Project Name: HEL

Project Code: HEL Site ID: H150 Observation ID: 1

Agency Name: CSIRO Division of Soils (TAS)

**Site Information** 

Desc. By: G.M. Dimmock Locality: Midway between Natone and upper Natone:upslope

about 4 chains west of road:

274 metres Date Desc.: 04/07/56 Elevation: Map Ref.: Rainfall: 1500 Sheet No.: 8015 1:100000 Northing/Long.: 145.90972222222 Runoff: Rapid Easting/Lat.: -41.19583333333333 Drainage: Well drained

Geology

ExposureType:Soil pitConf. Sub. is Parent. Mat.:No DataGeol. Ref.:No DataSubstrate Material:Granite

**Land Form** 

Rel/Slope Class: Rolling hills 90-300m 10-32% Pattern Type: Hills Morph. Type: No Data Relief: No Data

Elem. Type: Hillslope Slope Category: Moderately inclined

Slope: 0 % Aspect: No Data

Surface Soil Condition (dry): Self-mulching

**Erosion:** 

 $\overline{\cap_1}$ 

**Soil Classification** 

Australian Soil Classification:Mapping Unit:N/AAcidic Dystrophic Red KandosolPrincipal Profile Form:Gn2.14

ASC Confidence: Great Soil Group: Red podzolic soil

All necessary analytical data are available.

**<u>Site Disturbance:</u>** No effective disturbance. Natural

Vegetation: Low Strata - Fern, 0.51-1m, Mid-dense. \*Species includes - None recorded

Tall Strata - Tree, , . \*Species includes - Eucalyptus obliqua

## **Surface Coarse Fragments:**

0 - 0.01 m

| Oi | 0 - 0.01 m    | Moist; Very weak consistence; 50-90%, fine gravelly, 2-6mm, Quartz, coarse fragments; AbundantDiffuse change to -   |
|----|---------------|---|
| A1 | 0.01 - 0.06 m | Dark brown (7.5YR3/2-Moist); ; Sandy clay loam; Massive grade of structure; Moist; Very weak consistence; 50-90%, fine gravelly, 2-6mm, Quartz, coarse fragments; Abundant          |
|    | 0.06 - 0.13 m | Brown (7.5YR4/2-Moist); ; Sandy medium clay; Massive grade of structure; Very weak consistence; 50-90%, fine gravelly, 2-6mm, Quartz, coarse fragments; Abundant                    |
| В  | 0.13 - 0.23 m | Reddish brown (5YR4/4-Moist); ; Heavy clay; Massive grade of structure; Moist; Very weak consistence; 50-90%, fine gravelly, 2-6mm, Quartz, coarse fragments; Common                |
| В  | 0.23 - 0.34 m | Reddish brown (5YR4/4-Moist); , 5YR46, 2-10%; , 2-10%; Heavy clay; Massive grade of structure; Moist; Very weak consistence; 50-90%, Gravel, coarse fragments; Common               |
| В  | 0.34 - 0.46 m | Reddish brown (5YR4/4-Moist); , 5YR46; Heavy clay; Massive grade of structure; Moist; Very weak consistence; 50-90%, Gravel, coarse fragments; Common, coarse (>5mm) roots;         |
|    | 0.48 - 0.64 m | Yellowish red (5YR4/6-Moist); ; Heavy clay; Massive grade of structure; Weak consistence; 20-50%, Gravel, coarse fragments;   |
|    | 0.64 - 0.76 m | Yellowish red (5YR4/6-Moist); ; Heavy clay; Massive grade of structure; Weak consistence; 20-50%, Gravel, coarse fragments;   |
| С  | 0.81 - 0.97 m | Yellowish red (5YR4/6-Moist); , 10YR56; , 10YR81; Heavy clay; Massive grade of structure; Moist; Very weak consistence; 20-50%, medium gravelly, 6-20mm, Granite, coarse fragments; |
|    | 1.6 - 1.7 m   | Yellowish brown (10YR5/6-Moist); , 10YR81; , 5YR64; Heavy clay; Massive grade of structure; Very weak consistence; 20-50%, medium gravelly, 6-20mm, Granite, coarse fragments;      |
|    |               |   |

Organic Layer: Black (10YR2/1-Moist): Sandy clay loam (Light): Massive grade of structure:

### **Morphological Notes**

#### **Observation Notes**

81-170CM CLAY WITH DECOMPOSING GRANITE:48-170CM MICA FLAKES INCREASING DOWN PROFILE:

