

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed064 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: M.E. Heape	Locality: Ian Cameron, Argyle
Date Desc.: 10/02/86	Elevation: 250 metres
Map Ref.: Sheet No. : 8837_N 1:50000	Rainfall: No Data
Northing/Long.: 6670100 AMG zone: 55	Runoff: No Data
Easting/Lat.: 770700 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

Erosion:

Soil Classification

Australian Soil Classification: N/A	Mapping Unit: N/A
ASC Confidence: Confidence level not specified	Principal Profile Form: Ug6.1
	Great Soil Group: Grey clay

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark reddish brown (5YR2/2-Moist); Dark reddish brown (5YR2/2-Dry); ; Light clay; Strong grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Dark reddish brown (5YR2/2-Moist); ; Light clay; Strong grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Black (5YR2/1-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, coarse gravelly, 20-60mm, rounded tabular, Ironstone, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 1 m	Black (5YR2/1-Moist); , 10YR42, 2-10% , 0-5mm, Distinct; Heavy clay; Moderate grade of structure, 20-50 mm, Prismatic; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 8.5 (pH meter);
B21	1 - 1.55 m	Brown (10YR5/3-Moist); ; Medium clay; Weak grade of structure, 50-100 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 - 6 mm), Soft segregations; Field pH 8.5 (pH meter); Diffuse, Smooth
B22	1.55 - 2.5 m	Brown (7.5YR5/4-Moist); , N80, 0-2% , 0-5mm, Prominent; Medium clay; Weak grade of structure, 50-100 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; 20-50%, coarse gravelly, 20-60mm, subangular, Consolidated rock (unidentified), coarse fragments; Very few (0 - 2 %), Unidentified, Fine (0 - 2 mm), Soft segregations; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;

Morphological Notes

A11 0-30 is not as dark as 30-80. This core is like site 236 in lower part. Do we have a basaltic fan in this area from Nundi Creek? Sampled at 170-177 for McTainsh. The unknown segregations seem to be crystalline but no fizz or powdery. Abunda

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A12 nt pebbles of mixed lithology in lower part.

Observation Notes

Parent Rock: alluvial sediment, mixed texture, non-calcareous, gravel fifth (eroded) fan

Site Notes

Very fine surface mulch (2cm deep) over hard upper layer. No visible cracks. This site is in savannah and seems to be on a small ridge with sandstone beneath. Basalt pieces (weathered and fresh) occur at 230-250cm. Few quartz gravels (up to

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Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.02	7.3A	0.282A	18.41B	4.31	2.62	0.15			
0 - 0.1	7.52A	0.213A	21.82B	5.74	0.84	0.33			
0.1 - 0.2	8.49A	0.139A	22.3B	5.8	0.31	0.62			
0.3 - 0.4	9.08A	0.175A	19.56B	6.94	0.21	1.8			
0.7 - 0.8	8.97A	0.519A	22.75B	10.96	0.22	5.92			
1.2 - 1.3	8.18A	1.344A	23.3B	12.53	0.35	6.08			
1.8 - 1.9	7.52A	0.705A	21.52B	11.51	0.3	6.72			

[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
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method