

**Project Name:** YAMBULLA RESEARCH CATCHMENTS  
**Project Code:** 1000196 **Site ID:** YAM\_RC15 **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>	16/09/86	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 8823 1:25000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	5868895 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	736025 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>	Lower-slope	<b>Relief:</b>	0 metres
<b>Elem. Type:</b>	Footslope	<b>Slope Category:</b>	No Data
<b>Slope:</b>	7 %	<b>Aspect:</b>	135 degrees

**Surface Soil Condition (dry):**

**Erosion:** No sheet erosion (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>	Uc2.31
		<b>Great Soil Group:</b>	Podzol

**Site Disturbance:**

**Vegetation:**

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

**Profile Morphology**

O1	0 - 0.02 m	Organic Layer; ; Coarse sandy clay loam; Moist; Slightly plastic; Slightly sticky; Abrupt, Smooth change to -
O2	0.02 - 0.04 m	Organic Layer; ; Coarse sandy clay loam; Moist; Slightly plastic; Slightly sticky; Abrupt, Smooth change to -
A1	0.04 - 0.19 m	Black (2.5Y2/1-Moist); ; Coarse sandy clay loam; Weak grade of structure, 5-10 mm, Polyhedral; Earthy fabric; Moist; Weak consistence; Slightly plastic; Slightly sticky; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Field pH 4 (Raupach); Abrupt, Wavy change to -
A21	0.19 - 0.29 m	Dark grey (10YR4/1-Moist); ; Coarse sandy clay loam; Weak grade of structure, 5-10 mm, Polyhedral; Earthy fabric; Moist; Weak consistence; Slightly plastic; Slightly sticky; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Field pH 4.5 (Raupach); Clear, Irregular change to -
A22e	0.29 - 0.4 m	Light brownish grey (10YR6/2-Moist); ; Single grain grade of structure, Polyhedral; Sandy (grains prominent) fabric; Moist; Weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Field pH 5 (Raupach); Gradual, Smooth change to -
B2x	0.4 - 0.54 m	Yellow (10YR7/6-Moist); Mottles, 10-20% , Prominent; Mottles, 10-20% , Distinct; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Strong consistence; Slightly plastic; Slightly sticky; 10-20%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, prominent; Common (10 - 20 %), Organic (humified), Very coarse (20 - 60 mm), Veins; Ortstein, Moderately cemented, Discontinuous, Massive; Field pH 5 (Raupach);
B2	0.54 - 0.74 m	Light yellowish brown (10YR6/4-Moist); Mottles, 20-50% , Faint; Mottles, 2-10% , Faint; Massive grade of structure; Earthy fabric; Firm consistence; 10-20%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Few (2 - 10 %), Organic (humified), Coarse (6 - 20 mm), Veins; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Ortstein, Weakly cemented, Discontinuous, Massive; Field pH 5.5 (Raupach);
B3	0.74 - 0.94 m	Yellow (10YR7/6-Moist); ; Massive grade of structure; Earthy fabric; Firm consistence; 20-50%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Field pH 5.5 (Raupach);

**Morphological Notes**

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A21                      B2 hsx

A22e                      B2s

**Observation Notes**

Colluvial footslope. True Podzol with      orstein hardpan. Elluvial OM covers      cracks 10cm apart, cutans and pores.  
Continues down to B3 hor.

**Site Notes**

Catch.2/20708

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				CMol (+)/kg				%
0.04 - 0.19	3.13I 3.65H		0.5F	1.17	0.22	0.25	2.02G			
0.19 - 0.29	3.57I 3.84H		0.2F	0.79	0.13	0.14	1.14G			
0.29 - 0.4	3.77I 3.97H		0.12F	0.7	0.11	0.11	1.04G			
0.4 - 0.54	4.18I 4.24H		0.11F	0.7	0.23	0.18	2.01G			
0.74 - 0.94	4.05I 4.27H		0.09F	0.75	0.29	0.19	2.55G			

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
0.04 - 0.19		3.05A		28F	<0.01E			4.6	
0.19 - 0.29		1.43A		23F	<0.01E			10.3	
0.29 - 0.4		0.82A		17F	<0.01E			18.6	
0.4 - 0.54		1.52A		23F	<0.01E			39.7	
0.74 - 0.94		0.43A		22F	<0.01E			29.4	

[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 (%)