Project Name: MEA
Project Code: MEA **Site ID:** H180 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (TAS)

Site Information

Desc. By:	K.D. Nicholls	**Locality:**	4.1KM south east of Deloraine:pit is 111M from west fence and 76M fromsouth fence of paddock:
Date Desc.:	04/10/58	**Elevation:**	305 metres
Map Ref.:		**Rainfall:**	990
Northing/Long.:	146.679166666667	**Runoff:**	Rapid
Easting/Lat.:	-41.5555555555556	**Drainage:**	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:	No Data	**Pattern Type:**	No Data
Morph. Type:	No Data	**Relief:**	No Data
Elem. Type:	No Data	**Slope Category:**	Very gently sloped
Slope:	0 %	**Aspect:**	No Data

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:
Humose-Acidic Mesotrophic Red Ferrosol
ASC Confidence:
All necessary analytical data are available.

Mapping Unit: N/A
Principal Profile Form: Gn3.11
Great Soil Group: Krasnozem

Site Disturbance: No effective disturbance. Natural

Vegetation:

Mid Strata - Tree, , Very sparse. *Species includes - Acacia species
Tall Strata - Tree, 20.01-35m, . *Species includes - Eucalyptus viminalis

Surface Coarse Fragments:

Profile Morphology

A1	0.01 - 0.08 m	Dark reddish brown (2.5YR2/4-Moist); ; Clay loam; Strong grade of structure, <2 mm, Granular; Moist; Weak consistence; 10-20%, coarse gravelly, 20-60mm, subangular, Gravel, coarse fragments; Common (10 - 20 %), Ferruginous, Medium (2 -6 mm), Nodules; Diffuse change to -
	0.08 - 0.16 m	Dark reddish brown (2.5YR3/4-Moist); ; Clay loam; Strong grade of structure, <2 mm, Granular; Weak consistence; 2-10%, coarse gravelly, 20-60mm, subangular, Gravel, coarse fragments; Common (10 - 20 %), Ferruginous, Medium (2 -6 mm), Nodules; Clear change to -
	0.16 - 0.3 m	Dark red (2.5YR3/6-Moist); ; Light clay; Moderate grade of structure, <2 mm, Granular; Weak consistence; 10-20%, coarse gravelly, 20-60mm, subangular, Gravel, coarse fragments; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Diffuse change to -
	0.3 - 0.46 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Weak grade of structure, <2 mm, Granular; Massive grade of structure; Weak consistence; 10-20%, coarse gravelly, 20-60mm, subangular, Gravel, coarse fragments; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Diffuse change to -
	0.46 - 0.61 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Weak grade of structure, <2 mm, Granular; Massive grade of structure; Weak consistence; 2-10%, coarse gravelly, 20-60mm, subangular, Gravel, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Diffuse change to -
	0.61 - 0.74 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Weak grade of structure, <2 mm, Granular; Massive grade of structure; Weak consistence; 10-20%, coarse gravelly, 20-60mm, subangular, Gravel, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Diffuse change to -
	0.74 - 0.94 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Weak grade of structure, <2 mm, Granular; Massive grade of structure; Weak consistence; 10-20%, cobbly, 60-200mm, subangular, Gravel, coarse fragments; Diffuse change to -
	0.94 - 1.27 m	Dark red (2.5YR3/6-Moist); ; Heavy clay; Weak grade of structure, <2 mm, Granular; Massive grade of structure; Weak consistence; 20-50%, subangular, Gravel, coarse fragments; Diffuse change to -

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1.78 - 1.83 m Yellowish red (5YR4/8-Moist); ; Silty clay loam; Very strong consistence; 20-50%, subangular, Gravel, coarse fragments;

1.83 - 1.93 m ;

Morphological Notes

On moderately hard highly decomposed basalt:

Observation Notes

74-127CM CLAY WITH POCKETS OF VERY W`D BA OR SOFT LATERITE:178-183CM ZCL GROUND UP FROM HARD W`D ROCK:

Site Notes

QUAMBY

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations Ca	Mg	K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0.01 - 0.08	5.7A	0.804A	25.9H	2	2.2	0.12	24.4H 53.4E		83.6B	
0.08 - 0.16	5.7A	0.417A	13.3H	0.7	1.1	0.08	17.3H 41.6E		56.8B	
0.16 - 0.3	5.8A	0.292A								
0.3 - 0.46	5.4A	0.289A	2H	0.49	0.72	0.03	4.4H 16.3E		19.5B	
0.46 - 0.61	5.1A	0.244A					2H			
0.61 - 0.84	5.1A	0.173A	0.76H	0.82	0.09	0.37	3.8H 9.2E		11.3B	
0.74 - 0.94	5.8A	0.095A								
0.94 - 1.27	6A	0.098A	0.72H	0.97	0.03	1.2	3.6H 9.6E		12.5B	
1.78 - 1.83	5.9A	0.083A								

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			%		
0.01 - 0.08		13.1D		0.141D	0.822A			12	5B	16	20	28
0.08 - 0.16		7.2D		0.126D	0.444A			9	5B	19	18	36
0.16 - 0.3		3.3D			0.204A							
0.3 - 0.46		1.8D		0.081D	0.105A			18	3B	18	19	55
0.46 - 0.61		1.01D			0.054A							
0.61 - 0.84		0.81D		0.091D	0.04A			16	5D	24	24	42
0.74 - 0.94												
0.94 - 1.27								18	3B	26	22	45
1.78 - 1.83												

Depth	COLE	Gravimetric/Volumetric Water Contents Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	K sat	K unsat
m		g/g - m3/m3							mm/h	mm/h
0.01 - 0.08										
0.08 - 0.16										
0.16 - 0.3										
0.3 - 0.46										
0.46 - 0.61										
0.61 - 0.84										
0.74 - 0.94										
0.94 - 1.27										
1.78 - 1.83										

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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
3A1	EC of 1:5 soil/water extract
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
XRD_C_Gb	Gibbsite - X-Ray Diffraction
XRD_C_Hm	Hematite - X-Ray Diffraction
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction