

**GROUND TECHNOLOGY SERVICES**

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NORFOLK PE34 3AF

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25nd April 2016

Ref:GTS-16-795
Via Email Only

Andrew Blackwell
Bidwells LLP
Bidwells House
Trumpington Road
Cambridge
CB2 9LD

For the attention of: Andrew Blackwell

Dear Andrew,

Re: Chidden Farms, Bartons Road, Havant – Mineral Deposits

Following your correspondence and instruction, we have undertaken a review of data from GTS report GTS-15-719 and provided a summary of the ground conditions encountered, with respect to potential extractable mineral deposits underlying the site.

This letter details a factual record of the GTS previous works completed at the site, ground conditions encountered and a summary of the geology across the site with respect to potential commercially viable mineral deposits.

Ground Technology Services carried out investigative site works in two phases between the 27th and 28th October and the 1st and 2nd of December 2015 (as part of GTS report: GTS-15-719). The objectives of the previous investigation were to inform a feasibility study with respect to a proposed planning application for the site.

The site works comprised a series of 6 No. continuous dynamic sampler (window sampler) boreholes, and 25 No. machine excavated trial pits (see enclosed exploratory hole records), of which further details are included in GTS Report GTS-15-719.

Ground Conditions / Geology

The investigation distinguished four geological horizons. These were identified as; Topsoil, Head Deposits, River Terrace Deposits and the London Clay Formation.

Soils anticipated to be topsoil were encountered in all exploratory holes from ground level to a maximum depth of 0.30mbgl.

The soils generally comprised brownish / dark brownish grey silty gravelly fine to medium SAND, very silty fine SAND and soft dark brownish grey / dark brownish black gravelly silty sandy CLAY, and gravelly sandy SILT, locally with some roots and rootlets.

Soils anticipated to be Head Deposits were encountered underlying the topsoil in TP1-6, SA1-2, TP104-113 and WS1-7 to a maximum depth of 6.45mbgl. The cohesive layers of this stratum generally comprised firm to stiff brown, yellowish brown, greyish brown, orangish brown, locally light grey sandy CLAY and sandy gravelly CLAY. Locally, there were predominantly granular horizons, which generally comprised clayey gravelly fine to coarse SAND.



Soils anticipated to be River Terrace Deposits were encountered in SA1-2, TP2-4 and WS4 to a maximum depth of 2.00mbgl.

These soils are predominantly cohesive, comprising firm to stiff, locally soft orangish brown, greyish brown, yellowish brown, locally light grey sandy gravelly CLAY, sandy CLAY, CLAY and sandy silty CLAY, locally with occasional cobbles.

Locally there were horizons of granular material which generally comprised dense, locally medium dense clayey sandy GRAVEL, clayey SAND and GRAVEL.

The gravel fraction generally comprised angular to subangular, locally subrounded fine to coarse flint. The cobble fraction generally comprised angular to subangular flint.

Underlying the Head Deposits and River Terrace Deposits in WS1-4, soils anticipated to be London Clay Formation were encountered to a maximum depth of 6.45mbgl.

The soils generally comprised firm to stiff, locally very stiff, locally crumbly / friable grey, brown / dark brown, orangish brown and grey silty CLAY / CLAY.

Extractable Minerals Summary

The observed geology from the investigation is consistent with the geological records provided by the British Geological Survey mapping. The nature and extent of the geology on site is such that any minerals on site are highly unlikely to be commercially viable.

Yours Sincerely

For Ground Technology Services

Geoff Day
Geotechnical Engineer

Enclosed;
Exploratory Hole Record
Exploratory Hole Location Plan

 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					SA1 Sheet 1 of 1														
	Project: Chidden Farms, Havant																			
	Project ID: GTS-15-719																			
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473379.48 107807.24														
Orientation of Trial Pit:		Length: 2.80		Width: 0.50		Depth: 2.30														
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test			Remarks and Test Results SPT/HV/PP PID (ppm)												
					Type	Ref	Depth Top (m)		Depth Base (m)											
TOPSOIL: Dark brownish grey slightly gravelly sandy silty CLAY. Gravel is angular to subangular fine to coarse flint. Firm yellowish grey friable sandy CLAY. [HEAD DEPOSITS]		0.20			B	1	0.20	0.40												
Firm to stiff yellowish brown and yellowish grey slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. Some black specks and staining. [HEAD DEPOSITS]		0.40			D	1	0.40	0.60	HV=75 kPa											
Stiff grey and yellowish brown slightly gravelly CLAY, with occasional cobbles. Gravel is angular to subrounded fine to coarse flint. Some sub horizontal uneven to smooth grey slip planes. Occasional fine roots and decayed root channels. [HEAD DEPOSITS]		0.70			D	2	0.80		PP=65 kPa											
Stiff grey and yellowish brown slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. [HEAD DEPOSITS]		1.30							PP=100 kPa											
Very stiff grey and brown CLAY. Some fine decayed root channels. [LONDON CLAY FORMATION]		2.00			D	3	1.80		PP=120 kPa											
Trial Pit completed at 2.300m		2.30			D	4	2.10		HV=165 kPa											
Date: 27/10/2015 Plant: JCB3CX Logged By: J. Tomalin Checked By: P. Lewin		<table border="1"> <tr> <th colspan="4">Water Level Observations</th> </tr> <tr> <th>Date</th> <th>Water Strike (m)</th> <th>Standing Time (Mins)</th> <th>Standing Level (m)</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>							Water Level Observations				Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)				
Water Level Observations																				
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)																	
		Groundwater Remarks																		
		Remarks 1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion. 3. Soakaway not undertaken in trial pit due difficulties in towing bowser to location after heavy rainfall.																		
		Hole Stability Good																		



SA2
Sheet 1 of 1

Project ID: GTS-15-719

Engineer: N/a

Coordinates	473133.24
	107811.30

Length: 1.90 Width: 0.50 Depth: **2.00**

Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test				Remarks and Test Results	
					Type	Ref	Depth Top (m)	Depth Base (m)	SPT/HV/PP	PID (ppm)
TOPSOIL: Dark brownish grey sandy slightly gravelly CLAY. Gravel is angular fine to coarse flint.		0.25								
Firm to stiff yellowish brown and yellowish grey CLAY. [HEAD DEPOSITS]		0.80								
Stiff to very stiff yellowish brown CLAY, with some grey sub horizontal smooth shear planes. [HEAD DEPOSITS]		1.30								
Very stiff yellowish brown CLAY, with some yellowish brown sandy clay pockets, 6cm to 10cm, a little black specking and veining. [HEAD DEPOSITS]		1.50								
Stiff to very stiff greyish brown and grey CLAY, crumb texture, with some fine decayed root channels. [LONDON CLAY FORMATION]		2.00								
Trial Pit completed at 2.000m										

