

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed413 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	M.E. Heape	Locality:	Bruce Tout, Oakvale
Date Desc.:	06/05/86	Elevation:	303 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6666700 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	778800 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:	Very gently sloped
Slope:	1 %	Aspect:	355 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:	Ug5.25
		Great Soil Group:	Brown clay

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Granular; Moderate grade of structure, 20-50 mm, Polyhedral; 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 8.5 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Very dark grey (10YR3/1-Moist); , 7.5YR42, 0-2% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Dark brown (7.5YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B21	0.55 - 1 m	Dark reddish grey (5YR4/2-Moist); ; Medium heavy clay; Moderate grade of structure, 100-200 mm, Polyhedral; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; 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	Reddish brown (5YR4/4-Moist); , 7.5YR32, 2-10% , 5-15mm, Distinct; Light medium clay; Weak grade of structure, 20-50 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; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.5 (pH meter);
B23	1.9 - 3.21 m	Reddish brown (5YR4/4-Moist); ; Light medium clay; Weak grade of structure, 10-20 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 8.5 (pH meter);

Morphological Notes

A11 Structure:- midway between platy and angular blocky - termed polyhedral for ed43102-04. Several small coarse fragments at 60cm, composition - fine sandstone. Reddish

Observation Notes

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

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Reclaimed native forest. This site has a brown surface which I thought was wash over terrace from nearby sandstone hill, but this not proven by core. Perhaps some sandstone detritus in the terrace alluvium.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.1	8.01A	0.125A	26.06B	10.32	0.96	1.16			
0.1 - 0.2	8.05A	0.087A	25.93B	13.8	0.67	2.15			
0.3 - 0.4	8.83A	0.202A	24.91B	14.47	0.45	3.91			
0.7 - 0.8	9.19A	0.328A	19.32B	15.21	0.41	6.77			
1.2 - 1.3	9.22A	0.34A	18.92B	15.18	0.46	7.14			
2.5 - 2.6	8.73A	0.123A	12.01B	13.47	0.41	5.87			

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
m	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS	Silt Clay
0 - 0.1	0.2B	1.45C	17.1J								
0.1 - 0.2	<0.1B	1.13C	3.9J								
0.3 - 0.4	0.4B	0.98C	1.9J								
0.7 - 0.8	2.7B	0.49C	12.3J								
1.2 - 1.3	1.8B	0.2C	13.4J								
2.5 - 2.6	<0.1B	0.12C	14.8J								

[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