

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T592 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

Desc. By:	M.G. Cannon	Locality:	
Date Desc.:	16/08/93	Elevation:	No Data
Map Ref.:	Sheet No. : 8056 GPS	Rainfall:	No Data
Northing/Long.:	7706994 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	388824 Datum: AGD66	Drainage:	No Data

Geology

ExposureType:	No Data	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	No Data	Substrate Material:	Undisturbed soil core, No Data

Land Form

Rel/Slope Class:	Level plain <9m <1%	Pattern Type:	Plain
Morph. Type:	Closed Depression	Relief:	No Data
Elem. Type:	Plain	Slope Category:	Level
Slope:	1 %	Aspect:	No Data

Surface Soil Condition (dry): Surface crust, Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Epicalcareous-Epihypersodic Self-Mulching Grey Vertosol		Principal Profile Form:	Ug5.24
Non-gravelly Medium fine Very fine 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, Sparse. *Species includes - Digitaria species, Cyperus species, Eulalia aurea

Mid Strata - Tree, 1.01-3m, Sparse. *Species includes - Terminalia oblongata, Eremophila mitchellii, Lysiphillum carronii

Tall Strata - Tree, 6.01-12m, Mid-dense. *Species includes - Acacia cambagei, Callitris species, Lysiphillum carronii

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.01 m	; Light clay; Moderate grade of structure, Platy; Earthy fabric; Dry; Very weak consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; , Calcareous, , , Gypseous, , ; Field pH 9 (Raupach, 0); Many, fine (1-2mm) roots;
A12	0.01 - 0.17 m	Yellowish brown (10YR5/4-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Dry; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; , Gypseous, , ; Soil matrix is Highly calcareous; Field pH 9 (Raupach, 0.1); Many, fine (1-2mm) roots; Diffuse change to -
B21	0.17 - 0.39 m	Light yellowish brown (10YR6/4-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Strong grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; , Gypseous, , ; Soil matrix is Moderately calcareous; Field pH 9 (Raupach, 0.3); Common, fine (1-2mm) roots; Diffuse
B22	0.39 - 0.64 m	Light yellowish brown (10YR6/4-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong grade of structure, 5-10 mm, Lenticular; Smooth-ped fabric; Moderately moist; Very strong consistence; Few cutans, <10% of ped faces or walls coated, distinct; Very few (0 - 2 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Gypseous, Medium (2 - 6 mm), Soft segregations; Soil matrix is Highly calcareous; Field pH 9 (Raupach, 0.6); Common, fine (1-2mm) roots; Diffuse change to -
B23	0.64 - 0.94 m	Pale brown (10YR6/3-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Very few (0 - 2 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Gypseous, Medium (2 - 6 mm), Soft segregations; Field pH 9 (Raupach, 0.9); Common, fine (1-2mm) roots; Diffuse change to -

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	0.94 - 1.3 m	Pale brown (10YR6/3-Moist); ; Medium clay; Strong grade of structure, 100-200 mm, Lenticular; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; , Gypseous, , Soft segregations; Soil matrix is Moderately calcareous; Field pH 9 (Raupach, 1.2); Few, fine (1-2mm) roots;
	1.3 - 1.6 m	Pale brown (10YR6/3-Moist); ; Medium clay; Strong grade of structure, 100-200 mm, Lenticular; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; , Gypseous, , ; Soil matrix is Slightly calcareous; Field pH 9 (Raupach, 1.5); Few, fine (1-2mm) roots;
B24	1.6 - 1.94 m	Pale brown (10YR6/3-Moist); ; Medium clay; Strong grade of structure, 100-200 mm, Lenticular; Weak grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; , Gypseous, , ; Field pH 9 (Raupach, 1.9); Few, fine (1-2mm) roots; Diffuse change to -

Morphological Notes

Observation Notes

Kaylene Site 25

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				%
0.01 - 0.17	7.8C 8.6A	0.25A	16E	6.5	0.9	0.09		25B		0.36
0.17 - 0.39	8.1C 8.7A	0.46A								
0.39 - 0.64	8C 8.3A	2.1A	9.4E	14	0.56	4.5		28B		16.07
0.64 - 0.94	8.1C 8.5A	1.9A								
0.94 - 1.3	8.1C 8.6A	1.6A								
1.3 - 1.6	8.1C 8.8A	1.5A								
1.6 - 1.64	8.1C 8.7A	1.4A	7.7E	13	0.6	4.8		29B		16.55

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			%		
0.01 - 0.17		0.62A		0.022A	0.05A	1.06A			15A	31	15	40
0.17 - 0.39												
0.39 - 0.64		0.26A		0.015A	0.01A	1.06A			11A	30	16	43
0.64 - 0.94												
0.94 - 1.3												
1.3 - 1.6												
1.6 - 1.64				0.013A	0.01A	1.16A			9A	31	13	47

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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
15C1_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_CEC	CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_MG	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, 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