Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed230** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By:	M. Korevaar	**Locality:**	V.T.(Vic) Melbourne, Yarral
Date Desc.:	01/05/85	**Elevation:**	200 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	**Rainfall:**	No Data
Northing/Long.:	6655680 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	751060 Datum: AGD66	**Drainage:**	No Data

Geology

ExposureType:	Undisturbed soil core	**Conf. Sub. is Parent. Mat.:**	No Data
Geol. Ref.:	No Data	**Substrate Material:**	No Data

Land Form

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

Surface Soil Condition (dry): Surface crust, Recently cultivated

Erosion:

Soil Classification

Australian Soil Classification:
N/A
ASC Confidence:
Confidence level not specified

Mapping Unit: N/A
Principal Profile Form: Ug5.15
Great Soil Group: Grey clay

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.09 m	Dark brown (7.5YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); , 10YR21, 0-2% , 0-5mm, Distinct; Light medium clay; Moderate grade of structure, 2-5 mm, Granular; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Field pH 8.4 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
A12p	0.09 - 0.29 m	Dark brown (7.5YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Light medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Field pH 8.4 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
B21	0.29 - 0.55 m	Very dark greyish brown (10YR3/2-Moist); , 10YR61, 0-2% , 0-5mm, Distinct; Medium clay; Massive grade of structure; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, rounded tabular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.6 (pH meter); Few, very fine (0-1mm) roots;
B22	0.55 - 1 m	Dark brown (10YR3/3-Moist); , 10YR41, 0-2% , 0-5mm, Distinct; , 10YR31, 0-2% , 5-15mm, Faint; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, coarse gravelly, 20-60mm, rounded tabular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B23	1 - 1.9 m	Dark yellowish brown (10YR3/4-Moist); , 10YR31, 2-10% , 0-5mm, Distinct; , 10YR62, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots;

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B24	1.9 - 2.75 m	Dark greyish brown (10YR4/2-Moist); , 5YR56, 0-2% , 5-15mm, Prominent; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Soft segregations; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter);

Morphological Notes

A11p Field pH's estimated from lab pH's.

Observation Notes

Parent Rock: alluvial sediment, clay, parna on fourth fan, Namoi

Site Notes

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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 - 0.02	8.43A	0.131A	19.19B	10.1	1.74	0.65				
0 - 0.09	8.51A	0.105A	19.78B	9.46	1.46	0.55				
0.1 - 0.2	8.49A	0.084A	19.77B	9.219999	1.45	0.53				
0.3 - 0.4	8.82A	0.116A	20.32B	11.39	0.89	0.97				
0.7 - 0.8	9.34A	0.248A	16.13B	14.2	0.52	3.6				
1.2 - 1.3	9.35A	0.235A	14.39B	14.59	0.73	4.89				
2.5 - 2.6	9.29A	0.225A	15.16B	12.73	0.58	4.51				

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 - 0.02	<0.1B	1.1C									20.7	53.4
0 - 0.09	0.1B	1.37C	49.6J								21.7	51.5
0.1 - 0.2	0.2B	1.19C	51.8J								22.1	50.6
0.3 - 0.4	0.7B	0.9C	23J								21.7	54.6
0.7 - 0.8	2B	0.55C	9.1J								25.3	56.9
1.2 - 1.3	0.4B	0.3C	23J								25.4	56.8
2.5 - 2.6	0.3B	0.28C	23.7J								23.9	52.4

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
0 - 0.02									
0 - 0.09									
0.1 - 0.2									
0.3 - 0.4									
0.7 - 0.8									
1.2 - 1.3									
2.5 - 2.6									

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_K	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_MG	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_NA	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
19B1	Carbonates - manometric
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
6B3	Total organic carbon - high frequency induction furnace, infrared
7B1	Water soluble nitrate - automated colour
9B1	Bicarbonate-extractable phosphorus - manual colour
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method