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Ground Investigation Report for A Proposed Development off Mill Road, Addlethorpe

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01 February 2022

G43988/HD/22/EM



www.lincolnshire.gov.uk

Ground Investigation Report for A Proposed Development off Mill Road, Addlethorpe

Reporter:

Reviewer:



Huw Davey
Geotechnical Engineer



Sam Wells
Senior Geotechnical Engineer

Distribution:

Copy 1 (PDF) – Ritz Resorts, AI French
Copy (PDF) – File

All technical matters within this report have been undertaken under the guidance of **Sam Wells**. Any enquiry relating to this report should be addressed to **Huw Davey** at Lincs Laboratory.

The samples will be stored for one month after publication of the report. Please inform **Huw Davey** if you wish to have these stored for a longer period.

GROUND INVESTIGATION REPORT FOR A PROPOSED DEVELOPMENT OFF MILL ROAD, ADDLETHORPE

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GROUND INVESTIGATION REPORT FOR A PROPOSED DEVELOPMENT OFF MILL ROAD, ADDLETHORPE

1.0 INTRODUCTION

- 1.1 At the request of Ritz Resorts Limited, Lincs Laboratory has undertaken a ground investigation in accordance with the general principles of BS5930 ⁽¹⁾ at a proposed development site off Mill Road, Addlethorpe, Lincolnshire. The purpose of the investigation was to determine the nature of the underlying soils to enable recommendations to be made to aid the design and construction of the proposed access road.
- 1.2 The proposed development consists of multiple plots for static caravans with associated landscaping and access roads.
- 1.3 This report is based on data from test results and site records obtained during the ground investigation. There is the possibility of variations in ground conditions that have not been revealed during the ground investigation. It should also be noted that changes in groundwater levels are likely to occur from season to season and that higher groundwater levels may be encountered.

The report is also based on the information given to Lincs Laboratory by the client. Should there be any subsequent alterations to the project's design it will be necessary to check with Lincs Laboratory that the geotechnical assessments and recommendations are still valid.

- 1.4 This report has been prepared for the sole use and reliance of the Client. The report may not be used or relied upon by any unauthorised third party without the written consent of Lincs Laboratory.
- 1.5 This report shall not be reproduced except in full, without the written approval of Lincs Laboratory.

2.0 SITE DESCRIPTION AND GEOLOGY

- 2.1 The site is situated approximately four and a half kilometres north of Skegness town centre in the village of Addlethorpe, Lincolnshire (Drawing Number 1, Appendix (i)). It consists of large area of flat farmland, approximately 21.3 hectares in size (Drawing Number 2, Appendix (i)). The site is bound by agricultural land to the south and west, Mill Road with residential property to the north and a disused site to the east. Access to the site was via an existing track off Mill Road.

An existing drain running east-west was present across the site at the time of the works. Water levels were indicated to be normal for the time of the year.

- 2.2 The British Geological Survey 1:50,000 geological sheet for the Skegness area ⁽²⁾ indicates the site to be situated on superficial Tidal Flat Deposits. The underlying solid geology is indicated to be of the Welton Chalk Formation in the northern half of the site and the Ferriby Chalk Formation in the southern half of the site.

3.0 SITE WORK

3.1 On Tuesday 21st December 2021, five trial pits (TPs 1 to 5) were excavated using a mechanical backhoe loader to between 2.00 m and 2.25 m below ground level (BGL) in positions selected by Lincs Laboratory. The trial pits were extended below groundwater levels.

Bulk (B) bag samples were taken from each trial pit.

3.2 Soakaway testing was planned for the site in the original scope of work. However, on excavation of the trial pits this was cancelled, as the nature of the soils and the groundwater encountered would have precluded any infiltration.

4.0 LABORATORY WORK

4.1 Lincs Laboratory is registered with the United Kingdom Accreditation Service, UKAS registration No. 0699. Achieving accreditation means that the testing laboratory has demonstrated that it tests to a high standard, through external audits.

4.2 The following tests were completed at the laboratory:
Particle Size Distribution (wet sieve analysis)
Soaked California Bearing Ratio (CBR)

The following tests were subcontracted to another UKAS accredited laboratory:
Fine Grading Analysis
Water Soluble Sulphate Content
pH value

Details of the standards used ⁽³⁾ and the test results are presented in the Laboratory Test Result Report in Appendix (iii).

Lincs Laboratory is accredited for all of the tests undertaken in-house.

