

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed117 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	M.E. Heape	<b>Locality:</b>	P.E.(Phil) Tout, Belbowrie
<b>Date Desc.:</b>	13/02/86	<b>Elevation:</b>	248 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6662900 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	771800 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>	Flood plain
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	No Data	<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>	Dd1.41
		<b>Great Soil Group:</b>	Solonetz

**Site Disturbance:** Complete clearing. Pasture, native or improved, cultivated at some stage, Cultivation. Rainfed,

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Grey (10YR5/1-Dry); ; Sandy clay loam; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Moderately moist; Very weak consistence; Field pH 7.5 (pH meter); Common, very fine (0-1mm) roots;
A12	0.1 - 0.15 m	Grey (10YR5/1-Moist); ; Light clay; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
B21	0.15 - 0.25 m	Very dark brown (10YR2/2-Moist); ; Medium clay; Weak grade of structure, 100-200 mm, Prismatic; Earthy fabric; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
B22	0.25 - 0.4 m	Dark grey (10YR4/1-Moist); ; Medium heavy clay; Moderate grade of structure, 50-100 mm, Platy; Moderate grade of structure, 20-50 mm, Subangular blocky; 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 8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B23k	0.4 - 1 m	Grey (10YR5/1-Moist); , 10YR81, 2-10% , 0-5mm, Prominent; Medium heavy clay; Strong grade of structure, 20-50 mm, Prismatic; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
B24k	1 - 2 m	Greyish brown (10YR5/2-Moist); , 10YR41, 20-50% , 30-mm, Distinct; , 10YR82, 0-2% , 0-5mm, Prominent; Medium clay; Moderate grade of structure, 10-20 mm, Prismatic; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8 (pH meter); Diffuse, Smooth change to -
C	2 - 2.61 m	Brown (10YR5/3-Moist); , 10YR41, 10-20% , 5-15mm, Distinct; , 10YR51, 20-50% , 15-30mm, Distinct; Medium clay; Massive grade of structure; Earthy fabric; Moderately moist; Very strong consistence; Field pH 6.5 (pH meter);

#### Morphological Notes

A11 167-261 (3 inch core) B2/C contact marked by manganese. Notice degraded top and dark B horizon.

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** ed117      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Observation Notes**

Parent Rock: alluvial sediment, clay, sand Tertiary beds

**Site Notes**

This site is beside a small stream, at base of basaltic [sic] ridge (where Belbowrie house is built). Hard surface, very like ?site

**Observation ID: 1**

**Project Code:** EDCERO1      **Site ID:** 3a  
**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	6.78A	0.048A	6.06B	3.4	1.04	0.07			
0 - 0.1	6.23A	0.142A	4.77B	3.31	0.93	0.04			
0.1 - 0.15	6.49A	0.049A	5.54B	2.91	0.45	0.21			
0.15 - 0.2	7.1A	0.046A	12.13B	7.04	0.37	0.98			
0.3 - 0.4	8.42A	0.086A	15.65B	10.28	0.22	1.83			
0.7 - 0.8	8.83A	0.481A	15.63B	13.2	0.19	3.07			
1.2 - 1.3	8.97A	0.442A	9.309999	10.85	0.26	2.86			
B									
2.5 - 2.6	5.32A	0.443A	7.23B	11.37	0.15	3.35			

[illegible][illegible]

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** ed117      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**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