

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed414 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: M.E. Heape	Locality: Bruce Tout, Oakvale
Date Desc.: 25/03/86	Elevation: 293 metres
Map Ref.: Sheet No. : 8837_N 1:50000	Rainfall: No Data
Northing/Long.: 6666700 AMG zone: 55	Runoff: No Data
Easting/Lat.: 777900 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: 80 degrees

Surface Soil Condition (dry): Surface crust, Recently cultivated

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

A11p	0 - 0.03 m	Very dark grey (10YR3/1-Moist); Dark brown (7.5YR3/2-Dry); ; Medium clay; Moderate grade of structure, 2-5 mm, Granular; Moderate grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
A12	0.03 - 0.1 m	Very dark brown (10YR2/2-Moist); ; Light 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; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.1 - 0.25 m	Very dark brown (10YR2/2-Moist); ; Light medium clay; 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), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.25 - 0.7 m	Very dark brown (10YR2/2-Moist); , 10YR4/3, 2-10% , 0-5mm, Distinct; Medium clay; Weak grade of structure, 20-50 mm, Lenticular; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth
B21	0.7 - 1 m	Dark reddish grey (5YR4/2-Moist); , 7.5YR3/2, 2-10% , 5-15mm, Faint; Medium heavy clay; Weak grade of structure, 50-100 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 1.9 m	Dark reddish grey (5YR4/2-Moist); ; Light clay; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Medium (2 - 6 mm), Nodules; Field pH 8.5 (pH meter); Few, medium (2-5mm) roots;

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B23	1.9 - 2.8 m	Reddish brown (5YR4/4-Moist); , 5YR66, 2-10% , 5-15mm, Distinct; Light clay; Weak grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Fine (1-2mm) macropores, Moderately moist; Firm consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
C1	2.8 - 3.3 m	Reddish brown (5YR4/4-Moist); ; Medium clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 20-50%, coarse gravelly, 20-60mm, rounded, Consolidated rock (unidentified), coarse fragments; Field pH 7.5 (pH meter); Abrupt, Smooth change to -
C2	3.3 - 3.89 m	Dark reddish grey (5YR4/2-Moist); ; Light medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, rounded, Consolidated rock (unidentified), coarse fragments; Field pH 7.5 (pH meter);

Morphological Notes

A11p	Carbonate at 5cm. ?MVpH. There is evidence of a discontinuity in the sediments at 330 cm. The 106cm above this discontinuity is composed of fine sand to coarse gravels (up to 5cm in the longest axis). The textures grade over this distance,
A12	the basal gravels beginning at 273cm. Evidence of sedimentary layering is found from 305cm. The bottom 20cm of the sampled profile is well structured clay material (5YR4/2) with few manganese stains and (2, 5, ab, pedality and smooth ped fa
A13	ces). It appears to be a buried B2 horizon with no carbonate. There is a little evidence of man-made compaction in the top 30cm of the profile. The texture of the C horizon is gravelly. We subsequently located more core including 350-360; t
A14	his part is not in the photo. Note that lab numbers for 41408 and 41409 (= 41400) should be reversed, as the samples have now been put in proper depth order.

Observation Notes

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

Site Notes

Surface also has small amount of fine self mulching. Old river bed with deposited clay alluvium on hard sandstone.

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Laboratory Test Results:

[illegible][illegible][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