

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 146 **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.:	6467800 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	595200 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

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	MACQUARIE
N/A			ALLUVIUM
			BACKPLAI

ASC Confidence:

Confidence level not specified

Principal Profile Form: Ug5.15

Great Soil Group: N/A

Site Disturbance: Complete clearing. Pasture, native or improved, but never cultivated

Vegetation:

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

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.08 m	Dark brown (10YR3/3-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Clear, Smooth change
B21	0.08 - 0.45 m	Very dark greyish brown (10YR3/2-Moist); ; Heavy clay; Strong grade of structure, 50-100 mm, Polyhedral; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Field pH 7.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Diffuse, Irregular change to -
B22	0.45 - 0.8 m	Dark brown (10YR3/3-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Field pH 8 (Raupach); Few, very fine (0-1mm) roots; Gradual, Irregular change to -
B23	0.8 - 1.4 m	Strong brown (7.5YR5/5-Moist); , 7.5YR54, 10-20% , 5-15mm, Faint; Heavy clay; Moderate grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

B23 This is related to 148/149 etc and is quite distinct compared to 145 = esp BC

Observation Notes

Mullah Soil Profile Class, Black Phase, Gilgai? Uneven surface wavy horizons

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	7.7A	0.066A	6.9E	5.2	0.2	1.2			13.5D	
0.3 - 0.35	8.5A	0.105A								
0.7 - 0.75	9.1A	0.235A	8.4E	8.4	0.3	2.9			20D	
1.3 - 1.35	8.3A	0.852A								

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							1.44		13.8A	25	14.4	46.7
0.3 - 0.35							1.44					
0.7 - 0.75							1.48		17.6A	30.4	16.4	35.3
1.3 - 1.35							1.49					

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	0.099A			0.27G				0.16D	
0.3 - 0.35	0.105A			0.27G				0.16D	
0.7 - 0.75	0.066A			0.24G				0.14D	
1.3 - 1.35	0.087A			0.25G				0.16D	

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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)