**Project Name:** **Hunter Valley Soil Survey**
**Project Code:** **HV** **Site ID:** **CP378** **Observation ID:** **1**
**Agency Name:** **CSIRO Division of Soils (ACT)**

## Site Information

| | | | |
|---|---|---|---|
| **Desc. By:** | C.J. Chartres | **Locality:** | |
| **Date Desc.:** | 07/04/93 | **Elevation:** | No Data |
| **Map Ref.:** | Sheet No. : 9132 1:100000 | **Rainfall:** | No Data |
| **Northing/Long.:** | 151.27388889 | **Runoff:** | No Data |
| **Easting/Lat.:** | -32.615 | **Drainage:** | No Data |

## Geology

| | | | |
|---|---|---|---|
| **ExposureType:** | Undisturbed soil core | **Conf. Sub. is Parent. Mat.:** | No Data |
| **Geol. Ref.:** | No Data | **Substrate Material:** | No Data |

## Land Form

| | | | |
|---|---|---|---|
| **Rel/Slope Class:** | Undulating low hills 30-90m 3-10% | **Pattern Type:** | Hills |
| **Morph. Type:** | Mid-slope | **Relief:** | 30 metres |
| **Elem. Type:** | Hillslope | **Slope Category:** | Very gently sloped |
| **Slope:** | 4 % | **Aspect:** | 360 degrees |

## Surface Soil Condition (dry):

## Erosion:

## Soil Classification

**Australian Soil Classification:**
Brown Sodosol
**ASC Confidence:**
Confidence level not specified

**Mapping Unit:** N/A
**Principal Profile Form:** N/A
**Great Soil Group:** Soloth

## Site Disturbance:

## Vegetation:

## Surface Coarse Fragments:

## Profile Morphology

| | | |
|---|---|---|
| A1 | 0 - 0.1 m | Brown (10YR4/3-Dry); ; Loamy sand; Many, fine (1-2mm) roots; Gradual change to - |
| A2 | 0.1 - 0.2 m | Pale brown (10YR6/3-Moist); ; Loamy sand; Few, fine (1-2mm) roots; Abrupt change to - |
| B21 | 0.2 - 0.7 m | Brown (10YR5/3-Moist); , 7.5YR56, 10-20% , 5-15mm, Distinct; Light clay; Common, fine (1-2mm) roots; |
| B22 | 0.7 - 1 m | Brown (10YR5/3-Moist); , 7.5YR56, 10-20% , 5-15mm, Distinct; , 2.5YR58, 10-20% , 5-15mm, Distinct; Light clay; Few, very fine (0-1mm) roots; |

## Morphological Notes

| | |
|---|---|
| A1 | Deep cracks filled with sand to 70cm. |
| A2 | Deep cracks filled with sand to 70cm. |
| B21 | Light Clay texture is sandy. Deep cracks filled with sand to 70cm. |
| B22 | Prominent red mottle in 1 core at 80-100cm (2.5YR58). Light Clay texture is sandy. |

## Observation Notes

Brown duplex soil.

## Site Notes

Kelvin Landen. Pasture. Rothbury land system.

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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 - 0.1 | 4.5D | 0.043A | 1.43H | 0.77 | 0.63 | 0.13 | | | 3.28D | |
| 0.1 - 0.2 | 4.6D | 0.028A | 0.74H | 0.62 | 0.32 | 0.13 | | | 2.06D | |
| 0.2 - 0.4 | 5D | 0.115A | 0.39H | 8.47 | 0.32 | 2.37 | | | 11.64D | |
| 0.5 - 0.7 | 5.15D | 0.271A | 0.19H | 7.65 | 0.15 | 3.82 | | | 11.84D | |
| 0.8 - 1 | 5.2D | 0.554A | 0.03H | 7.61 | 0.22 | 4.95 | | | 12.84D | |

| 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 - 0.1 | | 1.41A | 4J | | | | | | | | | |
| 0.1 - 0.2 | | | | | | | | | | | | |
| 0.2 - 0.4 | | | | | | | | | | | | |
| 0.5 - 0.7 | | | | | | | | | | | | |
| 0.8 - 1 | | | | | | | | | | | | |

| 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 - 0.1 | | | | | | | | | |
| 0.1 - 0.2 | | | | | | | | | |
| 0.2 - 0.4 | | | | | | | | | |
| 0.5 - 0.7 | | | | | | | | | |
| 0.8 - 1 | | | | | | | | | |

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**Laboratory Analyses Completed for this profile**

| | |
|---|---|
| 15_NR_AL | Exchangeable aluminium - method not recorded |
| 15E1_CA | Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble |
| 15E1_K | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15E1_MG | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15E1_NA | Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts |
| 15J_BASES | Sum of Bases |
| 3A1 | EC of 1:5 soil/water extract |
| 4C1 | pH of 1:5 soil/1M potassium chloride extract - direct |
| 6A1 | Organic carbon - Walkley and Black |
| 9B1 | Bicarbonate-extractable phosphorus - manual colour |