

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na031 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	W.T. Ward	Locality:	Mrs H. Barton, Round Swamp
Date Desc.:	08/01/88	Elevation:	199 metres
Map Ref.:	Sheet No. : 8837_S 1:50000	Rainfall:	No Data
Northing/Long.:	6649150 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	745700 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:	Lake	Slope Category:	Level
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry): Surface crust

Erosion:

Soil Classification

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

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.01 m	Light brownish grey (10YR6/2-Moist); Light grey (10YR7/2-Dry); ; Sand; Single grain grade of structure, <2 mm; Weak grade of structure, 2-5 mm, Granular; Sandy (grains prominent) fabric; Common (1-5 per 100mm ²) Fine (1-2mm) macropores, Moderately moist; Loose consistence; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A12g	0.01 - 0.1 m	Grey (5Y5/1-Moist); , 10YR41, 10-20% , 15-30mm, Distinct; Medium heavy clay; Weak grade of structure, 100-200 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Weak consistence; Very few (0 - 2 %), Ferruginous, Fine (0 - 2 mm), Tubules; Field pH 6 (pH meter); Few, very fine (0-1mm) roots;
A13g	0.1 - 0.2 m	Dark grey (5Y4/1-Moist); , 10YR41, 0-2% , 15-30mm, Faint; , 10YR41, 0-2% , 0-5mm, Faint; Heavy clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Tubules; Field pH 6 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
C	0.2 - 0.55 m	(N4/0-Moist); , 10YR41, 0-2% , 0-5mm, Faint; Medium clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Very few (0 - 2 %), Ferruginous-organic, Medium (2 - 6 mm), Nodules; Field pH 7 (pH meter); Few, very fine (0-1mm) roots;
C	0.55 - 1.2 m	(N5/0-Moist); , 10YR62, 0-2% , 0-5mm, Prominent; Medium heavy clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Field pH 7 (pH meter); Diffuse, Smooth change to -
Cg	1.2 - 1.5 m	Grey (5Y5/1-Moist); ; Medium heavy clay; Weak grade of structure, 20-50 mm, Lenticular; Massive grade of structure; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Very few (0 - 2 %), Ferruginous-organic, Fine (0 - 2 mm), Nodules; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
Cg	1.5 - 2.4 m	Grey (5Y6/1-Moist); , 10YR63, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 20-50 mm, Prismatic; Massive grade of structure; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Very few (0 - 2 %), Ferruginous-organic, Fine (0 - 2 mm), Nodules; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na031 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

2.4 - 2.9 m	Light grey (5Y7/2-Moist); , 10YR44, 2-10% , 5-15mm, Distinct; , 10YR72, 10-20% , 5-15mm, Prominent; Coarse sandy light clay; Massive grade of structure; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Firm consistence; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 8.5 (pH meter); Clear, Smooth change to -
2.9 - 3.85 m	Yellowish brown (10YR5/6-Moist); , 5Y72, 20-50% , 30-mm, Prominent; Coarse sandy light clay; Massive grade of structure; Massive grade of structure; Earthy fabric; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Weak consistence; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 8.5 (pH meter);

Morphological Notes

A11 Round Swamp 1. A very thin (1cm) sand drift on surface. Fissures infilled with sand extend to 80-90cm. The gleyed horizon shows yellowish brown colours where cut by the knife. Slickensides occur in a narrow zone only, from 110-120cm. Na0310

A12g 6 (120-130cm) is in the transition from gleyed zone with humus to gleyed parent sediment. There are a very few ferruginous- organic concretions here, but none were seen at 70-80cm. The structure at 250cm is between wedge and biscuity, so I

A13g choose lenticular as best descriptor. The third and fourth cores (above and below 293cm) are respectively 4 inch and 3 inch, with different sediments, from which I inferred at first a relatively sharp break at ~290cm, the contact not seen

C in either core, but further study of the core laid out properly suggests that there is actually no break here. The upper part of the fourth core is weakly gleyed, the lowest part has reddish colours. I accept a break at 240cm (weathered sand

C dy alluvium below, parna above). Note inwashed sand, and at 40cm, parna beneath new parna. The break at 40cm is obscured by weathering, but supported by inwashed sand becoming more prominent at this level. [Considering that this is a lake bed, the degree of soil development is surprising].

Cg

Observation Notes

Parent Rock: , , parna in swamp

Site Notes

Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.01									
0.01 - 0.1	6.67A	0.067A	4.61B	2.81	1.28	0.49			
0.1 - 0.2	6.56A	0.06A	6.76B	3.95	1.76	0.69			
0.3 - 0.4	7.07A	0.065A	7.9B	5.47	2.14	0.65			
0.7 - 0.8	7.48A	0.045A	7.93B	5.5	1.87	0.55			
1.2 - 1.3	7.74A	0.042A	10.21B	7.35	2.96	0.72			
1.7 - 1.8	8A	0.039A	8.719999	6.03	2.19	0.58			
			B						
2.5 - 2.6	8.61A	0.148A	8.29B	4.87	1.56	0.43			
3.5 - 3.6	8.71A	0.161A	6.56B	4.38	1.44	0.42			

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle	Size	Analysis	
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt Clay
		%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.01											
0.01 - 0.1	<0.1B	0.53C	8.4J								<1 36.7
0.1 - 0.2	<0.1B	0.35C	2.6J								7.2 44.9
0.3 - 0.4	<0.1B	0.26C	<1J								6.3 46.9
0.7 - 0.8	<0.1B	0.13C	<1J								6.1 48.1
1.2 - 1.3	<0.1B	0.08C	<1J								7.4 59.7
1.7 - 1.8	<0.1B	0.02C	<1J								6.2 49.3
2.5 - 2.6	3B	<0.01C	<1J								3.1 34.6
3.5 - 3.6	2.7B	0.03C	<1J								1.7 30.6

[illegible]

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na031 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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