

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed014 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b> W.T. Ward	<b>Locality:</b> Paul Owens, Old Edgeroi
<b>Date Desc.:</b> 16/06/86	<b>Elevation:</b> 274 metres
<b>Map Ref.:</b> Sheet No. : 8837_N 1:50000	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6676900 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 777700 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> 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> Ug5.15
	<b>Great Soil Group:</b> Brown clay

**Site Disturbance:** Cultivation. Rainfed

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11p	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Dark brown (7.5YR3/2-Dry); ; Medium clay; Moderate grade of structure, 2-5 mm, Granular; Moderate 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; Very firm consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.25 m	Dark brown (7.5YR3/2-Moist); , 10YR53, 0-2% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 2-5 mm, Angular blocky; Moderate grade of structure, 2-5 mm, Granular; 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 9 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Dark reddish brown (5YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 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 9 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 1 m	Dark reddish brown (5YR3/2-Moist); , 7.5YR64, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 10-20 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	1 - 1.9 m	Reddish brown (5YR4/3-Moist); ; Medium heavy clay; Weak grade of structure, 20-50 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 9 (pH meter);
B22	1.9 - 2.79 m	Reddish brown (5YR4/3-Moist); , 7.5YR54, 2-10% , 5-15mm, Distinct; , N20, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (pH meter);

#### Morphological Notes

A11p 10-20 inwashed fine sand. First metre is moist throughout. The 0-10 is possibly a recent surface wash on ? the redbrown terrace. Soft 7.5YR 6/4 carbonate (1ks2) below 160cm. B2 contains 5YR4/6 faunal casts in worm channels. Q. A brown soil of heavy texture.

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Parent Rock: , , second (brown parna) terraced

**Site Notes**

Site is 15m north of drainage channel. Large gum to SE. Chart penetrometer like site 013.

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**Laboratory Test Results:**

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.02	8.77A	0.16A	31.29B	15.03	1.38	0.93999				
						99				
0 - 0.1	8.47A	0.18A	27.37B	15.67	1.16	1.01				
0.1 - 0.2	8.84A	0.165A	27.82B	17.33	0.89	1.78				
0.3 - 0.4	9.06A	0.231A	25.11B	19.19	0.75	4.21				
0.7 - 0.8	9.34A	0.376A	19.74B	23.23	0.9	9.03000				
						1				
1.2 - 1.3	9.11A	0.79A	15.34B	24.53	1.2	11.05				
2.5 - 2.6	9.06A	0.916A	12.99B	25.46	0.97	10.41				

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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