Project Name: **Soils of the Lower Macquarie Valley, New South Wales**
Project Code: **Macquarie** **Site ID:** **308** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 25/07/85
Map Ref.: Sheet No. : 8434 1:10000
Northing/Long.: 6463680 AMG zone: 55
Easting/Lat.: 587780 Datum: AGD66
Locality:
Elevation: No Data
Rainfall: No Data
Runoff: Slow
Drainage: Moderately 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: Flat
Elem. Type: No Data
Slope: %
Pattern Type: No Data
Relief: No Data
Slope Category: No Data
Aspect: No Data

Surface Soil Condition (dry): Hardsetting, Surface crust

Erosion: Partial, Minor or present (wind);

Soil Classification

Australian Soil Classification:
N/A

ASC Confidence:
Confidence level not specified

Mapping Unit: OLD ALLUVIUM MEANDER PLAIN
Principal Profile Form: Gn4.15
Great Soil Group: N/A

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

Vegetation:

Tall Strata - Hummock grass, <0.25m, Sparse. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.18 m	Reddish brown (5YR4/4-Moist); ; Sandy clay loam; Weak grade of structure, 20-50 mm, Subangular blocky; Weak grade of structure, 20-50 mm, Platy; Earthy 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; Very weak consistence; Field pH 6.5 (Raupach); Abundant, very fine (0-1mm) roots; Abundant, fine (1-2mm) roots; Clear, Smooth change to -
A2	0.18 - 0.45 m	Yellowish red (5YR3/7-Moist); Reddish yellow (5YR6/7-Dry); ; Sandy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy 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; Few cutans, <10% of ped faces or walls coated; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Gradual, Smooth change to -
B21	0.45 - 0.8 m	Red (2.5YR4/6-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Field pH 7 (Raupach); Common, fine (1-2mm) roots; Diffuse, Smooth change to -
B22	0.8 - 1.35 m	Dark red (10R3/6-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Moderately moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

B22 Further some CO3 along pit. ?under old tree? @ ~30-100cm. Moist to around 85cm

Observation Notes

Mitchell Soil Profile Class, Moderately Drained 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	6.5A	0.038A	0.3E	0.1	0.4	0.1			0.9D	
0.3 - 0.35	6.8A	0.021A								
0.7 - 0.75	8.5A	0.051A	6.2E	3.6	0.6	0.5			10.9D	
1.3 - 1.35	8.7A	0.073A								

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							1.77		26.9A	40.9	15.9	16.3
0.3 - 0.35							1.68					
0.7 - 0.75							1.69		16.4A	25.2	9.9	48.5
1.3 - 1.35							1.66					

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			0.12G				0.05D	
0.3 - 0.35	0.031A			0.1G				0.06D	
0.7 - 0.75	0.042A			0.17G				0.14D	
1.3 - 1.35	0.04A			0.18G				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)