

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed207 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	W.T. Ward	Locality:	Forestry Commission of NSW, Killarney State Forest
Date Desc.:	08/03/85	Elevation:	268 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6650700 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	778300 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:	Pediment	Slope Category:	Very gently sloped
Slope:	2 %	Aspect:	180 degrees

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Dy5.43
		Great Soil Group:	Solodic soil

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Brown (10YR4/3-Moist); Light brownish grey (10YR6/2-Dry); ; Sand; Single grain grade of structure, <2 mm; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Field pH 7 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
A12	0.1 - 0.25 m	Brown (10YR4/3-Moist); Light grey (10YR7/2-Dry); ; Sand; Single grain grade of structure, <2 mm; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Field pH 6.7 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.5 m	Brown (10YR5/3-Moist); Light grey (10YR7/2-Dry); ; Sand; Single grain grade of structure, 100-200 mm; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Field pH 6.7 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A14	0.5 - 0.6 m	Very pale brown (10YR7/3-Moist); , 10YR56, 10-20% , 5-15mm, Faint; Sand; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; 2-10%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 6.7 (pH meter); Sharp, Wavy change to -
B21	0.6 - 1 m	Yellowish brown (10YR5/4-Moist); , 10YR71, 20-50% , 30-mm, Distinct; Coarse sandy clay loam; Massive grade of structure; Rough-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH 5.7 (pH meter);
B22	1 - 1.3 m	Light brownish grey (2.5Y6/2-Moist); , 7.5YR58, 20-50% , 30-mm, Prominent; Coarse sandy light clay; Weak grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; Very few (0 - 2 %), Ferruginous, Fine (0 - 2 mm), Soft segregations; Field pH 6.3 (pH meter); Diffuse, Smooth change to -
B23	1.3 - 2.3 m	Strong brown (7.5YR5/8-Moist); , 2.5Y62, 20-50% , 30-mm, Prominent; , 2.5YR48, 10-20% , 5-15mm, Distinct; Coarse sandy light clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Field pH 7.8 (pH meter); Diffuse, Smooth change to -

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C 2.3 - 3.4 m Brownish yellow (10YR6/6-Moist); , 5Y61, 20-50% , 15-30mm, Distinct; , 10YR81, 2-10% , 15-30mm, Prominent; Coarse sandy light clay; Moderate grade of structure, 20-50 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Nodules; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Soft segregations; Very few (0 - 2 %), Ferruginous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Diffuse, Smooth change to -

Morphological Notes

A11 B23 has quartz pebble and ironstone pebble. The red may be the primary colour. At 205cm there is a large Fe nodule and at 280cm is a carbonate nodule. Is carbonate a sign of aeolian lime?

Observation Notes

Parent Rock: alluvial sediment, mixed texture, non-calcareous, Pilliga Sandstone, weathered

Site Notes

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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 - 0.02	5.6A	0.131A	1.83B	0.54	0.17	0.01			
0 - 0.1	6.51A	0.027A	1.87B	0.39	0.08	<0.01			
0.1 - 0.2	5.5A	0.029A	0.56B	0.2	0.02	<0.01			
0.3 - 0.4	6.22A	0.01A	0.27B	0.15	0.02	<0.01			
0.5 - 0.6	6.51A	0.01A	<0.1B	0.23	0.03	<0.01			
0.7 - 0.8	5.96A	0.071A	0.54B	4.07	0.35	0.86			
1.2 - 1.3	6.24A	0.356A	1.95B	10.25	0.72	2.88			
1.7 - 1.8	7.95A	0.326A	1.99B	8.59	0.54	2.36			
2.5 - 2.6	8.25A	0.41A	3.04B	12.49	0.73	3.62			

Depth m	CaCO ₃	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
	%	%	mg/kg	%	%	%	Mg/m ³	Gv	Cs	Fs %	Silt Clay
0 - 0.02	<0.1B	1.49C									4.6 5
0 - 0.1	<0.1B	0.83C	2.7J								4 3
0.1 - 0.2	<0.1B	0.39C	1.5J								3.9 2.5
0.3 - 0.4	<0.1B	0.14C	<1J								4 2.3
0.5 - 0.6	<0.1B	0.03C	<1J								4.5 3.2
0.7 - 0.8	<0.1B	0.09C	<1J								4.3 25.6
1.2 - 1.3	<0.1B	0.08C	1.9J								3.8 47.2
1.7 - 1.8	<0.1B	0.1C	1.8J								2.2 32.3
2.5 - 2.6	<0.1B	0.05C	3.3J								3.8 43.7

[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