

**Project Name:** Rhynie Soil Survey  
**Project Code:** Rhynie **Site ID:** A1249 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (SA)

#### Site Information

<b>Desc. By:</b>	N.J. McKenzie	<b>Locality:</b>	
<b>Date Desc.:</b>	01/11/88	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>	Sheet No. : 6629-18 1:10000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6216430 AMG zone: 54	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	289580 Datum: AGD66	<b>Drainage:</b>	No Data

#### Geology

<b>ExposureType:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

#### Land Form

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	No Data
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	No Data	<b>Slope Category:</b>	No Data
<b>Slope:</b>	%	<b>Aspect:</b>	No Data

#### Surface Soil Condition (dry):

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
N/A		<b>Principal Profile Form:</b>	N/A
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	N/A
Confidence level not specified			

#### Site Disturbance:

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.05 m	Dark brown (7.5YR3/4-Moist); ; Sandy clay loam, fine sandy; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Dry; Very firm consistence; Field pH 6.5 (Raupach); Abrupt change to -
A12	0.05 - 0.1 m	Dark reddish brown (5YR3/4-Moist); ; Sandy clay loam, fine sandy; Massive grade of structure; Rough-ped fabric; Dry; Very firm consistence; Field pH 7 (Raupach); Clear change to -
A2	0.1 - 0.2 m	Dark reddish brown (5YR3/4-Moist); Light reddish brown (5YR6/4-Dry); , 5YR34, 20-50% , 15-30mm, Faint; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Field pH 7 (Raupach); Abrupt change to -
B21	0.2 - 0.3 m	Reddish brown (5YR5/4-Moist); , 5YR34; Moderate grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 7.5 (Raupach); Clear change to -
B22	0.3 - 0.4 m	Reddish brown (5YR5/4-Moist); , 5YR34, 20-50% , 15-30mm, Distinct; Moderate grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Few cutans, <10% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, , ; Field pH 9 (Raupach); Clear change to -
B23	0.4 - 0.5 m	Yellowish red (5YR5/5-Moist); , 5YR34, 20-50% , 15-30mm, Distinct; Moderate grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Few cutans, <10% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, , ; Field pH 9 (Raupach);
B23	0.5 - 0.6 m	Yellowish red (5YR5/6-Moist); ; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Few cutans, <10% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, , ; Field pH 9 (Raupach); Gradual change to -
B31	0.6 - 0.8 m	Yellowish red (5YR5/6-Moist); ; Massive grade of structure; Rough-ped fabric; Dry; Very strong consistence; Few cutans, <10% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, , ; Field pH 9 (Raupach);
B31	0.8 - 1 m	Yellowish red (5YR5/6-Moist); ; Massive grade of structure; Rough-ped fabric; Dry; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Many (20 - 50 %), Calcareous, , ; Field pH 9 (Raupach); Gradual change to -

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B32	1 - 1.3 m	Yellowish red (5YR5/6-Moist); , 5YR46, 20-50% , 15-30mm, Distinct; Massive grade of structure; Rough-ped fabric; Dry; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Many (20 - 50 %), Calcareous, , ; Field pH 9 (Raupach); Abrupt change to -
B41	1.3 - 1.55 m	Light yellowish brown (10YR6/4-Moist); , 2.5YR56, 2-10% , 5-15mm, Distinct; Massive grade of structure; Rough-ped fabric; Dry; Very strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Few (2 - 10 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (Raupach); Clear change to -
B42	1.55 - 1.8 m	Pinkish grey (7.5YR7/3-Moist); , 7.5YR66, 10-20% , 15-30mm, Distinct; Massive grade of structure; Rough-ped fabric; Dry; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, faint; Few (2 - 10 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (Raupach); Clear change to -
C	1.8 - 2.1 m	; Massive grade of structure; Rough-ped fabric; Dry; Very strong consistence; Common cutans, 10-50% of ped faces or walls coated, faint; Few (2 - 10 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (Raupach);

#### **Morphological Notes**

A11	Another profile with a double carbonate minimum. No instant swelling, red-brown clay as per other profiles.
A2	The heavier horizons were very difficult to texture, the carbonate B2 horizon was very difficult to wet. Tough and slimey (sodic?).
B31	Ferrans.
B41	The bottom carbonate free layer has numerous Mn/Fe nodules and the mottle colour is close to lepidocrocite's yellow. Mottle is reticulate and between the peds.
B42	Mangans and ferrans. Yellow mottle.

#### **Observation Notes**

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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 - 0.05								
0.05 - 0.1								
0.1 - 0.2								
0.2 - 0.3								
0.3 - 0.4								
0.4 - 0.5								
0.5 - 0.6								
0.6 - 0.8								
0.8 - 1								
1 - 1.3								
1.3 - 1.55								
1.55 - 1.8								
1.8 - 2.1								

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Laboratory Analyses Completed for this profile