7 (Raupach, 0.4); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B/C	0.48 - 0.57 m	; Medium clay; Weak grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; , Calcareous, , , , Gypseous, , , ; Field pH 7.5 (Raupach, 0.5); Clear, Wavy change to -
C	0.57 - 0.7 m	; Smooth-ped fabric; Moderately moist; 50-90%, medium gravelly, 6-20mm, angular, dispersed, Igneous rock (unidentified), coarse fragments; , Calcareous, , , , Gypseous, , , ; Field pH 8 (Raupach, 0.7);

Morphological Notes

Observation Notes

DLR1024

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Exchangeable Acidity		%
							(+)/kg		
0 - 0.09	6.41A	0.05A	8.3B	3.4	1.6	0.22		12.3I	1.79
			8.46J	2.95	0.67	0.02			0.16
0.09 - 0.25	6.55A	0.02A							
0.25 - 0.38	6.59A	0.02A							
0.38 - 0.48	6.74A	0.02A	15.1J	6.16	0.07	0.07		15.2D	0.46
								24.3I	0.29
0.48 - 0.57	6.93A	0.02A	16B	7.5	0.43	0.49			
0.57 - 0.7	7.27A	0.03A	15J	5.77	0.04	0.11		24I	0.46

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.09		1.6B		0.054A	0.07A	1.22A			12A	33	31	23
0.09 - 0.25												
0.25 - 0.38												
0.38 - 0.48									6A	15	18	60
0.48 - 0.57												
0.57 - 0.7									46A	9	12	33

[illegible]

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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
13A1_FE	Oxalate-extractable iron
15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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
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