

**Project Name:** 1968 ISSS Congress Tour  
**Project Code:** IS3      **Site ID:** A1003      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (SA)

**Site Information**

<b>Desc. By:</b>	G. Blackburn	<b>Locality:</b>	
<b>Date Desc.:</b>	05/12/66	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : SI54-9    1:250000	<b>Rainfall:</b>	0
<b>Northing/Long.:</b>	138.647222222222	<b>Runoff:</b>	Rapid
<b>Easting/Lat.:</b>	-34.975	<b>Drainage:</b>	No Data

**Geology**

<b>ExposureType:</b>	No Data	<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>	No Data	<b>Relief:</b>	152 metres
<b>Elem. Type:</b>	Fan	<b>Slope Category:</b>	No Data
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):**

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Haplic Calcic Red Dermosol	<b>Principal Profile Form:</b>	N/A
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	Red-brown earth
All necessary analytical data are available.		

**Site Disturbance:** Complete clearing. Pasture, native or improved, but never cultivated

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

0 - 0.05 m	Dark reddish brown (5YR3/3-Moist); ; Fine sandy loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Weak consistence; 2-10%, Gravel, coarse fragments; Few
0.05 - 0.1 m	Dark reddish brown (5YR3/4-Moist); ; Fine sandy loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Weak consistence; 2-10%, subangular, Gravel, coarse fragments; Few
0.1 - 0.15 m	Olive brown (2.5Y4/8-Moist); ; 5YR3/4; Fine sandy loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Weak consistence; 10-20%, coarse fragments; FewDiffuse change to
0.15 - 0.2 m	Dark reddish brown (5YR3/4-Moist); ; Fine sandy loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Weak consistence; 10-20%, subangular, Gravel, coarse fragments; Few, fine (1-2mm) roots;
0.2 - 0.26 m	Red (2.5YR4/8-Moist); ; Clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Weak consistence; 2-10%, Gravel, coarse fragments; Few, fine (1-2mm) roots; Sharp change
0.26 - 0.3 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 20-50 mm, Subangular blocky; Weak consistence; 0-2%, Gravel, coarse fragments; Few, coarse (>5mm) roots;
0.3 - 0.4 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Strong grade of structure, 20-50 mm, Subangular blocky; Weak consistence; 0-2%, Gravel, coarse fragments; Few, coarse (>5mm) roots;
0.4 - 0.5 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Strong grade of structure, 20-50 mm, Subangular blocky; Weak consistence; Common, coarse (>5mm) roots;
0.5 - 0.6 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Strong grade of structure, 50-100 mm, Subangular blocky; Firm consistence; 0-2%, angular, Gravel, coarse fragments; Common, coarse (>5mm) roots;
0.6 - 0.7 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 50-100 mm, Subangular blocky; Very firm consistence; 0-2%, Gravel, coarse fragments; Common, coarse (>5mm) roots;

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0.7 - 0.8 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 50-100 mm, Subangular blocky; Very firm consistence; 10-20%, Gravel, coarse fragments; Very few (0 - 2 %), Calcareous, , Soft segregations; Common, coarse (>5mm) roots;
0.8 - 0.9 m	Dark red (2.5YR3/6-Moist); , 2.5YR48; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 50-100 mm, Subangular blocky; Very firm consistence; 10-20%, Gravel, coarse fragments; Few (2 - 10 %), Calcareous, , Soft segregations; Few, coarse (>5mm) roots;
0.9 - 1 m	Yellowish red (5YR4/6-Moist); , 2.5YR36; Medium clay; Weak grade of structure, 5-10 mm, Subangular blocky; Weak grade of structure, 20-50 mm, Subangular blocky; Firm consistence; 2-10%, Gravel, coarse fragments; Common (10 - 20 %), Calcareous, , Soft segregations; Few, coarse (>5mm) roots;
1 - 1.1 m	Strong brown (7.5YR5/6-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 20-50 mm, Subangular blocky; Firm consistence; 2-10%, Gravel, coarse fragments; Common (10 - 20 %), Calcareous, , Soft segregations;
1.1 - 1.2 m	Yellowish brown (10YR5/6-Moist); , 7.5YR56; , 5YR46; Medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 20-50 mm, Subangular blocky; Firm consistence; 2-10%, Gravel, coarse fragments; Common (10 - 20 %), Calcareous, , Soft segregations; Few
1.2 - 1.3 m	Yellowish brown (10YR5/6-Moist); , 5YR46; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 50-100 mm, Subangular blocky; Firm consistence; Common (10 - 20 %), Calcareous, , Soft segregations; Few
1.3 - 1.4 m	Yellowish brown (10YR5/6-Moist); , 5YR48; , 2.5YR46; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 50-100 mm, Subangular blocky; Firm consistence; 0-2%, Gravel, coarse fragments; Common (10 - 20 %), Calcareous, , Soft segregations; Few
1.4 - 1.5 m	Strong brown (7.5YR5/6-Moist); , 5YR58; , 10YR56; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 50-100 mm, Subangular blocky; Firm consistence; 0-2%, Gravel, coarse fragments; Common (10 - 20 %), Calcareous, , Soft segregations; Few
1.5 - 1.6 m	Yellowish red (5YR4/6-Moist); , 7.5YR56; , 2.5YR46; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 50-100 mm, Subangular blocky; Very firm consistence; 2-10%, Gravel, coarse fragments; Common (10 - 20 %), Calcareous, , Soft segregations; Few
1.6 - 1.7 m	Yellowish red (5YR4/6-Moist); , 7.5YR56; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 50-100 mm, Subangular blocky; Strong consistence; 2-10%, Gravel, coarse fragments; Common (10 - 20 %), Calcareous, , Soft segregations; Few
1.7 - 1.8 m	Yellowish red (5YR4/6-Moist); , 7.5YR56; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 50-100 mm, Subangular blocky; Strong consistence; 10-20%, cobbly, 60-200mm, Gravel, coarse fragments; Common (10 - 20 %), Calcareous, , Soft segregations; Few

