

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** 201 **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> 09/04/91	<b>Elevation:</b> 260 metres
<b>Map Ref.:</b> Sheet No. : 8258 GPS	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 7790552 AMG zone: 55	<b>Runoff:</b> Very slow
<b>Easting/Lat.:</b> 457692 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> Undisturbed soil core, Granodiorite

#### Land Form

<b>Rel/Slope Class:</b> Gently undulating plains <9m 1-3%	<b>Pattern Type:</b> Plain
<b>Morph. Type:</b> Flat	<b>Relief:</b> No Data
<b>Elem. Type:</b> Plain	<b>Slope Category:</b> Very gently sloped
<b>Slope:</b> 2 %	<b>Aspect:</b> 270 degrees

**Surface Soil Condition (dry):** Cracking, Surface crust

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Endocalcareous Epipedal Black Vertosol Slightly gravelly	<b>Principal Profile Form:</b> Ug5.15
Medium fine Very fine Very deep	
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> Black earth
All necessary analytical data are available.	

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

**Vegetation:** Low Strata - Tussock grass, 0.26-0.5m, Mid-dense. \*Species includes - Bothriochloa pertusa, Dichanthium sericeum,

Heteropogon contortus Mid Strata - Shrub, 0.51-1m, Very sparse. \*Species includes - Acacia farnesiana

Tall Strata - , , . \*Species includes - None Recorded

**Surface Coarse Fragments:** 2-10%, coarse gravelly, 20-60mm, angular, Igneous rock (unidentified)

#### Profile Morphology

A1	0 - 0.04 m	Black (10YR2/1-Moist); ; Medium clay; Strong grade of structure, 2-5 mm, Granular; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Many (>5 per 100mm2) Medium (2-5mm) macropores, Moderately moist; Strong consistence; , Calcareous, , , , Gypseous, , , Common, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.04 - 0.5 m	Black (10YR2/1-Moist); ; Heavy clay; Strong grade of structure, 10-20 mm, Lenticular; Smooth-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Igneous rock (unidentified), coarse fragments; Common cutans, 10-50% of ped faces or walls coated, prominent; , Calcareous, , , , Gypseous, , , Field pH 6.5 (Raupach, 0.05); Common, very fine (0-1mm) roots; Gradual, Smooth change to -
B22k	0.5 - 1.2 m	Black (10YR2/1-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Lenticular; Smooth-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Igneous rock (unidentified), coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , , Field pH 8.5 (Raupach, 0.9); Diffuse, Smooth change to -
B3k	1.2 - 1.6 m	Dark yellowish brown (10YR4/4-Moist); ; Light medium clay; Moderate grade of structure, 20-50 mm, Lenticular; Smooth-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; , Gypseous, , , Field pH 8 (Raupach, 1.5); Clear, Smooth change to -
C	1.6 - 1.95 m	; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; , Gypseous, , , Field pH 8 (Raupach, 1.95);

#### Morphological Notes

#### Observation 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	Acidity	
						Cmol (+)/kg		%
0.04 - 0.5	7.3A		22J	14.5	0.3	1.4	40.5I	3.46
0.5 - 1.2	8A		8.3J	3.5	0.2	0.3	8.7I	3.45
1.2 - 1.6	8.4A							
1.6 - 1.95	9.3A		21.6J	17.1	0.1	7.6	44.5I	17.08

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
		C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		

0.04 - 0.5  
0.5 - 1.2  
1.2 - 1.6  
1.6 - 1.95

<b>Depth</b>	<b>COLE</b>	<b>Gravimetric/Volumetric Water Contents</b>							<b>K sat</b>	<b>K unsat</b>
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m					g/g - m <sup>3</sup> /m <sup>3</sup>				mm/h	mm/h

0.04 - 0.5  
0.5 - 1.2  
1.2 - 1.6  
1.6 - 1.95

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**Laboratory Analyses Completed for this profile**

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)
4A1	pH of 1:5 soil/water suspension