

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 105 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	30/03/85	Elevation:	No Data
Map Ref.:	Sheet No. : 8534 1:100000	Rainfall:	No Data
Northing/Long.:	6459133 AMG zone: 55	Runoff:	Very slow
Easting/Lat.:	590800 Datum: AGD66	Drainage:	No Data

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:	Open depression (vale)	Relief:	No Data
Elem. Type:	No Data	Slope Category:	No Data
Slope:	%	Aspect:	No Data

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	TRANGIE COWAL ALLUVIUM
N/A			

ASC Confidence:		Principal Profile Form:	Ug5.25
Confidence level not specified		Great Soil Group:	N/A

Site Disturbance: Extensive clearing, for example poisoning, ringbarking

Vegetation:

Tall Strata - Chenopod shrub, 0.51-1m, . *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.18 m	Dark grey (10YR4/1-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Many (>5 per 100mm2) Fine (1-2mm) macropores, Firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Field pH 6 (Raupach); Field pH 7.5 (Raupach); Common, fine (1-2mm) roots; Gradual, Smooth change to -
B2	0.18 - 0.8 m	Dark grey (10YR4/1-Moist); ; Heavy clay; Strong grade of structure, 200-500 mm, Prismatic; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Many (>5 per 0.01m2) Fine (1-2mm) macropores, Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Common, fine (1-2mm) roots; Clear, Smooth change to -
BC	0.8 - 1.5 m	Yellowish brown (10YR5/5-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Few, fine (1-

Morphological Notes

BC Worm casts or infilled root channels at 1.5m

Observation Notes

Ellengerah 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	6.8A	0.036A	4.6E	2.8	0.6	0.1			8.1D	
0.3 - 0.35	7.5A	0.041A								
0.7 - 0.75	8.4A	0.06A	9.6E	6.1	0.6	0.9			17.2D	
1.3 - 1.35	9A	0.174A								

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							1.51		3A	25.4	24.5	47.2
0.3 - 0.35							1.40					
0.7 - 0.75							1.52		2.2A	23.2	27.1	47.6
1.3 - 1.35							1.45					

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	0.057A			0.23G				0.16D	
0.3 - 0.35	0.104A			0.25G				0.16D	
0.7 - 0.75	0.092A			0.25G				0.17D	
1.3 - 1.35	0.038A			0.27G				0.17D	

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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)