

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed081 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	D. McGarry	Locality:	stock route, near Edgeroi
Date Desc.:	03/06/86	Elevation:	238 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6667700 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	769200 Datum: AGD66	Drainage:	No Data

Geology

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

Land Form

Rel/Slope Class:	No Data	Pattern Type:	Flood plain
Morph. Type:	No Data	Relief:	No Data
Elem. Type:	No Data	Slope Category:	Very gently sloped
Slope:	0 %	Aspect:	0 degrees

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Ug5.16
		Great Soil Group:	Grey clay

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); ; Light clay; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Field pH 6.5 (pH meter); Common, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Very dark grey (10YR3/1-Moist); ; Light clay; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Field pH 6.6 (pH meter); Common, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Black (10YR2/1-Moist); ; Medium clay; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 8 (pH meter); Common, very fine (0-1mm)
A14	0.55 - 1.1 m	Black (10YR2/1-Moist); , 10YR81, 0-2% , 0-5mm, Faint; Medium clay; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Rough-ped 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 8.5 (pH meter); Common, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	1.1 - 1.9 m	Brown (7.5YR4/2-Moist); , 10YR21, 2-10% , 5-15mm, Faint; , 10YR81, 0-2% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, Lenticular; Weak 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots;
B22	1.9 - 2.62 m	Brown (7.5YR4/3-Moist); , N30, 2-10% , 0-5mm, Distinct; , 10YR81, 2-10% , 15-30mm, Distinct; Medium clay; Weak grade of structure, 50-100 mm, Prismatic; Weak 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 strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8.8 (pH meter);

Morphological Notes

A11 70-80 shows flecks of carbonate. Site sampled was near rail line - one rounded basalt stone at 10cm is probably ballast. Coarse fragments stop at 65cm. Small carbonate (1-2mm) to 180cm, then large carbonate from 225 on. Manganese stain begi

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A12 ns at 190cm on. ? aeolian component. Photoed twice - incorrectly as site 180 - photos repeated as 081.

Observation Notes

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

Site Notes

Eastern side of the railway. Recent rain has made the surface sticky and the cracks are infilled.

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	7.26A	0.052A	12.98B	3.27	0.88	0.29			
0 - 0.1	6.61A	0.146A	16.51B	4.61	0.76	0.6			
0.1 - 0.2	7.4A	0.06A	19.38B	4.3	0.24	1.18			
0.3 - 0.4	8.29A	0.075A	25.6B	6.14	0.28	2.66			
0.7 - 0.8	8.64A	0.342A	27.37B	7.07	0.25	5.14			
1.2 - 1.3	8.83A	0.554A	24B	7.11	0.24	6.43			
2.5 - 2.6	8.71A	0.776A	22.98B	7.73	0.22	6.32			

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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
P10_CF_Z	Silt (%) - Coventry and Fett pipette method