

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 147 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	10/05/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8534 1:10000	Rainfall:	No Data
Northing/Long.:	6468100 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	595100 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): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	MACQUARIE
N/A			ALLUVIUM
			BACKPLAI
		Principal Profile Form:	Ug5.24
		Great Soil Group:	N/A

ASC Confidence:

Confidence level not specified

Site Disturbance: Limited clearing, for example selective logging

Vegetation:

Tall Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.09 m	Weak red (2.5YR4/2-Moist); ; Heavy clay; Strong grade of structure, 50-100 mm, Subangular blocky; Strong grade of structure, 50-100 mm, Granular; Smooth-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Strong consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.09 - 1.1 m	Dark greyish brown (10YR4/2-Moist); ; Heavy clay; Strong grade of structure, 50-100 mm, Polyhedral; Smooth-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 0.01m ²) Medium (2-5mm) macropores, Very strong consistence; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8 (Raupach); Common, fine (1-2mm) roots; Diffuse, Smooth change to -
B22	1.1 - 1.5 m	Brown (10YR5/3-Moist); ; Heavy clay; Strong grade of structure, 50-100 mm, Polyhedral; Smooth-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 0.01m ²) Fine (1-2mm) macropores, Very strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH

Morphological Notes

B22 A solid grey clay; quite different to 146 - gilgai? CaCo₃ at about 15cm

Observation Notes

Mullah Soil Profile Class, Grey Phase, Gilgaied? - uneven surface

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable	Cations	Na	Exchangeable	CEC	ECEC	ESP
m		dS/m		Mg	K	Cmol (+)/kg	Acidity			%
0.1 - 0.15	7.9A	0.093A	8E	3.9	0.3	0.1			12.3D	
0.3 - 0.35	8.6A	0.122A								
0.7 - 0.75	9A	0.224A	16.7E	16.8	0.5	4.3			38.3D	
1.3 - 1.35	7.6A	2.74A								

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle	Size	Analysis
m	%	C	P	P	N	K	Density	GV	CS	FS
		%	mg/kg	%	%	%	Mg/m3			%
0.1 - 0.15							1.40		8.5A	20.2
0.3 - 0.35							1.40			13.8
0.7 - 0.75							1.43		6.3A	15.4
1.3 - 1.35							1.43			55.7

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	0.102A			0.28G				0.21D	
0.3 - 0.35	0.102A			0.28G				0.21D	
0.7 - 0.75	0.127A			0.31G				0.2D	
1.3 - 1.35	0.127A			0.31G				0.2D	

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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)