

Project Name: Rhynie Soil Survey
Project Code: Rhynie **Site ID:** A1277 **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.:	6216630 AMG zone: 54	Runoff:	No Data
Easting/Lat.:	290080 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	Dark reddish brown (5YR3/2-Moist); ; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Strong consistence; Field pH 8.5 (Raupach); Gradual change to -
B21	0.1 - 0.2 m	Brown (7.5YR4/3-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Strong consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 8.5 (Raupach);
B21	0.2 - 0.3 m	Brown (7.5YR4/3-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 8.5 (Raupach); Diffuse change to -
B21	0.3 - 0.4 m	Brown (7.5YR4/3-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Field pH 8.5 (Raupach);
B2	0.4 - 0.5 m	Brown (7.5YR4/3-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Field pH 8.5 (Raupach);
B22	0.5 - 0.63 m	Brown (7.5YR4/3-Moist); ; Heavy clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Very strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9 (Raupach); Abrupt change to -
B23	0.63 - 0.82 m	Reddish brown (5YR5/4-Moist); ; 7.5YR43, 10-20% , 15-30mm, Distinct; Heavy clay; Strong grade of structure, 20-50 mm, Polyhedral; Smooth-ped fabric; Very strong consistence; Many cutans, >50% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 9 (Raupach); Abrupt change to -
B3	0.82 - 1 m	Yellowish red (5YR5/6-Moist); ; Heavy clay; Weak grade of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Very strong consistence; Many cutans, >50% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9.5 (Raupach);
B3	1 - 1.4 m	Yellowish red (5YR5/6-Moist); ; Heavy clay; Massive grade of structure; Rough-ped fabric; Very strong consistence; Common (10 - 20 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (Raupach);

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B3	1.4 - 1.9 m	Yellowish red (5YR5/6-Moist); ; Heavy clay; Massive grade of structure; Rough-ped fabric; Very strong consistence; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (Raupach); Clear change to -
B41	1.9 - 2.3 m	Reddish yellow (5YR6/6-Moist); , 2.5YR56, 20-50% , 30-mm, Distinct; Massive grade of structure; Rough-ped fabric; Very strong consistence; 2-10%, coarse gravelly, 20-60mm, subangular tabular, dispersed, Shale, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 9 (Raupach);
B41	2.3 - 2.7 m	Reddish yellow (5YR6/6-Moist); , 5YR64, 20-50% , 30-mm, Distinct; Massive grade of structure; Rough-ped fabric; Very strong consistence; 0-2%, medium gravelly, 6-20mm, subangular tabular, dispersed, Shale, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 8 (Raupach);
B42	2.7 - 2.9 m	Light red (2.5YR6/6-Moist); , 5YR64, 20-50% , 30-mm, Prominent; Weak grade of structure, 20-50 mm, Polyhedral; Rough-ped fabric; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subangular tabular, dispersed, Shale, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 8 (Raupach); Clear change to -
R	2.9 - m	Rock

Morphological Notes

A1	Profile: Dark brown cracking clay into clear carbonate segregations then the more pale tough sodic and carbonate rich clay to 190cm.
B21	Sorptivity of the solum is interesting. Top of the B has a very high sorptivity and swells - this decreases and sorptivity = 0 and no instant shrinkage is detected by the B22 (Is this a Ca-Mg-Na domination of the exchange complex?).
B3	Clays are hard to texture >82cm - more sand in the B3 than B4 (10%).
B3	160-190cm carbonate decreases gradually and >190 it is absent. B4 becomes increasingly mottled - zone of groundwater flow - pH decreases mildly.
B41	Carbon fragments are weathered in the B4. No Mn nodules even in the B4.

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Laboratory Test Results:

[illegible][illegible][illegible]

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0.63 - 0.82
0.82 - 1
1 - 1.4
1.4 - 1.9
1.9 - 2.3
2.3 - 2.7
2.7 - 2.9
2.9 -

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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