Water Level Observations

Water Level Observations			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)

Remarks

1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion. 3. Soakaway undertaken in trial pit - please refer to supplementary soakaway sheet SA2

Good

 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					SA3 Sheet 1 of 1														
	Project: Chidden Farms, Havant																			
	Project ID: GTS-15-719																			
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473190.48 107607.25														
Orientation of Trial Pit:		Length: 1.90		Width: 0.50		Depth: 2.00														
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test			Remarks and Test Results SPT/HV/PP PID (ppm)												
					Type	Ref	Depth Top (m)		Depth Base (m)											
TOPSOIL: Brownish grey sandy slightly gravelly silty CLAY. Gravel is angular to subangular fine to coarse flint. Soft brown sandy SILT. [RIVER TERRACE DEPOSITS]		0.25			B	1	0.00	0.10												
Stiff brown sandy slightly gravelly silty CLAY. Gravel is angular fine to coarse flint. [RIVER TERRACE DEPOSITS]		0.70			B	2	0.30	0.40												
					B	3	0.70	4.00	HV=125 kPa											
									PP=85 kPa											
					D	1	1.90		PP=130 kPa											
Trial Pit completed at 2.000m		2.00																		
Date: 27/10/2015 Plant: JCB3CX Logged By: J. Tomalin Checked By: P. Lewin		<table border="1"> <thead> <tr> <th colspan="4">Water Level Observations</th> </tr> <tr> <th>Date</th> <th>Water Strike (m)</th> <th>Standing Time (Mins)</th> <th>Standing Level (m)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>							Water Level Observations				Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)				
Water Level Observations																				
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)																	
		Groundwater Remarks																		
		Remarks 1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion. 3. Soakaway undertaken in trial pit - please refer to supplementary soakaway sheet SA3																		
		Hole Stability Good																		



SA4
Sheet 1 of 1

Project ID: GTS-15-719

Ground Level	
Coordinates	473124.26 107698.20

Length: 1.90 Width: 0.50 Depth: 2.00

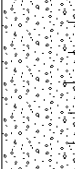
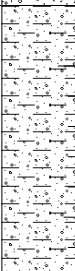
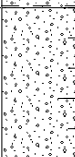
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test				Remarks and Test Results			
					Type	Ref	Depth Top (m)	Depth Base (m)	SPT/HV/PP	PID (ppm)		
TOPSOIL: Soft brownish grey sandy slightly gravelly CLAY. Gravel is angular fine to coarse flint.		0.25			B	1	0.00	0.10				
Stiff Brown slightly sandy silty CLAY. With occasional angular fine to coarse flint gravel. [RIVER TERRACE DEPOSITS]	D				2	0.40	0.50					
	D				1	0.40	0.50					

Water Level Observations

Water Level Observations			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)

Remarks	1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion. 3. Soakaway undertaken in trial pit - please refer to supplementary soakaway sheet SA4
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Hole Stability	Good
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 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					TP1 Sheet 1 of 1														
	Project: Chidden Farms, Havant																			
	Project ID: GTS-15-719																			
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473410.30 107977.88														
Orientation of Trial Pit:		Length:		Width:		Depth: 3.60														
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test			Remarks and Test Results SPT/HV/PP PID (ppm)												
					Type	Ref	Depth Top (m)		Depth Base (m)											
TOPSOIL: Dark brownish grey very silty gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse flint. Light grey clayey medium and coarse SAND and GRAVEL. Gravel is angular to rounded fine to coarse flint. [HEAD DEPOSITS] From 0.40mbgl yellowish brown		0.20			B	1	0.20	0.40												
Stiff yellowish brown and grey sandy gravelly CLAY, with occasional cobbles. Gravel is angular to subrounded flint. Dense. Locally a clayey sand and gravel. [HEAD DEPOSITS]		0.80			B	2	0.80	1.00												
Yellowish brown clayey fine to coarse SAND and GRAVEL, with occasional cobbles. Gravel is angular to rounded fine to coarse flint. Dense. Locally a clayey sand and gravel. [HEAD DEPOSITS]		1.70			B	3	1.20	2.00												
Yellowish brown silty fine SAND. Some 5cm to 10cm silt bands. A little black specking and staining. [HEAD DEPOSITS]		2.20			D	1	2.20	2.30												
Trial Pit completed at 3.600m		3.60																		
Date: 27/10/2015 Plant: Logged By: J. Tomalin Checked By: P. Lewin		<table border="1"> <tr> <th colspan="4">Water Level Observations</th> </tr> <tr> <th>Date</th> <th>Water Strike (m)</th> <th>Standing Time (Mins)</th> <th>Standing Level (m)</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>							Water Level Observations				Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)				
Water Level Observations																				
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)																	
		Groundwater Remarks																		
		Remarks 1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion.																		
		Hole Stability																		



TP101
Sheet 1 of 1

Project ID: GTS-15-719

Ground Level	
Coordinates	473179.00 107594.00

Length: 0.75 Width: 0.75 Depth: 0.70

[illegible]

Water Level Observations			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)
Groundwater Remarks			
Remarks		1. Trial pit undertaken using mechanical excavator 2. Soakaway test undertaken in exploratory hole, please refer to supplementary soakaway sheet 3. Exploratory hole backfilled upon completion.	
Hole Stability		Good	



TP102
Sheet 1 of 1

Project ID: GTS-15-719

Ground Level	
Coordinates	473096.00
	107698.00

Length: 0.80 Width: 0.50 Depth: 0.70

Legend	Depth (m)	Level (m)	Water	Type	Ref	Depth Top (m)	Depth Base	SPT/HV/PP	PID (ppm)
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Sample Test			
Type	Ref	Depth Top (m)	Depth Base (m)

B	1	0.50	0.80
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Trial Pit completed at 0.700m

Water Level Observations

Water Level Observations			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)

