

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 140 **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.:	Sheet No. : 8534 1:10000	Rainfall:	No Data
Northing/Long.:	6467200 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	596650 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): Self-mulching, Loose

Erosion:

Soil Classification

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

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 - 0.12 m	Very dark greyish brown (10YR3/2-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 100mm ²) Medium (2-5mm) macropores, Very strong consistence; Field pH 7 (Raupach); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
B21	0.12 - 0.56 m	Very dark greyish brown (10YR3/2-Moist); ; Heavy clay; Strong grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 0.01m ²) macropores, Very strong consistence; Field pH 8 (Raupach); Few, very fine (0-1mm) roots; Gradual, Irregular change to -
B22	0.56 - 0.8 m	Brown (7.5YR4/4-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
BC	0.8 - 1.35 m	Yellowish red (5YR4/7-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Common (1-5 per 100mm ²) macropores, Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (Raupach);

Morphological Notes

B22 A very diifcult pit for backhoe

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	8.2A	0.093A	8.6E	3.8	0.3	2			14.7D	
0.3 - 0.35	8.9A	0.151A								
0.7 - 0.75	8.4A	0.636A	8.3E	6.1	0.3	4			18.7D	
1.3 - 1.35	8.5A	0.847A								

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							1.39		12.2A	20	17	50.8
0.3 - 0.35							1.43					
0.7 - 0.75							1.49		13.5A	25.9	13.2	47.3
1.3 - 1.35							1.65					

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	0.11A			0.29G				0.18D	
0.3 - 0.35	0.095A			0.27G				0.19D	
0.7 - 0.75	0.045A			0.21G				0.18D	
1.3 - 1.35	0.04A			0.19G				0.17D	

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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)