**Project Name:** PAT
**Project Code:** PAT **Site ID:** H218 **Observation ID:** 1
**Agency Name:** CSIRO Division of Soils (TAS)

## Site Information

**Desc. By:** K.D. Nicholls
**Locality:** 6.4KM NW of Scottsdale on property "Jetsonville":21M and 44M respectively from westerly and northerly boundary fence:
**Date Desc.:** 19/07/61
**Elevation:** 165 metres
**Map Ref.:**
**Rainfall:** 940
**Northing/Long.:** 147.463888888889
**Runoff:** Rapid
**Easting/Lat.:** -41.1180555555556
**Drainage:** Well drained

## Geology

**ExposureType:** Soil pit
**Conf. Sub. is Parent. Mat.:** No Data
**Geol. Ref.:** No Data
**Substrate Material:** Basalt

## Land Form

**Rel/Slope Class:** No Data
**Pattern Type:** Hills
**Morph. Type:** Flat
**Relief:** No Data
**Elem. Type:** Hillcrest
**Slope Category:** Gently inclined
**Slope:** 2.5 %
**Aspect:** 90 degrees

## Surface Soil Condition (dry):

## Erosion:

## Soil Classification

**Australian Soil Classification:**
Haplic Eutrophic Red Kandosol
**ASC Confidence:**
All necessary analytical data are available.
**Mapping Unit:** N/A
**Principal Profile Form:** Gn3.11
**Great Soil Group:** Krasnozem

**Site Disturbance:** Complete clearing. Pasture, native or improved, cultivated at some stage

## Vegetation:

## Surface Coarse Fragments:

## Profile Morphology

| | | |
|---|---|---|
| Ap | 0 - 0.1 m | Dark reddish brown (5YR3/3-Moist); ; Clay loam (Heavy); Moderate grade of structure, <2 mm, Granular; Moist; Weak consistence; 2-10%, Gravel, coarse fragments; Very few (0 - 2 %), Unidentified, Fine (0 - 2 mm), Concretions; Diffuse change to - |
| Ap | 0.1 - 0.18 m | Dark reddish brown (5YR3/3-Moist); ; Clay loam (Heavy); Moderate grade of structure, <2 mm, Granular; Moist; Weak consistence; 2-10%, Gravel, coarse fragments; Very few (0 - 2 %), Unidentified, Fine (0 - 2 mm), Concretions; Sharp change to - |
| | 0.19 - 0.3 m | Dark reddish brown (2.5YR3/4-Moist); ; Medium clay; Weak grade of structure, <2 mm, Granular; Weak consistence; 0-2%, coarse gravelly, 20-60mm, Basalt, coarse fragments; Very few (0 - 2 %), Unidentified, Medium (2 -6 mm), Concretions; Diffuse change to - |
| | 0.3 - 0.48 m | Dark reddish brown (2.5YR3/4-Moist); ; Medium clay; Weak grade of structure, <2 mm, Granular; Rough-ped fabric; Weak consistence; 0-2%, Gravel, coarse fragments; Many cutans, >50% of ped faces or walls coated; Clear change to - |
| B | 0.49 - 0.69 m | Dark red (10R3/6-Moist); ; Medium heavy clay; Weak grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; Many cutans, >50% of ped faces or walls coated; Diffuse change to - |
| B | 0.69 - 0.89 m | Dark red (10R3/6-Moist); ; Medium heavy clay; Weak grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; 0-2%, Gravel, coarse fragments; Common cutans, 10-50% of ped faces or walls coated; Diffuse change to - |
| BC | 0.99 - 1.17 m | Dark red (10R3/6-Moist); ; Medium clay; Weak grade of structure, 5-10 mm, Subangular blocky; Moist; Weak consistence; 0-2%, Gravel, coarse fragments; Diffuse change to - |
| C | 1.52 - 1.63 m | Dark red (2.5YR3/6-Moist); , 10YR53; Silty medium clay; Moist; Weak consistence; 0-2%, Gravel, coarse fragments; Diffuse change to - |
| | 2.06 - 2.13 m | Dark red (2.5YR3/6-Moist); , 10R36; , 10YR62; Silty medium clay; Weak consistence; 2-10%, Gravel, coarse fragments; |

