Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD **Project Name:**

Project Code: Observation ID: 1 Site ID: 500

Agency Name: **QLD Department of Primary Industries**

Site Information

Locality: M.G. Cannon

Desc. By: Date Desc.: Elevation: 08/04/91 300 metres Sheet No.: 8258 GPS Map Ref.: Rainfall: No Data Northing/Long.: 7802384 AMG zone: 55 Runoff: Slow

Imperfectly drained Easting/Lat.: 459109 Datum: AGD66 Drainage:

Geology

ExposureType: No Data Conf. Sub. is Parent. Mat.:

Substrate Material: Geol. Ref.: Undisturbed soil core, Granodiorite No Data

Land Form

Rel/Slope Class: Level plain <9m <1% Pattern Type: Plain Morph. Type: Elem. Type: Crest Relief: No Data **Slope Category:** Plain Level 1 % Aspect: 60 degrees Slope:

Surface Soil Condition (dry): Hardsetting, Surface crust

Erosion:

Soil Classification

Australian Soil Classification: N/A Mapping Unit: Supracalcic Subnatric Black Sodosol Medium Non-gravelly Principal Profile Form: Dd1.43

Clay-loamy Clayey Deep

ASC Confidence: Great Soil Group: Solodic soil

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 - Bothriochloa pertusa, Eragrostis

species, Carissa

Mid Strata - Tree, 6.01-12m, Isolated plants. *Species includes - Eucalyptus brownii, Grevillea lanceolata

striata

Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - Eucalyptus brownii

Surface Coarse Fragments:

Profile	Morphology						
A11	0 - 0.01 m	Very dark greyish brown (10YR3/2-Moist); ; Sandy clay loam (Light); Weak grade of structure, 2-5 mm; Dry; Firm consistence; , Calcareous, , ; , Gypseous, , ; Common, very fine (0-1mm) roots; Sharp, Smooth change to -					
A12	0.01 - 0.13 m	Dark brown (10YR3/3-Moist); ; Sandy clay loam; Massive grade of structure; Moderately moist; Weak consistence; , Calcareous, , ; , Gypseous, , ; Field pH 5.8 (Raupach, 0.05); Common, very fine (0-1mm) roots; Sharp, Smooth change to -					
A2e	0.13 - 0.18 m	Brown (10YR4/3-Moist); ; Sandy clay loam (Light); Massive grade of structure; Moderately moist; Weak consistence; , Calcareous, , ; , Gypseous, , ; Few, very fine (0-1mm) roots; Abrupt, Smooth change to -					
B21	0.18 - 0.25 m	Dark brown (10YR3/3-Moist); ; Medium heavy clay; Moderate grade of structure, 50-100 mm, Columnar; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; , Calcareous, , ; , Gypseous, , ; Few, fine (1-2mm) roots; Sharp, Wavy change to -					
B22	0.25 - 0.4 m	Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, Angular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; , Gypseous, , ; Soil matrix is Slightly calcareous; Field pH 8.5 (Raupach, 0.3); Diffuse, Wavy change to -					
B23	0.4 - 0.6 m	Brown (10YR4/3-Moist); ; Medium heavy clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; , Gypseous, , ; Soil matrix is Slightly calcareous; Field pH 9.5 (Raupach, 0.6); Abrupt, Wavy change to -					
B24	0.6 - 1 m	Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Strong consistence; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Soil matrix is Moderately calcareous; Field pH 9.5 (Raupach, 0.9); Sharp, Wavy change to -					

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1 - 1.25 m

Brown (10YR4/3-Moist); ; Medium clay; Weak grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Moderately moist; Very firm consistence; Many (20 - 50 %), Calcareous, Medium (2 -6 mm), Soft segregations; , Gypseous, , ; Soil matrix is Highly calcareous; Field pH 9.5

(Raupach, 1.2); Abrupt, Wavy change to -

; Sandy clay loam; Weak grade of structure, 5-10 mm; Earthy fabric; Moderately moist; Weak consistence; Many (20 - 50 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; , С 1.25 - 1.9 m

Gypseous, , ; Soil matrix is Highly calcareous; Field pH 9.5 (Raupach, 1.9);

Morphological Notes Observation Notes Site Notes

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Laboratory Test Results:

0.01 - 0.13 0.25 - 0.4 0.4 - 0.6 0.6 - 1 1 - 1.25 1.25 - 1.9

Laboratory	1631110	Jours.								
Depth	рН	1:5 EC		hangeable Mg	Cations K	E Na	xchangeable Acidity	CEC	ECEC	ESP
m		dS/m		5	••	Cmol (+)				%
0.01 - 0.13 0.25 - 0.4 0.4 - 0.6 0.6 - 1 1 - 1.25 1.25 - 1.9	6.2A 7.7A 8.7A 9A 9A 9.3A		4.5B 17.2J 20B	3.3 9.9 11	2.09 0.1 0.1	0.19 2.9 6.1		30.91		9.39
Depth m	CaCO3	Organic C %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle GV CS	e Size / FS %	Analysis Silt Clay
0.01 - 0.13 0.25 - 0.4 0.4 - 0.6 0.6 - 1 1 - 1.25 1.25 - 1.9										
Depth	Depth COLE Gravimetric/Volumetric Water Contents									K unsat
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar /g - m3/m	1 Bar 3	5 Bar 15	Bar m	m/h	mm/h

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Laboratory Analyses Completed for this profile

10B Extractable sulfur(mg/kg) - Phosphate extractable sulfur 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 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)

4A1 pH of 1:5 soil/water suspension