

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR                      **Site ID:** T507                      **Observation ID:** 1  
**Agency Name:** QLD Department of Primary Industries

**Site Information**

<b>Desc. By:</b>	M.G. Cannon	<b>Locality:</b>	
<b>Date Desc.:</b>	03/12/91	<b>Elevation:</b>	250 metres
<b>Map Ref.:</b>	Sheet No. : 8257    GPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	7744830 AMG zone: 55	<b>Runoff:</b>	Very slow
<b>Easting/Lat.:</b>	490871    Datum: AGD66	<b>Drainage:</b>	Well drained

**Geology**

<b>Exposure Type:</b>	No Data	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	Qa	<b>Substrate Material:</b>	Undisturbed soil core, 1.2 m deep, Sand

**Land Form**

<b>Rel/Slope Class:</b>	Steep rises 9-30m 32-56%	<b>Pattern Type:</b>	Alluvial plain
<b>Morph. Type:</b>	Flat	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Bank	<b>Slope Category:</b>	Level
<b>Slope:</b>	1 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):**

**Erosion:**    1 m, 20 m;

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Basic Regolithic Orthic Tenosol Medium Non-gravelly Sandy Loamy Very deep	<b>Principal Profile Form:</b>	Uc5.22
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	Earthy sand

All necessary analytical data are available.

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

**Vegetation:**    Low Strata - Tussock grass, <0.25m, Sparse. \*Species includes - Heteropogon contortus, Bothriochloa pertusa  
Mid Strata - Tree, 1.01-3m, Isolated plants. \*Species includes - Eucalyptus erythrophloia  
Tall Strata - Tree, 6.01-12m, Sparse. \*Species includes - Eucalyptus erythrophloia, Eucalyptus crebra,

Eucalyptus

**Surface Coarse Fragments:**

**Profile Morphology**

A11	0 - 0.1 m	Brown (10YR4/3-Moist); ; Clayey fine sand; Massive grade of structure; Earthy fabric; Dry; Very weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 8 (Raupach, 0.05); Few, fine (1-2mm) roots; Gradual, Smooth change to -
A3	0.1 - 0.33 m	Dark yellowish brown (10YR4/4-Moist); ; Clayey fine sand; Massive grade of structure; Earthy fabric; Dry; Very weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 0.3); Few, fine (1-2mm) roots; Gradual, Wavy change to -
B21	0.33 - 0.63 m	Strong brown (7.5YR5/6-Moist); ; Fine sandy loam (Light); Weak grade of structure, 10-20 mm, Subangular blocky; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 0.6); Few, fine (1-2mm) roots; Diffuse change to -
B22	0.63 - 0.93 m	Strong brown (7.5YR5/6-Moist); ; Fine sandy loam (Light); Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 7.5 (Raupach, 0.9); Few, fine (1-2mm) roots; Diffuse change to -
B23	0.93 - 1.23 m	Strong brown (7.5YR5/6-Moist); ; Fine sandy loam (Light); Earthy fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 8 (Raupach, 1.2); Diffuse change to -
C	1.23 - 1.8 m	Reddish yellow (7.5YR6/8-Moist); ; Clayey fine sand; Sandy (grains prominent) fabric; Dry; Very weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 8 (Raupach, 1.8);

**Morphological Notes**

**Observation Notes**

DLR 1013: OTHER GROUND COVER - FLANNELWEEDS.

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.1	6.32A	0.12A	2.7B	1.5	2.2	0.49		4.2I		11.67
0.1 - 0.33	6.13A	0.04A	2.32J	0.96	0.5	0.03				0.71
0.33 - 0.63	7.26A	0.01A	3.8B	2.3	1.2	0.37		6D		6.17
			3.86J	1.56	0.18	0.02		5.4I		6.85
0.63 - 0.93	7.24A	0.09A								0.33
0.93 - 1.23	7.28A	0.01A								0.37
1.23 - 1.8	7.41A	0.08A	3.61J	1.81	0.13	0.02		4I		0.50

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 - 0.1		0.6B		0.041A		1.61A			17A	69	7	6
0.1 - 0.33												
0.33 - 0.63									13A	69	6	12
0.63 - 0.93												
0.93 - 1.23												
1.23 - 1.8									10A	74	5	11

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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
5A1	Chloride - 1:5 soil/water extract, potentiometric titration
6B2	Total organic carbon - high frequency induction furnace, volumetric
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