

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 410 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	13/10/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8533 1:10000	Rainfall:	No Data
Northing/Long.:	6448900 AMG zone: 55	Runoff:	Slow
Easting/Lat.:	604000 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:	Flat	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:	Gn3.12
		Great Soil Group:	N/A

ASC Confidence:

Confidence level not specified

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

Vegetation:

Tall Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.08 m	Dark reddish brown (2.5YR2/4-Moist); ; Sandy clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Rough-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Wet; Weak consistence; Field pH 7 (Raupach); ManyClear, Smooth change to -
B1	0.08 - 0.23 m	Red (2.5YR4/5-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Wet; Weak consistence; Common cutans, 10-50% of ped faces or walls coated; Field pH 7 (Raupach); CommonGradual, Smooth change to -
B21	0.23 - 0.6 m	Dark yellowish brown (10YR4/6-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; Many cutans, >50% of ped faces or walls coated; Field pH 7 (Raupach); CommonDiffuse, Smooth change to -
B22	0.6 - 1.35 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Many cutans, >50% of ped faces or walls coated; Field pH 7 (Raupach); Common

Morphological Notes

A11 Termites at 50cm.

Observation Notes

Mitchell Soil Profile Class, Well Drained Phase

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	6.9A	0.031A	4.1E	0.8	1	0.1			6D	
0.3 - 0.35	7.2A	0.021A								
0.7 - 0.75	7.5A	0.027A	7.8E	4.1	0.3	0.1			12.3D	
1.3 - 1.35	6.9A	0.027A								

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							1.66		19.3A	37.9	13.1	29.6
0.3 - 0.35							1.42					
0.7 - 0.75							1.62		13.9A	24.2	8.3	53.5
1.3 - 1.35							1.54					

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
0.1 - 0.15	0.009A			0.12G				0.08D	
0.3 - 0.35	0.105A			0.28G				0.11D	
0.7 - 0.75	0.013A			0.2G				0.15D	
1.3 - 1.35	0.046A			0.21G				0.16D	

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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)
XRD_C_II	Illite - X-Ray Diffraction
XRD_C_Kt	Kaolinite - X-Ray Diffraction