

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T524 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By: M.G. Cannon	Locality:
Date Desc.: 09/12/91	Elevation: 290 metres
Map Ref.: Sheet No. : 8157 GPS	Rainfall: No Data
Northing/Long.: 7767711 AMG zone: 55	Runoff: Slow
Easting/Lat.: 422566 Datum: AGD66	Drainage: Moderately well drained

Geology

ExposureType: No Data	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: O-Dr	Substrate Material: Undisturbed soil core, 0.56 m deep, Diorite

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%	Pattern Type: Plain
Morph. Type: Crest	Relief: No Data
Elem. Type: Plain	Slope Category: Level
Slope: 1 %	Aspect: 300 degrees

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Haplic Supracalcic Red Chromosol Thin Non-gravelly Clay-loamy Clayey Shallow	Principal Profile Form: Dr2.13
ASC Confidence:	Great Soil Group: Red-brown 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 - Bothriochloa ewartiana, Heteropogon contortus, Dichanthium sericeum Mid Strata - Tree, 1.01-3m, Isolated plants. *Species includes - Eucalyptus erythrophloia

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

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A	0 - 0.05 m	Dark brown (7.5YR3/2-Moist); ; Sandy clay loam (Light); Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 7.5 (Raupach, 0.03); Many, very fine (0-1mm) roots; Abrupt, Smooth change to -
B1	0.05 - 0.2 m	Dark reddish brown (5YR3/3-Moist); ; Light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Dry; Very firm consistence; 2-10%, cobbly, 60-200mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 7.5 (Raupach, 0.15); Common, very fine (0-1mm) roots; Gradual, Wavy change to -
B2	0.2 - 0.43 m	Dark red (2.5YR3/6-Moist); ; Medium heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Concretions; , Gypseous, , ; Field pH 8 (Raupach, 0.35); Common, very fine (0-1mm) roots; Clear, Wavy change to -
BC	0.43 - 0.56 m	Brown (7.5YR4/4-Moist); ; Medium clay; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Moderately moist; Weak consistence; 10-20%, medium gravelly, 6-20mm, angular, dispersed, Diorite, coarse fragments; Many (20 - 50 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Soil matrix is Highly calcareous; Field pH 9 (Raupach, 0.5); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
C	0.56 - 1 m	; Dry; Very weak consistence; 10-20%, medium gravelly, 6-20mm, angular, dispersed, Diorite, coarse fragments; Very many (50 - 100 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Soil matrix is Highly calcareous; Field pH 9 (Raupach, 0.9);

Morphological Notes

Observation Notes

DLR1030: OTHER GRASSES - BOPER.

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 - 0.05	6.89A	0.03A	8.7B 8.64J	2.2 1.83	0.95 0.26	0.13 0.07		11.4I	1.14 0.61
0.05 - 0.2	7.16A	0.02A							
0.2 - 0.43	7.45A	0.02A	23.8J	2.87	0.1	0.05		24.2D 28.3I	0.21 0.18
0.43 - 0.56	8.58A	0.08A	42B	3.4	0.62	0.13			
0.56 - 1	8.83A	0.07A	21.7J	2.22	0.04	0.02		20.6I	0.10

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 - 0.05		1.3B		0.025A	0.05A	1.92A			53A	24	5	18
0.05 - 0.2												
0.2 - 0.43									23A	16	7	54
0.43 - 0.56	0.1A	0.7B										
0.56 - 1									37A	20	22	20

[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
13A1_FE	Oxalate-extractable 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