

Project Name: Warren Reservoir Catchment Survey
Project Code: WRN **Site ID:** 053 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (SA)

Site Information

Desc. By:	I. Hollingsworth	Locality:	
Date Desc.:	28/11/90	Elevation:	421 metres
Map Ref.:	1:10000	Rainfall:	No Data
Northing/Long.:	6158120 AMG zone: 54	Runoff:	Slow
Easting/Lat.:	318980 Datum: AGD66	Drainage:	Poorly drained

Geology

ExposureType:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	No Data	Substrate Material:	Undisturbed soil core, 2 m deep, Porous, Schist

Land Form

Rel/Slope Class:	Gently undulating rises 9-30m 1-3%	Pattern Type:	Rises
Morph. Type:	Open depression (vale)	Relief:	No Data
Elem. Type:	Drainage depression	Slope Category:	Gently inclined
Slope:	4 %	Aspect:	140 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Chromosol		Principal Profile Form:	Dy5.41
ASC Confidence:		Great Soil Group:	Lateritic podzolic soil
Confidence level not specified			

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation: Low Strata - Sod grass, <0.25m, Mid-dense. *Species includes - None recorded
Tall Strata - Tree, 12.01-20m, Mid-dense. *Species includes - Pinus radiata

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

O	0 - 0.01 m	Organic Layer; , 0-0% ; Single grain grade of structure; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Very weak consistence; Non-plastic; Non-sticky; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A2	0.01 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); , 0-0% ; Loamy sand; Massive grade of structure; Moderately moist; Loose consistence; Non-plastic; Non-sticky; 2-10%, fine gravelly, 2-6mm, rounded, dispersed, Ironstone, coarse fragments; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Clear, Smooth change to -
A21	0.1 - 0.2 m	Brown (10YR5/3-Moist); Light yellowish brown (10YR6/4-Dry); , 2.5YR46, 0-2% , 0-5mm, Faint; Loamy sand; Weak grade of structure; Moist; Loose consistence; Non-plastic; Non-sticky; 20-50%, fine gravelly, 2-6mm, rounded, stratified, Ironstone, coarse fragments; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Abrupt, Wavy change to -
A22	0.2 - 0.3 m	Brown (10YR5/3-Moist); Light grey (10YR7/2-Dry); , 2.5YR46, 0-2% , 0-5mm, Faint; Loamy sand; Moderate grade of structure; Wet; Very firm consistence; Non-plastic; Non-sticky; 20-50%, fine gravelly, 2-6mm, rounded, stratified, Ironstone, coarse fragments; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Abrupt, Wavy change to -
Bt	0.3 - 0.4 m	Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/4-Dry); , 7.5YR58, 10-20% , 5-15mm, Distinct; , 5YR58; Medium clay; Strong grade of structure; Strong consistence; Very plastic; Normal plasticity; Moderately sticky; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Abrupt, Smooth change to -
Bt	0.4 - 0.5 m	Yellowish brown (10YR5/6-Moist); , 10YR68, 10-20% , 5-15mm, Distinct; , 2.5YR48; Light medium clay; Very plastic; Normal plasticity; Moderately sticky; Field pH 6 (Raupach); Common, fine (1-2mm) roots; Abrupt, Smooth change to -
Bt	0.5 - 0.6 m	Yellowish brown (10YR5/6-Moist); , 10YR68, 10-20% , 5-15mm, Distinct; , 2.5YR48; Light medium clay; Single grain grade of structure; Very strong consistence; Very plastic; Normal plasticity; Moderately sticky; Field pH 6 (Raupach); Common, fine (1-2mm) roots; Abrupt, Smooth change to -

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BC	0.6 - 0.8 m	Light grey (10YR7/2-Moist); , 10YR68, 2-10% , 15-30mm, Distinct; , 2.5YR36; Light clay; Single grain grade of structure; Loose consistence; Very plastic; Normal plasticity; Moderately sticky; Field pH 6 (Raupach); Few, fine (1-2mm) roots; Clear, Wavy change to -
Cr	0.8 - 1 m	White (10YR8/1-Moist); , 7.5YR58, 0-2% , 5-15mm, Prominent; Clay loam; Single grain grade of structure; Loose consistence; Moderately plastic; Normal plasticity; Slightly sticky; Field pH 6 (Raupach);
Cr	1 - 2 m	White (10YR8/1-Moist); , 7.5YR58, 0-2% , 5-15mm, Prominent; Clay loam; Moderately plastic; Normal plasticity; Slightly sticky; Field pH 6 (Raupach);

Morphological Notes

Observation Notes

Site Notes

A1415

Observation ID: 1

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable Acidity		CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Cmol (+)/kg			%
0 - 0.01										
0.01 - 0.1	4.8C 4.9A	0.14A	1.14D	0.91	0.16	0.34		2.9K	2.6D	11.72
0.1 - 0.2	4.9C 5.1A	0.08A	0.64D	0.63	0.06	0.23		2.2K	1.6D	10.45
0.2 - 0.3	4.9C 5.1A	0.09A	0.67D	0.81	0.12	0.25		2.5K	1.9D	10.00
0.3 - 0.4	5C 5.1A	0.48A	4.2D	6.96	0.28	1.5	0.08A	12.9K	13D	11.63
0.4 - 0.6	5.4C 5.2A	0.91A	3.38D	7.47	0.39	1.67	0.01A	13.4K	12.9D	12.46
0.5 - 1	4.7C 4.8A	1.34A	1.8D	5.67	0.07	2.23	0.11A	9.5K	9.8D	23.47
1 - 2	4.1C 4.3A	1.57A	1.6D	5.32	0.07	2.66	0.07A	8.9K	9.7D	29.89

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
		%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.01		9C			0.157D							
0.01 - 0.1		0.8C	5E		0.025D			44B	45	5	6	
0.1 - 0.2		0.3C	4E		0.013D			55B	34	5	5	
0.2 - 0.3		0.3C	4E		0.013D			60B	28	5	7	
0.3 - 0.4		0.9C			0D			10B	6	5	78	
0.4 - 0.6		0.5C			0D			3B	6	7	85	
0.5 - 1		0.1C			0D			15B	12	10	62	
1 - 2		0C			0D			13B	12	19	56	

[illegible]

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Laboratory Analyses Completed for this profile

15B2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15B2_K	Exchangeable bases and CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15B2_MG	Exchangeable bases and CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15B2_NA	Exchangeable bases and CEC - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15G1	Exchange acidity (hydrogen and aluminium) by 1M potassium chloride
15I3	CEC measurement - automated determination of ammonium and chloride ions
15J_BASES	Sum of Bases
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
4B2	pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1
5A2	Chloride - 1:5 soil/water extract, automated colour
6B3	Total organic carbon - high frequency induction furnace, infrared
7A5	Total nitrogen - high frequency induction furnace, thermal conductivity
9B2	Bicarbonate-extractable phosphorus - automated colour
P10A1_C	Clay (%) - Pipette
P10A1_CS	Coarse sand (%) - Pipette
P10A1_FS	Fine sand (%) - Pipette
P10A1_Z	Silt (%) - Pipette