

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed186 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	K.J. Smith	Locality:	W.F. Buchanan, Killarney
Date Desc.:	02/06/86	Elevation:	229 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6653400 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	768800 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:	Level
Slope:	0 %	Aspect:	No Data

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: Complete clearing. Pasture, native or improved, cultivated at some stage, Cultivation. Rainfed,

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.05 m	Very dark greyish brown (10YR3/2-Moist); Very dark grey (10YR3/1-Dry); ; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Rough-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; Field pH 7 (pH meter); Common, very fine (0-1mm) roots; Abrupt, Wavy change to -
A12	0.05 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); ; Medium heavy clay; Strong grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Platy; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7.5 (pH meter); Common, very fine (0-1mm) roots;
A13	0.1 - 0.25 m	Dark grey (10YR4/1-Moist); Very dark grey (10YR3/1-Dry); , 10YR33, 0-2% , 0-5mm, Distinct; Light medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Field pH 8.3 (pH meter); Common, very fine (0-1mm) roots;
A14	0.25 - 0.55 m	Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); , 10YR33, 0-2% , 0-5mm, Distinct; Heavy clay; Moderate grade of structure, 20-50 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 8.8 (pH meter); Few, very fine (0-1mm) roots;
A15	0.55 - 1.05 m	Very dark grey (10YR3/1-Moist); , 10YR42, 0-2% , 0-5mm, Distinct; , 10YR82, 0-2% , 0-5mm, Faint; Heavy clay; Moderate 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) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9 (pH meter); Common, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	1.05 - 1.9 m	Brown (7.5YR4/2-Moist); , 10YR31, 0-2% , 0-5mm, Distinct; , 10YR82, 2-10% , 0-5mm, Distinct; Light medium clay; Weak grade of structure, 50-100 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; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;

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B22 1.9 - 3.41 m Greyish brown (10YR5/2-Moist); , 10YR31, 0-2% , 0-5mm, Distinct; , 10YR82, 0-2% , 0-5mm, Distinct; Heavy clay; Moderate grade of structure, 100-200 mm, Lenticular; Moderate grade of structure, 10-20 mm, Cast; 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 9 (pH meter); Few, very fine (0-1mm) roots;

Morphological Notes

A11 Ground surface seems trampled or weakly poached or slaked. 1cm polyhedral peds from 250 down. Subsoil is a dull yellowish brown.

Observation Notes

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

Site Notes

Spring Creek is 300m E in a 1m deep channel which shows 5cm brown alluvial clay over prior black cracking clay.

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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