

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** T512 **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> 360 metres
<b>Map Ref.:</b> Sheet No. : 8258 GPS	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 7802506 AMG zone: 55	<b>Runoff:</b> Very slow
<b>Easting/Lat.:</b> 459139 Datum: AGD66	<b>Drainage:</b> Poorly drained

#### Geology

<b>Exposure Type:</b> No Data	<b>Conf. Sub. is Parent. Mat.:</b> No Data
<b>Geol. Ref.:</b> SDR	<b>Substrate Material:</b> Undisturbed soil core, 1.7 m deep, Granodiorite

#### Land Form

<b>Rel/Slope Class:</b> Level plain <9m <1%	<b>Pattern Type:</b> Plain
<b>Morph. Type:</b> Flat	<b>Relief:</b> No Data
<b>Elem. Type:</b> Plain	<b>Slope Category:</b> Level
<b>Slope:</b> 1 %	<b>Aspect:</b> 60 degrees

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

**Erosion:** 1 m, 99 m;

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b> N/A
Calcic Mottled-Subnatric Brown Sodosol Medium Non-gravelly	<b>Principal Profile Form:</b> Dy2.43
Sandy Clayey Moderately deep	
<b>ASC Confidence:</b>	<b>Great Soil Group:</b> Solodic soil
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  
 Mid Strata - , , . \*Species includes - None recorded  
 Tall Strata - Tree, 6.01-12m, Sparse. \*Species includes - Eucalyptus brownii

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

#### Profile Morphology

A1	0 - 0.08 m	Dark brown (10YR3/3-Moist); ; Coarse sandy loam; Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 0.02); Common, fine (1-2mm) roots; Clear, Wavy change to -
A22e	0.08 - 0.28 m	Brown (7.5YR5/4-Moist); ; Coarse sandy loam (Light); Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 0.15); Few, fine (1-2mm) roots; Abrupt, Wavy change to -
B21	0.28 - 0.45 m	Dark yellowish brown (10YR4/4-Moist); , 10YR58, 10-20% ; , 10-20% ; Medium heavy clay; Strong grade of structure, 50-100 mm, Columnar; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Dry; Rigid consistence; , Calcareous, , , , Gypseous, , ; Field pH 8.5 (Raupach, 0.4); Few, very fine (0-1mm) roots; Clear, Wavy change to -
B22	0.45 - 0.75 m	Very dark grey (10YR3/1-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Dry; Rigid consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , ; Field pH 9.9 (Raupach, 0.6); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B23k	0.75 - 1 m	Brown (10YR4/3-Moist); ; Medium heavy clay; Strong grade of structure, 50-100 mm, Angular blocky; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Dry; Rigid consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Substrate material, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; , Gypseous, , ; Soil matrix is Moderately calcareous; Field pH 9.5 (Raupach, 0.9); Clear, Wavy change to -
B24k	1 - 1.18 m	Brown (7.5YR5/4-Moist); ; Medium heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Dry; Rigid consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Substrate material, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; , Gypseous, , ; Soil matrix is Moderately calcareous; Field pH 9.5 (Raupach, 1.1);
BC	1.18 - 1.7 m	; Earthy fabric; Dry; Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Field pH 9.5 (Raupach, 1.6); Few, medium (2-5mm) roots;

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**Observation Notes**

DLR1018; B21 DISPERSED SLIGHTLY.

**Site Notes**

**Morphological Notes**

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**Laboratory Test Results:**

[illegible]

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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
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5A1	Chloride - 1:5 soil/water extract, potentiometric titration
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