Remarks	1. Trial pit undertaken using mechanical excavator 2. Soakaway test undertaken in exploratory hole, please refer to supplementary soakaway sheet 3. Exploratory hole backfilled upon completion.
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Hole Stability	Good
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TP103
Sheet 1 of 1

Project ID: GTS-15-719

Ground Level	
Coordinates	473116.00 107745.00

Length: 0.80 Width: 0.50 Depth: 0.70

Legend	Depth (m)	Level (m)	Water	Type	Ref	Depth Top (m)	Depth Base (m)	SPT/HV/PP	PID (ppm)
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0.25

O.D.
Leve
(m)

Sample Test

Type	Ref	Depth Top (m)	Depth Base (m)
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B	1	0.40	0.70
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Remarks and Test Results

SPT/HV/PP	PID (ppm)
10/10/10	10
20/20/20	20
30/30/30	30
40/40/40	40
50/50/50	50
60/60/60	60
70/70/70	70
80/80/80	80
90/90/90	90
100/100/100	100
110/110/110	110
120/120/120	120
130/130/130	130
140/140/140	140
150/150/150	150
160/160/160	160
170/170/170	170
180/180/180	180
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930/930/930	930
940/940/940	940
950/950/950	950
960/960/960	960
970/970/970	970
980/980/980	980
990/990/990	990
1000/1000/1000	1000

Water Level Observations

Water Level Observations			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)

Remarks	1. Trial pit undertaken using mechanical excavator 2. Soakaway test undertaken in exploratory hole, please refer to supplementary soakaway sheet 3. Exploratory hole backfilled upon completion.
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Hole Stability	Good
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 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					TP104 Sheet 1 of 1													
	Project: Chidden Farms, Havant																		
	Project ID: GTS-15-719																		
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473132.47 107784.75													
Orientation of Trial Pit:		Length: 1.10		Width: 0.50		Depth: 0.75													
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test		Remarks and Test Results SPT/HV/PP PID (ppm)												
					Type	Ref		Depth Top (m)	Depth Base (m)										
TOPSOIL: Dark brown slightly gravelly fine very silty SAND . Gravel is angular to subangular fine to coarse flint. Firm to stiff greyish brown sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS] Firm yellowish brown sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS]	  	0.25 0.50 0.75			B 1 0.25 0.50 B 2 0.50 0.75	PP=60 kPa													
Trial Pit completed at 0.750m																			
Date: 01/12/2015 Plant: JCB3CX Logged By: JT Checked By: P. Lewin		<table border="1"> <thead> <tr> <th colspan="4">Water Level Observations</th> </tr> <tr> <th>Date</th> <th>Water Strike (m)</th> <th>Standing Time (Mins)</th> <th>Standing Level (m)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Water Level Observations				Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)				
Water Level Observations																			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)																
		Groundwater Remarks																	
		Remarks 1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled upon completion.																	
		Hole Stability Good																	



TP106
Sheet 1 of 1

Project ID: GTS-15-719

Ground Level	
Coordinates	473245.00 107726.00

Length: 1.20 Width: 0.50 Depth: 0.75

[illegible]

Water Level Observations			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)
Groundwater Remarks			
Remarks		1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled upon completion.	
Hole Stability		Good	

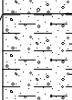


TP107
Sheet 1 of 1

Project ID: GTS-15-719

Ground Level	
Coordinates	473300.00 107746.00

Length: 1.10 Width: 0.50 Depth: 0.80

Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test				Remarks and Test Results	
					Type	Ref	Depth Top (m)	Depth Base (m)	SPT/HV/PP	PID (ppm)
TOPSOIL: Dark brownish grey very silty gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse flint.		0.25			B	1	0.25	0.50		
Grey clayey very sandy GRAVEL. Gravel is angular fine to medium flint.		0.50			B	2	0.50	0.80		
[HEAD DEPOSITS]		0.80								
Firm to stiff orangish brown and greyish brown sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint.										
[HEAD DEPOSITS]										
Trial Pit completed at 0.800m										
		</								

Water Level Observations

Water Level Observations			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)

Remarks	1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled upon completion.
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Hole Stability	Good
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GROUND TECHNOLOGY
Maple Road, Kings Lynn
Norfolk, PE34 3AF
Tel: 01553 817657
www.groundtechnology.co.uk

Trial Pit Record

TP108
Sheet 1 of 1

Project: Chidden Farms, Havant

Project ID: GTS-15-719

Client: Bidwells LLP

Engineer: N/a

Ground Level

Coordinates	473249.17
	107777.35

Orientation of Trial Pit:

Length:	0.90	Width:	0.50	Depth:	0.70
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Description

Legend

Depth
(m)

O.D. Level (m)

Water

Sample Test

Type	Ref	Depth Top (m)	Depth Base (m)
------	-----	------------------	----------------------

		(iii)

[illegible][illegible]

Remarks and Test Results

SPT/HV/PP

PID (ppm)

TOPSOIL: Brownish grey silty gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse flint.

Light grey and yellowish brown clayey coarse SAND and GRAVEL. Gravel is angular to subrounded fine to coarse flint.

[HEAD DEPOSITS]

Trial Pit completed at 0.700m

Date: 01/12/2015

Plant: JCB3CX

Logged By: JT

Checked By: P. Lewin

Water Level Observations

Date _____

Water Strike (m)

Observations
Standing Time (Mins)

Standing Level (m)

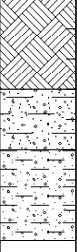
Groundwater Remarks	
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Remarks

1. Trial pit undertaken using mechanical excavator
2. Soakaway test undertaken in exploratory hole, please refer to supplementary soakaway sheet
3. Exploratory hole backfilled upon completion.