5.0 ENGINEERING ASSESSMENT AND RECOMMENDATIONS

5.1 Ground Conditions

The ground investigation confirmed that the anticipated Tidal Flat Deposits are present on the site. These were encountered as grey-brown and orange-brown silty clay of varying strengths. Made ground was encountered in TP2 and TP3 associated with the existing farm track running the length of the site.

The underlying solid geology of the Welton Chalk Formation or Ferriby Chalk Formation was not encountered during the investigation. Local records indicate these geological units to be at depths beyond 8m BGL.

Groundwater was encountered at 1.90 m BGL in TP3 and 2.10 m BGL in TP5. The trial pit logs in Appendix (ii) give the specific details of the encountered soils at each location.

5.2 Sulphate Classification for Concrete

Laboratory water soluble sulphate content testing gave a result of less than 0.1 g/l.

This indicates a Design Sulphate Classification of DS-1 in accordance with BRE Special Digest 1 ⁽⁴⁾. In order to assess an Aggressive Chemical Environment for Concrete (ACEC), the site has been assumed to be natural and the groundwater has been assumed to be mobile in the absence of extensive groundwater monitoring. The corresponding alkaline pH value test result of 8.2, together with the sulphate content values and previous site usage, represents an ACEC classification of AC-1.

The client is advised to refer to the BRE Special Digest 1 ⁽⁴⁾ for construction guidelines for in-situ and pre-cast concrete elements of the construction.

5.3 Soakaways

Planned soakaway testing was cancelled due to the nature of the soils encountered and the presence of groundwater. It should be considered that the site is unsuitable for the use of any infiltration drainage.

5.4 Road Construction

The ground investigation revealed a weak, cohesive sub-grade. Laboratory soaked CBR test results are presented below.

TP No.	Depth (mBGL)	Moisture Content (%)	Minimum CBR (%)
1	0.60-1.00	30	4.3
2	0.70-1.00	44	0.5
3	0.60-1.00	37	2.3

For design purposes, it is recommended that a CBR of less than 1.5% is used. A geogrid and membrane will be required.

All made ground beneath the line of any adoptable road must be removed and replaced with a suitably engineered fill.

The client is advised to refer to the relevant chart in the Lincolnshire County Council Development Road and Sustainable Drainage Specification and Construction ⁽⁵⁾ to determine a total minimum construction thickness and for construction guidelines and requirements.

5.5 Observations for Contamination

Arisings obtained during the excavations were examined for visual and olfactory signs of contamination.

The soils encountered in the trial pits did not show any visual or olfactory signs of contamination. Additionally, the surrounding land shows good healthy grass cover and mature trees. Considering all these factors, along with the rural history of the area and the present surrounding land uses, it is not considered that the site is chemically contaminated. Consequently, the risk of contamination

associated with constructing and using the site for its intended use is considered to be low. However, as with all developments, the workforce should wear overalls, gloves and boots to minimise contact with soils and water. For example, the presence of water contaminated with Weil's disease (caused by rats) is a small probability and working on many developments increases the overall risk of infection to an individual. Care should be taken if any heavily discoloured or pungent smelling materials are encountered as this could indicate that small amounts of chemicals have been discarded. In the unlikely event of encountering suspicious materials, appropriate advice should be sought.

