

**Project Name:** YAMBULLA RESEARCH CATCHMENTS  
**Project Code:** 1000196 **Site ID:** YAM\_RC18 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

#### Site Information

|                        |                          |                   |              |
|------------------------|--------------------------|-------------------|--------------|
| <b>Desc. By:</b>       | P. Ryan                  | <b>Locality:</b>  |              |
| <b>Date Desc.:</b>     | 17/09/86                 | <b>Elevation:</b> | No Data      |
| <b>Map Ref.:</b>       | Sheet No. : 8823 1:25000 | <b>Rainfall:</b>  | No Data      |
| <b>Northing/Long.:</b> | 5869375 AMG zone: 55     | <b>Runoff:</b>    | No Data      |
| <b>Easting/Lat.:</b>   | 736590 Datum: AGD66      | <b>Drainage:</b>  | Well drained |

#### Geology

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

#### Land Form

|                         |             |                        |            |
|-------------------------|-------------|------------------------|------------|
| <b>Rel/Slope Class:</b> | No Data     | <b>Pattern Type:</b>   | No Data    |
| <b>Morph. Type:</b>     | Upper-slope | <b>Relief:</b>         | 0 metres   |
| <b>Elem. Type:</b>      | Hillslope   | <b>Slope Category:</b> | No Data    |
| <b>Slope:</b>           | 36 %        | <b>Aspect:</b>         | 90 degrees |

#### Surface Soil Condition (dry):

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

#### Soil Classification

|  |                                |                                |                   |
|--|--------------------------------|--------------------------------|-------------------|
| <b>Australian Soil Classification:</b> | N/A                            | <b>Mapping Unit:</b>           | N/A               |
| <b>ASC Confidence:</b>                 | Confidence level not specified | <b>Principal Profile Form:</b> | Dy4.51            |
|  |                                | <b>Great Soil Group:</b>       | No suitable group |

#### Site Disturbance:

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

|     |               |  |
|-----|---------------|--|
| A1  | 0 - 0.12 m    | Very dark brown (10YR2/2-Moist); ; Coarse sandy loam; Weak grade of structure, 2-5 mm, Granular; Earthy fabric; Moist; Very weak consistence; Non-plastic; Non-sticky; 10-20%, cobbly, 60-200mm, angular, dispersed, coarse fragments; Field pH 4 (Raupach); Clear, Smooth change to -         |
| B1  | 0.12 - 0.26 m | Brown (10YR4/3-Moist); ; Coarse sandy clay loam; Weak grade of structure, 10-20 mm, Polyhedral; Earthy fabric; Moist; Very weak consistence; Slightly plastic; Slightly sticky; 10-20%, cobbly, 60-200mm, angular, dispersed, coarse fragments; Field pH 5 (Raupach);                          |
| B2  | 0.26 - 0.5 m  | Brown (10YR5/3-Moist); ; Coarse sandy clay loam; Weak grade of structure, 10-20 mm, Polyhedral; Earthy fabric; Moist; Weak consistence; Slightly plastic; Slightly sticky; 10-20%, cobbly, 60-200mm, angular, dispersed, coarse fragments; Field pH 5.5 (Raupach); Gradual, Smooth change to - |
| 2C1 | 0.5 - 0.83 m  | Light brown (7.5YR6/4-Moist); ; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Slightly plastic; Moderately sticky; 20-50%, cobbly, 60-200mm, angular, dispersed, coarse fragments; Field pH 5.5 (Raupach); Clear, Smooth change to -             |
| 2C2 | 0.83 - 1.05 m | Reddish yellow (7.5YR6/6-Moist); ; Coarse sandy clay loam; Massive grade of structure; Sandy (grains prominent) fabric; Moist; Firm consistence; Slightly plastic; Moderately sticky; 10-20%, fine gravelly, 2-6mm, subrounded, undisturbed, Adamellite, coarse fragments;                     |

#### Morphological Notes

2C1 Bolus dispersive.

#### Observation Notes

Downslope of Ordovician sediments. Thickcolluvium a mixture of 0 & Dgwa. Lower C hor is mainly granite. Sediments are Meta-sandstones, Fe-rich.

#### Site Notes

Catch.2/1203

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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 - 0.12    | 3.31I<br>3.46H |        | 1.84F                | 0.95 | 0.23 | 1.27         | 2.09G   |      |     |
| 0.12 - 0.26 | 3.67I<br>4.1H  |        | 1.14F                | 0.79 | 0.2  | 0.84         | 1.22G   |      |     |
| 0.5 - 0.83  | 3.74I<br>4.75H |        | 0.08F                | 0.89 | 0.21 | 0.14         | 0.8G    |      |     |
| 0.83 - 1.05 | 3.83I<br>4.97H |        | 0.05F                | 1.86 | 0.26 | 0.25         | 0.51G   |      |     |

| Depth       | CaCO3 | Organic | Avail. | Total | Total  | Total | Bulk    | Particle |    | Size | Analysis |      |
|-------------|-------|---------|--------|-------|--------|-------|---------|----------|----|------|----------|------|
| m           | %     | C       | P      | P     | N      | K     | Density | GV       | CS | FS   | Silt     | Clay |
|             |       | %       | mg/kg  | %     | %      | %     | Mg/m3   |          |    | %    |          |      |
| 0 - 0.12    |       | 5.94A   |        | 47F   | <0.01E |       |         | 35.5     |    |      |          |      |
| 0.12 - 0.26 |       | 1.68A   |        | 24F   | <0.01E |       |         | 41.5     |    |      |          |      |
| 0.5 - 0.83  |       | 0.17A   |        | 19F   | <0.01E |       |         | 30.1     |    |      |          |      |
| 0.83 - 1.05 |       | 0.12A   |        | 22F   | <0.01E |       |         | 23.1     |    |      |          |      |

[illegible]

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**Laboratory Analyses Completed for this profile**

|           |   |
|-----------|---|
| 15D1_CA   | Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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 (%)  |