Project Name: CAN

Project Code: CAN Site ID: CP128 Observation ID: 1

Agency Name: CSIRO Division of Soils (VIC)

**Site Information** 

Desc. By: C.L. Watson Locality: Wimmera Highway:Lallat Plains

<u>Geology</u>

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

**Land Form** 

Rel/Slope Class: Gently undulating plains <9m Pattern Type: Plain

1-3%

Morph. Type: Flat Relief: No Data

Elem. Type: Plain Slope Category: Very gently sloped

Slope: <1 % Aspect: No Data

Surface Soil Condition (dry): Soft, Recently cultivated

**Erosion:** 

**Soil Classification** 

Australian Soil Classification:Mapping Unit:N/AEpicalcareous-Endohypersodic Self-Mulching Black VertosolPrincipal Profile Form:Ug5.16

ASC Confidence: Great Soil Group: Black earth

Analytical data are incomplete but reasonable confidence.

Site Disturbance: Cultivation. Rainfed

Vegetation: Low Strata - Sod grass, 0.26-0.5m, Closed or dense. \*Species includes - Triticum aestivum

Surface Coarse Fragments: No surface coarse fragments

**Profile Morphology** 

0 - 0.06 m Very dark greyish brown (10YR3/2-Moist); ; Light medium clay; Strong grade of structure, <2 mm, Granular; Weak consistence; Few (2 - 10 %), Calcareous, , Soft segregations; Sharp change to

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0.06 - 0.12 m Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Massive grade of structure; Weak consistence; Moderately plastic; Few (2 - 10 %), Calcareous, , Soft segregations; Field pH 8

(pH meter); Sharp change to -

0.12 - 0.2 m Brown (7.5YR4/2-Moist); , 10YR32, 0-2%; , 0-2%; Medium heavy clay; Massive grade of

structure; Weak consistence; Moderately plastic; Few (2 - 10 %), Calcareous, , Soft

segregations; Field pH 8.3 (pH meter); Sharp change to -

0.2 - 0.36 m Very dark greyish brown (10YR3/2-Moist); , 7.5YR42, 2-10%; , 2-10%; Medium heavy clay;

Strong grade of structure, 2-5 mm; Weak consistence; Moderately plastic; Very few (0 - 2 %),

Calcareous, , Soft segregations; Field pH 8.5 (pH meter); Sharp change to -

0.36 - 0.4 m Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Strong grade of structure, 2-5

mm, Angular blocky; Weak consistence; Moderately plastic; Very few (0 - 2 %), Calcareous,

Soft segregations; Field pH 8.7 (pH meter);

0.4 - 0.5 m Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Strong grade of structure, 2-5

mm, Angular blocky; Weak consistence; Moderately plastic; Very few (0 - 2 %), Calcareous, ,

Soft segregations: Field pH 8.8 (pH meter):

0.5 - 0.6 m Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Strong grade of structure, 2-5

mm, Angular blocky; Weak consistence; Moderately plastic; Very few (0 - 2 %), Calcareous, ,

Soft segregations; Field pH 8.9 (pH meter);

0.6 - 0.7 m Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Strong grade of structure, 2-5

mm, Angular blocky; Weak consistence; Moderately plastic; Very few (0 - 2 %), Calcareous, ,

Soft segregations; Field pH 9.1 (pH meter); Sharp change to -

0.7 - 0.8 m Very dark greyish brown (10YR3/2-Moist); , 5YR54, 2-10%; , 2-10%; Medium heavy clay; Strong

grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50

%), Calcareous, , Concretions; Field pH 9.2 (pH meter);

