

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** na034 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b> W.T. Ward	<b>Locality:</b> Mrs H. Barton, Round Swamp
<b>Date Desc.:</b> 02/02/88	<b>Elevation:</b> 201 metres
<b>Map Ref.:</b> Sheet No. : 8837_S 1:50000	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6649300 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 745800 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> Lunette	<b>Slope Category:</b> Gently inclined
<b>Slope:</b> 1 %	<b>Aspect:</b> 20 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> Dy5.61
	<b>Great Soil Group:</b> Solodic soil

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.1 m	Brown (10YR5/3-Moist); Brown (10YR5/3-Dry); ; Coarse sand; Single grain grade of structure, <2 mm; Weak grade of structure, 5-10 mm, Platy; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Field pH 6 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Brown (10YR4/3-Moist); ; Coarse sand; Single grain grade of structure, <2 mm; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Loose consistence; Field pH 6 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.38 m	Brown (10YR4/3-Moist); ; Coarse 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 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A2	0.38 - 1.43 m	Pink (7.5YR7/4-Moist); ; Coarse 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; 20-50%, coarse gravelly, 20-60mm, subrounded, Ironstone, coarse fragments; Many (20 - 50 %), Ferruginous, Very coarse (20 - 60 mm), Concretions; Field pH 6.5 (pH meter); Sharp, Smooth change to -
B2g	1.43 - 1.55 m	Light brownish grey (2.5Y6/2-Moist); , 5YR56, 2-10% , 0-5mm, Distinct; , 5YR22, 0-2% , 0-5mm, Distinct; Clayey coarse sand; Weak grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 5-10 mm, Platy; 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 6.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
2B2g	1.55 - 2 m	Yellowish brown (10YR5/6-Moist); , 5YR73, 10-20% , 5-15mm, Distinct; , 10YR72, 0-2% , 0-5mm, Distinct; Clayey coarse sand; Massive grade of structure; Rough-ped fabric; 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); Diffuse, Smooth change to -
2C	2 - 3.21 m	Yellowish brown (10YR5/6-Moist); , 10YR52, 20-50% , 30-mm, Distinct; , 10YR62, 2-10% , 5-15mm, Distinct; Light clay; Massive grade of structure; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 5.8 (pH meter);

#### Morphological Notes

A11 Round Swamp 3. Topsoil weak platy structure which extends down to about 10cm is possibly an indication of ?recent bedding. The break at 155cm is obscured by gleying. It

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could be as deep as 170cm. Core not recovered between 94 and 140cm, and

A12      disturbed by drilling at 70-80cm.

**Observation Notes**

Parent Rock: aeolian sediment, sand, over weathered sands and clayey sands lunette on fifth fan

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Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.1	6.16A	0.06A	1.81B	0.42	0.43	<0.01			
0.1 - 0.2	6.26A	0.025A	1.61B	0.11	0.18	<0.01			
0.3 - 0.4	6.77A	0.025A	1.5B	0.15	0.08	<0.01			
0.7 - 0.8	6.59A	0.016A	0.23B	<0.1	0.03	<0.01			
1.45 - 1.55	7.61A	0.037A	2.43B	4.41	0.87	0.45			
1.7 - 1.8	7.8A	0.032A	0.9B	2.62	0.57	0.42			
2.5 - 2.6	6.24A	0.052A	1.54B	7.02	0.98999	1.25			

[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