

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T526 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By: M.G. Cannon	Locality:
Date Desc.: 10/12/91	Elevation: 240 metres
Map Ref.: Sheet No. : 8257 GPS	Rainfall: No Data
Northing/Long.: 7755360 AMG zone: 55	Runoff: Slow
Easting/Lat.: 474536 Datum: AGD66	Drainage: Imperfectly drained

Geology

Exposure Type: No Data	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: O-Dr	Substrate Material: Undisturbed soil core, 1.6 m deep, Granodiorite

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%	Pattern Type: Low hills
Morph. Type: Flat	Relief: No Data
Elem. Type: Plain	Slope Category: Level
Slope: 1 %	Aspect: 320 degrees

Surface Soil Condition (dry): Hardsetting, Cracking

Erosion: 1 m2 m;

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Haplic Eutrophic Red Dermosol Thin Non-gravelly Clay-loamy Clayey Moderately deep	Principal Profile Form: Gn3.12
ASC Confidence:	Great Soil Group: Euchrozem
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 - Bothriochloa pertusa, Bothriochloa ewartiana

Mid Strata - Tree, 1.01-3m, Sparse. *Species includes - Eucalyptus erythrophloia

Tall Strata - Tree, 3.01-6m, Sparse. *Species includes - Eucalyptus crebra, Eucalyptus erythrophloia,

Eucalyptus tessellaris

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.07 m	Dusky red (2.5YR3/2-Moist); ; Sandy clay loam; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderately moist; Very weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , Gypseous, , ; Field pH 6.5 (Raupach, 0.05); Common, fine (1-2mm) roots; Clear, Wavy change to -
B1	0.07 - 0.3 m	Dark reddish brown (2.5YR3/4-Moist); ; Light clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderately moist; Weak consistence; , Calcareous, , , Gypseous, , ; Field pH 6 (Raupach, 0.2); Common, fine (1-2mm) roots; Gradual, Wavy change to -
B22	0.3 - 0.56 m	Dark reddish brown (2.5YR3/3-Moist); ; Light clay; Weak grade of structure, 10-20 mm, Subangular blocky; Weak grade of structure, 5-10 mm, Subangular blocky; Dry; Firm consistence; , Calcareous, , , Gypseous, , ; Field pH 6 (Raupach, 0.4); Common, very fine (0-1mm) roots; Gradual, Wavy change to -
	0.56 - 0.86 m	Dark reddish brown (5YR3/3-Moist); ; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Firm consistence; , Calcareous, , , Gypseous, , ; Field pH 6 (Raupach, 0.7); Common, very fine (0-1mm) roots; Gradual, Wavy change to -
B23	0.86 - 0.99 m	Greyish brown (10YR5/2-Moist); Mottles, 10YR46, 20-50% , 5-15mm, Distinct; Mottles, 10YR43, 20-50% ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Dry; Strong consistence; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , , Gypseous, , ; Field pH 6 (Raupach, 0.9); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
C1	0.99 - 1.22 m	Dark greyish brown (10YR4/2-Moist); ; Loamy coarse sand; Massive grade of structure; Dry; Loose consistence; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Concretions; , Calcareous, , , Gypseous, , ; Field pH 6 (Raupach, 1.1); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -

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C2 1.22 - 1.6 m ; Dry; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct;
Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , , ,
Gypseous, , ; Field pH 7 (Raupach, 1.5); Few, very fine (0-1mm) roots; Abrupt change to -

Morphological Notes

Observation Notes

DLR1032; <1 CM PF RED SAND ON SURFACE./OTHER EUCALYPTS - EUPAP.

Site 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 - 0.07	6.08A	0.09A	5.7B	2.1	0.81	0.05		8.3I		0.60
0.07 - 0.3	6.88A	0.04A	5.2J	1.57	0.4	0.02				0.24
0.3 - 0.56	6.77A	0.01A	5.9B	1.7	0.66	0.08		8.7D		0.92
			4.95J	1.2	0.14	0.02		7.2I		1.11
										0.23
										0.28
0.56 - 0.86	6.85A	0.04A								
0.99 - 1.22	6.64A	0.01A								
1.22 - 1.6	6.95A	0.01A	11.8J	7.42	0.05	0.17		22.3I		0.76

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 - 0.07	0.1A	1.8B		0.032A	0.05A	1.6A			46A	24	9	21
0.07 - 0.3												
0.3 - 0.56	0.1A	0.7B		0.021A	0.02A	1.54A			43A	17	8	32
0.56 - 0.86												
0.99 - 1.22												
1.22 - 1.6									31A	19	11	39

[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
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