

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 306 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	27/07/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8434 1:10000	Rainfall:	No Data
Northing/Long.:	6463200 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	587600 Datum: AGD66	Drainage:	Poorly 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:	Open depression (vale)	Relief:	No Data
Elem. Type:	No Data	Slope Category:	No Data
Slope:	%	Aspect:	No Data

Surface Soil Condition (dry): Cracking, Firm

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	OLD ALLUVIUM MEANDER PLAIN
N/A		Principal Profile Form:	Gn3.13
		Great Soil Group:	N/A

ASC Confidence:

Confidence level not specified

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.3 m	Dark brown (7.5YR3/3-Moist); ; Sandy 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) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Field pH 6 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Clear, Irregular change to -
B21	0.3 - 0.55 m	Yellowish red (5YR4/5-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Field pH 8 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Gradual, Smooth change to -
B22k	0.55 - 1.35 m	Yellowish red (5YR4/6-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Polyhedral; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Common (10 - 20 %), Calcareous, Fine (0 - 2 mm), Nodules; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Nodules; Common (10 - 20 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Field pH 9.5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

B22k Almost bottom of Cowal

Observation Notes

Mitchell Soil Profile Class, Moderately Drained Phase, Lucerne

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	0.068A	2.9E	1.8	0.5	0.2			5.4D	
0.3 - 0.35	8.7A	0.237A								
0.7 - 0.75	9.6A	0.475A	2.8E	7	0.5	4.4			14.7D	
1.3 - 1.35	9.5A	0.66A								

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							1.50		14.9A	44.1	13.4	27.5
0.3 - 0.35							1.54					
0.7 - 0.75							1.55		11.4A	37.1	10.8	40.7
1.3 - 1.35							1.60					

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	0.087A			0.2G				0.09D	
0.3 - 0.35	0.093A			0.22G				0.13D	
0.7 - 0.75	0.09A			0.21G				0.16D	
1.3 - 1.35	0.076A			0.19G				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)