Project Name: HEL
Project Code: HEL **Site ID:** H147 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (TAS)

Site Information

Desc. By: J. Loveday
Date Desc.: 24/03/56
Map Ref.: Sheet No. : 8015 1:100000
Northing/Long.: 145.980555555556
Easting/Lat.: -41.1
Locality: 2KM south of Heybridge 4.8KM north of Cuprona:
Elevation: 152 metres
Rainfall: 990
Runoff: Rapid
Drainage: Well drained

Geology

ExposureType: Soil pit
Geol. Ref.: No Data
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Basalt

Land Form

Rel/Slope Class: Gently undulating rises 9-30m 1-3%
Morph. Type: Simple-slope
Elem. Type: Hillslope
Slope: 5.2 %
Pattern Type: Plateau
Relief: 15 metres
Slope Category: Gently inclined
Aspect: No Data

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:
Haplic Eutrophic Red Ferrosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn4.11
Great Soil Group: Krasnozem

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A	0 - 0.08 m	Dark reddish brown (5YR3/4-Moist); ; Clay loam; Strong grade of structure, 2-5 mm, Subangular blocky; Moist; Weak consistence; Diffuse change to -
A	0.08 - 0.18 m	Dark reddish brown (5YR3/4-Moist); ; Clay loam; Strong grade of structure, 2-5 mm, Subangular blocky; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, Basalt, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Concretions; Clear change to -
B	0.2 - 0.28 m	Yellowish red (5YR3/5-Moist); ; Medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, Basalt, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Concretions; Diffuse change to -
B	0.28 - 0.36 m	Yellowish red (5YR3/5-Moist); ; Medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, Basalt, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Concretions; Diffuse change to -
B	0.36 - 0.48 m	Dark red (2.5YR3/5-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moist; Weak consistence; 0-2%, Basalt, coarse fragments; , Unidentified, Fine (0 - 2 mm), Concretions; Diffuse change to -
B	0.48 - 0.61 m	Dark red (2.5YR3/5-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, Basalt, coarse fragments; , Unidentified, Fine (0 - 2 mm), Concretions; Diffuse change to -
B	0.61 - 0.76 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Massive grade of structure; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, Basalt, coarse fragments; Diffuse change to -
	0.76 - 0.91 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Massive grade of structure; Weak consistence; 2-10%, fine gravelly, 2-6mm, Basalt, coarse fragments; Diffuse change to -
	0.91 - 1.19 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Massive grade of structure; Weak consistence; 2-10%, fine gravelly, 2-6mm, Basalt, coarse fragments;
	1.57 - 1.68 m	Yellowish red (5YR4/6-Moist); ; Light clay; 50-90%, Basalt, coarse fragments;
	2.44 - 2.54 m	Yellowish brown (10YR5/6-Moist); , 5YR54; Very strong consistence; 50-90%, Basalt, coarse fragments;

Morphological Notes

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Observation Notes
244-254CM COMPACT DECOMPOSED BA WITH SOME CLAY:36-254CM BL STAINING ON BA GRAVELS:

Site Notes
BURNIE

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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 - 0.08	5.5A		10.9H	1.4	0.63	0.21	16.3H 34.4E		47.5B	
0.08 - 0.18	5.6A									
0.2 - 0.28	5.9A		9.35H	1.2	0.55	0.13	9.9H 22.7E		33.9B	
0.28 - 0.36	6A									
0.36 - 0.48	6.1A									
0.48 - 0.61	6A									
0.61 - 0.76	6.1A		5.2H	1.6	0.28	0.13	7.1H 15.1E		22.3B	
0.76 - 0.91	6.3A									
0.91 - 1.19	6.4A									
1.57 - 1.68	5.2A									
2.44 - 1.54	4.8A									

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 - 0.08		4.7D		0.14D	0.46A				2B	9	14	61
0.08 - 0.18		3.8D		0.11D	0.381A							
0.2 - 0.28		2.6D		0.08D	0.244A			1	2B	11	14	67
0.28 - 0.36												
0.36 - 0.48		1.8D			0.189A							
0.48 - 0.61												
0.61 - 0.76		0.6D		0.056D				1	3D	9	13	69
0.76 - 0.91												
0.91 - 1.19												
1.57 - 1.68												
2.44 - 1.54												

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 - 0.08										
0.08 - 0.18										
0.2 - 0.28										
0.28 - 0.36										
0.36 - 0.48										
0.48 - 0.61										
0.61 - 0.76										
0.76 - 0.91										
0.91 - 1.19										
1.57 - 1.68										
2.44 - 1.54										

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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
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
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