

**Project Name:** Hardsetting Soils  
**Project Code:** HS **Site ID:** CP295 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

#### Site Information

<b>Desc. By:</b>	C.J. Chartres	<b>Locality:</b>	Approximately 4 km East of 'Yerong Creek', just south of the road.
<b>Date Desc.:</b>	01/01/92	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 8327 1:100000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6082900 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	509400 Datum: AGD66	<b>Drainage:</b>	No Data

#### Geology

<b>Exposure Type:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

#### Land Form

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

#### Surface Soil Condition (dry):

#### Erosion:

#### Soil Classification

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

#### Site Disturbance:

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.06 m	Dark brown (10YR3/3-Moist); ; Silty loam; Moderate grade of structure, <2 mm, Granular; Very weak consistence; Many
A12	0.06 - 0.22 m	Brown (10YR4/3-Moist); ; Silty loam; Massive grade of structure; Weak grade of structure, 10-20 mm, Subangular blocky; Weak consistence; Common
A13	0.22 - 0.3 m	Dark brown (10YR3/3-Moist); , 10YR54; Silty loam; Weak grade of structure, 10-20 mm, Subangular blocky; Massive grade of structure; Weak consistence; Common
B2w	0.3 - 0.47 m	Brown (7.5YR5/4-Moist); ; Silty clay loam; Weak grade of structure, 5-10 mm, Subangular blocky; Weak consistence; Common
2A1	0.47 - 0.5 m	Brown (7.5YR5/4-Moist); ; Silty clay loam; Weak grade of structure, 5-10 mm, Subangular blocky; Weak consistence; Common
2B21	0.5 - 0.62 m	Strong brown (7.5YR5/6-Moist); ; Silty clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Weak consistence; Few
2B22	0.62 - 0.85 m	Strong brown (7.5YR5/6-Moist); , 10YR52, 20-50% , 15-30mm, Distinct; Silty clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Firm consistence; Few
2B23	0.85 - 1 m	Strong brown (7.5YR5/6-Moist); , 10YR63, 20-50% , 5-15mm, Distinct; Silty clay; Weak grade of structure, 10-20 mm, Subangular blocky; Firm consistence; Few
2BC1	1 - 1.4 m	Strong brown (7.5YR4/6-Moist); , 10YR63, 10-20% , 5-15mm, Distinct; Silty clay; Massive grade of structure; Firm consistence;
2BC2	1.4 - 1.8 m	Yellowish red (5YR4/6-Moist); , 10YR63, 10-20% , 5-15mm, Distinct; Silty clay loam; Massive grade of structure; Firm consistence;
2BC3	1.8 - 2.4 m	Strong brown (7.5YR5/6-Moist); ; Silty clay loam; Massive grade of structure; Firm consistence;
2BC4	2.4 - 2.85 m	Brown (7.5YR5/4-Moist); , 10YR62, 10-20% , 5-15mm, Distinct; Silty clay loam; Massive grade of structure; Firm consistence;

#### Morphological Notes

A11 American system, horizon is A1.

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A12	American system, horizon is A2.	
A13	American system, horizon is A3.	
B2w	American system, horizon is Bw.	
2A1	American system, horizon is A+Eb.	
2B21	American system, horizon is Bb1.	
2B22	American system, horizon is Bb2.	
2B23	American system, horizon is Bb3.	
2BC1	American system, horizon is BCb1.	
2BC2	American system, horizon is BCb2.	
2BC3	American system, horizon is BCb3.	Texture is a gravelly SiCL.
2BC4	American system, horizon is BCb4.	Texture is a gravelly SiCL.

**Observation Notes**

Soil Taxonomy, Fluvaquentic Xerochrept, fine. Australian Soil Classification, may also be a buried Dermasol.

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.06	5.11A	0.08A	0.89E	0.22	0.44	0.07			
0.06 - 0.22	5.34A	0.04A	1.6E	0.23	0.22	0.11			
0.22 - 0.3	6.89A	0.04A	5.3E	0.68	0.23	0.17			
0.3 - 0.47	7.51A	0.03A	7.3E	0.93	0.17	0.06			
0.47 - 0.5	7.64A	0.04A	10.6E	1.8	0.36	0.01			
0.5 - 0.62	7.71A	0.04A	10.2E	2.1	0.37	0.01			
0.62 - 0.85	7.86A	0.05A	12.7E	3.7	0.14	0.56			
0.85 - 1	8.02A	0.06A	11.4E	4.5	0.09	0.6			
1 - 1.4	8.13A	0.06A	9.5E	5.9	0.17	0.6			
1.4 - 1.8	8.16A	0.05A							
1.8 - 2.4	8.18A	0.05A							
2.4 - 2.85	8.18A	0.05A							

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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
15C1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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