

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** we013 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	W.T. Ward	<b>Locality:</b>	rail line easement, SE of Cubbaroo
<b>Date Desc.:</b>	15/02/87	<b>Elevation:</b>	175 metres
<b>Map Ref.:</b>	Sheet No. : 8737_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6659000 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	705500 Datum: AGD66	<b>Drainage:</b>	No Data

**Geology**

<b>ExposureType:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

**Land Form**

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

**Surface Soil Condition (dry):** Firm

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>	N/A	<b>Mapping Unit:</b>	N/A
<b>ASC Confidence:</b>	Confidence level not specified	<b>Principal Profile Form:</b>	N/A
		<b>Great Soil Group:</b>	Prairie soil

**Site Disturbance:** Complete clearing. Pasture, native or improved, cultivated at some stage

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

A11	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Greyish brown (10YR5/2-Dry); ; Clay loam; Massive grade of structure; Weak grade of structure, 20-50 mm, Angular blocky; Earthy fabric; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Calcareous, coarse fragments; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.15 m	Very dark greyish brown (10YR3/2-Moist); ; Clay loam; Massive grade of structure; Weak grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
A13	0.15 - 0.27 m	Very dark greyish brown (10YR3/2-Moist); ; Light clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.27 - 0.55 m	Very dark greyish brown (10YR3/2-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Angular blocky; Weak grade of structure, 10-20 mm, Prismatic; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Sharp change to -
B21	0.55 - 1 m	Brown (7.5YR4/4-Moist); ; Light clay; Moderate grade of structure, 50-100 mm, Lenticular; Moderate grade of structure, 10-20 mm, Prismatic; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 1.3 m	Brown (7.5YR4/4-Moist); ; Light clay; Weak grade of structure, 50-100 mm, Lenticular; Moderate grade of structure, 10-20 mm, Prismatic; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** we013      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

- C1      1.3 - 2.45 m      Reddish yellow (7.5YR6/6-Moist); , 7.5YR44, 2-10% , 0-5mm, Faint; Clay loam; Weak grade of structure, 50-100 mm, Prismatic; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm<sup>2</sup>) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8 (pH meter);
- C2      2.45 - 2.75 m      Reddish yellow (7.5YR6/6-Moist); ; Clay loam; Weak grade of structure, 50-100 mm, Prismatic; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm<sup>2</sup>) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8 (pH meter);

**Morphological Notes**

- A11      Originally bu015. Top 15cm is recent flood deposit. 230-240cm sampled by mistake for 250-260cm (also sampled). Pian. The hard concretions at 70-80cm are somewhat irregular and lumpy. As the soil is deep, dark, well structured and carbonate-rich, I prefer prairie soil to grey clay. Parent sediment below 130cm is weakly weathered.
- A12

**Observation Notes**

Parent Rock: alluvial sediment, clay, mixed texture, with lime first terraced fan, Namoi

**Site Notes**

Shallow surface deposit over Pian sediment. Low terrace. Slight levee rise. Poplar box.

**Observation ID: 1**

**Agency Name:** CSIRO Division of Soils (QLD)

**Laboratory Test Results:**

Depth m	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP %
		dS/m	Ca	Mg	K	Na Acidity Cmol (+)/kg			
0 - 0.1	7.21A	0.156A	19.77B	6.31	2.76	0.21			
0.1 - 0.15	7.95A	0.115A	25.16B	10.14	1.58	0.44			
0.15 - 0.25	8.42A	0.155A	25.6B	12.12	0.91	0.7			
0.3 - 0.4	8.65A	0.175A	21.55B	14.28	0.59	1.17			
0.7 - 0.8	8.7A	0.299A	14.09B	15.52	0.58	1.74			
1.2 - 1.3	8.42A	0.44A	10.08B	12.72	0.57	1.44			
2.3 - 2.4	8.33A	0.354A	11.34B	12.25	0.48	1.46			
2.5 - 2.6	8.34A	0.365A	13.89B	12.59	0.47	1.6			

[illegible][illegible]

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** we013      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Laboratory Analyses Completed for this profile**

15A2_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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