Project Name: HEL

Project Code: HEL Site ID: H122 Observation ID: 1

Agency Name: CSIRO Division of Soils (TAS)

**Site Information** 

Desc. By: J. Loveday Locality: 1.6KM STH OF DOCTORS ROCKS:PROPERTY OF

PAT BUSBY:ON SLOPE FALLING SEAWARDS:

**Date Desc.:** 20/05/55 **Elevation:** 110 metres

 Map Ref.:
 Sheet No.: 8015
 1:100000
 Rainfall:
 1000

 Northing/Long.:
 145.780555555556
 Runoff:
 Moderately rapid

 Easting/Lat.:
 -41.0291666666667
 Drainage:
 Moderately well drained

Geology

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

 Geol. Ref.:
 No Data
 Substrate Material:
 Basalt

**Land Form** 

Rel/Slope Class:Undulating hills 90-300m 3-Pattern Type:PlateauMorph. Type:Simple-slopeRelief:152 metresElem. Type:HillslopeSlope Category:Gently inclinedSlope:5.2 %Aspect:No Data

Surface Soil Condition (dry):

**Erosion:** 

**Soil Classification** 

Australian Soil Classification:Mapping Unit:N/AHaplic Eutrophic Red FerrosolPrincipal Profile Form:Gn3.11ASC Confidence:Great Soil Group:Krasnozem

Analytical data are incomplete but reasonable confidence. **Site Disturbance:** Cultivation. Irrigated, past or present

**Vegetation:** 

**Surface Coarse Fragments:** 

**Profile Morphology** 

<u> </u>	0 - 0.08 m	Dark reddish brown (5YR3/3-Moist); ; Clay loam; Strong grade of structure, 2-5 mm, Subangular blocky; Weak consistence; Many
	0.08 - 0.15 m	Dark reddish brown (5YR3/3-Moist); ; Clay loam; Strong grade of structure, 5-10 mm, Subangular blocky; Weak consistence; Common
	0.15 - 0.23 m	Dark reddish brown (5YR3/3-Moist); ; Light clay; Strong grade of structure, 5-10 mm, Subangular blocky; Weak consistence; Very few (0 - 2 %), Unidentified, , ; CommonDiffuse change to -
	0.23 - 0.38 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Weak consistence; Very few (0 - 2 %), Unidentified, , ; FewDiffuse change to -
	0.46 - 0.61 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Very weak consistence; Very few (0 - 2 %), Unidentified, , ; Diffuse change to -
	0.61 - 0.84 m	Dark red (2.5YR3/6-Moist); , 10YR64; Heavy clay; Weak grade of structure, <2 mm, Angular blocky; Very weak consistence; Diffuse change to -
	0.84 - 1.02 m	Red (2.5YR4/6-Moist); , 10YR64; Heavy clay; Weak grade of structure, <2 mm, Angular blocky; Very weak consistence;
	1.12 - 1.27 m	Red (2.5YR4/6-Moist); , 10YR64; Heavy clay; Weak consistence;
	1.7 - 1.88 m	Red (2.5YR4/8-Moist); ; Heavy clay (Light); Weak consistence; , Unidentified, Coarse (6 - 20 mm), ;
	2.34 - 2.59 m	Strong brown (7.5YR5/8-Moist); ; Silty medium clay; Weak consistence; , Unidentified, Coarse $(6-20\ mm)$ , ;

## **Morphological Notes**

## **Observation Notes**

0-38CM WORM ACTIVITY:170-188CM COATINGS OF BLACK MATERIAL+ODD POCKETS OF HALLOYSITE:234-259CM BLACK INCLUSIONS PROMINENT

## **Site Notes**

WELLINGTON

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Laboratory Test Results:												
Depth	pН	1:5 EC		hangeable Mg	Cations K	E Na	Exchangeable Acidity	CEC	ECE	С	ESP	
m		dS/m		9		Cmol (+)					%	
0 - 0.08 0.08 - 0.15	5.9A 5.9A		16.5H	5.8	2.3	0.35	18H	37.7C	57.8	зв		
0.15 - 0.23	6A				1.9		32.8E	40C				
0.13 - 0.23	6.2A		12.1H	5.75	1.06	0.23	8.6H 18.2E	400	38.2	!B		
0.46 - 0.61 0.61 - 0.84	5.9A 5.3A		9.8H	7.9	0.13	0.31	12.5E	30.3C	31.6	iΒ		
0.84 - 1.02 1.12 - 1.27 1.7 - 1.88 2.34 - 2.59	5.1A 4.9A 4.6A 4.7A		5.5H	5.5		0.31	19.9E		31.3	В		
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Partic GV C		•	is Clay	
m	%	%	mg/kg	%	%	%	Mg/m3	0. 0.	%	O	Olay	
0 - 0.08 0.08 - 0.15 0.15 - 0.23 0.23 - 0.38 0.46 - 0.61 0.61 - 0.84 0.84 - 1.02		5.4D 5.6D 4.7D 1.8D 0.8D		0.146E 0.145E 0.074E	0.47 0.39	'8A 98A		<	1D 9	11 18 9 22 5 30	2 61	
1.12 - 1.27 1.7 - 1.88 2.34 - 2.59												
Depth	COLE	0.4			etric/Volumetric W				K sat	K uns	at	
m		Sat.	0.05 Bar		0.5 Bar g - m3/m3	1 Bar 3	5 Bar 15 I		nm/h	mm/l	h	
0 - 0.08 0.08 - 0.15 0.15 - 0.23 0.23 - 0.38 0.46 - 0.61 0.61 - 0.84 0.84 - 1.02 1.12 - 1.27 1.7 - 1.88 2.34 - 2.59												

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

15\_NR\_K Exch. basic cations (K++) - meq per 100g of soil - Not recorded

15D1\_CEC CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach

15E1\_CA

Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble 5E1\_K

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

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 Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen)

2\_LOI Loss on Ignition (%)
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

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

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