

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed125 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	G.M. Roberts	<b>Locality:</b>	Clinton Freer, Greenbah
<b>Date Desc.:</b>	30/03/85	<b>Elevation:</b>	196 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6661200 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	745600 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 flat	<b>Slope Category:</b>	Level
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

**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>	Ug5.24
		<b>Great Soil Group:</b>	Grey clay

**Site Disturbance:** Cultivation. Irrigated, past or present

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

A11p	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); ; Medium clay; Moderate grade of structure, 2-5 mm, Granular; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 8.5 (pH meter); Common, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.25 m	Dark grey (10YR4/1-Moist); ; Medium heavy clay; Weak grade of structure, 5-10 mm, Lenticular; Weak grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 8.2 (pH meter); Few, medium (2-5mm) roots;
A13	0.25 - 0.55 m	Dark grey (10YR4/1-Moist); , 5R21, 0-2% , 5-15mm, Faint; , 10YR62, 0-2% , 0-5mm, Faint; Medium heavy clay; Weak grade of structure, 5-10 mm, Lenticular; Weak grade of structure, 5-10 mm, Angular blocky; 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 %), Manganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 1 m	Very dark greyish brown (10YR3/2-Moist); , 5R21, 0-2% , 5-15mm, Faint; , 10YR62, 0-2% , 0-5mm, Faint; Medium heavy clay; Weak grade of structure, 10-20 mm, Subangular blocky; 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 %), Manganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A15	1 - 1.3 m	Dark greyish brown (10YR4/2-Moist); , N40, 20-50% , 15-30mm, Faint; , 5R21, 0-2% , 0-5mm, Faint; Medium heavy clay; Massive grade of structure; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Common (10 - 20 %), Argillaceous, Medium (2 -6 mm), Veins; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

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B2      1.3 - 2.6 m      Brown (7.5YR4/4-Moist); , 10YR42, 10-20% , 5-15mm, Distinct; , 5YR56, 0-2% , 0-5mm, Faint; Light clay; Massive grade of structure; Weak grade of structure, 5-10 mm, Subangular blocky; Sandy (grains prominent) fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm<sup>2</sup>) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Common (10 - 20 %), Argillaceous, Medium (2 -6 mm), Veins; Field pH 9 (pH meter);

**Morphological Notes**

A11p      Site is beside first telegraph pole S of pump S of Greenbah 1.6km from house west of road and drain beside cotton crop. In the 10-20cm sample the top 2cm is obviously imported light brown clay, i.e. this area has been filled. The brown mate  
A12      rial is not included in the profile description or sample. From 85 to 90cm there is evidence of inwashed sand in cracks.

**Observation Notes**

Parent Rock: , , parna on third fan, Namoi

**Site Notes**

Site is beside first telegraph pole south of Greenbah (0.6km from house).

**Observation ID: 1**

**Laboratory Test Results:**

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.02	8.42A	0.1A	29.39B	15.65	2.05	1.25			
0 - 0.1	8.31A	0.206A	24.64B	11.7	1.52	2.41			
0.1 - 0.2	8.78A	0.225A	24.55B	13.04	1.33	4.07			
0.3 - 0.4	8.85A	0.33A	23.65B	15.37	0.98999	5.93			
					99				
0.7 - 0.8	8.99A	0.414A	18.21B	15.98	1.12	9.25			
1.2 - 1.3	8.99A	0.408A	15.77B	15.37	1.06	11.24			
2.5 - 2.6	8.9A	0.321A	9.89B	9.48	0.47	8.46999			
						9			

Depth m	CaCO3 %	Organic C %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m <sup>3</sup>	Particle Size		Analysis	
								GV	CS	FS %	Silt Clay
0 - 0.02	<0.1B	0.87C								17.9	69.2
0 - 0.1	0.1B	1.04C	37.7J							19.5	60.8
0.1 - 0.2	0.2B	0.73C	14.9J							16.6	68.3
0.3 - 0.4	1.5B	0.49C	27.4J							15.4	70.1
0.7 - 0.8	1.3B	0.42C	35.4J							16.1	71.7
1.2 - 1.3	1.2B	0.37C	25.1J							17.3	69.6
2.5 - 2.6	<0.1B	0.09C	69.3J							12.8	41.5

[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