Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed180** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By:	M. Korevaar	**Locality:**	stock route, at Yarral
Date Desc.:	06/03/85	**Elevation:**	202 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	**Rainfall:**	No Data
Northing/Long.:	6653800 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	752300 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): Self-mulching

Erosion:

Soil Classification

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

Mapping Unit: N/A
Principal Profile Form: Ug6.1
Great Soil Group: Brown clay

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.08 m	Very dark greyish brown (10YR3/2-Moist); Dark grey (10YR4/1-Dry); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Field pH 6 (pH meter); Few, fine (1-2mm) roots; Clear, Smooth change to -
A12	0.08 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); Dark grey (10YR4/1-Dry); ; Medium heavy clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Field pH 6.5 (pH meter); Few, fine (1-2mm) roots;
A13	0.25 - 0.4 m	Very dark grey (10YR3/1-Moist); Dark grey (10YR4/1-Dry); ; Medium heavy clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Field pH 7 (pH meter); Few, fine (1-2mm) roots; Gradual, Smooth change to -
A14	0.4 - 0.78 m	Very dark greyish brown (10YR3/2-Moist); , 10YR42, 20-50% , 15-30mm, Distinct; Medium clay; Weak grade of structure, 100-200 mm, Angular blocky; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B2k	0.78 - 1.2 m	Brown (10YR4/3-Moist); , 10YR83, 2-10% , 5-15mm, Prominent; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.3 (pH meter); Common, very fine (0-1mm) roots; Diffuse, Smooth change to -
C1	1.2 - 1.9 m	Brown (10YR4/3-Moist); , 10YR83, 2-10% , 0-5mm, Prominent; , 10YR32, 2-10% , 15-30mm, Distinct; Fine sandy light clay; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.1 (pH meter); Few, very fine (0-1mm) roots;
C2	1.9 - 3 m	Dark yellowish brown (10YR4/4-Moist); , 10YR42, 2-10% , 5-15mm, Distinct; Silty clay loam; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Field pH 7.8 (pH meter);

Morphological Notes

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Observation Notes

Parent Rock: , , second terraced 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	6.86A	0.204A	16.82B	7.03	4.16	<0.01				
0 - 0.08	6.41A	0.102A	14.1B	8.08	2.76	0.23				
0.1 - 0.2	7.33A	0.057A	19.23B	9.57	1	0.53				
0.3 - 0.4	7.88A	0.087A	20.56B	11.24	0.79	1.19				
0.7 - 0.78	8.53A	0.172A	19.75B	12.52	0.89	1.89				
1 - 1.1	8.62A	0.258A	16.73B	11.35	0.77	1.75				
1.2 - 1.3	8.64A	0.224A	14.75B	11.27	0.56	1.64				
2.5 - 2.6	8.14A	0.087A	13.01B	11.74	0.39	1.64				

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	4.99C									22.4	45.2
0 - 0.08	<0.1B	2.4C	233.5J								25.6	48.1
0.1 - 0.2	<0.1B	1.15C	99.6J								25.9	51
0.3 - 0.4	<0.1B	1.12C	81.5J								24.4	54.9
0.7 - 0.78	0.1B	0.59C	81.2J								22.5	56.9
1 - 1.1	4.7B	0.35C	31.1J								22.2	49.3
1.2 - 1.3	1.2B	0.24C	25.7J								20	43.3
2.5 - 2.6	<0.1B	0.2C	31.3J								22.7	34.9

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 - 0.08										
0.1 - 0.2										
0.3 - 0.4										
0.7 - 0.78										
1 - 1.1										
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