**Project Name:** **Preliminary Assessment and Survey of Land Degradation in the Dalrypmle Shire, QLD**
**Project Code:** **DLR** **Site ID:** **95** **Observation ID:** **1**
**Agency Name:** **QLD Department of Primary Industries**

## Site Information

**Desc. By:** M. DeCorte
**Date Desc.:** 08/08/90
**Map Ref.:** Sheet No. : 8156 GPS
**Northing/Long.:** 7678816 AMG zone: 55
**Easting/Lat.:** 407462 Datum: AGD66
**Locality:**
**Elevation:** 226 metres
**Rainfall:** No Data
**Runoff:** Very slow
**Drainage:** Moderately well drained

## Geology

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

## Land Form

**Rel/Slope Class:** Level plain <9m <1%
**Morph. Type:** Flat
**Elem. Type:** Plain
**Slope:** 1 %
**Pattern Type:** Alluvial plain
**Relief:** No Data
**Slope Category:** Level
**Aspect:** 90 degrees

**Surface Soil Condition (dry):** Hardsetting

**Erosion:**

## Soil Classification

**Australian Soil Classification:**
Eutrophic Subnatric Brown Sodosol Thick Non-gravelly Sandy Clayey Deep
**Mapping Unit:** N/A
**Principal Profile Form:** Dy2.43
**ASC Confidence:**
No analytical data and little or no knowledge of this soil.
**Great Soil Group:** Solodic soil

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

**Vegetation:** Low Strata - Tussock grass, 0.26-0.5m, Sparse. *Species includes - Bothriochloa ewartiana, Aristida species
Mid Strata - Tree, 3.01-6m, Sparse. *Species includes - Eucalyptus melanophloia, Acacia species, Planchonia careya

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

**Surface Coarse Fragments:** No surface coarse fragments

## Profile Morphology

| | | |
|---|---|---|
| A1 | 0 - 0.1 m | Dark brown (10YR3/3-Moist); ; Loamy fine sand; Massive grade of structure; Earthy fabric; Moderately moist; Very firm consistence; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 0.05); Common, very fine (0-1mm) roots; |
| A2 | 0.1 - 0.45 m | Dark yellowish brown (10YR4/5-Moist); ; Clayey sand; Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; , Calcareous, , ; , Gypseous, , ; Field pH 7.5 (Raupach, 0.3); Few, fine (1-2mm) roots; |
| A2c | 0.45 - 0.52 m | Brownish yellow (10YR6/6-Moist); ; Clayey sand; Massive grade of structure; Earthy fabric; Moderately moist; Very weak consistence; Few (2 - 10 %), Manganiferous, Coarse (6 - 20 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Few, fine (1-2mm) roots; |
| B21c | 0.52 - 0.99 m | Light olive brown (2.5Y5/5-Moist); Mottles, 10YR46, 2-10% , 0-5mm, Faint; Mottles, 2-10% ; Medium clay; Strong grade of structure, Columnar; Strong grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Moderately moist; Very firm consistence; Common (10 - 20 %), Manganiferous, Coarse (6 - 20 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 9 (Raupach, 0.9); |
| B22k | 0.99 - 1.45 m | Yellowish brown (10YR5/6-Moist); ; Medium clay; 20-50 mm; Smooth-ped fabric; Moderately moist; Very firm consistence; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Nodules; , Gypseous, , ; Soil matrix is Very highly calcareous; Field pH 9.9 (Raupach, 1.2); |

## 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 | 6.5A | | 3.7B | 1.3 | 0.33 | 0.07 | | | | |
| 0.1 - 0.45 | 6.9A | | 1.6J | 0.7 | 0.2 | 0.1 | | 2.1I | | 4.76 |
| 0.52 - 0.99 | 8.6A | | | | | | | | | |
| 0.99 - 1.45 | 9.3A | | 20B | 6.7 | 0.56 | 4 | | 15B | | 26.67 |
| | | | 4.3E | 5.9 | 0.64 | 3.4 | | | | 22.67 |

| 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 | | | | | | | | | | | | |
| 0.1 - 0.45 | | | | | | | | | | | | |
| 0.52 - 0.99 | | | | | | | | | | | | |
| 0.99 - 1.45 | | | | | | | | | | | | |

| 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 | | | | | | | | | |
| 0.1 - 0.45 | | | | | | | | | |
| 0.52 - 0.99 | | | | | | | | | |
| 0.99 - 1.45 | | | | | | | | | |

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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 |
| 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 |
| 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 |