

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed132 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b> W.T. Ward	<b>Locality:</b> stock route, east of Green Timbers
<b>Date Desc.:</b> 12/03/85	<b>Elevation:</b> 223 metres
<b>Map Ref.:</b> Sheet No. : 8837_N 1:50000	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6660700 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 764800 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):** Hardsetting, Poached

#### 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> Dr2.13
	<b>Great Soil Group:</b> Brown clay

#### Site Disturbance:

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A1	0 - 0.08 m	Dark yellowish brown (10YR3/4-Moist); Brown (7.5YR5/4-Dry); ; Fine sandy clay loam; Massive grade of structure; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 5.6 (pH meter); Common, fine (1-2mm) roots; Abrupt, Smooth change to -
B2	0.08 - 0.25 m	Dark reddish brown (5YR3/3-Moist); Dark reddish brown (5YR3/2-Dry); ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
C	0.25 - 0.5 m	Dark reddish brown (5YR3/3-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Common, very fine (0-1mm) roots; Clear, Smooth change to -
2A11	0.5 - 1 m	Dark brown (7.5YR3/2-Moist); , 10YR82, 0-2% , 0-5mm, Faint; Light clay; Weak grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Cast; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 7.8 (pH meter); Few, very fine (0-1mm) roots;
2A12	1 - 1.9 m	Dark brown (7.5YR3/2-Moist); , N30, 10-20% , 15-30mm, Distinct; , 10YR83, 0-2% , 0-5mm, Distinct; Medium clay; Weak grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 7.8 (pH meter); Few, very fine (0-1mm) roots;
2B2	1.9 - 3.64 m	Brown (7.5YR4/4-Moist); , N30, 10-20% , 15-30mm, Distinct; , 10YR82, 0-2% , 0-5mm, Prominent; Light medium clay; Moderate grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.7 (pH meter);

#### Morphological Notes

A1 Crack depth 35cm length 3500. Strength of 2cm surface crust is 6. Boundary at 50 ?s. This seems to me to be an early burial of an older groundsurface, seen now at 50cm. Cf modern floodway distributaries. Repeat core for Fitz confirms burial

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B2                                      at 55cm.

**Observation Notes**

Parent Rock: alluvial sediment, clay, second terraced fan

**Site Notes**

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Project Code: EDCERO1 Site ID: 3d  
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 Cmol (+)/kg	Acidity		%
0 - 0.02	6.83A	0.149A	7.06B	7.54	1.8	0.86			
0 - 0.08	6.66A	0.107A	4.89B	4.98	0.98999	1.17			
0.1 - 0.2	8.41A	0.156A	15.92B	16.79	0.6	5.89			
0.3 - 0.4	9.14A	0.649A	15.5B	15.85	0.47	10.17			
0.7 - 0.8	8.9A	0.715A	11.84B	11.94	0.49	7.79			
1.2 - 1.3	8.64A	0.763A	11.74B	12.28	0.55	8.04			
2.5 - 2.6	8.99A	0.85A	10.8B	12.01	0.62	7.7			

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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