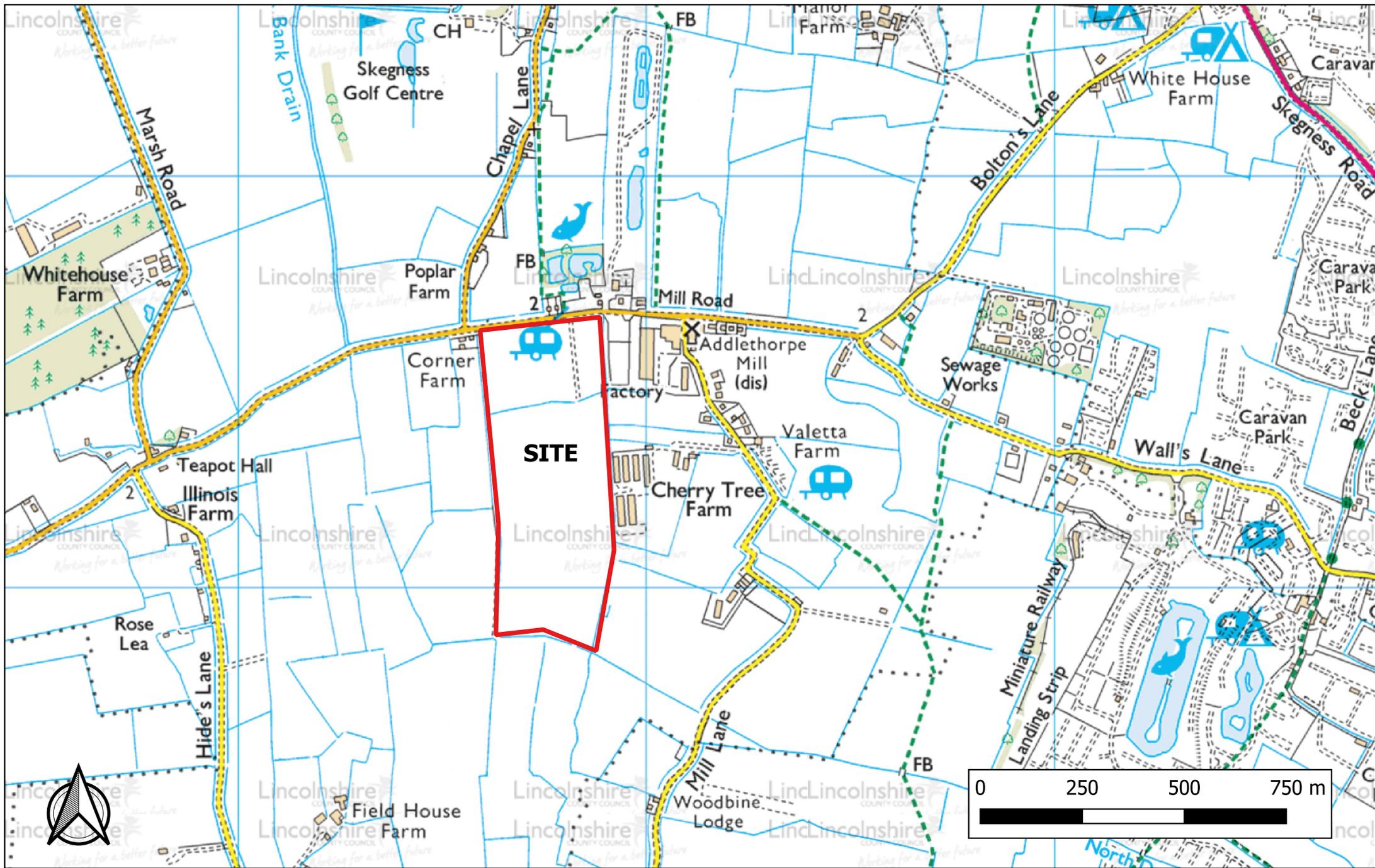
6.0 REFERENCES

- (1) BS 5930: 2015 (+A1:2020). "Code of Practice for Site Investigation". British Standards Institution.
- (2) BGS 1:50,000 Geological Solid and Drift map for the Skegness Area. Sheet 116. Published 1996.
- (3) BS 1377: 1990. "Methods of Test for Soils for Civil Engineering Purposes". British Standards Institution.
- (4) BRE Special Digest 1: "Concrete in Aggressive Ground". Third Edition. Published 2005. BRE Construction Division.
- (5) "Development Road and Sustainable Drainage Specification and Construction ". Lincolnshire County Council. March 2021 (Version 4.3)

7.0 APPENDICES

APPENDIX (i)

DRAWINGS



Produced by HD (Lincs Lab) Jan 2022

**Site off Mill Road, Addlethorpe
Site Location Plan**

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Site off Mill Road, Addlethorpe Trial Pit Location Plan

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Produced by HD (Lincs Lab) Jan 2022



APPENDIX (ii)

TRIAL PIT LOGS

TPs 1 to 5

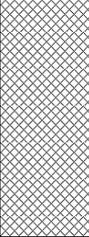
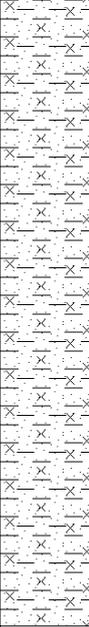


Trial Pit Log

Lincs Laboratory
St Georges Lane
Riseholme
LN2 2LQ

TP Number
TP2

Project Name: Mill Road, Addlethorpe		Client: Ritz Resorts Ltd		Date: 21/12/2021	
Location: Off Mill Road					
Project No. : 43988		JCB Contractor: J.E.Spence		Equipment: JCB 3CX	
Location Number TP2	Location Type TP	Level	Logged By HD	Scale 1:16	Page Number Sheet 1 of 1

