

Project Name: Rhynie Soil Survey
Project Code: Rhynie **Site ID:** A1252 **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.:	6216710 AMG zone: 54	Runoff:	No Data
Easting/Lat.:	289420 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

A11	0 - 0.1 m	Dark reddish brown (5YR2/3-Moist); ; Silty loam; Moderate grade of structure, 10-20 mm; Rough-ped fabric; Dry; Very firm consistence; Field pH 6.5 (Raupach); Gradual change to -
A12	0.1 - 0.2 m	Dark brown (7.5YR3/4-Moist); ; Silty loam; Weak grade of structure, 5-10 mm; Rough-ped fabric; Dry; Strong consistence; Field pH 7 (Raupach);
A13	0.2 - 0.3 m	Dark reddish brown (5YR3/3-Moist); ; Sandy clay loam, fine sandy; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Field pH 7.5 (Raupach); Gradual change to -
A21	0.3 - 0.4 m	Dark reddish brown (5YR3/4-Moist); Reddish brown (5YR5/4-Dry); ; Sandy clay loam, fine sandy; Massive grade of structure; Rough-ped fabric; Dry; Very firm consistence; Field pH 8 (Raupach);
A21	0.4 - 0.48 m	Reddish brown (2.5YR4/4-Moist); Reddish brown (5YR5/4-Dry); , 2.5YR33; Silty loam; Massive grade of structure; Rough-ped fabric; Dry; Very firm consistence; Field pH 8 (Raupach); Abrupt change to -
A22b	0.48 - 0.5 m	Reddish brown (5YR5/4-Moist); Pink (5YR7/3-Dry); ; Heavy clay; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Field pH 8 (Raupach); Sharp change to -
B21	0.5 - 0.6 m	Red (2.5YR4/6-Moist); , 2.5YR31, 20-50% , 30-mm, Prominent; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Field pH 8.5 (Raupach);
B21	0.6 - 0.7 m	Red (2.5YR4/6-Moist); , 2.5YR31, 10-20% , 30-mm, Distinct; Heavy clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Field pH 8.5 (Raupach); Clear change to -
B22	0.7 - 0.8 m	Yellowish red (5YR4/6-Moist); , 2.5YR31, 2-10% , 30-mm, Distinct; Heavy clay; Weak grade of structure, 20-50 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), Nodules; Field pH 8.5 (Raupach);
B22	0.8 - 0.9 m	Yellowish red (5YR5/6-Moist); ; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Common (10 - 20 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (Raupach); Clear change to -

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B31	0.9 - 1 m	Reddish brown (5YR5/4-Moist); , 7.5YR73, 20-50% , 15-30mm, Distinct; Heavy clay; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (Raupach);
B31	1 - 1.2 m	Reddish brown (5YR5/4-Moist); , 7.5YR73, 20-50% , 15-30mm, Distinct; Heavy clay; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; 10-20%, medium gravelly, 6-20mm, angular, Quartz, coarse fragments; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (Raupach); Gradual change to -
B32	1.2 - 1.4 m	Light yellowish brown (10YR6/4-Moist); , 10YR66, 10-20% , 15-30mm, Distinct; Heavy clay; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; 10-20%, medium gravelly, 6-20mm, angular, Quartz, coarse fragments; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Nodules; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 9 (Raupach);
B32	1.4 - 1.6 m	Light yellowish brown (10YR6/4-Moist); , 10YR66, 10-20% , 15-30mm, Distinct; Heavy clay; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Nodules; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 9 (Raupach); Clear change to -
C	1.6 - 1.8 m	;

Morphological Notes

B21	Most marked feature is the bleached capping (silica?) of the possibly columnar B21 (one planar crack was sampled). The B21 has very prominent mangans and the packing density appears to be high.
B22	The carbonate profile is notable because the carbonate is in nodules and the surrounding clay matrix is not effervescent - suggests they are relict.
B32	Some manganese nodules at depth - (minor watertable?) - Solodised solonetz?
C	Overlies WFS at 180cm.

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 - 0.48
0.48 - 0.5
0.5 - 0.6
0.6 - 0.7
0.7 - 0.8
0.8 - 0.9
0.9 - 1
1 - 1.2
1.2 - 1.4
1.4 - 1.6
1.6 - 1.8

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 - 0.48
0.48 - 0.5
0.5 - 0.6
0.6 - 0.7
0.7 - 0.8
0.8 - 0.9
0.9 - 1
1 - 1.2
1.2 - 1.4
1.4 - 1.6
1.6 - 1.8

[illegible]

0 - 0.1
0.1 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.48
0.48 - 0.5
0.5 - 0.6
0.6 - 0.7
0.7 - 0.8
0.8 - 0.9
0.9 - 1
1 - 1.2

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1.2 - 1.4
1.4 - 1.6
1.6 - 1.8

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Laboratory Analyses Completed for this profile