Project Name: **Soils of the Lower Macquarie Valley, New South Wales**
Project Code: **Macquarie** **Site ID:** **336** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 04/09/85
Map Ref.: Sheet No. : 8434 1:10000
Northing/Long.: 6470367 AMG zone: 55
Easting/Lat.: 591733 Datum: AGD66

Locality:
Elevation: No Data
Rainfall: No Data
Runoff: Moderately rapid
Drainage: Well drained

Geology

ExposureType: Soil pit
Geol. Ref.: No Data

Conf. Sub. is Parent. Mat.: No Data
Substrate Material: , No Data

Land Form

Rel/Slope Class: No Data
Morph. Type: Crest
Elem. Type: No Data
Slope: %

Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: No Data

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
N/A

Mapping Unit: TRANGIE
COWAL ALLUVIUM

Principal Profile Form: Gn2.12
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, <0.25m, Mid-dense. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.2 m	Dark brown (7.5YR3/4-Moist); ; Sandy clay loam; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moist; Very weak consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Gradual, Smooth change to -
B21	0.2 - 0.65 m	Reddish brown (5YR4/4-Moist); ; Fine sandy clay loam; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy 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; Weak consistence; Field pH 7.5 (Raupach); Many, very fine (0-1mm) roots; Diffuse, Smooth change to -
B22	0.65 - 1.2 m	Strong brown (7.5YR4/6-Moist); ; Sandy clay loam; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moist; Very weak consistence; Field pH 7.5 (Raupach); Common, very fine (0-1mm) roots; Diffuse, Smooth change to -
B23	1.2 - 1.4 m	Strong brown (7.5YR4/6-Moist); ; Sandy clay loam; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Dry; Very weak consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8 (Raupach); Common, very fine (0-1mm) roots;

Morphological Notes

A1 A uniform very light profile on crest

Observation Notes

Wilga Soil Profile Class, Calcic Phase

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0.1 - 0.15	7.7A	0.056A	4.1E	0.8	1.5	0.4			6.8D	
0.3 - 0.35	7.8A	0.043A								
0.7 - 0.75	8.2A	0.026A	6.9E	4.1	0.4	0.2			11.6D	
1.3 - 1.35	8.2A	0.363A								

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							1.51		5.1A	58.4	22.3	14.2
0.3 - 0.35							1.38					
0.7 - 0.75							1.39		4.8A	55.3	21	18.9
1.3 - 1.35							1.41					

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	0.026A			0.19G				0.06D		
0.3 - 0.35	0.034A			0.17G				0.08D		
0.7 - 0.75	0.041A			0.19G				0.07D		
1.3 - 1.35	0.008A			0.21G				0.06D		

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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)