

**Project Name:** Soils of the Lower Macquarie Valley, New South Wales  
**Project Code:** Macquarie **Site ID:** 208 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

**Site Information**

<b>Desc. By:</b>	N.J. McKenzie	<b>Locality:</b>	
<b>Date Desc.:</b>	14/06/85	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 8534 1:10000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6460500 AMG zone: 55	<b>Runoff:</b>	Slow
<b>Easting/Lat.:</b>	598200 Datum: AGD66	<b>Drainage:</b>	Moderately well drained

**Geology**

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	No Data
<b>Morph. Type:</b>	Crest	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	No Data	<b>Slope Category:</b>	No Data
<b>Slope:</b>	%	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Firm

**Erosion:** Active, Minor or present (wind);

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	GIN GIN AEOLIAN DEPOSITS
N/A	<b>Principal Profile Form:</b>	Gn4.12
	<b>Great Soil Group:</b>	N/A

**ASC Confidence:**

Confidence level not specified

**Site Disturbance:** Cultivation. Rainfed

**Vegetation:**

Tall Strata - Tussock grass, , Sparse. \*Species includes - None Recorded

**Surface Coarse Fragments:**

**Profile Morphology**

A11	0 - 0.1 m	Dark reddish brown (5YR3/4-Moist); ; Sandy clay; Massive grade of structure; Earthy fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Very weak consistence; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.18 m	Dark reddish brown (5YR3/4-Moist); ; Sandy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Weak consistence; Field pH 6.5 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.18 - 0.68 m	Yellowish red (5YR4/8-Moist); ; Light clay; Moderate 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, Firm consistence; Few cutans, <10% of ped faces or walls coated; Field pH 7 (Raupach); Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Gradual, Smooth change to -
B22	0.68 - 1.3 m	Red (2.5YR4/6-Moist); , 7.5YR6/7, 20-50% , 5-15mm, Distinct; Medium clay; Moderate grade of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Firm consistence; 2-10%, medium gravelly, 6-20mm, subrounded, dispersed, coarse fragments; Common cutans, 10-50% of ped faces or walls coated; Field pH 6.5 (Raupach); Few, very fine (0-1mm) roots;

**Morphological Notes**

A11 The B22 may well (doubtful - texture of B21 and B22 similar) be the subsoil of another soil; the mottled appreance was recorded yesterday B21 - subphase?

**Observation Notes**

Gin Gin 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	6.2A	0.042A	3.6E	0.3	0.5	0			4.4D	
0.3 - 0.35	6.4A	0.042A								
0.7 - 0.75	6A	0.041A	2.2E	1.8	0.2	0.2			4.4D	
1.3 - 1.35	6.4A	0.073A								

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		20.3A	38.5	11.5	29.7
0.3 - 0.35							1.55					
0.7 - 0.75							1.77		14.2A	28.2	7	50.6
1.3 - 1.35							1.77					

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	0.012A			0.15G				0.09D	
0.3 - 0.35	0.022A			0.15G				0.09D	
0.7 - 0.75	0.006A			0.12G				0.13D	
1.3 - 1.35	0.006A			0.12G				0.17D	

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**Laboratory Analyses Completed for this profile**

15C1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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 <sup>3</sup>
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)