**Project Name:** **Soils of the Lower Macquarie Valley, New South Wales**
**Project Code:** **Macquarie** **Site ID:** **156** **Observation ID:** **1**
**Agency Name:** **CSIRO Division of Soils (ACT)**

## Site Information

**Desc. By:** N.J. McKenzie
**Date Desc.:** 11/05/85
**Map Ref.:** Sheet No. : 8534 1:10000
**Northing/Long.:** 6470100 AMG zone: 55
**Easting/Lat.:** 597200 Datum: AGD66

**Locality:**
**Elevation:** No Data
**Rainfall:** No Data
**Runoff:** Very slow
**Drainage:** Moderately well drained

## Geology

**ExposureType:** Soil pit
**Geol. Ref.:** No Data

**Conf. Sub. is Parent. Mat.:** No Data
**Substrate Material:** No Data

## Land Form

**Rel/Slope Class:** No Data
**Morph. Type:** Flat
**Elem. Type:** No Data
**Slope:** %

**Pattern Type:** No Data
**Relief:** No Data
**Slope Category:** No Data
**Aspect:** No Data

## Surface Soil Condition (dry): Loose

## Erosion:

## Soil Classification

**Australian Soil Classification:**
N/A

**Mapping Unit:** MACQUARIE ALLUVIUM LEVEE DE

**Principal Profile Form:** Uf6.11
**Great Soil Group:** N/A

**ASC Confidence:**
Confidence level not specified

## Site Disturbance: Cultivation. Rainfed

## Vegetation:

## Surface Coarse Fragments:

## Profile Morphology

| | | |
|---|---|---|
| A11 | 0 - 0.2 m | Dark brown (10YR3/3-Moist); ; Silty clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Many (>5 per 0.01m2) Medium (2-5mm) macropores, Very firm consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Gradual, Smooth change to - |
| A12 | 0.2 - 0.52 m | Very dark greyish brown (10YR3/2-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Many (>5 per 0.01m2) Medium (2-5mm) macropores, Very firm consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Sharp, Smooth change to - |
| B2 | 0.52 - 1.5 m | Very dark brown (10YR2/2-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Many (>5 per 0.01m2) Medium (2-5mm) macropores, Strong consistence; Field pH 7 (Raupach); Common, very fine (0-1mm) roots; |

## Morphological Notes

B2 Remarkable number of former channels, casts, macropores

## Observation Notes

Macquarie Soil Profile Class, Ploughed

## Site Notes

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## Laboratory Test Results:

| Depth | pH | 1:5 EC | Exchangeable Cations | | | | Exchangeable Acidity | CEC | ECEC | ESP |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ca | Mg | K | Na | | | | |
| m | | dS/m | Cmol (+)/kg | | | | | | | % |
| 0.1 - 0.15 | 6.7A | 0.079A | 8.6E | 3.5 | 0.8 | 0.1 | | | 13D | |
| 0.3 - 0.35 | 7.3A | 0.053A | | | | | | | | |
| 0.7 - 0.75 | 7.3A | 0.069A | 17.2E | 7.4 | 0.3 | 0.2 | | | 25.1D | |
| 1.3 - 1.35 | 7.5A | 0.031A | | | | | | | | |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size Analysis | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | GV | CS | FS | Silt | Clay |
| m | % | % | mg/kg | % | % | % | Mg/m3 | | | % | | |
| 0.1 - 0.15 | | | | | | | 1.28 | | 1.2A | 29.3 | 39.8 | 29.7 |
| 0.3 - 0.35 | | | | | | | 1.27 | | | | | |
| 0.7 - 0.75 | | | | | | | 1.23 | | 2.9A | 11.2 | 47.7 | 38.2 |
| 1.3 - 1.35 | | | | | | | 1.54 | | | | | |

| Depth | COLE | Gravimetric/Volumetric Water Contents | | | | | | K sat | K unsat |
|---|---|---|---|---|---|---|---|---|---|
| | | Sat. | 0.05 Bar | 0.1 Bar | 0.5 Bar | 1 Bar | 5 Bar | 15 Bar | |
| m | | g/g - m3/m3 | | | | | | mm/h | mm/h |
| 0.1 - 0.15 | 0.052A | | | 0.29G | | | | 0.13D | |
| 0.3 - 0.35 | 0.059A | | | 0.28G | | | | 0.14D | |
| 0.7 - 0.75 | 0.037A | | | 0.26G | | | | 0.17D | |
| 1.3 - 1.35 | 0.058A | | | 0.21G | | | | 0.16D | |

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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) |