## Morphological Notes

## Observation Notes

206-213CM SILTY CLAY AND MOTTLED SEMI-HARD MATERIAL:RED MATERIAL HARDEROCCURRING IN VEINS OR

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**Site Notes**
RINGAROOMA

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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 | 5.7A | 0.06A | 8.3H | 2.2 | 0.62 | 0.31 | 15.1H | | 26.5B | |
| 0.1 - 0.18 | 5.8A | 0.042A | 8.6H | 1.9 | 0.39 | 0.24 | 13.9H | | 25B | |
| 0.19 - 0.3 | 6A | 0.315A | 4.9H | 2.6 | 0.51 | 0.37 | 5.9H | | 14.3B | |
| 0.3 - 0.48 | 6A | 0.042A | | | | | | | | |
| 0.49 - 0.69 | 6.1A | 0.039A | | | | | | | | |
| 0.69 - 0.89 | 5.9A | 0.06A | 4.3H | 6 | 0.17 | | 7.3H | | 18.6B | |
| 0.99 - 1.17 | 5.6A | 0.057A | | | | | | | | |
| 1.52 - 1.63 | 5.2A | 0.036A | | | | | | | | |
| 2.06 - 2.13 | 4.9A | 0.039A | | | | | | | | |

| 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 | | 5.38D | | 0.045D | 0.305A | | | 3 | 8B | 26 | 25 | 33 |
| 0.1 - 0.18 | | 4.93D | | 0.04D | 0.232A | | | 4 | 9B | 25 | 23 | 34 |
| 0.19 - 0.3 | | 1.41D | | | 0.084A | | | 4 | 8D | 23 | 21 | 42 |
| 0.3 - 0.48 | | 0.9D | | | 0.066A | | | | | | | |
| 0.49 - 0.69 | | | | | | | | | | | | |
| 0.69 - 0.89 | | | | | | | | 1 | 2D | 6 | 4 | 90 |
| 0.99 - 1.17 | | | | | | | | | | | | |
| 1.52 - 1.63 | | | | | | | | | | | | |
| 2.06 - 2.13 | | | | | | | | | | | | |

| 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 - 0.18 | | | | | | | | | |
| 0.19 - 0.3 | | | | | | | | | |
| 0.3 - 0.48 | | | | | | | | | |
| 0.49 - 0.69 | | | | | | | | | |
| 0.69 - 0.89 | | | | | | | | | |
| 0.99 - 1.17 | | | | | | | | | |
| 1.52 - 1.63 | | | | | | | | | |
| 2.06 - 2.13 | | | | | | | | | |

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**Laboratory Analyses Completed for this profile**

| | |
|---|---|
| 12_HCL_FE | Total element - Fe(%) - Total acid(HCl) extractable Fe |
| 13C1_FE | Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon |
| 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 |
| 15G_C_H1 | Exchangeable hydrogen - meq per 100g of soil - Hydrogen By back titration of A or B |
| 15J_H | Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen) |
| 2_LOI | Loss on Ignition (%) |
| 2A1 | Air-dry moisture content |
| 3A1 | EC of 1:5 soil/water extract |
| 4A1 | pH of 1:5 soil/water suspension |
| 5A2 | Chloride - 1:5 soil/water extract, automated colour |
| 6A1_UC | Organic carbon (%) - Uncorrected Walkley and Black method |
| 7A2 | Total nitrogen - semimicro Kjeldahl , automated colour |
| 9A_HCL | Total element - P(%) - By boiling HCl |
| P10_GRAV | Gravel (%) |
| P10_PB_C | Clay (%) - Plummet balance |
| P10_PB_CS | Coarse sand (%) - Plummet balance |
| P10_PB_FS | Fine sand (%) - Plummet balance |
| P10_PB_Z | Silt (%) - Plummet balance |
| P10A1_C | Clay (%) - Pipette |
| P10A1_CS | Coarse sand (%) - Pipette |
| P10A1_FS | Fine sand (%) - Pipette |
| P10A1_Z | Silt (%) - Pipette |