

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T590 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By:	M.G. Cannon	Locality:	
Date Desc.:	17/08/93	Elevation:	294 metres
Map Ref.:	Sheet No. : 8056 GPS	Rainfall:	No Data
Northing/Long.:	7718425 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	383486 Datum: AGD66	Drainage:	No Data

Geology

ExposureType:	No Data	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	No Data	Substrate Material:	No Data

Land Form

Rel/Slope Class:	No Data	Pattern Type:	Plain
Morph. Type:	Flat	Relief:	No Data
Elem. Type:	No Data	Slope Category:	No Data
Slope:	1 %	Aspect:	No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Ferric Eutrophic Yellow Kandosol Medium Non-gravelly Loamy Clay-loamy Deep	Principal Profile Form:	Gn2.22
ASC Confidence:	Great Soil Group:	Yellow earth

All necessary analytical data are available.

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

Vegetation: Low Strata - Tussock grass, <0.25m, Sparse. *Species includes - None recorded
 Mid Strata - Tree, 1.01-3m, Sparse. *Species includes - Eucalyptus melanophloia, Eucalyptus peltata
 Tall Strata - Tree, 3.01-6m, Sparse. *Species includes - Eucalyptus melanophloia, Eucalyptus papuana

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1	0 - 0.04 m	Very dark greyish brown (10YR3/2-Moist); ; Sandy loam; Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 5.5 (Raupach, 0.03); Few, fine (1-2mm) roots; Clear change to -
A3	0.04 - 0.2 m	Dark yellowish brown (10YR4/4-Moist); ; Sandy loam; Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 5.2 (Raupach, 0.1); Few, fine (1-2mm) roots; Gradual change to -
B1	0.2 - 0.42 m	Yellowish brown (10YR5/8-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , ; Field pH 5.2 (Raupach, 0.3); Few, fine (1-2mm) roots; Gradual change to -
B21	0.42 - 0.81 m	Brownish yellow (10YR6/8-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, rounded, dispersed, Quartz, coarse fragments; , Calcareous, , , , Gypseous, , ; Field pH 5.2 (Raupach, 0.7); Few, fine (1-2mm) roots; Gradual change to -
B22	0.81 - 1 m	Brownish yellow (10YR6/6-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Dry; Weak consistence; 2-10%, fine gravelly, 2-6mm, rounded, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Concretions; , Calcareous, , , , Gypseous, , ; Field pH 6 (Raupach, 0.9); Few, very fine (0-1mm) roots; Gradual
B23c	1 - 1.66 m	Light grey (10YR7/2-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Dry; Weak consistence; 10-20%, medium gravelly, 6-20mm, rounded, dispersed, Quartz, coarse fragments; Very many (50 - 100 %), Ferruginous, Coarse (6 - 20 mm), Concretions; , Calcareous, , , , Gypseous, , ; Field pH 7 (Raupach, 1.4); Field pH 7.5 (Raupach, 1.65); Few, very fine (0-1mm) roots; Abrupt change to -
D1	1.66 - 1.74 m	White (10YR8/2-Moist); ; Sand; Single grain grade of structure; Smooth-ped fabric; Dry; Loose consistence; Many (20 - 50 %), Ferruginous, Coarse (6 - 20 mm), Concretions; , Calcareous, , , , Gypseous, , ; Common, fine (1-2mm) roots; Gradual change to -

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- 1.74 - 1.8 m Grey (10YR6/1-Moist); Mottles, 2.5Y56, 10-20% , 5-15mm, Prominent; Mottles, 5YR46, 10-20% ;
Moderate grade of structure, 5-10 mm, Platy; Very strong consistence; , Calcareous, , , ,
Gypseous, , ; Thin ironpan, Very strongly cemented, Continuous, Massive; Field pH 7.5
(Raupach, 1.78); Gradual change to -
- 1.8 - 1.92 m Light brownish grey (10YR6/2-Moist); , Moderate grade of structure, 5-10 mm, Platy; Very
strong consistence; , Calcareous, , , , Gypseous, , ; Thin ironpan, Very strongly cemented,
Continuous, Massive; Field pH 8 (Raupach, 1.9);

Morphological Notes

Observation Notes

Kaylene Site 23

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 - 0.04	4.5C 6.4A	0.04A	1.2B	0.64	0.32	0.04				
0.04 - 0.2	4.2C 6.2A	0.04A								
0.2 - 0.42	4.3C 6.3A	0.03A								
0.42 - 0.81	4.5C 6.4A	0.03A	18B	11	0.55	1.5				
0.81 - 1	5.4C 6.5A	0.03A								
1 - 1.66	5.7C 6.6A	0.04A								
1.66 - 1.74	5.8C 6.8A	0.03A								
1.74 - 1.8	6C 8.1A	0.06A	1.4B	3.8	0.44	1.1				
1.8 - 1.92	6.3C 7.7A	0.24A								

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 - 0.04		0.88A		0.017A	0.03A	0.24A			52A	30	4 14
0.04 - 0.2											
0.2 - 0.42											
0.42 - 0.81		0.24A		0.013A	0.01A	0.3A			45A	28	2 25
0.81 - 1											
1 - 1.66											
1.66 - 1.74											
1.74 - 1.8											
1.8 - 1.92				0.013A		0.97A			69A	17	10 4

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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
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
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