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0.8 - 0.9 m	Very dark greyish brown (10YR3/2-Moist); , 5YR54, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 9.2 (pH meter); Sharp change to -
0.9 - 1 m	Brown (7.5YR5/4-Moist); ; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 9.1 (pH meter); Gradual change to -
1 - 1.1 m	Brown (7.5YR5/4-Moist); , 10YR63, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Concretions; Field pH 8.9 (pH meter);
1.1 - 1.2 m	Brown (7.5YR5/4-Moist); , 10YR63, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.9 (pH meter);
1.2 - 1.3 m	Pale brown (10YR6/3-Moist); , 7.5YR54, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Concretions; Field pH 8.8 (pH meter);
1.3 - 1.4 m	Pale brown (10YR6/3-Moist); , 7.5YR54, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.8 (pH meter);
1.4 - 1.5 m	Pale brown (10YR6/3-Moist); , 7.5YR54, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Concretions; Field pH 8.7 (pH meter);
1.5 - 1.6 m	Pale brown (10YR6/3-Moist); , 7.5YR54, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.7 (pH meter);
1.6 - 1.7 m	Pale brown (10YR6/3-Moist); , 7.5YR54, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Concretions; Field pH 8.7 (pH meter);
1.7 - 1.8 m	Pale brown (10YR6/3-Moist); , 7.5YR54, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.7 (pH meter);
1.8 - 1.9 m	Pale brown (10YR6/3-Moist); , 7.5YR54, 2-10%; , 2-10%; Medium heavy clay; Strong grade of structure, 2-5 mm, Angular blocky; Weak consistence; Moderately plastic; Many (20 - 50 %), Calcareous, , Concretions; Field pH 8.7 (pH meter);

**Morphological Notes Observation Notes** 

Site Notes RUPANYUP

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Laboratory Test Results:	
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Depth	рН	1:5 EC		changeable	Cations K	E Na	Exchangeable	e CEC	ECEC	ESP ESP
m		dS/m	Са	Mg	ĸ	Cmol (+)	Acidity )/kg			%
0 - 0.06 0.06 - 0.12 0.12 - 0.2 0.2 - 0.36 0.36 - 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	8A 8.3A 8.5A 8.7A 8.8A 8.9A 9.1A 9.2A 9.1A 8.9A 8.9A 8.8A 8.7A 8.7A 8.7A 8.7A	0.14A 0.1A 0.07A 0.09A 0.22A 0.16A 0.47A 1.4A 1.6A 1.7A 1.8A 1.8A 1.8A 1.8A 2.1A		6.4	3.3	0.83	7.6B	49J		1.69
Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Par	rticle Size	Analysis
m	%	С %	P mg/kg	Р	N %	K %	Density Mg/m3	/ GV	CS FS %	Silt Clay
0 - 0.06 0.06 - 0.12 0.12 - 0.2 0.2 - 0.36 0.36 - 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	0.2A	1.28D							7D 2	20 11 58
Depth	COLE	Sat.		vimetric/Vo		/ater Cont 1 Bar		15 Bar	K sat	K unsat
m				g/	g - m3/m3	3			mm/h	mm/h
0 - 0.06								0.26B		

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0.06 - 0.12 0.12 - 0.2 0.2 - 0.36

0.2 - 0.36 0.36 - 0.4 0.4 - 0.5 0.5 - 0.6 0.6 - 0.7 0.7 - 0.8 0.8 - 0.9

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

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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\_CEC CEC - meq per 100g of soil - Not recorded

15\_NR\_KExch. basic cations (K++) - meq per 100g of soil - Not recorded15\_NR\_MGExch. basic cations (Mg++) - meq per 100g of soil - Not recorded15\_NR\_NAExch. basic cations (Na++) - meq per 100g of soil - Not recorded

15G\_C\_AL1 Exchangeable aluminium - meq per 100g of soil - Aluminium By difference of C and A or B

19A1 Carbonates - rapid titration
2A1 Air-dry moisture content
3A1 EC of 1:5 soil/water extract
4A1 pH of 1:5 soil/water suspension

5A2 Chloride - 1:5 soil/water extract, automated colour

6A1\_UC Organic carbon (%) - Uncorrected Walkley and Black method

P10\_PB\_C
P10\_PB\_CS
Clay (%) - Plummet balance
Coarse sand (%) - Plummet balance
P10\_PB\_FS
P10\_PB\_Z
Clay (%) - Plummet balance
Fine sand (%) - Plummet balance
Silt (%) - Plummet balance

P3B\_GV\_15 15 BAR Moisture g/g - Gravimetric using pressure plate