Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed137 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.: Elevation: 28/04/85 287 metres Sheet No.: 8837 N 1:50000 Map Ref.: Rainfall: No Data Northing/Long.: 6660300 AMG zone: 55 Runoff: No Data 778500 Datum: AGD66 No Data Easting/Lat.: Drainage:

Geology

ExposureType: Conf. Sub. is Parent. Mat.: Undisturbed soil core No Data **Substrate Material:** Geol. Ref.: No Data No Data

Land Form

Rel/Slope Class: No Data Pattern Type: No Data Morph. Type: No Data Relief: No Data

Elem. Type: Very gently sloped Slope Category: Pediment Aspect: 180 degrees Slope: 2 %

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification: N/A Mapping Unit: Principal Profile Form: Uc2.12 ASC Confidence: **Great Soil Group:** Siliceous sand

Confidence level not specified

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

Dark yellowish brown (10YR4/4-Moist); Very pale brown (10YR7/3-Dry); ; Sand; Single grain $0 - 0.1 \, \text{m}$ grade of structure, <2 mm; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Field pH 5.8 (pH meter); Few, very fine (0-1mm) roots; Diffuse change to A12 0.1 - 0.25 m Brownish yellow (10YR6/6-Moist); Very pale brown (10YR7/4-Dry); ; Sand; Single grain grade of structure, <2 mm; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Field pH 5.5 (pH meter); Few, very fine (0-1mm) roots; Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/4-Dry); ; Sand; Single grain grade A13 0.25 - 0.55 m of structure, <2 mm; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Field pH 5.5 (pH meter); Few, fine (1-2mm) roots; Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/4-Dry); ; Sand; Single grain grade A14 0.55 - 0.75 m of structure, <2 mm; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Field pH 5.8 (pH meter); Few, fine (1-2mm) roots; Diffuse change to -A21 0.75 - 1 m Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/4-Dry); ; Sand; Massive grade of structure; Single grain grade of structure; Sandy (grains prominent) fabric; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 5.8 (pH meter); Few, fine (1-2mm) roots; A22 1 - 2.3 m

Brownish yellow (10YR6/6-Moist); Brownish yellow (10YR6/6-Dry); , 10YR71, 10-20% , 30mm, Distinct; Sand; Massive grade of structure; Single grain grade of structure; Sandy (grains prominent) fabric; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Veins; Field pH 5.8 (pH meter);

Morphological Notes

Observation Notes

Parent Rock:,, Pilliga Sandstone

Site Notes

Ca 25cm of loose brownish sand passing to firmer sand with slight clay, an A2, continuing further than I can drill. The deep topsoil of a near-channell 'sand-monkey'. Further down is a sandy, firm, mottled B2. The slope steepens west to a

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Laboratory Test Results:

Depth	рН	1:5 EC		nangeable			Exchangeable	CEC		ECEC	E	SP
m		dS/m	Ca I	Иg	К	Na Cmol (-	Acidity +)/kg				•	%
0 - 0.02	5.68A	0.022A	0.1B	0.18	0.1	<0.01						
0 - 0.1	5.79A	0.015A	0.91B	< 0.1	0.06	0.31						
0.1 - 0.2	5.39A	0.013A	0.8B	< 0.1	0.05	0.02						
0.3 - 0.4	5.64A	0.01A	0.98B	<0.1	0.06	0.03						
0.7 - 0.75	6.3A	0.007A	0.939999 9B	0.53	0.1	0.02						
0.75 - 0.8	6.47A	0.053A	<0.1B	3.65	0.29	0.69						
1.2 - 1.3	7.17A	0.104A	0.64B	4.25	0.37	0.85						
Depth	CaCO3	Organic	Avail.	Total	Total	Tota					Analysis	
m	%	C %	P mg/kg	P %	N %	K %	Density Mg/m3	GV	CS	FS %	Silt	Clay
0 - 0.02	<0.1B	1.05C									1.9	3
0 - 0.1	<0.1B		14.8J								3.9	4.7
0.1 - 0.2	<0.1B		6.9J								3.7	5.4
0.3 - 0.4	<0.1B		<1J								3.8	5.4
0.7 - 0.75	<0.1B		<1J								3.7	8.5
0.75 - 0.8	<0.1B		<1J								5.8	21.7
1.2 - 1.3	<0.1B	0.04C	3.5J								3.4	16.9
Depth	COLE										K unsat	:
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar /g - m3/m	1 Bar 3	5 Bar 15 I	Bar	mm	ı/h	mm/h	

0 - 0.02 0 - 0.1 0.1 - 0.2

0.1 - 0.2 0.3 - 0.4 0.7 - 0.75 0.75 - 0.8 1.2 - 1.3

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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 Silt (%) - Coventry and Fett pipette method