

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T506 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By:	M.G. Cannon	Locality:	
Date Desc.:	03/12/91	Elevation:	317 metres
Map Ref.:	Sheet No. : 8357 GPS	Rainfall:	No Data
Northing/Long.:	7749934 AMG zone: 55	Runoff:	Moderately rapid
Easting/Lat.:	503360 Datum: AGD66	Drainage:	Moderately well drained

Geology

Exposure Type:	No Data	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Eoc	Substrate Material:	Undisturbed soil core, 0.65 m deep, Granodiorite

Land Form

Rel/Slope Class:	Rolling low hills 30-90m 10-32%	Pattern Type:	Low hills
Morph. Type:	Crest	Relief:	No Data
Elem. Type:	Hillcrest	Slope Category:	Very gently sloped
Slope:	4 %	Aspect:	240 degrees

Surface Soil Condition (dry): Hardsetting

Erosion: 5 m, 20 m;

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Haplic Eutrophic Red Chromosol Thin Non-gravelly Clay-loamy Clayey Moderately deep		Principal Profile Form:	Dr2.13
ASC Confidence:		Great Soil Group:	Non-calci brown soil
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, Mid-dense. *Species includes - Bothriochloa pertusa, Bothriochloa ewartiana,
Heteropogon contortus Mid Strata - Tree, 1.01-3m, Sparse. *Species includes - Eucalyptus erythrophloia, Eucalyptus crebra

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

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A	0 - 0.08 m	Dark brown (7.5YR3/4-Moist); ; Sandy clay loam (Light); Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 0.05); Common, fine (1-2mm) roots; Clear, Wavy change to -
B1	0.08 - 0.25 m	Dark reddish brown (5YR3/3-Moist); ; Clay loam, sandy; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, Substrate material, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 0.15); Few, fine (1-2mm) roots; Clear, Smooth change to -
B2	0.25 - 0.45 m	Red (10R4/6-Moist); ; Medium heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Substrate material, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 0.35); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
BC	0.45 - 0.65 m	Red (2.5YR4/8-Moist); ; Sandy medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Dry; Very firm consistence; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Substrate material, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , ; Field pH 8 (Raupach, 0.55); Few, very fine (0-1mm) roots; Gradual, Wavy change
C	0.65 - 1 m	; Dry; Very weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Granodiorite, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 8.5 (Raupach, 0.8); Few, very fine (0-1mm) roots;

Morphological Notes

Observation Notes

DLR1012:

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 - 0.08	5.92A	0.02A	5.4B	3.4	1.2	0.45		9.1I	4.95
			5.8J	2.76	0.33	0.02			0.22
0.08 - 0.25	6.66A	0.01A							
0.25 - 0.45	7.41A	0.01A	10.1J	5.26	0.08	0.05		16.1D	0.31
								18.2I	0.27
0.45 - 0.65	7.72A	0.02A	9.3B	5.6	0.55	0.68			
0.65 - 1	7.25A	0.02A	6.2J	3.08	0.02	0.04		9.4I	0.43

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 - 0.08		1B		0.025A	0.05A	1.18A			42A	34	7	17
0.08 - 0.25												
0.25 - 0.45									30A	19	9	42
0.45 - 0.65												
0.65 - 1									54A	24	9	12

[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
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