

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed007 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	D. McGarry	<b>Locality:</b>	R.H. Fife, Stranraer
<b>Date Desc.:</b>	23/05/85	<b>Elevation:</b>	208 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6677600 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	758400 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 plain	<b>Slope Category:</b>	Level
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Surface crust, 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>Site Disturbance:</b>	Cultivation. Rainfed	<b>Great Soil Group:</b>	Grey clay

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11p	0 - 0.12 m	Very dark grey (10YR3/1-Moist); , 10YR41, 2-10% , 0-5mm, Distinct; Light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Smooth-ped fabric; Earthy fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 7.3 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12p	0.12 - 0.25 m	Very dark grey (10YR3/1-Moist); ; Medium clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Rigid consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 7.8 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
A13	0.25 - 0.56 m	Very dark grey (10YR3/1-Moist); , 10YR41, 0-2% , 0-5mm, Distinct; Medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
B21	0.56 - 1.15 m	Very dark greyish brown (10YR3/2-Moist); , N30, 0-2% , 5-15mm, Faint; , 10YR81, 0-2% , 0-5mm, Distinct; Light medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) 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 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.2 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B22	1.15 - 1.9 m	Dark greyish brown (10YR4/2-Moist); , N30, 2-10% , 0-5mm, Distinct; , 10YR58, 0-2% , 0-5mm, Distinct; Light medium clay; Strong grade of structure, 20-50 mm, Lenticular; Strong grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 8.3 (pH meter);
B23	1.9 - 2.74 m	Very dark greyish brown (10YR3/2-Moist); , N30, 0-2% , 0-5mm, Distinct; , 10YR58, 0-2% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 20-50 mm, Lenticular; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 7.7 (pH meter);

#### Morphological Notes

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** ed007      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

A11p      Visible crack depth is 63cm. Fine granular surface of 2cm. A1p2 is a strong plough layer with tensile strength >6000. Sand lenses (5mm deep but not horizontally continuous) at  
A12p      22 horizon is strongly pedal, but does not seem buried due to lack of abrupt boundary and little colour change. At other sites similar material has been buried.

**Observation Notes**

Parent Rock: alluvial sediment, clay, parna on fourth fan

**Site Notes**

Surface cracks filled and not visible due to cultivation.

**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 - 0.02	7.83A	0.059A	23.55B	12.29	1.78	1.16			
0 - 0.1	6.86A	0.284A	22.07B	13.97	0.61	1.53			
0.12 - 0.2	8.6A	0.109A	25.82B	14.47	<0.01	3.8			
0.3 - 0.4	9.05A	0.195A	21.4B	14.59	<0.01	5.5			
0.72 - 0.8	7.86A	2.64A	26.26B	13.45	0.19	8.36			
1.2 - 1.3	8.65A	1.43A	26.99B	17.25	0.69	10.13			
2.5 - 2.6	8.78A	1.035A	25.5B	14.85	0.44	10.17			

Depth  m	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS %	Silt Clay
0 - 0.02	<0.1B	0.87C									21.8 51.6
0 - 0.1	0.1B	1.35C	14.3J								18.2 50.3
0.12 - 0.2	0.1B	0.63C	3.6J								20.5 53.1
0.3 - 0.4	0.4B	0.61C	2.2J								19.4 52
0.72 - 0.8	1.2B	0.29C	8.9J								20.4 54.7
1.2 - 1.3	1.2B	0.09C	6.9J								15.3 65.3
2.5 - 2.6	0.5B	0.05C	3.5J								16.5 65.9

[illegible]

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** ed007      **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