

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed140 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	D. McGarry	Locality:	W.R.(Rick) Tapp, Fernleigh
Date Desc.:	17/10/85	Elevation:	349 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6660000 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	786800 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:	1 %	Aspect:	340 degrees

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:	Ug5.36
		Great Soil Group:	Brown clay

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.07 m	Very dark brown (10YR2/2-Moist); ; Medium clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Moderate grade of structure, <2 mm, Granular; Rough-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; 2-10%, coarse gravelly, 20-60mm, angular platy, Basalt, coarse fragments; Field pH 6.5 (pH meter); Common, fine (1-2mm) roots; Abrupt, Irregular change to -
B21	0.07 - 0.25 m	Dark reddish brown (5YR3/4-Moist); ; 10YR22, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, angular platy, Quartz, coarse fragments; Field pH 6.7 (pH meter); Few, very fine (0-1mm) roots;
B22	0.25 - 0.6 m	Dark reddish brown (5YR3/4-Moist); ; 10YR22, 0-2% , 0-5mm, Faint; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 5-10 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; Firm consistence; Field pH 8.2 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B23r	0.6 - 0.9 m	Dark brown (7.5YR3/4-Moist); ; Medium clay; 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; Very firm consistence; 50-90%, cobbly, 60-200mm, subrounded, Basalt, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B24k	0.9 - 1.51 m	Dark reddish brown (5YR3/4-Moist); ; 7.5YR64, 10-20% , 15-30mm, Prominent; Silty clay loam; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, coarse gravelly, 20-60mm, subrounded, Basalt, coarse fragments; Common (10 - 20 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots;

Morphological Notes

A1	B2r is very strong, perhaps cobbly, >50% of sampled layer, the stones include basalt and sandstone. Carbonate at 90cm. Tendency to prismatic structure at 40-50 in ?sandier material associated with the boulders. There is some discussion as to
B21	whether 140.05 is a buried B2, but I think not. Hole ends at 151 in weathered basalt boulder.

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Parent Rock: alluvial sediment, mixed texture, with lime, first terraced fan

Site Notes

Abundant turnipweed. Very soft moist surface. Cobblestones stop proline at about 150cm. Penetrometer passes between stones. Many basalt cobbles and boulders. Common surface stone.

Observation Notes

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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