

**Project Name:** Kaniva, Vic. (Gilgai Soils)  
**Project Code:** REG **Site ID:** A1064 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (VIC)

**Site Information**

<b>Desc. By:</b>	G. Blackburn	<b>Locality:</b>	
<b>Date Desc.:</b>	14/09/70	<b>Elevation:</b>	155 metres
<b>Map Ref.:</b>	Sheet No. : 7125 1:100000	<b>Rainfall:</b>	460
<b>Northing/Long.:</b>	141.35	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	-36.4666666666667	<b>Drainage:</b>	Moderately well drained

**Geology**

<b>ExposureType:</b>	Soil pit	<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>	Alluvial plain
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	5 metres
<b>Elem. Type:</b>	Plain	<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>	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>	Brown clay

**Site Disturbance:** No effective disturbance. Natural

**Vegetation:**

Tall Strata - Tree, 6.01-12m, Sparse. \*Species includes - None Recorded

**Surface Coarse Fragments:**

**Profile Morphology**

A	0 - 0.1 m	Yellowish brown (10YR5/4-Moist); ; Medium clay; Strong grade of structure, 2-5 mm, Granular; Very weak consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Soil matrix is Highly calcareous; Field pH 8 (pH meter); Many, fine (1-2mm) roots; Diffuse change to -
A	0.1 - 0.2 m	Yellowish brown (10YR5/4-Moist); , 10YR78, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 2-5 mm, Granular; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Very weak consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Common, very fine (0-1mm) roots; Diffuse change to -
B	0.2 - 0.3 m	Light yellowish brown (10YR6/4-Moist); , 10YR84, 2-10% , 5-15mm, Faint; , 2-10% , 5-15mm, Faint; Medium clay; Strong grade of structure, 2-5 mm, Angular blocky; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Very weak consistence; Many (20 - 50 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Common, very fine (0-1mm) roots; Diffuse change to -
B	0.3 - 0.4 m	Light yellowish brown (10YR6/4-Moist); , 10YR63, 2-10% , 5-15mm, Faint; , 10YR84, 2-10% , 5-15mm, Faint; Sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Very weak consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Abundant, very fine (0-1mm) roots; Diffuse change to -
B	0.4 - 0.5 m	Light yellowish brown (10YR6/4-Moist); , 10YR84, 0-2% ; , 0-2% ; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Very weak consistence; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Many, very fine (0-1mm) roots; Diffuse change to -
B	0.5 - 0.6 m	Light yellowish brown (10YR6/4-Moist); , 10YR84, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Common, very fine (0-1mm) roots; Diffuse change to -

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0.6 - 0.7 m	Light yellowish brown (10YR6/4-Moist); , 10YR84, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
0.7 - 0.8 m	Light yellowish brown (10YR6/4-Moist); , 10YR84, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Fine sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
0.8 - 0.9 m	Light yellowish brown (10YR6/4-Moist); , 5Y63, 2-10% , 15-30mm, Distinct; , 10YR84, 2-10% , 15-30mm, Distinct; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Few, very fine (0-1mm) roots;
0.9 - 1 m	Light yellowish brown (10YR6/4-Moist); , 10YR86, 2-10% , 15-30mm, Distinct; , 2-10% , 15-30mm, Distinct; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Clear change to -
1 - 1.1 m	Brownish yellow (10YR6/6-Moist); ; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Very firm consistence; Soil matrix is Moderately calcareous; Few, very fine (0-1mm) roots;
1.1 - 1.2 m	Brownish yellow (10YR6/6-Moist); ; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Slightly calcareous; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse change to -
1.2 - 1.3 m	Reddish yellow (7.5YR6/6-Moist); , 10YR72, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Firm consistence; Soil matrix is Slightly calcareous; Few, very fine (0-1mm) roots;
1.3 - 1.4 m	Reddish yellow (7.5YR6/6-Moist); , 10YR72, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Very weak consistence; Soil matrix is Slightly calcareous; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
1.4 - 1.5 m	Light yellowish brown (10YR6/4-Moist); , 2.5Y52, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Very weak consistence; Soil matrix is Slightly calcareous; Field pH 8.5 (pH meter); Few, fine (1-2mm) roots;
1.5 - 1.6 m	Brownish yellow (10YR6/6-Moist); , 2.5Y62, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Fine sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Very weak consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Slightly calcareous; Few, fine (1-2mm) roots; Diffuse change to -
1.6 - 1.7 m	Brownish yellow (10YR6/6-Moist); , 2.5Y74, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Very weak consistence; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Slightly calcareous; Field pH 8.5 (pH meter); Few, fine (1-2mm) roots;
1.7 - 1.8 m	Light grey (2.5Y7/2-Moist); , 7.5YR66, 20-50% , 5-15mm, Distinct; , 10YR84, 20-50% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Common (1-5 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Firm consistence; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter);
1.8 - 1.9 m	Light grey (2.5Y7/2-Moist); , 7.5YR66, 10-20% , 5-15mm, Distinct; , 10YR84, 10-20% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Common (1-5 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Firm consistence; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Soil matrix is Moderately calcareous; Clear change to -

