Archaeological monitoring and geoarchaeological investigation on land at Hythe Quay, Colchester, Essex, CO2 8JP

September-November 2021



by Dr Elliott Hicks & Chris Lister figures by Chris Lister and Sarah Carter

fieldwork by Megan Seehra

commissioned by Rob Masefield (RPS)

NGR: TMM 01521 24376 (centre) Planning reference: pre-application CAT project ref.: 2021/04c CHER ref: ECC4669 OASIS reference: colchest3-419478



Colchester Archaeological Trust Roman Circus House, Roman Circus Walk, Colchester, Essex, CO2 7GZ

tel.: 01206 501785 email: <u>eh2@catuk.org</u>

CAT Report 1730 January 2022

Contents

1 2 3	Summary Introduction Archaeological background	1 1 1
4 5	Aim Results	2
6	Finds	5
7	Conclusion	5
8	Acknowledgements	5
9	References	6
10	Abbreviations and glossary	7
11	Contents of archive	7
12	Archive deposition	7
Арр	pendix 1 Context list	9
Figu	after p9	
Арр		

Appendix 3 Hythe Quay, Colchester: Geotechnical and Geoenvironmental Interpretative Report - Rev2

CAT WSI OASIS Summary

List of photographs, tables, maps and figures

Cover: Extract from Chapman and André's map of Essex, 1777

F1 in TP02 – looking north	3
Details on the main types of ceramics and pottery Quantities of pottery and CBM by features and layers Approximate dates for the individual features and layers	5 5 5
Extract from the 1897 Ordnance Survey map showing the location of TP02	6
Site location Results Representative sections	
	F1 in TP02 – looking north Details on the main types of ceramics and pottery Quantities of pottery and CBM by features and layers Approximate dates for the individual features and layers Extract from the 1897 Ordnance Survey map showing the location of TP02 Site location Results Representative sections

1 Summary

Archaeological monitoring and geoarchaeological investigation was carried out on land at Hythe Quay, Colchester, Essex during the excavation of trial-pits, window sampler boreholes and boreholes as part of ground investigations during the pre-application stage of a development proposal. A brick structure which may have been associated with a series of lime kilns which was present on the site in the 19th century was observed, along with substantial make-up and demolition layers associated with the prior use of the site as an industrial area, activity which likely destroyed any earlier archaeological deposits which might have existed here.

Data collected from the trial-pits, window samples and boreholes allowed the preparation of a north-south transect of the site. This indicates the presence of probable Holocene alluvium beneath the modern floodplain of the river overlying gravels probably dating to the late Pleistocene.

2 Introduction (Fig 1)

This report presents the results of archaeological monitoring on land at Hythe Quay, Colchester, Essex, which was carried out on 27th September 2021. The work was commissioned by Rob Masefield of RPS, was undertaken during the excavation of seven trial-pits and six window sampler boreholes and boreholes as part of ground investigations during the pre-application stage of development, and was carried out by Colchester Archaeological Trust (CAT). An earlier phase of geotechnical investigation was undertaken in May 2021 (BH01 and BH02 on Fig 2) but was not monitored by CAT. A final phase of geotechnical investigation (BH03, BH04 and BH05 on Fig 2) was undertaken in November 2021, intended to be monitored by Dr Martin Bates, a freelance geoarchaeologist subcontracted to CAT. Unfortunately, due to illness, no drilling took place whilst Dr Bates was present and his report (Appendix 2) is based on the available logs from the geotechnical investigations and from direct observations on the samples deposited with the geotechnical laboratory.

As the site lies within an area identified by the Colchester Historical Environment Record (CHER) as possessing a high potential for archaeological deposits, following consultation with Colchester Borough Council Planning Services (CBCPS), Colchester Borough Council Archaeological Advisor Dr Richard Hoggett advised that in order to establish the archaeological implications of this application, the applicant should be required to commission a scheme of archaeological investigation in accordance with the *National Planning Policy Framework* (MHCLG 2019).

RPS consulted with CBCAA Dr Richard Hoggett who approved the programme of investigation. All archaeological work was carried out in accordance with a Written Scheme of Investigation (WSI) prepared by CAT and agreed with CBCPS (CAT 2021).

In addition to the WSI, all fieldwork and reporting was done in accordance with *Management of Research Projects in the Historic Environment (MoRPHE)* (Historic England 2016), and with *Standards for field archaeology in the East of England* (EAA **14** and **24**). This report mirrors standards and practices contained in the Institute for Archaeologists' *Standard and guidance for archaeological watching briefs* (CIfA 2014a) and *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014b).

3 Archaeological background

The archaeological and historical background of the site has been comprehensively explored with assessments of significance in the Archaeological Desk-Based Assessment (DBA) produced by RPS (2021). The following background summary is taken from the DBA (RPS 2021, i-ii).

There is low potential for earlier prehistoric (Palaeolithic, Mesolithic) or later prehistoric (Neolithic, Bronze Age or Iron Age) remains although it is possible that alluvium and peat dating to these periods may be present at this extreme edge of the river floodplain, beneath modern disturbance and made ground.

The site is likely to have been used as river valley pasture during the Late Iron Age, and there is low to moderate archaeological potential for land-raise of Roman date, given its location on the Colne and based on the archaeological identification of Roman consolidation layers approximately 150m to the north of the site at 9-11 Hythe Quay (CAT Report 100).

There is similarly low potential for settlement activity of Anglo-Saxon and medieval date. The 18th-century historical maps suggest that much of the south/central area of the site may have been located further away from the river than it currently is. As such only the northern area was potentially within or immediately adjacent to the medieval quay, with the remainder most likely used as grazing meadows. However, given that the port of Hythe has medieval origins there is a low to moderate potential that ground stabilisation layers, and a low potential for possible remnants of wharfs, revetments or other wooden structures, might possibly be present at depth, particularly in northern areas below post-medieval consolidation and truncation.

Following modifications to the River Colne in the 19th century, larger vessels could access and dock at the quayside at Hythe (including at the site) which was now a thriving port. A lime kiln is probably shown in the central southern area of the site in 1845, and was labelled as such by 1876, when further structures and yards are also shown in the northern area. There is a moderate potential for partial archaeological survival of remnants of these facilities and structures beneath 20th-century disturbance and made ground. In the mid-20th century a travelling crane and hopper were operative with coal stores in the northern zone. There is a high potential for remains of these structures to be present below ground level.

4 Aim

Archaeological monitoring was undertaken to record any archaeological deposits which were exposed by the groundworks.

Geoarchaeological monitoring was undertaken to:

- Determine the location, depth, extent, date, character, condition, significance and quality of the surviving geoarchaeological remains
- Assess the ecofactual and environmental potential of the geoarchaeological deposits
- Inform subsequent evaluation/excavation strategy and sampling policy if further work is required

5 Results (Figs 2-3)

The results of all the geotechnical investigations are summarised below but are discussed in greater detail in Appendix 2.

5.1 Boreholes 1 and 2 (BH01-BH02)

BH01:

BH01 was a cable percussion borehole located at the north end of the site and dug to a depth of 13m. Made ground was encountered to a depth of 2m below ground level with the following 4m comprising what the CGL report interprets as river terrace deposits. London Clay was encountered from 6m below current ground level (bcgl) to 10.5m bcgl with sand from the Lambeth Group comprising the remainder of the borehole.

BH02:

BH02 was located at the south end of the site and was dug to a depth of 8.5m. As with BH01 made ground was found to a depth of 2m bcgl. River terrace deposits were encountered for the next 3m followed by London Clay to a depth of 8.5m bcgl where the borehole was terminated.

5.2 Trial-pits 1-5 (TP01-TP05)

TP01-TP05 were orientated north-south and were dug by a tracked mechanical excavator equipped with a toothed bucket. Each trial pit measured 2.8m long by 0.6m wide. All observations and measurements were made from the top of the trial pit.

TP01:

TP01 was excavated through modern topsoil (L1), approximately 0.2m thick which sealed a make-up layer of crushed brick *c* 0.5m thick laying on a geotextile membrane (L2). Below L2 was a further make-up or demolition layer, 0.78m thick, stained with hydrocarbons and containing modern brick fragments, chalk fragments and lenses of orange sand (L3). L3 sealed a 1.3m layer of redeposited alluvium containing coal, oyster shell and modern pottery sherds in the lower part of the deposit (L4). Alluvium (L5) was encountered at approximately 2.8m bcgl.

TP02:

L1 and L2 were identified within the top 0.95m of TP02, laying on top of the same geotextile membrane noted in TP01. Below this was a 1m thick deposit of clay (L7) with rare animal bone inclusions which may be associated with a post-medieval or modern brick structure (F1) observed in the northern edge of the trial pit. Below this was alluvium (L5) to the full depth of the trial pit, 2.9m bcgl.



Photograph 1 F1 in TP02 – looking north

TP03:

L1 and L2 had an overall depth of 0.7m onto the geotextile membrane. Below this L3 was again observed, approximately 0.5m thick, although the interface between this and L6 below was very hard to distinguish. L6, a greyish brown clay with black staining throughout (presumed hydrocarbon contamination from the odour) was approximately 1.2m thick and contained brick and concrete fragments. L6 partially sealed a modern concrete footing at the north end of the trial pit (F2). The alluvium (L5) was encountered at approximately 2.1m bcgl to the full 2.8m depth of the trial pit.

TP04:

L1 and L2 had an overall depth of 0.75m onto the geotextile membrane. Below this L3 was again observed, approximately 1.45m thick with concrete at the base. The alluvium (L5) was encountered at approximately 2.2m bcgl to the full 2.8m depth of the trial pit.

TP05:

L1 and L2 had an overall depth of 0.7m onto the geotextile membrane. Below this L3 was again observed, approximately 1.1m thick with concrete fragments and ceramic tiles present throughout. The alluvium (L5) was encountered at approximately 1.8m bcgl to the full 2.8m depth of the trial pit.

5.3 Window sampler boreholes 1-6 (WS01-WS06)

WS01-WS06 were all drilled to a depth of 5m bcgl, with the exception of WS04, which only reached 3m bcgl.

WS01:

Made ground was noted down to 3.8m bcgl with brick fragments identified at this depth. Below this was a 0.2m thick layer of alluvium sealing river terrace deposits to the full depth of the borehole.

WS02:

Made ground was noted down to 3.7m bcgl which included redeposited alluvium at around 1.7-2m bcgl. This overlay 1.3m of reworked river terrace deposits containing brick fragments and hydrocarbons.

WS03:

Made ground was much shallower at this location, only 1m deep. This sealed a 2.9m thick deposit of alluvium which overlay river terrace deposits.

WS04:

Made ground comprised the entire depth of this borehole with brick fragments encountered at approximately 1.6m bcgl. WS04 was abandoned at 3m bcgl due to the sides collapsing.

WS05:

Made ground was noted down to 3.8m bcgl with reworked alluvium encountered in the lower 1.9m of this. The made ground sealed river terrace deposits.

WS06:

Made ground comprised 4.5m of this borehole with reworked alluvium present from approximately 1.7m bcgl. Brick fragments were noted between 4m and 4.5m bcgl. The made ground sealed river terrace deposits.

6 Finds

by Dr Matthew Loughton

The watching brief uncovered 13 sherds of pottery and ceramic building material (henceforth CBM) with a weight of 5,864g (Table 1). The mean sherd weight is very high at 451g.

Ceramic material	No.	Weight (g)	MSW (g)
Pottery	4	418	105
СВМ	9	5,446	605
Total	13	5,864	451

Table 1 Details on the main types of ceramics and pottery

This material was recovered from two features: the brick structure (F1) and the alluvial clay (L4) (Table 2). The alluvial clay L4 produced four sherds (418g) from a late slipped kitchenware (F51A) storage jar with an arched lug handle which dates to the 19th-20th century (*CAR* **7**, 254-5, fig. 171 no. 1).

The brick structure F1 produced a small and varied assemblage of CBM with peg-tile, mortar, and frogged and un-frogged bricks. There was one frogged brick fragment impressed with a stamp of L[BC?] perhaps of the 'London Brick Company' which was in operation from 1900 onwards. There were also four earlier (late 18th-19th century) un-frogged bricks with dimensions of ? mm x 105 mm x 55 mm and ? mm x 110/112 mm x 65/70 mm all with traces of white mortar and heavy burning. The later frogged brick is un-mortared and also shows no signs of burning suggesting that it was not part of the brick structure F1.

Context	Description	No.	Weight (g)	MSW (g)		
F1	Brick structure	9	5,446	605		
L4	Alluvial clay	4	418	105		
	Total	13	5864	451		

Table 2 Quantities of pottery and CBM by features and layers

Conclusion

Table 3 summarizes the dating evidence for the two pits which produced dateable ceramic finds.

Context	Feature type	Post-Roman	CBM	Overall date approx.
F1	Brick structure	-	PT BR (frogged)- intrusive? BR (unfrogged)	Late 18th-19th century
L4	Alluvial clay	F51A (Storage jar)	-	19th-20th century

Table 3 Approximate dates for the individual features and layers

7 Conclusion

Groundworks at this site uncovered much evidence of its previous use as an industrial area during the post-medieval and modern periods. Within TP02, parts of a post-medieval or modern brick structure were observed. Exhibiting signs of intense heat, it is likely that these represent remains associated with a series of lime kilns depicted on late 19th-century Ordnance Survey mapping (see Map 1 below). Substantial make-up and demolition layers were present across the site, suggesting that any earlier archaeological deposits which may have present have been heavily truncated by industrial activity and the demolition of structures which previously stood here. Where it had not been entirely destroyed, the varying depths at which the alluvium was

encountered, from *c* 1m-3.8m bcgl, provides further indication of the impact of this activity.



Map 1 Extract from the 1897 Ordnance Survey map showing the location of TP02

8 Acknowledgements

CAT thanks Rob Masefield of RPS for commissioning and funding the work. The project was managed by C Lister and carried out by M Seehra (for CAT) and Dr Martin Bates. Figures were prepared by C Lister, and S Veasey. The project was monitored for CBC by Dr Richard Hoggett and Dr Simon Wood.

9 References

Note: all CAT reports, except for DBAs, are available online in PDF format at http://cat.essex.ac.uk

Brown, D	2011 (2nd ed.)	Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation
CAR 7	2000	Colchester Archaeological Report 7 : Post-Roman pottery from
Campbell, G,	2011	Environmental Archaeology: A Guide to the Theory and Practice
Moffett, L & Straker, V	(2nd ed.)	of Methods, from Sampling and Recovery to Post-Excavation
CAT	2021	Health & Safety Policy
CAT Report 100	2000	An archaeological evaluation at 9-11 Hythe Quay, Colchester, Essex: October 2000
CIfA	2014a	Standard and Guidance for an archaeological watching brief. Rev. June 2020
CIfA	2014b	Standard and guidance for the collection, documentation, conservation and research of archaeological materials. Updated Oct 2020
ClfA	2014c	Code of Conduct. Rev. Oct 2019
Gurney, D	2003	Standards for field archaeology in the East of England. East Anglian Archaeology Occasional Papers 14 (EAA 14)
Historic England	2015	Management of Research Projects in the Historic Environment (MoRPHE)
Medlycott, M	2011	Research and archaeology revisited: A revised framework for the East of England. East Anglian Archaeology Occasional Papers 24 (EAA 24)
MHCLG	2019	National Planning Policy Framework. Ministry of Housing, Communities and Local Government.
RPS	2021	Archaeological Desk-Based Assessment: Hythe Quay, Colchester – Beyond the Box, by R Masefield

10 Abbreviations and glossary

Anglo-Saxon	period from $c 500 - 1066$
Bronze Age	period from <i>c</i> 2500 – 700 BC
CAT	Colchester Archaeological Trust
CBC	Colchester Borough Council
CBCAA	Colchester Borough Council Archaeological Advisor
CBCPS	Colchester Borough Council Planning Services
CBM	ceramic building material, ie brick/tile
CHER	Colchester Historic Environment Record
ClfA	Chartered Institute for Archaeologists
context	specific location of finds on an archaeological site
feature (F)	an identifiable thing like a pit, a wall, a drain: can contain 'contexts'
Iron Age	period from 700 BC to Roman invasion of AD 43
layer (L)	distinct or distinguishable deposit (layer) of material
medieval	period from AD 1066 to <i>c</i> 1500
Mesolithic	period from <i>c</i> 10,000 – 4000BC
modern	period from <i>c</i> AD 1800 to the present
natural	geological deposit undisturbed by human activity
Neolithic	period from <i>c</i> 4000 – 2500 BC
NGR	National Grid Reference
OASIS	Online AccesS to the Index of Archaeological InvestigationS,
	<u>http://oasis.ac.uk/pages/wiki/Main</u>
Palaeolithic	period <i>c</i> 800,000 BC to <i>c</i> 10,000BC
post-medieval	from <i>c</i> AD 1500 to <i>c</i> 1800
prehistoric	pre-Roman
section	(abbreviation sx or Sx) vertical slice through feature/s or layer/s
wsi	written scheme of investigation

11 Contents of archive

Finds: discarded **Digital record** The report (CAT Report 1730) CBC evaluation brief, CAT written scheme of investigation Graphics Site digital photographs, photographic thumbnails and log Original site record (context lists and sections) Survey

12 Archive deposition

The archive is currently held by the Colchester Archaeological Trust at Roman Circus House, Roman Circus Walk, Colchester, Essex, CO2 7GZ, but will be permanently deposited with the Archaeological Data Service

© Colchester Archaeological Trust 2022

Distribution list

Rob Masefield, RPS Dr Simon Wood, Colchester Borough Council Planning Services Essex Historic Environment Record



Colchester Archaeological Trust Roman Circus House, Roman Circus Walk, Colchester, Essex, CO2 7GZ

tel.: 01206 501785 *email:* <u>eh2@catuk.org</u>

Checked by: Chris Lister Date: 10.01.2022

Appendix 1 Context list

Context Number	Finds Number	Feature / layer type	Description	Date		
L1	-	Topsoil	Friable/firm, dry medium grey/brown sandy-silt with 25% CBM pieces, 5% stones and CBM flecks	Modern		
L2	-	Make-up layer	Friable, dry light/medium orange sand with 99% CBM pieces	Modern		
L3	-	Demolition/make- up layer	Friable/firm, moist dark orange/grey/brown/black silty-loam with 60% CBM pieces and 30% stones	Modern		
L4	3	Redeposited alluvium	Firm, wet light/medium grey/blue clay with 5% CBM pieces and 1% stones	?Post- medieval / modern		
L5	-	Natural	Firm, wet light/medium blue clay	Post-glacial		
L6	-	?Redeposited alluvium	Firm/hard, wet medium/dark grey/black clay with 45% CBM pieces and CBM flecks	?Post- medieval / modern		
L7	1	?Redeposited alluvium	Firm/hard, wet medium brown clay	Undatable		
F1	2	Brick structure	Constructed out of unfrogged bricks laid in white mortar	Late 18th to 19th century		
F2	-	Concrete footing	-	Modern		







Fig 3 Representative sections.

Appendix 2 Hythe Quay: geoarchaeological observations

Introduction

These notes have been produced following provision of Test Pitting and Window Sampling logs, reported on by CGL and monitored (CGL 2021), Colchester Archaeological Trust's associated watching brief (CAT Sept 2021) and visits to the site to observe further geotechnical investigations of boreholes (25/11/21) and the i2 Analytical Ltd laboratories at Watford (15/12/21) to examine samples taken for geotechnical testing. Unfortunately due to illness no drilling was being undertaken on the visit to Colchester on the 25th, although some samples from window sampling were available to the author at i2 Analytical Ltd.

