

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 421 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	21/10/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8533 1:10000	Rainfall:	No Data
Northing/Long.:	6454000 AMG zone: 55	Runoff:	Slow
Easting/Lat.:	605500 Datum: AGD66	Drainage:	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): Firm, Hardsetting

Erosion:

Soil Classification

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

ASC Confidence:

Confidence level not specified

Principal Profile Form: Gn3.12

Great Soil Group: N/A

Site Disturbance: Limited clearing, for example selective logging

Vegetation:

Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - Eucalyptus populnea

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.38 m	Dark brown (7.5YR3/3-Moist); ; Silty clay; Moderate grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 0.01m2) Medium (2-5mm) macropores, Moist; Firm consistence; Few cutans, <10% of ped faces or walls coated; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Many, medium (2-5mm) roots; Gradual, Smooth change to -
B21	0.38 - 0.85 m	Dark reddish brown (5YR3/4-Moist); ; Medium heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; 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; Very firm consistence; Many cutans, >50% of ped faces or walls coated; Field pH 7.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Diffuse, Smooth change to -
B22	0.85 - 1.35 m	Strong brown (7.5YR4/6-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Lenticular; Rough-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 0.01m2) Medium (2-5mm) macropores, Dry; Firm consistence; Common cutans, 10-50% of ped faces or walls coated; Field pH 8 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

A1 Infilled channels common in B22

Observation Notes

Wilga Soil Profile Class, Non-Calcic Phase

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	7.1A	0.063A	7.6E	2.7	1.2	0.2			11.7D	
0.3 - 0.35	7.6A	0.07A								
0.7 - 0.75	8A	0.077A	10.8E	7.9	0.3	0.7			19.7D	
1.3 - 1.35	8.7A	0.086A								

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							1.28		6.4A	22.6	44.4	26.5
0.3 - 0.35							1.47					
0.7 - 0.75							1.56		5.1A	17.9	33.6	43.4
1.3 - 1.35							1.48					

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	0.036A			0.22G				0.12D	
0.3 - 0.35	0.045A			0.21G				0.13D	
0.7 - 0.75	0.067A			0.22G				0.16D	
1.3 - 1.35	0.082A			0.26G				0.15D	

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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)