

Project Name: Hardsetting Soils
Project Code: HS **Site ID:** CP299 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: C.J. Chartres	Locality: Several kilometres southeast of 'Yerong Creek'
Date Desc.: 01/01/92	Elevation: No Data
Map Ref.: Sheet No. : 8327 1:100000	Rainfall: No Data
Northing/Long.: 6081733 AMG zone: 55	Runoff: No Data
Easting/Lat.: 509133 Datum: AGD66	Drainage: No Data

Geology

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

Land Form

Rel/Slope Class: No Data	Pattern Type: No Data
Morph. Type: Mid-slope	Relief: No Data
Elem. Type: Hillslope	Slope Category: No Data
Slope: %	Aspect: 5 degrees

Surface Soil Condition (dry):

Erosion:

Soil Classification

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

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.18 m	Dark brown (7.5YR3/4-Moist); ; Loam; Moderate grade of structure, <2 mm, Granular; Weak consistence; Many (20 - 50 %), Manganiferous, , ; Many
A21	0.18 - 0.29 m	Light brown (7.5YR6/4-Moist); ; Sandy loam; Massive grade of structure; Weak consistence; Common (10 - 20 %), Manganiferous, , ; Common
A22	0.29 - 0.46 m	Light yellowish brown (10YR6/4-Moist); ; Sandy loam; Massive grade of structure; Weak consistence; Common
B21t	0.46 - 0.75 m	Strong brown (7.5YR5/6-Moist); , 10YR63, 10-20% , 5-15mm, Distinct; , 5YR58, 10-20% , 5-15mm, Distinct; Silty clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, Prismatic; Weak consistence; Few
B22t	0.75 - 1 m	Yellowish brown (10YR5/6-Moist); ; Silty clay loam; Weak grade of structure, 10-20 mm, Subangular blocky; Firm consistence;
B23t	1 - 1.5 m	Yellowish brown (10YR5/6-Moist); , 5YR56, 20-50% , 5-15mm, Distinct; , 10YR31; Silty clay; Massive grade of structure; Firm consistence;
	1.5 - 2 m	Yellowish brown (10YR5/6-Moist); , 10YR62; Silty clay; Massive grade of structure; Firm consistence;
	2 - 2.55 m	Yellowish brown (10YR5/6-Moist); ; Silty clay; Massive grade of structure; Firm consistence;
	2.55 - 2.7 m	Very pale brown (10YR7/4-Moist); White (10YR8/2-Dry); ; Sandy clay; Massive grade of structure; , Calcareous, , ;
	2.7 - 3 m	Yellowish brown (10YR5/4-Moist); , 7.5YR56, 20-50% , 5-15mm, Distinct; , 10YR62; Silty clay; Massive grade of structure; Firm consistence;

Morphological Notes

A1	Coarse fragments are mainly quartz except: 0-18 cm, 50% Mn; 0-29 cm, 20%Mn; 255-270, mostly carbonates.
A21	American system, horizon is E1.
A22	American system, horizon is E2. 29-46 and 46-75 cm horizons resemble a fragipan.
B21t	American system, horizon is Bt1. Texture is a gravelly SiCL. Fine sand and silt coatings (E horizon material) on prism faces.

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B22t American system, horizon is Bt2. Texture is a gravelly SiCL.
B23t American system, horizon is Bt3.
 No horizon given, called sample no. 7.
 No horizon given, called sample no. 8.
 No horizon given, called sample no. 9. Cemented material; does not slake in water.
 No horizon given, called sample no. 10.

Observation Notes

Soil Taxonomy, Aquic Palexeralf, fine.

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.18	5.79A	0.04A	1.6E	0.39	0.61	0.04				
0.18 - 0.29	6.41A	0.03A	1.7E	0.42	0.11	0.05				
0.29 - 0.46	7.03A	0.02A	1.2E	0.51	0.06	0.06				
0.46 - 0.75	7.32A	0.04A	6.7E	3.9	0.72	0.43				
0.75 - 1	8.15A	0.07A	7.5E	5.6	0.83	1.6				
1 - 1.5	8.48A	0.1A	7.7E	6.6	0.79	2.1				
1.5 - 2	8.91A	0.21A								
2 - 2.55	9.31A	0.32A								
2.55 - 2.7	9.64A	0.32A								
2.7 - 3	9.13A	0.22A								

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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 (Ca ²⁺ ,Mg ²⁺ ,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