

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 507 **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.: 6472600 AMG zone: 55	Runoff: Very slow
Easting/Lat.: 577600 Datum: AGD66	Drainage: Poorly 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, Recently cultivated

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	INFILLED CHANNELS
N/A	Principal Profile Form:	Ug5.39
	Great Soil Group:	N/A

ASC Confidence:

Confidence level not specified

Site Disturbance: Cultivation. Rainfed

Vegetation:

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

Surface Coarse Fragments:

Profile Morphology

A1p	0 - 0.1 m	Reddish brown (5YR4/4-Moist); ; Sandy clay; Weak grade of structure, 10-20 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, Moist; Firm consistence; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Abrupt, Smooth change to -
B21	0.1 - 0.36 m	Reddish brown (5YR4/3-Moist); ; Medium heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Very firm consistence; Many cutans, >50% of ped faces or walls coated; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Many (20 - 50 %), Calcareous, Medium (2 -6 mm), Nodules; Many (20 - 50 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 8.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Smooth change to
B22k	0.36 - 0.95 m	Reddish brown (5YR5/4-Moist); , 2.5YR54, 2-10% , 15-30mm, Faint; Medium 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, Medium (2 -6 mm), Nodules; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 8.5 (Raupach); Common, very fine (0-1mm) roots; Diffuse, Irregular change to -
B3	0.95 - 1.35 m	Brown (7.5YR5/4-Moist); , 5YR56, 2-10% , 15-30mm, Distinct; Medium 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, Moderately moist; Very firm consistence; Many cutans, >50% of ped faces or walls coated; Field pH 9 (Raupach);

Morphological Notes

A1p B21 has A in it = has fallen down cracks. Reddish channels at depth.

Observation Notes

Buddah Soil Profile Class, Oats

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	7.6A	0.054A	8E	6	0.5	1.1			15.6D	
0.3 - 0.35	9.2A	0.33A								
0.7 - 0.75	9A	1.099A	5.7E	10.9	0.6	5			22.2D	
1.3 - 1.35	9A	1.215A								

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							1.54		16.3A	29.5	11.3	43
0.3 - 0.35							1.49					
0.7 - 0.75							1.72		10.1A	28.7	15.1	46.1
1.3 - 1.35							1.57					

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	0.07A			0.24G				0.16D	
0.3 - 0.35	0.08A			0.26G				0.2D	
0.7 - 0.75	0.037A			0.25G				0.17D	
1.3 - 1.35	0.077A			0.25G				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)