

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 101 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	21/02/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8533 1:100000	Rainfall:	No Data
Northing/Long.:	6458400 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	590000 Datum: AGD66	Drainage:	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
N/A			MEANDER PLAIN
		Principal Profile Form:	Dr2.13
		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 - Hummock grass, 0.26-0.5m, . *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.2 m	Dark reddish brown (5YR3/4-Moist); ; Fine sandy clay (Light); Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Very weak consistence; Field pH 7 (Raupach); ManyGradual, Smooth change to -
A2	0.2 - 0.45 m	Yellowish red (5YR4/8-Moist); Reddish yellow (7.5YR8/6-Dry); ; Fine sandy clay (Light); Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Very weak consistence; Field pH 6.5 (Raupach); CommonClear, Smooth change to -
B21	0.45 - 0.8 m	Yellowish red (5YR4/6-Moist); ; Sandy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Weak consistence; 0-2%, medium gravelly, 6-20mm, subangular, Detrital sedimentary rock (unidentified), coarse fragments; Common cutans, 10-50% of ped faces or walls coated; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules; Field pH 8 (Raupach); CommonGradual, Smooth change to -
B22	0.8 - 1.3 m	Yellowish red (5YR4/6-Moist); ; Medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Weak consistence; Common cutans, 10-50% of ped faces or walls coated; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Nodules; Field pH 8.5 (Raupach); Few

Morphological Notes

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	6.6A	0.046A	0.6E	0.1	1	0.2			1.9D	
0.3 - 0.35	7.1A	0.029A								
0.7 - 0.75	8.1A	0.042A	6.5E	5.5	0.6	0.2			12.8D	
1.3 - 1.35	8.6A	0.11A								

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							1.59		45.9A	30.8	9.6	13.7
0.3 - 0.35							1.71					
0.7 - 0.75							1.66		29.8A	20.2	7.5	42.5
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			
0.1 - 0.15	0.031A			0.14G				0.05D	
0.3 - 0.35	0.002A			0.12G				0.05D	
0.7 - 0.75	0.042A			0.17G				0.13D	
1.3 - 1.35	0.047A			0.21G				0.14D	

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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