

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed362 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b> W.T. Ward	<b>Locality:</b> Frank O'Neill, Llano
<b>Date Desc.:</b> 22/01/87	<b>Elevation:</b> 197 metres
<b>Map Ref.:</b> Sheet No. : 8837_N 1:50000	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6675100 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 751250 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> Fan	<b>Slope Category:</b> Level
<b>Slope:</b> 0 %	<b>Aspect:</b> No Data

**Surface Soil Condition (dry):** Self-mulching, Recently cultivated

#### 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> Ug5.16
	<b>Great Soil Group:</b> Grey clay

**Site Disturbance:** Cultivation. Rainfed

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11j	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Brown (7.5YR4/2-Dry); , 10YR51, 0-2% , 5-15mm, Distinct; , 10YR62, 0-2% , 0-5mm, Faint; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderate grade of structure, 5-10 mm, Platy; 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; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.25 m	Dark brown (7.5YR3/2-Moist); , 10YR62, 0-2% , 0-5mm, Faint; Heavy clay; Moderate grade of structure, 20-50 mm, Lenticular; Moderate grade of structure, 5-10 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); Common, very fine (0-1mm) roots;
A13	0.25 - 0.7 m	Dark brown (7.5YR3/2-Moist); , 10YR62, 2-10% , 0-5mm, Distinct; Heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; Moderate grade of structure, 10-20 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; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change
B21	0.7 - 1 m	Dark reddish grey (5YR4/2-Moist); , 7.5YR32, 10-20% , 15-30mm, Distinct; Medium heavy clay; Moderate grade of structure, 20-50 mm, Lenticular; 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; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 1.7 m	Dark reddish grey (5YR4/2-Moist); , 7.5YR42, 0-2% , 15-30mm, Distinct; Medium heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m <sup>2</sup> ) Medium (2-5mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B23g	1.7 - 3.05 m	Reddish brown (5YR4/3-Moist); , 5YR41, 20-50% , 30-mm, Prominent; Medium heavy clay; Moderate grade of structure, 20-50 mm, Lenticular; Weak grade of structure, 10-20 mm, Subangular 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; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter);

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed362 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

B24g	3.05 - 3.7 m	Dark reddish grey (5YR4/2-Moist); , 10YR51, 20-50% , 30-mm, Prominent; , 5YR46, 0-2% , 5-15mm, Distinct; Medium heavy clay; Moderate grade of structure, 20-50 mm, Lenticular; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm <sup>2</sup> ) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Field pH 9 (pH meter); Gradual, Smooth change to -
2A1	3.7 - 5.1 m	Dark reddish grey (5YR4/2-Moist); , 10YR51, 20-50% , 30-mm, Prominent; Light medium clay; Weak grade of structure, 100-200 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; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Diffuse, Smooth change to -
2B21g	5.1 - 6.05 m	Dark reddish grey (5YR4/2-Moist); , 10YR61, 2-10% , 5-15mm, Prominent; Medium clay; Strong grade of structure, 20-50 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8.5 (pH meter);
2B22g	6.05 - 7.13 m	Dark reddish grey (5YR4/2-Moist); , N60, 2-10% , 0-5mm, Prominent; Medium clay; Strong grade of structure, 50-100 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm <sup>2</sup> ) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8.5 (pH meter);

### **Morphological Notes**

A11j	Llano 1B. Grey colours appear at about 170cm. This core has contained at least one large worm. Topsoil contamination occurs at 385-390 cm (break in core). At 520cm the wedge structure reappears. The grey colour extends down the fissures. A
A12	very small amount of carbonate at 650-660cm. Uncertain buried soil with indistinct upper boundary at 370. The ?buried topsoil separates two gleyed zones. Heavy carbonate occurs at top, and in upper part of burial. Sample 350-360 is possibly
A13	not B2g but the top of the buried soil, the contact being somewhere about 350, immediately below heavy carbonate accumulation.

### **Observation Notes**

Parent Rock: alluvial sediment, mixed texture, with lime, parna on fourth fan

### **Site Notes**

**Observation ID: 1**

[illegible]

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** ed362      **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