

Project Name: Rhynie Soil Survey
Project Code: Rhynie **Site ID:** A1246 **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.:	6216530 AMG zone: 54	Runoff:	No Data
Easting/Lat.:	289730 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 - 0.05 m	Dark reddish brown (5YR3/4-Moist); ; Sandy clay loam; Weak grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Dry; Weak consistence; Field pH 7 (Raupach); Clear change to -
A21	0.05 - 0.1 m	Dark reddish brown (2.5YR3/4-Moist); Reddish brown (5YR5/4-Dry); ; Silty loam; Massive grade of structure; Rough-ped fabric; Dry; Very firm consistence; Field pH 6.5 (Raupach);
A21	0.1 - 0.2 m	Dark reddish brown (2.5YR3/4-Moist); Reddish brown (5YR5/4-Dry); ; Silty loam; Massive grade of structure; Rough-ped fabric; Dry; Very firm consistence; Field pH 6.5 (Raupach); Clear change to -
A22	0.2 - 0.3 m	Dark reddish brown (5YR3/4-Moist); Light reddish brown (5YR6/4-Dry); , 5YR54, 10-20% , 5-15mm, Faint; Clay loam, fine sandy; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH 7 (Raupach);
A22	0.3 - 0.4 m	Dark reddish brown (5YR3/4-Moist); Light reddish brown (5YR6/4-Dry); , 5YR54, 10-20% , 5-15mm, Faint; Clay loam, fine sandy; Massive grade of structure; Rough-ped fabric; Dry; Strong consistence; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH 7 (Raupach); Clear change to -
B21	0.4 - 0.5 m	Red (2.5YR4/6-Moist); ; Medium clay; Weak 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); Clear change to -
B22	0.5 - 0.6 m	Red (2.5YR4/6-Moist); ; Medium clay; Weak 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);
B22	0.6 - 0.73 m	Red (2.5YR4/6-Moist); ; Medium clay; Weak 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); Abrupt change to -
B3k	0.73 - 0.9 m	Yellowish red (5YR4/6-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Dry; Very strong consistence; Few cutans, <10% of ped faces or walls coated, faint; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Nodules; , , , Soft segregations; Field pH 9 (Raupach);

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B3k 0.9 - 1 m Yellowish red (5YR4/6-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Polyhedral; Rough-ped fabric; Dry; Very strong consistence; 2-10%, medium gravelly, 6-20mm, reoriented, Shale, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Common (10 - 20 %), Calcareous, Coarse (6 - 20 mm), Nodules; , , , Soft segregations; Field pH 9 (Raupach);

R 1 - m Rock

Morphological Notes

A1 A strong contrast to earlier Red Brown Earths's. Duller colours.
A22 The A22 is almost a pan, very difficult to wet and apparently strongly cemented. There appear to be some Iron nodules in the A22- the beginnings of the ironstone gravel further down?
B21 The fabric is Rough Ped all through the B horizon and structure is weak to massive.
B22 The B2 like the A22 is also difficult to wet and texture. There is no clear band of illuviation and the COLE must be very low (ie <0.04).
B22 Carbonate is not encountered until a depth of 73cm.
B3k Woolshed Flat Shale (WFS) at 1 metre.

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 - 0.05
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 - 0.73
0.73 - 0.9
0.9 - 1
1 -

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 - 0.05
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 - 0.73
0.73 - 0.9
0.9 - 1
1 -

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 - m ³ /m ³						mm/h	mm/h

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 - 0.73
0.73 - 0.9
0.9 - 1
1 -

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Laboratory Analyses Completed for this profile