Project Name: **Soils of the Lower Macquarie Valley, New South Wales**
Project Code: **Macquarie** **Site ID:** **505** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 30/11/85
Map Ref.: Sheet No. : 8434 1:10000
Northing/Long.: 6472400 AMG zone: 55
Easting/Lat.: 576860 Datum: AGD66
Locality:
Elevation: No Data
Rainfall: No Data
Runoff: Moderately rapid
Drainage: Imperfectly 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: Crest
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: INFILLED CHANNELS
Principal Profile Form: Ug5.39
Great Soil Group: N/A

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.08 m	Dark brown (7.5YR3/4-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Rough-ped 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; Field pH 9 (Raupach); Common, very fine (0-1mm) roots; Abrupt, Irregular change to -
B1	0.08 - 0.43 m	Yellowish red (5YR5/6-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9.5 (Raupach); Common, very fine (0-1mm) roots; Gradual, Smooth change to -
B2	0.43 - 1.1 m	Yellowish red (5YR5/6-Moist); , 2.5YR56, 10-20% , 5-15mm, Distinct; Heavy clay; Strong grade of structure, 20-50 mm, Polyhedral; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Few (2 - 10 %), Manganiferous, Very coarse (20 - 60 mm), Nodules; Field pH 9.5 (Raupach); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B3	1.1 - 1.35 m	Light brown (7.5YR6/4-Moist); , 2.5YR56, 10-20% , 5-15mm, Distinct; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; Many cutans, >50% of ped faces or walls coated; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9.5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

A1 Puff of gilgai. Very odd vertisol = v pale red colour; the B2 &B3 may be another soil. The A1/B1 may be "silt" deposited in former stream channel. A1 interfingers down old

Observation Notes

Snake Soil Profile Class, Wheat

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	9.2A	0.27A	8.6E	7.9	0.9	2.2			19.6D	
0.3 - 0.35	9.6A	0.686A								
0.7 - 0.75	8.8A	1.52A	4.4E	0.8	0.5	9.1			14.8D	
1.3 - 1.35	9.2A	1.259A								

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							1.37		20.2A	29.2	9.9	40.7
0.3 - 0.35							1.49					
0.7 - 0.75							1.58		13.1A	27.4	17.4	42.1
1.3 - 1.35							1.53					

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	0.082A			0.26G				0.18D		
0.3 - 0.35	0.109A			0.26G				0.19D		
0.7 - 0.75	0.086A			0.25G				0.17D		
1.3 - 1.35	0.1A			0.26G				0.18D		

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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)