Project Name: **Hardsetting Soils**
Project Code: **HS** **Site ID:** **CP292** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: C.J. Chartres
Date Desc.: 01/01/92
Map Ref.: Sheet No. : 8327 1:100000
Northing/Long.: 6094050 AMG zone: 55
Easting/Lat.: 513500 Datum: AGD66
Locality: Southeast of 'The Rock'
Elevation: No Data
Rainfall: No Data
Runoff: No Data
Drainage: No Data

Geology

ExposureType: Undisturbed soil core
Geol. Ref.: No Data
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: No Data

Land Form

Rel/Slope Class: No Data
Morph. Type: Mid-slope
Elem. Type: Hillslope
Slope: %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: 45 degrees

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:
N/A
ASC Confidence:
Confidence level not specified
Mapping Unit: N/A
Principal Profile Form: N/A
Great Soil Group: N/A

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.12 m	Brown (7.5YR5/4-Moist); ; Silty loam; Moderate grade of structure, <2 mm, Granular; Weak consistence; Many
A2	0.12 - 0.27 m	Light brown (7.5YR6/4-Moist); ; Silty loam; Moderate grade of structure, 2-5 mm, Platy; Weak consistence; Common
AB	0.27 - 0.43 m	Reddish yellow (7.5YR6/6-Moist); , 10YR54; Silty loam; Weak grade of structure, 5-10 mm, Subangular blocky; Weak consistence; Few
B21t	0.43 - 0.7 m	Yellowish brown (10YR5/4-Moist); , 7.5YR66, 10-20% , 5-15mm, Distinct; Silty clay loam; Weak grade of structure, 5-10 mm, Subangular blocky; Weak consistence; Few
B22t	0.7 - 0.95 m	Yellowish brown (10YR5/6-Moist); , 10YR62, 10-20% , 5-15mm, Distinct; Silty clay; Weak grade of structure, 5-10 mm, Subangular blocky; Firm consistence; Few
B23t	0.95 - 1.45 m	Yellowish brown (10YR5/6-Moist); , 10YR62, 10-20% , 5-15mm, Distinct; Silty clay; Weak grade of structure, <2 mm, Platy; Weak consistence;
BC1	1.45 - 1.9 m	Yellowish brown (10YR5/6-Moist); , 10YR62, 10-20% , 5-15mm, Distinct; Silty clay loam; Massive grade of structure; Weak consistence;
BC2	1.9 - 2.35 m	Yellowish brown (10YR5/6-Moist); , 10YR62, 10-20% , 5-15mm, Distinct; Silty clay; Massive grade of structure; Firm consistence;
BC3	2.35 - 2.8 m	Yellowish brown (10YR5/6-Moist); , 10YR62, 10-20% , 5-15mm, Distinct; Silty clay; Massive grade of structure; Firm consistence;

Morphological Notes

A2	American system, horizon is E. Vertical cracks through the core in the 12-95cm horizons probably represents coarse prismatic structure. 27-43 cm horizon is brittle and the roots are mainly in channels.
AB	American system, horizon is EB. Vertical cracks through the core in the 12-95cm horizons probably represents coarse prismatic structure.
B21t	American system, horizon is Bt1. Vertical cracks through the core in the 12-95cm horizons probably represents coarse prismatic structure.
B22t	American system, horizon is Bt2. Vertical cracks through the core in the 12-95cm horizons probably represents coarse prismatic structure.

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B23t	American system, horizon is Bt3.

Observation Notes

Soil Taxonomy: Aquic Palerealf, fine.

Site Notes

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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 - 0.12	5.22A	0.04A	0.32E	0.13	0.4	0				
0.12 - 0.27	5.52A	0.03A	0.6E	0.15	0.29	0				
0.27 - 0.43	6.13A	0.04A	1.7E	1.2	0.41	0.11				
0.43 - 0.7	6.64A	0.06A	3.3E	4.3	0.86	1				
0.7 - 0.95	7.23A	0.08A	4E	6.4	1.1	1.7				
0.95 - 1.45	8.38A	0.11A	4.4E	7.5	1.1	2.4				
1.45 - 1.9	8.9A	0.15A								
1.9 - 2.35	8.88A	0.17A								
2.35 - 2.8	8.88A	0.21A								

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 - 0.12		0.85C							13D	56	18	12
0.12 - 0.27		0.16C							15D	56	17	11
0.27 - 0.43									11D	46	17	26
0.43 - 0.7									6D	28	11	53
0.7 - 0.95									5D	26	9	57
0.95 - 1.45									5D	28	12	50
1.45 - 1.9												
1.9 - 2.35												
2.35 - 2.8												

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 - 0.12									
0.12 - 0.27									
0.27 - 0.43									
0.43 - 0.7									
0.7 - 0.95									
0.95 - 1.45									
1.45 - 1.9									
1.9 - 2.35									
2.35 - 2.8									

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Laboratory Analyses Completed for this profile

13A1_AL	Oxalate-extractable aluminium
13A1_FE	Oxalate-extractable iron
13A1_MN	Oxalate-extractable manganese
13A1_SI	Oxalate-extractable silicon
13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_SI	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15C1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_MG	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15I4	CEC measurement - titration of ammonium and chloride ions
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
6B3	Total organic carbon - high frequency induction furnace, infrared
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