Water Strikes	Sample and In Situ/Lab Testing							Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Atterberg Limits			CBR %	Shear Strength				
			PL %	LL %	PI %						
	0.70 - 1.00	B							 Limestone/chalk capping with silty clay and brick fragments - MADE GROUND  Soft, brown and orange-brown silty CLAY (TFD)  Stiff to very stiff, grey-blue and brown slightly sandy silty CLAY (TFD)	1	
						(Top) 0.5 (Base) 0.7	2.00		End of Trial Pit at 2.000m	2	
										3	

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks



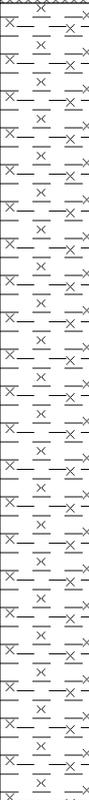


Trial Pit Log

Lincs Laboratory
St Georges Lane
Riseholme
LN2 2LQ

TP Number
TP3

Project Name: Mill Road, Addlethorpe		Client: Ritz Resorts Ltd		Date: 21/12/2021	
Location: Off Mill Road					
Project No. : 43988		JCB Contractor: J.E.Spence		Equipment: JCB 3CX	
Location Number TP3	Location Type TP	Level	Logged By HD	Scale 1:16	Page Number Sheet 1 of 1

Water Strikes	Sample and In Situ/Lab Testing							Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Atterberg Limits			CBR %	Shear Strength				
			PL %	LL %	PI %						
	0.60 - 1.00	B				(Top) 2.3 (Base) 2.7		0.60	 Medium grained, yellow sand with brick and concrete - MADE GROUND		
								2.25	 Firm, grey-brown and orange-brown silty CLAY (TFD)	1	2
											3
End of Trial Pit at 2.250m											

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks

Remarks





Trial Pit Log

Lincs Laboratory
St Georges Lane
Riseholme
LN2 2LQ

TP Number
TP4

Project Name: Mill Road, Addlethorpe		Client: Ritz Resorts Ltd		Date: 21/12/2021	
Location: Off Mill Road					
Project No. : 43988		JCB Contractor: J.E.Spence		Equipment: JCB 3CX	
Location Number TP4	Location Type TP	Level	Logged By HD	Scale 1:16	Page Number Sheet 1 of 1

Water Strikes	Sample and In Situ/Lab Testing							Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Atterberg Limits			CBR %	Shear Strength				
			PL %	LL %	PI %						
0.50 - 0.60	B							0.20		Soft, dark brown silty clayey TOPSOIL with rare brick	
								1.20		Soft to firm, grey-brown and orange-brown silty CLAY (TFD)	1
								2.10		Soft to firm, grey and orange-brown silty CLAY (TFD)	2
									End of Trial Pit at 2.100m	3	

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks

Lincolnshire
COUNTY COUNCIL



Trial Pit Log

Lincs Laboratory
St Georges Lane
Riseholme
LN2 2LQ

TP Number
TP5

Project Name: Mill Road, Addlethorpe Client: Ritz Resorts Ltd Date: 21/12/2021

Location: Off Mill Road

Project No. : 43988 JCB Contractor: J.E.Spence Equipment: JCB 3CX

Location Number TP5	Location Type TP	Level	Logged By HD	Scale 1:16	Page Number Sheet 1 of 1
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Water Strikes	Sample and In Situ/Lab Testing							Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Atterberg Limits			CBR %	Shear Strength				
			PL %	LL %	PI %						
	0.50 - 0.60	B						<div style="border: 1px solid black; padding: 2px; width: 50px; height: 20px; margin-bottom: 5px;"> </div> Soft, dark brown silty clayey TOPSOIL			
							0.20	<div style="border: 1px solid black; padding: 2px; width: 50px; height: 20px; margin-bottom: 5px;"> </div> Soft to firm, brown and orange-brown silty CLAY (TFD)			
							0.95	<div style="border: 1px solid black; padding: 2px; width: 50px; height: 20px; margin-bottom: 5px;"> </div> Firm, grey-brown and orange-brown silty CLAY (TFD)		1	
							2.10	End of Trial Pit at 2.100m		2	
▼										3	

Dimensions		Trench Support and Comment				Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks

