

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** T529 **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>	10/12/91	<b>Elevation:</b>	291 metres
<b>Map Ref.:</b>	Sheet No. : 8256 GPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	7716290 AMG zone: 55	<b>Runoff:</b>	Very slow
<b>Easting/Lat.:</b>	479396 Datum: AGD66	<b>Drainage:</b>	Well drained

**Geology**

<b>ExposureType:</b>	No Data	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	Tu	<b>Substrate Material:</b>	Undisturbed soil core, No Data

**Land Form**

<b>Rel/Slope Class:</b>	Undulating plains <9m 3-10%	<b>Pattern Type:</b>	Plateau
<b>Morph. Type:</b>	Flat	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	Level
<b>Slope:</b>	1 %	<b>Aspect:</b>	No Data

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

**Erosion:** 2 m2 m;

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Haplic Mesotrophic Red Kandosol Medium Non-gravelly Loamy Clayey Very deep	<b>Principal Profile Form:</b>	Gn2.12
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	Red earth

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, Sparse. \*Species includes - Chrysopogon fallax, Aristida species, Bothriochloa  
ewartiana Mid Strata - Tree, 1.01-3m, Sparse. \*Species includes - Lysiphillum carronii, Terminalia oblongata, Acacia species

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

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

**Profile Morphology**

A11	0 - 0.07 m	Dark reddish brown (5YR3/3-Moist); ; Sandy loam; Moderate grade of structure, 10-20 mm, Platy; Earthy fabric; Dry; Very firm consistence; , Calcareous, , , , Gypseous, , ; Field pH 5.8 (Raupach, 0.05); Common, fine (1-2mm) roots; Clear, Wavy change to -
A12	0.07 - 0.24 m	Dark reddish brown (2.5YR3/4-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Dry; Firm consistence; , Calcareous, , , , Gypseous, , ; Field pH 5.8 (Raupach, 0.15); Few, fine (1-2mm) roots; Clear, Wavy change to -
B1	0.24 - 0.37 m	Dark red (2.5YR3/6-Moist); ; Fine sandy light clay; Massive grade of structure; Earthy fabric; Dry; Firm consistence; , Calcareous, , , , Gypseous, , ; Field pH 5.8 (Raupach, 0.3); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B21	0.37 - 0.72 m	Dark red (10R3/6-Moist); ; Light clay; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Dry; Firm consistence; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 0.6); Few, very fine (0-1mm) roots; Diffuse, Wavy change to -
B22	0.72 - 1 m	Dark red (10R3/6-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Dry; Firm consistence; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 0.9); Few, very fine (0-1mm) roots; Diffuse change to -
B23	1 - 1.3 m	Red (10R4/6-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Dry; Firm consistence; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 1.2); Few, very fine (0-1mm) roots;
B23	1.3 - 1.6 m	Red (10R4/6-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Dry; Very firm consistence; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 1.5); Few, very fine (0-1mm) roots;
B23	1.6 - 2 m	Red (10R4/6-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Dry; Very firm consistence; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 1.9); Few, very fine (0-1mm) roots;

**Morphological Notes**

**Observation Notes**

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**Site Notes**

DLR1035; OTHER GROUNDCOVER - MANY SMALL SHRUBS

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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 - 0.07	5.96A	0.07A	3.3B	1	0.58	0.05		3.9I		1.28
			2.68J	0.76	0.16	0.02				0.51
0.07 - 0.24	5.83A	0.03A								
0.24 - 0.37	6.22A	0.01A								
0.37 - 0.72	6.6A	0.01A	2.1B	0.87	0.56	0.06		4.1D		1.46
			1.92J	0.68	0.09	0.02		4.3I		1.40
										0.49
										0.47
0.72 - 1	6.72A	0.01A								
1 - 1.3	6.86A	0.01A								
1.3 - 1.6	6.74A	0.01A								
1.6 - 2	6.91A	0.01A	1.73J	0.79	0.02	0.02		3.4I		0.59

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 - 0.07		1.6B		0.023A	0.05A	0.135A			47A	31	7 16
0.07 - 0.24											
0.24 - 0.37											
0.37 - 0.72				0.019A		0.173A			33A	22	6 39
0.72 - 1											
1 - 1.3											
1.3 - 1.6											
1.6 - 2									30A	25	7 39

[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