#### **Morphological Notes**

#### **Observation Notes**

#### **Site Notes**

WAITE ARBORETU

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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 - 0.05	5.9J 7H	0.047C	10K	1.5	2.3	0.31				
0.05 - 0.1	5.4J 6.5H	0.027C	7.8K	1.3	1.4	0.22				
0.1 - 0.15	5.6J 6.7H	0.034C	7.9K	1.2	1.2	0.14				
0.15 - 0.2	5.8J 6.9H	0.023C	7.8K	1.5	1.1	1.8				
0.2 - 0.26	6J 7.1H	0.028C	8.6K	1.9	1.2	0.17				
0.26 - 0.3	6.1J 7.2H	0.029C	11K	3.2	1.6	0.27				
0.3 - 0.4	6.3J 7.4H	0.033C								
0.4 - 0.5	6.7J 7.8H	0.077C	25K	7.7	2.9	0.54				
0.5 - 0.6	6.8J 7.9H	0.069C								
0.6 - 0.7	6.9J 8H	0.041C	23K	8.2	2.5	0.47				
0.7 - 0.8	6.8J 8H	0.033C								
0.8 - 0.9	7.2J 8.5H	0.072C	27K	7.5	1.7	0.34				
0.9 - 1	7.4H 8.6H	0.058C								
1 - 1.1	7.4H 8.8H	0.056C	24K	6.9	1.2	0.7				
1.1 - 1.2	7.4H 8.8H	0.058C								
1.2 - 1.3	7.4H 8.7H	0.063C								
1.3 - 1.4	7.4H 8.9H	0.067C	26K	10	1.4	0.61				
1.4 - 1.5	7.4H 8.8H	0.062C								
1.5 - 1.6	7.4H 8.8H	0.065C								
1.6 - 1.7	7.4H 8.8H	0.067C	24K	9.1	1	0.78				
1.7 - 1.8	7.3H 8.9H	0.07C								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.05		2.9E	21C		0.22B			1	8C	53	18	18
0.05 - 0.1			8C		0.13B			3	8C	55	19	19
0.1 - 0.15			6C		0.092B			4	8C	54	20	20
0.15 - 0.2			5C		0.074B			49	12C	49	18	22

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0.2 - 0.26			5C	0.066B	15	12C	46	14	29
0.26 - 0.3		0.7E	4C	0.073B	5	6C	39	9	45
0.3 - 0.4									
0.4 - 0.5	0.19C	0.6E	3C	0.078B	0	1C	12	0	79
0.5 - 0.6									
0.6 - 0.7	0.07C		3C	0.064B	6	3C	16	3	73
0.7 - 0.8									
0.8 - 0.9	4.2C		2C	0.04B	33	21C	21	7	44
0.9 - 1									
1 - 1.1	6.6C		2C	0.024B	11	5C	42	11	35
1.1 - 1.2									
1.2 - 1.3	14C				1	2C	28	12	42
1.3 - 1.4	13C		5C	0.019B	1	2C	26	12	42
1.4 - 1.5	21C				1	2C	28	12	37
1.5 - 1.6									
1.6 - 1.7	8.4C		1C	0.015B		3C	34	15	37
1.7 - 1.8									

[illegible]

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**Laboratory Analyses Completed for this profile**

15_NR_CA	Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded
15_NR_K	Exch. basic cations (K++) - meq per 100g of soil - Not recorded
15_NR_MG	Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded
15_NR_NA	Exch. basic cations (Na++) - meq per 100g of soil - Not recorded
19B_NR	Calcium Carbonate (CaCO <sub>3</sub> ) - Not recorded
2_LOI	Loss on Ignition (%)
2A1	Air-dry moisture content
3A_TSS	Electrical conductivity or soluble salts - Total soluble salts %
4_NR	pH of soil - Not recorded
4B_C_2.5	pH of soil - pH of 1:2.5 Soil/0.1M CaCl <sub>2</sub> suspension
5_NR	Water soluble Chloride - Cl(%) - Not recorded
6Z	Organic carbon (%) - Not recorded
7_NR	Total nitrogen (%) - Not recorded
9_NR	Available P (mg/kg) - Not recorded
P10_GRAV	Gravel (%)
P10_NR_C	Clay (%) - Not recorded
P10_NR_CS	Coarse sand (%) - Not recorded
P10_NR_FS	Fine sand (%) - Not recorded
P10_NR_Z	Silt (%) - Not recorded