

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed025 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.M. Roberts	Locality:	K.W. Eather, Kurrawombi
Date Desc.:	08/07/85	Elevation:	213 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6675100 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	759700 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:	No Data
Morph. Type:	No Data	Relief:	No Data
Elem. Type:	Terrace flat	Slope Category:	Very gently sloped
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry): Self-mulching, Recently cultivated

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Ug5.15
		Great Soil Group:	Brown clay

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.05 m	Dark greyish brown (10YR4/2-Moist); Greyish brown (10YR5/2-Dry); ; Medium heavy clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A12	0.05 - 0.1 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 7.8 (pH meter); Few, very fine (0-1mm) roots;
A13	0.1 - 0.25 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Heavy clay; Weak grade of structure, 50-100 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; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.25 - 0.42 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth
B21	0.42 - 0.7 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Medium clay; Moderate grade of structure, 20-50 mm, Lenticular; 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 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B22y	0.7 - 1.35 m	Brown (7.5YR4/4-Moist); Brown (7.5YR4/4-Dry); ; Medium clay; Weak grade of structure, 50-100 mm, Subangular blocky; Moderate 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; Few (2 - 10 %), Gypseous, Fine (0 - 2 mm), Crystals; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9.2 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

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B23y	1.35 - 1.9 m	Brown (7.5YR4/4-Moist); Brown (7.5YR4/4-Dry); ; Medium clay; Weak grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Ferruginous, Fine (0 - 2 mm), Veins; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Field pH 9 (pH meter); Diffuse, Smooth change to -
B24	1.9 - 2.67 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderate grade of structure, 10-20 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Veins; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Field pH 9 (pH meter);

Morphological Notes

A11p From 190cm there is an increase in ferruginous patches associated with old root channels cracks and coatings on slickensides.

Observation Notes

Parent Rock: , , parna on fourth fan

Site Notes

Brown soil on terrace surface. The brown surface is 2m above vegetated alluvium by creek to north. It may be an eroded surface developed at the edge of the high terrace. The brown runs downslope from the high terrace. A low contour bank lie

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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	8.23A	0.117A	28B	11.88	2.25	1.77			
0 - 0.05	8.39A	0.104A	26.59B	11.99	2.15	2.34			
0.05 - 0.1	8.22A	0.098A	27.87B	12.03	2.32	1.99			
0.1 - 0.2	8.6A	0.09A	28.04B	12.26	1.62	3.02			
0.3 - 0.4	9.32A	0.212A	25.8B	12.62	1.07	6.71			
0.5 - 0.6	9.28A	0.317A	23.16B	12.69	1.02	9.32			
0.7 - 0.8	8.09A	1.92A	21.04B	13.21	0.81000	10.3			
					01				
1.2 - 1.3	8.72A	1.007A	19.57B	13.38	0.92	8.82			
2.5 - 2.6	8.92A	0.881A	20.6B	17.37	0.96	7.47			

[illegible]

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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