

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 141 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	03/05/85	Elevation:	No Data
Map Ref.:	1:10000	Rainfall:	No Data
Northing/Long.:	6467500 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	596500 Datum: AGD66	Drainage:	Very poorly 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): Loose, Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	MACQUARIE
N/A			ALLUVIUM
			BACKPLAI

ASC Confidence:

Confidence level not specified

Principal Profile Form: Ug5.29

Great Soil Group: N/A

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.15 m	Weak red (2.5YR4/1-Moist); ; Heavy clay; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Very strong consistence; Field pH 7 (Raupach); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B21	0.15 - 0.8 m	Weak red (2.5YR4/1-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Very strong consistence; Field pH 7.5 (Raupach); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B22	0.8 - 1.48 m	Dark grey (10YR4/1-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Very strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Field pH 8 (Raupach); Few, very fine (0-1mm) roots; Clear, Smooth change to -
BC	1.48 - 1.55 m	Dark greyish brown (10YR4/2-Moist); ; Heavy clay; Moderate grade of structure; Rough-ped fabric; Very strong consistence; Field pH 8.5 (Raupach);

Morphological Notes

Observation Notes

Mullah Soil Profile Class, Grey 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	7.4A	0.065A	5.5E	3.9	0.7	0.3			10.4D	
0.3 - 0.35	7.6A	0.062A								
0.7 - 0.75	8.2A	0.138A	11.2E	8.7	0.8	2.5			23.2D	
1.3 - 1.35	8.9A	0.334A								

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							1.35		6.7A	9.3	20.7	63.2
0.3 - 0.35							1.43					
0.7 - 0.75							1.52		10.2A	11.2	20.5	58.1
1.3 - 1.35							1.38					

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	0.095A			0.33G				0.23D	
0.3 - 0.35	0.095A			0.27G				0.21D	
0.7 - 0.75	0.091A			0.24G				0.21D	
1.3 - 1.35	0.101A			0.29G				0.24D	

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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)