

**Project Name:** Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD  
**Project Code:** DLR **Site ID:** 177 **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>	09/10/90	<b>Elevation:</b>	495 metres
<b>Map Ref.:</b>	Sheet No. : 7859 GPS	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	7880772 AMG zone: 55	<b>Runoff:</b>	Very rapid
<b>Easting/Lat.:</b>	278908 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>	No Data	<b>Substrate Material:</b>	Undisturbed soil core, Detrital sedimentary rock (unidentified)

#### Land Form

<b>Rel/Slope Class:</b>	Undulating rises 9-30m 3-10%	<b>Pattern Type:</b>	Rises
<b>Morph. Type:</b>	Mid-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	Very gently sloped
<b>Slope:</b>	2 %	<b>Aspect:</b>	240 degrees

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

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Hypocalcic Subnatric Red Sodosol Medium Slightly gravelly Clay-loamy Clayey Shallow	<b>Principal Profile Form:</b>	Dr3.23
<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, Isolated plants. \*Species includes - Bothriochloa decipiens, Panicum species

Mid Strata - Tree, 6.01-12m, Very sparse. \*Species includes - Eucalyptus brownii, Bursaria incana

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

**Surface Coarse Fragments:** 2-10%, coarse gravelly, 20-60mm, rounded, Ferricrete

#### Profile Morphology

A1	0 - 0.09 m	Dark brown (7.5YR3/4-Moist); ; Sandy clay loam (Heavy); Massive grade of structure; Earthy fabric; Many (>5 per 100mm <sup>2</sup> ) Fine (1-2mm) macropores, Dry; Firm consistence; 2-10%, medium gravelly, 6-20mm, rounded, dispersed, Ferricrete, coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 0.05); Many, fine (1-2mm) roots; Abrupt, Smooth change to -
A3	0.09 - 0.2 m	Strong brown (7.5YR4/6-Moist); ; Sandy light clay; Massive grade of structure; Earthy fabric; Many (>5 per 100mm <sup>2</sup> ) Fine (1-2mm) macropores, Dry; Loose consistence; 90-100%, coarse gravelly, 20-60mm, rounded, dispersed, Ferricrete, coarse fragments; , Calcareous, , ; , Gypseous, , ; Abrupt, Smooth change to -
B21t	0.2 - 0.45 m	Yellowish red (5YR5/8-Moist); Mottles, 7.5YR6/8, 10-20% , 5-15mm, Faint; Mottles, 10-20% ; Medium heavy clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Lenticular; Smooth-ped fabric; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Dry; Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Soil matrix is Slightly calcareous; Field pH 8.5 (Raupach, 0.3); Abrupt, Smooth change to -
C	0.45 - 0.9 m	; , Calcareous, , ; , Gypseous, , ; Field pH 8.5 (Raupach, 0.6);

#### Morphological Notes

#### Observation Notes

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Exchangeable Na	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg	Acidity		%
0 - 0.09	6.4A		7.1B	4.5	0.15	0.18			
0.2 - 0.45	8.3A		14.8J	12	0	2	29.2I		6.85
0.45 - 0.9	9A		12E	14	0.02	2.5	27B		9.26

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**Laboratory Analyses Completed for this profile**

10B	Extractable sulfur(mg/kg) - Phosphate extractable sulfur
15A2_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 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 (Ca2+,Mg2+,Na+,K+) - 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
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