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DEVON

# Site Notes

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| <u>Laboratory Test Results:</u> |       |              |             |                  |              |             |                       |          |          |       |                   |     |
|---------------------------------|-------|--------------|-------------|------------------|--------------|-------------|-----------------------|----------|----------|-------|-------------------|-----|
| Depth                           | pН    | 1:5 EC       |             | nangeable<br>//g | Cations<br>K | Ex<br>Na    | changeable<br>Acidity | CEC      | E        | CEC   | ES                | SP  |
| m                               |       | dS/m         |             | 9                |              | Cmol (+)/   |                       |          |          |       | %                 | •   |
| 0 - 0.01                        | 5.2A  |              | 0.011       | 4.5              | 0.40         | 0.00        | 40.711                |          | 0        | 0. 4D |                   |     |
| 0.01 - 0.06                     | 5.2A  |              | 2.6H        | 1.5              | 0.42         | 0.09        | 16.7H<br>25.8E        |          | 3        | 0.4B  |                   |     |
| 0.06 - 0.13                     | 5.1A  |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.13 - 0.23                     | 5A    |              | 0.62H       | 0.33             | 0.29         | 0.05        | 10.3H<br>17.3E        |          | 1        | 8.6B  |                   |     |
| 0.23 - 0.34                     | 4.7A  |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.34 - 0.46                     | 4.6A  |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.48 - 0.64                     | 4.8A  |              | 0.26H       | 0.13             | 0.32         | 0.06        | 11H<br>19.1E          |          | 1        | 9.9B  |                   |     |
| 0.64 - 0.76                     | 4.9A  |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.81 - 0.97                     | 4.9A  |              |             |                  |              |             |                       |          |          |       |                   |     |
| 1.6 - 1.7                       | 5.2A  |              |             |                  |              |             |                       |          |          |       |                   |     |
| Depth                           | CaCO3 | Organic<br>C | Avail.<br>P | Total<br>P       | Total<br>N   | Total<br>K  | Bulk<br>Density       | Pa<br>GV | rticle S |       | nalysis<br>Silt C | lav |
| m                               | %     | %            | mg/kg       | %                | %            | %           | Mg/m3                 |          |          | %     |                   |     |
|                                 |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.01 - 0.06                     |       | 4.2D         |             | 0.025            |              |             |                       | 29       | 35D      | 19    | 13                | 27  |
| 0.06 - 0.13                     |       | 2.7D         |             |                  | 0.13         |             |                       |          |          |       |                   |     |
| 0.13 - 0.23                     |       |              |             | 0.018            | 0.10         | )2A         |                       | 62       | 33D      | 17    | 10                | 37  |
| 0.23 - 0.34                     |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.34 - 0.46                     |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.48 - 0.64                     |       |              |             |                  |              |             |                       | 29       | 22D      | 14    | 9                 | 50  |
| 0.64 - 0.76                     |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.81 - 0.97                     |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 1.6 - 1.7                       |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| Depth                           | COLE  |              | Grav        | imetric/Vo       | lumetric W   | /ater Conte | ents                  |          | K sat    | K     | unsat             |     |
|                                 |       | Sat.         | 0.05 Bar    | 0.1 Bar          | 0.5 Bar      | 1 Bar       | 5 Bar 15 B            | Bar      |          |       |                   |     |
| m                               |       |              |             | g/               | g - m3/m3    | 3           |                       |          | mm/h     | •     | mm/h              |     |
| 0 - 0.01                        |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.01 - 0.06                     |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.06 - 0.13                     |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.13 - 0.23                     |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.23 - 0.34                     |       |              |             |                  |              |             |                       |          |          |       |                   |     |
| 0.24 0.40                       |       |              |             |                  |              |             |                       |          |          |       |                   |     |

0.23 - 0.34 0.34 - 0.46 0.48 - 0.64 0.64 - 0.76 0.81 - 0.97 1.6 - 1.7

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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 15E1\_MG Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts 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

Exchangeable hydrogen - meq per 100g of soil - Hydrogen By back titration of A or B 15G\_C\_H1 Hydrogen Cation - meq per 100g of soil - 1M KCl Exch. Acidity By titration to pH 8.0 Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen) 15G1\_H 15J\_H

Loss on Ignition (%) 2\_LOI 2A1 Air-dry moisture content 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

Total nitrogen - semimicro Kjeldahl , automated colour 7A2

9A\_HCL Total element - P(%) - By boiling HCI

P10\_GRAV Gravel (%)

Clay (%) - Plummet balance P10\_PB\_C P10\_PB\_CS Coarse sand (%) - Plummet balance P10\_PB\_FS Fine sand (%) - Plummet balance P10\_PB\_Z Silt (%) - Plummet balance