

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** T516 **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> 04/12/91	<b>Elevation:</b> 301 metres
<b>Map Ref.:</b> Sheet No. : 8257 GPS	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 7780749 AMG zone: 55	<b>Runoff:</b> Moderately rapid
<b>Easting/Lat.:</b> 458636 Datum: AGD66	<b>Drainage:</b> Imperfectly drained

#### Geology

<b>Exposure Type:</b> No Data	<b>Conf. Sub. is Parent. Mat.:</b> No Data
<b>Geol. Ref.:</b> O-Dr	<b>Substrate Material:</b> Undisturbed soil core, 0.78 m deep, Granodiorite

#### Land Form

<b>Rel/Slope Class:</b> Undulating rises 9-30m 3-10%	<b>Pattern Type:</b> Low hills
<b>Morph. Type:</b> Crest	<b>Relief:</b> No Data
<b>Elem. Type:</b> Hillcrest	<b>Slope Category:</b> Gently inclined
<b>Slope:</b> 4 %	<b>Aspect:</b> 280 degrees

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

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

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Eutrophic Subnatric Brown Sodosol Thick Slightly gravelly	<b>Principal Profile Form:</b> Dy2.33
Sandy Clayey Moderately deep	
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> No suitable
Analytical data are incomplete but reasonable confidence.	

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

**Vegetation:** Low Strata - Tussock grass, 0.26-0.5m, Mid-dense. \*Species includes - Heteropogon contortus, Chrysopogon fallax,  
 TRIODIA SPECIES ? Mid Strata - Tree, 3.01-6m, Sparse. \*Species includes - Eucalyptus erythrophloia,  
 Eucalyptus papuana

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

**Surface Coarse Fragments:** 2-10%, coarse gravelly, 20-60mm, angular platy, Granite

#### Profile Morphology

A11	0 - 0.12 m	Dark brown (7.5YR3/2-Moist); ; Coarse sandy loam (Light); Massive grade of structure; Earthy fabric; Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , , Field pH 6.5 (Raupach, 0.05); Many, very fine (0-1mm) roots; Clear, Wavy change to -
A12	0.12 - 0.33 m	Brown (7.5YR4/2-Moist); ; Coarse sandy loam (Light); Massive grade of structure; Earthy fabric; Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , , Field pH 6.5 (Raupach, 0.2); Field pH 6.5 (Raupach, 0.3); Many, very fine (0-1mm) roots; Diffuse, Wavy change to -
A2j	0.33 - 0.45 m	Dark yellowish brown (10YR3/4-Moist); ; Clayey coarse sand; Massive grade of structure; Earthy fabric; Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , , Few, very fine (0-1mm) roots; Clear, Wavy change to -
B1	0.45 - 0.6 m	Brown (10YR4/3-Moist); ; Coarse sandy clay loam (Light); Massive grade of structure; Earthy fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , , Field pH 7.5 (Raupach, 0.5); Clear, Wavy change to -
B2	0.6 - 0.65 m	Brown (10YR4/3-Moist); ; Coarse sandy medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; 10-20%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , , Field pH 8 (Raupach, 0.65); Gradual, Wavy change to -
BC	0.65 - 0.78 m	Brown (10YR5/3-Moist); ; Coarse sandy medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Dry; Weak consistence; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Granodiorite, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , , Field pH 8.5 (Raupach, 0.75); Gradual, Wavy change to -

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C            0.78 - 0.85 m            ; Dry; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Granodiorite, coarse fragments; ,  
Calcareous, , , , Gypseous, , , ; Field pH 9 (Raupach, 0.8);

**Morphological Notes**

**Observation Notes**

SURFACE WASH OF PALE YELLOW SNAD 5MM DEPTH, B HORIZON DISPERSED IN DISTILLED WATER./RUBBERVINE NOT  
ON  
SITE BUT            EXTENSIVE IN CREEK. DLR1022

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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				+	(+)/kg			%
0 - 0.12	6.21A	0.02A	2.8B	1.1	0.66	0.17		1.9I		8.95
			2.51J	0.92	0.14	0.02				1.05
0.12 - 0.33	6.43A	0.01A								
0.33 - 0.45	6.14A	0.01A								
0.45 - 0.6	7.92A	0.02A	3B	2.8	0.38	0.8				
0.6 - 0.65	8.36A	0.04A	5.18J	4.39	0.02	0.54		10.9D		4.95
								8.9I		6.07
0.65 - 0.78	8.55A	0.05A								
0.78 - 0.85	9.14A	0.04A								

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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