Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed136** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By:	G.M. Roberts	**Locality:**	Forestry Commission of NSW, Bobbiwaa State Forest
Date Desc.:	29/04/85	**Elevation:**	268 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	**Rainfall:**	No Data
Northing/Long.:	6660300 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	775800 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:**	Level
Slope:	0 %	**Aspect:**	No Data

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:
N/A
ASC Confidence:
Confidence level not specified

Mapping Unit: N/A
Principal Profile Form: Ug6.21
Great Soil Group: No suitable

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.06 m	Dark brown (10YR3/3-Moist); Brown (10YR5/3-Dry); ; Light clay; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Field pH 6 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.06 - 0.25 m	Yellowish brown (10YR5/4-Moist); Pale brown (10YR6/3-Dry); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Very strong consistence; 0-2%, coarse gravelly, 20-60mm, rounded tabular, Quartz, coarse fragments; Field pH 5.8 (pH meter); Few, coarse (>5mm) roots;
A13	0.25 - 0.55 m	Yellowish brown (10YR5/4-Moist); Yellowish brown (10YR5/4-Dry); ; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Very strong consistence; 0-2%, coarse gravelly, 20-60mm, rounded tabular, Quartz, coarse fragments; Common (10 - 20 %), Organic (humified), Coarse (6 - 20 mm), Veins; Field pH 6 (pH meter);
A14	0.55 - 0.83 m	Brownish yellow (10YR6/6-Moist); ; Medium heavy clay; Massive grade of structure; Moderate grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse change to -
B21	0.83 - 1.22 m	Brown (10YR4/3-Moist); , 10YR81, 2-10% , 0-5mm, Distinct; , 10YR31, 2-10% , 0-5mm, Distinct; Medium heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8.3 (pH meter); Few, very fine (0-1mm) roots; Sharp,
B22	1.22 - 1.9 m	Brown (10YR5/3-Moist); , 10YR56, 0-2% , 0-5mm, Distinct; , 10YR81, 0-2% , 0-5mm, Distinct; Light clay; Massive grade of structure; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Veins; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter);

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B23	1.9 - 2.62 m	Light brownish grey (10YR6/2-Moist); , 10YR56, 0-2% , 0-5mm, Distinct; , 10YR21, 0-2% , 0-5mm, Distinct; Sandy clay loam; Massive grade of structure; Single grain grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; 2-10%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8 (pH meter);

Morphological Notes

Observation Notes

Parent Rock: , , Pilliga Sandstone

Site Notes

A solodic soil. Nearby ridges consist of shallow ferruginous sandstone with mottled yellow earths.Pale yellow sandy soils occur in depressions on slopes and browner patches on the better-drained knolls and clayier parent materials.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.02	6.72A	0.058A	3.8B	1.65	0.67	0.01				
0 - 0.06	6.78A	0.087A	6.57B	6.55	0.83	0.34				
0.1 - 0.2	6.2A	0.123A	7.53B	7.04	0.68	1				
0.3 - 0.4	6.32A	0.277A	7.51B	9.75	0.43	1.79				
0.7 - 0.8	8.4A	0.453A	4.8B	8.96	0.36	1.87				
1 - 1.1	9.17A	0.59A	5.34B	9.809999	0.41	2.95				
1.22 - 1.3	9.3A	0.455A	3.51B	6.97	0.37	2.35				
2.5 - 2.6	9.32A	0.333A	2.28B	5.25	0.25	1.99				

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.02	<0.1B	2.09C									9	13
0 - 0.06	<0.1B	2.31C	28.9J								7.5	34
0.1 - 0.2	<0.1B	0.52C	6.9J								6	46
0.3 - 0.4	<0.1B	0.6C	4.1J								7.8	51.7
0.7 - 0.8	<0.1B	0.14C	<1J								7.3	31.9
1 - 1.1	2.8B	0.08C	2.3J								8.8	36.5
1.22 - 1.3	1B	0.06C	3.3J								6.3	27.3
2.5 - 2.6	0.2B	0.03C	2.3J								5.1	21.2

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m		g/g - m3/m3							mm/h	mm/h
0 - 0.02										
0 - 0.06										
0.1 - 0.2										
0.3 - 0.4										
0.7 - 0.8										
1 - 1.1										
1.22 - 1.3										
2.5 - 2.6										

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca2+,Mg2+,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