

Project Name: Soils of the Lower Macquarie Valley, New South Wales
Project Code: Macquarie **Site ID:** 119 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

| | | | |
|------------------------|--------------------------|-------------------|---------------------|
| Desc. By: | N.J. McKenzie | Locality: | |
| Date Desc.: | 04/04/85 | Elevation: | No Data |
| Map Ref.: | Sheet No. : 8434 1:10000 | Rainfall: | No Data |
| Northing/Long.: | 6462440 AMG zone: 55 | Runoff: | Slow |
| Easting/Lat.: | 593780 Datum: AGD66 | Drainage: | Imperfectly 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: | Simple-slope | Relief: | No Data |
| Elem. Type: | No Data | Slope Category: | No Data |
| Slope: | % | Aspect: | No Data |

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

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

| | | | |
|--------------------------------|--|--------------------------------|--------|
| ASC Confidence: | | Principal Profile Form: | Dr2.43 |
| Confidence level not specified | | Great Soil Group: | N/A |

Site Disturbance: Extensive clearing, for example poisoning, ringbarking

Vegetation:

Tall Strata - Tree, 12.01-20m, . *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

| | | |
|-----|---------------|---|
| A11 | 0 - 0.12 m | Dark reddish brown (5YR3/4-Moist); ; Clay loam; Moderate grade of structure, 50-100 mm, Platy; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Weak consistence; Field pH 6.5 (Raupach); Many, very fine (0-1mm) roots; Clear, Smooth change to - |
| A12 | 0.12 - 0.31 m | Reddish brown (5YR4/4-Moist); ; Clay loam; Moderate grade of structure, 50-100 mm, Platy; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Weak consistence; Field pH 7 (Raupach); Many, very fine (0-1mm) roots; Clear, Smooth change to - |
| B21 | 0.31 - 0.59 m | Yellowish red (5YR4/6-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Firm consistence; Field pH 7 (Raupach); Common, very fine (0-1mm) roots; Gradual, Smooth change to - |
| B22 | 0.59 - 1.3 m | Strong brown (7.5YR5/6-Moist); ; Clay loam; Strong grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Firm consistence; Field pH 8.5 (Raupach); Many, very fine (0-1mm) roots; Gradual, Smooth change to - |
| BC | 1.3 - 1.4 m | Strong brown (7.5YR5/6-Moist); ; Sandy clay loam; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Field pH 8.5 (Raupach); Common, very fine (0-1mm) roots; |

Morphological Notes

Observation Notes

Wilga Soil Profile Class, Calcic Phase

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 | 6.7A | 0.044A | 1.3E | 0.5 | 0.5 | 0 | | | 2.3D | |
| 0.3 - 0.35 | 7.3A | 0.024A | | | | | | | | |
| 0.7 - 0.75 | 8.9A | 0.098A | 7.8E | 3.9 | 0.3 | 0.2 | | | 12.2D | |
| 1.3 - 1.35 | 9.5A | 0.196A | | | | | | | | |

| 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 | | 2.9A | 49.7 | 28.7 | 18.7 |
| 0.3 - 0.35 | | | | | | | 1.44 | | | | | |
| 0.7 - 0.75 | | | | | | | 1.35 | | 1.3A | 37.8 | 35 | 26 |
| 1.3 - 1.35 | | | | | | | 1.54 | | | | | |

| 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 | 0.022A | | | 0.16G | | | | 0.07D | |
| 0.3 - 0.35 | 0.042A | | | 0.18G | | | | 0.13D | |
| 0.7 - 0.75 | 0.018A | | | 0.23G | | | | 0.09D | |
| 1.3 - 1.35 | 0.024A | | | 0.17G | | | | 0.07D | |

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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) |