Project Name: HEL

Project Code: Site ID: H119 Observation ID: 1 HEL

Agency Name: CSIRO Division of Soils (TAS)

Site Information

K.D. Nicholls Desc. By: Locality: 3 chains east of Waratah Highway A:6KM south of

Yolla:

Date Desc.: 19/05/55 Elevation: 332 metres Map Ref.: Sheet No.: 8015 1:100000 Rainfall: 1440 Northing/Long.: 145.7125 Runoff: Moderately rapid Drainage: Moderately well drained

Easting/Lat.: -41.1375

Geology

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

Geol. Ref.: No Data **Substrate Material:** 2.4 m deep,Basalt

Land Form

Rel/Slope Class: Gently undulating plains <9m Pattern Type: Plateau

1-3%

Simple-slope Morph. Type: Relief: No Data Plain Slope Category: Gently inclined Elem. Type: No Data Slope: 0 % Aspect:

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification: N/A **Mapping Unit:** Humose-Acidic Dystrophic Red Ferrosol **Principal Profile Form:** Gn3.11 **ASC Confidence: Great Soil Group:** Krasnozem

All necessary analytical data are available.

<u>Site Disturbance:</u> Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments:

Profile Morphology

0 - 0.1 m

0 0.1111	Subangular blocky; Weak consistence; Clear change to -
0.13 - 0.23 m	Brown (7.5YR4/4-Moist); ; Light clay; Strong grade of structure, 5-10 mm, Angular blocky; Weak consistence;
0.23 - 0.38 m	Brown (7.5YR4/4-Moist); ; Heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Weak consistence; Very few (0 - 2 %), Unidentified, Fine (0 - 2 mm), Concretions;
0.38 - 0.53 m	Reddish brown (5YR4/4-Moist); ; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Weak consistence; Very few (0 - 2 %), Unidentified, Fine (0 - 2 mm), Concretions;
0.53 - 0.69 m	Reddish brown (5YR4/4-Moist); ; Heavy clay; Weak grade of structure, <2 mm, Angular blocky; Weak consistence; Very few (0 - 2 %), Unidentified, Fine (0 - 2 mm), Concretions;
0.69 - 0.89 m	Reddish brown (5YR4/4-Moist); ; Heavy clay; Weak grade of structure, <2 mm, Angular blocky; Weak consistence;
0.89 - 1.07 m	Reddish brown (5YR4/4-Moist); ; Heavy clay; Weak grade of structure, <2 mm, Angular blocky; Weak consistence;
1.27 - 1.37 m	Reddish brown (5YR4/4-Moist); ; Heavy clay; Weak consistence; 0-2%, Charcoal, coarse fragments; Few (2 - 10 %), Unidentified, , Concretions;
1.83 - 1.96 m	Reddish brown (5YR4/4-Moist); ; Light clay; Weak consistence; Few (2 - 10 %), Unidentified, Fine (0 - 2 mm), Concretions;
2.34 - 2.39 m	Reddish brown (5YR4/4-Moist); ; Heavy clay; Very weak consistence;
2.39 - 2.49 m	;

Dark yellowish brown (10YR3/4-Moist); Clay loam; Strong grade of structure, <2 mm,

Morphological Notes

Parent material (probably basalt floater):

Observation Notes

0-46CM WORM ACTIVITY:

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WELLINGTON

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<u>Laboratory Test Results:</u>												
Depth	рН	1:5 EC		nangeable ⁄Ig	Cations K	E Na	xchangeable Acidity	CEC	ECEC	ESP		
m		dS/m		9		Cmol (+)				%		
0 - 0.1	6A		16.4H	3	0.49	0.3	14.7H 34.4E		54.6B			
0.13 - 0.23 0.23 - 0.38	5.1A 4.9A		3.9H 1.1H	2.2 1.6	0.3 0.29	0.18 0.14	38E 21H		44.6B 40.8B			
0.38 - 0.53 0.53 - 0.69	4.9A 4.9A		0.55H	0.95	0.38	0.16	37.7E 20.7H	25.5C	33.5B			
0.69 - 0.89	4.9A 4.7A		0.55⊓	0.95	0.36	0.16	31.5E		33.3D			
0.89 - 1.07 1.27 - 1.37	4.8A 4.8A											
1.83 - 1.96 2.34 - 2.39	4.7A 4.7A		0.11K	1.3	0.09	0.14	33.6E		35.2B			
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV CS		nalysis Silt Clay		
m	%	%	mg/kg	%	%	%	Mg/m3	0. 00	%	· · · · · · · · · · · · · · · · · · ·		
0 - 0.1 0.13 - 0.23		7.6D 4.6D		0.139E 0.098E		-		21	В 7	16 64		
0.23 - 0.38 0.38 - 0.53		3D 1.4D		0.092		69A		21	B 7	15 72		
0.53 - 0.69 0.69 - 0.89 0.89 - 1.07 1.27 - 1.37 1.83 - 1.96 2.34 - 2.39		0.7D		0.102		7.07.1		21	B 12	18 66		
Depth	COLE		Grav	imetric/Vo	olumetric V	Vater Cont	ents	K	sat K	(unsat		
m		Sat.	0.05 Bar		0.5 Bar g - m3/m	1 Bar 3	5 Bar 15 E		m/h	mm/h		
0 - 0.1 0.13 - 0.23 0.23 - 0.38												

0.38 - 0.53

0.53 - 0.69 0.69 - 0.89

0.89 - 1.07 1.27 - 1.37 1.83 - 1.96 2.34 - 2.39

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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
15_NR_CA
Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded
15_NR_K
Exch. basic cations (K++) - meq per 100g of soil - Not recorded
15_NR_MG
Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded
15_NR_NA
Exch. basic cations (Na++) - 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
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
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

P10A1_C Clay (%) - Pipette
P10A1_CS Coarse sand (%) - Pipette
P10A1_FS Fine sand (%) - Pipette
P10A1_Z Silt (%) - Pipette

XRD_C_Gt Geothite - X-Ray Diffraction
XRD_C_Ka Kaolin - X-Ray Diffraction
XRD_C_Qz Quartz - X-Ray Diffraction