

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed086 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b> W.T. Ward	<b>Locality:</b> Des Gordon, Couradda State Forest
<b>Date Desc.:</b> 03/07/86	<b>Elevation:</b> 344 metres
<b>Map Ref.:</b> Sheet No. : 8837_N 1:50000	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6667200 AMG zone: 55	<b>Runoff:</b> No Data
<b>Easting/Lat.:</b> 782900 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> Hillcrest	<b>Slope Category:</b> Very gently sloped
<b>Slope:</b> 1 %	<b>Aspect:</b> 320 degrees

**Surface Soil Condition (dry):** Soft, 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> Dy5.11
	<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 - 0.16 m	Brown (7.5YR4/2-Moist); Brown (10YR4/3-Dry); , 7.5YR54, 0-2% , 5-15mm, Distinct; Sand; Single grain grade of structure; Weak grade of structure, 2-5 mm, Granular; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth
A12	0.16 - 0.25 m	Brown (10YR5/3-Moist); ; Sand; Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
A2	0.25 - 0.5 m	Brown (10YR5/3-Moist); ; Sand; Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Sharp change to -
B21	0.5 - 0.65 m	Yellowish red (5YR4/6-Moist); , 10YR62, 20-50% , 30-mm, Prominent; Light clay; Moderate grade of structure, 50-100 mm, Columnar; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Ferruginous, Fine (0 - 2 mm), Nodules; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots;
B22	0.65 - 1 m	Yellowish red (5YR5/6-Moist); , 10YR62, 20-50% , 30-mm, Prominent; , 2.5YR34, 2-10% , 5-15mm, Prominent; Medium clay; Moderate grade of structure, 50-100 mm, Columnar; 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; Very firm consistence; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Field pH 6 (pH meter); Few, very fine (0-1mm) roots;
B23	1 - 1.8 m	Red (2.5YR4/8-Moist); , 10YR56, 10-20% , 15-30mm, Prominent; , 10YR61, 2-10% , 5-15mm, Prominent; Light medium clay; Weak grade of structure, 100-200 mm, Angular blocky; Massive grade of structure; 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 %), Ferruginous, Fine (0 - 2 mm), Nodules; Field pH 6 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
C	1.8 - 2.67 m	Yellowish red (5YR4/6-Moist); , 10YR56, 10-20% , 15-30mm, Prominent; , 10YR61, 2-10% , 15-30mm, Prominent; Light clay; Weak grade of structure, 100-200 mm, Columnar; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Rigid consistence; Field pH 6 (pH meter); Few, very fine (0-1mm) roots;

#### Morphological Notes

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A11      Biscuity and sandy below 90cm. No carbonate visible.

**Observation Notes**

Parent Rock: residual, sandstone, Pilliga Sandstone, weathered

**Site Notes**

100m north of road. Logged Cypress forest. Slope direction difficult to identify.

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**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	6.24A	0.038A	1.6B	0.34	0.37	0.05			
0 - 0.1	4.96A	0.057A	0.42B	0.15	0.07	0.05			
0.1 - 0.2	4.72A	0.033A	<0.1B	<0.1	0.04	0.01			
0.3 - 0.4	4.92A	0.03A	<0.1B	0.2	0.04	0.02			
0.5 - 0.6	5.45A	0.061A	<0.1B	3.31	0.08	1.16			
0.7 - 0.8	5.41A	0.105A	<0.1B	6.51	0.19	2.43			
1.2 - 1.3	6.36A	0.246A	<0.1B	8.63	0.5	3.58			
2.5 - 2.6	5A	0.208A	<0.1B	3.15	0.17	1.64			

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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