

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** T545 **Observation ID:** 1  
**Agency Name:** QLD Department of Primary Industries

#### Site Information

**Desc. By:** M.G. Cannon  
**Date Desc.:** 05/12/91  
**Map Ref.:** Sheet No. : 8257 GPS  
**Northing/Long.:** 7770947 AMG zone: 55  
**Easting/Lat.:** 451208 Datum: AGD66

**Locality:**  
**Elevation:** 280 metres  
**Rainfall:** No Data  
**Runoff:** No Data  
**Drainage:** No Data

#### Geology

**ExposureType:** No Data  
**Geol. Ref.:** Qe

**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:** Mid-slope  
**Elem. Type:** Hillslope  
**Slope:** 4 %

**Pattern Type:** Rises  
**Relief:** No Data  
**Slope Category:** Very gently sloped  
**Aspect:** 200 degrees

**Surface Soil Condition (dry):** Soft

#### Erosion:

#### Soil Classification

**Australian Soil Classification:**  
Basic Regolithic Orthic Tenosol Medium Non-gravelly Sandy  
Sandy Deep

**Mapping Unit:** N/A  
**Principal Profile Form:** Uc5.11

**ASC Confidence:**  
All necessary analytical data are available.

**Great Soil Group:** Earthy sand

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

**Vegetation:** Low Strata - Hummock grass, 0.26-0.5m, Sparse. \*Species includes - TRIODIA SPECIES ?, Sporobolus species

Mid Strata - Tree, 1.01-3m, Mid-dense. \*Species includes - Lysiphyllum species

Tall Strata - Tree, 3.01-6m, Closed or dense. \*Species includes - Acacia species

**Surface Coarse Fragments:** No surface coarse fragments

#### Profile Morphology

A11	0 - 0.08 m	Strong brown (7.5YR5/6-Moist); ; Coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Loose consistence; 2-10%, medium gravelly, 6-20mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 0.05); Common, very fine (0-1mm) roots; Clear change to -
A12	0.08 - 0.26 m	Yellowish red (5YR5/6-Moist); ; Coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Loose consistence; 2-10%, medium gravelly, 6-20mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 0.15); Few, fine (1-2mm) roots; Diffuse change to -
B1	0.26 - 0.46 m	Yellowish red (5YR4/6-Moist); ; Clayey coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Loose consistence; 10-20%, medium gravelly, 6-20mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.35); Common, medium (2-5mm) roots; Diffuse change to -
B21	0.46 - 0.73 m	Red (2.5YR4/8-Moist); ; Clayey coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Loose consistence; 10-20%, medium gravelly, 6-20mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.55); Few, very fine (0-1mm) roots; Diffuse change to -
	0.73 - 1 m	Red (2.5YR4/8-Moist); ; Clayey coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Loose consistence; 10-20%, medium gravelly, 6-20mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.85); Few, very fine (0-1mm) roots; Diffuse change to -

#### Morphological Notes

#### Observation Notes

DLR1051

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations				CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.08	5.56A	0.01A	0.23B 0.05J	0.14 0.02	0.07 0.02	0.04 0.02		1.1I	3.64 1.82
0.08 - 0.26	5.09A	0.01A							
0.26 - 0.46	7.2A	0.01A	0.15B 0.02J	0.12 0.02	0.07 0.02	0.04 0.02		1.2I	3.33 1.67
0.46 - 0.73	5.48A	0.01A	0.16B	0.14	0.06	0.04			
0.73 - 1	5.44A	0.01A	0.02J	0.02	0.02	0.02		2.7D 1.2I	0.74 1.67

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
		%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.08		0.2B		0.015A	0.01A	0.084A			93A	5	1	2
0.08 - 0.26												
0.26 - 0.46		0.1B		0.018A	0.01A	0.075A			87A	9	2	3
0.46 - 0.73												
0.73 - 1									68A	22	4	6

[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 <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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