

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 129 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	04/05/85	Elevation:	No Data
Map Ref.:	1:10000	Rainfall:	No Data
Northing/Long.:	6464976 AMG zone: 55	Runoff:	Slow
Easting/Lat.:	594800 Datum: AGD66	Drainage:	Imperfectly 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): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	TRANGIE COWAL ALLUVIUM
N/A		

ASC Confidence:	Principal Profile Form:	Gn3.23
Confidence level not specified	Great Soil Group:	N/A

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Tall Strata - Tree, 6.01-12m, . *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.2 m	Brown (7.5YR4/4-Moist); ; Light medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Very firm consistence; Field pH 7.5 (Raupach); Many, fine (1-2mm) roots; Clear, Smooth change to -
A12	0.2 - 0.38 m	Dark brown (7.5YR3/3-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Earthy fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Medium (2-5mm) macropores, Very firm consistence; Field pH 8 (Raupach); Many, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.38 - 0.85 m	Brown (7.5YR4/4-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Medium (2-5mm) macropores, Strong consistence; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (Raupach); Common, fine (1-2mm) roots; Diffuse, Smooth change to -
B22	0.85 - 1.2 m	Reddish brown (5YR4/4-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Medium (2-5mm) macropores, Strong consistence; Many (20 - 50 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
BC	1.2 - 1.35 m	Reddish brown (5YR4/4-Moist); ; Sandy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Many (>5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Strong consistence; Field pH 9 (Raupach);

Morphological Notes

BC The A11 looks lighter - cultitvation and loss of OM. Tree root in pit - A1 down deep; co's under root

Observation Notes

Byron Soil Profile Class

Site Notes

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 129 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

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	7.8A	0.069A	6.2E	1.4	0.2	0.2			8D	
0.3 - 0.35	8.5A	0.123A								
0.7 - 0.75	8.8A	0.137A	9.5E	6.6	0.3	0.6			17D	
1.3 - 1.35	9.3A	0.137A								

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							1.40		3.2A	34.7	29.1	32.9
0.3 - 0.35							1.42					
0.7 - 0.75							1.52		2.1A	26.6	36.3	35.1
1.3 - 1.35							1.64					

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	0.018A			0.22G				0.12D	
0.3 - 0.35	0.076A			0.22G				0.06D	
0.7 - 0.75	0.063A			0.21G				0.13D	
1.3 - 1.35	0.053A			0.14G				0.09D	

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 129 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

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)