

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed170 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	D. McGarry	<b>Locality:</b>	Peter Wilson, Mayfield
<b>Date Desc.:</b>	04/06/86	<b>Elevation:</b>	250 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6655700 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	772900 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>	Very gently sloped
<b>Slope:</b>	1 %	<b>Aspect:</b>	158 degrees

**Surface Soil Condition (dry):** Surface crust, 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>	Ug5.17
		<b>Great Soil Group:</b>	No suitable

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); , N20, 0-2% , 5-15mm, Prominent; Light medium clay; Strong grade of structure, 20-50 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 7.5 (pH meter); Common, very fine (0-1mm) roots;
A12	0.1 - 0.32 m	Dark brown (7.5YR3/2-Moist); , 7.5YR54, 2-10% , 0-5mm, Distinct; Light medium clay; Strong grade of structure, 20-50 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 (pH meter); Common, very fine (0-1mm) roots; Abrupt, Wavy change to -
B2	0.32 - 0.4 m	Dark brown (7.5YR3/2-Moist); , 10YR64, 2-10% , 0-5mm, Distinct; , 10YR21, 0-2% , 5-15mm, Distinct; Light medium clay; Moderate grade of structure, 20-50 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); Common, very fine (0-1mm) roots; Abrupt, Smooth change to -
2A11	0.4 - 1 m	Very dark grey (10YR3/1-Moist); , 10YR33, 2-10% , 0-5mm, Distinct; Light clay; Weak grade of structure, 20-50 mm, Prismatic; Weak 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;
2A12	1 - 2 m	Very dark grey (10YR3/1-Moist); , 10YR33, 2-10% , 0-5mm, Distinct; Light medium clay; Weak grade of structure, 20-50 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.3 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
2B2	2 - 2.87 m	Dark greyish brown (10YR4/2-Moist); , 10YR41, 10-20% , 0-5mm, Prominent; , 10YR21, 0-2% , 0-5mm, Distinct; 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; Firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter);

#### Morphological Notes

A11 Washed-in material in layer 02 is silt. There is evidence of layering (newly added sediment) in the top 80cm of profile. A new sediment with a developed A and less well developed B2 breaks at 40cm to a buried A layer which is very dark. The

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A12                      top 40cm of the buried A (to 80cm in the profile) has some inwashed sand and faint (new) sedimentary features. An alluvial (WTW) soil showing recent (to 40cm) over slightly older alluvium on ?MVpH below 250-260. B2 is developing in alluvia

B2                      l parent. The top 20 cm of the profile has some new inwashed silt, mainly in cracks. Difficulty of interpretation and location of boundaries in top 40cm caused by new sediment being silt/clay so changes inferred from colour. An inherited sedimentary feature at 276-282 - a band of coarse sand.

2A11

**Observation Notes**

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

**Site Notes**

Surface cracks are very narrow (1cm) and penetrate no more than 2cm. Surface crust ranges from weak to moderate. Brown wash from low terrace, spread as modern alluvium over prior soil at 70cm depth. Query Tumbledown or River Red Gum.

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[illegible]

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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