

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T576 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By: M.G. Cannon	Locality:
Date Desc.: 24/08/93	Elevation: 390 metres
Map Ref.: Sheet No. : 8058 GPS	Rainfall: No Data
Northing/Long.: 7804757 AMG zone: 55	Runoff: No Data
Easting/Lat.: 350846 Datum: AGD66	Drainage: No Data

Geology

Exposure Type: No Data	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: No Data	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): Hardsetting

Erosion: Active, Present (tunnel)

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Manganic Eutrophic Red Ferrosol Thin Non-gravelly Clay-loamy Clayey Moderately deep	Principal Profile Form: Gn3.11
ASC Confidence:	Great Soil Group: Euchrozem

Analytical data are incomplete but reasonable confidence.

Site Disturbance: Limited clearing, for example selective logging

Vegetation: Low Strata - Tussock grass, 0.26-0.5m, Sparse. *Species includes - Heteropogon contortus, Dichanthium species,
 Chrysopogon fallax Mid Strata - Tree, 6.01-12m, Sparse. *Species includes - Eucalyptus papuana, Eucalyptus crebra

Tall Strata - Tree, 6.01-12m, Isolated plants. *Species includes - Eucalyptus crebra

Surface Coarse Fragments: 0-2%, medium gravelly, 6-20mm, rounded, Basalt

Profile Morphology

A1	0 - 0.01 m	Black (7.5YR2/0-Moist); ; Clay loam; Strong grade of structure, 2-5 mm, Subangular blocky; Strong grade of structure, <2 mm, Angular blocky; Smooth-ped fabric; Dry; Very weak consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 6.8 (Raupach, 0);
A3	0.01 - 0.1 m	Dark reddish brown (5YR3/2-Moist); ; Clay loam (Heavy); Strong grade of structure, 5-10 mm, Angular blocky; Strong grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Dry; Very weak consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 6.8 (Raupach, 0.07);
B1	0.1 - 0.19 m	Dark reddish brown (5YR3/3-Moist); ; Light clay; Strong grade of structure, 5-10 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Dry; Very firm consistence; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 6.6 (Raupach, 0.15);
B21	0.19 - 0.32 m	Dark reddish brown (5YR3/3-Moist); ; Light medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Dry; Very firm consistence; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.3);
B22	0.32 - 0.47 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Dry; Very firm consistence; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.4);
	0.47 - 0.65 m	Dark reddish brown (2.5YR3/4-Moist); ; Medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Very firm consistence; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.6);

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B23 0.65 - 0.9 m Red (2.5YR4/6-Moist); Substrate influence, 7.5YR6/8, 2-10% , 0-5mm, Distinct; Substrate influence, 2-10% ; Light medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Dry; Very firm consistence; Many (20 - 50 %), Manganiferous, Medium (2 -6 mm), Nodules; , Calcareous, , , , Gypseous, , ; Field pH 6.8 (Raupach, 0.8);

Morphological Notes

Observation Notes

Kaylene Site 7

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				cmol (+)/kg				%
0 - 0.01	5.9C 7A	0.08A	13B	5.4	1.6	5.4				
0.01 - 0.1	5.8C 6.8A	0.07A	13B	5.5	1.6	0.08				
0.1 - 0.19	5.5C 7A	0.05A								
0.19 - 0.32	5C 6.5A	0.04A	8.6B	4.5	0.85	0.07				
0.32 - 0.47	5.3C 6.5A	0.04A								
0.47 - 0.65	5.7C 6.6A	0.03A								
0.65 - 0.9	5.9C 6.7A	0.02A	6.9B	4.5	0.27	0.09				

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 - 0.01		2A		0.102A		0.41A			19A	17	27	37
0.01 - 0.1		1.8A		0.098A		0.4A			18A	17	27	38
0.1 - 0.19												
0.19 - 0.32				0.041A		0.34A			20A	10	15	56
0.32 - 0.47												
0.47 - 0.65												
0.65 - 0.9				0.04A		0.19A			18A	7	9	66

[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 (Ca2+,Mg2+,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
17A1	Total potassium - X-ray fluorescence
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
4B2	pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1
5A1	Chloride - 1:5 soil/water extract, potentiometric titration
6A1	Organic carbon - Walkley and Black
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