

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T519 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By: M.G. Cannon	Locality:
Date Desc.: 05/12/91	Elevation: 277 metres
Map Ref.: Sheet No. : 8257 GPS	Rainfall: No Data
Northing/Long.: 7769968 AMG zone: 55	Runoff: Slow
Easting/Lat.: 449382 Datum: AGD66	Drainage: Moderately well drained

Geology

ExposureType: No Data	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: O-Dr	Substrate Material: No Data

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%	Pattern Type: Plain
Morph. Type: Crest	Relief: No Data
Elem. Type: Plain	Slope Category: Level
Slope: 2 %	Aspect: 320 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Haplic Eutrophic Black Dermosol Thin Non-gravelly Loamy Clayey Moderately deep	Principal Profile Form: Dd2.13
ASC Confidence:	Great Soil Group: Non-calcic brown soil
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, Chrysopogon fallax Mid Strata - Tree, 3.01-6m, Sparse. *Species includes - Eucalyptus erythrophloia, Eucalyptus crebra

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

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.02 m	Dark brown (7.5YR3/3-Moist); ; Sandy loam; Massive grade of structure; Sandy (grains prominent) fabric; Dry; Very weak consistence; , Calcareous, , , , Gypseous, , , ; Field pH 6.5 (Raupach, 0.01); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A/B	0.02 - 0.1 m	Dark brown (7.5YR3/2-Moist); ; Fine sandy clay loam; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very strong consistence; , Calcareous, , , , Gypseous, , , ; Field pH 7 (Raupach, 0.07); Many, very fine (0-1mm) roots; Clear, Wavy change to -
B21	0.1 - 0.25 m	Dark brown (7.5YR3/2-Moist); Mottles, 5YR46, 2-10% , 0-5mm, Distinct; Mottles, 2-10% ; Light clay; Strong grade of structure, 20-50 mm, Subangular blocky; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , , ; Field pH 7 (Raupach, 0.18); Common, very fine (0-1mm) roots; Clear, Wavy change to -
B22	0.25 - 0.38 m	Dark red (2.5YR3/6-Moist); ; Light clay; Massive grade of structure; Smooth-ped fabric; Moderately moist; Very firm consistence; , Calcareous, , , , Gypseous, , , ; Field pH 7.5 (Raupach, 0.3); Common, very fine (0-1mm) roots; Abrupt, Wavy change to -
BC	0.38 - 0.58 m	; Weak grade of structure, 50-100 mm, Angular blocky; Sandy (grains prominent) fabric; Dry; Firm consistence; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Granodiorite, coarse fragments; , Calcareous, , , , Gypseous, , , ; Field pH 8 (Raupach, 0.5); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
C	0.58 - 1 m	; Sandy (grains prominent) fabric; Dry; Weak consistence; 10-20%, medium gravelly, 6-20mm, angular, dispersed, Granodiorite, coarse fragments; , Calcareous, , , , Gypseous, , , ; Field pH 8.5 (Raupach, 0.8);

Morphological Notes

Observation Notes

DLR1025; A11 HORIZON IS SURFACE WASH/OTHER GRASSES HECO1.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.02	6.67A	0.04A	5.3B	3	0.87	0.13		7.2I	1.81
			5.99J	2.74	0.32	0.02			0.28
0.02 - 0.1	6.92A	0.04A	11B	5.3	0.8	0.18		17.1I	1.05
			11.3J	4.64	0.23	0.03			0.18
0.1 - 0.25	7.14A	0.03A							
0.25 - 0.38	7.41A	0.02A	16.7J	6.71	0.06	0.05		18.9D	0.26
								26I	0.19
0.38 - 0.58	7.86A	0.02A	17B	0.45	0.45	0.42			
0.58 - 1	8.1A	0.02A	7.46J	2.38	0.05	0.04		8.7I	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 - 0.02		1.8B		0.023A	0.07A	0.808A			50A	33	5	12
0.02 - 0.1	0.1A	0.6A		0.025A	0.07A	0.964A			37A	28	8	26
		1.7B										
0.1 - 0.25												
0.25 - 0.38									29A	23	10	38
0.38 - 0.58												
0.58 - 1									65A	21	5	9

[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
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
19A1	Carbonates - rapid titration
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
6A1	Organic carbon - Walkley and Black
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