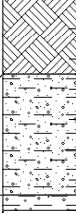
Hole Stability

Good

 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					TP109 Sheet 1 of 1													
	Project: Chidden Farms, Havant																		
	Project ID: GTS-15-719																		
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473143.00 107780.00													
Orientation of Trial Pit:		Length: 1.00		Width: 0.50		Depth: 0.80													
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test		Remarks and Test Results SPT/HV/PP PID (ppm)												
					Type	Ref		Depth Top (m)	Depth Base (m)										
TOPSOIL: Dark brownish grey slightly gravelly very silty fine to medium SAND. Gravel is angular to subangular fine to coarse flint.		0.30			B	1	0.30	0.50											
Yellowish grey clayey very gravelly fine to coarse SAND, with occasional cobbles. Gravel is angular to subangular fine to coarse flint.		0.50			B	2	0.50	0.80											
[HEAD DEPOSITS] Stiff orangish brown and yellowish brown sandy slightly gravelly CLAY, with occasional cobbles. Gravel is angular to subrounded fine to coarse flint.		0.80																	
[HEAD DEPOSITS] Trial Pit completed at 0.800m																			
Date: 01/12/2015 Plant: JCB3CX Logged By: JT Checked By: P. Lewin		<table border="1"> <thead> <tr> <th colspan="4">Water Level Observations</th> </tr> <tr> <th>Date</th> <th>Water Strike (m)</th> <th>Standing Time (Mins)</th> <th>Standing Level (m)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Water Level Observations				Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)				
Water Level Observations																			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)																
		Groundwater Remarks																	
		Remarks 1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled upon completion.																	
		Hole Stability Good																	

 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					TP110 Sheet 1 of 1													
	Project: Chidden Farms, Havant																		
	Project ID: GTS-15-719																		
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473071.84 107843.54													
Orientation of Trial Pit:		Length: 0.80		Width: 0.50		Depth: 1.00													
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test		Remarks and Test Results SPT/HV/PP PID (ppm)												
					Type	Ref		Depth Top (m)	Depth Base (m)										
TOPSOIL: Brownish grey sandy slightly gravelly SILT. Gravel is angular to subangular fine to coarse flint. Stiff yellowish brown slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS] Stiff light grey and yellowish brown slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. [HEAD DEPOSITS] Trial Pit completed at 1.000m	   	0.25 0.60 1.00			D 1 0.25 0.65 B 2 0.65 1.00														
Date: 01/12/2015 Plant: JCB3CX Logged By: JT Checked By: P. Lewin <table border="1"> <thead> <tr> <th colspan="4">Water Level Observations</th> </tr> <tr> <th>Date</th> <th>Water Strike (m)</th> <th>Standing Time (Mins)</th> <th>Standing Level (m)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> Groundwater Remarks Remarks 1. Trial pit undertaken using mechanical excavator 2. Soakaway test undertaken in exploratory hole, please refer to supplementary soakaway sheet 3. Exploratory hole backfilled upon completion. Hole Stability Good								Water Level Observations				Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)				
Water Level Observations																			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)																

 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record				TP111 Sheet 1 of 1													
	Project: Chidden Farms, Havant																	
	Project ID: GTS-15-719																	
Client: Bidwells LLP	Engineer: N/a				Ground Level Coordinates 473111.00 107845.00													
Orientation of Trial Pit:	Length: 1.30	Width: 0.50	Depth: 0.75															
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test Type Ref Depth Top (m) Depth Base (m)	Remarks and Test Results SPT/HV/PP PID (ppm)												
TOPSOIL: Dark greyish brown gravelly fine very silty SAND . Gravel is angular to subangular fine to coarse flint. Brownish grey sandy slightly gravelly CLAY, with occasional cobbles. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS] Firm to stiff light grey and yellowish brown slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS] Trial Pit completed at 0.750m		0.25 0.35 0.75			B 1 0.35 0.70 PP=65 kPa													
Date: 01/12/2015 Plant: JCB3CX Logged By: JT Checked By: P. Lewin <table border="1"> <tr> <th colspan="4">Water Level Observations</th> </tr> <tr> <th>Date</th> <th>Water Strike (m)</th> <th>Standing Time (Mins)</th> <th>Standing Level (m)</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> Groundwater Remarks Remarks 1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled upon completion. Hole Stability Good							Water Level Observations				Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)				
Water Level Observations																		
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)															

 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					TP112 Sheet 1 of 1													
	Project: Chidden Farms, Havant																		
	Project ID: GTS-15-719																		
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473202.00 107846.00													
Orientation of Trial Pit:		Length: 0.85		Width: 0.50		Depth: 0.70													
Description		Legend	Depth (m)	O.D. Level (m)	Water	Sample Test Type Ref Depth Top (m) Depth Base (m)													
TOPSOIL: Dark greyish brown sandy gravelly SILT. Gravel is angular to subangular fine to coarse flint. Firm grey sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS]			0.25			B 1 0.26 0.65	Remarks and Test Results SPT/HV/PP PID (ppm)												
Firm to stiff light grey and yellowish brown slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS]			0.65 0.70																
Trial Pit completed at 0.700m																			
Date: 01/12/2015 Plant: JCB3CX Logged By: JT Checked By: P. Lewin		<table border="1"> <tr> <th colspan="4">Water Level Observations</th> </tr> <tr> <th>Date</th> <th>Water Strike (m)</th> <th>Standing Time (Mins)</th> <th>Standing Level (m)</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>						Water Level Observations				Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)				
Water Level Observations																			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)																
		Groundwater Remarks																	
		Remarks 1. Trial pit undertaken using mechanical excavator 2. Soakaway test undertaken in exploratory hole, please refer to supplementary soakaway sheet 3. Exploratory hole backfilled upon completion.																	
		Hole Stability Good																	



GROUND TECHNOLOGY
Maple Road, Kings Lynn
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Trial Pit Record

TP113
Sheet 1 of 1

Project: Chidden Farms, Havant

Project ID: GTS-15-719

Client: Bidwells LLP

Engineer: N/a

Ground Level

Coordinates	473335.00
	107826.00

Orientation of Trial Pit:

Length: 0.35 Width: 0.35 Depth: **0.70**

Description

Legend

Depth
(m)O.D.
Level
(m)

Water

Sample Test

Type

Re

Depth
Top (m)

Bas

Remarks and Test Results

SPT/HV/PP

PID (ppm)

TOPSOIL: Dark grey slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint.

Firm yellowish brown slightly sandy CLAY, with occasional gravel. Gravel is angular to subangular fine to coarse flint.

