

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed065 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	W.T. Ward	<b>Locality:</b>	W.D.(Bill) Baxter, Belar View
<b>Date Desc.:</b>	04/12/86	<b>Elevation:</b>	262 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6669900 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	773400 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>	Terrace plain	<b>Slope Category:</b>	Very gently sloped
<b>Slope:</b>	1 %	<b>Aspect:</b>	45 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>	Grey clay

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.1 m	Very dark brown (10YR2/2-Moist); Very dark brown (10YR2/2-Dry); ; Light medium clay; Moderate grade of structure, 20-50 mm, Platy; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Strong consistence; Field pH 6 (pH meter); Common, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Very dark brown (10YR2/2-Moist); ; Light medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Strong consistence; 0-2%, medium gravelly, 6-20mm, angular, Quartz, coarse fragments; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.4 m	Black (10YR2/1-Moist); , 10YR83, 0-2% , 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; Strong consistence; 0-2%, medium gravelly, 6-20mm, angular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8.5 (pH meter); Few, fine (1-2mm) roots; Clear, Smooth change to -
2A11	0.4 - 0.6 m	Black (10YR2/1-Moist); , 10YR83, 0-2% , 0-5mm, Distinct; , 10YR22, 0-2% , 0-5mm, Faint; Light clay; Strong grade of structure, 50-100 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), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
2A12	0.6 - 1.22 m	Black (10YR2/1-Moist); , 10YR83, 0-2% , 0-5mm, Faint; , 10YR22, 0-2% , 0-5mm, Distinct; Light clay; Strong grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Moderately moist; Strong consistence; 0-2%, medium gravelly, 6-20mm, subangular, Silcrete, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
3C1	1.22 - 1.45 m	Brown (10YR4/3-Moist); , 10YR83, 0-2% , 0-5mm, Prominent; Light clay; Weak 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; 2-10%, medium gravelly, 6-20mm, rounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;

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3C2      1.45 - 1.89 m      Brown (7.5YR5/4-Moist); , 7.5YR32, 2-10% , 5-15mm, Distinct; , 10YR83, 0-2% , 0-5mm, Distinct; Loamy sand; Massive grade of structure; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 6 (pH meter);

**Morphological Notes**

A11      Sample 065-04 a possible burial. Level 05 has rounded pebbles to 5mm washed into cracks. Maximum depth 189cm but no evidence to support stopping at this depth. This level appears to include a contact between gravel above and sand below. The  
A12      burial is supported by coarse fragment distribution above and below to 40cm. Thge lowest levels are prior horizons of deposition. Small nest of tiny gypsum crystals at

**Observation Notes**

Parent Rock: alluvial sediment, mixed texture, with lime, sand fifth (eroded) fan

**Site Notes**

Small mounds and depressions like gilgai might be stump holes. Drilling stopped at 189 due to extreme difficulty in penetration. There are few water worn quartz gravels and conglomerate gravels on the surface. Clay/sand pipes. ? highest all

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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 - 0.02	7.64A	0.212A	15.16B	3.4	1.51	0.37			
0 - 0.1	6.41A	0.13A	16.43B	4.31	0.69	0.15			
0.1 - 0.2	7.46A	0.061A	20.21B	4.7	0.36	0.38			
0.3 - 0.4	8.47A	0.061A	26.43B	8.37	0.21	1.61			
0.4 - 0.5	8.6A	0.178A	28.59B	9.92	0.22	2.11			
0.7 - 0.8	8.49A	0.369A	26.16B	11.07	0.23	3.79			
1.2 - 1.3	8.09A	0.669A	20.47B	9.95	0.24	3.66			
1.6 - 1.7	5.91A	0.442A	16.93B	7.9	0.18	4.01			

[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