

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 341 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	04/09/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8434 1:10000	Rainfall:	No Data
Northing/Long.:	6471900 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	591600 Datum: AGD66	Drainage:	No Data

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):

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	MACQUARIE ALLUVIUM LEVEE DE
N/A		Principal Profile Form:	Ug5.15
		Great Soil Group:	N/A

ASC Confidence:

Confidence level not specified

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1p	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); ; Light clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 0.01m2) Medium (2-5mm) macropores, Moist; Firm consistence; Field pH 7 (Raupach); Common, very fine (0-1mm) roots; Clear, Smooth change to -
B1	0.1 - 0.38 m	Very dark greyish brown (10YR3/2-Moist); ; Heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moist; Very firm consistence; Many cutans, >50% of ped faces or walls coated; Field pH 7.5 (Raupach); Few, very fine (0-1mm) roots; Clear, Wavy change to -
B2	0.38 - 1.1 m	Dark yellowish brown (10YR4/4-Moist); ; Medium heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Very firm consistence; Many cutans, >50% of ped faces or walls coated; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8 (Raupach); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B3	1.1 - 1.4 m	Dark yellowish brown (10YR4/4-Moist); , 10YR5.5, 10-20% , 5-15mm, Faint; Medium heavy clay; Moderate grade of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Field pH 8.5 (Raupach);

Morphological Notes

A1p CaCO3 - hard nodules only. Are these relict (ie pre-flooding)? The re qtz grains have reappeared. Many shear planes & slickensides at depth.

Observation Notes

Ellengrahl 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	0.088A	9.4E	3.5	0.9	0.1			13.9D	
0.3 - 0.35	7.9A	0.054A								
0.7 - 0.75	8.6A	0.161A	14.2E	9.5	0.4	0.7			24.8D	
1.3 - 1.35	9.1A	0.226A								

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							1.43		11.5A	22.3	26.7	39.5
0.3 - 0.35							1.50					
0.7 - 0.75							1.55		9.5A	16.1	27.5	46.8
1.3 - 1.35							1.52					

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	0.034A			0.23G				0.12D	
0.3 - 0.35	0.076A			0.24G				0.15D	
0.7 - 0.75	0.089A			0.22G				0.15D	
1.3 - 1.35	0.084A			0.23G				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)