

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 405 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	12/10/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8533 1:10000	Rainfall:	No Data
Northing/Long.:	6447400 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	603722 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, Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	OLD ALLUVIUM BACKPLAIN
N/A		Principal Profile Form:	Ug5.34
		Great Soil Group:	N/A

ASC Confidence:

Confidence level not specified

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

Vegetation:

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

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.3 m	Brown (7.5YR4/3-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Many cutans, >50% of ped faces or walls coated; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 7.5 (Raupach); ManyDiffuse, Smooth change to -
B21	0.3 - 0.9 m	Brown (7.5YR4/3-Moist); ; Medium heavy clay; Strong grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Many cutans, >50% of ped faces or walls coated; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (Raupach); CommonDiffuse, Smooth
B22	0.9 - 1.35 m	Strong brown (7.5YR4/5-Moist); ; Medium heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Many cutans, >50% of ped faces or walls coated; Field pH 8.5 (Raupach); Few

Morphological Notes

A1 Cracking clay par excellence

Observation Notes

Buddah Soil Profile Class

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	8.5A	0.081A	14.3E	8.3	1.1	0.8			24.5D	
0.3 - 0.35	9A	0.221A								
0.7 - 0.75	9.3A	0.407A	8.5E	13.5	0.5	4.5			27D	
1.3 - 1.35	9.1A	0.824A								

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							1.53		7.3A	27.9	13.2	51.6
0.3 - 0.35							1.43					
0.7 - 0.75							1.47		10.5A	24.6	12.3	52.7
1.3 - 1.35							1.27					

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	0.068A			0.25G				0.17D	
0.3 - 0.35	0.084A			0.27G				0.17D	
0.7 - 0.75	0.108A			0.27G				0.18D	
1.3 - 1.35	0.14A			0.36G				0.19D	

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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)