Data available to the author is as follows:

- Archaeological monitoring and a geoarchaeological investigation on land at Hythe Quay, Colchester, Essex, CO2 8JP, September 2021, CAT 2021
- Information from the British Geological Survey (BGS) Geology of Britain viewer.
- Borehole, window sample and test pit logs from the Hythe Quay, Colchester Geotechnical and Geoenvironmental Interpretative Report Rev 1 October 2021 (CGL 2021)
- Hythe Quay, Colchester Geotechnical and Geoenvironmental Interpretative Report Rev 2 January, 2022 (CGL 2022)
- Samples recovered from i2 Analytical Ltd.

Following review of the above and site observations following the site visit of 25th November it was noted to the client that the underlying gravels look to have large quantities of Early and Middle Pleistocene gravels reworked into them and are probably late Devensian in age but there appears to be little in the way of contained material suitable for dating.

It was also noted that BH 3 seems to indicate about 3m of made ground (quantities of red brick debris) over perhaps 1.5m of grey silts/sand/clays above a relatively well rounded, poorly sorted gravel. It was suggested that there might be some intact Holocene sediments that may be worth assessing for contained palaeoenvironmental material (see below). There was no sign of any organic rich material or shell that might be suitable for 14C dating.

The Rev 2 Geotechnical and Geoenvironmental Interpretative Report includes the following:

5.2 Made Ground

Made Ground was encountered in all exploratory hole locations to a maximum depth of 3.0m bgl and generally comprised very loose to dense dark grey, greyish brown, reddish brown, yellowish grey and

brown clayey silty gravelly sand to silty sandy gravel; and firm grey, red and brown sandy gravelly clay.

Gravel was of flint, brick, concrete, asphalt, ceramic tile, charcoal, shell fragments and chalk. Frequent roots and rootlets, and frequent to occasional cobbles of brick, concrete, chalk and asphalt were noted.

Rare claystone, slag, quartz gravel, glass fragments, oyster shells, shell fragments, animal bones and metal fragments were noted. A geotextile membrane was noted within the Made Ground between 0.3m bgl and 1.0m bgl in locations TP1, TP2, TP3, TP4 and WS2, across the centre of the site. In borehole BH02, occasional boulders of concrete and rare wood were noted. In boreholes WS2 and WS4, dense white mottled black gravelly chalk silt was noted. 50mm of concrete hardstanding was encountered in borehole WS1 at the surface and further concrete between 0.45m bgl and 0.6m bgl; and a 150mm thick concrete layer was encountered at 2.0m bgl in trial pit TP4...

5.3 Made Ground – Reworked Alluvium

Made Ground comprising Reworked Alluvium was encountered in locations TP1, TP3, TP5, WS1, WS2, WS5, WS6, BH04 and BH05 beneath the Made Ground to a maximum depth of 4.5m bgl. This stratum generally comprised very soft to firm dark grey, grey, reddish brown and dark greyish brown with black mottling sandy gravelly clay. The gravel comprised flint, chalk, brick, concrete, oyster shells and ceramic tile.

Black staining and a hydrocarbon odour were noted in TP1 and TP3; black staining and an organic odour were noted in TP3 and TP5...

5.4 Made Ground – Reworked River Terrace Deposits

Made Ground comprising Reworked River Terrace Deposits was encountered in borehole WS2 only to the base of the borehole at 5.0m bgl, underlying Reworked Alluvium. The stratum comprised medium dense greyish brown very clayey slightly sandy gravel. The gravel was of flint, ceramic and brick.

5.5 Alluvium

Alluvium was encountered below the Made Ground to a maximum depth of 4.5m bgl. It was not encountered in boreholes WS2, WS4, WS5, WS6 and BH05, where either Reworked Alluvium was encountered instead, or the exploratory hole terminated within the Made Ground. The stratum generally comprised soft grey, bluish grey with black mottling silty clay.

Occasional small pieces of wood, lignite fragments and decomposing organic fragments; and occasional to frequent shells and shell fragments were noted. In borehole BH02, a band of silty very sandy gravel overlying a band of very soft dark grey to black silty sandy very gravelly clay was recorded. An organic odour was frequently recorded."

These results do not indicate the presence of peat below the site itself.

Results

The following samples from the initial GI were available to the author and are currently in the authors possession:

WS 1, 1.8m WS 2, 1.6m WS 5, 2.5m WS 6A, 1.1m WS 6A, 3.5m

TP 1, 1.8m TP 3, 1.1m TP 4, 2.8m

According to the draft logs this represents the following above the London Clay:

WS 1, 1/8 samples WS 2, 1/8 samples

WS 3, 0/8 samples WS 4, 0/8 samples WS 5, 1/8 samples WS 6, 0/9 samples BH 1, 0/10 BH 2, 0/16

TP 1, 1/7 samples TP 2, 0/6 samples TP 3, 1/6 samples TP 4, 1/6 samples TP 5, 0/6 samples

Of the samples in the pots the following is noted:

WS 1,1.8m. A grey clay-silt with wood fragments.
WS 2, 1.6m. Yellow brown sandy clay with organic fragments and possibly coal.
WS 5, 2.5m. Dear grey clay with clasts of flint.
WS 6A, 1.1m. Mixed gravel and clay-silt. Probably made ground.
WS 6A, 3.5m. Grey clay-silt with gravel clasts.
TP 1, 1.8m. Grey clay-silt.
TP 3, 1.1m. gravel with brown clay-silt matrix and common shell fragments.
TP 4, 2.8m. Grey clay-silt.

It is difficult to be definitive about the material. While it is clear that there is material that could be dated, e.g. shells are noted in places (e.g. WS 3) and in WS 1, 1.8m this is a disturbed sample and it would be difficult to say much about the context of the organic material.

On the basis of the data from the site a north-south transect has been drawn up (Figure 1). This shows that the London Clay surface is between -2m and -3m O.D. Overlying the bedrock surface a thin unit of gravel or sands and gravel is present that attains a maximum thickness of around 2.5m in BH 01. The upper surface of this sand and gravel between 0m and -1m O.D. Fine grained clay/silt dominated sediments overlie the gravels and never exceed 3m in thickness. In one borehole (02) sands replace the clay/silts above the gravels.

For comparison a transect perpendicular to that in Figure 1 has been drawn up from borehole logs held by the BGS (Figure 2). This transect shows that the bedrock surface undulates from around -5m O.D. in the west dropping to below -13m O.D. before rising to around 0m O.D. to the east. The thickness of the sands and gravels overlying the bedrock but in places attain thickness' of 8m or more (e.g. TM02SW62). Complexity in the gravels are also noted with finer grained silts/clays present within the gravels in TM02SW68. Fine grained clay/silt units overlie the gravels between c. -2m O.D. and 2m O.D. In some places these deposits shown by the BGS beyond the site contain peat (e.g. TM02SW64).

This evidence from the wider area suggests that a body of fine grained clay/silt dominated sediments is present between the made ground and the gravels. This body of sediment contains organic material including shells in places and is probably the Holocene alluvium beneath the modern floodplain of the river. The presence of organic material indicates that pollen and plant remains may be well preserved in places and suitable for radiocarbon dating; although this would have to be on shells (no peat has been recovered in any boreholes drilled at the site). The fine grained nature of the sediments also means they are probably suitable for Optically Stimulated Luminescence (OSL) dating. At present there is no indication of when in the Holocene this sequence of deposits accumulated.

The gravels beneath the alluvium probably date to the late Pleistocene (perhaps between 30,000 and 10,000 years B.P). These deposits in the site area (Figure 1) are typically thinner and at higher

elevations that those across the full width of the floodplain (Figure 2). This may suggest the sequences are of different ages.

MRB

20/12/21



Figure 1. Transect through site based on geotechnical data.



Figure 2. Transect across floodplain based on British Geological Survey geotechnical data (inset shows positions of borehole records – from Geology of Britain viewer, British Geological Survey).

Appendix 3 Hythe Quay, Colchester: Geotechnical and Geoenvironmental Interpretative Report - Rev2



Beyond the Box Developments Ltd

Hythe Quay, Colchester

Geotechnical and Geoenvironmental Interpretative Report – Rev 2

January, 2022

Card Geotechnics Limited 4 Godalming Business Centre Woolsack Way, Godalming GU7 1XW Telephone: 01483 310600 www.cgl-uk.com









8403	8	8	
<u>á</u>	븅	3	·
			Superficial deposits
×	<u> </u>	E 🚟 ***	(Made Ground,
Dance o	<u> </u>		Terrace)
	Č (* -		
- Y	in the second se	GAR 1 MA	DE GROUND- REAL A
1 INVER 1	X00	oimi (avi	a Théorea
<u> </u>	x		London Clay and
<u>_ V</u>		NDON CLAY	Mudstone. Mudstone shown as
LONDA	1.1	NDON CLAY	solid blue blocks.
FORMATIC Multiple	CLAF [LD DN - FOI D - MI	NDON CLAY MARTICIN - PETONE)	4
LAF N			·
			Lambeth Group –
GROUP]			Cidys driu Sanus.
			*
			*
			*
			*
			*
			4
al distanc	ces are	e not to	
			*
			*
48.65	48.89	55.74	
3.700	5.700 1	3.775	
0.37	3.91	2.74	
	Job No)	
			CG/38709
			Figure 3

Project T	itle: Hyt	the Quay,	Colchester					S	Status: Location ID											
Cl	ient: Bey	/ond the	Box Developments	Limite	ed			FI	INAL			BHO)1				GL			
From (m)	To (m)	Type	Plant Used	Strike	(m) Tin	nawai	Rose	To Location Ty	vpe: Cabl	e percuss	sion (shel	l and aug	er)							
0.00	1.20	IP	Hand Dug	2.5	0	-	-	Coords: 60	1519.83	DE/22443	39.910N	Level:	3.400m	1	4 God	a Geotechnics Ialming Busine	Limited, ss Centre,			
1.20	13.00		Dando 150	6.0	0	20	5.0	Ordnance Su	irvey Grea	t Britain	Final	Donth	12.0	0 m	1	Woolsack Wa Godalming	ау,			
					National Grid									Surrey,	,					
								Orientatio	n:	0°	Incli	nation:	90)°		www.cgl-uk.c	om			
								Date Star	rt: 20/0	05/2021	Da	te End:	21/05,	/2021		Sheet 1 of	2			
	Sa	mples & Tes	its	Water Level	Legend /Cover	Strata Depth	Level (m)				Strata	Description					Inst/ Depth Backfill (m)			
Sample Depth (m)	Type/ Ref	1	ēsts/Results	(m)		(m)	()													
0.20	D 1						-	Very loose dark to subrounded o	brown silt of flint, bri	y gravelly ck and cor	sand. Sand Icrete. Free	l is fine to quent root	coarse. G	Gravel is f otlets and	ine to coar I occasiona	se angular I				
0.50	D 2						-	subrounded cob	ubrounded cobbles of brick and concrete noted. MADE GROUND]											
0.50 - 1.00	B 3						-	INIADE GROUNL												
1.00	D 4						-													
							-													
1.50 - 1.95	SPTLS 5	SPT(C) 1	.50m N=1 (1.0/0.0.0.1)				-													
1.50 - 2.00	B 6		Ublows=1				-	1.50m bgl b	ecoming c	layey with	h rare rootl	lets and co	obbles.							
2.00	D 7					2.00	1.40									-	2			
							-	Very loose dark coarse subangul	brown cla ar to roun	yey silty ve ded of flin	ery gravelly nt.	y SAND. Sa	nd is fine	e to coars	e. Gravel is	s fine to				
2.50 - 2.95	SPTLS 8	SPT(C) 2	.50m N=0 (1,0/0,0,0,0)				-	[RIVER TERRACE	DEPOSITS	5]										
2.50 - 3.00	B 9		Ublows=0		 		-													
3.00	D 10						-										3 —			
					× × –		-													
3.50 - 3.95	SPTLS 11	11 SPT(C) 3.50m N=1 (1,0/0,0,1,0)																		
3.50 - 4.00	B 12		Ublows=1		Ŷ×,		-	Very loose to me to rounded of fli	edium den nt. Sand is	se grey sli fine to co	ightly sand barse.	y silty GRA	AVEL. Gra	ivel is fine	e to coarse	subrounded				
4.00	D 13			[RIVER TERRACE DEPOSITS]																
					×××		-													
4.50 - 4.95	SPTLS 14	SPT(C) 4.	50m N=25 (3,4/5,6,7,7)		× × × ,		-													
4.50 - 5.00	B 15		Ublows=25		×××		-													
5.00	D 16				××、		-										5 —			
					×××、		-	5.00m bgl b	ecoming s	andy.										
5.50	D 17	ĺ			× × ,	5.50	-2.10	<u> </u>									_			
					×— - - ×		-	decomposed roc	otlets note	LAY. Sand d.	i is fine to c	coarse. Rar	re subrol	unded gra	ivel of flint	and				
6.00	D 18	SPT(S) 6.00r	m N=37 (18,10/10,8,9,10)		~ 	6.00	-2.60	[RIVER TERRACE	DEPOSITS	5]		and is fine					6			
6.00 - 6.45	SPTLS 19	ĺ	Ublows=37		(-	LONDON CLAY F	ORMATIC	N]	iyey sili. Sa	and is line.	•							
6.50 - 7.00	B 21	SPT(C) 6.5	50m N=22 (20,8/8,4,4,6)		(×××	6.50	-3.10	Medium strong		STONE							-			
6.50 - 7.00	SPTLS 20	ĺ	Ublows=24				-	[LONDON CLAY F	ORMATIC	N - MUDS	STONE]									
7.00	D 22				<u>^</u>	7.00	-3.60	Stiff grov silty vo	ry sandy (har Sand	is fine						7			
					×		-	[LONDON CLAY F	ORMATIC	N]	is fille.									
7.50 - 7.95	U 23		Ublows=17		×		-										-			
					×		-													
8.00	D 24	ĺ			×		-										8 —			
					×		-													
					×		_										-			
					×		-													
9.00	D 25	SPT(S) 9.0	00m N=19 (3,4/4,5,5,5)		×		-	9 00m hal h	ecomina c	oranae hra	wn in colo	ur					9 9			
9.00 - 9.95	SPILS 26	ĺ	Oblows=19		×		-	5.00m bgi b	cconnig c	ange bro										
		ĺ			×— –		-													
		ĺ			×		-													
10.00	10.00 D 27 Strata continues onto next page																			
Notes:									Hole D	iameter	Cas	sing	Han	nmer Infori	mation	Scale:	1:50			
1. Borehole	ehole terminated at 13.0m bgl as unable to advance casing beyond 9.0m bgl and water struck at 13.0m bgl Depth Diam Depth Diam Energy Ratio Serial No. Logged By:												ALP							
2. Groundwa	ater strikes	encounterer Dicture	at 2.5m bgl, 6.0m bgl a	nd 13.0n	n bgl.	tandrul	Donot'	ion Tort Lines	1.20	300	7.00	200	75%	6	AR3276	Checked By:	HRG			
Sample. N =	Standard P	enetration T	inple. u = undisturbed : fest 'N' Value.	oample. S	381125 = S	andard	renetrat	colomic surveying	7.00	200	9.00	150	Insta	II Response	e Zones	Approved By: Section ID:	RJB			
4. installatio 5. No visual	or olfactory	.om to 13.0r y evidence o	if contamination noted.	pipe with	ı grout se	ai íor do	wn-nole	seismic surveying.					Ref	From (m)	To (m)	CGL Ref	ference			
ь. Une hour 7. Borehole	spent chise located 0.9	m from rive	through mudstone layer. r wall.							Lihet			CG/3	8709						

Project 1	Project Title: Hythe Quay, Colchester							St	atus:		Lc	ocatior	n ID				
Cl	ient: Be	yond the	Box Developments	Limit	ed			FI	NAL			вно	1			GL	
	Metho	od and Pla	ant Used		Grou	undwat	er		ne: Cahl	e nercus	sion (shell an	d aug	er)				
From (m) 0.00 1.20	To (m) 1.20 13.00	Type IP CP	Plant Used Hand Dug Dando 150	Strike	e (m) Tii 00	me (min) 20	Rose 1	Coords: 60	1519.83	0E/2244	39.910N L	evel:	3.400m	Car 4 Goo	d Geotechnics I dalming Busines	Limited, ss Centre,	
								Ordnance Su National Grid	rvey Grea	t Britain	Final Dep	oth:	13.00 m		Godalming,	ıy, ,	
						Orientation: 0° Inclination: 90°								GU7 1XW			
								Date Star	: 20/	05/2021	Date E	nd:	21/05/2023	1	Sheet 2 of	f 2	
	Sa	amples & Te	sts	Water	Legend	Strata	Level				Strata Desc	ription		I		Inst/ Depth	
Sample Depth (m)	Type/ Ref	-	Tests/Results	(m)	/cover	(m)	(11)									backini (iii)	
					× 		-	Stiff grey silty ver [LONDON CLAY F	y sandy (ORMATIC	CLAY. Sano DN]	d is fine.						
10.50 - 10.95	U 28		Ublows=19		×	10.50	-7.10	between 10.	00m and	10.50m b	ogl rare fine gra	vel of r	nudstone not	ed.		-	
10.50 - 11.00	B 29				× 		-	LAMBETH GROU	rown clay IP - READ	ING FORM	MATION]	ie. Kare	e purpie and g	green mottling	, noted.		
11.00	D 30				× 		-									11 —	
					× ×		-										
					× ×		-									-	
					× ×		-										
12.00 12.00 - 12.45	D 31 SPTLS 32	SPT(S) 12	2.00m N=18 (2,3/4,5,4,5) Ublows=18		×_×		-									12 —	
					×		-										
					× 		-										
13.00	D 33				~ X	13.00	-9.60									13	
							-	EOH at 13.00m -	Terminat	ed due to	o inability to pro	ogress o	casing and res	ulting collapse	of borehole		
							-									-	
							-										
							-									14 —	
							-										
							-									-	
							-										
							-									15 —	
							-										
							-									-	
							-									16	
							-									10	
							-									-	
							-										
							-									17 —	
							-										
							-									-	
							-										
							-									18 —	
							-										
							-									-	
							-									10	
							-									19 -	
							-										
							-										
]									20 -	
Notes:									Hole D	iameter	Casing		Hammer II	nformation	Scale	1:50	
1. Borehole	terminated	at 13.0m b	gl as unable to advance c	asing be	eyond 9.0	m bgl and	water st	ruck at 13.0m bgl	Depth	Diam	Depth D	Diam	Energy Ratio	Serial No.	Logged By:	ALP	
resulting in 2. Groundw	collapse of ater strikes	tne borehol encountere	ie. ed at 2.5m bgl, 6.0m bgl a	nd 13.0	m bgl.				(m) 13.00	(mm) 150	(m) (r	mm)	75%	AR3276	Checked By:	HRG	

 Groundwater strikes encountered at 2.5m bgl, 6.0m bgl and 13.0m bgl.
 B = Bulk Sample. D = Disturbed Sample. U = Undisturbed Sample. SPTLS = Standard Penetration Test Liner Sample. N = Standard Penetration Test 'N' Value.
 Installation details: 0.0m to 13.0m plain 50mm diameter pipe with grout seal for down-hole seismic surveying.
 No visual or olfactory evidence of contamination noted.
 One hour spent chiselling to get through mudstone layer.
 Borehole located 0.9m from river wall. Approved By: RJB Install Response Zones Section ID: Ref From (m) To (m) CGL Reference Pipe1 CG/38709

