

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed424 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	M.E. Heape	<b>Locality:</b>	Bruce Tout, Oakvale
<b>Date Desc.:</b>	02/04/86	<b>Elevation:</b>	287 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6665100 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	775100 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>	Pediment	<b>Slope Category:</b>	Very gently sloped
<b>Slope:</b>	1 %	<b>Aspect:</b>	250 degrees

**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>	Ug5.14
		<b>Great Soil Group:</b>	Grey clay

**Site Disturbance:** Cultivation. Rainfed

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11p	0 - 0.06 m	Very dark brown (10YR2/2-Moist); Dark grey (10YR4/1-Dry); ; Light medium clay; Moderate grade of structure, <2 mm, Granular; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
A12	0.06 - 0.1 m	Very dark grey (10YR3/1-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, <2 mm, Granular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.1 - 0.25 m	Very dark grey (10YR3/1-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, <2 mm, Granular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.25 - 0.6 m	Very dark grey (10YR3/1-Moist); ; Medium heavy clay; Weak grade of structure, 10-20 mm, Lenticular; Moderate grade of structure, 5-10 mm, Subangular 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, angular, Quartz, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
A15k	0.6 - 1.2 m	Very dark grey (10YR3/1-Moist); , 10YR62, 0-2% , 0-5mm, Distinct; Heavy clay; Strong grade of structure, 50-100 mm, Lenticular; 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; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	1.2 - 1.5 m	Dark greyish brown (10YR4/2-Moist); , 10YR31, 20-50% , 5-15mm, Distinct; Medium heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; 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; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter);
B22	1.5 - 2.15 m	Brown (7.5YR5/4-Moist); , 7.5YR32, 0-2% , 5-15mm, Distinct; Medium heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; 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 %), Calcareous, Medium (2 - 6 mm), Soft segregations; Field pH 8.5 (pH meter);

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B23	2.15 - 2.7 m	Dark brown (10YR3/3-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8 (pH meter); Gradual, Smooth change to -
B24	2.7 - 3.58 m	Brown (7.5YR5/4-Moist); ; Medium clay; Strong grade of structure, 50-100 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Field pH 6.5 (pH meter); Sharp, Smooth change to -
D	3.58 - 4.18 m	Light yellowish brown (10YR6/4-Moist); , 10YR41, 2-10% , 0-5mm, Prominent; Fine sandy light clay; Massive grade of structure; Moderate grade of structure, 2-5 mm, Cast; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Field pH 5.5 (pH meter);

**Morphological Notes**

A11p	Sediment falling into cracks at 70cm is cultivated topsoil. Some of the carbonate is soft segregations in A1k and B2v. Colour 2 at 170-180 is mn. pH5.5 at 320 cm depth, extra sample is below mn band at 270cm. Pedisegment at 350cm is basal
A12	conglomerate. 352cm: brown slickensided clay finishes abruptly on 8cm of conglomerate (basalt stones 4cm long); rests sharply on weathering finely-bedded soft sandstone at 358cm. Sampled at 360-370 due to conglomerate being less typical of
A13	the core. Colour of soft sandstone is 2.5Y8/2.

**Observation Notes**

Parent Rock: colluvial sediment, from sandstone and basalt, with lime, colluvium, thick, with basalt

**Site Notes**

Pediment, mid to upper slope.



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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