

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T539 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By:	M.G. Cannon	Locality:	
Date Desc.:	12/12/91	Elevation:	256 metres
Map Ref.:	Sheet No. : 8156 GPS	Rainfall:	No Data
Northing/Long.:	7721326 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	399297 Datum: AGD66	Drainage:	Imperfectly drained

Geology

ExposureType:	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:	Alluvial plain
Morph. Type:	Flat	Relief:	No Data
Elem. Type:	Plain	Slope Category:	Level
Slope:	<1 %	Aspect:	No Data

Surface Soil Condition (dry): Soft, Cracking

Erosion: 3 m3 m;

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Endoacidic Epipedal Grey Vertosol Gravelly Medium fine Medium fine Very deep		Principal Profile Form:	Ug5.24
ASC Confidence:		Great Soil Group:	Grey clay

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, Very sparse. *Species includes - Aristida species, Dichanthium species
Mid Strata - Tree, 1.01-3m, Sparse. *Species includes - Eremophila mitchellii, Lysiphillum carronii, Terminalia oblongata

Tall Strata - Tree, 1.01-3m, Mid-dense. *Species includes - Acacia cambagei, Eucalyptus cambageana

Surface Coarse Fragments: 10-20%, medium gravelly, 6-20mm, rounded, Quartz

Profile Morphology

A11	0 - 0.02 m	Grey (10YR5/1-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 0.01); Common, fine (1-2mm) roots; Abrupt, Wavy change to -
A12	0.02 - 0.33 m	Grey (10YR5/1-Moist); ; Medium clay; Strong grade of structure, 50-100 mm, Subangular blocky; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Dry; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.2); Common, very fine (0-1mm) roots; Clear, Wavy change to -
B21	0.33 - 0.7 m	Dark grey (10YR4/1-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; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 4.5 (Raupach, 0.6); Few, very fine (0-1mm) roots; Diffuse, Wavy change to -
B22	0.7 - 1 m	Greyish brown (10YR5/2-Moist); ; Medium heavy clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 4.5 (Raupach, 0.9); Few, very fine (0-1mm) roots;
B22	1 - 1.3 m	Greyish brown (10YR5/2-Moist); ; Medium heavy clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; , Calcareous, , , , Gypseous, , ; Field pH 4.5 (Raupach, 1.2); Few, very fine (0-1mm) roots; Diffuse, Wavy change to -
B23	1.3 - 1.6 m	Brown (10YR5/3-Moist); ; Medium heavy clay; Strong grade of structure, 50-100 mm, Subangular blocky; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , ; Field pH 4.5 (Raupach, 1.5); Few, very

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B23 1.6 - 1.9 m Brown (10YR5/3-Moist); ; Medium heavy clay; Strong grade of structure, 50-100 mm, Subangular blocky; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; , Calcareous, , , , Gypseous, , ; Field pH 4.5 (Raupach, 1.8); Few, very

Morphological Notes

Observation Notes

DLR1045

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Exchangeable Na	CEC	ECEC	ESP
m		dS/m				Acidity Cmol (+)/kg			%
0 - 0.02	6.19A	0.07A	7.2B	7.1	0.77	0.47	15.6I		3.01
			6.85J	6.11	0.23	0.19			1.22
0.02 - 0.33	6.18A	0.11A	6.66J	7.7	0.11	0.44	18.5I		2.38
0.33 - 0.7	4.88A	0.58A	5.1B	8.5	0.29	4.8	18.6D		25.81
			4.14J	6.73	0.03	1.14	15.5I		30.97
									6.13
									7.35
0.7 - 1	4.72A	0.65A							
1 - 1.3	4.7A	0.63A	3.52J	6.79	0.04	1.31	17.5I		7.49
1.3 - 1.6	4.6A	0.66A							
1.6 - 1.9	4.58A	0.65A	3.01J	7.04	0.07	1.58	17.9I		8.83

Depth	CaCO ₃	Organic C	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m ³	Particle GV	Size CS	Analysis FS %	Silt	Clay
m	%	%										
0 - 0.02	0.1A	0.9B		0.023A	0.06A	0.342A			13A	24	19	45
0.02 - 0.33	0.1A	0.5B							8A	20	20	52
0.33 - 0.7		0.4B		0.014A	0.02A	0.339A			5A	17	22	57
0.7 - 1												
1 - 1.3									4A	20	23	53
1.3 - 1.6												
1.6 - 1.9									3A	20	22	55

[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
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