

Project Name: YAMBULLA RESEARCH CATCHMENTS
Project Code: 1000196 **Site ID:** YAM_RC8 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

| | |
|---|---------------------------------|
| Desc. By: P. Ryan | Locality: |
| Date Desc.: 07/05/86 | Elevation: No Data |
| Map Ref.: Sheet No. : 8823 1:25000 | Rainfall: No Data |
| Northing/Long.: 5865938 AMG zone: 55 | Runoff: No Data |
| Easting/Lat.: 733100 Datum: AGD66 | Drainage: Poorly 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: Footslope | Slope Category: No Data |
| Slope: 8 % | Aspect: 90 degrees |

Surface Soil Condition (dry): Firm

Erosion: No sheet erosion (sheet) No rill erosion (rill) No gully erosion (gully)

Soil Classification

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|---|---------------------------------------|
| Australian Soil Classification: N/A | Mapping Unit: N/A |
| ASC Confidence: Confidence level not specified | Principal Profile Form: Gn1.84 |
| | Great Soil Group: Humic gley |

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

| | | |
|------|---------------|---|
| A1 | 0 - 0.13 m | Black (10YR2/1-Moist); ; Loam; Moderate grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Moist; Weak consistence; Slightly plastic; Slightly sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Field pH 4 (Raupach); Abrupt, Wavy change to - |
| A2 | 0.13 - 0.24 m | Dark grey (2.5Y4/1-Moist); ; Coarse sandy clay loam; Weak grade of structure, 2-5 mm, Polyhedral; Earthy fabric; Moist; Weak consistence; Slightly plastic; Slightly sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Field pH 4.5 (Raupach); Abrupt, Smooth change to - |
| B2 | 0.24 - 0.36 m | Weak red (2.5YR5/2-Moist); ; Coarse sandy loam; Weak grade of structure, 2-5 mm, Polyhedral; Sandy (grains prominent) fabric; Moist; Very firm consistence; Non-plastic; Slightly sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Common (10 - 20 %), Organic (humified), Coarse (6 - 20 mm), Veins; Common (10 - 20 %), Organic (humified), Coarse (6 - 20 mm), Tubules; Field pH 5 (Raupach); Abrupt, Tongued change to - |
| B3 | 0.36 - 0.53 m | Light reddish brown (2.5YR6/3-Moist); ; Coarse sandy loam; Weak grade of structure, 5-10 mm, Polyhedral; Sandy (grains prominent) fabric; Moist; Firm consistence; Non-plastic; Slightly sticky; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Organic (humified), Fine (0 - 2 mm), Veins; Field pH 5.5 (Raupach); Abrupt, Smooth |
| 2B1 | 0.53 - 0.64 m | Pale brown (10YR6/3-Moist); ; Coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Wet; Firm consistence; Non-plastic; Non-sticky; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Common (10 - 20 %), Organic (humified), Coarse (6 - 20 mm), Veins; Common (10 - 20 %), Organic (humified), Coarse (6 - 20 mm), Tubules; Field pH 5.5 (Raupach); Clear, Tongued change to - |
| 2B2t | 0.64 - 1.06 m | Brownish yellow (10YR6/8-Moist); Mottles, 5Y71, 10-20% , Distinct; Coarse sandy clay; Massive grade of structure; Sandy (grains prominent) fabric; Wet; Firm consistence; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Few (2 - 10 %), Organic (humified), Medium (2 -6 mm), Veins; Field pH 5 (Raupach); |

Morphological Notes

Observation Notes

Near creek line, seep upslope wet soil. Polygenetic profile - 2 humic illuvial horizons neither strongly developed. B3 and B21h were weakly cemented. Possible alluvial layering.

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Site Notes

Catch.3 309/306

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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 Cmol (+)/kg | Acidity | | % |
| 0 - 0.08 | 3.38I 3.95H | | 0.86F | 1.38 | 0.44 | 0.35 | 3.47G | | |
| 0.07 - 0.18 | 3.71I 4.16H | | 0.07F | 0.34 | 0.19 | 0.29 | 2.73G | | |
| 0.18 - 0.3 | 3.84I 4.44H | | 0.07F | 0.39 | 0.21 | 0.16 | 2.54G | | |
| 0.3 - 0.38 | 4.08I 4.5H | | 0.06F | 0.22 | 0.22 | 0.21 | 2.02G | | |
| 0.47 - 0.58 | 4.16I 4.58H | | 0.05F | 0.15 | 0.18 | 0.47 | 0.85G | | |
| 0.58 - 1 | 3.75I 4.35H | | 0.08F | 1.42 | 0.24 | 0.66 | 1.41G | | |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size | | Analysis | |
|-------------|-------|-----------|----------|---------|---------|---------|--------------|---------------|----|----------|-----------|
| m | % | % | mg/kg | % | % | % | Mg/m3 | GV | CS | FS % | Silt Clay |
| 0 - 0.08 | | 10.2A | | 80F | 0.27E | | | 4 | | | |
| 0.07 - 0.18 | | 2.29A | | 48F | 0.05E | | | 9.3 | | | |
| 0.18 - 0.3 | | 1.13A | | 22F | 0.05E | | | 43 | | | |
| 0.3 - 0.38 | | 0.75A | | 34F | 0.02E | | | 40 | | | |
| 0.47 - 0.58 | | 0.29A | | 20F | 0.01E | | | 43.2 | | | |
| 0.58 - 1 | | 0.17A | | 13F | 0.01E | | | 15.8 | | | |

[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 (%) |