Project T	itle: Hyt	he Quay,	Colchester					St	Status: Location ID											
Cl	ient: Bey	ond the	Box Developments	s Limit	ed			FI	NAL			BHC			GI	L				
From (m)	To (m)	Type	Plant Used	Strike	Grou	undwa me (min)		To Location Ty	pe: Cabl	e percuss	sion (shel	l and aug	jer)							
0.00	1.20	IP	Hand Dug	4.5	50	20	4.3	0 Coords: 60	1531 /20)E/22/13(1 400N	ا میرما	3 700m		Carc 4 God	l Geotechnics I alming Busine:	Limited, ss Centro	e,		
1.20	8.50	СР	Dando 150	7.0	50	20	5.0	0 Ordnance Su	rvev Grea	t Britain	1.4001		5.70011			Woolsack Wa	ay,			
								National Grid	1	Dificulti	Final	Depth:	8.50 m			Godalming, Surrey,				
								Orientatio	n:	0°	Incli	nation:	90°			GU7 1XW	h			
								Date Star	t: 17/0)5/2021	Da	te End:	18/05/202			Shoot 1 of	1			
	Sa	mples & Tes	its	Water	Legend	Strata	Level				Strata	Description				SHEELIN	Inst/	Depth		
Sample	Type/	1	Fests/Results	Level (m)	/Cover	Depth (m)	(m)										Backfill	(m)		
Depth (m)	Ref			. ,				Very loose dark	grey silty g	ravelly sa	nd. Sand is	s fine to co	arse. Gravel is	fine to	coarse	angular to		_		
0.20	D 1							rounded of brick	, asphalt a	ind concre	ete. Freque	ent rootlet	s; occasional s	ubangu	ilar to s	ubrounded		-		
0.50	D 2							pieces of wood r	noted.				guiai bouldeis	OI COIN	ciele, a	nu rare		_		
0.50 - 1.00	B 3						-	[MADE GROUND	ADE GROUND] 0.80m bgl becoming clayey with cobbles becoming rare and boulders absent.											
1.00	D 4							0.80111 by1 b												
1.00	1.5 2																			
1.50 - 1.95	SPTLS 5	SPT(S) 1.	50m N=0 (1,0/0,0,0,0)					-										-		
1.50 - 2.00	B 6		Ublows=0				-											-		
2.00	D 7					2.00	1.70							<i>c</i> :				2		
					× × ×	×		very loose dark rounded of flint.	grey silty g Occasion	ravelly SA al small pi	ND. Sand eces of wo	is fine to c ood noted.	oarse. Gravel i	s fine si	ubangu	lar to		-		
2.50 - 2.95	SPTLS 8	SPT(S) 2.	50m N=0 (1.0/0.0.0.0)		××××	×		[RIVER TERRACE	DEPOSITS]								-		
		o (o)	Ublows=0		××××	×	_	2.50m bgl b	ecoming c	layey.								-		
2.00					××××	×												-		
3.00	0.5				× × ×	×		between 3.0	0m and 3	50m bgl b brounded	band of gre	ey silty ver	y sandy GRAV	EL. Grav	vel is fin	ne to		-		
					× × ×	×		, inculant ang	jului to su	biounaca	0) jiint. 50	ind is jine	10 000130.					-		
3.50 - 3.95	SPTLS 10	.0 SPT(S) 3.50m N=1 (1.0/0,0,0.1) Ublows=1 between 3.50m and 4.00m bgl band of very soft dark grey to black silty sandy very													-					
					×××	×		gravelly CLA coarse.	Y. Gravel i	s fine to m	nedium an	gular to su	ibrounded of f	lint. Sar	nd is fin	e to		-		
4.00	D 11				× × ×	×												4		
					× × ×	×												-		
4.50 - 4.95 4.50 - 5.00	SPTLS 12 B 13	SPT(S) 4.	50m N=2 (1,0/0,0,1,1) Ublows=2		× ×	× 4.50	-0.80	Very loose dark	grey silty v	ery sandy	GRAVEL.	Gravel is fi	ne to coarse a	ngular t	to subro	ounded of		_		
					×××	×	-	flint. Sand is fine	to coarse	. Rare sub	rounded c	obbles of	flint noted.					-		
5.00	D 14				× × · · ·	> 5.00	-1.30	Firm orange sligh	ntly sandy	silty CLAY	. Sand is fi	ne to coars	se.					5 —		
								[LONDON CLAY F	ORMATIC	N]								-		
																		_		
					×_×	-	-											-		
6.00	D 15	SPT(S) 6.0	00m N=15 (2,3/3,3,4,5)		X			6 00m hal h	ecomina c	ranae hra	wn in colo	ur						6 —		
6.00 - 6.45	SPTLS 16		Ublows=15		×_×	-		0.00111 by b	econning c	runge bro		ui.						-		
																		-		
					×_×		-											-		
7.00	D 17				×_×	-												7		
					×_×		-											-		
7 50 - 7 95	11.18		Liblows-17		× ×	7.50	-3.80											-		
7.50 - 8.00	B 19		0010003-17		×		_	Firm brown silty	sandy gra	velly CLAY	. Gravel is	fine to coa artially de	arse subangula	r to sub	orounde oted	ed of		-		
0.00	0.20				×			[LONDON CLAY F	ORMATIC	N]	p	yuc						• -		
6.00	U 20				×		4.00	8.00m bgl b	ecoming v	ery gravel	lly.							-		
						× 8.30	-4.60	Very strong brow	vn MUDST	ONE. Occ	asional ora	ange veinir	ng noted.					-		
8.50 8.50	B 22 SPTLS 21	SPT(C) 8.50	m 50 (25 for 0mm/50 for 0mm)					[LONDON CLAY F	ORMATIC	N - MUDS	5TONE] 3.50m - Tei	rminated o	due to refusal					-		
8.50	5P1L5 25		Ublows=50					-										-		
																		9		
							-													
					I			J										10 -		
Notes:									Hole D	ameter	Ca	sing	Hammer I	nformati	on	Scale:	1:50			
1. Borehole	terminated	at 8.5m bgl	due to refusal on muds	tone.					Depth	Diam	Depth	Diam	Energy Ratio	Seria	il No.	Logged By:	ALF	>		
2. Groundwa 3. ES = Envir	onmental S	ample. B = E	u au 4.5m bgi and 7.6m l Bulk Sample. D = Disturb	ed Samp	ole. U = Ui	ndisturbe	ed Samp	e. SPTLS = Standard	1.20	300	8.50	200	75%	AR3	276	Checked By:	HRC	G		
Penetration 4. Installatio	iest Liner S n details: 0	ample. N = : .0m to 8.5m	Standard Penetration Te plain 50mm diameter p	st 'N' Va vipe with	iue. I grout sea	al for dov	vn-hole	seismic surveying.	8.50	200			Install Resp	ionse Zoi	nes	Approved By:	RJE	3		
5. No visual 6. Two hours	or olfactory s spent chis	/ evidence o elling to get	t contamination noted. through mudstone laye	r.									Ref From	(m) 1	Го (m)	CGI Ref	erence			
7. Borehole	located 1.0	m from rive	r wall.							Pipe1			CG/3	8709						

Project T	itle: Hyt	the Quay,	Colchester					St	atus:			Locatio	on ID					_
Cl	ient: Bey	ond the	Box Development	s Limite	ed			DF	RAFT			BHC)3				G	
	Metho	d and Pla	ant Used		Grou	ndwat	er	Location Tv	ne: Cable	nercus	sion (shell	landau	ver)					_
From (m)	To (m)	Type IP	Plant Used Hand Dug	Strike	(m) Tin D	ne (min)	Rose -			, percus	sion (sirei		ser)		Caro	d Geotechnics	Limited	,
1.20	25.00	СР	Dando 150	7.50	D	5	2.50	Coords: 60	1519.090)E/22439	97.030N	Level:	3.300m		4 600	Woolsack W	ay,	e,
								Ordnance Su National Gric	rvey Grea [.] I	: Britain	Final	Depth:	25.00 ı	n		Godalming	,	
								Orientation	 י.	0°	Incli	nation	90°			GU7 1XW		
								onentation				nation.			-	www.cgl-uk.c	om	
								Date Star	t: 23/2	1/2021	Da	te End:	26/11/20)21		Sheet 1 of	3	
	Sa	imples & Tes	sts	Water Level	Legend /Cover	Strata Depth	Level (m)				Strata	Description					Inst/ Backfill	Depth (m)
Sample Depth (m)	Type/ Ref	I I	Fests/Results	(m)	,	(m)	()											()
0.20	D1						-	Loose orange bro	own silty v	ery grave	lly sand. Sa	and is fine	to coarse. O	Gravel	is angular t	10		
0.20							-	rootlets noted.	to coarse	OT Drick, (concrete, a	sphait and	d rare flint, i	extile	and plastic	. Occasiona i		-
0.50 0.50 - 1.00	D 2 B 3						-	[MADE GROUND]									-
							-	0.30m bgl fr	equent su	brounded erv claves	cobbles of	brick noticed	ed. c noted					-
1.00	D 4]	0.00111 by b	conning v	ciy ciayey	, with grav	cr of criain	noteu.					1
1.00							-											-
1.50 - 1.95	U 5		Ublows=16				-											-
							-											-
2.00	D6						-											2
2.00							-											
				-			-											-
2.50 2.50 - 2.95	EW1 SPTLS 7	SPT(S) 2.	50m N=3 (3,2/1,1,0,1) Ublows=3				-	2.50m bgl be	ecoming g	rey in colo	our with ra	re black n	nottling.					-
						2.80	0.50	Soft grey with ra	re black m	ottling sli	ghtly sand	v slightly g	ravelly CLA	. Grav	el is angula	ar to		-
3.00 3.00	D 8 ES 8						-	subrounded fine	to coarse	of flint ar	nd brick. Sa	nd is fine	to coarse.					3 —
							_	[ALLUVIUM]										-
3.50 - 3.95	U 9		Ublows=50				-											_
							-											-
4.00	D 10					4.00	-0.70											4
4.00	ES 10						-	Medium dense g flint. Sand is fine	rey slightl to coarse	y sandy G	RAVEL. Gra	avel is sub	angular to r	ounde	d fine to co	oarse of		
							-	[RIVER TERRACE	DEPOSITS]								1 1
4.50 - 4.95 4.50 - 5.00	D 11 B 12	SPT(C) 4.	50m N=23 (2,3/3,5,7,8) Ublows=23				-											
							_											
5.00	D 13				<u> </u>	5.00	-1.70	Firm dark greyish	n brown si	lty CLAY.								5
					<u>×_×</u> _		-	[LONDON CLAY F	ORMATIO	N]								
					<u>×_×</u>													-
					<u>×_×</u>		-											
6.00	D 14	SPT(S) 6.0	00m N=16 (2,2/3,3,4,6)		<u>×_×</u>		-											6
6.00 6.00 - 6.45	ES 14 SPTLS 15		Ublows=16		<u>×</u> ×		-											
					_ <u>×</u>		-											1]
					_ <u>×</u>		-											1 1
					$\frac{1}{2} \times$		-											
7.00	D 16				<u>× </u>			between 7.0	0 and 7.8	Om bgl fre	quent sub	angular to	subrounde	d fine	to coarse g	ravel of		
					<u>×</u>		_	muastone no	otea.									
7.50 - 7.95 7.50 - 8.00	U 17 B 19		Ublows=30		×		-											
					×	7.80	-4.50	Week grey MUD										
8.00	D 18				— <u>—</u>	8.00	-4.70	LONDON CLAY F	ORMATIO	N - MUDS	STONE]					/		8-
0.00	0.20				×		-	Firm dark greyish	h brown si	Ity CLAY.								-
					<u>×_^</u> _		-		UNIVIATIO	N]								-
					<u>×_</u> _		-											-
0.00 0.45	CDTIC 21	SPT(S) O (00m N=15 (1 2/2 4 4 5)		<u>×_</u>		-											-
9.00 - 9.45	3P1L3 21	5P1(5) 9.0	Ublows=15		×		-	between 9.0	0 and 13.	00m bgl si	lightly sand	dy. Sand is	fine.					
					<u>×_×</u> _		_											-
					<u>×_×</u>		4											
					<u></u>		-											
10.00	D 22	I		ł		J	1			Stra	ata continu	ies onto n	ext page					10 -
Notes:									Hole Di	ameter	Cas	sing	Hamme	er Infori	mation	Scale:	1:50	
1. Borehole	terminated	l at 25.0m bį	gl.						Depth	Diam	Depth	Diam	Energy Rati	0 9	Serial No.	Logged By:	AL	Р
2. Groundwa 3. B = Bulk S	ater strikes ample. D =	encountere Disturbed S	d at 3.7m bgl, 7.5m bgl ample. U = Undisturbed	and 22.5m Sample. S	n bgl. SPTLS = S	tandard I	Penetrati	on Test Liner	(m) 1.20	(mm) 300	(m)	(mm)	75%		AR3276	Checked By:	RJ	В
Sample. N = 4. Installatio	Standard P	enetration T	fest 'N' Value. I plain 50mm diameter r	ipe with I	bentonita	seal 4.0)m to 8 0	m slotted 50mm	1.20	200			Install R	esponsi	e Zones	Approved By:	PJ	s
diameter pi	pe with grav	vel filter, 8.0	m to 10.0m bentonite s	eal, 10.0m	n to 25.0r	n backfill	led with a	arisings.					Ref Fr	om (m)	To (m)	Section ID:		
5. NO VISUAL 6. No chisell	or offactory ling require	y evidence o d.	i contamination noted.										Pipe1	4.00	8.00	CGL Re	terence	3
																CG/3	8709	

Project T	itle: Hyt	the Quay,	, Colchester					SI	tatus:			Locatio	n ID				
Cl	ient: Bey	ond the	Box Developments	s Limite	Grou	ndwat	or	DI	RAFT			BHC)3				GL
From (m)	To (m)	Type	Plant Used	Strike	(m) Tim	ne (min)	Rose To	Location Ty	pe: Cabl	e percus	sion (shel	ll and aug	er)		Corr	Controhning	limited
0.00	1.20	IP	Hand Dug					Coords: 60	1519.090	DE/22439	97.030N	Level:	3.300m	า	4 God	alming Busine	ss Centre,
1.20	25.00	CP	Dando 150					Ordnance Su	rvey Grea	t Britain	Final	Donth	25.0	0	-	Woolsack Wa Godalming	ау,
								National Grid	ł		Final	Depth:	25.0	UM	-	Surrey,	,
								Orientation	า:	0°	Incli	ination:	90)°		GU7 1XW www.cgl-uk.c	om
								Date Star	t: 23/2	11/2021	Da	ite End:	26/11	/2021		Sheet 2 of	3
	Sa	I Imples & Tes	sts	Water	Legend	Strata	Level				Strata	Description					Inst/ Depth
Sample	Type/	T	Tests/Results	Level (m)	/Cover	Depth (m)	(m)										Backfill (m)
Depth (m)	Nei				×_^_		- Fi	rm dark greyisl	n brown si	lty CLAY.							
					×_×_		[L	ONDON CLAY F	ORMATIC	N]							
10.50 - 10.95	U 23		Ublows=30		×_×_		-										- 1
					×_×_		-										
11.00	D 24				×]										11 -
					×		-										
					<u>×_×</u> _]										- 100
					<u>×_</u>		_										
12.00	D 25	SPT(S) 12	.00m N=14 (2,3/3,3,4,4)		<u>×_</u>		-										12 -
12.00 - 12.45	SP1L5 20		ODIOWS=14		<u>×_</u>		_										
					<u>×_</u> _		-										- 100
					<u>×_*</u> _]										
13.00	D 27				<u>×_*</u> _		-										13 -
					<u>×_*</u> _		_										
13.50 - 13.95	U 28		Ublows=35		×		-										- 100
13.50 - 14.00	B 29				×		-										
14.00	D 30				×_^_	14.00	-10.70										14
14.00	ES 30				×_^-		- St [L	iff dark orange AMBETH GROU	brown sli JP - READ	ghtly sand ING FORM	dy silty CLA /IATION]	AY. Sand is 1	fine to co	oarse.			
					×_^		-										. (%)
					×		-										
15.00	D 31	SPT(S) 15.	00m N=30 (2.4/4.6.7.13)		×		-										15
15.00 - 15.45	SPTLS 32		Ublows=30		× 		-										
					× 		-										
					×		-										
16.00	D 22				×		-										16 -
16.00	035				×			16.00m bgl	rare blue g	grey mott	ling noted.						
46.50 46.05			1111		×		-										
10.50 - 10.95	0 54		000005=100		×]										
					× 		-										
17.00	D 35				× 		-										17-
					×— –		-										
					~ 		-										
					X	18.00	-14 70										
18.00 18.00 - 18.45	D 36 SPTLS 37	SPT(S) 18.0	0m N=48 (4,7/6,12,14,16) Ublows=50				- D	ense dark oran	ge brown	silty SAN	D. Sand is f	ine.					18-
								AMBETH GROU	JP - READ		IATION						
							-										-
							-										
19.00	D 38						-										19 -
							-										
19.50 - 19.95	SPTLS 39	SPT(S) 19.5	0m N=48 (4,6/8,10,15,15) Ublows=48				-										-
							-										
20.00	D 40	l					1			Str	ata continu	ues onto ne	ext page				20 -
Notes:									Hole D	iameter	Ca	sing	Har	nmer Infor	mation	Scale:	1:50
1. Borehole	terminated	at 25.0m by	gl. d at 3.7m bol. 7.5m bol.	ind 22 5n	n høl				Depth (m)	Diam (mm)	Depth (m)	Diam (mm)	Energy	Ratio	Serial No.	Logged By:	ALP
3. B = Bulk S	ample. D =	Disturbed S	ample. U = Undisturbed	Sample.	SPTLS = SI	tandard P	enetration	Test Liner	15.00	200	15.00	200	759	6	AR3276	Checked By:	RJB
4. Installatio	n details: 0	.0m to 4.0m	n plain 50mm diameter p	ipe with	bentonite	seal, 4.0	m to 8.0m s	lotted 50mm	19.00	150	19.00	150	Insta	II Respons	e Zones	Approved By: Section ID:	PJS
aiameter pi 5. No visual	oe with grav or olfactory	vei filter, 8.0 y evidence o	n to 10.0m bentonite se of contamination noted.	aı, 10.0n:	1 to 25.0r	n packfille	ed with aris	mgs.			1		Ref	From (m)	To (m)	CGL Ref	erence
6. No chisell	ing require	d.											ripe1	4.00	8.00	CG/3	8709

