

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T515 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By: M.G. Cannon
Date Desc.: 05/12/91
Map Ref.: Sheet No. : 8257 GPS
Northing/Long.: 7784928 AMG zone: 55
Easting/Lat.: 456890 Datum: AGD66
Locality:
Elevation: 293 metres
Rainfall: No Data
Runoff: Slow
Drainage: Well drained

Geology

ExposureType: No Data
Geol. Ref.: O-Dr
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Undisturbed soil core, 0.8 m deep, Diorite

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%
Pattern Type: Plain
Morph. Type: Mid-slope
Elem. Type: Plain
Slope: 1 %
Relief: No Data
Slope Category: Level
Aspect: 160 degrees

Surface Soil Condition (dry): Hardsetting

Erosion: 1 m, 90 m;

Soil Classification

Australian Soil Classification: Haplic Calcic Red Dermosol Medium Gravelly Clay-loamy Clayey Moderately deep
Mapping Unit: N/A
Principal Profile Form: Gn3.13
ASC Confidence: All necessary analytical data are available.
Great Soil Group: Euchrozem

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

Vegetation: Low Strata - Tussock grass, 0.26-0.5m, Sparse. *Species includes - Bothriochloa pertusa, Bothriochloa ewartiana,
Dichanthium species Mid Strata - , , . *Species includes - None recorded

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

Surface Coarse Fragments: 10-20%, bouldery, 600mm-2m, rounded, Diorite

Profile Morphology

A1	0 - 0.12 m	Dark reddish brown (5YR2/2-Moist); ; Clay loam; Moderate grade of structure, 20-50 mm, Subangular blocky; Strong grade of structure, 5-10 mm, Angular blocky; Sandy (grains prominent) fabric; Dry; Very firm consistence; , Calcareous, , , , Gypseous, , , Field pH 6 (Raupach, 0.05); Common, very fine (0-1mm) roots;
B21	0.12 - 0.35 m	Dark reddish brown (5YR3/2-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Angular blocky; Sandy (grains prominent) fabric; Dry; Very firm consistence; , Calcareous, , , , Gypseous, , , Field pH 6 (Raupach, 0.2); Common, very fine (0-1mm) roots;
B22	0.35 - 0.7 m	Dark reddish brown (5YR3/3-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Lenticular; Strong grade of structure, 10-20 mm, Angular blocky; Sandy (grains prominent) fabric; Dry; Very strong consistence; Many cutans, >50% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , , Field pH 8 (Raupach, 0.5); Common, very fine (0-1mm)
BC	0.7 - 0.8 m	Dark reddish brown (5YR3/3-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Sandy (grains prominent) fabric; Dry; Very firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Concretions; , Gypseous, , , Field pH 9.5 (Raupach, 0.8); Few, very fine (0-1mm) roots;
C	0.8 - 1 m	; Light medium clay; Dry; Weak consistence; , Calcareous, , , , Gypseous, , , Field pH 8.5 (Raupach, 0.9);

Morphological Notes

Observation Notes

DLR1021; SURFACE HAS 2CM DEPTH WORM CASTS./OTHER GRASSES - CHFAL.

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Exchangeable Acidity		%
							(+)/kg		
0 - 0.12	6.4A	0.04A	9.6B	4.1	0.73	0.14		13.9I	1.01
			10J	3.57	0.18	0.02			0.14
0.12 - 0.35	6.72A	0.02A	10.7J	3.2	0.07	0.02		17.8D	0.11
								14.9I	0.13
0.35 - 0.7	7.63A	0.02A	14B	6.7	0.31	0.26			
0.7 - 0.8	8.58A	0.08A							
0.8 - 1	8.63A	0.07A	10.9J	3.56	0.02	0.05		11.7I	0.43

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk Density	Particle		Size	Analysis					
	%	C %	P mg/kg	P %	N %	K %		GV	CS		FS %	Silt	Clay			
m							Mg/m3									
0 - 0.12	0.1A	1.9B		0.081A	0.07A	0.536A										
0.12 - 0.35		1.6B											20A	35	15	29
0.35 - 0.7													18A	37	11	34
0.7 - 0.8																
0.8 - 1													44A	31	8	17

[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