Project Name: **Soils of the Lower Macquarie Valley, New South Wales**
Project Code: **Macquarie** **Site ID:** **520** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 04/12/85
Map Ref.: Sheet No. : 8434 1:10000
Northing/Long.: 6476760 AMG zone: 55
Easting/Lat.: 578850 Datum: AGD66
Locality:
Elevation: No Data
Rainfall: No Data
Runoff: Slow
Drainage: Imperfectly drained

Geology

ExposureType: Soil pit
Geol. Ref.: No Data
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: No Data

Land Form

Rel/Slope Class: No Data
Morph. Type: Flat
Elem. Type: No Data
Slope: %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: No Data

Surface Soil Condition (dry): Hardsetting, Surface crust

Erosion:

Soil Classification

Australian Soil Classification:
N/A

ASC Confidence:
Confidence level not specified

Mapping Unit: OLD ALLUVIUM MEANDER PLAIN
Principal Profile Form: Ug5.38
Great Soil Group: N/A

Site Disturbance: Extensive clearing, for example poisoning, ringbarking

Vegetation:

Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - Pinus species

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.2 m	Dark reddish brown (5YR3/4-Moist); ; Weak grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Many, medium (2-5mm) roots; Clear, Smooth change to -
B21	0.2 - 0.55 m	Dark reddish brown (2.5YR3/4-Moist); ; Medium heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Field pH 7.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Gradual, Irregular change to -
B22	0.55 - 1.35 m	Dark reddish brown (2.5YR3/4-Moist); ; Medium heavy clay; Strong grade of structure, 10-20 mm, Polyhedral; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

A1 An old red 'cracking clay' except for the hardsetting compacted A horizon.

Observation Notes

Mitchell Soil Profile Class, Moderately Drained Phase

Site Notes

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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							%
0.1 - 0.15	8.5A	0.097A	1.4E	0.8	0.6	0.2			3D	
0.3 - 0.35	6.3A	0.033A								
0.7 - 0.75	9A	0.781A	6E	10.1	0.5	4.7			21.3D	
1.3 - 1.35	9A	0.988A								

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			%		
0.1 - 0.15							1.57		18.6A	44.9	16.1	20.5
0.3 - 0.35							1.48					
0.7 - 0.75							1.48		12.4A	24.6	30.2	32.9
1.3 - 1.35							1.59					

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
0.1 - 0.15	0.021A			0.14G				0.06D		
0.3 - 0.35	0.066A			0.28G				0.19D		
0.7 - 0.75	0.081A			0.29G				0.19D		
1.3 - 1.35	0.049A			0.2G				0.17D		

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Laboratory Analyses Completed for this profile

15C1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_MG	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15J_BASES	Sum of Bases
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_CS	Coarse sand (%) - Coventry and Fett pipette method
P10_CF_FS	Fine sand (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method
P3A1	Bulk density - g/cm3
P3B1GV_15	15 BAR Moisture g/g - Gravimetric of ground sample (<2mm) using pressure plate
P3B4GV_01	0.1 BAR Moisture g/g - Gravimetric of soil clods (Soil Survey Staff,1967)
P5_COLE	Coefficient of Linear Extensibility (Grossman et al. 1968)