

Project Name: Rhynie Soil Survey
Project Code: Rhynie **Site ID:** A1234 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (SA)

Site Information

Desc. By:	N.J. McKenzie	Locality:	
Date Desc.:	30/10/88	Elevation:	296 metres
Map Ref.:	Sheet No. : 6629-18 1:10000	Rainfall:	No Data
Northing/Long.:	6216010 AMG zone: 54	Runoff:	No Data
Easting/Lat.:	289360 Datum: AGD66	Drainage:	No Data

Geology

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

Land Form

Rel/Slope Class:	No Data	Pattern Type:	No Data
Morph. Type:	Upper-slope	Relief:	No Data
Elem. Type:	No Data	Slope Category:	No Data
Slope:	5 %	Aspect:	40 degrees

Surface Soil Condition (dry): Hardsetting

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: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.06 m	Dark reddish brown (5YR3/4-Moist); ; Loam; Massive grade of structure; Earthy fabric; Dry; Weak consistence; Field pH 6 (Raupach);
A12	0.06 - 0.1 m	Dark reddish brown (5YR3/4-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Dry; Very firm consistence; Field pH 6 (Raupach); Clear, Smooth change to -
A12	0.1 - 0.18 m	Dark reddish brown (5YR3/4-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Dry; Very firm consistence; Field pH 6 (Raupach); Abrupt, Smooth change to -
B21	0.18 - 0.2 m	Dark reddish brown (2.5YR3/3-Moist); ; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Field pH 7 (Raupach);
B21	0.2 - 0.3 m	Dark reddish brown (2.5YR3/4-Moist); ; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Field pH 7.5 (Raupach); Clear, Smooth change to -
B22	0.3 - 0.4 m	Dark reddish brown (2.5YR3/3-Moist); ; 2.5YR36, 20-50% , 0-5mm, Faint; Heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Field pH 8 (Raupach);
B22	0.4 - 0.48 m	Dark reddish brown (2.5YR3/3-Moist); ; 2.5YR36, 20-50% , 15-30mm, Faint; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; 2-10%, coarse gravelly, 20-60mm, rounded platy, reoriented, Shale, coarse fragments; Many cutans, >50% of ped faces or walls coated, prominent; Field pH 8 (Raupach); Abrupt, Smooth change to -
B23k	0.48 - 0.5 m	Reddish brown (2.5YR4/4-Moist); ; 2.5YR56, 20-50% , 15-30mm, Distinct; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.5 (Raupach);
B23k	0.5 - 0.6 m	Reddish brown (2.5YR4/4-Moist); ; 2.5YR56, 20-50% , 15-30mm, Distinct; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; Many cutans, >50% of ped faces or walls coated, prominent; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.5 (Raupach); Abrupt, Smooth change to -

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C 0.6 - 0.8 m ; Weak grade of structure; Smooth-ped fabric; Dry; Many (20 - 50 %), Calcareous, , Soft segregations; Field pH 8.5 (Raupach);

Morphological Notes

A11 Profile: Carbonate accumulation within the solum (contrast with A1233).

B21 B horizon is finely structured at the top and coarsens noticeably

B23k Carbonates present

B23k Carbonates present

C The C horizon is the same as A1233, banded and having grey, white and yellow weathered WF Shale with a few carbonate bands.

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 - 0.06
0.06 - 0.1
0.1 - 0.18
0.18 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.48
0.48 - 0.5
0.5 - 0.6
0.6 - 0.8

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 - 0.06
0.06 - 0.1
0.1 - 0.18
0.18 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.48
0.48 - 0.5
0.5 - 0.6
0.6 - 0.8

[illegible]

0 - 0.06
0.06 - 0.1
0.1 - 0.18
0.18 - 0.2
0.2 - 0.3
0.3 - 0.4
0.4 - 0.48
0.48 - 0.5
0.5 - 0.6
0.6 - 0.8

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Laboratory Analyses Completed for this profile