Project Name: **Soils of the Lower Macquarie Valley, New South Wales**
Project Code: **Macquarie** **Site ID:** **511** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By:	N.J. McKenzie	**Locality:**	
Date Desc.:	01/12/85	**Elevation:**	No Data
Map Ref.:	Sheet No. : 8434 1:10000	**Rainfall:**	No Data
Northing/Long.:	6473933 AMG zone: 55	**Runoff:**	Very slow
Easting/Lat.:	577733 Datum: AGD66	**Drainage:**	Imperfectly 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:	Flat	**Relief:**	No Data
Elem. Type:	No Data	**Slope Category:**	No Data
Slope:	%	**Aspect:**	No Data

Surface Soil Condition (dry): Cracking, Self-mulching, Recently cultivated

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: Cultivation. Rainfed

Vegetation:
Tall Strata - Tussock grass, 0.26-0.5m, Sparse. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.1 m	Greyish brown (10YR5/2-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Field pH 8.5 (Raupach); Common, very fine (0-1mm) roots; Clear, Smooth change to -
B21	0.1 - 0.25 m	Dark greyish brown (10YR4/2-Moist); ; Heavy clay; Strong grade of structure, 50-100 mm, Polyhedral; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Very firm consistence; Many cutans, >50% of ped faces or walls coated; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (Raupach); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B22	0.25 - 0.7 m	Greyish brown (10YR5/2-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Lenticular; 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; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (Raupach); Few, very fine (0-1mm) roots; Gradual, Irregular change to -
B3	0.7 - 1.4 m	Brown (7.5YR5/4-Moist); ; Heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; Smooth-ped fabric; 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, Medium (2 -6 mm), Nodules; Few (2 - 10 %), Gypseous, Medium (2 -6 mm), Crystals; Field pH 9 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

A1 Again a fairly dull B3. Possibly high ESP?

Observation Notes

Snake Soil Profile Class, Oats

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0.1 - 0.15	9.1A	0.19A	23.3E	7.3	1.1	1.9			33.6D	
0.3 - 0.35	9.3A	0.262A								
0.7 - 0.75	8.5A	1.511A	12.3E	12.3	0.7	9.6			34.9D	
1.3 - 1.35	8.9A	1.626A								

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							1.41		11A	28.6	13.1	47.3
0.3 - 0.35							1.32					
0.7 - 0.75							1.33		9.2A	27.3	13.4	50.1
1.3 - 1.35							1.36					

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	0.093A			0.28G				0.19D		
0.3 - 0.35	0.141A			0.33G				0.2D		
0.7 - 0.75	0.14A			0.33G				0.2D		
1.3 - 1.35	0.132A			0.34G				0.21D		

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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)