Project Name: **Rhynie Soil Survey**
Project Code: **Rhynie** **Site ID:** **A1275** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (SA)**

Site Information

Desc. By: N.J. McKenzie
Date Desc.: 01/11/88
Map Ref.: Sheet No. : 6629-18 1:10000
Northing/Long.: 6216430 AMG zone: 54
Easting/Lat.: 290220 Datum: AGD66
Locality:
Elevation: No Data
Rainfall: No Data
Runoff: No Data
Drainage: No Data

Geology

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

Land Form

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

Surface Soil Condition (dry):

Erosion:

Soil Classification

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

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.1 m	Dark reddish brown (5YR3/2-Moist); ; Light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Dry; Strong consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 8 (Raupach); Gradual change to -
B21	0.1 - 0.2 m	Dark reddish brown (5YR3/2-Moist); ; Light medium clay; Strong grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric; Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Field pH 8 (Raupach); Gradual change to -
B22	0.2 - 0.3 m	Dark reddish brown (5YR3/3-Moist); , 5YR43, 20-50% , 15-30mm, Faint; Medium clay; Strong grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric; Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Field pH 8 (Raupach);
B22	0.3 - 0.35 m	Dark reddish brown (5YR3/3-Moist); , 5YR43, 20-50% , 15-30mm, Distinct; Medium heavy clay; Strong grade of structure, 10-20 mm, Polyhedral; Smooth-ped fabric; Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Field pH 8 (Raupach); Abrupt change to -
B3	0.35 - 0.4 m	Reddish brown (5YR4/4-Moist); , 5YR32, 20-50% , 15-30mm, Distinct; Medium heavy clay; Moderate grade of structure, 5-10 mm, Polyhedral; Smooth-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; Field pH 8.5 (Raupach); Clear change to -
B41k	0.4 - 0.5 m	Pink (7.5YR8/4-Moist); ; Medium heavy clay; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Field pH 8.5 (Raupach); Gradual change to -
B42k	0.5 - 0.8 m	Reddish yellow (5YR7/6-Moist); ; Medium heavy clay; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Field pH 8.5 (Raupach); Gradual change to -
B43k	0.8 - 1.46 m	Reddish yellow (5YR7/6-Moist); ; Medium heavy clay; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Field pH 8.5 (Raupach); Abrupt change to -
2B	1.46 - 1.8 m	Light red (2.5YR6/6-Moist); , 10YR63, 20-50% , 30-mm, Prominent; Heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Very firm consistence; Few cutans, <10% of ped faces or walls coated, faint; Field pH 8.5 (Raupach);

Morphological Notes

A1 A shallow black earth overlying a thick carbonate which then gives way to a HC buried layer. A1 a bit harder to manipulate (OM?) and degraded structure.

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B21	The B2 sorbs and swells enormously - high heat of wetting.
B22	B22 and B3 mottles = coatings.
B41k	High sorptivity clays transform to a fine moist crumb when moistened.
2B	pale carbonate present.

Observation Notes

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.1	7.24C 7.52A	0.19A								
0.1 - 0.2	6.99C 7.45A	0.1A								
0.2 - 0.3	7.42C 7.72A	0.15A								
0.3 - 0.35										
0.35 - 0.4	7.63C 8A	0.17A								
0.4 - 0.5	7.63C 8.01A	0.17A								
0.5 - 0.8	7.76C 8.3A	0.14A								
0.8 - 1.46	7.78C 8.26A	0.15A								
1.46 - 1.8	7.97C 8.27A	0.17A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1												
0.1 - 0.2												
0.2 - 0.3												
0.3 - 0.35												
0.35 - 0.4												
0.4 - 0.5												
0.5 - 0.8												
0.8 - 1.46												
1.46 - 1.8												

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
m		g/g - m3/m3						mm/h	mm/h
0 - 0.1									
0.1 - 0.2									
0.2 - 0.3									
0.3 - 0.35									
0.35 - 0.4									
0.4 - 0.5									
0.5 - 0.8									
0.8 - 1.46									
1.46 - 1.8									

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Laboratory Analyses Completed for this profile

12C2	Calcium chloride extractable boron - ICPAES
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
4B2	pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1
5A2	Chloride - 1:5 soil/water extract, automated colour