Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed178** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By:	G.M. Roberts	**Locality:**	R.C.(Ron) Swansbra, Lochelgin
Date Desc.:	26/08/85	**Elevation:**	197 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	**Rainfall:**	No Data
Northing/Long.:	6653900 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	746800 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:**	Flood plain
Morph. Type:	No Data	**Relief:**	No Data
Elem. Type:	No Data	**Slope Category:**	Gently inclined
Slope:	2 %	**Aspect:**	270 degrees

Surface Soil Condition (dry): Self-mulching, Trampled

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: Alluvial soil

Site Disturbance: Cultivation. Irrigated, past or present, Complete clearing. Pasture, native or improved, cultivated at some stage,

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11f	0 - 0.08 m	Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); ; Medium heavy clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12f	0.08 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.4 m	Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Earthy fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
A14	0.4 - 1 m	Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A15	1 - 2.15 m	Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Coarse, (10 - 20) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.3 (pH meter); Few, very fine (0-1mm) roots;
B2	2.15 - 2.78 m	Brown (7.5YR4/3-Moist); , 10YR74, 10-20% , 15-30mm, Faint; Medium clay; Weak grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8.5 (pH meter); Abrupt, Smooth change to -

Morphological Notes

A11f This site subject to frequent high flooding but no layering from recent flooding can be seen. There is plenty of faunal activity in upper part.

Observation Notes

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Parent Rock: alluvial sediment, clay, floodplain, Namoi

Site Notes

This site is heavily timbered and grassed and is often flooded - the position is on a lower level floodplain. The surface has been eroded and is irregular.

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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	6.53A	0.251A	23.54B	16.57	3.22	0.42				
0 - 0.08	7.14A	0.119A	20.59B	14.01	1.53	0.29				
0.1 - 0.2	7.47A	0.076A	22.47B	13.97	0.79	0.25				
0.3 - 0.4	7.83A	0.054A	23.41B	13.22	0.63	0.36				
0.7 - 0.8	7.91A	0.049A	24.87B	12.55	0.45	0.6				
1.2 - 1.3	8.02A	0.061A	24.23B	12.4	0.46	0.74				
2.5 - 2.6	8.2A	0.061A	20.29B	12.08	0.43	0.77				

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	3.8C									25.8	65.5
0 - 0.08	<0.1B	2.79C	227.7J								28.4	62.3
0.1 - 0.2	<0.1B	1.7C	128J								28.3	58.7
0.3 - 0.4	0.1B	1.46C	64.7J								27.4	58.7
0.7 - 0.8	<0.1B	1.28C	54.9J								27.7	58.6
1.2 - 1.3	<0.1B	1.16C	79.5J								30.1	57.1
2.5 - 2.6	<0.1B	0.66C	87.5J								32.6	49.6

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 - 0.8									
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