Project 1	itle: Hy	the Quay,	, Colchester					Stat	tus:			Locatio	n ID				
C	ient: Bey	yond the	Box Development	s Limit	ed			DR/	AFT			BHC	3		// C	G	L
From (m)	To (m)	od and Pla	Plant Used	Strike	Grou	Indwat	ter Rose	Location Type	e: Cable	e percus	sion (shel	l and aug	er)				
0.00	1.20	IP	Hand Dug	22.	50	5	13.0	0 Coords: 6015	519 090	F/22430	N020 76		3 300m	Card 4 God	d Geotechnics Ialming Busine	Limited, ss Centr	e,
1.20	25.00	СР	Dando 150					Ordnance Surv	ev Great	t Britain			5.500111		Woolsack W	ay,	
								National Grid			Final	Depth:	25.00 m		Surrey,		
								Orientation:		0°	Incli	nation:	90°		GU7 1XW www.cgl-uk.c	om	
								Date Start:	23/1	1/2021	Da	te End:	26/11/202	ı 🕂	Sheet 3 of	3	
	Sa	amples & Tes	sts	Water	Legend	Strata	Level				Strata	Description				Inst/	Depth
Sample Depth (m)	Type/ Ref	-	Tests/Results	(m)	70000	(m)	(11)									Dackini	(111)
							-	Dense dark orange	brown	silty SANE	D. Sand is fi	ne.					
							-	LAMBETH GROUP	- READI	NG FURIV	IATION						
							-										-
						21.00	-17.70										
21.00 21.00 - 21.45	D 41 U 42		Ublows=100		×			Stiff dark orange b	rown slig	ghtly sand	dy silty CLA	Y. Sand is t	ine to coarse.				21 -
					×		-	21.00m bgl rai	re blue g	grey motti	ling noted.						
21.50	D 43				×		-										
					×		-										
22.00	D 44				×		-	22.00m bgl fre	equent b	lue mottli	ing and fin	e sand pai	tings noted.				22 -
					× 	22 50	-19 20										
22.50 - 22.95	5 SPTLS 45	SPT(S) 22.50	Im 50 (10,15/50 for 85mm) Ublows=50		×		-15.20	Very dense greyish	white w	vith rare o	orange mot	tling fine	SAND. Sand is	fine. Occasion	al fine		
							_	glauconite grains n [LAMBETH GROUP	oted. ' - READI	NG FORM	1ATION]						
23.00	D 46						-	between 23.00	0 and 24	.00m bgl	pale green	in colour.					23 —
							-										
							-										
							-										
24.00 24.00 - 24.45	D 47 SPTLS 48	SPT(S) 24.00	Im 50 (10,15/50 for 80mm) Ublows=50				-										24 —
							-										
							-										-
						25.00	21.70										
25.00	D 49					25.00	-21.70			EOH at	: 25.00m - /	Achieved t	arget depth			<u> ////////////////////////////////////</u>	25 —
							-										
							-										
							-										
							1										26 -
							-										
							-										
							-										
							-										27
							-										
							-										
							-										
							-										28
							-										
							-										
							-										. 29
							-										
							-										20
	•				-												30 —
Notes:	terminated	at 25 0m h	σl						Hole Di	ameter Diam	Cas Denth	ing Diam	Hammer II	formation	Scale:	1:50	
2. Groundw	ater strikes	encountere	d at 3.7m bgl, 7.5m bgl i ample 11 - Undisturbed	and 22.5	m bgl.	tandard	Penetrot	on Test Liner	(m)	(mm)	(m)	(mm)	750/	AP2776	Checked By:	RJI	3
Sample. N =	Standard F	Penetration	Test 'N' Value.	Sample.	bortrail		Om to 0.2	m clotted F0mm	25.00	100			/ 370	AR3270	Approved By:	PJS	\$
diameter pi	pe with gra	vel filter, 8.0	m to 10.0m bentonite s	eal, 10.0	m to 25.0	m backfil	lled with a	arisings.					Ref From	(m) To (m)	Section ID:		
6. No chisel	ling require	y eviaence c d.	n contamination noted.										Pipe1 4.0	0 8.00	CGL Re	terence	:

CG/38709

Project 1	itle: Hyt	the Quay,	, Colchester					S	tatus:			Locatio	n ID					
Cl	ient: Bey	yond the	Box Developments	s Limite	ed .			DI	RAFT			BHO)4				G	iL.
From (m)	Metho	d and Pla	ant Used	Striko	Grou	ndwat	er Boro ·	Location Ty	pe: Cabl	e percus	sion (shel	l and aug	er)					
0.00	1.20	IP	Hand Dug	4.0	0	- -	-	, Calandar CO	1512.22	, , , , , , , , ,	, TA E 10N	Lavali	2 700		Caro 4 Goo	d Geotechnics Ialming Busine	Limite	≥d, ntre
1.20	29.00	СР	Dando 150					Ordnanco Su	1515.220	JE/ZZ433	54.510M	Level:	3.700m		-	Woolsack W	ay,	,
								National Grid	d d		Final	Depth:	29.00	m		Godalming Surrey,		
								Orientatio	n:	0°	Incli	nation:	90°			GU7 1XW		
								Date Star	+. 29/	11/2021	Da	te End:	02/12/	2021		www.cgi-uk.c	:om	
				Wator	Logond	Strata	Lovel	Date Star	ι. <i>23</i> /.	11/2021	Strata	Description	02/12/	2021		Sheet 1 of	3	/ Dopth
Sample	Sa Type/	imples & les	its Tests/Results	Level	/Cover	Depth	(m)				Strata	Description					Backf	fill (m)
Depth (m)	Ref			(m)		(m)												¶
0.20	D 1						-	Very loose reddi brick. flint and ra	sh grey sil are chalk.	ty sandy g Sand is fin	ravel. Grav le to coarse	el is subar . Occasio	ngular to s nal rootlet	ubroun s and ra	ded fine to are partially	coarse of		
0.50							-	decomposed wo	od and no	dules of o	dark brown	silty clay	noted.					
0.50 - 1.00	B 3						-	[MADE GROUND	0]									-
							-	0.80m bgl g	ravel of ch	alk becon	ning freque	ent.						
1.00	D 4						-											1
						1.40	2.30	1.20m bgl b	ecoming v	ery clayey	Ι.							
1.50 - 1.95 1.50 - 2.00	D 5 B 6	SPT(C) 1	.50m N=2 (1,1/0,0,1,1)				-	Very soft dark br	own to bl	ack sandy	gravelly cla	ay. Gravel	is subang	lar to r	ounded fin	e to coarse		-
							-	decomposed wo	od noted.		130. 000031			Tootiet		any		
2.00	D 7						-											2
2.00	ES /						-	2.00m bgl b	ecoming s	lightly sar	ndy and slig	ghtly grave	elly with g	ravel of	brick beco	ming		-
2.50	EW1		Ublows=8				-	rare.										-
2.50 - 2.95	U 8						-											
3.00	D.9						-											3-
							-	3.00m bgl b	ecoming v	ery sandy	with a slig	ght organio	c odour no	ted.				
						3.50	0.20											
3.50 - 3.95	SPTLS 10	SPT(S) 3.	50m N=10 (1,1/0,1,4,5)		<u>×_×</u>		-	Firm dark brown	with rare	black mo	ttling silty s	sandy CLA	Y. Sand is	ine. Fre	quent part	ially		
				_	<u>X</u>			decomposed wo	od and a s	slight orga	inic odour	noted.						-
4.00	D 11					4.00	-0.30	[ALLUVIUM]					1	1.10				4
							-	Medium dense g Sand is medium	to coarse.	y sandy G Rare subi	RAVEL. Gra	avel is ang obbles of f	ular to rou lint noted	inded fi	ne to coars	e of flint.	١.	
4.50	ES 12	SPT(C) 4.	50m N=30 (3,5/6,7,8,9)				-		DEDOCITO	1							١H.	-
4.50 - 5.00	B 13						-	IRIVER TERRACE	DEPOSITS	-1								
5.00	D 14						-										١.H	5 -
							-										H	
							-										H	
						5.80	-2.10										H	
6.00	D 15		Ublows-29		<u>~ ~</u>		-	Firm dark greyis	h brown sl	ightly san	dy slightly	gravelly si	lty CLAY. G	ravel is	subangula	r fine of	Н	
6.00 - 6.45	U 16		0010ws-29		×		-	[LONDON CLAY F	ORMATIC	coarse. N]								
					X		-											
6.50 6.50 - 7.00	D 17 B 18				×		-											
					X	6.80	-3.10	Medium strong	dark grey I	MUDSTON	NE.							
7.00 7.00	D 19 ES 19	SPT(S) 7.00	m 50 (25 for 10mm/50 for 15mm)				-	[LONDON CLAY F	ORMATIC	N - MUDS	STONE]							7 —
7.00 - 7.10 7.00 - 8.00	SPTLS 20 B 21						-											
							-											-
							-											
8.00	D 22						-											8-
					<u> </u>	8.20	-4.50	Stiff dark grev si	ty CLAY w	ith occasio	onal fine sa	and partin	gs.					
					<u>×_</u>		-		., .				0-					- 8
					<u>×_</u>		-	LONDON CLAY F	ORMATIC	NJ								
9.00	52 0		Liblows=100		<u>×_</u>		-											
9.00 - 9.45	U 24 B 25		5510W3-100		<u>×</u>	9.20	-5.50											
5.00 - 5.00	525					9.50	-5.80	Weak dark grey		IE. N - MUDS	STONE1							
					×	5.50		Stiff dark grey si	ty CLAY w	ith occasi	onal fine sa	and parting	gs.					
					<u>×_×</u>		-	LONDON CLAY	ORMATIO	N]								
10.00	D 26	I	I			J I	1			Stra	ata continu	ues onto ne	ext page					10
Notes:									Hole D	iameter	Cas	sing	Hami	ner Infor	mation	Scale:	1:50	
1. Borehole	terminated	at 29.0m b	gl due to collapse of the	borehole					Depth	Diam	Depth	Diam	Energy Ra	itio :	Serial No.	Logged By:	. ,	ALP
2. Groundw 3. B = Bulk S	ater strikes Sample. D =	encountere Disturbed S	u at 4.0m bgl and 23.0m ample. U = Undisturbed	sample. S	SPTLS = S	tandard F	Penetrati	on Test Liner	(m) 1.20	(IIIIII) 300	(m)	(mm)	70%		AR3276	Checked By:	1	RJB
Sample. N = 4. Installatio	Standard P on details: D	Penetration Oual install, p	Test 'N' Value. Dipe 1: 0.0m to 4.0m plai	n 50mm (diameter	pipe with	n benton	ite seal, 4.0m to					Install	Response	e Zones	Approved By:		PJS
6.0m slotter 50mm diam	d 50mm dia Ieter pipe. 1	meter pipe 15.0m to 29	with gravel filter, 6.0m to .0m slotted 50mm diam	o 8.0m be eter pipe	ntonite s with grav	eal. Pipe el filter.	2: 0.0m	to 15.0m plain					Ref	rom (m)	To (m)	Section ID:	foron	
5. No visual 6. One hour	or olfactor	y evidence o elling to get	f contamination noted.		2								Pipe1 Pipe2	4.00 15.00	6.00 29.00	CG/3	870	9
		0 0										1				,		

Project T	itle: Hyt	the Quay,	Colchester					St	tatus:			Locatio	on ID				-
Cli	ent: Bey	ond the	Box Developments	Limite	d			DI	RAFT			BHC)4			G	L
	Metho	d and Pla	ant Used		Grou	ndwat	er	Location Tv	ne: Cabl	e nercus	sion (shel	landaug	ver)				_
From (m) 0.00	To (m) 1.20	Type IP	Plant Used Hand Dug	Strike ((m) Tin	ne (min)	Rose		pc. cubi	- /				Car	d Geotechnics	Limited	l, tro
1.20	29.00	СР	Dando 150					Coords: 60	1513.220	DE/22435	54.510N	Level:	3.700m	4 00	Woolsack W	/ay,	ie,
								Ordnance Su National Grid	irvey Grea d	t Britain	Final	Depth:	29.00 m		Godalming	Β,	
								Orientation	n.	0°	Incli	nation	90°		GU7 1XW	/	
										-					www.cgl-uk.	com	
								Date Star	t: 29/	11/2021	Da	te End:	02/12/202	21	Sheet 2 of	f 3	
	Sa	imples & Tes	sts	Water Level	Legend /Cover	Strata Depth	Level (m)				Strata	Description				Inst/ Backfil	Depth I (m)
Depth (m)	Ref		lests/Results	(m)		(m)											
				ļ	<u>×_^</u>		-	Stiff dark grey sil	ty CLAY w	ith occasi	onal fine sa	and partin	gs.				8 :
				-	<u>×_^</u> _		-	[LONDON CLAY F	ORMATIC	N]							8
10.50 - 10.95	SPTLS 27	SPT(S) 10.	50m N=19 (2,3/4,5,5,5)		<u>×_^</u> _		-										
					<u>×_^</u> _		-										
11.00	D 28				<u>×_^</u> _		-										11-
				ŀ	<u>×</u> _		-										
					<u>×_</u>		-										8 -
				ł	<u>×_×</u> _		_										
12.00	D 29		Ublows=100	F	×_×_		-										12 -
12.00 - 12.45	U 30			F	<u>×_×</u> _		-										
12.50	D 31			F	<u>×_×</u>		-										
				F	<u></u>		_										<u> </u>
12.00				ŀ	<u>×_×</u>		-										<u> </u>
13.00	0.32			ļ	<u></u>		-	13.00m bgl i	rare light	grey mott	ling noted.						2 13 -
					××		-										3
13.50 - 13.95	SPTLS 33	SPT(S) 13.	50m N=30 (2,4/6,8,8,8)	ł	<u> </u>		-	13.50m bgl i	becoming	sandy. Sa	nd is fine.						3 -
					_ <u>×</u>		-										
14.00	D 34			-	<u>^</u>	14.00	-10.30	Medium dense d	dark greyis	h brown S	SAND. Sand	d is fine.					14 -
							-	[LAMBETH GROU	JP - READ	ING FORM	1ATION]						
							-										- 1
				·			-										
15.00	D 35	SPT(S) 15.	.00m N=21 (1,2/4,5,6,6)	ŀ			-										15 —
15.00 - 15.45	SPTLS 36			-	×	15.20	-11.50	15.00m bgl (occasiona	l pale gree	en sand gro	ains noted					
				F	×		1	[LAMBETH GROU	JP - READ	ING FORM	1ATION]	rey mottin	ng siity clai.				
				F	×		_										
				F	×		-										
16.00	D 37				×		-										16
				ŀ	<u>×_^</u> _		-										
16.50 - 16.95	U 38		Ublows=100		<u>×_^</u> _		-										
					<u>×_*</u> _		-										
17.00	D 39			ŀ	<u>×_</u>		-										17 -
17.00	23.35				<u>×_</u>		-										
				F	×		-	17 50	hacamin	raddict '	rours is -	lour					-
				F	×			17.50m bĝi i	vecoming	reauisti D	UWII IN CO	ioui.					
18.00	D 40	SPT(S) 18.00	0m N=45 (4,7/7,10.13.15)	F	<u>×</u> _											$ \cdot $	18
18.00 - 18.45	SPTLS 41	,		F	×_×_		-									ŀΠ	
				F	<u>×_×</u>		-									F	
				-	<u>×_×</u>		-										
				ŀ	<u></u>		-										· -
19.00	D 42				<u></u>		-	19.00m bgl i	becoming	orange b	rown in col	lour.					19
				ŀ	<u>×</u>		-										
19.50 - 19.95	U 43		Ublows=100	ŀ	<u>×</u> _												; -
	1			ŀ			_										, .
20.00	D 44			ł]	1			C†r	ata contini	les onto p	ext page				
20.00 Notes:	ES 44								Hole D	iameter		sing	Hammer	Information	Scale	· 1·50	
1. Borehole	erminated	l at 29.0m b	gl due to collapse of the I	orehole.					Depth	Diam	Depth	Diam	Energy Ratio	Serial No.	Logged By	: A	.LP
2. Groundwa 3. B = Bulk S	iter strikes ample. D =	encountere Disturbed S	d at 4.0m bgl and 23.0m ample. U = Undisturbed	bgl. Sample S	SPTLS = S	tandard F	enetrati	on Test Liner	(m)	(mm)	(m)	(mm)	70%	AR3276	Checked By:	R	JB
Sample. N =	Standard P	Penetration T	Test 'N' Value.	50mm -	liamote-	nino use	henter	ite seal 4 0m to					Install Par		Approved By	<u>Р</u>	JS
6.0m slotted	50mm dia	meter pipe	with gravel filter, 6.0m to	8.0m be	ntonite s	eal. Pipe	2: 0.0m	to 15.0m plain					Ref From	n (m) To (m)	Section ID		
50mm diame 5. No visual e	eter pipe, 1 or olfactory	15.0m to 29. y evidence o	um slotted 50mm diame f contamination noted.	ter pipe v	with grav	ei filter.							Pipe1 4.	00 6.00	CGL Re	ferenc	e
6 One hour	spent chise	elling to get	through mudstone laver						1	1	1	1	I Pipe2 15	.00 29.00	1 CG/3	sx709	,

Project T	itle: Hy	the Quay,	, Colchester					St	tatus:			Locatio	n ID					
Cl	ient: Bey	yond the	Box Developments	Limite	ed			DI	RAFT			BHC)4				G	
From (m)	To (m)	Type	Plant Used	Strike	(m) Tir	ne (min)	Rose	To Location Ty	pe: Cabl	e percus	sion (shel	l and aug	er)		6		1.1	
0.00	1.20	IP	Hand Dug	23.0	00	-	-	Coords: 60	1513.220	DE/22435	54.510N	Level:	3.700m		4 God	lalming Busine	ss Centr	, re,
1.20	29.00	CP	Dando 150					Ordnance Su	rvey Grea	t Britain	Final	Dopth	20.00	m	-	Woolsack W Godalming	ay,	
								National Grid	ł		Filldi	Deptil.	29.00		-	Surrey,	,	
								Orientation	า:	0°	Incli	nation:	90°		-	www.cgl-uk.c	om	
								Date Star	t: 29/	11/2021	Da	te End:	02/12/2	021		Sheet 3 of	3	
	Sa	amples & Tes	sts	Water Level	Legend /Cover	Strata Depth	Level (m)				Strata	Description					Inst/ Backfill	Depth (m)
Sample Depth (m)	lype/ Ref		lests/Results	(m)		(m)												
					×		-	Very stiff orange [LAMBETH GROU	brown wi JP - READ	th occasic ING FORM	onal blue g 1ATION]	rey mottlir	ng silty CLA	ί.				
					×		-											
					× ×		_											
21.00	D 45	SPT(S) 21.0	00m N=50 (3,5/8,9,15,18)		<u> </u>		-	24.00										21
21.00 - 21.45	SPTLS 46				×_×		-	21.00m bgl i	blue grey	mottling b	ecoming f	requent.						
					<u></u>		-											-
					<u></u>		-											
22.00	D 47				×_×_		-											22 -
					×_*_		-											
22.50 - 22.95	U 48		Ublows=100		×		-											-
					×	22.80	-19.10											
23.00	D 49			▼			-	Very dense pale [LAMBETH GROU	greyish w JP - READ	hite SAND ING FORM	. Sand is fii 1ATION]	ne. Freque	ent dark gre	en gla	uconite gra	ins noted.		23 —
							-											
							-											-
							-											
24.00	D 50	SPT(S) 24.00	0m N=52 (3,8/10,13,15,14)				-	24.00m bal	freauent o	oranae bro	own mottlii	na noted.						24 —
24.00 - 24.43	5 50115 51						-	2 1100111 091)	, equence	in ange bre		ig notear						
						24.50	-20.80	Verv dense dark	green SAI	ND. Sand i	s fine.							
							-	[LAMBETH GROU	JP - UPNC	R FORMA	TION]							
25.00	D 52						-											25 -
							-											
25.50 25.50 - 26.00	U 53 B 54		Ublows=100				-										H	
							-											
26.00	D 55						-	26.00m bgl i	becoming	blue gree	n in colour	:						26 -
							-											
							-											
							-											
27.00 27.00 - 27.45	D 56 SPTLS 57	SPT(S) 27.0	00m N=35 (4,5/6,9,9,11)				-	27.00m bgl i	becoming	dense an	d sand bec	oming fine	e to mediun	1.				27 -
							-											
							-	27.50m bgl i	becoming	clayey wi	th medium	to coarse	sand.					
28.00	D 58						-											28 -
							-											
28.50 - 28.95	SPTLS 59							28.50m bgl (dark purp	le mottling	g noted.							
						29.00	-25.30											
29.00	D 60								EO	H at 29.00)m - Termir	nated due	to sides col	apsing	5			29 -
							-											
							-											
							-											
					-		-											30 —
Notes:	terminated	at 29 Om b	gl due to collance of the	horebold	2				Hole D	iameter Diam	Cas Depth	sing Diam	Hamm	er Infor	mation Serial No.	Scale:	1:50	p
2. Groundw	ater strikes	encountere	d at 4.0m bgl and 23.0m	bgl. Samplo	۱۹۹۵ - ۱۹	tandard	Penetrot	ion Test Liner	(m)	(mm)	(m)	(mm)	7/0/		ΔR3276	Checked By:	RJ	в
Sample. N =	Standard F	Penetration 7	Test 'N' Value.	50mm	diameter	nine wit	h berter	nite seal 4 0m to	21.00 28.50	150	21.00 28.50	200 150	Install P	espone	e Zones	Approved By:	PJ	s
6.0m slotter	d 50mm dia	imeter pipe 15 0m to 20	with gravel filter, 6.0m to	8.0m be	entonite s	eal. Pipe eal filtor	2: 0.0m	to 15.0m plain	29.00	100			Ref Fr	om (m)	To (m)	Section ID:]
5. No visual	or olfactor	y evidence o	of contamination noted.	cer hibe	with BLan	er miter.							Pipe1 Pipe2	4.00	6.00	CGL Re	rerence 8709	•
S. One noul	spencenist	coming to get	ougin muuscone layet.						I	1	1	1	1 · · PC2 .			, .	2.33	