[HEAD DEPOSITS]

Trial Pit completed at 0.700m

0.25

0.70

1

0.30

0

Date: 01/12/2015

Plant: Hand Pit

Logged By: JT

Checked By: P. Lewin

Water Level Observations

Date _____

Water Strike (m)

Observations
Standing Time (Mins)

Standing Level (m)

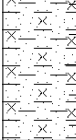
Groundwater Remarks	
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Remarks

1. Trial pit undertaken using Hand Tools 2. Exploratory hole backfilled upon completion.

Hole Stability

Good

 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					TP114 Sheet 1 of 1			
	Project: Chidden Farms, Havant								
	Project ID: GTS-15-719								
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473249.00 107618.00			
Orientation of Trial Pit:		Length: 1.30		Width: 0.50		Depth: 0.75			
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test		Remarks and Test Results SPT/HV/PP PID (ppm)		
					Type	Ref		Depth Top (m)	Depth Base (m)
TOPSOIL: Greyish brown slightly gravelly fine very silty SAND. Gravel is angular to subangular fine to coarse flint. Firm orangish brown sandy silty CLAY. [RIVER TERRACE DEPOSITS]		0.25			B	1	0.50	0.70	
Trial Pit completed at 0.750m		0.75							
Date: 01/12/2015		Water Level Observations							
Plant: JCB3CX		Date	Water Strike (m)		Standing Time (Mins)		Standing Level (m)		
Logged By: JT									
Checked By: P. Lewin		Groundwater Remarks							
		Remarks		1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled upon completion.					
		Hole Stability		Good					

 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					TP2 Sheet 1 of 1				
	Project: Chidden Farms, Havant									
	Project ID: GTS-15-719									
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473399.96 107854.22				
Orientation of Trial Pit:		Length: 2.20		Width: 0.50		Depth: 3.00				
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test				Remarks and Test Results	
					Type	Ref	Depth Top (m)	Depth Base (m)	SPT/HV/PP	PID (ppm)
TOPSOIL: Greyish brown slightly gravelly sandy silty CLAY. Gravel is angular fine to coarse flint.		0.30							PP=55 kPa	
Firm yellowish brown slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS]					B 1 D 1		0.50 0.50	0.60 0.60		
Stiff yellowish brown and grey slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS]		0.70							PP=90 kPa	
					B 2 D 2		0.70 0.70	1.00 1.00		
Stiff grey and brown CLAY, with a little fine decayed root channels. Occasional flint gravel with some gravelly bands. [HEAD DEPOSITS]		1.40							PP=150 kPa	
					B 3 D 3		1.60 1.60	1.80 1.80		
Stiff to very stiff greyish brown and grey CLAY. Crumb texture. [LONDON CLAY FORMATION]		2.20							PP=150 kPa	
					D 4		2.40			
Trial Pit completed at 3.000m		3.00								
										
Date: 27/10/2015 Plant: JCB3CX Logged By: J. Tomalin Checked By: P. Lewin		Water Level Observations								
		Date	Water Strike (m)		Standing Time (Mins)		Standing Level (m)			
		Groundwater Remarks								
		Remarks 1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion.								
		Hole Stability Good								



TP3
Sheet 1 of 1

Project ID: GTS-15-719

Ground Level	
Coordinates	473273.67 107813.28

Length: 2.30 Width: 0.50 Depth: 3.00

Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test				Remarks and Test Results	
					Type	Ref	Depth Top (m)	Depth Base (m)	SPT/HV/PP	PID (ppm)
TOPSOIL: Dark greyish brown slightly gravelly fine very silty SAND . Gravel is angular fine to coarse flint.		0.20			B	1	0.20	0.40		
Greyish brown slightly gravelly fine very silty SAND. Gravel is angular fine to coarse flint. [HEAD DEPOSITS]		0.40			B	2	0.40	0.60		
Firm to stiff brown sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS]		0.70			B D	3 1	0.80 0.80	1.00 1.00	HV=105 kPa	
Stiff orangish brown and light grey slightly gravelly CLAY. Gravel is angular fine to coarse flint. [HEAD DEPOSITS]		1.20			B D	4 2	1.20 1.20	1.40 1.40		
Stiff brown and grey CLAY, with occasional angular fine to coarse flint gravel. [HEAD DEPOSITS]									HV=115 kPa	
					D	3	2.00		PP=110 kPa	
Stiff greyish brown and grey CLAY. A crumb texture, with a little sugary calcite granules. [LONDON CLAY FORMATION]		2.40								
					D	4	2.80		HV=135 kPa	
Trial Pit completed at 3.000m		3.00								

Water Level Observations

Water Level Observations			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)

Remarks	1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion.
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Hole Stability	Good
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 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record					TP4 Sheet 1 of 1			
	Project: Chidden Farms, Havant								
	Project ID: GTS-15-719								
Client: Bidwells LLP		Engineer: N/a				Ground Level Coordinates 473173.22 107760.65			
Orientation of Trial Pit:		Length: 2.40		Width: 0.50		Depth: 3.00			
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test			Remarks and Test Results SPT/HV/PP PID (ppm)	
					Type	Ref	Depth Top (m)		Depth Base (m)
TOPSOIL: Dark brownish grey sandy slightly gravelly SILT. Gravel is angular fine to coarse flint.		0.25			B	1	0.00	0.20	HV=100 kPa
Brownish grey sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint.		0.40			B	2	0.30	0.40	
[HEAD DEPOSITS]		0.70			B	3	0.50	0.70	
Stiff orangish brown slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint.					B	4	0.70	0.90	
[HEAD DEPOSITS]		1.30			D	2	0.70	0.90	
Stiff brown and grey CLAY, with some fine roots and decayed root channels.					B	5	1.30	1.50	
[HEAD DEPOSITS]		2.00			D	3	1.30	1.50	
Very stiff brown and grey slightly gravelly CLAY. Gravel is angular fine to medium flint.									
[LONDON CLAY FORMATION]		2.70			D	4	2.20		
Very stiff greyish brown and grey CLAY									
[LONDON CLAY FORMATION]		3.00			D	5	2.80		
Trial Pit completed at 3.000m									
Date: 27/10/2015		Water Level Observations							
Plant: JCB3CX		Date		Water Strike (m)		Standing Time (Mins)		Standing Level (m)	
Logged By: J. Tomalin									
Checked By: P. Lewin		Groundwater Remarks							
		Remarks 1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion.							
		Hole Stability Good							



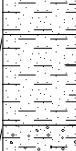
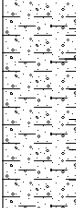
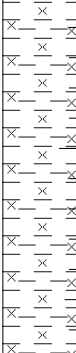
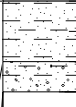
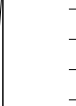
TP5
Sheet 1 of 1

Project ID: GTS-15-719

Ground Level	
Coordinates	473286.85 107735.14

[illegible]

