Project Name: Rhynie Soil Survey

Project Code: Observation ID: 1 Rhvnie Site ID: A1242

Agency Name: **CSIRO Division of Soils (SA)**

Site Information

Desc. By: N.J. McKenzie Locality:

Date Desc.: Elevation: 01/11/88 No Data Sheet No.: 6629-18 1:10000 Map Ref.: Rainfall: No Data Northing/Long.: 6216920 AMG zone: 54 Runoff: No Data Easting/Lat.: 289520 Datum: AGD66 No Data Drainage:

Geology

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

Land Form

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

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification: Mapping Unit: 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

Dark brown (7.5YR3/3-Moist); ; Loamy fine sand; Weak grade of structure, 5-10 mm, Subangular $0 - 0.1 \, \text{m}$ blocky; Earthy fabric; Dry; Firm consistence; 2-10%, medium gravelly, 6-20mm, rounded platy, undisturbed, Shale, coarse fragments; Field pH 6.5 (Raupach); Clear, Smooth change to -

A12 0.1 - 0.2 m Black (5YR2/1-Moist); ; Sandy clay loam, fine sandy; Moderate grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Dry; Very firm consistence; Field pH 6.5 (Raupach); Gradual, Smooth change to -

Dusky red (2.5YR3/2-Moist);; Clay loam; Moderate grade of structure, 10-20 mm, Angular blocky; **A3** $0.2 - 0.3 \, \text{m}$ Rough-ped fabric; Dry; Very firm consistence; 2-10%, medium gravelly, 6-20mm, rounded platy, undisturbed, Shale, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint;

Field pH 7 (Raupach); Gradual, Smooth change to -

B21 0.3 - 0.4 m Dark reddish brown (2.5YR3/3-Moist); , 2.5YR32, 10-20% , 15-30mm, Faint; Heavy clay; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence;

Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 7 (Raupach);

Dark reddish brown (2.5YR3/3-Moist); , 2.5YR32, 10-20% , 15-30mm, Faint; Heavy clay; Strong B21 0.4 - 0.48 m grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 7 (Raupach); Abrupt,

Smooth change to -

B22 0.48 - 0.5 m Dusky red (2.5YR3/2-Moist); , 2.5YR34, 20-50% , 15-30mm, 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 7.5 (Raupach);

Dusky red (2.5YR3/2-Moist); , 2.5YR34, 20-50% , 15-30mm, Distinct; Heavy clay; Strong grade of B22 0.5 - 0.56 m structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Dry; Strong consistence; Many cutans,

>50% of ped faces or walls coated, prominent; Field pH 7.5 (Raupach); Abrupt, Smooth change

B3k 0.56 - 0.7 m Red (2.5YR5/7-Moist); , 2.5YR52, 20-50% , 5-15mm, Prominent; , 5YR66; Heavy clay; Strong

grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Dry; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, Very coarse (20 - 60 mm), Soft segregations; Field pH 8.5 (Raupach); Abrupt, Smooth change to

С 0.7 - 1.3 m **Project Name: Rhynie Soil Survey**

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A11 A reasonably straight forward 70cm RBE, except for the darkness of the B2 - the clay

does not sorb strongly (slow to wet). The A horizon gradually increases in the

percentage of clay.

The carbonate profile is noticeable for the very sharp boundary and aboundant quantity in the B3. B3k

The Woolshed Flat Shale is weathered to approximately 120-130cm, where it becomes an R horizon. The C horizon is characterised by white carbonate bands and grey argillaceous weathered shale. The C horizon depth is >130cm. С

Observation Notes

Site Notes

Project Name: Project Code: Agency Name:

Rhynie Soil Survey
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Laboratory Test Results:

Laboratory			_		0.41	_		050	-0-0	500
Depth	рН	1:5 EC	Ca	changeable Mg	K	Na E	xchangeable Acidity	CEC	ECEC	ESP
m		dS/m		-		Cmol (+)/	kg			%
0 - 0.1	5.6C 5.82A	0.57A								
0.1 - 0.2	5.44C 5.89A	0.16A								
0.2 - 0.3	6.04C 6.38A	0.11A								
0.3 - 0.4	6.1C 6.64A	0.08A								
0.4 - 0.48										
0.48 - 0.56	7.54C 7.81A	0.2A								
0.5 - 0.56										
0.56 - 0.7	7.83C 8.19A	0.19A								
0.7 - 1.3										
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV CS	Size FS	Analysis Silt Clay
m	%	%	mg/k	g %	%	%	Mg/m3		%	•
0 - 0.1 0.1 - 0.2 0.2 - 0.3 0.3 - 0.4 0.4 - 0.48 0.48 - 0.56 0.5 - 0.56 0.56 - 0.7 0.7 - 1.3										
Depth	COLE			Gravimetric/Volumetric Water Contents					sat	K unsat
m		Sat.	0.05 Baı		0.5 Bar g - m3/m3	1 Bar	5 Bar 15 E		n/h	mm/h
0 - 0.1 0.1 - 0.2 0.2 - 0.3 0.3 - 0.4 0.4 - 0.48 0.48 - 0.56 0.5 - 0.56 0.56 - 0.7										

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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