Remarks

**GROUND INVESTIGATION REPORT FOR A PROPOSED DEVELOPMENT OFF
MILL ROAD, ADDLETHORPE**

NOTES ON SAMPLE DESCRIPTIONS AND SYMBOLS

1. **Sample Descriptions**

Sample descriptions are in accordance with BS 5930: 2015 Code of Practice for Site Investigations ⁽¹⁾ but with the following additional terms also being used.

rare	intermittent appearance less than 2%
occasional	intermittent appearance 2% to 5%
with a trace	less than 10%
with a little or with frequent	10% to 25%
with some or with numerous	25% to 40%
and	about equal

2. **Geology**

(TFD) Tidal Flat Deposits

APPENDIX (iii)
LABORATORY TEST REPORT



Lincs Laboratory, St Georges Lane,
Riseholme, Lincoln, LN2 2LQ

Tel: (01522) 530355

Email: Lincslab@lincolnshire.gov.uk

TO: Al French – Ritz Resorts
Suite 101
Telegraph House
80 Cleethorpes Road
Grimsby
DN31 3EH

REPORT NO: 80715
JOB NO: 43988
DATE: 26 January 2022

PROJECT TITLE: MILL ROAD, ADDLETHORPE
WORK UNDERTAKEN: ANALYSIS OF SOILS

Authorising Signature: (R. Broughton; Supervisor - Laboratory Testing)

Notes:

1. This report is factual and only relates to the items tested.
2. Advice on the interpretation of these results is available from Lincs Laboratory Consultancy Staff. Opinions and interpretations are outside the scope of our UKAS/ISO 17025 accreditation.
3. Any samples or their residues will normally be kept for four weeks after the publication of this report.
4. Tests marked 'UKAS accredited' in this report are listed in our UKAS accreditation schedule bearing No.0699.
5. This report shall not be reproduced except in full, without written approval of Lincs Laboratory.

Distribution:

- √1 - Client (Via H Davey)
- 1 - Lab File



0699



Lincs Laboratory St Georges Lane, Riseholme, Lincoln LN2 2LQ
Tel: (01522) 530355
Email: Lincslab@lincolnshire.gov.uk



REPORT: 80715
JOB NO: 43988
DATE: 26 January 2022

PROJECT TITLE: MILL ROAD, ADDLETHORPE
WORK UNDERTAKEN: CALIFORNIA BEARING RATIO TEST RESULTS

Lab Sample No:	BH/TP (No)	Sample (type)	Depth (m)	Density			Moisture Content		CBR Value			Retained 20mm (%)	Swell (mm)
				Bulk (Mg/m ³)	Soaked (Mg/m ³)	Dry (Mg/m ³)	Top (%)	Base (%)	Top (%)	Base (%)	Mean (%)		
S1776-21	TP1	B	0.60-1.00	1.84	1.85	1.44	28	30	4.3	6.5	N/A	0.0	2.07
S1777-21	TP2	B	0.70-1.00	1.74	1.74	1.21	44	44	0.5	0.7	0.6	0.0	0.00
S1778-21	TP3	B	0.60-1.00	1.83	1.83	1.34	37	36	2.3	2.7	2.5	0.0	0.34

Notes:

- i) Sampler : Lincs Lab
- ii) Sampling Procedure : BS 5930:2015 (Not UKAS Accredited)
- iii) Date Received : 22/12/2021
- iv) Date Tested : 06/01/2022-20/01/2022
- v) Test Procedure : BS 1377:Pt 4:1990 Cl 7.4, Surcharge Mass: 13kg (UKAS Accredited)
Method of Compaction : Dynamic (2.5kg rammer) BS1377:Part 4:1990 CL 7.2.4.4 Method 5 (UKAS Accredited)
Method of Soaking : BS1377:Part 4:1990 Cl 7.3 (UKAS Accredited)
- vi) The samples were prepared in accordance with BS 1377:Part 1:1990 (UKAS Accredited)
- vii) B = Bulk
- viii) Samples S1777-21 & S1778-21 were tested in a soaked condition for 96 hours. Sample S1776-21 was tested in a soaked condition for 216 hours.
- ix) Samples were flooded after 72 hours.
- x) Copies of the force penetration curves are available on request.
- xi) Copies of the swell measurement curves are available on request.
- xii) The test method stated for Moisture Content has been superseded by BS EN ISO 17892-1:2014.