Water Level Observations			
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)
Groundwater Remarks			
Remarks		1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion.	
Hole Stability		Good	

 GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657 www.groundtechnology.co.uk	Trial Pit Record				TP6 Sheet 1 of 1																
	Project: Chidden Farms, Havant																				
	Project ID: GTS-15-719																				
Client: Bidwells LLP		Engineer: N/a			Ground Level Coordinates 473208.60 107715.21																
Orientation of Trial Pit:		Length:		Width: 0.50		Depth: 3.00															
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sample Test			Remarks and Test Results													
					Type	Ref	Depth Top (m)	Depth Base (m)	SPT/HV/PP	PID (ppm)											
TOPSOIL: Dark brownish grey slightly gravelly sandy SILT. Gravel is angular to subangular fine to coarse flint. Stiff greyish brown slightly sandy CLAY, with occasional flint gravel. [HEAD DEPOSITS] Stiff yellowish brown slightly sandy CLAY, with occasional flint gravel. [HEAD DEPOSITS] Stiff orangish brown and light grey slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. Some black specks. [HEAD DEPOSITS]	  	0.25 0.40 0.70																			
Firm to stiff orangish brown and light grey silty CLAY, with occasional flint gravel. [HEAD DEPOSITS]		1.50																			
Stiff orangish brown and light grey sandy CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS] Stiff orangish brown and light grey slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS]	 	2.70 2.90 3.00																			
Trial Pit completed at 3.000m																					
Date: 27/10/2015 Plant: JCB3CX Logged By: J. Tomalin Checked By: P. Lewin		<table border="1"> <tr> <th colspan="4">Water Level Observations</th> </tr> <tr> <th>Date</th> <th>Water Strike (m)</th> <th>Standing Time (Mins)</th> <th>Standing Level (m)</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>								Water Level Observations				Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)				
Water Level Observations																					
Date	Water Strike (m)	Standing Time (Mins)	Standing Level (m)																		
		Groundwater Remarks																			
		Remarks 1. Trial pit undertaken using mechanical excavator 2. Exploratory hole backfilled with arisings upon completion.																			
		Hole Stability Good																			



GROUND TECHNOLOGY
Maple Road, Kings Lynn
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(01553) 817657

Window Sample Record

WS1

Sheet 1 of 1

Project: Chidden Farms, Havant

Project ID: GTS-15-719

Client: Bidwells LLP

Engineer: N/a

Ground Level:

Coordinates: 473410.03
107904.36

Description	Legend	Depth (m)	O.D. Level (m)	Sample Test		SPT/CPT		Remarks and Test Results		Installations
				Type	Ref	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	
TOPSOIL: Dark brownish black sandy gravelly SILT, with some roots and rootlets. Gravel is angular to subrounded fine to medium flint.		0.30								
MADE GROUND: yellowish brown clayey GRAVEL. Gravel is subangular to subrounded fine to coarse flint. Water ingress from ceramic land drain.		0.60								
Loose yellowish brown clayey GRAVEL. Gravel is subangular to subrounded fine to coarse flint.		1.60		D	1	1.20	1.65	0.00	1.2	
[HEAD DEPOSITS]		1.70		B	3	1.40	1.60			
Soft orangish brown mottled grey sandy silty CLAY.		2.30		D	4	1.60	1.70			
[HEAD DEPOSITS]		2.30		B	5	1.70	2.00			
Loose orangish brown mottled grey silty clayey fine to medium SAND. with some 5mm wide pockets of grey sandy clay.		2.30		D	2	2.00	2.45	0.00	2	
[HEAD DEPOSITS]		2.30								
From 2.00mbgl medium dense.		2.30		D	7	2.70	2.80			
From 2.20m to 2.30mbgl soft orange brown sandy clay.		2.30								
Firm to stiff dark brown mottled grey silty CLAY.		3.45		D	6	3.00	3.45	0.00	2.5	
[LONDON CLAY FORMATION]		3.45								
Borehole completed at 3.450m		3.45								

Drive Records			Water Level Observations				
Diameter	To (m)	Sample Recovery	Date	Depth Strike	Standing Time (mins)	Standing Level (m)	Casing Depth (m)
102	2.00	100%	28-10-2015	0.5	5.00	0.50	0
76	3.00	100%	28-10-2015	0.5	15.00	0.50	0
			28-10-2015	0.5	20.00	0.50	0
			28-10-2015	0.5	10.00	0.50	0

Dates: Start: 28/10/2015 End: 28/10/2015

Plant: Dando Terrier

Drilled By: Andrew Elshof

Logged By: G. Day

Checked By: P. Lewin

Remarks:

1. Inspection pit hand dug from ground level to 1.20mbgl 2. Exploratory hole terminated after reaching completion depth.



GROUND TECHNOLOGY
Maple Road, Kings Lynn
Norfolk, PE34 3AF
(01553) 817657

Window Sample Record

WS3

Sheet 1 of 1

Project: Chidden Farms, Havant

Project ID: GTS-15-719

Client: Bidwells LLP

Engineer: N/a

Ground Level:

Coordinates: 473196.49
107811.39

Description	Legend	Depth (m)	O.D. Level (m)	Sample Test		SPT/CPT		Remarks and Test Results		Installations
				Type	Ref	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	
TOPSOIL: dark brownish black sandy gravelly SILT, with some roots and rootlets. Gravel is angular to subrounded fine to medium flint. Dense dark orangish sandy silty GRAVEL. [HEAD DEPOSITS]		0.30		B	4	1.00	1.70			
				D	1	1.20	1.65	0.00	Dry	N=46 (5,9/13,11,12,10)
		1.70		D	5	1.80	2.00			
Dark orangish brown gravelly CLAY. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS]				D	2	2.00	2.45	0.00	Dry	N=18 (5,5/6,4,4,4)
		2.60		D	6	2.60	2.80			
Very stiff dark brown and grey silty CLAY. [LONDON CLAY FORMATION]				D	3	3.00	3.45	0.00	Dry	N=17 (1,1/2,3,5,7)
Borehole completed at 3.450m		3.45								

Drive Records			Water Level Observations				
Diameter	To (m)	Sample Recovery	Date	Depth Strike	Standing Time (mins)	Standing Level (m)	Casing Depth (m)
1	2.00	100%					
87	3.00	100%					

Dates: Start: 27/10/2015 End: 27/10/2015

Plant: Dando Terrier

Drilled By: Andrew Elshof

Logged By: G. Day

Checked By: P. Lewin

Remarks:

1. Inspection pit hand dug from ground level to 1.20mbgl 2. Exploratory hole terminated after reaching completion depth. 3. Exploratory hole backfilled with arisings upon completion.