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1.9 - 2 m                      Light grey (2.5Y7/2-Moist); , 7.5YR6/6, 2-10% , 5-15mm, Distinct; , 10YR8/4, 2-10% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Common (1-5 per 100mm<sup>2</sup>) Very fine (0.075-1mm) macropores, Very weak consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 8.5 (pH meter);

**Morphological Notes**

**Observation Notes**

**Site Notes**

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**Observation ID: 1**

**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 - 0.1	8.4H	0.072B	22K	12	1.9	1.4			
0.1 - 0.2	8.8H	0.097B	19K	13	1.7	1.9			
0.2 - 0.3	9H	0.078B	16K	14	1.5	2.5			
0.3 - 0.4	9H	0.096B							
0.4 - 0.5	9.1H	0.16B	11K	16	1.6	4.6			
0.5 - 0.6	9.1H	0.18B							
0.6 - 0.7	9.2H	0.24B	8K	17	1.6	7.5			
0.7 - 0.8	9.1H	0.35B							
0.8 - 0.9	9H	0.39B	5.8K	16	1.6	10			
0.9 - 1	9H	0.44B							
1 - 1.1	8.9H	0.51B	6.8K	16	1.6	10			
1.1 - 1.2	8.9H	0.49B							
1.2 - 1.3	8.8H	0.48B	5.7K	14	1.6	9.4			
1.3 - 1.4	8.7H	0.56B							
1.4 - 1.5	8.7H	0.54B	6.1K	16	1.7	10			
1.5 - 1.6	8.8H	0.56B							
1.6 - 1.7	8.9H	0.61B	8.2K	17	1.8	11			
1.7 - 1.8	8.9H	0.57B							
1.8 - 1.9	8.9H	0.54B	7.5K	16	1.7	10			
1.9 - 2	8.9H	0.55B							

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle		Size	Analysis	
								GV	CS		FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1	2.2C	1.2E			0.14B				11C	15	3	64
0.1 - 0.2	3.4C	0.56E			0.065B				11C	14	3	64
0.2 - 0.3	5.8C	0.34E			0.042B				11C	13	1	64
0.3 - 0.4	6.6C	0.29E			0.042B							
0.4 - 0.5	7.7C	0.25E			0.035B			10C	12	3	62	
0.5 - 0.6	9.2C	0.25E			0.031B							
0.6 - 0.7	8.9C	0.23E			0.032B			9C	13	2	62	
0.7 - 0.8	9.1C	0.24E			0.3B							
0.8 - 0.9	6.8C	0.36E			0.037B			10C	13	3	62	
0.9 - 1	5C	0.22E			0.028B							
1 - 1.1	3.2C	0.18E			0.025B			12C	14	3	63	
1.1 - 1.2	0.96C	0.17E			0.023B							
1.2 - 1.3	0.45C	0.18E			0.023B			18C	22	2	52	
1.3 - 1.4	0.15C	0.17E			0.02B							
1.4 - 1.5	0.24C	0.14E			0.016B			21C	23	1	50	
1.5 - 1.6	0.69C	0.13E			0.016B							
1.6 - 1.7	8.5C	0.12E			0.016B			15C	18	1	54	
1.7 - 1.8	5.5C	0.12E			0.016B							
1.8 - 1.9	6C	0.12E			0.015B			17C	20	2	50	
1.9 - 2	7C	0.12E			0.011B							

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0.1 - 0.2  
0.2 - 0.3  
0.3 - 0.4  
0.4 - 0.5  
0.5 - 0.6  
0.6 - 0.7  
0.7 - 0.8  
0.8 - 0.9  
0.9 - 1  
1 - 1.1  
1.1 - 1.2  
1.2 - 1.3  
1.3 - 1.4  
1.4 - 1.5  
1.5 - 1.6  
1.6 - 1.7  
1.7 - 1.8  
1.8 - 1.9  
1.9 - 2

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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
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - Not recorded
5_NR	Water soluble Chloride - Cl(%) - Not recorded
6Z	Organic carbon (%) - Not recorded
7_NR	Total nitrogen (%) - Not recorded
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