Project Name: **Soils of the Lower Macquarie Valley, New South Wales**
Project Code: **Macquarie** **Site ID:** **528** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By:	N.J. McKenzie	**Locality:**	
Date Desc.:	07/12/85	**Elevation:**	No Data
Map Ref.:	Sheet No. : 8434 1:10000	**Rainfall:**	No Data
Northing/Long.:	6479200 AMG zone: 55	**Runoff:**	Slow
Easting/Lat.:	579400 Datum: AGD66	**Drainage:**	Moderately well drained

Geology

ExposureType:	Soil pit	**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:	Mid-slope	**Relief:**	No Data
Elem. Type:	No Data	**Slope Category:**	No Data
Slope:	%	**Aspect:**	No Data

Surface Soil Condition (dry): Hardsetting, Surface crust

Erosion:

Soil Classification

Australian Soil Classification:
N/A

Mapping Unit: OLD ALLUVIUM MEANDER PLAIN

Principal Profile Form: Uf6.12

ASC Confidence:
Confidence level not specified

Great Soil Group: N/A

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:
Tall Strata - Tussock grass, 0.51-1m, Sparse. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark reddish brown (5YR3/4-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Earthy fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 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; Gradual, Smooth change to -
A12	0.1 - 0.37 m	Dark reddish brown (2.5YR3/4-Moist); ; Medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 0.01m2) Medium (2-5mm) macropores, Moist; Weak consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Many, medium (2-5mm) roots; Gradual, Smooth change to -
B1	0.37 - 0.65 m	Red (2.5YR4/8-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Rough-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 0.01m2) Medium (2-5mm) macropores, Moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated; Field pH 7 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Clear, Smooth change to -
B2	0.65 - 1.35 m	Reddish brown (2.5YR4/4-Moist); , 7.5YR74, 20-50% , 15-30mm, Distinct; , 5YR58, 20-50% , 15-30mm, Distinct; Medium clay; Weak grade of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Field pH 8.5 (Raupach);

Morphological Notes

A11 The B2 is well on its way to being lateritic - was very tough for the backhoe. The mottled Fe-rich colouring is notable - relict? Rabbit burrow @ 30cm

Observation Notes

Mitchell Soil Profile Class, Well Drained Phase, Compaction due to livestock

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	7A	0.043A	3.1E	0.5	1.7	0.3			5.6D	
0.3 - 0.35	7.5A	0.027A								
0.7 - 0.75	8.7A	0.117A	7E	1.9	0.8	0.1			9.8D	
1.3 - 1.35	8.5A	0.154A								

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							1.39		29.8A	33.3	12.9	24
0.3 - 0.35							1.53					
0.7 - 0.75							1.64		24.6A	25.6	6.8	43
1.3 - 1.35							1.48					

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	0.048A			0.16G				0.08D		
0.3 - 0.35	0.084A			0.14G				0.09D		
0.7 - 0.75	0.028A			0.16G				0.13D		
1.3 - 1.35	0.05A			0.18G				0.16D		

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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)