

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** T552 **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> 04/03/92	<b>Elevation:</b> 420 metres
<b>Map Ref.:</b> Sheet No. : 8157 GPS	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 7755937 AMG zone: 55	<b>Runoff:</b> Rapid
<b>Easting/Lat.:</b> 422912 Datum: AGD66	<b>Drainage:</b> Moderately well drained

#### Geology

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

#### Land Form

<b>Rel/Slope Class:</b> Rolling low hills 30-90m 10-32%	<b>Pattern Type:</b> Hills
<b>Morph. Type:</b> Upper-slope	<b>Relief:</b> No Data
<b>Elem. Type:</b> Hillslope	<b>Slope Category:</b> Moderately inclined
<b>Slope:</b> 10 %	<b>Aspect:</b> 270 degrees

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

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Haplic Eutrophic Red Chromosol Medium Very gravelly Clay-loamy Clayey Moderately deep	<b>Principal Profile Form:</b> Dr2.12
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> Non-calcic brown soil

All necessary analytical data are available.

**Site Disturbance:** Limited clearing, for example selective logging

**Vegetation:** Low Strata - Tussock grass, 0.51-1m, Mid-dense. \*Species includes - Heteropogon triticeus, Aristida species, Eragrostis species Mid Strata - Tree, 3.01-6m, Sparse. \*Species includes - Eucalyptus trachyphloia, Eucalyptus crebra, Albizia basaltica

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

**Surface Coarse Fragments:** 50-90%, cobbly, 60-200mm, subrounded, Igneous rock (unidentified)

#### Profile Morphology

A11	0 - 0.03 m	Dark brown (10YR3/3-Moist); ; Clay loam (Light); Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; 50-90%, coarse gravelly, 20-60mm, subangular, dispersed, Igneous rock (unidentified), coarse fragments; , Calcareous, , , , Gypseous, , , Field pH 7 (Raupach, 0.01); Clear, Smooth change to -
A12	0.03 - 0.15 m	Dark brown (7.5YR3/3-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; 50-90%, coarse gravelly, 20-60mm, subangular, dispersed, Igneous rock (unidentified), coarse fragments; , Calcareous, , , , Gypseous, , , Field pH 7.5 (Raupach, 0.1); Clear, Wavy change to -
B2	0.15 - 0.42 m	Yellowish red (5YR4/6-Moist); ; Light medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; , Calcareous, , , , Gypseous, , , Field pH 7 (Raupach, 0.35); Clear, Wavy change to -
B3	0.42 - 0.7 m	Reddish yellow (7.5YR6/8-Moist); Substrate influence, 5YR56, 20-50% , 0-5mm, Distinct; Substrate influence, 20-50% ; Light clay; Strong grade of structure, 10-20 mm, Angular blocky; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; , Calcareous, , , , Gypseous, , , Field pH 6.5 (Raupach, 0.6); Diffuse, Wavy change to -
BC	0.7 - 0.9 m	; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderately moist; Strong consistence; , Calcareous, , , , Gypseous, , , Diffuse, Wavy change to -
C	0.9 - 1.7 m	; Moderately moist; , Calcareous, , , , Gypseous, , ,

#### Morphological Notes

#### Observation Notes

DLR1058; LOWER B2 DISPERSES.

#### Site Notes

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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 - 0.03	7.21A	0.07A	8.9B	3.4	0.92	0.19		15.6I		1.22
			9.4J	3.12	0.67	0.04				0.26
0.03 - 0.15	6.86A	0.04A	7.2B	3.1	0.55	0.24		11.4I		2.11
			6.35J	2.56	0.27	0.03				0.26
0.15 - 0.42	6.63A	0.03A	11B	7.3	0.39	0.28		18.5D		1.51
			10J	6.95	0.11	0.09		20I		1.40
										0.49
										0.45
0.42 - 0.7	6.78A	0.03A	13B	9.1	0.32	0.32				
0.7 - 0.9	6.76A	0.03A	15.8J	11.8	0.14	0.14		31.3I		0.45

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 - 0.03		1.8B		0.039A	0.11A	1.58A			29A	37	17	17
0.03 - 0.15	0.1A	1.3B		0.03A	0.07A	1.52A			38A	31	15	16
0.15 - 0.42	0.1A	0.4B		0.019A	0.03A	0.739A			13A	24	21	42
0.42 - 0.7												
0.7 - 0.9									13A	27	25	35

[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
19A1	Carbonates - rapid titration
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