

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 142 **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.:	6467500 AMG zone: 55	Runoff:	Slow
Easting/Lat.:	596300 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): Cracking, Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	MACQUARIE ALLUVIUM BACKPLAI
N/A		Principal Profile Form:	Ug5.15
		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, Sparse. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.07 m	Very dark greyish brown (10YR3/2-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Strong consistence; Field pH 6.5 (Raupach); Field pH 7 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Abrupt, Smooth change to -
B21	0.07 - 0.58 m	Very dark grey (10YR3/1-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Very strong consistence; Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Smooth change to -
B22	0.58 - 0.95 m	Yellowish red (5YR4/6-Moist); , 10YR31, 20-50% , 15-30mm, Faint; Sandy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Very strong consistence; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Crystals; Field pH 8 (Raupach); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
BC	0.95 - 1.35 m	Dark red (2.5YR3/6-Moist); ; Sandy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Crystals; Few, very fine (0-

Morphological Notes

BC A tricky site; beneath the wetting area is a large tree root remnant to about 50cm. There are many carbonate concretions beneath the root - see slide after site 142 (have done all descriptions etc except clods on opposite side of pit.

Observation Notes

Byron Soil Profile Class

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	6.5A	0.064A	3.8E	0.9	0.7	0			5.4D	
0.3 - 0.35	7.5A	0.044A								
0.7 - 0.75	8A	0.048A	7.9E	2.4	0.7	0.1			11.1D	
1.3 - 1.35	8.1A	0.036A								

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							1.46		28A	23.4	16.5	32.1
0.3 - 0.35							1.57					
0.7 - 0.75							1.73		28.6A	27.6	11.5	32.3
1.3 - 1.35							1.60					

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	0.037A			0.18G				0.13D	
0.3 - 0.35	0.059A			0.17G				0.13D	
0.7 - 0.75	0.057A			0.13G				0.12D	
1.3 - 1.35	0.054A			0.19G				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)