

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** 137 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By: M. DeCorte	Locality:
Date Desc.: 05/09/90	Elevation: 340 metres
Map Ref.: Sheet No. : 8056 GPS	Rainfall: No Data
Northing/Long.: 7720258 AMG zone: 55	Runoff: Very rapid
Easting/Lat.: 354344 Datum: AGD66	Drainage: Moderately well drained

Geology

ExposureType: No Data	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: No Data	Substrate Material: No Data

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%	Pattern Type: Plain
Morph. Type: Flat	Relief: No Data
Elem. Type: Plain	Slope Category: Gently inclined
Slope: 4 %	Aspect: 180 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification: Supracalcic Hypernatric Red Sodosol Thin Slightly gravelly Loamy Clayey Very deep	Mapping Unit: N/A Principal Profile Form: Dr2.33
ASC Confidence: All necessary analytical data are available.	Great Soil Group: Solodized solonetz

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

Vegetation: Low Strata - Tussock grass, 0.51-1m, Very sparse. *Species includes - Sporobolus species, Enteropogon species

Mid Strata - Tree, 1.01-3m, Sparse. *Species includes - Eremophila mitchellii, Terminalia oblongata

Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - Acacia cambagei, Eucalyptus papuana

Surface Coarse Fragments: 2-10%, coarse gravelly, 20-60mm, subangular, Quartz

Profile Morphology

A2j	0 - 0.04 m	Brown (7.5YR4/4-Moist); ; Sandy loam; Massive grade of structure; Earthy fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Strong consistence; Common, very fine (0-1mm) roots; Abrupt, Smooth change to -
B1k	0.04 - 0.32 m	Brown (7.5YR4/4-Moist); ; Clay loam, fine sandy; Strong grade of structure, 20-50 mm, Columnar; Strong grade of structure, 10-20 mm, Angular blocky; Sandy (grains prominent) fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Dry; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Soil matrix is Slightly calcareous; Field pH 6.5 (Raupach, 0.05); Common, fine (1-2mm) roots; Clear, Smooth change to -
B21k	0.32 - 1.65 m	Yellowish red (5YR4/6-Moist); ; Light medium clay; Strong grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Sandy (grains prominent) fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Concretions; , Gypseous, , ; Soil matrix is Highly calcareous; Field pH 9.9 (Raupach, 0.9); Few, fine (1-2mm) roots; Abrupt, Smooth change to -
D1	1.65 - 1.9 m	Strong brown (7.5YR5/6-Moist); ; Sand; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Field pH 9.9 (Raupach, 1.8); Abrupt, Smooth change to -
D2	1.9 - 2.1 m	Yellowish brown (10YR5/6-Moist); ; Fine sandy clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Sandy (grains prominent) fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Very few (0 - 2 %), Manganiferous, , Veins; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Concretions; , Gypseous, , ; Soil matrix is Very highly calcareous; Field pH 9.9 (Raupach, 2.1);

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 - 0.04	6.8A		4.2B	1.2	0.45	0.3				
0.04 - 0.32	9.1A									
0.32 - 1.65	9.7A		13B	2.6	0.31	20		19B		105.26
			5E	2.8	0.26	11				57.89
1.65 - 1.9	9.2A									
1.9 - 2.1	9.3A		8.7J	3.4	0.5	11.4		20.8I		54.81

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Laboratory Analyses Completed for this profile

10B	Extractable sulfur(mg/kg) - Phosphate extractable sulfur
15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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 (Ca ²⁺ ,Mg ²⁺ ,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