

Project Name: Rhynie Soil Survey
Project Code: Rhynie **Site ID:** A1269 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (SA)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	01/11/88	Elevation:	No Data
Map Ref.:	Sheet No. : 6629-18 1:10000	Rainfall:	No Data
Northing/Long.:	6216890 AMG zone: 54	Runoff:	No Data
Easting/Lat.:	289920 Datum: AGD66	Drainage:	No Data

Geology

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

Land Form

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

Surface Soil Condition (dry):

Erosion:

Soil Classification

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

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.1 m	Yellowish red (5YR3/6-Moist); ; Sandy clay loam; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Dry; Strong consistence; Field pH 6 (Raupach); Sharp change to -
B21	0.1 - 0.2 m	Reddish brown (5YR4/4-Moist); ; 5YR46, 20-50% , 15-30mm, Distinct; Medium heavy clay; Massive grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Very strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 8 (Raupach);
B21	0.2 - 0.3 m	Reddish brown (5YR4/4-Moist); ; 5YR46, 10-20% , 15-30mm, Distinct; Medium heavy clay; Massive grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Very strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 8.5 (Raupach);
B21	0.3 - 0.4 m	Yellowish red (5YR4/6-Moist); ; Medium heavy clay; Massive grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Very strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 9 (Raupach); Gradual change to -
B22	0.4 - 0.5 m	Reddish brown (5YR4/4-Moist); ; 5YR66, 10-20% , 15-30mm, Faint; Medium heavy clay; Massive grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Very strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; , , , Nodules; Field pH 9 (Raupach);
B22	0.5 - 0.7 m	Reddish brown (5YR4/4-Moist); ; 5YR66, 10-20% , 15-30mm, Faint; Medium heavy clay; Massive grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Very strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; , , , Nodules; Field pH 9 (Raupach); Clear change to -
B23	0.7 - 0.85 m	Yellowish red (5YR5/6-Moist); ; Medium clay; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Soft segregations; , , , Nodules; Field pH 9 (Raupach); Clear change to -
B3	0.85 - 1.1 m	Reddish brown (5YR5/4-Moist); ; 7.5YR76, 20-50% , 30-mm, Distinct; Medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Many (20 - 50 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 9 (Raupach); Clear change to -

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B41	1.1 - 1.45 m	Light yellowish brown (10YR6/4-Moist); , 2.5YR46, 20-50% , 5-15mm, Prominent; Light medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Soft segregations; , , , Nodules; Field pH 9 (Raupach); Clear change to -
B42	1.45 - 1.9 m	Light brownish grey (2.5Y6/3-Moist); , 10YR63, 20-50% , 15-30mm, Distinct; , 2.5YR46, 20-50% , 15-30mm, Distinct; Light medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 8.5 (Raupach); Abrupt change to -
R	1.9 - m	Rock

Morphological Notes

A1	A hydrologically complex profile. Original A11 lost by erosion(?) leaving the high chroma, hence the very bright paddock observation. Current A1 is shallow and degraded with a very sharp (plough induced?) boundary.
B21	The B2 is massive and tough, very pedal. Mottle in the B21 is in the peds.
B21	Carbonate enters at 40cm and eventually gets a carbonate rich, pale layer (B23/B3).
B22	Mottle in the B22 is in the coatings.
B3	Mottle, carbonate.
B41	The B4 is high in clay but is light textured - there is a clear Fe mottling, particularly along the distinct fissures - Manganese nodules increase. Also cream carbonate
B42	The B42 is a lateral transmission zone and is carbonate free.
R	Overlying Woolshed Flat Shale at 1.95m.

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	Acidity		%
						Cmol (+)/kg			

0 - 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.5
0.5 - 0.7
0.7 - 0.85
0.85 - 1.1
1.1 - 1.45
1.45 - 1.9
1.9 -

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
		C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		

0 - 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.5
0.5 - 0.7
0.7 - 0.85
0.85 - 1.1
1.1 - 1.45
1.45 - 1.9
1.9 -

[illegible]

0 - 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.5
0.5 - 0.7
0.7 - 0.85
0.85 - 1.1
1.1 - 1.45
1.45 - 1.9
1.9 -

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Laboratory Analyses Completed for this profile