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

Project Code: DLR Site ID: 255 Observation ID: 1

Agency Name: QLD Department of Primary Industries

Site Information

Desc. By: M. DeCorte Locality:

Date Desc.: Elevation: 16/06/91 280 metres Map Ref.: Sheet No.: 8158 GPS Rainfall: No Data Northing/Long.: 7806408 AMG zone: 55 Runoff: No runoff Well drained Easting/Lat.: 401796 Datum: AGD66 Drainage:

**Geology** 

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

Geol. Ref.: No Data Substrate Material: Undisturbed soil core. Basalt

Land Form

Rel/Slope Class:Level plain <9m <1%</th>Pattern Type:PlainMorph. Type:FlatRelief:No DataElem. Type:PlainSlope Category:LevelSlope:1 %Aspect:0 degrees

Surface Soil Condition (dry): Hardsetting

**Erosion:** 

**Soil Classification** 

Australian Soil Classification:Mapping Unit:N/AManganic Eutrophic Red Ferrosol Thin Non-gravelly Clay-Principal Profile Form:Gn3.12

loamy Clayey Deep

ASC Confidence: Great Soil Group: Euchrozem

No analytical data are available but confidence is fair.

Site Disturbance: Limited clearing, for example selective logging

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. \*Species includes - Bothriochloa pertusa, Chloris species,

Bothriochloa

decipiens Mid Strata - Tree, 1.01-3m, Isolated plants. \*Species includes - Eucalyptus melanophloia

Tall Strata - Tree, 6.01-12m, Sparse. \*Species includes - Eucalyptus melanophloia, Eucalyptus erythrophloia,

Eucalyptus

crebra

Surface Coarse Fragments: No surface coarse fragments

**Profile Morphology** 

A1 0 - 0.06 m Dark reddish brown (5YR2/3-Moist); ; Clay loam; Strong grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 7 (Raupach, 0.05); Many, very fine (0-1mm) roots; Clear, Smooth change

to -

B1 0.06 - 0.2 m Dark reddish brown (2.5YR2/4-Moist); ; Light clay; Strong grade of structure, 5-10 mm,

Subangular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Common, fine (1-2mm) roots; Gradual, Smooth change to -

B21 0.2 - 0.65 m Dusky red (10R3/4-Moist); ; Light clay; Strong grade of structure, 2-5 mm, Subangular blocky;

Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Common (10 - 20 %), Manganiferous, Fine (0 - 2 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 6.5 (Raupach, 0.3); Few, very fine (0-1mm) roots;

Sharp, Smooth change to -

B22c 0.65 - 1 m Dark red (2.5YR3/6-Moist); ; Light clay; Strong grade of structure, 2-5 mm, Subangular blocky;

Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Many (20 - 50 %), Manganiferous, Coarse (6 - 20 mm), Nodules; , Calcareous, , ; , Gypseous, , ; Field pH 7.5 (Raupach, 0.9); Abrupt, Smooth change to -

Morphological Notes

**Observation Notes** 

**Site Notes** 

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## **Laboratory Test Results:**

| Donth                             |              | 1:5 EC       | Eva         | hanaaahla       | Cations             |            | Evahangaahla            | CEC     |               | ECEC       |                  | SP       |
|-----------------------------------|--------------|--------------|-------------|-----------------|---------------------|------------|-------------------------|---------|---------------|------------|------------------|----------|
| Depth                             | pН           | 1:5 EC       |             | hangeable<br>Mg | K                   | Na         | Exchangeable<br>Acidity | CEC     |               | ECEC       | -                | :3P      |
| m                                 |              | dS/m         | -           | 9               |                     | Cmol (+)   |                         |         |               |            | •                | %        |
| 0 - 0.1                           | 5.7C<br>6.7A | 0.05A        |             |                 |                     |            |                         |         |               |            |                  |          |
| 0.2 - 0.65                        | 5.8C<br>6.8A | 0.01A        | 6.1B        | 4.4             | 0.41                | 0.06       |                         |         |               |            |                  |          |
| 0.65 - 1                          | 6.1C<br>6.9A | 0.02A        |             |                 |                     |            |                         |         |               |            |                  |          |
| Depth                             | CaCO3        | Organic<br>C | Avail.<br>P | Total<br>P      | Total<br>N          | Total<br>K | Bulk<br>Density         | P<br>GV | article<br>CS | Size<br>FS | Analysis<br>Silt |          |
| m                                 | %            | %            | mg/kg       | %               | %                   | %          | Mg/m3                   |         |               | %          |                  |          |
| 0 - 0.1<br>0.2 - 0.65<br>0.65 - 1 |              | 1.1A         |             |                 | 0.08                | ВА         |                         |         | 14D<br>14D    |            | 22<br>2          | 41<br>71 |
| Depth                             | COLE         |              | Grav        | /imetric/Vo     | olumetric V         | Vater Con  | tents                   |         | Ks            | at         | K unsat          |          |
| m                                 |              | Sat.         | 0.05 Bar    | 0.1 Bar<br>g/   | 0.5 Bar<br>g - m3/m | 1 Bar<br>3 | 5 Bar 15 I              | Bar     | mm            | /h         | mm/h             |          |
| 0 - 0.1<br>0.2 - 0.65             |              |              |             |                 |                     |            |                         |         |               |            |                  |          |

0.65 - 1

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## **Laboratory Analyses Completed for this profile**

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

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

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