Project T	itle: Hy	the Quay,	, Colchester					St	atus:			Locatio	n ID			
Cl	ient: Bey	yond the	Box Developments	Limite	d			DF	RAFT			BH0	5			GL
- ()	Metho	od and Pla	ant Used		Grou	ndwate	er	Location Tv	ne: Cable	- nercus	sion (shell	and aug	er)			
From (m)	To (m)	Type TP	Plant Used Hand Dug	Strike (i 3.50	m) Tin	ne (min)	Rose		pe. cubi	, percus	51011 (511011	unu uug		Ca	rd Geotechnics	Limited,
1.20	20.00	СР	Cable Percussion	8.50		-	-	Coords: 602	1522.700	DE/22430	09.780N	Level:	3.800m	4 60	Woolsack W	ay,
			Borehole Rig					Ordnance Sur National Grid	rvey Grea	t Britain	Final [Depth:	20.00 m		Godalming	
								Orientation		0°	Inclin	nation	90°		GU7 1XW	
								onentation			incin	lucion.			www.cgl-uk.c	om
								Date Start	t: 06/1	12/2021	Dat	e End:	08/12/202	21	Sheet 1 of	2
	Sa	amples & Tes	sts	Water	Legend /Cover	Strata Denth	Level (m)				Strata D	Description				Inst/ Depth Backfill (m)
Sample Depth (m)	Type/ Ref	-	Tests/Results	(m)	,	(m)	(,									
0.20	D1						-	Loose dark red b	rown sand	dy gravel.	Gravel is an	ngular to s	ubangular fir	ne to coarse o	f brick,	
0.20				Ě			-	concrete and rare	e flint. Sar 1	nd is fine t	to coarse. O	ccasional)	rootlets note	ed.		
0.50	D 2 B 3						-		1							
							-									-
1.00	D 4						-									1
							-									
1.50 - 1.95	SPTLS 5	SPT(C) 1	50m N=9 (1,2/2,2,2,3)	Š			-									-
1.50 - 2.00	B 6		Ublows=9				-									-
							-									-
2.00	07						-									2
							_									-
2.50 - 2.95 2.50 - 3.00	D 8 B 9	SPT(C) 2	.50m N=6 (1,1/1,2,1,2) Ublows=6	. K			-	between 2.5	0 and 3.0	0 mbgl be	coming silty	у.				-
							_									-
3.00	D 10					3.00	0.80	Soft dark grev slig	ohtly sand	ly gravelly	silt Gravel	l is angula	r to subangul	ar fine to coa	rse of brick	3
							_	concrete and flin	t. Sand is	fine to co	arse.	i io ungulu	i to subuligu		se of brick,	
3.50 - 3.95	SPTLS 11	SPT(C) 3	5.50m N=5 (1.1/1.1.2.1)				-	[MADE GROUND	- REWOR	KED ALLU	IVIUM]					-
3.50 - 4.00	B 12		Ublows=5	Ŕ			-									-
							-									-
4.00	D 13			X]									4
							_									-
4.50 - 4.95 4.50 - 5.00	SPTLS 14 B 15	SPT(C) 4.	50m N=17 (2,2/3,4,5,5) Ublows=17	¢	~~~~~	4.50	-0.70	Medium dense d	ark grey s	lightly sa	ndy GRAVEL	. Gravel is	subangular	to rounded fir	e to coarse	•••
				4. - -			_	of flint. Sand is fi	ne to coai	rse.						
5.00	D 16			÷			-	KIVER IERRACE	DEPUSITS	Li,						
				1.			-									
				4. - -			-									
				4.			-									
6.00	D 17	CDT/C) C	00 - 1 - 4 (1 1 / 1 1 1 1)			6.00	-2.20									
6.00 - 6.45	SPTLS 18	3PT(3) 0	Ublows=4	P	×		-	Soft to firm dark	grey silty	CLAY.						
					×		-		UNIVIATIO							
					×		-									
					<u> </u>		_									
7.00	D 19			2	<u> </u>		-									
					<u>~_~</u>		-									
7.50 - 7.95	U 20		Ublows=60	>	<u>~_~</u>		-	hatwaan 7 F	0 and 11	00 mhailf	iroquant cub	angulart	o cubroundo	d fina ta coarra	o aravolo	
					<u>×</u>		-	and cobbles	o ana 11.0 of mudsta	one noted	i equent sub I.	ungular t	ο subrounded	a jine to coars	e gruveis	
8.00	D 21			5	×											
				5	<u></u>		-									
					<u></u>	8.50	-4.70									
							-	Medium strong d	lark grey I	MUDSTON	NE.					
							_	LONDON CLAY F	ORMATIO	N - MUD	STONE					
9.00 9.00 - 9.45	D 22 SPTLS 24	SPT(S) 9.	00m N=14 (1,8/5,3,3,3) Ublows=14	Ę	×_ ×	9.00	-5.20	Firm dark grey sil	Ity CLAY. C	Occasiona	l angular co	arse grave	els of mudsto	ne noted.		9
9.00 - 9.50	B 23			É			-	[LONDON CLAY F	ORMATIO	N]						-
				Ê	<u> </u>		-									-
				P	<u> </u>		_									
10.00	D 25				×		1									10 —
										Str	ata continue	es onto ne	ext page			1.50
Notes:	terminated	at 20 0m b	σl						Hole Di	Diam	Casi Denth	Diam	Hammer	Information Serial No.	Scale:	1:5U
2. Groundw	ater strikes	encountere	d 3.5m bgl and 8.5m bgl.		o				(m)	(mm)	(m)	(mm)		Jerial NU.	Checked By:	RIB
з. в = Bulk S Sample. N =	ample. D = Standard F	Disturbed S enetration	ampie. U = Undisturbed S Test 'N' Value.	sample. Sl	rils = S	andard F	renetrati	on lest Liner					/0%	AK3276	Approved Bv:	PJS
4. Installatio	n details: 0 pe with gra	0.0m to 4.5m vel filter. 9.0	i plain 50mm diameter pi Im to 11.0m bentonite se	ipe with b al, 11.0m	entonite to 20.0r	seal, 4.5 n backfill	m to 9.0 ed with #	m slotted 50mm arisings.					Install Res	ponse Zones	Section ID:	
5. No visual	or olfactor	y evidence o	of contamination noted.					-					Ret From	50 To (m)	CGL Re	ference
o. Two nour	s spent chis	seming to get	. unougn muusione layer	•											CG/3	8709

Project T	itle: Hy	the Quay	, Colchester					St	tatus:			Locatio	n ID				~ •
Cl	ient: Be	yond the	Box Developments	s Limite	ed	n du ct		DI	RAFT			BHC)5				GL
From (m)	To (m)	Type	Plant Used	Strike	(m) Tin	ndwate	er Rose To	Location Ty	pe: Cable	e percus	sion (shel	l and aug	er)				
0.00	1.20	TP	Hand Dug			. ,		Coords: 60	1522.700)F/22430	09.780N	Level:	3.800m	<u></u> า	4 God	alming Busines	imited, s Centre,
1.20	20.00	СР	Borehole Rig					Ordnance Su	irvey Grea	, t Britain	Final	Donth	20.0	0	-	Woolsack Way Godalming	y,
								National Grid	k		Final	Deptn:	20.0	U M	-	Surrey,	
								Orientatio	n:	0°	Incli	nation:	90)°		GU7 IXW www.cgl-uk.co	m
								Date Star	t: 06/2	12/2021	Da	te End:	08/12	/2021		Sheet 2 of 2	2
	Sa	amples & Te	sts	Water	Legend	Strata	Level				Strata	Description					Inst/ Depth
Sample Depth (m)	Type/ Ref		Tests/Results	(m)	/Cover	(m)	(11)										Backiiii (III)
					×		- F	irm dark grey si	ilty CLAY. C	ccasional	l angular co	oarse grav	els of mu	udstone n	oted.		
					×		!	LONDON CLAY F	ORIVIATIO	NJ							
10.50 - 10.95 10.50 - 11.00	U 26 B 27		Ublows=60		×_^_		-										-
					×_^												
11.00	D 28				×		-	11.00m bgl	gravels of	mudstone	e becoming	g absent.					11-
					×		-										
					×		-										-
					×		-										
12.00 12.00 - 12.45	D 29 SPTLS 30	SPT(S) 12	.00m N=15 (3,3/3,4,4,4) Ublows=15		×		-										12 -
					× ×		-										
					× ×		-										-
					<u>×</u> ×		-										
13.00	D 31				<u>×_×</u>												13 -
					<u></u>		-										
13.50 - 13.95 13.50 - 14.00	U 32 B 33		Ublows=35		<u></u>		-										-
					<u></u>	14.00	-10.20										
14.00	D 34				× ×	14.00	- T	o be confirmed	following	receipt of	f lab results	s:					14-
					× × ×		- [LAMBETH GROU	JP - READ	NG FORM	AND IS TINE. ATION]						
					× × ×		-										-
					× × × ×												
15.00 15.00 - 15.45	D 35 SPTLS 36	SPT(S) 15	.00m N=26 (3,3/4,6,8,8) Ublows=26		x×× ××		-										15 -
					°x ×		-										
					x××,		-										-
					××× ×××		-										
16.00	D 37				× × × ×		-										16 -
					××× ××>		-										
16.50 - 16.95	SPTLS 38	SPT(S) 16.	50m N=37 (3,4/8,10,9,10) Ublows=37		××^		-	16.50m bgl	becoming	dense.							-
					××,		-										
17.00	D 39				×××		-										17 -
					× × ×		-										
					× × ,		-										-
					× × >												
18.00 18.00 - 18.45	D 40 SPTLS 41	SPT(S) 18.00	0m N=45 (3,7/10,11,12,12) Ublows=45		× × ×		-										18 -
					× × > × ×		-										
					× × ×		-										-
					× × ×												
19.00	D 42				×		-										19 -
					×		_										
19.50 - 19.95	SPTLS 43	SPT(S) 19.50	m N=52 (5,10/12,12,12,16) Ublows=52		×××		-										-
					× ×××	20.00	16 20										
20.00	D 44	I			ux>	20.00	10.20		EOH a	at 20.00m	- Terminat	ed upon e	ngineers	instructi	on	k	20 –
Notes:									Hole Di	ameter	Cas	sing	Har	nmer Infor	mation	Scale: 1	L:50
1. Borehole 2. Groundwa	terminateo ater strikes	at 20.0m b encountere	gl. ed 3.5m bgl and 8.5m bgl						Depth (m)	Diam (mm)	Depth (m)	Diam (mm)	Energy	Ratio	Serial No.	Logged By:	DTM
3. B = Bulk S Sample. N =	ample. D = Standard F	Disturbed S Penetration	ample. U = Undisturbed Test 'N' Value.	Sample.	SPTLS = S	tandard P	enetration	Test Liner					709	%	AR3276	Approved Bv:	PJS
4. Installatio diameter pi	n details: C be with gra).0m to 4.5m vel filter, 9.0	n plain 50mm diameter p Im to 11.0m bentonite se	ipe with al, 11.0n	bentonite n to 20.0r	e seal, 4.5 n backfille	m to 9.0m ed with ari:	slotted 50mm sings.					Insta	Erom (m)	e Zones	Section ID:	
5. No visual 6. Two hour	or olfactor s spent chis	y evidence o selling to ge	of contamination noted. t through mudstone lave	c.									Pipe1	4.50	9.00	CGL Refe	erence
		0 - 00	сзус													CG/38	3709

Project 1	Title: Hy	the Quay,	Colchester					St	atus:			Location I	D				
C	lient: Be	yond the	Box Developments	Limite	d			FI	NAL			TP1				G	
- ()	Metho	od and Pla	ant Used		Grou	Indwat	ter	- Location Tv	ne: Trial nit	/trend	-h						
From (m)	To (m)	Type TP	Plant Used	Strike (m) Tin	ne (min) -	Rose		pe. marpit,	.,	511			C	ard Geotechnics	Limited,	
0.00	2.50							Coords: 60	1518.000E/	22430	05.683N	Level: 3.5	540m	4 6	Woolsack W	ess Centr /ay,	e,
								Ordnance Su National Grid	rvey Great Br I	ritain	Final D	epth:	2.90 m	n	Godalmin	g,	
								Orientatio		0	Inclin	ation	90°		GU7 1XW	/	
															www.cgl-uk.	com	
								Date Star	t: 27/09/	2021	Date	e End: 2	7/09/20)21	Sheet 1 o	f 1	
	Sa	amples & Tes	sts	Water Level	Legend	Strata Depth	Level (m)				Strata D	escription				Inst/ Backfill	Depth (m)
Sample Depth (m)	Type/ Ref	-	Tests/Results	(m)		(m)	. ,										. ,
0.70 0.70 1.00 1.50 1.50 1.80 1.80 1.80 2.40	ES1 ES1 B1 ES2 ES2 BNot Given ES3 ES4			¥		1.40	2.99	Medium dense t and flint. Sand is [MADE GROUND <i>0.55m bgl g</i> Firm slightly san concrete, ceram [MADE GROUND MADE GROUND Between 1.4 Between 1.6	rown sandy g fine to coars] eotextile men dy slightly gra c tile and flin] rey slightly cl brounded of brounded of - REWORKEE 0 and 1.65m 5 and 2.80m	gravel. e. Frec avelly a avelly a tt. Sanc flint. D ALLU bgl sta bgl ra	Gravel is fin quent roots a e noted. ashy silt. Gra d is fine to co wium] ained black i re oyster sho	e to coarse and rootlets vel is fine to barse.	angular t noted.	to coarse. Gra our noted. ments noted.	vel is fine		
2.00				ľ		2.90	0.64	Soft grey slightly	gravelly CLAY	Y. Grav	el is fine to r	nedium sub	rounded	to rounded of	flint.		
2.90	ES 5						-	Occasional lignit	e fragments r	noted.					,		3-
							-	(EOF	1 at 2.90m - Ac	hieved target	depth)		-
							-										-
							-										-
							-										-
							_										-
							-										
							-										
							1										-
							_										4 —
							-										-
							-										
							-										
							-										_
							_										-
							-										-
							-										
	·		I	I		· · ·											5 —
Notes:									Test No.		Soak	away Tests	mm) ''	nfiltration Pato	Scale	: 1:25	
 Trial pit to Groundw 	erminated a ater strike e	at 2.9m bgl v encountered	vithin natural ground. at 2.0m bgl.							1			, "		Logged By	: NL(С
3. B = Bulk 9 4. Trial nit b	Sample. D = ackfilled wi	Disturbed S	ample. ES = Environment	al Sample	≥.										Checked By	: RJE	5
5. Black stai	ning with a	hydrocarbo	n odour noted between 1	.4m bgl a	and 1.65	m bgl.					Pi	t Details			Section ID	. FJ2	-
									S	Stability	4	Shoring	Length	(m) Width (n	1) CGL Re	eference	è
										stable		None	2.80	0.40	CG/3	38709	

Project 1	itle: Hyt	the Quay,	Colchester					Sta	itus:			Location I	D					_
Cl	ient: Bey	ond the	Box Developments	Limite	d			FI	IAL			TP2					G	
Erom (m)	Metho	d and Pla	Int Used	Ctrilia /	Grou	ndwat	er Roca T	Location Tvr	e: Trial pit	/tren	ch					•		
0.00	2.90	TP	Tracked excavator	2.10)	- -	-	Coordou CO1		, />> />	44.0000	Laurali 21	-12		Caro 4 Goo	d Geotechnics Ialming Busine	Limited,	, re
								Coords: 601	515.000E/	2Z43	44.000N	Level: 3.	51211	1	-	Woolsack W	ay,	2,
								National Grid	vey Great Bi	ritain	Final [Depth:	2.90) m		Godalming Surrey,		
								Orientation	0	•	Inclin	nation:	90)°		GU7 1XW		
								Date Start	27/09/	/2021	Dat	e End· 2	7/09	/2021	-	www.cgi-uk.c	com	
	5.2	mplac & Tas	to	Water	Legend	Strata	Level	Date Start	27/05/	2021	Strata D	escription	77057	/2021		Sheet 1 of	1 Inst/	Denth
Sample	Type/	Timpies & res	ests/Results	Level	Legena	Depth	(m)				Stidue	rescription					Backfill	(m)
Depth (m)	Ref			(m)	~~~~~	(m)	_	Andium donco ro	ddich brown	ncand	v gravel Gra	wal is fina to	coor	co angula	r to round	od of brick		a —
							-	concrete, flint, ce MADE GROUND	ramic tile ar	nd cha	k. Sand is fir	ne to coarse	. Freq	uent root	s and root	lets noted.		-
0.30	ES1							-										-
0.30	ES 1						-											-
							_											-
							-											
]											
0.90	B 1						-	1.00										-
						1.00	2.51	irm brown mottl	ed grev slig	htly gr	avelly clay. G	Gravel is sub	angula	ar to roun	ded of flin	t.		1-
1.10 1.10	D 1 ES 2						-	Occasional beds o	f grey medi	ium to	coarse sand	l, oyster she	ls and	brick co	bbles; and	rare animal		-
							-	ones noted. MADE GROUND]										-
							-											
																		- 1
							-											-
							-											-
							-											-
							-											
						2.10	1.41											- -
2.20	В 2						-	vledium dense gr ALLUVIUM]	ey SAND. Sa	and is t	nne to medii	um. Frequer	it shel	ll fragmer	its noted.			-
																		-
					<u> </u>	2.40	1.11	oft grey mottled	black CLAY.									-
2.60							-	ALLUVIUM]										
2.60	D 2]											
							-											- 1
				F		2.90	0.61			EOł	H at 2.90m - A	chieved target	depth					4 .
							-											3
							-											
]											
							-											-
							_											-
							-											
							-											
							1											
							_											4 —
							+											-
							-											
							1											
																		_
							-											
							-											
							-											
							+											
	•		1													1		· 5 —
Notes:									Test No.		Soal Date	kaway Tests Duration (hh	:mm)	Infiltrat	tion Rate	Scale:	1:25	
1. Trial pit te 2. Groundw	erminated a ater seepag	at 2.9m bgl w ge noted at 2	vithin natural ground. 1.1m bgl.					F					,			Logged By:	NL	.C B
3. B = Bulk 9 4. Trial pit b	ample. D = ackfilled wi	Disturbed S th arisings.	ample. ES = Environment	al Sample	2.											Approved By:	PI PI	s
5. No visual	or olfactory	y evidence o	f contamination noted.								Pi	it Details				Section ID:		
								F		Stabilit Stable	<u>у</u>	Shoring None	Len	gth (m) 2.80	Width (m) 0.40	CGL Re	ference	5
1													1			CG/3	8709	

