

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR                      **Site ID:** T503                      **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. : 8357    GPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	7739786 AMG zone: 55	<b>Runoff:</b>	Slow
<b>Easting/Lat.:</b>	503452    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>	Odr	<b>Substrate Material:</b>	Undisturbed soil core, 56 m deep., Granite

#### Land Form

<b>Rel/Slope Class:</b>	Rolling plains <9m 10-32%	<b>Pattern Type:</b>	Hills
<b>Morph. Type:</b>	Mid-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	Moderately inclined
<b>Slope:</b>	15 %	<b>Aspect:</b>	160 degrees

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

**Erosion:** 3 m1 m;

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Palic Paralithic Leptic Tenosol Medium Non-gravelly Sandy Clayey Moderately deep	<b>Principal Profile Form:</b>	Uc4.11
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	Siliceous 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 - Bothriochloa pertusa, Heteropogon contortus  
Mid Strata - Tree, 3.01-6m, Mid-dense. \*Species includes - Lysiphillum carronii, Petalostigma pubescens,

Melaleuca nervosa

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

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

#### Profile Morphology

A11	0 - 0.1 m	Dark brown (10YR3/3-Moist); ; Coarse sand; Massive grade of structure; Rough-ped fabric; Moderately moist; Loose consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , , ; Field pH 6 (Raupach, 0.05); Gradual, Smooth change to -
A12	0.1 - 0.2 m	Brown (10YR4/3-Moist); ; Coarse sand; Massive grade of structure; Rough-ped fabric; Moderately moist; Loose consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , , ; Field pH 6.5 (Raupach, 0.15); Gradual, Smooth change to -
A2	0.2 - 0.36 m	Yellowish brown (10YR5/4-Moist); ; Loamy coarse sand; Single grain grade of structure; Rough-ped fabric; Dry; Loose consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , , ; Field pH 6.5 (Raupach, 0.28); Clear, Wavy change to -
BC	0.36 - 0.55 m	Yellowish brown (10YR5/6-Moist); ; Medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Dry; Very firm consistence; 10-20%, fine gravelly, 2-6mm, subangular, dispersedweak, Granite, coarse fragments; , Calcareous, , , , Gypseous, , , ; Field pH 7 (Raupach, 0.5); Diffuse change to -
C	0.55 - 0.75 m	; Massive grade of structure; Earthy fabric; Dry; Weak consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; , Calcareous, , , , Gypseous, , , ; Field pH 7.5 (Raupach, 0.7);

#### Morphological Notes

#### Observation Notes

DLR 1009.

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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	6.39A	0.05A	3.8B 6.05J	0.88 0.81	1.2 0.16	0.65		4.8I		13.54
0.1 - 0.2	6.54A	0.02A								
0.2 - 0.36	6.4A	0.02A								
0.36 - 0.55	6.58A	0.01A	8.6B 9.57J	4.3 3.6	0.93 0.16	0.44 0.05		12.7D 15.4I		3.46 2.86 0.39 0.32
0.55 - 0.75	7.3A	0.01A								

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 - 0.1 0.1 - 0.2 0.2 - 0.36 0.36 - 0.55 0.55 - 0.75		1B		0.019A	0.05A	2.86A			71A	17	6	7
				0.018A		1.78A			31A	11	6	52

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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