

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed150 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b> W.T. Ward	<b>Locality:</b> M.H.(Mark) & R.E.W. Lampe, Bobbiwaa
<b>Date Desc.:</b> 21/01/86	<b>Elevation:</b> 226 metres
<b>Map Ref.:</b> Sheet No. : 8837_N 1:50000	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6658300 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 766200 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):** 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> Ug6.1
	<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); ; Light clay; Strong grade of structure, 2-5 mm, Granular; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.25 m	Dark brown (7.5YR3/2-Moist); , 10YR62, 0-2% , 0-5mm, Faint; Light medium clay; Strong grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Dark brown (7.5YR3/2-Moist); , 10YR62, 0-2% , 0-5mm, Faint; Medium clay; Weak grade of structure, 50-100 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 0.85 m	Dark brown (7.5YR3/2-Moist); , 10YR62, 0-2% , 0-5mm, Faint; Heavy clay; Weak grade of structure, 50-100 mm, Angular blocky; Earthy fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Diffuse, Smooth change to -
B21	0.85 - 1.9 m	Dark reddish brown (5YR3/3-Moist); , 7.5YR32, 2-10% , 30-mm, Distinct; , 5YR53, 0-2% , 5-15mm, Distinct; Medium clay; Weak grade of structure, 100-200 mm, Prismatic; Earthy fabric; Medium, (5 - 10) mm crack; Moderately moist; Firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter);
B22	1.9 - 2.92 m	Reddish brown (5YR4/4-Moist); , 5YR46, 2-10% , 0-5mm, Distinct; , 5YR52, 0-2% , 0-5mm, Distinct; Medium clay; Moderate 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 weak consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter);

#### Morphological Notes

A11p	An ant nest with seeds at 40cm. 250-260 has 1f2 organic stains. One moderately good slickenside at 230cm. 150.06 is slightly better structured than 150.05. A supplementary sample (?another hole) from 99-127cm includes basalt and trachyte gr avel.
A12	

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**Site Notes**

No cracks visible. A brown clay, perhaps a little dispersive, as there are some pieces of crust, disrupted by ploughing. 168, 167, 151 and 150 are within the same unit of high terrace, red-brown material. 132 may also fit this group.

Parent Rock: alluvial sediment, clay, mixed texture, with lime second terraced fan

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**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	8.29A	0.099A	23.11B	14.79	2.44	0.16			
0 - 0.1	7.43A	0.249A	22.61B	15.41	1.78	0.61			
0.1 - 0.2	8.22A	0.093A	23.57B	15.36	1.12	0.81000			
						01			
0.3 - 0.4	8.74A	0.117A	21.63B	16.02	0.49	1.61			
0.7 - 0.8	9.15A	0.235A	17.75B	17.79	0.41	4.26			
1.2 - 1.3	9.4A	0.353A	9.32B	18.51	0.58	7.11			
2.5 - 2.6	9.48A	0.362A	7.07B	19.45	0.74	5.79			

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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