

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed011 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	G.M. Roberts	<b>Locality:</b>	highway, near Boggy Creek
<b>Date Desc.:</b>	18/07/85	<b>Elevation:</b>	241 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6677200 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	769500 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>	Level
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

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

#### 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

A11	0 - 0.07 m	Dark brown (7.5YR3/2-Moist); Greyish brown (10YR5/2-Dry); ; Medium heavy clay; Moderate grade of structure, 2-5 mm, Granular; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.07 - 0.2 m	Brown (7.5YR4/2-Moist); , 7.5YR44, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Angular 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; 2-10%, medium gravelly, 6-20mm, rounded, Quartz, coarse fragments; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
B21	0.2 - 0.7 m	Dark brown (7.5YR3/4-Moist); , 10YR81, 0-2% , 0-5mm, Faint; Heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Angular 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, rounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B22	0.7 - 1 m	Brown (7.5YR4/4-Moist); , 7.5YR42, 2-10% , 0-5mm, Faint; , 10YR83, 2-10% , 0-5mm, Distinct; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Earthy 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, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B23k	1 - 1.9 m	Brown (7.5YR4/4-Moist); , 5YR58, 2-10% , 0-5mm, Distinct; , 10YR83, 2-10% , 0-5mm, Distinct; Medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Weak 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; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Veins; Field pH 9 (pH meter);

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B24k      1.9 - 2.6 m      Brown (7.5YR4/4-Moist); , 5YR58, 2-10% , 0-5mm, Distinct; , 10YR83, 2-10% , 0-5mm, Distinct; Medium heavy clay; Moderate grade of structure, 5-10 mm, Angular blocky; Moderate grade of structure, 10-20 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; Firm consistence; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Veins; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter);

**Morphological Notes**

A11      Possible disturbed surface. Soil similar from 70cm to 260cm except for slight changes in development of slickensides at 70-260.

**Observation Notes**

Parent Rock: , , parna on fourth fan

**Site Notes**

Site is 80 metres east of target adjacent to roadside.

**Observation ID: 1**

**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	7.67A	0.104A	29.71B	17.52	2.42	2.14			
0 - 0.07	7.9A	0.132A	28.96B	17.33	3.11	2.44			
0.1 - 0.2	8.18A	8.199999E-02A	28.93B	15.7	2.45	3.22			
0.3 - 0.4	8.27A	0.179A	30.55B	16.6	1.57	6.25			
0.7 - 0.8	9.35A	0.535A	22.03B	16.84	1.76	11.46			
1.2 - 1.3	8.86A	1.162A	19.27B	19.55	2.04	13.7			
2.5 - 2.6	8.99A	0.921A	22.35B	19.72	1.71	13.38			

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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