

PRELIMINARY GROUND INVESTIGATION REPORT

UPON DAINTREE FARM

RAMSEY ST MARY, RAMSEY

HUNTINGDON, PE26 2TF

PROJECT No: 31221

DOCUMENT REF: 31221-GI-01



On Behalf of
Huntingdonshire District Council
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PE29 3TN

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1. INTRODUCTION

Acting upon instruction from Studio 11 Architecture on behalf of the client Huntingdonshire District Council, we visited site on 20th July 2021 with a view to determining the basic characteristics of the soils strata.

Hand Auger boreholes and in-situ testing took place, and our comments are based upon a visual Inspection of the disturbed samples and testing results obtained on site.

No soil infiltration rate tests were undertaken at this stage.

We would suggest the groundwater conditions may vary seasonally and that water levels as recorded at the time of boreholing should not necessarily be taken as being constant as they may be subject to fluctuations.

The opinions and comments expressed in this report are based upon ground conditions encountered in the boreholes sunk at the time of our visit.

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2. LOCATION AND BRIEF DESCRIPTION OF THE SITE

2.1 Site location

Situated to the very westerly end of Daintree Road, which is a single track road leading down to the farmhouse. The appropriate National Grid reference TF 244 899. A site location plan is contained in APPENDIX A.

2.2 Site History description

Desktop study of historical maps has been undertaken. The site does not appear to have been previously developed, it appears to have stood as a grassed paddock for many years.

Extracts of the 1889 Ordnance survey county series map is contained within APPENDIX B.

2.3 Site description

The site currently stands as a grassed paddock adjoining to an existing property. The investigation is limited to site boundaries as shown on our location plan contained within APPENDIX A.

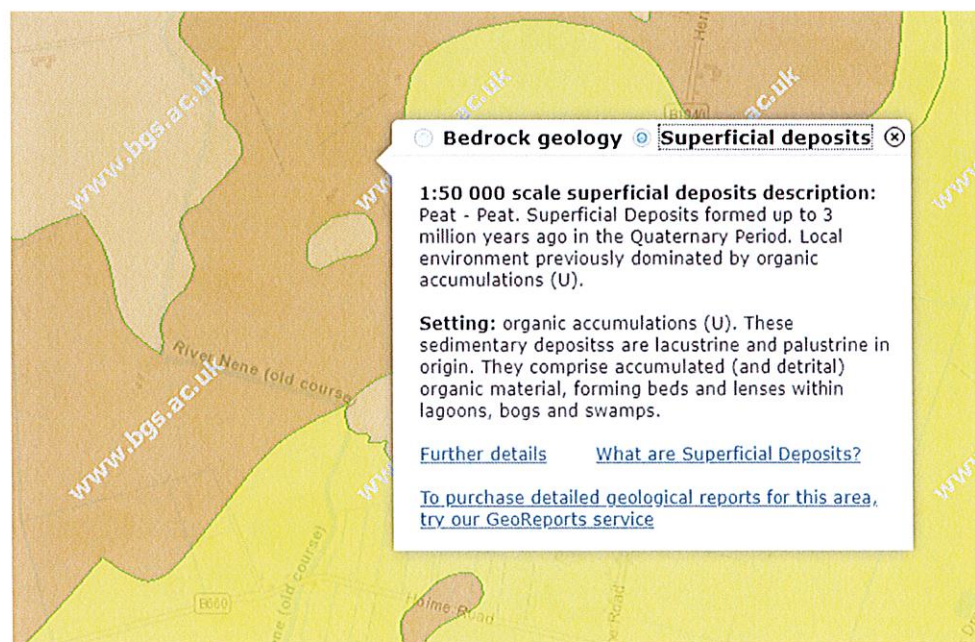
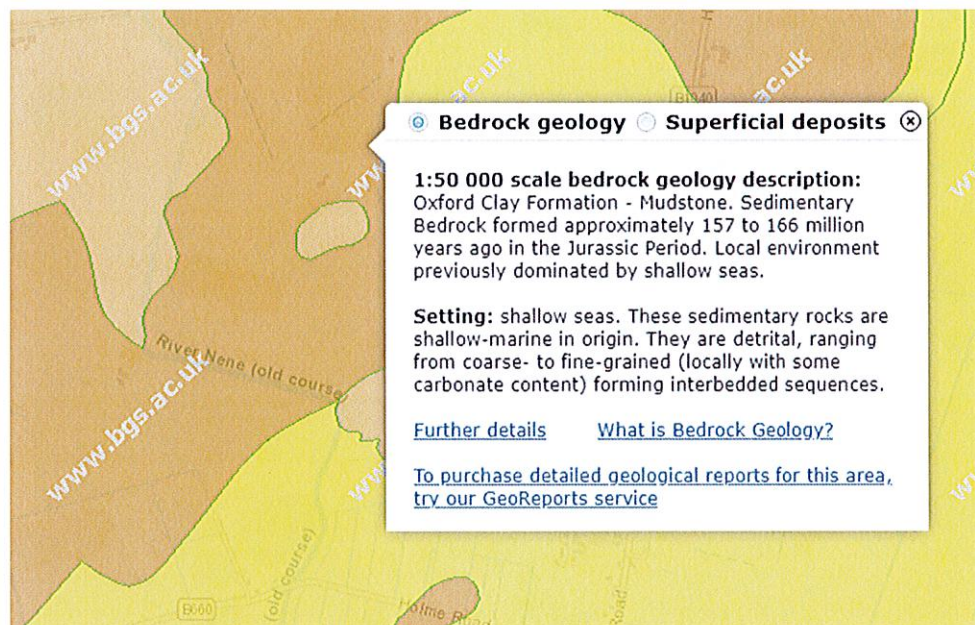
The North of the site is bound by dense hedgerow and a neighbouring field.

