

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 310 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	28/07/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8434 1:10000	Rainfall:	No Data
Northing/Long.:	6464240 AMG zone: 55	Runoff:	Moderately rapid
Easting/Lat.:	587940 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:	No Data	Relief:	No Data
Elem. Type:	No Data	Slope Category:	No Data
Slope:	%	Aspect:	No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	OLD ALLUVIUM MEANDER PLAIN
N/A		Principal Profile Form:	Dr2.43
ASC Confidence:		Great Soil Group:	N/A
Confidence level not specified			

Site Disturbance: Complete clearing. Pasture, native or improved, but never cultivated

Vegetation:

Tall Strata - Tussock grass, 0.26-0.5m, Sparse. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.22 m	Dark reddish brown (5YR3/4-Moist); ; Sandy clay (Light); Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Many (>5 per 100mm ²) Fine (1-2mm) macropores, Few (<1 per 0.01m ²) Medium (2-5mm) macropores, Moist; Weak consistence; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Clear, Smooth change to -
A2	0.22 - 0.29 m	Reddish brown (5YR4/4-Moist); ; Sandy clay (Light); Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm ²) Fine (1-2mm) macropores, Few (<1 per 0.01m ²) Medium (2-5mm) macropores, Moist; Weak consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.29 - 0.6 m	Red (2.5YR4/6-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Polyhedral; Smooth-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated; Common cutans, 10-50% of ped faces or walls coated; Field pH 8 (Raupach); Common, very fine (0-1mm) roots; Diffuse, Irregular change to -
B22k	0.6 - 1.5 m	Red (2.5YR4/5-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Polyhedral; Smooth-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated; Common cutans, 10-50% of ped faces or walls coated; Common (10 - 20 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Field pH 9 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

B22k Concretionary CaCO₃

Observation Notes

Mitchell Soil Profile Class, Poorly Drained Phase, Minor (20cm?) undulations

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0.1 - 0.15	6A	0.033A	0.5E	0.1	0.2	0.1			0.9D	
0.3 - 0.35	8.5A	0.108A								
0.7 - 0.75	8.9A	0.371A	3.1E	5.8	0.4	3.9			13.2D	
1.3 - 1.35	9A	0.683A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0.1 - 0.15							1.68		34.7A	39.2	12.6	13.5
0.3 - 0.35							1.74					
0.7 - 0.75							1.66		20.5A	24.1	9.1	46.2
1.3 - 1.35							1.64					

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
				g/g	m3/m3				mm/h
0.1 - 0.15	0.023A			0.09G				0.04D	
0.3 - 0.35	0.057A			0.15G				0.14D	
0.7 - 0.75	0.036A			0.17G				0.14D	
1.3 - 1.35	0.049A			0.18G				0.19D	

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Laboratory Analyses Completed for this profile

15C1_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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/cm ³
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)