

Project Name: Preliminary Assessment and Survey of Land Degradation in the Dalrymple Shire, QLD
Project Code: DLR **Site ID:** T577 **Observation ID:** 1
Agency Name: QLD Department of Primary Industries

Site Information

| | | | |
|------------------------|----------------------|-------------------|------------|
| Desc. By: | M.G. Cannon | Locality: | |
| Date Desc.: | 19/08/93 | Elevation: | 440 metres |
| Map Ref.: | Sheet No. : 7958 GPS | Rainfall: | No Data |
| Northing/Long.: | 7808716 AMG zone: 55 | Runoff: | No Data |
| Easting/Lat.: | 333138 Datum: AGD66 | Drainage: | No Data |

Geology

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

Land Form

| | | | |
|-------------------------|-----------------------------------|------------------------|--------------------|
| Rel/Slope Class: | Gently undulating plains <9m 1-3% | Pattern Type: | Plain |
| Morph. Type: | Flat | Relief: | No Data |
| Elem. Type: | Plain | Slope Category: | Very gently sloped |
| Slope: | 3 % | Aspect: | No Data |

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

| | | |
|--|--------------------------------|-------------|
| Australian Soil Classification: | Mapping Unit: | N/A |
| Haplic Eutrophic Red Ferrosol Thin Non-gravelly Clayey | Principal Profile Form: | Uf6.31 |
| Clayey Moderately deep | Great Soil Group: | No suitable |

ASC Confidence:
Analytical data are incomplete but reasonable confidence.

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

Vegetation: Low Strata - Tussock grass, 0.51-1m, Sparse. *Species includes - Dichanthium species
Mid Strata - Tree, 1.01-3m, Isolated plants. *Species includes - Eucalyptus orgadophylla
Tall Strata - Tree, 12.01-20m, Very sparse. *Species includes - Eucalyptus orgadophylla, Eucalyptus papuana

Surface Coarse Fragments: 2-10%, stony, 200-600mm, subrounded, Basalt

Profile Morphology

| | | |
|----|---------------|--|
| A1 | 0 - 0.11 m | Very dark brown (10YR2/2-Moist); ; Light clay; Strong grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , , ; Field pH 5.8 (Raupach, 0.05); Gradual |
| A3 | 0.11 - 0.25 m | Dark greyish brown (10YR4/2-Moist); ; Light medium clay; Strong grade of structure, 5-10 mm, Angular blocky; Strong grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Dry; Weak consistence; , Calcareous, , , , Gypseous, , , ; Field pH 5.8 (Raupach, 0.2); Clear change to - |
| B2 | 0.25 - 0.4 m | Yellowish red (5YR4/6-Moist); Mottles, 10YR58, 0-2% , 0-5mm, Distinct; Mottles, 0-2% ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Dry; Very firm consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules; , Calcareous, , , , Gypseous, , , ; Field pH 5.8 (Raupach, 0.35); Diffuse change to - |
| BC | 0.4 - 0.62 m | Light olive brown (2.5Y5/4-Moist); ; Light medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Strong grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Dry; Very firm consistence; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Laminae; , Calcareous, , , , Gypseous, , , ; Field pH 7.5 (Raupach, 0.55); Gradual change to - |
| C | 0.62 - 0.77 m | ; Dry; 50-90%, medium gravelly, 6-20mm, subangular, dispersed, Basalt, coarse fragments; , Calcareous, , , , Gypseous, , , ; Field pH 8 (Raupach, 0.7); |
| | 0.77 - 0.9 m | ; 50-90%, medium gravelly, 6-20mm, subangular, dispersed, Basalt, coarse fragments; , Calcareous, , , , Gypseous, , , ; Field pH 8 (Raupach, 0.85); |

Morphological Notes

Observation Notes

Kaylene Site 8

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 - 0.11 | 5.6C 6.6A | 0.06A | 14E | 11 | 1 | 0.09 | | 43B | | 0.21 |
| 0.11 - 0.25 | 5.3C 6.7A | 0.04A | | | | | | | | |
| 0.25 - 0.4 | 5.6C 6.6A | 0.04A | 13E | 6.6 | 0.15 | 0.09 | | 35B | | 0.26 |
| 0.4 - 0.62 | 5.8C 6.7A | 0.04A | | | | | | | | |
| 0.62 - 0.77 | 6.1C 7A | 0.05A | | | | | | | | |
| 0.77 - 0.9 | 6.5C 7.6A | 0.04A | 13E | 11 | 0.09 | 0.8 | | 34B | | 2.35 |

| Depth | CaCO3 | Organic | Avail. | Total | Total | Total | Bulk Density | Particle | | Size | Analysis | |
|-------------|-------|---------|---------|--------|-------|-------|--------------|----------|-----|------|----------|------|
| | % | C % | P mg/kg | P % | N % | K % | | GV | CS | | FS % | Silt |
| m | | | | | | | Mg/m3 | | | | | |
| 0 - 0.11 | | 1.8A | | 0.133A | | 0.32A | | | 4A | 16 | 34 | 46 |
| 0.11 - 0.25 | | | | | | | | | | | | |
| 0.25 - 0.4 | | 0.59A | | 0.05A | | 0.18A | | | 3A | 6 | 15 | 76 |
| 0.4 - 0.62 | | | | | | | | | | | | |
| 0.62 - 0.77 | | | | | | | | | | | | |
| 0.77 - 0.9 | | | | 0.308A | | 0.67A | | | 35A | 25 | 15 | 25 |

[illegible]

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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 |
| 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 |