Lincs Laboratory St Georges Lane, Riseholme, Lincoln LN2 2LQ

Tel: (01522) 530355

Email: Lincslab@lincolnshire.gov.uk



0699

REPORT: 80715
JOB NO: 43988
DATE: 26 January 2021

PROJECT TITLE: MILL ROAD, ADDLETHORPE
WORK UNDERTAKEN: PARTICLE SIZE DISTRIBUTION
(WET GRADING ANALYSIS) TEST RESULTS

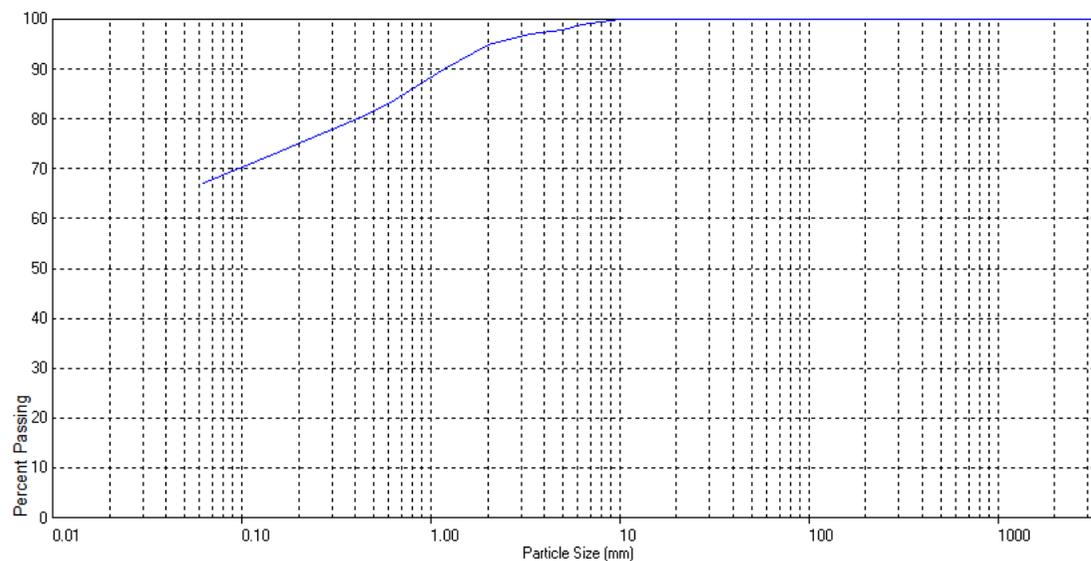
Lab Sample No:	BH/TP (No)	Sample (type)	Depth (m)	Sieve Size (mm)	Passing (%)
S1776-21	TP1	B	0.60-1.00	10	100
				6.3	99
				5	98
				3.35	97
				2.00	95
				1.18	90
				0.600	83
				0.425	80
				0.300	78
				0.212	76
				0.150	73
				0.063	67

Notes:

- i) Sampler : Lincs Lab
- ii) Sampling Procedure : BS 5930:2015 (Not UKAS Accredited)
- iii) Date Received : 22/12/2021
- iv) Date Tested : 06/01/2022-13/01/2022
- v) Test Procedure : BS 1377:Part 2:1990 Cl 9.2 (UKAS Accredited)
- vi) The samples were prepared in accordance with BS 1377:Part 1:1990 (UKAS Accredited)
- vii) B = Bulk



Particle Size Distribution



Job Name: Mill Road, Addlethorpe
Job Location: 43988
Sample Ref: S1776-21
Sample Location: TP1 at 0.60-1.00m
Date Tested: 13/01/2022



