

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T544 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By: M.G. Cannon	Locality:
Date Desc.: 13/12/91	Elevation: 277 metres
Map Ref.: Sheet No. : 8156 GPS	Rainfall: No Data
Northing/Long.: 7730840 AMG zone: 55	Runoff: No Data
Easting/Lat.: 419167 Datum: AGD66	Drainage: No Data

Geology

Exposure Type: No Data	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: Qa	Substrate Material: No Data

Land Form

Rel/Slope Class: Level plain <9m <1%	Pattern Type: 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: 2 m2 m;

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Epicalcareous-Epihypersodic Self-Mulching Brown Vertosol	Principal Profile Form: Ug5.24
Slightly gravelly Medium fine Very fine Very deep	
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, Mid-dense. *Species includes - Digitaria species, Dichanthium species, Aristida species, Mid Strata - Tree, 1.01-3m, Sparse. *Species includes - Eremophila mitchellii, Lysiphillum carronii

Tall Strata - Tree, 6.01-12m, Mid-dense. *Species includes - Acacia harpophylla, Eucalyptus cambageana

Surface Coarse Fragments: 2-10%, fine gravelly, 2-6mm, subrounded, Quartz

Profile Morphology

A11	0 - 0.07 m	Dark greyish brown (10YR4/2-Moist); ; Light medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.05); Common, very fine (0-1mm) roots; Clear change to -
A12	0.07 - 0.25 m	Dark grey (10YR4/1-Moist); ; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 8.5 (Raupach, 0.15); Few, very fine (0-1mm) roots; Clear change to -
B21	0.25 - 0.32 m	Brown (10YR4/3-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; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , , , Gypseous, , ; Soil matrix is Moderately calcareous; Field pH 8.5 (Raupach, 0.3); Few, very fine (0-1mm) roots; Diffuse change to -
B22	0.32 - 0.63 m	Yellowish brown (10YR5/4-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Soil matrix is Moderately calcareous; Field pH 8 (Raupach, 0.5); Few, very fine (0-1mm) roots; Diffuse change to -
B23	0.63 - 0.9 m	Greyish brown (2.5Y5/3-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 0.7); Few, very fine (0-1mm) roots; Diffuse change to -
B23	0.9 - 1.2 m	Greyish brown (2.5Y5/3-Moist); ; Medium heavy clay; Strong grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 1); Few, very fine (0-1mm) roots; Diffuse change to -

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T544 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

B24	1.2 - 1.62 m	Yellowish brown (10YR5/4-Moist); ; Medium heavy clay; Moderate grade of structure, 50-100 mm, Prismatic; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Dry; Strong consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , , , Gypseous, , ; Field pH 6.5 (Raupach, 1.4); Few, very fine (0-1mm) roots; Diffuse change to -
B24	1.62 - 1.7 m	Yellowish brown (10YR5/4-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; Dry; Strong consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , , , Gypseous, , ; Field pH 5.5 (Raupach, 1.65); Few, very fine (0-1mm) roots;

Morphological Notes

Observation Notes

DLR1050; FINE SAND DOWN CRACKS FOR 20CM. SAND ALSO BETWEEN 120 AND 170CM; "DOG BURR" ON MOUNDS, VERY LITTLE BUFFELL GRASS & BOEWA & DICANTHIUM INVADING FROM NEARBY FLAT.

Site Notes

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T544 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Exchangeable Na	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg	Acidity		%
0 - 0.07	6.46A	0.14A	9.4B	6.8	0.92	1.4		20.6I	6.80
0.07 - 0.25	8.49A	0.46A	8.85J	6.06	0.23	0.38			1.84
0.25 - 0.32	5.18A	0.78A	13.4J	7.32	0.07	2.07		21.4D	9.67
0.32 - 0.63	8.53A	1.2A	15B	8.9	0.47	8.6		26I	7.96
0.63 - 0.9	6.82A	1.23A	5.76J	6.52	0.07	2.38		19.6I	12.14
0.9 - 1.2	5.68A	1.19A							
1.2 - 1.62	8.97A	1.03A							
1.62 - 1.7	5.1A	1.04A	3.04J	4.63	0.07	1.92		12.8I	15.00

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.07	0.1A	1.2B		0.033A	0.07A	0.73A			11A	29	20	41
0.07 - 0.25												
0.25 - 0.32	2.4A	0.7B							10A	22	21	47
0.32 - 0.63												
0.63 - 0.9									8A	25	22	46
0.9 - 1.2												
1.2 - 1.62												
1.62 - 1.7									12A	27	20	41

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m		g/g - m3/m3							mm/h	mm/h
0 - 0.07										
0.07 - 0.25										
0.25 - 0.32										
0.32 - 0.63										
0.63 - 0.9										
0.9 - 1.2										
1.2 - 1.62										
1.62 - 1.7										

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T544 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

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