

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** 252 **Observation ID:** 1  
**Agency Name:** QLD Department of Primary Industries

#### Site Information

<b>Desc. By:</b>	M. DeCorte	<b>Locality:</b>	
<b>Date Desc.:</b>	14/05/91	<b>Elevation:</b>	340 metres
<b>Map Ref.:</b>	Sheet No. : 8057 GPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	7761608 AMG zone: 55	<b>Runoff:</b>	No runoff
<b>Easting/Lat.:</b>	380748 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>	No Data	<b>Substrate Material:</b>	No Data

#### Land Form

<b>Rel/Slope Class:</b>	Gently undulating plains <9m 1-3%	<b>Pattern Type:</b>	Plain
<b>Morph. Type:</b>	Hillock	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	Level
<b>Slope:</b>	2 %	<b>Aspect:</b>	155 degrees

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

#### Erosion:

#### Soil Classification

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

**ASC Confidence:**  
No analytical data are available but confidence is fair.

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

**Vegetation:** Low Strata - Tussock grass, 0.51-1m, Sparse. \*Species includes - Aristida species, Bothriochloa ewartiana, Chrysopogon fallax Mid Strata - Tree, 1.01-3m, Isolated plants. \*Species includes - Acacia species, Erythroxylon australe, Eucalyptus crebra

Tall Strata - Tree, 12.01-20m, Sparse. \*Species includes - Eucalyptus crebra

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

#### Profile Morphology

A11	0 - 0.05 m	Dark reddish brown (5YR3/4-Moist); ; Sandy loam; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Many (>5 per 100mm <sup>2</sup> ) Medium (2-5mm) macropores, Dry; Weak consistence; , Calcareous, , , Gypseous, , ; Field pH 6.5 (Raupach, 0.05); Common, medium (2-5mm) roots; Clear, Smooth change to -
A12	0.05 - 0.15 m	Dark reddish brown (2.5YR3/4-Moist); ; Sandy clay loam (Light); Massive grade of structure; Earthy fabric; Many (>5 per 100mm <sup>2</sup> ) Medium (2-5mm) macropores, Dry; Weak consistence; , Calcareous, , , Gypseous, , ; Common, medium (2-5mm) roots; Gradual, Smooth change to -
A3	0.15 - 0.42 m	Dark red (2.5YR3/6-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Many (>5 per 100mm <sup>2</sup> ) Fine (1-2mm) macropores, Dry; Weak consistence; , Calcareous, , , Gypseous, , ; Field pH 6.5 (Raupach, 0.3); Many, fine (1-2mm) roots; Gradual, Smooth change to -
B1	0.42 - 0.73 m	Dusky red (10R3/4-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Many (>5 per 100mm <sup>2</sup> ) Fine (1-2mm) macropores, Dry; Weak consistence; , Calcareous, , , Gypseous, , ; Field pH 6 (Raupach, 0.6); Few, fine (1-2mm) roots; Gradual, Smooth change to -
B21	0.73 - 1.15 m	Dark red (10R3/6-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Many (>5 per 100mm <sup>2</sup> ) Fine (1-2mm) macropores, Dry; Weak consistence; , Calcareous, , , Gypseous, , ; Field pH 6.5 (Raupach, 0.9); Few, fine (1-2mm) roots; Gradual, Smooth change to -
B22	1.15 - 1.6 m	; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Many (>5 per 100mm <sup>2</sup> ) Fine (1-2mm) macropores, Dry; Weak consistence; , Calcareous, , , Gypseous, , ; Field pH 6 (Raupach, 1.5);

#### Morphological Notes

#### Observation 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 - 0.1	5.7C	0.02A								
	6.7A									
0.15 - 0.42	5.3C	0.01A								
	6.7A									
0.42 - 0.73	5.5C	0.01A	2B	0.96	0.27	0.18				
	6.6A									
0.73 - 1.15	6.7A	0.01A	2E	1.2	0.15	0.04		4.5B		0.89
	6.6A									
1.15 - 1.6	6.6A	0.01A	2E	1.25	0.05	0.1		4.5B		2.22

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 - 0.1		0.7A			0.03A				47D	28	3	23
0.15 - 0.42												
0.42 - 0.73									35D	17	3	46
0.73 - 1.15				0.025A		0.201A			26D	16	4	53
1.15 - 1.6				0.025A		0.19A			27D	18	4	52

[illegible]

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**Laboratory Analyses Completed for this profile**

10A1	Total sulfur - X-ray fluorescence
12A1_CU	DTPA - extractable copper, zinc, manganese and iron
12A1_FE	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
15C1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_CEC	CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_MG	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, 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_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance