

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 211 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	16/06/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8534 1:10000	Rainfall:	No Data
Northing/Long.:	6461400 AMG zone: 55	Runoff:	Moderately rapid
Easting/Lat.:	599700 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:	Mid-slope	Relief:	No Data
Elem. Type:	No Data	Slope Category:	No Data
Slope:	%	Aspect:	No Data

Surface Soil Condition (dry): Firm

Erosion: Stable, Minor or present (wind);

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	GIN GIN AEOLIAN DEPOSITS
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Gn3.13
		Great Soil Group:	N/A

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.09 m	Dark reddish brown (5YR3/4-Moist); ; Sandy clay; Massive grade of structure; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very weak consistence; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Abrupt, Smooth change to -
A12	0.09 - 0.26 m	Dark reddish brown (5YR3/4-Moist); ; Sandy clay; Weak grade of structure, 20-50 mm, Polyhedral; 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, Moderately moist; Weak consistence; Field pH 7.5 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.26 - 0.72 m	Red (2.5YR4/6-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-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, Moderately moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated; Field pH 8 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Gradual, Smooth change to -
B22k	0.72 - 1.05 m	Red (2.5YR4/6-Moist); , 5YR54, 20-50% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Firm consistence; Many cutans, >50% of ped faces or walls coated; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots;

Morphological Notes

A11p I have noted the ploughed layer this time - it is present at several other cultivated sites.

Observation Notes

Mitchell Soil Profile Class, Moderately Drained Phase

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	0.15A	4.1E	0.5	0.9	0			5.5D	
0.3 - 0.35	7.7A	0.363A								
0.7 - 0.75	8.4A	0.163A	13.3E	7.2	0.8	0.2			21.5D	
1.3 - 1.35										

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							1.41		21.8A	36.7	11.8	29.7
0.3 - 0.35							1.68					
0.7 - 0.75							1.47		11.3A	19.5	6.8	62.4
1.3 - 1.35							1.47					

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	0.02A			0.19G				0.1D	
0.3 - 0.35	0.025A			0.16G				0.12D	
0.7 - 0.75	0.07A			0.24G				0.18D	
1.3 - 1.35	0.07A			0.24G				0.18D	

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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)