

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed195 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	G.M. Roberts	<b>Locality:</b>	R.A.(Richard) Williams, Merinda
<b>Date Desc.:</b>	22/08/85	<b>Elevation:</b>	198 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6651600 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	745400 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>	Very gently sloped
<b>Slope:</b>	1 %	<b>Aspect:</b>	45 degrees

**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>	Gn3.23
		<b>Great Soil Group:</b>	Alluvial soil

**Site Disturbance:** Cultivation. Rainfed

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11p	0 - 0.08 m	Very dark greyish brown (10YR3/2-Moist); Pale brown (10YR6/3-Dry); ; Sandy clay loam; Weak grade of structure, 2-5 mm, Subangular blocky; Single grain grade of structure; Earthy fabric; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A12	0.08 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); ; Sandy loam; Weak grade of structure, 20-50 mm, Subangular blocky; Weak grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.4 m	Very dark greyish brown (10YR3/2-Moist); , 10YR54, 10-20% , 15-30mm, Distinct; Sandy clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	0.4 - 1 m	Dark yellowish brown (10YR4/4-Moist); , 10YR42, 2-10% , 5-15mm, Distinct; Silty clay loam; Moderate grade of structure, 50-100 mm, Prismatic; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 9 (pH meter);
B22	1 - 1.8 m	Brown (10YR4/3-Moist); , 10YR56, 10-20% , 15-30mm, Distinct; Light clay; Moderate grade of structure, 50-100 mm, Prismatic; 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; Firm consistence; Field pH 8.3 (pH meter); Diffuse, Smooth change to -
C	1.8 - 2.79 m	Brown (7.5YR5/4-Moist); , 7.5YR52, 10-20% , 15-30mm, Distinct; , 10YR21, 0-2% , 5-15mm, Prominent; Sandy clay loam; Weak grade of structure, 50-100 mm, Prismatic; Weak grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 8.5 (pH meter);

#### Morphological Notes

A11p Episodic accumulation shown by texture profile and sand coating cracks but no

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A12                      6 are stained with organic matter or ?reduction colour. Possibly a slow draining Q: at  
265 there are clear gley colours in yellowish brown groundmass.

**Observation Notes**

Parent Rock: alluvial sediment, mixed texture, non-calcareous, second terraced fan, Namoi

**Site Notes**

This site is 15-20m from a small drainage line (natural) which would account for the poor surface conditon and its sandy fabric.

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**Project Code:** EDCERO1      **Site ID:** 3a  
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**Laboratory Test Results:**

Depth m	pH	1:5 EC dS/m	Exchangeable Cations			Exchangeable Acidity Na Cmol (+)/kg	CEC	ECEC	ESP %
			Ca	Mg	K				
0 - 0.02	6.72A	0.042A	7.71B	3.34	1.19	0.06			
0 - 0.08	6.64A	0.074A	7B	3.43	1.3	0.11			
0.1 - 0.2	6.77A	0.046A	8.440001 B	3.3	1.14	0.08			
0.3 - 0.4	7.35A	0.045A	11.73B	3.64	0.66	0.13			
0.7 - 0.8	8.3A	0.059A	18.25B	7.13	0.69	0.33			
1.2 - 1.3	8.5A	0.055A	15.36B	5.96	0.46	0.48			
2.5 - 2.6	8.65A	0.063A	10.72B	5.34	0.48	0.48			

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**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