

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T538 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By: M.G. Cannon	Locality:
Date Desc.: 12/12/91	Elevation: 277 metres
Map Ref.: Sheet No. : 8156 GPS	Rainfall: No Data
Northing/Long.: 7721844 AMG zone: 55	Runoff: Slow
Easting/Lat.: 404588 Datum: AGD66	Drainage: Imperfectly drained

Geology

Exposure Type: No Data	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: Tf	Substrate Material: No Data

Land Form

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

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Haplic Eutrophic Yellow Kandosol Medium Non-gravelly Clay-loamy Clay-loamy Moderately deep	Principal Profile Form: Gn2.22
ASC Confidence:	Great Soil Group: Yellow 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, Sparse. *Species includes - Aristida species, Heteropogon contortus, Cyperus species

Mid Strata - Tree, 1.01-3m, Mid-dense. *Species includes - Eucalyptus melanophloia

Tall Strata - Tree, 6.01-12m, Mid-dense. *Species includes - Eucalyptus melanophloia, Eucalyptus polycarpa

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.1 m	Brown (10YR4/3-Moist); ; Sandy clay loam (Light); Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.05); Common, fine (1-2mm) roots; Clear, Wavy change to -
B1	0.1 - 0.27 m	Yellowish brown (10YR5/8-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 5 (Raupach, 0.2); Common, fine (1-2mm) roots; Diffuse, Wavy change to -
B2	0.27 - 0.6 m	Brownish yellow (10YR6/6-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Common (10 - 20 %), Manganiferous, Medium (2 - 6 mm), Concretions; , Calcareous, , , , Gypseous, , ; Field pH 5.5 (Raupach, 0.5); Few, fine (1-2mm) roots; Gradual,
D1	0.6 - 0.72 m	Light yellowish brown (10YR6/4-Moist); ; Light medium clay; Massive grade of structure; Sandy (grains prominent) fabric; Dry; Very weak consistence; 50-90%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Very many (50 - 100 %), Manganiferous, Coarse (6 - 20 mm), Concretions; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.65); Abrupt, Wavy change to -
D21	0.72 - 0.8 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5Y6/8, 20-50% , 5-15mm, Distinct; Mottles, 20-50% ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; 20-50%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Many (20 - 50 %), Manganiferous, Coarse (6 - 20 mm), Concretions; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 0.75); Few, very fine (0-1mm) roots; Diffuse change to -
D22	0.8 - 1 m	Light brownish grey (2.5Y6/3-Moist); Mottles, 2.5Y6/8, 2-10% , 0-5mm, Distinct; Mottles, 2-10% ; Medium clay; Strong grade of structure, 20-50 mm, Subangular blocky; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Manganiferous, Coarse (6 - 20 mm), Concretions; , Calcareous, , , , Gypseous, , ; Field pH 7.5 (Raupach, 1); Few, very fine (0-1mm) roots;

Morphological Notes

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Observation Notes

D2 DISPERSES IN WATER./OTHER GROUNDCOVER - CHRYSPOGEN FALLEN(25%)DLR1044;

Site 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 Cmol (+)/kg	Acidity		%
0 - 0.1	5.95A	0.03A	1.3B	1	0.5	0.08		3.4I	2.35
0.1 - 0.27	5.39A	0.02A	0.85J	0.84	0.17	0.04			1.18
0.27 - 0.6	5.92A	0.01A	0.77B	1.4	0.38	0.15		3.9D	3.85
			0.67J	1.34	0.06	0.06		3.5I	4.29
									1.54
0.6 - 0.72	7.39A	0.02A							1.71
0.72 - 0.8	8.06A	0.07A							
0.8 - 1	8.52A	0.12A	2.21J	6.47	0.09	1.28		12.2I	10.49

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
		%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1		0.7B		0.018A	0.03A	0.208A			40A	38	8	14
0.1 - 0.27												
0.27 - 0.6		0.1B		0.013A	0.01A	0.184A			42A	32	6	20
0.6 - 0.72												
0.72 - 0.8												
0.8 - 1									23A	24	8	45

[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 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
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