To the Eastern, Southern & Western borders of the site is lined with fencing.

At the time of our visit the weather was dry and very warm, there had been no significant rainfall for a number of days.

2.4 Geological description

Desktop study of the area has been undertaken using the British Geological Society Maps.



3. SITE WORK

Two 100mm diameter Hand Auger boreholes took place in the locations shown on the location plan contained within APPENDIX A.

A visual inspection of the disturbed samples and in-situ testing were undertaken. A description of the strata is shown on sheet No.d 31221/BH01, 31221/BH02. The borehole logs are contained in APPENDIX C.

The soil demonstrated no identifying odours or markers for known contamination therefore, no samples were submitted for contamination laboratory testing.

4.0 GROUND CONDITIONS

The sequence of the strata encountered at depth during the investigation generally confirms the anticipated geology as interpreted from the geological maps.

Once the dry topsoil material was penetrated at 0.45m, the strata became a light brown silty clay. In BH01 the silty clay material extended down to a depth of 1.1m below ground level, at this level the material recovered became a blue grey clay. The blue grey clay continued to a depth of 1.9m, the borehole was terminated at this depth due to difficulty in retrieving the auger head due to suction.

The strata that was encountered in BH02 was not the same that was found in BH01. The material that was recovered began with a 300mm layer of topsoil, followed by a light grey silt with small orange lenses down to a depth of 1000mm. At a depth of 1.7m the material became the same as what was found in BH01, blue grey clay down to a depth of 2100mm. Water was encountered at a level of 1.2m and it was visible that water was running into the borehole.

5.0 CONCLUSIONS & RECOMENDATIONS

The strata encountered in the two boreholes is relatively similar.

However, due to the soft blue grey clay material to a depth of 1.9m in BH01 and 2.1m in BH02, traditional strip foundation will not be appropriate for this development.

To overcome the soft blue grey clay material, we make the recommendation of utilising a stiff reinforced raft foundation, in order to reduce the amount of differential settlement that may occur. The raft should be founded on a well compacted, non-frost susceptible stone base designed by engineer.

Therefore, bearing pressures should be restricted to 25kN/m² to ensure differential settlement is limited to an acceptable amount. The proposed development is a modest extension to the existing property; therefore, line loads will be kept to a minimum. Service and drainage connections should have flexible connections to allow for raft settlement.

