Project Name: **Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD**
Project Code: **DLR** **Site ID:** **254** **Observation ID:** **1**
Agency Name: **QLD Department of Primary Industries**

Site Information

Desc. By: M. DeCorte
Date Desc.: 15/05/91
Map Ref.: Sheet No. : 8156 GPS
Northing/Long.: 7730496 AMG zone: 55
Easting/Lat.: 418793 Datum: AGD66
Locality:
Elevation: 255 metres
Rainfall: No Data
Runoff: No runoff
Drainage: Imperfectly drained

Geology

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

Land Form

Rel/Slope Class: Level plain <9m <1%
Morph. Type: Flat
Elem. Type: Plain
Slope: 1 %
Pattern Type: Plain
Relief: No Data
Slope Category: Level
Aspect: 140 degrees

Surface Soil Condition (dry): Cracking, Surface crust

Erosion:

Soil Classification

Australian Soil Classification:
Epihypersodic Epipedal Brown Vertosol Non-gravelly Medium fine Very fine Very deep
Mapping Unit: N/A
Principal Profile Form: Ug5.34
ASC Confidence:
No analytical data are available but confidence is fair.
Great Soil Group: Brown clay

Site Disturbance: Limited clearing, for example selective logging

Vegetation: Low Strata - Tussock grass, 0.26-0.5m, Sparse. *Species includes - Sporobolus caroli, Bothriochloa ewartiana
Mid Strata - Tree, 3.01-6m, Sparse. *Species includes - Eremophila mitchellii, Acacia harpophylla
Tall Strata - Tree, 6.01-12m, Mid-dense. *Species includes - Acacia harpophylla, Eucalyptus cambageana

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A1j	0 - 0.11 m	Dark greyish brown (10YR4/2-Moist); Mottles, 7.5YR58, 2-10% , 0-5mm, Faint; Mottles, 2-10% ; Medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Very firm consistence; , Calcareous, , ; , Gypseous, , ; Field pH 6 (Raupach, 0.05); Few, medium (2-5mm) roots; Abrupt, Smooth change to -
B1	0.11 - 0.32 m	Very dark brown (10YR2/3-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Strong consistence; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Detrital sedimentary rock (unidentified), coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 0.3); Few, medium (2-5mm) roots; Clear, Smooth change to -
B21	0.32 - 0.82 m	Brown (10YR4/3-Moist); Mottles, 10YR44, 0-2% , 0-5mm, Faint; Mottles, 0-2% ; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Detrital sedimentary rock (unidentified), coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 8.5 (Raupach, 0.6); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B22	0.82 - 1.4 m	Very dark brown (10YR2/2-Moist); Mottles, 10YR43, 0-2% , 0-5mm, Faint; Mottles, 0-2% ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Detrital sedimentary rock (unidentified), coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 1.2); Clear, Smooth change to -

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B23	1.4 - 1.72 m	Very dark brown (10YR2/2-Moist); Mottles, 10YR43, 0-2% , 0-5mm, Faint; Mottles, 0-2% ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Detrital sedimentary rock (unidentified), coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations; , Calcareous, , ; , Gypseous, , ; Clear, Smooth change to -
C	1.72 - 1.83 m	Greyish brown (10YR5/2-Moist); Mottles, 10YR22, 10-20% , 5-15mm, Faint; Mottles, 5YR58, 10-20% ; Medium clay; Massive grade of structure; Smooth-ped fabric; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Detrital sedimentary rock (unidentified), coarse fragments; , Calcareous, , ; , Gypseous, , ; Field pH 5.3 (Raupach, 1.8);

Morphological Notes

Observation Notes

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.1	4.9C 6A	0.05A								
0.11 - 0.32	5.6C 7.1A	0.06A								
0.32 - 0.82	7.3C 8.1A	0.78A	11B	7.7	0.26	6.2				
0.82 - 1.3	6.8C 7.4A	1.3A								
1.3 - 1.72	5.6A	1A	3.5E	5	0.19	4.7		17.5B		26.86
1.72 - 1.83	5A	1.2A	3E	5.4	0.19	4.6		18B		25.56

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1		1.2A			0.08A				7D	20	23	52
0.11 - 0.32												
0.32 - 0.82									9D	23	19	49
0.82 - 1.3												
1.3 - 1.72				0.024A		0.702A			10D	25	21	43
1.72 - 1.83				0.021A		0.889A			6D	17	19	57

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 - 0.1									
0.11 - 0.32									
0.32 - 0.82									
0.82 - 1.3									
1.3 - 1.72									
1.72 - 1.83									

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
12A1_CU	DTPA - extractable copper, zinc, manganese and iron
12A1_FE	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
15C1_CA	Exchangeable bases (Ca2+,Mg2+,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_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance