**Project Name:** DER
**Project Code:** DER **Site ID:** H233 **Observation ID:** 1
**Agency Name:** CSIRO Division of Soils (TAS)

## Site Information

**Desc. By:** G.M. Dimmock
**Date Desc.:** 04/12/61
**Map Ref.:**
**Northing/Long.:** 147.270833333333
**Easting/Lat.:** -42.5902777777778
**Locality:** 5.7KM NE of Bagdad P.O.:40M from gate along rough track then 16M on LHSof track:
**Elevation:** 442 metres
**Rainfall:** 620
**Runoff:** Moderately rapid
**Drainage:** Poorly drained

## Geology

**ExposureType:** Soil pit
**Geol. Ref.:** Pd
**Conf. Sub. is Parent. Mat.:** No Data
**Substrate Material:** Auger boring, 0.81 m deep,Dolerite

## Land Form

**Rel/Slope Class:** No Data
**Morph. Type:** Ridge
**Elem. Type:** Hillslope
**Slope:** 3.5 %
**Pattern Type:** No Data
**Relief:** No Data
**Slope Category:** Gently inclined
**Aspect:** 315 degrees

## Surface Soil Condition (dry):

## Erosion:

## Soil Classification

**Australian Soil Classification:**
Bleached-Vertic Eutrophic Brown Kurosol
**ASC Confidence:**
All necessary analytical data are available.
**Mapping Unit:** N/A
**Principal Profile Form:** Db1.41
**Great Soil Group:** Grey-brown podzolic soil

**Site Disturbance:** Limited clearing, for example selective logging

**Vegetation:**
Low Strata - Shrub, , . *Species includes - None recorded
Mid Strata - Tree, , . *Species includes - None recorded
Tall Strata - Tree, , . *Species includes - None Recorded

## Surface Coarse Fragments:

## Profile Morphology

| | | |
|---|---|---|
| A1 | 0 - 0.02 m | Very dark grey (10YR3/1-Moist); Grey (10YR5/1-Dry); ; Fine sandy loam; Weak grade of structure, <2 mm, Granular; Dry; Loose consistence; 10-20%, coarse gravelly, 20-60mm, Dolerite, coarse fragments; ManyGradual change to - |
| A1A2 | 0.02 - 0.08 m | Very dark greyish brown (10YR3/2-Moist); Grey (10YR6/1-Dry); ; Fine sandy loam; Weak grade of structure, <2 mm, Granular; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Dry; Very weak consistence; 2-10%, coarse gravelly, 20-60mm, Dolerite, coarse fragments; Common (10 - 20 %), Ferruginous, Fine (0 - 2 mm), ; CommonDiffuse change to - |
| A21 | 0.08 - 0.14 m | Greyish brown (10YR5/2-Moist); Light grey (10YR7/1-Dry); , 10YR42; Fine sandy loam; Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Dry; Very weak consistence; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), ; FewDiffuse change to - |
| A22 | 0.14 - 0.23 m | Greyish brown (10YR5/2-Moist); Light grey (10YR7/2-Dry); ; Fine sandy loam; Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Dry; Weak consistence; 0-2%, stony, 200-600mm, Dolerite, coarse fragments; Common (10 - 20 %), Ferruginous, Medium (2 -6 mm), ; Clear, Wavy change to - |
| AB | 0.2 - 0.28 m | Greyish brown (10YR5/2-Moist); Light grey (10YR7/2-Dry); , 10YR53; Fine sandy clay loam; Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Dry; Strong consistence; Common (10 - 20 %), Ferruginous, Medium (2 -6 mm), ; Clear, Wavy change to - |
| B21 | 0.28 - 0.41 m | Brown (10YR4/3-Moist); , 10YR52, 2-10% ; , 2-10% ; Heavy clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderately moist; Very strong consistence; Common (10 - 20 %), Ferruginous, Medium (2 -6 mm), ; Gradual change to - |
| B22 | 0.41 - 0.56 m | Dark greyish brown (2.5Y4/2-Moist); , 10YR58; Heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Fine, (0 - 5) mm crack; Moist; Very strong consistence; 2-10%, coarse gravelly, 20-60mm, Dolerite, coarse fragments; Few (2 - 10 %), Ferruginous, , ; Gradual change to - |
| BC | 0.56 - 0.71 m | Greyish brown (2.5Y5/3-Moist); ; Heavy clay; Weak grade of structure, 10-20 mm, Subangular blocky; Moist; Very firm consistence; 2-10%, coarse gravelly, 20-60mm, Dolerite, coarse fragments; |