CGL Reference CG/38709

Project T	itle: Hy	the Quay,	, Colchester					St	atus:			Location	n ID				_
Cli	ent: Bey	yond the	Box Developments	Limited	ł			FI	NAL			ТРЗ	3			:G	
	Metho	od and Pla	ant Used		Grou	ndwate	er	Location Tu	no: Trial nit	/tronch							
From (m) 0.00	To (m) 2.80	Type TP	Plant Used Tracked excavator	Strike (r	n) Tin	ne (min)	Rose To	Coords: 60	1518.000E/2	224366	1 6.000N	Level:	3.260m	4	Card Geotechnic Godalming Busir	s Limited, less Centr	, re,
								Ordnance Su National Grid	rvey Great Bri I	itain	Final D	Depth:	2.80 m	ı	Godalmir Godalmir Surrey,	vay, ng,	
								Orientatio	n: 0°		Inclin	ation:	90°		GU7 1X	N	
								Date Star	t: 27/09/2	2021	Date	e End:	27/09/20	021	Sheet 1 c	of 1	
	Sa	imples & Tes	sts	Water I	egend	Strata	Level				Strata D	escription			0.000110	Inst/	Depth
Sample	Type/		Tests/Results	Level (m)		Depth (m)	(m)									Backfill	(m)
Sample Depth (m) 0.20 1.10 1.10 1.10 1.10 1.10 2.30 2.50	ES 1 ES 1 ES 1 D Not Given ES 2 ES 3 D 2	imples & Tes	sts Tests/Results	Water Level (m)	egend	Strata Depth (m)	Level (m) 2.56 - - - - - - - - - - - - - - - - - - -	Date Star	t: 27/09/: reyish brown eramic tile and 15 and 0.70m b brown with b d of brick, cc ccasional black mottled black	sandy g d chalk. bgl becc hbrane r occasio oncrete O ALLUV	Date Strata D Gravel. Grav Gravel. Grav Gravel. Grav Gravel. Grav Inal black st (ceramic ti (UM)] Gravel of the minimum of the	e End: vel is fine he to coar <i>dish brow</i> taining gr ile and fli <i>ild hydroc</i> bur noted. chieved targ	27/09/20 to coarse a se. Frequer n. avelly clay. nt. Organic	Gravel is fine odour noted	Sheet 1 c	of 1	Depth (m)
							-										-
							-										
							-										
							-										-
																	-
	I	I		I		I I	1									I	I 5 —
Notes:									T	1	Soak	away Test	S	- 61	Scale	e: 1:25	
1. Trial pit te	rminated a	at 2.8m bgl v	vithin natural ground.						Test No.		Date [Duration (I	nn:mm) l	ntiltration Rat	Logged B	y: NL	.C
3. B = Bulk Sa	ample. D =	Disturbed S	ample. ES = Environment	al Sample.											Checked B	y: RJI	В

b = built sample. D = Disturbed sample. S = Environmental sample.
 4. Trial pit backfilled with arisings.
 5. Occasional black staining with a mild hydrocarbon odour noted at 1.4m bgl.

Approved By: PJS Pit Details Shoring Length (m) Width (m) None 2.80 0.40 Section ID: Stability Stable CGL Reference CG/38709

Client: Beyond the Box Developments Limited FINAL TPA Card Geotechnics Limited Vertication and Plant Used Groundwater Location Type: Trial pit/trench Card Geotechnics Limited 0.00 2.80 TP Tracked excavator Time (min) Rose To Coords: 601518.000E/224394.000N Level: 3.121m Card Geotechnics Limited Card Geotechnics Limited 0.00 2.80 TP Tracked excavator Time (min) Rose To Coords: 601518.000E/224394.000N Level: 3.121m Card Geotechnics Limited Godalming, Surrey, Gudalming, Surrey, Gudalmin	_
Method and Plant Used Groundwater Location Type: Trial pit/trench Card Geotechnics Limit 0.00 2.80 TP Tracked excavator Image: Trial pit/trench Coords: 601518.000K/224394.000N Level: 3.121m Card Geotechnics Limit 0.00 2.80 TP Tracked excavator Image: Trial pit/trench Coords: 601518.000K/224394.000N Level: 3.121m Card Geotechnics Limit 0.00 2.80 TP Tracked excavator Image: Trial pit/trench Coords: 601518.000K/224394.000N Level: 3.121m Card Geotechnics Limit 0.00 2.80 TP Tracked excavator Image: Trial pit/trench Coords: 601518.000K/224394.000N Level: 3.121m Coords: 601518.000K/224394.000N Level: 3.121m 0.01 Drinetation: 0° Inclination: 90° Surrey, Gotal Britain Final Depth: 2.80 m 0.10 Tracked excavator Water Level Surray Distance Certifics (Brita Certifics Certifics Certifics (Brita Certifics Certifics (Brita Certifics Certifics (Brita Certifics Certifics (Brita Certifics Certifics Certifics (Brita Certifics Certifics Certifics (Brita Certifics Certifics (Brita Certifics Certifi	
From (m) To (m) Type Plant Used Strike (m) Time (min) Rose To Ubbalance Ubbalance Cords: 601518.000E/224394.000N Level: 3.121m Card Geotechnics Limite 0.00 2.80 TP Tracked excavtor Image: Strike (m) Image: Strike (m) Final Depth: 2.80 m Final Depth: 2.80 m Godalming Business Cer 0.00 Vertex Image: Strike (m) Image: Strike (m) Image: Strike (m) Final Depth: 2.80 m Strike (m) Godalming, Surrey, GU71XW 0.00 Vertex Strike (m) Strike (m) Strike (m) Strike (m) Strike (m) Image: Strike (m) Image: Strike (m) Tope/ Strike (m)	
Understand Samples & Tests Water Legend Strata Level Ordnance Survey Great Britain Final Depth: 2.80 m Godalming, Godalming, Surrey, GU7 1XW Samples & Tests Water Legend Strata Level Depth (m) Strata Description Strata Description Inst/ Backf Sample Strats Water Legend (m) Contract, Strata Description Strata Description Inst/ Backf Sample Strats Strata Level (m) Ordnance Survey Great Britain (m) Strata Description Inst/ Backf Sample Strats Strata Level (m) Concrete, find, ceramic tile and chalk. Sand is fine to coarse angular to rounded of brick, concrete, find, ceramic tile and Chalk. Sand is fine to coarse. Frequent roots and rootlets noted. (MADE GROUND) Between 0.25 and 0.70m bgl becoming reddish brown. 0.50 ES1 0.70 2.42 Ordnande grey slightly sandy gravely clay. Gravel is fine to coarse angular to subrounded of concrete, brick, ceramic tile and flint. Sand is fine to coarse. Occasional cobbles of chalk; and rare quart gravel, oyster shells and glass fragments noted. (MADE GROUND)	d, tre,
Image: Constraint of the second of the se	
Samples & Tests Water Level (m) Level (m) Date Start: 27/09/2021 Date End: 27/09/2021 Sheet 1 of 1 Samples & Tests Water Level (m) Level (m) Strata Depth (m) Level (m) Strata Description Inst/ Back Samples & Tests Water (m) Level (m) Depth (m) Price Strata Description Inst/ Back 0.50 ES1 Fist Depth (m) Price Price Price Price 0.50 ES1 Date Strata Concrete, flint, ceramic tile and chalk. Sand is fine to coarse angular to rounded of brick, concrete, flint, ceramic tile and chalk. Sand is fine to coarse. Frequent roots and rootlets noted. (MADE GROUND) Between 0.25 and 0.70m bgl geotextile membrane noted. 0.50 ES1 0.70 2.42 O.70m bgl geotextile membrane noted. Firm dark grey slightly sandy gravelly clay. Gravel is fine to coarse angular to subrounded of concrete, brick, ceramic tile and flint. Sand is fine to coarse. Occasional cobbles of chalk; and rare quartz gravel, oyster shells and glass fragments noted. [MADE GROUND]	
Sample Samples & Tests Water Level Level Level (m) Level Level (m) Strata Description Inst. Sample Depth (m) Type/ Ref Tests/Results Level (m) Level (m) Medium dense greyish brown sandy gravel. Gravel is fine to coarse angular to rounded of brick, concrete, flint, ceramic tile and chalk. Sand is fine to coarse. Frequent roots and rootlets noted. [MADE GROUND] Medium dense greyish brown sandy gravel. Gravel is fine to coarse angular to rounded of brick, concrete, flint, ceramic tile and chalk. Sand is fine to coarse. Frequent roots and rootlets noted. [MADE GROUND] 0.50 E51 0.70 2.42 0.70m bgl geotextile membrane noted. Firm dark grey slightly sandy gravelly clay. Gravel is fine to coarse angular to subrounded of concrete, brick, ceramic tile and flint. Sand is fine to coarse. Occasional cobbles of chalk, and rare quartz gravel, oyster shells and glass fragments noted. [MADE GROUND]	
Sample Depth (m) Type/ Ref Tests/Results Level (m) Depth (m) (m) (m) (m) Backf 0.50 E51 0.50 E51 0.70 2.42 Medium dense greyish brown sandy gravel. Gravel is fine to coarse. Frequent roots and rootlets noted. [MADE GROUND] Between 0.25 and 0.70m bgl becoming reddish brown. 0.70m bgl geotextile membrane noted. 0.70m bgl geotextile membrane noted. Firm dark grey slightly sandy gravelly clay. Gravel is fine to coarse angular to subrounded of concrete, brick, ceramic tile and fint. Sand is fine to coarse. Occasional cobbles of chalk; and rare quart gravel, oyster shells and glass fragments noted. [MADE GROUND]	 Depth
Depth (m) Ref	l (m)
1.80 E53 2.20 P1 Between 2.00 and 2.15m bgl concrete obstruction in the north and south of the pit noted Soft bluish grey mottled black CLAY. Organic odour noted.	2-
2.20 E54 [ALLUVIUM] 2.80 D2 2.80 D2 2.80 D2 2.80 D2 EOH at 2.80m - Achieved target depth	
Given	.
	3
	.
	.
	4
	.
	.
	.
	· 5 —
Notes: Soakaway Tests Scale: 1:25 1. Trick in the interventional data 2 on help with instance and the interventional data 2 on help with instance and the interventional data 2 on help with instance and the interventional data 2 on help with instance and the instance and	
1. In a pic terminated at 2.6m bgi within hatural ground. 2. No groundwater encountered. 3. B = Bill Sample D = Disturbed Sample ES = Environmental Sample Checked By:	UB

b - Doin Sample: 5 - Discusses annuel: 5 - Environmental Sample: 4
 A - Trial pit backfilled with arisings.
 No visual or olfactory evidence of contamination noted.
 Concrete obstruction noted in the north and south of the pit between 2.00m bgl and 2.15m bgl.

						CG/387	709	
S	table	None		2.80	0.40	CGL Refer	ence	
St	ability	Shoring	Len	gth (m)	Width (m)	CCL Pofor	anco	-
	F	it Details				Section ID:		
						Approved By:	PJS	
						Checked By:	RJB	
			,			Logged By:	NLC	
	Dute	Durution (min.in			ation nate			

Project 1	Project Title: Hythe Quay, Colchester						St	atus:		Lo	ocation ID					
C	Client: Beyond the Box Developments Limited							FI	NAL			TP5			G	
	Metho	od and P	lant Used		Grou	undwat	er			/						
From (m)	To (m)	Туре	Plant Used	Strike	(m) Tir	me (min)	Rose	To Location Ty	pe: Trial pit/	'trench				Card Geotechnic	s Limited,	
0.00	2.80	TP	Tracked excavator					Coords: 60	1505.000E/2	224408.	.000N L	evel: 3.431m	4	Godalming Busin	ess Centr	e,
								Ordnance Su	rvey Great Bri	tain	Einal Dor	nth: 79) m	wooisacк \ Godalmir	vay, Ig,	
								National Grid				ptil. 2.0	,	Surrey,	0,	
								Orientatio	n: 0°		Inclinati	ion: 90)°	GU7 1X	V	
								Date Star	t· 27/09/2	2021	Date F	nd· 27/09	/2021			
				14/-+	1	Churche	Loui	Dute Star	. 27/05/2	2021	Church Dave		2021	Sheet 1 d	0T 1	Dent
Comple	Si Turne/	amples & Te	Zests	Level	Legenu	Depth	(m)				Strata Dest	Linption			Backfill	(m)
Depth (m)	Ref		lests/nesuits	(m)		(m)										
							-	Medium dense r	eddish brown	sandy gr	ravel. Gravel	l is fine to coar	se angular to ro	unded of brick,		
							-	IMADE GROUND	eramic tile and il	d chaik. S	Sand is fine t	to coarse. Freq	uent roots and	rootlets noted.		
0.30	B 1						-									
0.40	ES1						-									
0.40	ES 1					0.50	2.93									
							-	Medium dense g	rey sandy grav s fine to coars	vel. Grav	el is fine to	coarse angular	to rounded of o	concrete, flint		
							-	[MADE GROUND]							
						0.80	2.63	Madu	allow	a du	al Crevili	fina to	ngula - +-	dod of huid	-))))))	
						§		concrete. flint ar	enow grey sar Id occasional (chalk. Sa	end is fine to	inne to coarse a coarse.	ingular to round	ueu ui Drick,		
						1.00	2.43	[MADE GROUND	·]							1 -
						§	_	Firm dark greyisl	h brown with o	occasion	al black stai	ning gravelly cl	ay. Gravel is fine	e to coarse		
1.20	D						-	[MADE GROUND	- REWORKED	ALLUVII	UM]	ana mnt. Oigd				
1.20	ES 2						-									
							_									
							-									
							-									
							-									
					· _ · -	1.80	1.63	Soft grey mottle	d black and br	own slig	htly gravelly	CLAY. Gravel is	medium round	led of flint.		
							-	[ALLUVIUM]								
2.00 2.00	ES3 D 2						-									2 -
2.00	ES 3]	-									
					· <u>·</u> ···	1	-									
					<u> </u>	1	-									
						4	_									
					<u> </u>	4	-									-
					· · · ·	4	-									
					<u>. </u>	2.80	0.63									
							-			EOH at	: 2.80m - Achie	eved target depth				
							-									3 -
							-									
							-									
							-									
							_									
							_									
							-									
							-									
							_									
							-									4 —
							-									
							-									
							-									
							_									
							-									-
							-									
							-									
							-									
							-									
			I	I	•		I								1 1	5 —
Notes:									T . • •	-	Soakaw	vay Tests	1.60	Scale	: 1:25	
1. Trial pit to	erminated a	at 2.8m bgl	within natural ground.						iest No.	Da	ate Dur	ration (hh:mm)	Infiltration Ra	Logged B	: NLC	2
2. No groun 3. B = Bulk S	iuwater end Sample. D =	-ountered. = Disturbed	Sample. ES = Environment	al Sampl	le.									Checked B	/: RJE	5
4. Trial pit b	ackfilled wi	ith arisings.								1				Approved B	/· PIS	

Trial pit backfilled with arisings.
5. No visual or olfactory evidence of contamination noted.

							Julie 1.1	20
	Test No.	Date	Duration (hh:n	nm)	Infiltra	ation Rate		
							Logged By:	NLC
							Checked By:	RJB
							Approved By:	PJS
		Pi	t Details				Section ID:	
	St	ability	Shoring	Leng	gth (m) Width (m		CCL Defer	
Ì	S	table	None	2	2.70 0.40		CGL Keler	ence
	-				-		CG/387	709

Client: Beyond the Box Developments Limited Method and Plant Used Groundwater Location Type: Window Sampler Coation Type: Window Sampler From (m) To (m) Type Plant Used Strike (m) Time (min) Rose To Location Type: Window Sampler Coation Type: Window Sampler C	ard Ge iodalm W	eotechnics L	GL
From (m) To (m) Type Plant Used Strike (m) Time (min) Rose To Location Type: Window Sampler Coardiant Depth: Sample 0.00 1.20 1P Hand Dug 2.40 20 2.10 Coords: 601513.000E/224437.000N Level: 3.375m 4 G 1.20 5.00 WS Tracked Window Sample Rig 2.40 20 2.10 Coords: 601513.000E/224437.000N Level: 3.375m 0rdnance Survey Great Britain Final Depth: 5.00 m 0.15 Sample S& Tests Water Legend Strata Level Orientation: 0° Inclination: 90° Sample Depth (m) Type/ Tests/Results Water Level Strata Level Strata Strata Main 0.15 E51 E51 005 3.32 Grey concrete. [MADE GROUND] [MADE GROUND]	ard Ge iodalm W	eotechnics L	
Prom (n) IV (n) Prior (n)	ard Ge iodalm W	eotechnics L ning Busines	
1.20 5.00 WS Tracked Window Sample Rig Tracked Window Sample Rig </td <td>W</td> <td></td> <td>imited, s Centre</td>	W		imited, s Centre
Sample Ng Water Legend Strata Level Cover Strata Level Strata Depth Main 0.15 E51 E51 E51 Grey concrete. [MADE GROUND] [MADE GROUND] [MADE GROUND]		Voolsack Wa	у,
Samples & Tests Water Level (m) Legend /Cover (m) Strata (m) Level (m) Strata (m) <		Godalming, Surrev.	
Sample Type/ Tests/Results Water Level (m) Legend (m) Strata Level (m) Grey concrete. (MADE GROUND] Witer (m)		GU7 1XW	
Samples & Tests Water Level Cover Depth (m) Wir Sample Type/ Tests/Results Level Cover Depth (m) WS 0.15 ES1 ES1 Grey concrete. [MADE GROUND] [MADE GROUND] [Made Ground]	wv	ww.cgl-uk.co	om
Sample Type/ Tests/Results Level Cover Depth (m) With 0.15 ES1 ES	S	sheet 1 of 1	Inst/ Depth
Depth (m) Ref (m) (m) Run 0.05 0.05 3.32 Grey concrete. (MADE GROUND]	Diam	Recovery	Backfill (m)
0.15 ES1 Grey Concrete.	(mm)	(%)	
0.15 ES 1 Dark greyish brown slightly silty gravelly sand. Sand is fine to coarse.			
Gravel is the to coarse subangular to rounded of concrete, finit and			•
0.45 2.92 [MADE GROUND]			
0.60 2.78 [MADE GROUND]		•	
Dense dark brown slightly clayey gravelly sand. Sand is fine to coarse.		*	
0.80 ES2 rare slag.		•	
0.80 ES 2 - [MADE GROUND]		•	
		•	
1.10 ES 3		•	
		•	
		•	
		•	· · -
1.60 1.78 - 1.20	102	100	
[MADE GROUND - REWORKED ALLUVIUM]		•	
1.80 D1 1.80 DNot			
Given			
			2-
		•	
		*	·∏:] .
		•	
	87	100	· - -
		•	
		•	
2.80 D 2 between 2.80 and 3.00m bgl frequent roots and decomposing		•	
organic fragments notea.		•	· H · · · · · · · · · · · · · · · · · ·
3.10 ES 5 3.00m bgl rare subrounded cobble of chalk noted.			-
			-
	78	100	-
between 3.70 and 3.80m bgl becoming very gravelly. Gravel is			
subangular to subrounded cobbles of brick noted.			
4.00 -0.62 Dense greenish grey clayey SAND. Sand is fine to medium. Frequent			4 —
Dense grey sandy GRAVEL. Gravel is fine to coarse angular to rounded of			
[River TERRACE DEPOSITS]			-
between 4.20 and 5.00m bgl becoming brown.	67	QE	
	07	65	
between 4.60 and 5.00m bgl becoming gravelly SAND. Sand is medium to coarse. Gravel is fine to coarse angular to rounded of			
flint.			
EOH at 5.00m - Achieved target depth			5 —
Notes: Hole Diameter Casing Hammer Information		Scale: 1	1:25
1. Window sampler borehole terminated at target depth of 5.0m bgl. Depth Diam Depth Diam Energy Ratio Serial No.		Logged By:	NLC
2. oroundwater strike encountered at 2.4m bg, which rose to 2.1m bg after 20 minutes. (iii) (iiii) (iiii) 3. D = Disturbed Sample, ES = Environmental Sample, 2.00 102 %		Checked By:	RJB
14. Installation details: 0.0m to 0.5m plain pipe with bentonite seal, 0.5m to 3.0m slotted pipe with gravel filter, 3.00 87 3.0m to 5.0m backfilled with bentonite. 4 nn 78 Install Response Zones	A	Approved By:	PJS
5. No visual or olfactory evidence of contamination noted.)		Prence
Pipe1 0.50 3.00		CG/38	3709

