

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** 1601 **Observation ID:** 1  
**Agency Name:** QLD Department of Primary Industries

#### Site Information

<b>Desc. By:</b>	Rogers, Gary	<b>Locality:</b>	
<b>Date Desc.:</b>	01/01/93	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 8059 GPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	7888792 AMG zone: 55	<b>Runoff:</b>	Moderately rapid
<b>Easting/Lat.:</b>	381273 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>	No Data	<b>Substrate Material:</b>	No Data

#### Land Form

<b>Rel/Slope Class:</b>	Undulating hills 90-300m 3-	<b>Pattern Type:</b>	Hills
<b>Morph. Type:</b>	Lower-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	Very gently sloped
<b>Slope:</b>	4 %	<b>Aspect:</b>	No Data

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

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	Haplic Eutrophic Red Chromosol Medium Gravelly Clay-loamy Clayey Moderately deep	<b>Mapping Unit:</b>	N/A
<b>ASC Confidence:</b>	All necessary analytical data are available.	<b>Principal Profile Form:</b>	Dr2.12
		<b>Great Soil Group:</b>	Non-calci brown soil

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

**Vegetation:** Low Strata - Tussock grass, <0.25m, Mid-dense. \*Species includes - Bothriochloa species, Heteropogon contortus

Mid Strata - Tree, 3.01-6m, Sparse. \*Species includes - Eucalyptus erythrophloia

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

**Surface Coarse Fragments:** 10-20%, coarse gravelly, 20-60mm, angular tabular, Siltstone

#### Profile Morphology

A11	0 - 0.04 m	Dark brown (7.5YR3/3-Moist); ; Sandy clay loam (Heavy); Weak grade of structure, 5-10 mm, Platy; Weak grade of structure, <2 mm, Granular; Moist; Very weak consistence; 10-20%, medium gravelly, 6-20mm, angular, Substrate material, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.04); Common, fine (1-2mm) roots; Abrupt change to -
A12	0.04 - 0.2 m	Dark brown (7.5YR3/4-Moist); ; Clay loam, sandy; Moderate grade of structure, 10-20 mm, Polyhedral; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; 20-50%, medium gravelly, 6-20mm, subangular, Substrate material, coarse fragments; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 0.15); Common, medium (2-5mm) roots; Clear change to -
B2	0.2 - 0.4 m	Red (2.5YR4/5-Moist); ; Light medium clay (Heavy); Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.3); Common, fine (1-2mm) roots; Gradual change to -
B3	0.4 - 0.7 m	Red (2.5YR4/5-Moist); ; Light medium clay; Strong grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; 50-90%, medium gravelly, 6-20mm, subangular, Substrate material, coarse fragments; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Laminae; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 0.6); Common, fine (1-2mm) roots; Gradual change to -
C	0.7 - 1 m	Red (2.5YR4/5-Moist); ; Clayey sand (Heavy); Moderate grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 50-90%, medium gravelly, 6-20mm, subangular, Substrate material, coarse fragments; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Laminae; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 0.9);

#### Morphological Notes

#### Observation Notes

#### Site Notes

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.04	7.2A	0.07A	12B	4.8	1.1	0.05			
0.04 - 0.2	5.7C 7.2A	0.05A							
0.2 - 0.4	7.4A	0.07A	22B	11	0.5	0.11			
0.4 - 0.7	6C 7.6A	0.04A							
0.7 - 1	6.3C 7.8A	0.03A							

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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
17A1	Total potassium - X-ray fluorescence
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
4B2	pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1
5A1	Chloride - 1:5 soil/water extract, potentiometric titration
6A1	Organic carbon - Walkley and Black
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