

Project Name: YAMBULLA RESEARCH CATCHMENTS
Project Code: 1000196 **Site ID:** YAM_RC12 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

| | | | |
|------------------------|-----------------------------|-------------------|--------------|
| Desc. By: | P. Ryan | Locality: | |
| Date Desc.: | 15/09/86 | Elevation: | No Data |
| Map Ref.: | Sheet No. : 8823 1:25000 | Rainfall: | No Data |
| Northing/Long.: | 5868895 AMG zone: 55 | Runoff: | No Data |
| Easting/Lat.: | 736460 Datum: AGD66 | Drainage: | Well drained |

Geology

| | | | |
|----------------------|----------|------------------------------------|------------|
| ExposureType: | Soil pit | Conf. Sub. is Parent. Mat.: | Probable |
| Geol. Ref.: | DGL | Substrate Material: | Adamellite |

Land Form

| | | | |
|-------------------------|-------------|------------------------|-------------|
| Rel/Slope Class: | No Data | Pattern Type: | No Data |
| Morph. Type: | Lower-slope | Relief: | 0 metres |
| Elem. Type: | Hillslope | Slope Category: | No Data |
| Slope: | 14 % | Aspect: | 225 degrees |

Surface Soil Condition (dry): Soft

Erosion: Partial, Minor (sheet) No rill erosion (rill) No gully erosion (gully)

Soil Classification

| | | | |
|--|--------------------------------|--------------------------------|--------|
| Australian Soil Classification: | N/A | Mapping Unit: | N/A |
| ASC Confidence: | Confidence level not specified | Principal Profile Form: | Uc2.31 |
| | | Great Soil Group: | Podzol |

Site Disturbance:

Vegetation:

Surface Coarse Fragments: 10-20%, fine gravelly, 2-6mm, subrounded, Quartz

Profile Morphology

| | | |
|-----|---------------|--|
| O1 | 0 - 0.03 m | Organic Layer; ; Loamy coarse sand; Moist; Non-plastic; Non-sticky; Gradual, Wavy change to - |
| A11 | 0.03 - 0.23 m | Black (2.5Y2/1-Moist); ; Loamy coarse sand; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Moist; Loose consistence; Non-plastic; Slightly sticky; 10-20%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Field pH 4 (Raupach); Clear, Wavy change to - |
| A12 | 0.23 - 0.45 m | Very dark grey (10YR3/1-Moist); ; Coarse sand; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Moist; Very weak consistence; Non-plastic; Non-sticky; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Field pH 4 (Raupach); Abrupt, Smooth change to - |
| A2e | 0.45 - 0.61 m | Grey (10YR6/1-Moist); ; Clayey coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Moist; Very weak consistence; Non-plastic; Slightly sticky; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Field pH 4.5 (Raupach); Gradual, Wavy change to - |
| B2x | 0.61 - 0.75 m | Yellowish brown (10YR5/6-Moist); Mottles, 20-50% , Distinct; Massive grade of structure; Earthy fabric; Moist; Firm consistence; 10-20%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Many cutans, >50% of ped faces or walls coated, prominent; Many (20 - 50 %), Ferruginous, Very coarse (20 - 60 mm), Veins; Many (20 - 50 %), Organic (humified), Very coarse (20 - 60 mm), Veins; Ortstein, Moderately cemented, Discontinuous, Massive; Field pH 4.5 (Raupach); Gradual, Wavy change to - |
| B2 | 0.75 - 0.88 m | Yellowish brown (10YR5/6-Moist); Mottles, 2-10% , Distinct; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Firm consistence; Moderately plastic; Moderately sticky; 10-20%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Veins; Few (2 - 10 %), Organic (humified), Coarse (6 - 20 mm), Veins; Field pH 5.5 (Raupach); |
| B3 | 0.88 - 1.18 m | Pale brown (10YR6/3-Moist); Mottles, 10-20% , Distinct; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Strong consistence; 10-20%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; 10-20%, stony, 200-600mm, rounded, undisturbed, Adamellite, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Soft segregations; Field pH 5.5 (Raupach); |

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Morphological Notes

A2e B2 hsx

B2x B2 hs

Observation Notes

Colluvial lower slope near creek. B2hsx has formed at the base of the colluvium.

Site Notes

Catch.2/20713

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Laboratory Test Results:

| Depth | pH | 1:5 EC | Exchangeable Cations | | | Exchangeable | CEC | ECEC | ESP |
|-------------|----------------|--------|----------------------|------|------|--------------|---------|------|-----|
| m | | dS/m | Ca | Mg | K | Na | Acidity | | % |
| | | | | | | Cmol (+)/kg | | | |
| 0.03 - 0.23 | 3.07I 3.4H | | 0.81F | 0.61 | 0.4 | 1 | 1.58G | | |
| 0.45 - 0.61 | 3.63I 3.86H | | 0.06F | 0.07 | 0.13 | 0.48 | 0.75G | | |
| 0.61 - 0.75 | 4.28I 4.37H | | 0.08F | 0.16 | 0.44 | 0.77 | 0.7G | | |
| 0.88 - 1.18 | 4.05I 4.43H | | 0.09F | 0.52 | 0.44 | 0.21 | 1.56G | | |

| 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 | | | % | | |
| 0.03 - 0.23 | | 3.69A | | 39F | <0.01E | | | 22.1 | | | | |
| 0.45 - 0.61 | | 0.49A | | 12F | <0.01E | | | 26.4 | | | | |
| 0.61 - 0.75 | | 1.96A | | 32F | <0.01E | | | 26.2 | | | | |
| 0.88 - 1.18 | | 1.15A | | 21F | <0.01E | | | 36.2 | | | | |

[illegible]

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Laboratory Analyses Completed for this profile

| | |
|-----------|---|
| 15D1_CA | Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach |
| 15D1_K | Exchangeable bases and CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach |
| 15D1_MG | Exchangeable bases and CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach |
| 15D1_NA | Exchangeable bases and CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach |
| 15G_C_AL2 | Exchangeable aluminium - meq per 100g of soil - Aluminium By KCl extraction and detremination By AAS |
| 2A1 | Air-dry moisture content |
| 4A_C_1 | pH of soil - pH of 1:1 soil/water suspension |
| 4C_C_1 | pH of 1:1 soil/1M potassium chloride suspension |
| 6A1 | Organic carbon - Walkley and Black |
| 7A1 | Total nitrogen - semimicro Kjeldahl, steam distillation |
| 9A_NR | Total element - P(%) - Not recorded |
| P10_GRAV | Gravel (%) |