

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** T505 **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>	243 metres
<b>Map Ref.:</b>	Sheet No. : 8257 GPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	7746736 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	499280 Datum: AGD66	<b>Drainage:</b>	No Data

#### 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, 0.47 m deep, Granodiorite

#### Land Form

<b>Rel/Slope Class:</b>	Undulating plains <9m 3-10%	<b>Pattern Type:</b>	Rises
<b>Morph. Type:</b>	Crest	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillcrest	<b>Slope Category:</b>	Very gently sloped
<b>Slope:</b>	2 %	<b>Aspect:</b>	80 degrees

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

**Erosion:** 2 m, 20 m;

#### Soil Classification

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Haplic Supracalcic Brown Dermosol Thin Non-gravelly Clay-loamy Clayey Shallow		<b>Principal Profile Form:</b>	Um6.32
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	No suitable

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, Bothriochloa ewartiana  
Mid Strata - Tree, 1.01-3m, Sparse. \*Species includes - Eucalyptus erythrophloia  
Tall Strata - Tree, 6.01-12m, Sparse. \*Species includes - Eucalyptus erythrophloia, Eucalyptus crebra

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

#### Profile Morphology

A	0 - 0.07 m	Dark brown (7.5YR3/2-Moist); ; Sandy clay loam; Moderate grade of structure, 20-50 mm, Subangular blocky; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Moderately moist; Very weak consistence; ; Calcareous, ; ; Gypseous, ; ; Field pH 7.5 (Raupach, 0.05); Common, fine (1-2mm) roots; Clear, Smooth change to -
B2	0.07 - 0.3 m	Dark brown (7.5YR3/3-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Strong consistence; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Substrate material, coarse fragments; ; Calcareous, ; ; Gypseous, ; ; Field pH 7.5 (Raupach, 0.2); Common, fine (1-2mm) roots; Clear, Wavy change to -
BC	0.3 - 0.47 m	Strong brown (7.5YR5/6-Moist); ; Sandy medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Firm consistence; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Substrate material, coarse fragments; ; Calcareous, ; ; Gypseous, ; ; Field pH 7.5 (Raupach, 0.35); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
C1	0.47 - 0.57 m	Yellowish brown (10YR5/4-Moist); ; Coarse sandy loam; Earthy fabric; Dry; Very weak consistence; 20-50%, fine gravelly, 2-6mm, angular, undisturbed weak, Granodiorite, coarse fragments; ; Calcareous, ; ; Gypseous, ; ; Field pH 8 (Raupach, 0.5); Gradual, Wavy change to -
C2	0.57 - 0.9 m	; Dry; Very weak consistence; 50-90%, fine gravelly, 2-6mm, angular, undisturbed, Granodiorite, coarse fragments; Many (20 - 50 %), Calcareous, Medium (2 - 6 mm), Soft segregations; ; Gypseous, ; ; Soil matrix is Highly calcareous; Field pH 8.5 (Raupach, 0.6);

#### Morphological Notes

#### Observation Notes

DLR1011

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**Laboratory Test Results:**

Depth m	pH	1:5 EC dS/m	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
0 - 0.07	7.12A	0.02A	14B 12.8J	4.9 3.62	1.3 0.49	0.21 0.04		20.2I		1.04 0.20
0.07 - 0.3	7.3A	0.01A	16.6J	3.83	0.11	0.02		21D 23.7I		0.10 0.08
0.3 - 0.47	7.59A	0.01A								
0.47 - 0.57	8.1A	0.03A	14B	3.3	0.42	0.37				
0.57 - 0.9	8.97A	0.04A	13.2J	1.43	0.02	0.02		10.8I		0.19

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 - 0.07		1.1B		0.027A	0.06A	1.93A			32A	34	10	25
0.07 - 0.3		0.9B							30A	30	10	30
0.3 - 0.47												
0.47 - 0.57	8.2A	1.1B			0.01A							
0.57 - 0.9									61A	19	14	6

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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