

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed199 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b> W.T. Ward	<b>Locality:</b> Clive Norrie, Mollee
<b>Date Desc.:</b> 26/06/85	<b>Elevation:</b> 202 metres
<b>Map Ref.:</b> Sheet No. : 8837_N 1:50000	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6651400 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 756400 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> 1 %	<b>Aspect:</b> 180 degrees

**Surface Soil Condition (dry):** Loose, 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> Ug5.17
	<b>Great Soil Group:</b> Prairie soil

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11p	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Brown (7.5YR4/2-Dry); ; Silty clay; Moderate grade of structure, 2-5 mm, Granular; Weak grade of structure, 10-20 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; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
A12	0.1 - 0.2 m	Brown (7.5YR4/2-Moist); ; 5YR66, 0-2% , 5-15mm, Distinct; Light medium clay; Weak grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Clay, coarse fragments; Field pH 7 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
2A11	0.2 - 0.55 m	Very dark grey (10YR3/1-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Polyhedral; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7.8 (pH meter); Few, very fine (0-1mm) roots;
2A12	0.55 - 1 m	Very dark grey (10YR3/1-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
2A13	1 - 1.35 m	Dark greyish brown (10YR4/2-Moist); , 10YR54, 0-2% , 5-15mm, Distinct; Medium clay; Weak grade of structure, 20-50 mm, Prismatic; 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; Strong consistence; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
2B2	1.35 - 2.1 m	Brown (10YR4/3-Moist); , 10YR41, 0-2% , 5-15mm, Distinct; Fine sandy light clay; Weak grade of structure, 20-50 mm, Prismatic; 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 8.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
2C	2.1 - 2.99 m	Brown (10YR5/3-Moist); , 10YR41, 2-10% , 5-15mm, Distinct; Light medium clay; Weak grade of structure, 20-50 mm, Prismatic; Weak grade of structure, 5-10 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); Abrupt, Smooth change to -

#### Morphological Notes

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A11p      Cultivated top included in 199.01. 10-20 has ?baked clay fragments (compare site 179)  
of colour two . Some fragments of charcoal at 18cm. 0-20 is young brown recent flood  
deposit. A prominent stained buried topsoil at 260, with moderate pol  
A12      yhedral structure and heavy organic carbon stain at 260. Although no carbonate is  
visible we obtain effervescence with HCl at 110-140, but not elsewhere. Alluvial soil

**Observation Notes**

Parent Rock: alluvial sediment, mixed texture, non-calcareous, clay floodplain, Namoi

**Site Notes**

This soil has hard clods and could be hard setting. The site is an old infilled lagoon or back swamp. A prominent sand layer, 800mm thick, occurs at 140cm.

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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
		Ca	Mg	K	Na	Acidity			
m		dS/m			Cmol (+)/kg				%
0 - 0.02	6.8A	0.074A	11.96B	7.2	1.7	0.15			
0 - 0.1	6.59A	0.098A	11.47B	8.12	1.44	0.08			
0.1 - 0.2	6.8A	0.066A	13.79B	7.1	0.83	0.12			
0.3 - 0.4	7.64A	0.052A	23.88B	9.21	0.61	0.39			
0.7 - 0.8	8.21A	0.056A	24.12B	10.77	0.55	0.65			
1.2 - 1.3	8.47A	0.109A	20.99B	9.530001	0.54	0.72			
1.7 - 1.8	8.27A	0.042A	10.54B	6.06	0.36	0.49			
2.5 - 2.6	8.16A	0.044A	18.6B	9.82	0.38	0.78			

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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