For and on behalf of **SIDEBOTTOM RICHARDSON CHENG LTD**

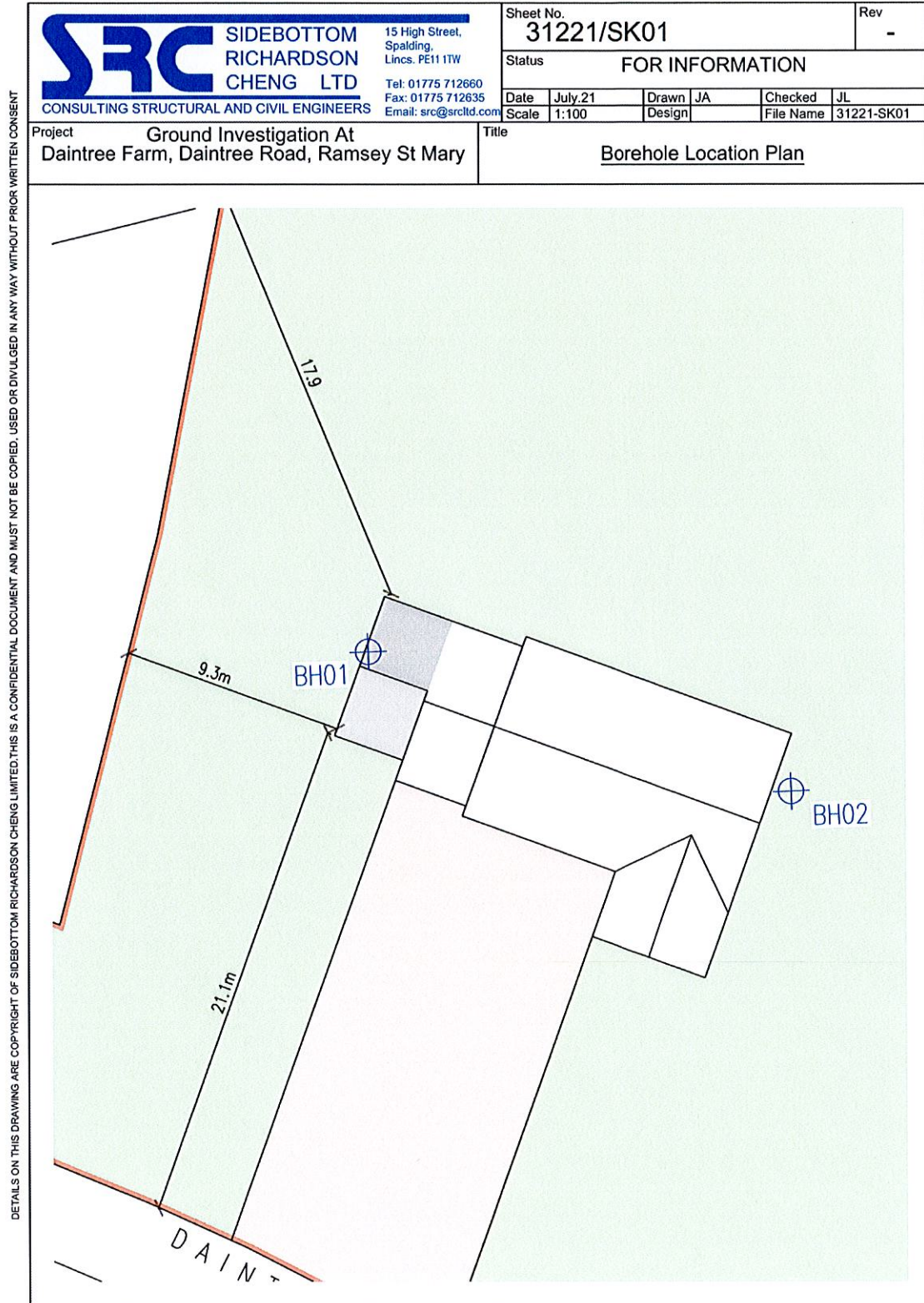
J. Lawrence

(Checked) J. A. Richardson

29th July 2020

APPENDIX A

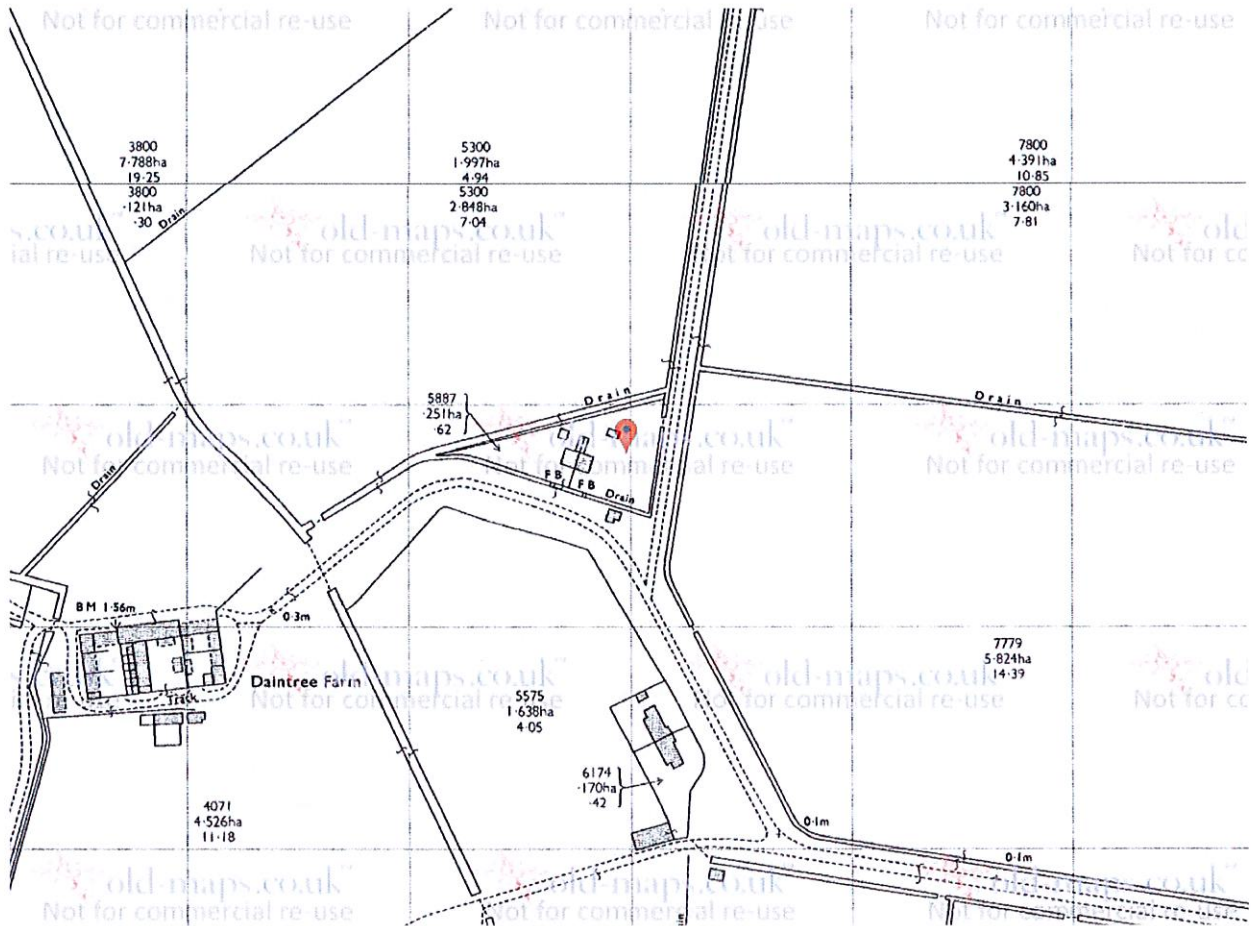
Borehole Location Plan



APPENDIX B



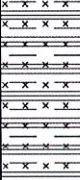
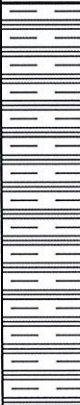
1972 - 1975 OS Map

1972-1975 Ordnance survey county series map






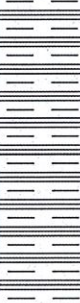
APPENDIX C

Borehole Logs

 SIDEBOTTOM RICHARDSON CHENG LTD CONSULTING STRUCTURAL AND CIVIL ENGINEERS		15 High Street, Spalding, Lincs. PE11 1TW Tel: 01775 712660 Fax: 01775 712635 Email: src@srcld.com		Sheet No. 31221/BH01		Rev -		
Status FOR INFORMATION								
Date July.21		Drawn JA		Checked JL		File Name 31221-BH01		
Scale NTS		Design -		Date Undertaken 20/07/21		Logged By JL		
Location Ground Investigation Report At, Daintree Farm, Daintree Road, Ramsey St Mary				Carried Out For Huntingdonshire DC				
Equipment & Methods Hand Auger				Site Coordinates: TF 244 899		Borehole No. 1		
Ground Level:								
Description	Reduced Level	Legend	Depth (Thick)	Samples			Test Required	M.P.T. Blow Count (Depth)
				Depth	Sample Reference	Sample Type No.		
