Project Name: **Kaniva, Vic. (Gilgai Soils)**
Project Code: **REG** **Site ID:** **A1065** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (VIC)**

Site Information

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

Geology

ExposureType: Soil pit
Geol. Ref.: No Data
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: No Data

Land Form

Rel/Slope Class: No Data
Morph. Type: No Data
Elem. Type: No Data
Slope: 0 %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: No Data

Surface Soil Condition (dry): Hardsetting, Cracking

Erosion:

Soil Classification

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

A1	0 - 0.05 m	Dark greyish brown (2.5Y4/2-Moist); Greyish brown (2.5Y5/2-Dry); ; Fine sandy clay loam; Weak grade of structure, 5-10 mm, Granular; Many (>5 per 100mm2) macropores, Weak consistence; Field pH 5.5 (pH meter); Abundant, very fine (0-1mm) roots; Clear change to -
A2	0.05 - 0.1 m	Greyish brown (10YR5/2-Moist); Light brownish grey (2.5Y6/2-Dry); , 2.5Y82, 10-20% , 5-15mm, Distinct; , 10YR81, 10-20% , 5-15mm, Distinct; Sandy clay loam (Light); Weak grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm2) macropores, Strong consistence; Field pH 6 (pH meter); Abundant, very fine (0-1mm) roots; Clear change to -
A2/B	0.1 - 0.2 m	Dark greyish brown (10YR4/2-Moist); , 2.5Y54, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Very strong consistence; Many, very fine (0-1mm) roots; Diffuse change to -
B	0.2 - 0.3 m	Light yellowish brown (10YR6/4-Moist); , 10YR51, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm2) macropores, Very firm consistence; Field pH 7.5 (pH meter); Many, very fine (0-1mm) roots; Diffuse change to -
B	0.3 - 0.4 m	Brown (10YR5/3-Moist); , 10YR52, 10-20% , 5-15mm, Faint; , 10-20% , 5-15mm, Faint; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Very firm consistence; Common, very fine (0-1mm) roots; Diffuse change to -
B	0.4 - 0.5 m	Yellowish brown (10YR5/4-Moist); , 2.5Y52, 2-10% , 5-15mm, Faint; , 2-10% , 5-15mm, Faint; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Very firm consistence; Field pH 8.3 (pH meter); Many, very fine (0-1mm) roots; Diffuse change to -
	0.5 - 0.6 m	Yellowish brown (10YR5/4-Moist); , 10YR74, 2-10% , 5-15mm, Faint; , 2-10% , 5-15mm, Faint; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm2) macropores, Very firm consistence; Few (2 - 10 %), Calcareous, , 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); , 10YR52, 2-10% , 5-15mm, Faint; , 2-10% , 5-15mm, Faint; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm2) macropores, Very firm consistence; Soil matrix is Slightly calcareous; Field pH 8.5 (pH meter); Common, very fine (0-1mm) roots; Diffuse change to -
0.7 - 0.8 m	Brown (7.5YR5/4-Moist); , 10YR86, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm2) 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 -
0.8 - 0.9 m	Brownish yellow (10YR6/6-Moist); , 10YR61, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Few (<1 per 100mm2) macropores, Firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Common, very fine (0-1mm) roots; Clear change to -
0.9 - 1 m	Brownish yellow (10YR6/6-Moist); , 10YR52, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Common, very fine (0-1mm) roots; Diffuse change to -
1 - 1.1 m	Reddish yellow (7.5YR6/6-Moist); , 2.5Y62, 20-50% , 0-5mm, Distinct; , 20-50% , 0-5mm, Distinct; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Soil matrix is Slightly calcareous; Common, very fine (0-1mm) roots; Diffuse change to -
1.1 - 1.2 m	Brownish yellow (10YR6/6-Moist); , 2.5Y62, 20-50% , 5-15mm, Prominent; , 7.5YR56, 20-50% , 5-15mm, Prominent; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Common (1-5 per 100mm2) macropores, Firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Field pH 9 (pH meter); Diffuse change to -
1.2 - 1.3 m	Reddish yellow (7.5YR7/6-Moist); , 5Y73, 20-50% , 5-15mm, Faint; , 5Y84, 20-50% , 5-15mm, Faint; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Common (1-5 per 100mm2) macropores, Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Slightly calcareous; Diffuse change to -
1.3 - 1.4 m	Light yellowish brown (10YR6/4-Moist); , 2.5Y72, 20-50% , 5-15mm, Distinct; , 7.5YR56, 20-50% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Common (1-5 per 100mm2) macropores, Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 8.5 (pH meter); Diffuse change to -
1.4 - 1.5 m	Light reddish brown (5YR6/3-Moist); , 10YR74, 20-50% , 5-15mm, Faint; , 20-50% , 5-15mm, Faint; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Common (1-5 per 100mm2) macropores, Very firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Diffuse change to -
1.5 - 1.6 m	Pale yellow (2.5Y7/4-Moist); , 7.5YR66, 10-20% , 5-15mm, Faint; , 10-20% , 5-15mm, Faint; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Many (20 - 50 %), Calcareous, Fine (0 - 2 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Diffuse change to -
1.6 - 1.7 m	Light yellowish brown (2.5Y6/4-Moist); , 2.5Y82, 10-20% , 5-15mm, Distinct; , 7.5YR66, 10-20% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Weak consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Diffuse change to -
1.7 - 1.8 m	Light brownish grey (2.5Y6/2-Moist); , 7.5YR66, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy light clay; Moderate grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Diffuse change to -
1.8 - 1.9 m	Pale olive (5Y6/3-Moist); , 7.5YR66, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy light clay; Moderate grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Weak consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Soil matrix is Moderately calcareous; Few, very fine (0-1mm) roots; Diffuse change to -