WS4

Sheet 1 of 1

Project ID: GTS-15-719

Engineer: N/a

Coordinates:	473077.73
	107812.56

Description	Legend	Depth (m)	O.D. Level (m)	Sample Test				SPT/CPT		Remarks and Test Results		Installations
				Type	Ref	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	SPT/HV/PP	PID (ppm)	
TOPSOIL: dark brownish black sandy gravelly SILT, with some roots and rootlets. Gravel is angular to subrounded fine to medium flint.		0.30										
Soft dark orangish brown silty gravelly CLAY. Gravel is angular to subangular fine to coarse flint.		0.80		D	1	0.60	0.70					
[RIVER TERRACE DEPOSITS]				B	6	1.00	1.50					
Dense brown very silty sandy fine to coarse GRAVEL. Gravel is angular to subangular fine to coarse flint.		1.50		D	2	1.20	1.65	1.00	1.2	N=33 (2,8/11,10,7,5)		
[RIVER TERRACE DEPOSITS]		1.70		D	4	1.70	1.80					
Firm dark orangish brown sandy gravelly CLAY. Gravel is angular to subangular fine to coarse flint.				D	3	2.00	2.45	2.00	1.9	N=18 (1,2/3,5,5,5)		
[RIVER TERRACE DEPOSITS]												
Stiff brown mottled grey silty CLAY. [LONDON CLAY FORMATION]				D	7	2.80	3.00					
From 2.50mbgl very mottling less apparent.				D	5	3.00	3.45	2.00	Dry	N=13 (1,2/2,3,3,5)		
From 3.00mbgl medium gravel size pockets of orange brown.												
				D	8	4.00	4.45	2.00	Dry	N=18 (2,2/4,4,5,5)		
				D	10	4.50	4.60					
				D	9	5.00	5.45	2.00	Dry	N=18 (2,2/4,4,5,5)		
Very stiff dark greyish brown silty CLAY. [LONDON CLAY FORMATION]		5.30		D	11	5.70	5.90					
				D	12	6.00	6.45	2.00	Dry	N=20 (3,3/4,5,6,5)		
Borehole completed at 6.450m		6.45										

Drive Records			Water Level Observations				
Diameter	To (m)	Sample Recovery	Date	Depth Strike	Standing Time (mins)	Standing Level (m)	Casing Depth (m)
102	2.00	100%	27-10-2015	0.8	20.00	0.50	0
87	3.00	100%	27-10-2015	0.8	10.00	0.80	0
75	4.00	100%	27-10-2015	0.8	5.00	0.80	0
65	5.00	100%	27-10-2015	0.8	15.00	0.80	0
55	6.00	100%					

Remarks:

1. Inspection pit hand dug from ground level to 0.80m bgl due to difficulty excavating with hand tools 2. Exploratory hole terminated after reaching completion depth. 3. Exploratory hole backfilled with arisings upon completion.

Logged By: G. Day

Checked B. Lewin

By: P. Lewin



GROUND TECHNOLOGY
Maple Road, Kings Lynn
Norfolk, PE34 3AF
(01553) 817657

Window Sample Record

WS5

Sheet 1 of 1

Project: Chidden Farms, Havant

Project ID: GTS-15-719

Client: Bidwells LLP

Engineer: N/a

Ground Level:

Coordinates: 473242.68
107740.61

Description	Legend	Depth (m)	O.D. Level (m)	Sample Test				SPT/CPT		Remarks and Test Results		Installations
				Type	Ref	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	SPT/HV/PP	PID (ppm)	
TOPSOIL: dark brownish black sandy gravelly SILT, with some roots and rootlets. Gravel is angular to subrounded fine to medium flint.		0.30										
Dark greyish black fine to coarse SAND and GRAVEL. Gravel is subangular to subrounded fine to coarse flint.		0.60										
[HEAD DEPOSITS]												
Dense orangish brown very clayey sandy GRAVEL. Gravel is subangular to subrounded fine to coarse flint. with fine to medium gravel size pockets of cohesive gravelly clay.				D	1	1.20	1.65	0.00	Dry	N=41 (9,8/10,12,10,9)		
[HEAD DEPOSITS]				B	4	1.60	2.00					
From 2.00mbgl loose. Band of gravelly clay between 2m and 2.30mbgl.				D	2	2.00	2.45	0.00	Dry	N=23 (4,4/3,4,8,8)		
				D	6	2.10	2.30					
				B	7	2.50	3.00					
From 3.00mbgl medium dense				D	3	3.00	3.45	0.00	Dry	N=29 (1,6/5,10,7,7)		
Stiff orangish brown gravelly CLAY. Gravel is subangular to subrounded fine to coarse flint.		3.50		D	8	3.60	3.70					
[HEAD DEPOSITS]		3.80										
Medium dense orangish brown clayey GRAVEL. Gravel is subangular to subrounded fine to coarse flint. (Exhibits cohesion).				D	5	4.00	4.45	0.00	Dry	N=20 (2,3/4,5,5,6)		
[HEAD DEPOSITS]		4.45										
Borehole completed at 4.450m												

Drive Records			Water Level Observations				
Diameter	To (m)	Sample Recovery	Date	Depth Strike	Standing Time (mins)	Standing Level (m)	Casing Depth (m)
102	2.00	100%					
87	3.00	100%					
65	4.00	100%					

Dates: Start: 28/10/2015 End: 28/10/2015

Plant: Dando Terrier

Drilled By: Andrew Elshof

Logged By: G. Day

Checked By: P. Lewin

Remarks:

1. Inspection pit hand dug from ground level to 1.20mbgl 2. Exploratory hole terminated after reaching completion depth. 3. Exploratory hole backfilled with arisings upon completion.