Project T	itle: Hy	the Quay,	Colchester					S	tatus:			Locatio	n ID						-
Cl	ient: Bey	yond the	Box Developments	Limited	1 Crow	ndurat		FI	NAL			WS	2					G	
From (m)	To (m)	Type	Plant Used	Strike (r	n) Tin	nawai	.er Rose 1	Location Ty	pe: Wind	low Sam	pler					Canal C		1.1	
0.00	1.20	IP	Hand Dug	3.20	,	-	-	Coords: 60	1507.000)F/22438	37.000N	Level:	3.426n	n	4	Card G Godaln	eotechnics ning Busine	Limited ess Cent	, re,
1.20	5.00	ws	Tracked Window Sample Rig					Ordnance Su	irvey Grea	t Britain	[[in al	Deveth	F 0	0		V	/oolsack W Godalmine	'ay,	
								National Grid	, t		Final	Deptn:	5.0	υm	-		Surrey,		
								Orientatio	n:	0°	Incli	nation:	9	0°		W	GU7 1XW ww.cgl-uk.o	com	
								Date Star	t: 28/0	09/2021	Dat	te End:	28/09	/2021		S	heet 1 of	1	
	Sa	amples & Tes	sts	Water L	_egend	Strata	Level	l		Strata D	escription				W	'indow S	ampling	Inst/	Depth
Sample Depth (m)	Type/ Ref	T	Tests/Results	(m)		(m)	(11)								WS Run	Diam (mm)	Recovery (%)		(11)
				ĺ.			-	Dense light grey	ish brown	sandy gra	vel. Gravel	is fine to	coarse a	ngular					
) X				[MADE GROUND	of brick, ch)]	aik and fli	nt. Sand is	nne to co	arse.						-
								0 30m hal a	eotextile r	nemhrane	noted								-
						0.40	3.03	Firm grey mottle	ed brown s	lightly gra	welly clay.	Gravel is f	ine to m	edium	-				-
0.50 0.50	ES1 ES1						-	angular to subro	unded of	lint.									1 1
							-		,]										
				X]												
				Ř			_												
				l		1 10	2 33												1
				Ŕ		1.10	-	Dense white mo	ttled black	gravelly o	chalk silt. G	iravel is fi	ne to coa	irse					
							-	noted.	Occasiona	subangu	lar to subro	ounded co	bbles fli	nt					
				l l				[MADE GROUND)]										
						1.50	1.93	Firm brown mot	tled orang	e slightly	sandy grave	elly clay. G	Gravel is	fine to	-				-
1.60 1.60	D 1 D Not			l l		1 70	1 73	coarse angular t	o subroun	ded of flin	t and rare	brick and	charcoa	. Sand	1.20 2.00	102	100		
1.60	Given ES 2			Ŕ		1.70		IS TINE to coarse. [MADE GROUND	0]										1]
				l l			-	Soft grey mottle	d black slig ar to roun	shtly sand	y gravelly o	lay. Grave	l is fine	to					
								[MADE GROUND	- REWOR	KED ALLU	VIUM]		130.					-	2
2.10	ES 3						-												
2.20	D 2						-												
							-												
							-								2.00	87	100		
				. X]								3.00				
							-												
				. X			-												
2.90				X			-												1
3.10	ES 4			Ě															
]												
				. X			-												
				Ě			_								3.00				
				Ě			-								4.00	78	100		
				ě		3.70	-0.27												
3.80	ES5			X]	Medium dense g to coarse angula	reyish bro r to subro	wn clayey unded of t	/ slightly sa flint, ceram	ndy grave nic and bri	l. Grave ck. Sand	is fine is fine					
3.80	ES 5			X			_	to coarse.			ο τερρλγε		:1						
				Ě			-	between 3.7	70 and 4.0	Om bgl str	ong hydrod	carbon od	our and	oily				•	4 —
4.20	ESG			X			-	sheen noted	Ι.										
4.20	ES 6			Ě			-												-
				Ě															-
				Ě			-								4.00 5.00	67	100		_
				X			-												-
							-												-
							-												
				Ř		5.00	-1.57		FOH at	5.00m - 4c	hieved targe	t depth							5 —
Notes										ameter	Con	ing	Цэ	nmer Infor	mation		Scolo	1.25	
1. Window s	ampler bo	rehole termi	inated at target depth of	5.0m bgl.					Depth	Diam	Depth	Diam	Energy	Ratio	Serial No).	Logged By	-1.2.3 NI	.C
2. Groundwa 3. D = Distur	ater strike e bed Sampl	encountered e. ES = Envir	l at 3.2m bgl. onmental Sample.						(m)	(mm) 102	(m)	(mm)	%				Checked By:	R	в
4. Installatio 4.0m to 5.0r	n details: 0 n backfiller	.0m to 0.5m d with bento	n plain pipe with bentonit nite.	e seal, 0.5	m to 4.0	0m slotte	ed pipe wi	th gravel filter,	3.00	87			Inst	all Respons	e Zones	<i>µ</i>	opproved By	PJ	S
5. Strong hy	drocarbon	odour and a	n oily sheen noted betwe	een 3.70m	n bgl and	d 4.00m	bgl.		4.00 5.00	78 67			Ref	From (m)	To (r	n)	Section ID	for	
													Pipe1	0.50	4.0	0		serence 8700	e
L									1		1		I		1				

Project T	itle: Hy	the Quay	, Colchester					St	atus:			Locatio	n ID					
C	ient: Be	yond the	Box Developments	Limited	4			FI	NAL			WS	3					GL
From (m)	Metho	od and Pla	ant Used	Ctrike (r	Grou	ndwate	er	Location Tv	pe: Wind	low Sami	pler						•	
0.00	1.20	IP	Hand Dug	3.80	n) 1111	-	-	Coorde: CO	1 - 1 4 000)r /22427	74.000N	Lavali	2 245 -		4	Card Go Godaln	eotechnics ning Busing	Limited, ess Centre.
1.20	5.00	WS	Tracked Window					Coords: 60	1514.000	JE/22437	4.000N	Level:	3.3451	1	-	W	/oolsack W	/ay,
			Sample Kig					National Grid	rvey Grea I	t Britain	Final	Depth:	5.0	0 m			Godalming Surrey,	5,
								Orientation	ו:	0°	Incli	nation:	90	С°			GU7 1XW	/
								Data Star	+. 20/0	10/2021	Da	to End:	28/00	/2021	 	W	ww.cgl-uk.o	com
				14/-4		Churche	Lund	Dale Stal	ι. 20/ι	09/2021	Da	të Ellu.	20/09	/2021		5	sheet 1 of	1
Sample	Sa Type/	amples & le	STS	Level ,	/Cover	Depth	(m)			Stidld Dt	escription				ws	Diam	Recovery	Backfill (m)
Depth (m)	Ref			(m)		(m)									Run	(mm)	(%)	
						0.55	2.80	Dense reddish bi subrounded of b [MADE GROUND	own sand rick, flint a]	y gravel. C	Gravel is fir	ne to coars	se angula	ar to	_			-
0.60 0.60	D D 1			Ŕ			-	subangular to su	tiy sandy : brounded	of chalk, f	ay. Gravei flint, charc	is fine to c oal and br	ick. Sanc	d is fine				
0.70 0.70	ES1 ES1						-	to coarse. [MADE GROUND]	,	- ,							
				×		1.00	2.35	Soft grev mottlee	d black CL	AY. Occasio	onal decor	nposing or	rganic		-			• • • • 1
1.10	ES 2						-	fragments, shells	and shell	fragment	s noted.		8					
1.20	D 2			F			-	between 1.0	0 and 1.9	0m bgl bei	coming soj	ft slightly <u>c</u>	gravelly	very				
				F			_	sandy clay. S	and is fin	e to coarse aded of fli	e. Gravel is nt	fine to m	edium					
				F			-	subungulur	.0 3001001	iaca oj jili	n.							
]								1.20 2.00	102	100	
				F			-											
				F			-											
2.00	ES 3			F			-											
2.10	D 3						-											
				E]											
							_											
				E			-								2 00			
2.60	D.4			E			-								3.00	87	100	
2.60	D 4			E			-											
				E			-											
				E														
				E			-											3-
				E			-											-
				E			-											
							_											
3.50	D			E]								3.00 4.00	78	100	-
3.50	05			E			-											-
				►			-											
						3.90	-0.56											
				i i			-	Dense brown sar of flint. Sand is n	ndy GRAVI nedium to	EL. Gravel coarse.	is fine to c	oarse ang	ular to ro	ounded				4
				i.			-	[RIVER TERRACE	DEPOSITS]								-
				i.			-											-
				i.			_											-
				21 21 2			-								4.00	67	85	
				i i			-								5.00			
				1 1 1			1											
				i de R														
				i i i		5,00	-1.66											
	I	I		Ľ.	<u></u>	5.00	1.00		EOH at	5.00m - Acl	hieved targe	t depth						5 —
Notes:									Hole Di	iameter	Cas	sing	Har	nmer Infor	mation		Scale	1:25
1. Window : 2. Groundw	sampler bo ater strike e	rehole term encountered	inated at target depth of at 3.8m bgl.	5.0m bgl.					Depth (m)	Diam (mm)	Depth (m)	Diam (mm)	Energy	Ratio	Serial No	D.	Logged By	NLC
3. D = Distu 4. Installatio	rbed Sampl on details: 0	e. ES = Envir).0m to 1.0m	onmental Sample.	e seal. 1.0	m to 3.0)m slotte	d pipe w	ith gravel filter.	2.00	102			%				unecked By:	RJB
3.0m to 5.0	m backfilled	d with bento	nite.	, 1.0				J	4.00	78			Insta	all Respons	e Zones		Section ID	
S. NO VISUAI	5. ShactUl	, criaciile (5.00	67			Ref	From (m)	To (r	m)	CGL Re	ference
													, ther	1.00	3.0		CG/3	8709

Project 7	Title: Hy	the Quay,	Colchester					Status:	Locatio	on ID					-
Client: Beyond the Box Developments Limited Method and Plant Used Groundwater			FINAL	WS	4				GI						
	Metho	od and Pla	ant Used		Grou	ndwate	er	Location Type: Window Sar	nnler						
From (m) 0.00	To (m)	Type IP	Plant Used Hand Dug	Strike (m 2.00	n) Tim	ie (min) -	Rose To	Location type. Window Sar			- (Card Ge	otechnics	Limited,	
1.20	3.00	ws	Tracked Window	2.00				Coords: 601512.000E/2243	362.000N Level:	3.534m	40	Godalm W	oolsack W	ay,	,
			Sample Rig					Ordnance Survey Great Britain National Grid	Final Depth:	3.00 m		(Godalming	5,	
								Orientation: 0°	Inclination:	90°	1		GU7 1XW		
											·	WW	/w.cgl-uk.c	om	
								Date Start: 28/09/2022	L Date End:	28/09/2021		S	heet 1 of	1	
	Sa	imples & Tes	its	Water L Level /	egend Cover	Strata Depth	Level (m)	Strata	Description		Wi	indow Sa	mpling	Inst/ D Backfill	Depth (m)
Sample Depth (m)	Type/ Ref		lests/Results	(m)		(m)					Run	Diam (mm)	Recovery (%)		. ,
Sample Depth (m) 0.50 1.20 1.58 1.70	ES 1 ES 2 ES 3		rests/Results	Level (m)	Cover Co	3.00	- M - M - rc - CC - CC - D - D - D - C - D - D - C - D - C - D - C - D - C - D - C - D - C - D - D - D - C - D - D - C - D - D - C - D - D - C - D - D - D - C - D - D - C - D - D - D - D - D - D - D - D - D - D	Iedium dense brown sandy grave punded of brick, concrete, flint, ce parse. Frequent subangular to sub increte noted. MADE GROUND] between 0.00 and 0.10m bgl fi ense white mottled black gravelly ingular of flint. MADE GROUND] movements noted. MADE GROUND] ense brown slightly sandy gravelly ibrounded of flint, brick and chall agments noted. MADE GROUND] between 1.60 and 3.00m bgl c	I. Gravel is fine to coa eramic tile and chalk. : prounded cobbles of the requent rootlets noted rehalk silt. Gravel is fine chalk silt. Gravel is fine to o k. Sand is fine to coars y sand. Sand is fine to coars y sand. Sand is fine to coars and fint, brick and ran lay becoming absent.	rse angular to Sand is fine to vrick and <u>1</u> ne to coarse coarse angular to se. Rare shell re claystone.	2.00 3.00	102 87	90 60		(m) (m)
							-								-
							-								-
							1								
							1								_
							Ţ								-
]								-
]								-
															-
	I														5 —
Notes:								Hole Diameter	Casing	Hammer Inform	nation		Scale	1:25	
1. Window	sampler bo	rehole termi	nated at 3.0m bgl due to	collapse o	f loose į	gravels in	to borehole	e. Depth Diam	Depth Diam	Energy Ratio S	Serial No).	Logged By:	- NLC	
2. Groundw 3. D = Distu	ater strike e rbed Sampl	encountered e. ES = Envir	at 2.0m bgl. onmental Sample.					(m) (mm) 2.00 102	(m) (mm)	%			Checked By:	RJB	
4. Installatio	on details: 0	.0m to 0.5m	plain pipe with bentonite	e seal, 0.5r	n to 2.0	m slotte	d pipe with	gravel filter, 3.00 87				— A	pproved By:	PJS	

A. Installation details: 0.0m to 0.5m plain pipe with bentonite seal, 0.5m to 2.0m slotted pipe with gravel filter,
 2.0m to 3.0m backfilled with bentonite.
 5. No visual or olfactory evidence of contamination noted.

Install Response Zones

0.50

Ref

Pipe1

Section ID: From (m) To (m) CGL Reference 2.00 CG/38709

Project T	itle: Hy	the Quay,	, Colchester					St	tatus:			Locatio	n ID					
Cl	ient: Be	yond the	Box Developments	Limited	Carry			FI	NAL			WS	5					GL
From (m)	To (m)	Type	Plant Used	Strike (m	Grou	nawau ne (min)	.er 	Location Ty	pe: Wind	dow Sam	pler							
0.00	1.20	IP	Hand Dug	3.00	.,	-	-	Coords: 60	1518.000	DF/22431	18.000N	l evel·	3 646m		4	Godaln	eotechnics ning Busine	Limited, ess Centre,
1.20	5.00	WS	Tracked Window Sample Rig					Ordnance Su	rvev Grea	t Britain					-	V	/oolsack W Godalmin	'ay,
								National Grid	, k		Final	Depth:	5.00	Jm	4		Surrey,	57
								Orientation	n:	0°	Inclin	nation:	90)°		w	GU7 1XW ww.cgl-uk.o	com
								Date Star	t: 28/0	09/2021	Dat	te End:	28/09,	/2021			heet 1 of	1
	Sa	amples & Tes	sts	Water Le	egend	Strata	Level			Strata D	escription				w	/indow S	ampling	Inst/ Depth
Sample Depth (m)	Type/ Ref	-	Tests/Results	(m)	Cover	Depth (m)	(m)								WS Run	Diam (mm)	Recovery (%)	Backfill (m)
bepen (m)							-	Medium dense r	eddish bro	own sandy	/ gravel. Gr	avel is fine	e to coars	se				
							-	angular to round is fine to coarse.	led of bric Frequent	k, concret cobbles o	e, flint, cer f brick and	amic tile a concrete;	and chalk and rare	k. Sand e metal				
0.30	ES 1						-	fragments noted										-
]	between 0.0)0 and 0.2	0m bgl fre	quent root	lets notea	Ι.					
							-											
							-											
							-											
]											-
						1.00	2.65	Firm dark brown	mottled r	ed and gr	ey slightly s	sandy grav	elly clay.	. Gravel	1			1-
1.10	ES 2						-	is fine to coarse and sh	angular to ell fragme	rounded	of flint and is fine to c	l rare brick oarse.	k, charco	al,				
							-	[MADE GROUND)])	0 1 1 (
								between 1.0	0 ana 1.2	um bgi jre	quent root	iets noted						
1.50	D 1						-								1 20			
							_								2.00	102	100	
1.75	ES 3						-	between 1.7	'0 and 1.9	7m bgl ch	arcoal becc	oming frea	quent.					
						1.95	1.70											
							-	Soft dark grey m	ottled bla	ck slightly	gravelly cla d rare brick	ay. Gravel	is fine to	coarse				2
2.10 2.10	ES4 ES 4						_	[MADE GROUND	- REWOR	KED ALLU	VIUM]							
							-											
							-											
2.50 2.50	D 2 D Not]								2.00 3.00	87	100	
	Given						_											
							-											
							-											
							-											3-
3.10	ES 5						_											-
							-											
							-											-
3.50	D 3						1								3.00 4.00	78	90	-
						3.80	-0.15											
3.90	ES6					ΙT	-	Dense brown sar of flint. Sand is n	ndy GRAVI	EL. Gravel	is fine to c	oarse ang	ular to ro	ounded				
3.90	ES 6]	[RIVER TERRACE	DEPOSITS	5]								4 —
							_											-
							-											-
							-											
					•		-								4.00 5.00	67	85	_
																		-
					•		-											
					•		-											
					•	5.00	-1.35		FOH at	5.00m - Ac	hieved targe	t depth						5 —
Notes:									Hole D	iameter	Cas	sing	Han	nmer Infori	mation		Scale	1:25
1. Window s	ampler bo	rehole termi	inated at target depth of	5.0m bgl.					Depth	Diam	Depth	Diam	Energy I	Ratio S	Serial No	э. —	Logged By	NLC
2. Groundw 3. D = Distu	ater strike e bed Sampl	encountered e. ES = Envir	i at 3.0m bgl. ronmental Sample.						(m) 2.00	(mm) 102	(m)	(mm)	%				Checked By	RJB
4. Installatio 3.0m to 5.0	n details: 0 m backfilleo	0.0m to 1.0m d with bento	n plain pipe with bentonit onite.	e seal, 1.0n	n to 3.0)m slotte	ed pipe w	th gravel filter,	3.00 4.00	87 78			Insta	Il Response	e Zones		Approved By	PJS
5. No visual	or olfactor	y evidence c	of contamination noted.						5.00	67			Ref	From (m)	To (r	n)	CGL Re	ference
													Pipe1	1.00	3.0	U	CG/3	8709

