

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed061 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward	Locality: K.G.(Ken) Walker, Westholme
Date Desc.: 14/01/87	Elevation: 222 metres
Map Ref.: Sheet No. : 8837_N 1:50000	Rainfall: No Data
Northing/Long.: 6670300 AMG zone: 55	Runoff: No Data
Easting/Lat.: 762400 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 plain	Slope Category: Level
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: Grey clay

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.1 m	Brown (7.5YR4/2-Moist); Dark grey (10YR4/1-Dry); , 10YR63, 0-2% , 0-5mm, Distinct; Light clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A12	0.1 - 0.25 m	Dark brown (7.5YR3/2-Moist); , 10YR63, 0-2% , 0-5mm, Prominent; Light medium clay; Moderate 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%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Dark brown (7.5YR3/2-Moist); , 10YR72, 0-2% , 0-5mm, Faint; Light medium clay; Moderate grade of structure, 50-100 mm, Lenticular; Moderate 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; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 0.9 m	Dark brown (7.5YR3/2-Moist); ; Light medium clay; Moderate grade of structure, 50-100 mm, Lenticular; 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; Very strong consistence; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B2	0.9 - 2.1 m	Reddish brown (5YR4/3-Moist); , 7.5YR54, 0-2% , 5-15mm, Prominent; , 7.5YR32, 0-2% , 5-15mm, Distinct; Light medium clay; Moderate grade of structure, 50-100 mm, Lenticular; 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; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
C	2.1 - 2.69 m	Reddish brown (5YR4/3-Moist); , 7.5YR32, 2-10% , 5-15mm, Distinct; , 7.5YR64, 0-2% , 5-15mm, Distinct; Light medium clay; Weak grade of structure, 100-200 mm, Lenticular; Moderate 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; Strong consistence; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;

Morphological Notes

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A11p A band of coarse sand occurs at 230cm, grit appears further down (240cm). The band of sand comprises sub-rounded quartz grains and detrital carbonate. Most like MVpH - ?fan on an old terrace. Very slight inwashed sand, 010-020.

Observation Notes

Parent Rock: alluvial sediment, mixed texture, with lime, parna on third fan

Site Notes

Two photos of the ground surface, 400 metres up lane way from windmill. No vegetation.

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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	8.13A	0.123A	25.93B	9.030001	1.96	1.65			
0 - 0.1	8.14A	0.267A	26.51B	11.12	1.39	2.35			
0.1 - 0.2	9.24A	0.204A	28.52B	11.59	0.78	4.3			
0.3 - 0.4	9.36A	0.284A	25.75B	13.17	0.71	6.72			
0.7 - 0.8	9.15A	0.629A	24.81B	14.89	0.9	9.63			
1.2 - 1.3	9.13A	0.792A	23.34B	14.95	1.12	11.64			
2.5 - 2.6	9.34A	0.605A	20.96B	11.67	0.92	9.89			

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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