Project Name: **Soils of the Lower Macquarie Valley, New South Wales**
Project Code: **Macquarie** **Site ID:** **543** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By:	N.J. McKenzie	**Locality:**	
Date Desc.:	10/12/85	**Elevation:**	No Data
Map Ref.:	Sheet No. : 8434 1:10000	**Rainfall:**	No Data
Northing/Long.:	6483133 AMG zone: 55	**Runoff:**	Very slow
Easting/Lat.:	583317 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:	Lower-slope	**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:
N/A

Mapping Unit: TRANGIE
COWAL ALLUVIUM

Principal Profile Form: Gn4.12
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, 0.26-0.5m, Sparse. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.16 m	Dark brown (7.5YR3/3-Moist); ; Light medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Rough-ped fabric; 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; Weak consistence; 10-20%, medium gravelly, 6-20mm, coarse fragments; Field pH 7.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Gradual, Smooth change to -
B21	0.16 - 0.55 m	Dark reddish brown (5YR3/3-Moist); ; Medium heavy clay; Strong grade of structure, 20-50 mm, Angular 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, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Field pH 8 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Common, medium (2-5mm) roots; Common, coarse (>5mm) roots; Gradual, Smooth change to -
B22	0.55 - 1.35 m	Brown (7.5YR4/4-Moist); , 5YR44; Light medium clay; Moderate grade of structure, 20-50 mm, Polyhedral; 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, Wet; Weak consistence; Common cutans, 10-50% of ped faces or walls coated; Field pH 8 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots;

Morphological Notes

A1 B22 has some black O.M? Coatings = ex roots? Or Fe/Mn

Observation Notes

Wilga Soil Profile Class, Non-Calcic Phase, B22 collapsed; sets like cement.

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0.1 - 0.15	7.3A	0.041A	9.5E	3	1.4	0			13.9D	
0.3 - 0.35	8.1A	0.037A								
0.7 - 0.75	8.3A	0.057A	17.4E	8	0.5	0.2			26.1D	
1.3 - 1.35	8.4A	0.028A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0.1 - 0.15							1.45		5A	33.6	29.4	31.9
0.3 - 0.35							1.52					
0.7 - 0.75							1.58		1.3A	38.1	26.5	34.1
1.3 - 1.35							1.59					

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m		g/g - m3/m3							mm/h	mm/h
0.1 - 0.15	0.035A			0.21G				0.17D		
0.3 - 0.35	0.064A			0.24G				0.18D		
0.7 - 0.75	0.044A			0.22G				0.17D		
1.3 - 1.35	0.049A			0.2G				0.15D		

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Laboratory Analyses Completed for this profile

15C1_CA	Exchangeable bases (Ca2+,Mg2+,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/cm3
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)