GROUND TECHNOLOGY
Maple Road, Kings Lynn
Norfolk, PE34 3AF
(01553) 817657

Window Sample Record

WS6

Sheet 1 of 1

Project: Chidden Farms, Havant

Project ID: GTS-15-719

Client: Bidwells LLP

Engineer: N/a

Ground Level:

Coordinates: 473086.08
107734.24

Description	Legend	Depth (m)	O.D. Level (m)	Sample Test				SPT/CPT		Remarks and Test Results		Installations
				Type	Ref	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	SPT/HV/PP	PID (ppm)	
TOPSOIL: dark brownish black sandy gravelly SILT, with some roots and rootlets. Gravel is angular to subrounded fine to medium flint.		0.25		B	1	0.30	0.80					
Dark greyish brown mottled orangish brown very clayey slightly gravelly fine to medium SAND. Gravel is angular to subangular fine to medium flint. Medium gravel size pockets of clay.		1.00		D	3	0.70	0.80					
[HEAD DEPOSITS] From 0.70mbgl very clayey.				D	2	1.20	1.65	0.00	Dry	N=11 (5,3/2,2,3,4)		
From 0.80mbgl bed of gravel.				D	6	1.50	1.60					
Firm orangish brown mottled grey silty gravelly CLAY. Gravel is angular to subangular fine to medium flint.				D	4	2.00	2.45	0.00	Dry	N=16 (1,1/5,4,4,3)		
[HEAD DEPOSITS] From 1.30m to 1.50mbgl bed of fine to medium sub-angular to angular flint gravel.		2.60										
Firm dark orangish brown silty gravelly CLAY, with some semi decayed root channels (2mm wide). Gravel is angular to subangular fine to coarse flint.		3.00		D	5	3.00	3.45	0.00	Dry	N=15 (1,1/3,4,4,4)		
[HEAD DEPOSITS] Stiff dark brown silty CLAY. With rare fine flint gravel and black organic specks.				D	8	3.50	3.60					
[HEAD DEPOSITS] From 4.10mbgl becoming sandier.		4.30		D	7	4.00	4.45	0.00	Dry	N=23 (1,2/3,5,6,9)		
Medium dense dark yellowish brown very silty fine to medium SAND.				B	11	4.30	5.00					
[HEAD DEPOSITS]				D	9	5.00	5.45	4.80	4.8	N=30 (2,6/7,7,7,9)		
				D	10	6.00	6.45	0.00	4.8	N=12 (1,1/2,3,3,4)		
Borehole completed at 6.450m		6.45										

Drive Records			Water Level Observations				
Diameter	To (m)	Sample Recovery	Date	Depth Strike	Standing Time (mins)	Standing Level (m)	Casing Depth (m)
117	2.00	100%	27-10-2015	4.8	20.00	4.80	0
102	3.00	100%	27-10-2015	4.8	15.00	4.80	0
75	4.00	100%	27-10-2015	4.8	10.00	4.80	0
65	5.00	100%	27-10-2015	4.8	5.00	4.80	0
55	6.00	100%					

Dates: Start: 27/10/2015 End: 27/10/2015

Plant: Dando Terrier

Drilled By: Andrew Elshof

Logged By: G. Day

Checked By: P. Lewin

Remarks:

1. Inspection pit hand dug from ground level to 0.80mbgl due to difficulty excavating with hand tools 2. Exploratory hole terminated after reaching completion depth. 3. Exploratory hole backfilled with arisings upon completion.



GROUND TECHNOLOGY
Maple Road, Kings Lynn
Norfolk, PE34 3AF
(01553) 817657

Window Sample Record

WS7

Sheet 1 of 1

Project: Chidden Farms, Havant

Project ID: GTS-15-719

Client: Bidwells LLP

Engineer: N/a

Ground Level:

Coordinates: 473218.25
107679.54

Description	Legend	Depth (m)	O.D. Level (m)	Sample Test				SPT/CPT		Remarks and Test Results		Installations	
				Type	Ref	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	SPT/HV/PP	PID (ppm)		
TOPSOIL: dark brownish black sandy gravelly SILT, with some roots and rootlets. Gravel is angular to subrounded fine to medium flint. Firm dark orangish brown silty sandy CLAY. [HEAD DEPOSITS]		0.30											
From 0.80mbgl gravelly clay.													
From 1.20mbgl firm silty clay.				D	1	1.20	1.65	0.00	Dry	N=10 (1,1/3,2,2,3)			
				D	2	1.60	1.70						
				D	3	2.00	2.45	0.00	Dry	N=15 (2,1/3,3,4,5)			
From 2.00mbgl stiff.													
From 2.50mbgl very stiff with rare fine gravel of flint / possible shell fragments.				D	4	3.00	3.45	0.00	Dry	N=33 (1,3/3,7,11,12)			
		3.40		B	6	3.40	4.00						
Dense orangish brown very clayey sandy fine to coarse GRAVEL. Gravel is angular to subangular fine to coarse flint. (Exhibits cohesion) [HEAD DEPOSITS]				D	5	4.00	4.45	0.00	Dry	N=37 (4,8/10,7,9,11)			
		4.60		B	7	4.60	5.00						
Dense orangish brown slightly clayey sandy fine to coarse GRAVEL. Gravel is angular to subangular fine to coarse flint. [HEAD DEPOSITS]		5.00		D	8	5.00	5.45	0.00	Dry	N=22 (6,6/6,6,5,5)			
Medium dense orangish brown very clayey sandy fine to coarse GRAVEL. [HEAD DEPOSITS]				D	9	6.00	6.45	0.00	Dry	N=16 (3,6/5,3,4,4)			
Borehole completed at 6.450m		6.45											

Drive Records			Water Level Observations				
Diameter	To (m)	Sample Recovery	Date	Depth Strike	Standing Time (mins)	Standing Level (m)	Casing Depth (m)
102	2.00	100%	28-10-2015	6	20.00	6.00	0
87	3.00	100%	28-10-2015	6	10.00	6.00	0
76	4.00	100%	28-10-2015	6	5.00	6.00	0
65	5.00	100%	28-10-2015	6	15.00	6.00	0
55	6.00	100%					

Dates: Start: 27/10/2015 End: 28/10/2015

Plant: Dando Terrier

Drilled By: Andrew Elshof

Logged By: G. Day

Checked By: P. Lewin

Remarks:

1. Inspection pit hand dug from ground level to 1.20mbgl 2. Exploratory hole terminated after reaching completion depth. 3. Exploratory hole backfilled with arisings upon completion.

Title: Site Plan

Scale: 1:4000

Engineer: N/a

Contractor: Ground Technology Services Ltd



 Locations By Type - TP

 Locations By Type - TP

Locations By Type - WS

