

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 155 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	11/05/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8534 1:10000	Rainfall:	No Data
Northing/Long.:	6469925 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	596950 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): Loose

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	MACQUARIE ALLUVIUM LEVEE DE
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Ug5.15
		Great Soil Group:	N/A

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.23 m	Dark greyish brown (10YR4/2-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Strong consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Gradual, Smooth change to -
A1	0 - 0.23 m	Dark greyish brown (10YR4/2-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Strong consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Gradual, Smooth change to -
B1	0.23 - 0.45 m	Very dark greyish brown (10YR3/2-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Coarse, (10 - 20) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Strong consistence; Field pH 7.5 (Raupach); Many, very fine (0-1mm) roots; Clear, Smooth change to -
B21	0.45 - 1.25 m	Very dark grey (10YR3/1-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Very strong consistence; Field pH 8 (Raupach); Many, very fine (0-1mm) roots; Gradual, Smooth change to -
B22	1.25 - 1.5 m	Brown (10YR4/3-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Strong consistence; Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

Observation Notes

Mullah Soil Profile Class, Black Phase, Ploughed

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	6.7A	0.066A	8.9E	4.2	0.5	0			13.6D	
0.3 - 0.35	7.2A	0.056A								
0.7 - 0.75	8.4A	0.101A	23.6E	14.3	0.3	3.3			41.5D	
1.3 - 1.35	8.6A	0.383A								

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							1.22		0.7A	10	48.4	40.9
0.3 - 0.35							1.29					
0.7 - 0.75							1.35		4.5A	6.8	28	60.7
1.3 - 1.35							1.44					

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	0.06A			0.32G				0.18D	
0.3 - 0.35	0.085A			0.28G				0.19D	
0.7 - 0.75	0.13A			0.31G				0.22D	
1.3 - 1.35	0.101A			0.27G				0.21D	

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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)