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1.9 - 2 m	Pale olive (5Y6/3-Moist); , 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy light clay; Moderate grade of structure, 20-50 mm, Angular blocky; Many (>5 per 100mm2) macropores, Weak consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Soil matrix is Slightly calcareous; Few, very fine (0-1mm) roots;

Morphological Notes

Observation Notes

Site Notes

LOWAN

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.05	6.7H	0.053B	4.4K	3.4	0.76	0.77				
0.05 - 0.1	7.9H	0.13B	3.6K	3.3	0.39	1.1				
0.1 - 0.2	7.9H	0.13B	8.4K	9.6	1.1	3.5				
0.2 - 0.3	8.4H	0.15B								
0.3 - 0.4	8.7H	0.19B	9.7K	13	1.3	6.3				
0.4 - 0.5	8.8H	0.18B								
0.5 - 0.6	8.9H	0.28B	7.8K	14	1.5	7.5				
0.6 - 0.7	8.9H	0.34B								
0.7 - 0.8	8.9H	0.41B	5.9K	15	1.5	9.1				
0.8 - 0.9	8.8H	0.46B								
0.9 - 1	8.7H	0.41B	5.6K	10	7.1	6.8				
1 - 1.1	8.8H	0.46B								
1.1 - 1.2	8.5H	0.5B	7.3K	16	1.7	9.4				
1.2 - 1.3	8.7H	0.51B								
1.3 - 1.4	8.9H	0.48B	6.8K	14	1.4	7.8				
1.4 - 1.5	8.9H	0.51B								
1.5 - 1.6	8.9H	0.52B	7.5K	14	1.4	8.1				
1.6 - 1.7	9H	0.52B								
1.7 - 1.8	8.8H	0.55B	8.3K	15	1.5	9.1				
1.8 - 1.9	8.8H	0.56B								
1.9 - 2	8.8H	0.57B	8.5K	16	1.5	9.4				

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis			
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.05	0C	2.6E			0.17B				24C	29	10	32
0.05 - 0.1	0.35C	1.1E			0.61B				28C	35	9	24
0.1 - 0.2	0.32C	0.61E			0.049B				15C	20	3	56
0.2 - 0.3	0.52C	0.45E			0.052B							
0.3 - 0.4	0.52C	0.44E			0.045B				12C	16	3	63
0.4 - 0.5	0.077C	0.36E			0.038B							
0.5 - 0.6	1.2C	0.34E			0.031B				14C	21	3	56
0.6 - 0.7	0.37C	0.25E			0.025B							
0.7 - 0.8	1.2C	0.19E			0.025B				11C	16	5	62
0.8 - 0.9	0.46C	0.18E			0.023B							
0.9 - 1	0.095C	0.12E			0.016B				20C	24	2	50
1 - 1.1	0.43C	0.13E			0.015B							
1.1 - 1.2	0.042C	0.12E			0.014B				18C	22	1	54
1.2 - 1.3	0.18C	0.11E			0.13B							
1.3 - 1.4	8.5C	0.098E			0.014B				19C	23	1	45
1.4 - 1.5	5.9C	0.1E			0.012B							
1.5 - 1.6	5.6C	0.1E			0.013B				21C	24	2	44
1.6 - 1.7	6.7C	0.11E			0.013B							
1.7 - 1.8	2.9C	0.11E			0.013B				21C	22	2	47
1.8 - 1.9	4.2C	0.12E			0.014B							
1.9 - 2	6.5C	0.13E			0.014B				18C	20	1	50

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m		g/g - m3/m3							mm/h	mm/h

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0 - 0.05
0.05 - 0.1
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 (CaCO3) - 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 recordede
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