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C 0.71 - 0.81 m Greyish brown (2.5Y5/3-Moist); ; Heavy clay; 10-20%, coarse gravelly, 20-60mm, Dolerite, coarse fragments;

**Morphological Notes**

**Observation Notes**

2-56CM CONCENTRATION OF PISOLITIC FE IN HOLLOWS:41-81CM MANY W SPECKS:71-81CM GRAVELLY C + MEALY W`D DR:

**Site Notes**

BRIGHTON

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## Laboratory Test Results:

| Depth | pH | 1:5 EC | Exchangeable Cations | | | | Exchangeable Acidity | CEC | ECEC | ESP |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ca | Mg | K | Na | | | | |
| m | | dS/m | Cmol (+)/kg | | | | | | | % |
| 0 - 0.02 | 5.7A | 0.134A | 19.5H | 6 | 0.57 | 0.23 | 14.2H<br>22.6E | | 48.9B | |
| 0.02 - 0.08 | 5.5A | 0.122A | 9.8H | 3.8 | 0.32 | 0.2 | 9.5H<br>14.7E | | 28.8B | |
| 0.08 - 0.14 | 5.4A | 0.051A | | | | | | | | |
| 0.14 - 0.23 | 5.8A | 0.033A | 2.3H | 2.3 | 0.13 | 0.09 | 2.5H<br>3.8E | | 8.6B | |
| 0.2 - 0.28 | 5.5A | 0.045A | | | | | | | | |
| 0.28 - 0.41 | 5.3A | 0.042A | | | | | | | | |
| 0.41 - 0.56 | 4.9A | 0.092A | 6.1H | 17.2 | 0.11 | 1.3 | 9.3H<br>13.9E | | 38.6B | |
| 0.56 - 0.71 | 5A | 0.152A | | | | | | | | |
| 0.71 - 0.81 | 5A | 0.223A | 9.9H | 22.8 | 0.17 | 2.3 | 7.1H<br>11.5E | | 46.7B | |

| 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 - 0.02 | | 10.1D | | 0.015D | 0.447A | | | 20 | 3B | 39 | 29 | 13 |
| 0.02 - 0.08 | | 4.82D | | 0.006D | 0.192A | | | 8 | 3B | 45 | 29 | 11 |
| 0.08 - 0.14 | | 2.1D | | | 0.077A | | | | | | | |
| 0.14 - 0.23 | | 0.74D | | | 0.04A | | | 13 | 5D | 49 | 36 | 8 |
| 0.2 - 0.28 | | | | | | | | | | | | |
| 0.28 - 0.41 | | | | | | | | | | | | |
| 0.41 - 0.56 | | | | | | | | 8 | 3D | 21 | 16 | 58 |
| 0.56 - 0.71 | | | | | | | | | | | | |
| 0.71 - 0.81 | | | | | | | | 11 | 27D | 25 | 12 | 33 |

| 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 - 0.02 | | | | | | | | | |
| 0.02 - 0.08 | | | | | | | | | |
| 0.08 - 0.14 | | | | | | | | | |
| 0.14 - 0.23 | | | | | | | | | |
| 0.2 - 0.28 | | | | | | | | | |
| 0.28 - 0.41 | | | | | | | | | |
| 0.41 - 0.56 | | | | | | | | | |
| 0.56 - 0.71 | | | | | | | | | |
| 0.71 - 0.81 | | | | | | | | | |

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**Laboratory Analyses Completed for this profile**

| | |
|---|---|
| 15E1_CA | Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble |
| 15E1_K | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15E1_MG | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15E1_NA | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15G_C_H1 | Exchangeable hydrogen - meq per 100g of soil - Hydrogen By back titration of A or B |
| 15G1_H | Hydrogen Cation - meq per 100g of soil - 1M KCl Exch. Acidity By titration to pH 8.0 |
| 15J_H | Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen) |
| 2_LOI | Loss on Ignition (%) |
| 2A1 | Air-dry moisture content |
| 3A1 | EC of 1:5 soil/water extract |
| 4A1 | pH of 1:5 soil/water suspension |
| 5A2 | Chloride - 1:5 soil/water extract, automated colour |
| 6A1_UC | Organic carbon (%) - Uncorrected Walkley and Black method |
| 7A2 | Total nitrogen - semimicro Kjeldahl , automated colour |
| 9A_HCL | Total element - P(%) - By boiling HCl |
| P10_GRAV | Gravel (%) |
| 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 |
| P10A1_C | Clay (%) - Pipette |
| P10A1_CS | Coarse sand (%) - Pipette |
| P10A1_FS | Fine sand (%) - Pipette |
| P10A1_Z | Silt (%) - Pipette |