

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed346 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b> W.T. Ward	<b>Locality:</b> I.O.(Ian) Falkiner, Murrumbilla
<b>Date Desc.:</b> 11/08/87	<b>Elevation:</b> 309 metres
<b>Map Ref.:</b> Sheet No. : 8837_N 1:50000	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6655600 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 780800 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> No Data
<b>Slope:</b> %	<b>Aspect:</b> 360 degrees

**Surface Soil Condition (dry):** Loose

#### 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> Dy5.42
	<b>Great Soil Group:</b> Solodic soil

#### Site Disturbance:

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11p	0 - 0.1 m	Brown (7.5YR5/2-Moist); Brown (7.5YR5/4-Dry); ; Sand; Single grain grade of structure, <2 mm; Weak grade of structure, 2-5 mm, Granular; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Loose consistence; Field pH 7 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A12	0.1 - 0.2 m	Light brown (7.5YR6/4-Moist); ; Sand; Massive grade of structure; Single grain grade of structure; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Field pH 7 (pH meter); Few, fine (1-2mm) roots; Gradual, Smooth change to -
A21c	0.2 - 0.45 m	Very pale brown (10YR7/3-Moist); ; Sand; Single grain grade of structure, <2 mm; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Loose consistence; Field pH 6.8 (pH meter); Few, fine (1-2mm) roots;
A22c	0.45 - 0.54 m	White (10YR8/2-Moist); ; Sand; Single grain grade of structure, <2 mm; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Loose consistence; Very few (0 - 2 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Very few (0 - 2 %), Argillaceous, Coarse (6 - 20 mm), Nodules; Field pH 6.8 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
B21	0.54 - 0.67 m	Strong brown (7.5YR5/8-Moist); , 10YR72, 20-50% , 30-mm, Prominent; , 7.5YR54, 2-10% , 0-5mm, Distinct; Light clay; Strong grade of structure, 100-200 mm, Prismatic; Weak grade of structure, 20-50 mm, Angular blocky; Rough-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 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Field pH 7 (pH meter); Few, very fine (0-1mm) roots;
B22	0.67 - 1 m	Reddish yellow (7.5YR6/8-Moist); , 10YR72, 20-50% , 30-mm, Prominent; , 10R46, 0-2% , 5-15mm, Prominent; Light medium clay; Moderate grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 7 (pH meter);
B23	1 - 1.5 m	Brownish yellow (10YR6/6-Moist); , 10YR72, 10-20% , 15-30mm, Distinct; , 10R46, 2-10% , 15-30mm, Prominent; Light clay; Weak grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 7.5 (pH meter); Diffuse, Smooth change to -

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C      1.5 - 1.78 m      Light yellowish brown (10YR6/4-Moist); , 10YR62, 10-20% , 5-15mm, Distinct; Light clay; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.5 (pH meter);

**Morphological Notes**

A11p      The sand is weakly coherent for about 15cm below the plough sole, suggesting weak hard-setting character disturbed by cultivation. Upper part of B2 has no inherited red stains. Lower part (70-80) has organic stains also. More ferruginous segregations occur at 90-100cm, and very few soft carbonate segregations at bottom of drilled section.

A12

**Observation Notes**

Parent Rock: colluvial sediment, from sandstone, with lime, colluvium, weathered

**Site Notes**

Site 346 is in the trees 60m off road. Loose sandy/clay surface. Sand, black then white A2 over clay; 87-157cm B2 clay, red, grey, white mottling . 157-178cm B2. Stones prevent further drilling.



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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