Topsoil With Brick Fragments.			450mm (450mm)					
Light Brown Silty Clay.			1100mm (650mm)					
Bluey Grey Clay – Amount of tree Roots Increases With Depth.			2500mm (1400mm)					
Remarks Borehole Terminated @ 2.5m Below GL.								

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Status FOR INFORMATION											
Date		July 21		Drawn		JA		Checked		JL	
Scale		NTS		Design		-		File Name		31221-BH02	
Location Ground Investigation Report At, Daintree Farm, Daintree Road, Ramsey St Mary						Carried Out For Huntingdonshire DC				Date Undertaken 20/07/21	
										Logged By JL	
Equipment & Methods Hand Auger						Site Coordinates: TF 244 899				Borehole No. 2	
						Ground Level:					
Description	Reduced Level	Legend	Depth (Thick)	Samples			Test Required	M.P.T. Blow Count (Depth)			
				Depth	Sample Reference	Sample Type No.					
Dark Brown Topsoil.			300mm (300mm)								
Light Grey Silt With Orange Fragments.			1000mm (700mm)								
Bluey Grey Clay With Minimal Orangey Brown Sandy Lenses. Water Strike @ 1200mm Below GL.			2100mm (1100mm)								
Remarks Borehole Terminated @ 2.1m Below GL Due To Suction. Standing Water @ 1200mm Below GL - Filling In From Sides.											