Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed182 Observation ID: 1

Agency Name: **CSIRO** Division of Soils (QLD)

Site Information

Desc. By: G.M. Roberts Locality: Clive Jones. Thornbro

Date Desc.: Elevation: 26/04/85 205 metres Map Ref.: Sheet No.: 8837 N 1:50000 Rainfall: No Data Northing/Long.: 6653700 AMG zone: 55 Runoff: No Data 757800 Datum: AGD66 Easting/Lat.: Drainage: No Data

Geology

ExposureType: Conf. Sub. is Parent. Mat.: Undisturbed soil core No Data Substrate Material: Geol. Ref.: No Data No Data

Land Form

Rel/Slope Class: No Data Pattern Type: No Data Morph. Type: No Data Relief: No Data Elem. Type: Slope Category: Terrace flat Level Aspect: No Data Slope:

Surface Soil Condition (dry): Self-mulching, Trampled

Erosion:

Soil Classification

Australian Soil Classification: N/A Mapping Unit: Principal Profile Form: Ua5.15 ASC Confidence: **Great Soil Group:** Brown clay

Confidence level not specified

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

Very dark grey (10YR3/1-Moist); Very dark greyish brown (10YR3/2-Dry); ; Light clay; Weak $0 - 0.1 \, \text{m}$ grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 8.7 (pH meter); Common, very fine (0-1mm) roots;

Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Light medium A12 0.1 - 0.3 m clay; Weak grade of structure, 50-100 mm, Subangular blocky; Earthy fabric; Medium, (5 - 10) mm crack, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Strong

consistence; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -

Dark grevish brown (10YR4/2-Moist): . 10YR83, 0-2% . 0-5mm, Distinct: Medium clay: Moderate В1 0.3 - 0.7 m

grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Earthy fabric; Medium, (5 -10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Rigid consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH

meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -

B21 0.7 - 1 m Brown (10YR4/3-Moist); , 10YR83, 0-2% , 0-5mm, Distinct; Medium clay; Weak grade of

structure, 50-100 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm)

B22 Brown (10YR4/3-Moist); , 10YR64, 0-2% , 0-5mm, Distinct; Medium clay; Weak grade of 1 - 1.8 m

structure, 50-100 mm, Subangular blocky; Earthy 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, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth

change to -

B23 1.8 - 2.74 m Brown (10YR4/3-Moist); , 10YR66, 2-10% , 5-15mm, Distinct; , 10YR21, 0-2% , 0-5mm, Distinct;

Light medium clay; Weak grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field

pH 8 (pH meter):

Morphological Notes

Observation Notes

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Parent Rock: , , second terraced fan, Namoi

Site Notes

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Laboratory Test Results:

Depth	рН	1:5 EC		changeable Cations			Exchangeable	CEC		ECEC	: 1	ESP
m		dS/m	Ca I	Mg	К	Na Cmol (+	Acidity)/kg					%
0 - 0.02	8.18A	0.223A	23.25B	6.64	2.14	0.29						
0 - 0.1	8.82A	0.195A	21.44B	6.35	1.48	1.38						
0.1 - 0.2	9.63A	0.284A	18.36B	8.39	0.65	4.44						
0.3 - 0.4	9.79A	0.672A	10.97B	10.46	0.6	11.36						
0.7 - 0.8	9.6A	1.337A	6.93B	9.79	0.53	15.29						
1.2 - 1.3	9.2A	1.567A	6.62B	11.13	0.49	16.48						
2.5 - 2.6	9.35A	1.454A	6.37B	10.99	0.59	16.71						
Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Р	article	Size	Analysis	5
		С	P	Р	N	K	Density	G۷	cs	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 000	1 OD	2.84C									22.6	40 E
0 - 0.02 0 - 0.1	1.9B 1.2B	2.64C 1.94C	43.8J								23.6 16.9	42.5 44.7
		0.8C									16.9	
0.1 - 0.2 0.3 - 0.4	4.7B		7.1J								17	45.1 47.5
	4.3B	0.76C	7.5J								21.2	_
0.7 - 0.8	2.5B	0.46C	17.5J									
1.2 - 1.3	0.1B	0.2C	21.5J									51.7
2.5 - 2.6	0.2B	0.08C	15.3J								15.4	50.6
Depth	COLE	COLE Gravimetric/Volumetric Water Contents								at	K unsa	ŧ
- 		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar		Bar			anou	-
m		Jui.	0.00 Bai		g - m3/m		0 Dui 10		mm	/h	mm/h	

0 - 0.02 0 - 0.1 0.1 - 0.2

0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.6

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Laboratory Analyses Completed for this profile

15A2_CA Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 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 Silt (%) - Coventry and Fett pipette method