Lincs Laboratory St Georges Lane, Riseholme, Lincoln LN2 2LQ

Tel: (01522) 530355

Email: Lincslab@lincolnshire.gov.uk



0699

REPORT: 80715
JOB NO: 43988
DATE: 26 January 2021

PROJECT TITLE: MILL ROAD, ADDLETHORPE
WORK UNDERTAKEN: PARTICLE SIZE DISTRIBUTION
(WET GRADING ANALYSIS) TEST RESULTS

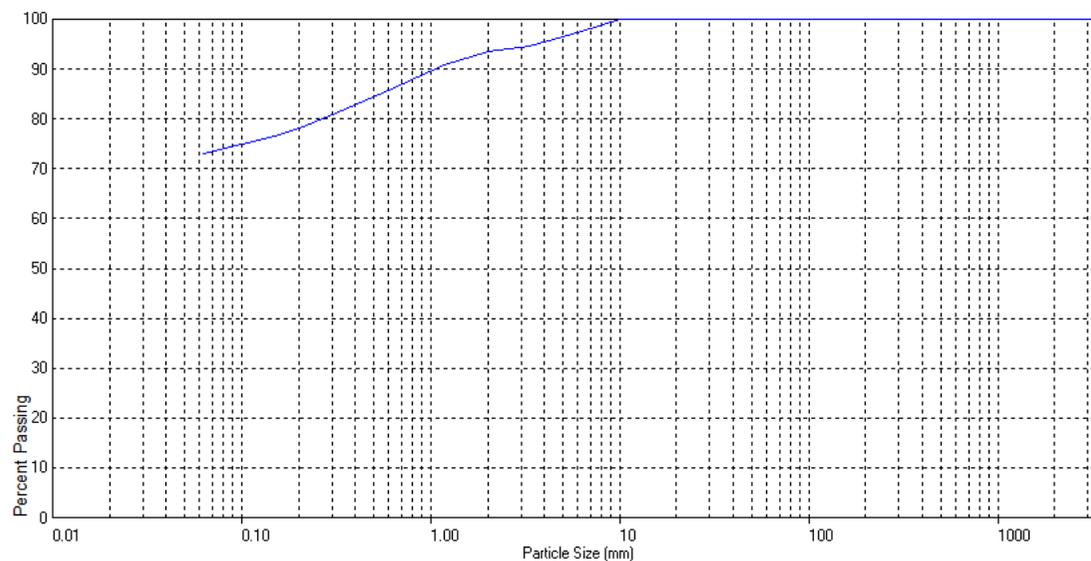
Lab Sample No:	BH/TP (No)	Sample (type)	Depth (m)	Sieve Size (mm)	Passing (%)
S1778-21	TP3	B	0.60-1.00	10	100
				6.3	98
				5	97
				3.35	95
				2.00	94
				1.18	91
				0.600	86
				0.425	83
				0.300	81
				0.212	79
				0.150	77
0.063	73				

Notes:

- i) Sampler : Lincs Lab
- ii) Sampling Procedure : BS 5930:2015 (Not UKAS Accredited)
- iii) Date Received : 22/12/2021
- iv) Date Tested : 06/01/2022-13/01/2022
- v) Test Procedure : BS 1377:Part 2:1990 Cl 9.2 (UKAS Accredited)
- vi) The samples were prepared in accordance with BS 1377:Part 1:1990 (UKAS Accredited)
- vii) B = Bulk



Particle Size Distribution



Job Name: Mill Road, Addlethorpe

Job Location: 43988

Sample Ref: S1778-21

Sample Location: TP3 at 0.60-1.00m

Date Tested: 13/01/2022



Tel: (01522) 530355

Email: Lincslab@lincolnshire.gov.uk

St Georges Lane
Riseholme
Lincoln
LN2 2LQ

REPORT: 80715
JOB NO: 43988
DATE: 26 January 2022

PROJECT TITLE: MILL ROAD, ADDLETHORPE
WORK UNDERTAKEN: ANALYSIS OF GROUND INVESTIGATION SAMPLES

Lab Sample No:	BH/TP No:	Sample Type	Depth (m)
S1776-21	TP1	B	0.60-1.00
S1778-21	TP3	B	0.60-1.00

SAMPLE DETAILS:

Sample Type:	B = Bulk	Date Received:	22/12/2021
Sampler:	Lincs Lab	Date Tested:	13/01/2022-24/01/2022
Sampling Procedure:	BS 5930:2015 (Not UKAS Accredited)		

REMARKS:

The above samples were sub-contracted to a UKAS accredited laboratory which is accredited for the tests as detailed in their report. A copy of their report can be found on pages 8 to 13 of this report.



Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

Lincs Lab
St Georges Lane
Riseholme
LN2 2LQ

Analytical Test Report: L22/00181/LIL - 22-23280

Your Project Reference:	43988 Mill Road Addlethorpe		
Your Order Number:	80338417	Testing Received / Instructed:	13/01/2022 / 13/01/2022
Report Issue Number:	1	Sample Tested:	13/01 to 20/01/2022
Samples Analysed:	2 soil samples	Report issued:	20/01/2022

Signed

Lee Harbottle
GCM Operations Manager
Nicholls Colton Group

Notes:

Samples will be retained for 14 days after issue of this report unless otherwise requested.

The results included within the report are representative of the samples submitted for analysis.

A certificate of sampling was not supplied

Samples were supplied by customer, results apply to the samples as received.

