

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na012 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward	Locality: University of Sydney, I.A.Watson Research Farm
Date Desc.: 19/01/88	Elevation: 224 metres
Map Ref.: Sheet No. : 8837_S 1:50000	Rainfall: No Data
Northing/Long.: 6647450 AMG zone: 55	Runoff: No Data
Easting/Lat.: 769500 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: Hillcrest	Slope Category: Very gently sloped
Slope: 1 %	Aspect: 180 degrees

Surface Soil Condition (dry): Surface crust

Erosion:

Soil Classification

Australian Soil Classification: N/A	Mapping Unit: N/A
ASC Confidence: Confidence level not specified	Principal Profile Form: Ug5.4
	Great Soil Group: Grey clay

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Very dark grey (10YR3/1-Moist); Dark grey (10YR4/1-Dry); , 7.5YR64, 2-10% , 0-5mm, Distinct; , 10YR41, 10-20% , 5-15mm, Distinct; Medium clay; Weak grade of structure, 50-100 mm, Subangular blocky; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 5.5 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.3 m	Very dark grey (10YR3/1-Moist); ; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Weak grade of structure, 5-10 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 7 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	0.3 - 0.55 m	Grey (10YR5/1-Moist); , 10YR31, 2-10% , 0-5mm, Distinct; Medium heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; Weak grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
B22	0.55 - 1 m	Dark greyish brown (10YR4/2-Moist); , 10YR31, 2-10% , 5-15mm, Distinct; Medium heavy clay; Weak grade of structure, 100-200 mm, Lenticular; Weak grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
B23y	1 - 1.5 m	Brown (10YR5/3-Moist); ; Medium clay; Weak grade of structure, 100-200 mm, Prismatic; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Few (2 - 10 %), Gypseous, Medium (2 -6 mm), Crystals; Field pH 4 (pH meter); Diffuse, Smooth change to -
Cg	1.5 - 3.51 m	Reddish brown (2.5YR4/4-Moist); , 7.5YR54, 10-20% , 15-30mm, Distinct; , 10YR52, 10-20% , 15-30mm, Distinct; Clay loam; Massive grade of structure; Weak 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; Field pH 3.5 (pH meter);

Morphological Notes

A11 53301 colour 3 is bleach associated with surface crust and extending to 5cm. This is a

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na012 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

A12 y just below a zone with prominent manganese stains. 01206 seems to be a water-mottled reddish prior horizon. One subangular ironstone fragment occurs at 335cm, 20-60mm. Notice that the carbonate and gypsum layers occur above a weathered, g
B21 leyed, acid layer extending to bottom of drillhole and pre-weathered reddish brown. Field pH for sample 6 revised from pH 3 to pH 3.5 following pH data analysis.

Observation Notes

Parent Rock: alluvial sediment, clay, Rolling Downs Group

Site Notes

Perhaps developed here on Tertiary deposits [later we identify these as Rolling Downs Formation]. The surface soil is clay with areas of sandy wash on the immediate surface. In the top metre there are large pockets of gypsum crystals. Subso

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na012 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

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