Project Name: **Soils of the Lower Macquarie Valley, New South Wales**
Project Code: **Macquarie** **Site ID:** **522** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 06/12/85
Map Ref.: Sheet No. : 8434 1:10000
Northing/Long.: 6477400 AMG zone: 55
Easting/Lat.: 578950 Datum: AGD66
Locality:
Elevation: No Data
Rainfall: No Data
Runoff: Slow
Drainage: Poorly 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): Cracking, Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:
N/A

ASC Confidence:
Confidence level not specified

Mapping Unit: OLD ALLUVIUM BACKPLAIN
Principal Profile Form: Ug5.24
Great Soil Group: N/A

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

Vegetation:

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

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.2 m	Dark greyish brown (10YR4/2-Moist); ; Medium heavy clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Weak consistence; Field pH 8 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Gradual, Smooth change to -
B21	0.2 - 0.4 m	Dark greyish brown (10YR4/2-Moist); ; Heavy clay; Strong grade of structure, 10-20 mm, Polyhedral; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Field pH 8.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Gradual, Smooth change to -
B22	0.4 - 1.05 m	Dark greyish brown (10YR4/2-Moist); ; Heavy 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, Moderately moist; Very firm consistence; Many cutans, >50% of ped faces or walls coated; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B3	1.05 - 1.35 m	Greyish brown (10YR5/2-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Very firm consistence; Many cutans, >50% of ped faces or walls coated; Common (10 - 20 %), Calcareous, Fine (0 - 2 mm), Nodules; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Nodules; Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

A1 A fair amount of charcoal in A & B - stubble burning?

Observation Notes

Mullah Soil Profile Class, Grey 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	8.5A	0.129A	20.6E	4.9	1.7	0.3			27.5D	
0.3 - 0.35	9.2A	0.225A								
0.7 - 0.75	9.2A	0.529A	10.5E	9.7	0.7	7.1			28D	
1.3 - 1.35	8.9A	1.019A								

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							1.46		11.4A	27.3	12	49.3
0.3 - 0.35							1.47					
0.7 - 0.75							1.26		13.7A	28	12.2	46.1
1.3 - 1.35							1.32					

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	0.074A			0.26G				0.17D	
0.3 - 0.35	0.1A			0.27G				0.18D	
0.7 - 0.75	0.165A			0.35G				0.19D	
1.3 - 1.35	0.135A			0.34G				0.19D	

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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)