HEL **Project Name:**

Project Code: HEL Site ID: H137 Observation ID: 1

Agency Name: CSIRO Division of Soils (TAS)

Site Information

J. Loveday Locality: .8KM north of upper Natone:

Desc. By: Date Desc.: Elevation: 335 metres 22/02/56 Sheet No.: 8015 1:100000 Map Ref.: Rainfall: 1500 Northing/Long.: 145.90555555556 Runoff: Rapid Easting/Lat.: -41.22222222222 Drainage: Well drained

Geology

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

Geol. Ref.: **Substrate Material:** Auger boring, 1.8 m deep,Basalt No Data

Land Form

Rel/Slope Class: Gently undulating rises 9-30m Pattern Type: Plateau

1-3%

Simple-slope Morph. Type: Relief: 30 metres Slope Category: Elem. Type: Hillslope Very gently sloped

Slope: 0 % Aspect: No Data

Surface Soil Condition (dry): Soft

Erosion:

Soil Classification

Australian Soil Classification: Mapping Unit: N/A Gn4.11 Humose-Acidic Dystrophic Red Ferrosol **Principal Profile Form: ASC Confidence: Great Soil Group:** Krasnozem

All necessary analytical data are available.

Site Disturbance: Complete clearing. Pasture, native or improved, but never cultivated

Vegetation:

Tall Strata - Tree, , Isolated plants. *Species includes - Eucalyptus obliqua

Surface Coarse Fragments:

Profile Morphology							
A	0 - 0.08 m	Reddish brown (5YR4/4-Moist); ; Clay loam; Strong grade of structure, <2 mm, Subangular blocky; Moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, Basalt, coarse fragments; Diffuse change to -					
Α	0.08 - 0.15 m	Reddish brown (5YR4/4-Moist); ; Clay loam; Strong grade of structure, <2 mm, Subangular blocky; Moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, Basalt, coarse fragments; Clear change to -					
В	0.15 - 0.28 m	Red (2.5YR4/5-Moist); ; Heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, Basalt, coarse fragments; Very few (0 - 2 %), Unidentified, Medium (2 -6 mm), Concretions; Diffuse change to -					
В	0.28 - 0.41 m	Red (2.5YR4/5-Moist); ; Heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; 20-50%, fine gravelly, 2-6mm, Basalt, coarse fragments; Many (20 - 50 %), Unidentified, Medium (2 -6 mm), Concretions; Diffuse change to -					
В	0.41 - 0.53 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; 50-90%, fine gravelly, 2-6mm, Basalt, coarse fragments; Very many (50 - 100 %), Unidentified, Medium (2 -6 mm), Concretions; Diffuse change to -					
В	0.53 - 0.74 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Moist; Weak consistence; 50-90%, fine gravelly, 2-6mm, Basalt, coarse fragments; Very many (50 - 100 %), Unidentified, Medium (2 -6 mm), Concretions; Diffuse change to -					
В	0.81 - 0.97 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Massive grade of structure; Moist; Weak consistence; 2-10%, cobbly, 60-200mm, Basalt, coarse fragments; Diffuse change to -					
ВС	0.97 - 1.09 m	Yellowish red (5YR4/6-Moist); ; Heavy clay; Massive grade of structure; Moist; Weak consistence; 2-10%, cobbly, 60-200mm, Basalt, coarse fragments; Diffuse change to -					
С	1.17 - 1.37 m	Yellowish brown (10YR5/6-Moist); , 10YR52; Heavy clay; Massive grade of structure; Moist; Weak consistence; 50-90%, cobbly, 60-200mm, Basalt, coarse fragments;					
	1.68 - 1.78 m	Dark greyish brown (10YR4/2-Moist); ; Very strong consistence; 50-90%, Basalt, coarse fragments;					

Project Name: HEL

Project Code: HEL Site ID: H1: Agency Name: CSIRO Division of Soils (TAS) Site ID: H137 Observation ID: 1

1.78 - 1.88 m ;

Morphological Notes

On decomposing basalt:

Observation Notes

81-168CM BL STAINING ON WEATHERED BASALT GV:168-178CM COMPACT (BL STAINED) DECOMPOSED BASALT:

Site Notes

UPPER NATONE

Observation ID: 1

Project Name: HEL
Project Code: HEL Site ID: H137
Agency Name: CSIRO Division of Soils (TAS)

Laboratory Test Results	L	abora	torv	Test	Res	ults:
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<u>Laboratory Test Results:</u>												
Depth	рН	1:5 EC		nangeable Mg	Cations K	E: Na	xchangeable Acidity	CEC	E	CEC	E	SP
m		dS/m		J		Cmol (+)/					%	b
0 - 0.08	5.3A		6.4H	0.7	0.25	0.24	19.8H 43.2E		5	0.8B		
0.08 - 0.15	5.2A		5.8H	0.24	0.11	0.05	22.7H 44.5E		5	0.7B		
0.15 - 0.28	5.1A											
0.28 - 0.41	5.2A		1.5H	0.33	0.15	0.1	13.1H 29.3E		3	1.4B		
0.41 - 0.53	5.1A											
0.53 - 0.74	5A											
0.81 - 0.97	4.7A											
0.97 - 1.09	4.7A											
1.17 - 1.37	4.7A		0.29H	0.09	0.13	0.13	14.5H 29.6E		3	0.2B		
1.68 - 1.78	4.8A											
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Pai GV	rticle S	ize Ar FS	nalysis Silt C	lav
m	%	%	mg/kg	%	%	%	Mg/m3			%		,
0 - 0.08		6.6D		0.1690	0.49	92A		8	5B	8	16	56
0.08 - 0.15		6.2D		0.158	0.44	19A		3	5B	9	18	55
0.15 - 0.28		3.5D			0.26	64A						
0.28 - 0.41		2.2D		0.141	0.16	67A		50	14B	7	13	65
0.41 - 0.53		1.7D									_	
0.53 - 0.74												
0.81 - 0.97												
0.97 - 1.09												
1.17 - 1.37				0.258)			25	11B	17	24	44
1.68 - 1.78				0.2002				0				•
Depth COLE Gravimetric/Volumetric Water Con							_	K sat	к	unsat		
m		Sat.	0.05 Bar		0.5 Bar g - m3/m	1 Bar 3	5 Bar 15	Bar	mm/h	ı	mm/h	
0 - 0.08												
0.08 - 0.15												
0.15 - 0.28												
0.28 - 0.41												
0.41 - 0.53												
0.53 - 0.74												
0.81 - 0.97												
0.97 - 1.09												
1.17 - 1.37												
1.68 - 1.78												
-												

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Laboratory Analyses Completed for this profile

12_HCL_FE Total element - Fe(%) - Total acid(HCl) extractable Fe

13C1_FE Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon

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

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_GRAV Gravel (%) P10A1_C Clay (%) - Pipette

P10A1_CS Coarse sand (%) - Pipette
P10A1_FS Fine sand (%) - Pipette
P10A1_Z Silt (%) - Pipette