Within the report any information provided by the client is identified with a '#'

Accreditation Key

UKAS = UKAS Accreditation, u = Unaccredited

Date of Issue 10/12/2020

Owned by Emily Blissett - Commercial Reporting Supervisor

Authorised by Lee Harbottle - GCM Operations Manager

J:\Public\Projects\2022\L22\LIL - Lincs Lab\L22-0181-LIL\L22-0181-LIL 22-23280.xlsm\Soil



Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

L22/00181/LIL - 22-23280

Project Reference - 43988 Mill Road Addlethorpe

Analytical Test Results - Soil

NC Reference		210395	210396
Client Sample ID (#)		S1776-21	S1778-21
Client Sample Location (#)		Site	Site
Client Sample Type (#)		B	B
Client Sample Number (#)		TP1	TP3
Depth - Top (m) (#)		0.60	0.60
Depth - Bottom (m) (#)		1.00	1.00
Sample Description		Brown slightly gravelly clay	Brown slightly gravelly clay
Determinant	Units		
0.02	(% Passing)	91	90
0.006	(% Passing)	65	61
0.002	(% Passing)	50	46
Sedimentation was pretreated	-	No	No



Nicholls Colton Group
7 - 11 Harding Street
Leicester
LE1 4DH

L22/00181/LIL - 22-23280

Project Reference - 43988 Mill Road Addlethorpe

Analysis Methodologies

Determinant	Title	Details and Test method used
1377SEDIPI	BS1377 Sedimentation by pipette	1377 Particle Size Distribution Sedimentation 1. Sample preparation was in accordance with BS1377:Part 1:2016. 2. Testing was in accordance with BS1377:Part 2:1990 clause 9.4 sedimentation by pipette method.



Nicholls Colton Group
 7 - 11 Harding Street
 Leicester
 LE1 4DH

Lincs Lab
 St Georges Lane
 Riseholme
 LN2 2LQ

Analytical Test Report: L22/00181/LIL - 22-23279

Your Project Reference:	43988 Mill Road Addlethorpe		
Your Order Number:	80338417	Testing Received / Instructed:	13/01/2022 / 13/01/2022
Report Issue Number:	1	Sample Tested:	13/01 to 24/01/2022
Samples Analysed:	2 soil samples	Report issued:	24/01/2022

Signed

James Gane
 Data Manager
 Nicholls Colton Group

Notes:

-
- Samples will be retained for 14 days after issue of this report unless otherwise requested.
 - The results included within the report are representative of the samples submitted for analysis.
 - Some information required by BS1377 is not included in the report. The information will be provided if requested.
 - A certificate of sampling was not supplied
 - Samples were supplied by customer, results apply to the samples as received.
 - Within the report any information provided by the client is identified with a '#'
 - Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.**
 - Uncertainty of measurement values are available on request.**

Accreditation Key

UKAS = UKAS Accreditation, u = Unaccredited
 Date of Issue 10/12/2020
 Owned by Emily Blissett - Commercial Reporting Supervisor
 Authorised by Lee Harbottle - GCM Operations Manager
 L:\DATA\REPORTS\LIN163\L22-00181-LIL - 22-23279.XLSM\Methodology



Nicholls Colton Group
 7 - 11 Harding Street
 Leicester
 LE1 4DH

L22/00181/LIL - 22-23279

Project Reference - 43988 Mill Road Addlethorpe

Analytical Test Results

NC Reference	210393	210394
Client Sample Reference	S1776-21	S1778-21
Client Sample Location	Site	Site
Client Sample Type	B	B
Client Sample Number	TP1	TP3
Depth - Top (m)	0.60	0.60
Depth - Bottom (m)	1.00	1.00
Sample Description	Dark brown silty clay with rare organic matter	Dark brown silty clay
	Units	Accreditation
1377 Determinations		
pH Value	(pH Units) UKAS	8.4 8.2
Water soluble sulphate content (as SO ₃)	(g/l) UKAS	< 0.1 < 0.1
1377 Sample Preparation - % of material passing 2mm test sieve	52	53



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Analysis Methodologies

Determinant	Title	Details and Test method used
1377 SULPH	BS 1377 Sulphate	<ol style="list-style-type: none">1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016.2. Sulphate testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021 Clause 7.3. Sulphate content as SO₄ has been calculated by multiplying the sulphate content as SO₃ by 1.2. BS 1377 : Part 3 : 1990 does not require SO₄ figures to be reported.4. Some information required by BS 1377 has not been reported. This information is available on request.
1377PH	BS1377 pH Value	pH testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021 Clause 12