Project 1	itle: Hy	the Quay	, Colchester					St	tatus:			Locatio	n ID				
Cl	ient: Be	yond the	Box Developments	Limite	d			FI	NAL			WS	6				GL
From (m)	To (m)	Type	Plant Used	Strike (Grou m) Tin	ndwate	er Rose 1	-o Location Ty	pe: Wind	dow Sam	pler				Canal C		. Constant of
0.00	1.20	IP	Hand Dug	2.40)	-	-	Coords: 60	1530.800	DE/22429	94.480N	Level:	3.775m	4	Godaln	ning Busin	ess Centre,
1.20	5.00	003	Sample Rig					Ordnance Su	rvey Grea	t Britain	Final	Denth:	5 00 m		V	Voolsack W Godalmin	/ay, g,
								National Grid	4	0°	Indi	notion.	0.00°	_		Surrey, GU7 1XW	/
								Orientation	1:	0	Incli	nation:	90	_	W	ww.cgl-uk.	com
				<u> </u>				Date Star	t: 28/0	09/2021	Da	te End:	29/09/2021		2	Sheet 1 o	f 1
Sample	Sa Type/	amples & Te	sts Tests/Results	Water Level	Legend /Cover	Strata Depth	Level (m)			Strata D	escription			WS	/indow S Diam	ampling Recovery	Inst/ Depth Backfill (m)
Depth (m)	Ref		,	(m)		(m)		Medium dense c	lark browi	n slightly (silty gravell	v sand Sa	nd is fine to	Run	(mm)	(%)	
]	coarse. Gravel is	fine to co	arse angu	ilar to subr	ounded of	flint, concrete				
0.20 0.20	ES1 ES1						_	and brick. [MADE GROUND	9]								
							-	between 0.0 between 0.2	0 and 0.2 0 and 0.6	0m bgl fre 5m bal be	equent root comina or	ts and roo anaish bro	tlets noted. wn.				
							-				J	J					
						0.65	3.12	Firm dark brown	mottlad	rov clight	thu candu ar		Cravel is fine	_			
							_	to coarse subang	gular to ro	unded of	flint, brick	and concr	ete. Sand is fine				
0.90	ES 2						-	to coarse. [MADE GROUND	0]								
							-	between 1.0	- 10 and 1.7	0m bal oc	casional fr	aaments o	f coal and				1-
1.10 1.10	D 1 D Not]	wood noted.		5		5					
	Given						-										
							-										
1.56]							1 20			
						1.70	2.08 -							2.00	102	100	
1.80	ES3						_	Firm dark grey sl	ightly san	dy slightly Inded of f	y gravelly cl lint and oc	lay. Gravel	is fine to				
1.80	ES 3						-	to coarse.						-			
							-	[MADE GROUND between 1.7) - REWOR 70 and 2.0	KED ALLU Om bgl mi	JVIUM] ottled brow	vn.					2 —
								between 2.0 to coarse	0 and 2.4	0m bgl be	coming ve	ry sandy. S	and is fine				
							-	10 000130.									
							-	hetween 24	0 and 4 5	0m hal he	ecomina we	et and very	soft				
2.50	D 2						-	Occasional o	coarse sub	angular g	gravel of flii	nt noted.	50)1.	2.00 3.00	87	100	
]										
2.80	ES 4						_										
							-										
							-										3-
							-										
							-										
3.50 3.50	D 3 D Not						-							3.00 4.00	78	100	·· •
	Given						-										
							_										
							-	between 3.8	iU and 4.5	um bgl ra	re roots no	ted.				1	
]	between 4.0	0 and 4.5	0m bgl be	coming ve	ry sandy. S	and is fine	-			- 4
								to coarse. O	ccasional	coarse su	bangular g	ravel of br	ick noted.				
4.20	04						-									1	
							-										-
					*****	4.50	-0.72 -	Dense brown sar	ndy GRAVI	EL. Gravel	l is fine to c	oarse ang	ular to rounded	4.00 5.00	67	90	
4.60 4.60	ES5 ES 5			4				of flint. Sand is n	nedium to	coarse.		5				1	
				4			_	LUITEN LENNACE	50 05113	L.						1	
				4	•		-									1	
	I	I		ł		5.00	-1.23 -		EOH at	5.00m - Ac	chieved targe	t depth				1	5 —
Notes:									Hole D	iameter	Cas	sing	Hammer In	formation		Scale	: 1:25
1. Window 2. Groundw	ampler bo	rehole term	inated at target depth of d at 2.4m bgl.	5.0m bgl.					Depth (m)	Diam (mm)	Depth (m)	Diam (mm)	Energy Ratio	Serial N	D.	Logged By	: NLC
3. D = Distu 4. Installatio	bed Sampl	e. ES = Envii	ronmental Sample.	e seal Oi	5m to 3 1	5m slotte	d nine wi	th gravel filter	2.00	102		,	%			Checked By	: RJB
3.5m to 5.0	m backfiller	d with bento	onite.	_ scui, U.		siotte	- P.P.C WI	Brater micely	3.00 4.00	87 78			Install Respo	nse Zones		Section ID	. ctr
S. NO VISUAL		y evidence (si contamination noted.						5.00	67			Ref From (m) To (m)		foronco

CGL Reference

CG/38709

Pipe1

0.50

3.50

Essex Historic Environment Record/ Essex Archaeology and History

Summary sheet

Address: Land at Hythe Quay,	Colchester, Essex, CO2 8JP
Parish: Colchester	District: Colchester
NGR: TM 01521 24376 (centre)	Site code:
	CAT project ref.: 2021/04c
	CHER ref: ECC4669
	OASIS ref: colchest3-419178
Type of work:	Site director/group:
Monitoring	Colchester Archaeological Trust
Date of work:	Size of area investigated:
27th September 2021	0.2ha
Location of curating museum:	Funding source:
Colchester Museum	Developer
Further seasons anticipated?	Related CHER/SMR number:
no	-
Final report: CAT Report 1730	
Periods represented: -	
Summary of fieldwork results: Archaeological monitoring and geoarchae land at Hythe Quay, Colchester, Essex de sampler boreholes and boreholes as part application stage of a development propo associated with a series of lime kilns whice was observed, along with substantial male the prior use of the site as an industrial as archaeological deposits which might have Data collected from the trial-pits, window preparation of a north-south transect of the probable Holocene alluvium beneath the gravels probably dating to the late Pleisto	eological investigation was carried out on uring the excavation of trial-pits, window of ground investigations during the pre- osal. A brick structure which may have been ch was present on the site in the 19th century ke-up and demolition layers associated with rea, activity which likely destroyed any earlier e existed here. samples and boreholes allowed the ne site. This indicates the presence of modern floodplain of the river overlying ocene.
Previous summaries/reports: -	
CBC monitor: Dr Richard Hoggett and D	or Simon Wood
Keywords: -	Significance: -
Author of summary:	Date of summary:
Dr Elliott Hicks	January 2022
	· · · · ·

Written Scheme of Investigation (WSI) for archaeological monitoring and a geoarchaeological investigation on land at Hythe Quay, Colchester, Essex, CO2 8JP

NGR: TM 01521 24376 (centre) District: Colchester

Planning reference: pre-application

Commissioned by: Rob Masefield, RPS

Curating museum: Colchester

CHER number: tbc CAT project code: 2021/04c OASIS project number: colchest3-419478

Site manager: Chris Lister CBC monitor: Dr Richard Hoggett

This WSI written: 15.4.2021



COLCHESTER ARCHAEOLOGICAL TRUST, Roman Circus House, Roman Circus Walk, Colchester, Essex, CO2 7GZ

tel: 01206 501785 *email:* <u>lp@catuk.org</u>

Site location and description

The proposed development occupies c 0.33 ha of land on the southeastern edge of the town centre on vacant land at Hythe Quay, Colchester, Essex, CO2 8JP (Fig 1). The site is centred at National Grid Reference (NGR) TM 01521 24376.

Proposed work

Trial-pits, window sampler boreholes and boreholes as part of site ground investigations at pre-application stage.

Archaeological background

The archaeological and historical background of the site has been comprehensively explored with assessments of significance in the Archaeological Desk-Based Assessment (DBA) produced by RPS (2021). The following background summary is taken from the DBA (RPS 2021, i-ii).

There is low potential for earlier prehistoric (Palaeolithic, Mesolithic) or later prehistoric (Neolithic, Bronze Age or Iron Age) remains. Although, there is possible potential for alluvium and peat of the these dates to be present at this extreme edge of the river floodplain, beneath modern disturbance and made ground.

The site is likely to have been used as river valley pasture during the Late Iron Age, and there is low to moderate archaeological potential for land-raise of Roman date, given its location on the Colne and based on the archaeological identification of Roman consolidation layers around 150m to the north of the site at 9-11 Hythe Quay (CAT Report 100).

There is similarly low potential for settlement activity of Anglo-Saxon and medieval date. The 18th-century historical maps suggest that much of the south/central area of the site may have been further from the river than it currently is. As such only the northern area was potentially within or immediately adjacent to the medieval quay, with the remainder most likely used as grazing meadows. However, given that the port of Hythe has medieval origins there is a low to moderate potential that ground stabilisation layers, and a low potential for possible remnants of wharfs, revetments or other wooden structures, might possibly be present at depth, particularly in northern areas below post-medieval consolidation and truncation.

Following modifications to the River Colne in the 19th century, larger vessels could access and dock at the quayside at Hythe (including at the site) which was now a thriving port. A lime kiln is probably shown in the central southern area of the site in 1845, and was labelled as such by 1876, when further structures and yards are also shown in the northern area. There is a moderate potential for partial archaeological survival of remnants of these facilities and structures beneath 20th-century disturbance and made ground. In the mid-20th century a travelling crane and hopper were operative with coal stores in the northern zone. There is a high potential for remains of these structures to be present below ground level.

Planning background

As part of a pre-application consultation the (former) Colchester Borough Council Archaeological Officer (CBCAO) stated that a Heritage (archaeological) assessment and a pre-determination trial trenching exercise, to include deposit modelling, should be undertaken prior to determination. The results of the assessment (RPS 2021) however, suggested that the proposed development is unlikely to impact upon any significant (above local importance) archaeological assets which might preclude the development. It was therefore agreed with the current CBCAO, that the first stage of investigation should comprise archaeological and geoarchaeological monitoring of proposed Site Ground Investigation, with subsequent subsurface topographical modelling. The results would then inform any subsequent trial trenching requirement.

Requirement for work

The required archaeological work is for:

- Archaeological monitoring of all trial pits (x7) and window sampler boreholes (x6) due to take place on the 26th-28th April 2021.
- Geoarchaeological investigation of the window sampler boreholes with a sample of the other boreholes also monitored whilst the geoarchaeologist is available on site.

General methodology

All work carried out by CAT will be in accordance with:

- professional standards of the Chartered Institute for Archaeologists, including its *Code of Conduct* (ClfA 2014a-c)
- Standards and Frameworks published by East Anglian Archaeology (Gurney 2003, Medlycott 2011)
- relevant Health & Safety guidelines and requirements (CAT 2021)

Professional CAT field archaeologists will undertake all specified archaeological work, for which they will be suitably experienced and qualified. Notification of the supervisor/project manager's name and the start date for the project will be provided to CBCAO one week before start of work.

CAT has employed the services of Dr Bates, a freelance geoarchaeologist to complete the geoarchaeological investigation. Dr Bates previously worked at UWTSD for 20 years as a lecturer in Environmental Archaeology and Geoarchaeology. He specialises in Quaternary stratigraphy and the application of geotechnical investigations to geoarchaeological problems. He has worked across Britain as well as in Jersey, France, the Middle East and East Africa. Currently he manages the cores from the ELF project and is the geoarchaeologist with Ice Age Island team investigating the Neanderthal site of La Cotte de Saint Brelade in Jersey. He has been involved with many engineering projects such as High Speed 1, Dover A20 Road and Sewer Scheme, Terminal 5, London Gateway Port and is currently advising Highways England on the Pleistocene deposits along the route of the proposed Lower Thames Crossing.

Unless it is the responsibility of other site contractors, CAT will study mains service locations and avoid damage to these.

At the start of work (immediately before fieldwork commences) an OASIS online record http:// ads.ahds.ac.uk/project/oasis/ will be initiated and key fields completed on Details, Location and Creators forms. At the end of the project all parts of the OASIS online form will be completed for submission to Essex Historic Environment Record (EHER). This will include an uploaded .PDF version of the entire report.

A unique HER event number will be obtained from the CBCAO prior to the commencement of fieldwork. The curating museum will be notified of the details of the project and the event code, which will be used to identify the project archive when depositing at the end of the project.

Staffing

The number of archaeological field staff for this project is estimated as follows: One CAT archaeologist for the duration of the specified groundworks (estimated at three days).

The number of geoarchaeological field staff for this project is estimated as follows: One geoarchaeologist (Dr Bates) for a total of two days.

Archaeological Monitoring

Methodology

There will be sufficient on-site attendance by CAT staff to maintain a watch on all specified contractors' groundworks, to record, excavate or sample (as necessary) any archaeological features or deposits, and to inspect all upcast soil.

If archaeological features or deposits are uncovered, time will be allowed for these to be excavated, planned and recorded. This could include a 50% sample of discrete features (pits, etc), 10% of linear features (ditches, etc) and 100% of all complex features and burials (see Human Remains policy below).

Individual records of excavated contexts, layers, features or deposits will be entered on proforma record sheets. Registers will be compiled of finds, small finds and soil samples.

Site surveying

Normal scale for archaeological site plans and sections is 1:20 and 1:10 respectively, unless circumstances indicate that other scales would be more appropriate. The site grid will be tied into the National Grid. Corners of excavation areas and trenches will be located by NGR coordinates.

Photographic record

Will include both general and feature-specific photographs, the latter with scale and north arrow. A photo register giving context number, details, and direction of shot will be prepared on site, and included in site archive. Digital site photographs will be taken and archived as per Historic England guidelines (2015a).

Environmental sampling

Any potentially rich environmental layers or features will be appropriately sampled. The number and range of samples collected will be adequate to determine the potential of the site, with particular focus on palaeoenvironmental remains including both biological remains (e.g. plants, small vertebrates) and small sized artefacts (e.g. smithing debris), and to provide information for sampling strategies on any future investigation. Environmental bulk samples will be 40 litres in size (assuming the context is large enough).

Should any complex, or otherwise outstanding deposits be encountered, Val Fryer/Lisa Gray may be asked onto site to advise. Waterlogged 'organic' features will always be sampled. In all cases, the advice of VF/LG and/or the Historic England Regional Advisor in Archaeological Science (East of England) on sampling strategies for complex or waterlogged deposits will be followed.

Human remains

CAT follows the policy of leaving human remains *in situ* unless there is a clear indication that the remains are in danger of being compromised as a result of their exposure or unless advised to do so by the project osteologist or CBCAO. The CBCAO will be notified immediately if any human remains are encountered during the investigation.

If circumstances indicated it were prudent or necessary to remove remains from the site during the monitoring, the following criteria would be applied. If it is clear from their position, context, depth, or other factors that the remains are ancient, then normal procedure is to apply to the Department of Justice for a licence to remove them and seek advice from the project osteologist. Conditions laid down by the DoJ license will be followed. If it seems that the remains are not ancient, then the coroner, the client, and the CBCAO will be informed, and any advice and/or instruction from the coroner will be followed. Following Historic England guidance (2018) if the human remains are not to be lifted, the project osteologist should be available to record the human remain *in situ* (i.e. a site visit).

Finds

All significant finds will be retained.

All finds, where appropriate, will be washed and marked with site code and context number. CAT may use local volunteers to assist the CAT Finds Officer with this task.

Most of our finds reports are written internally by CAT Staff under the supervision and direction of Philip Crummy (Director) and Howard Brooks (Deputy Director). This includes specialist subjects such as:

<u>ceramic finds (pottery and ceramic building material)</u>: Matthew Loughton <u>animal bones</u>: Alec Wade (or Adam Wightman, small groups only) <u>small finds, metalwork, coins, etc</u>: Laura Pooley <u>non-ceramic bulk finds:</u> Laura Pooley <u>flints</u>: Adam Wightman <u>environmental processing</u>: Bronagh Quinn <u>project osteologist (human remains)</u>: Meghan Seehra or to outside specialists:

<u>animal and human bone</u>: Julie Curl (*Sylvanus*) <u>environmental assessment and analysis</u>: Val Fryer / Lisa Gray <u>radiocarbon dating</u>: SUERC Radiocarbon Dating Laboratory, Glasgow <u>conservation/x-ray</u>: Laura Ratcliffe (LR Conservation) / Norfolk Museums Service, Conservation and Design Services

Other specialists whose opinion can be sought on large or complex groups include: flint: Hazel Martingell

<u>:</u> Hazel Martingell

<u>prehistoric pottery: S</u>tephen Benfield / Nigel Brown / Paul Sealey <u>Roman pottery:</u> Stephen Benfield / Paul Sealey / Jo Mills / Gwladys Monteil <u>Roman brick/tile</u>: Ian Betts (MOLA) <u>Roman glass</u>: Hilary Cool <u>small finds:</u> Nina Crummy <u>other</u>: EH Regional Adviser in Archaeological Science (East of England).

All finds of potential treasure will be removed to a safe place, and the coroner informed immediately, in accordance with the rules of the Treasure Act 1996. The definition of treasure is given in pages 3-5 of the Code of Practice of the above act. This refers primarily to gold or silver objects.

Requirements for conservation and storage of finds will be agreed with the appropriate museum prior to the start of work, and confirmed to CBCAO.

A contingency will be made in the budget for scientific assessment/analysis if suitable deposits are identified. This can include soil micromorphological and geochemical analysis of floors and dark earth deposits and/or absolute dating (such as archaeomagnetic and radiocarbon). The Historic England Regional Science Advisor will be consulted for advice.

Geoarchaeological investigation

There will be sufficient on-site attendance by a geo-archaeologist to watch a representative selection of the ground investigation boreholes and the logs from the remaining GI locations will be used to supplement/confirm the findings.

Drilling will be undertaken using a drill rig taking 1m undisturbed cores. Coring using a drill rig involves percussive hammering of the barrel into the ground and the recovery of the caught sample in an open windows sample barrel. Coring will continue from the current ground surface through the alluvium to a depth of 5m. This will provide information on the general stratigraphy of the deposits, their potential and overall character.

Core samples will be returned to the laboratory for cutting, recording and sampling. The cores will be fully examined and recorded.

A post-excavation assessment will be produced to:

- Determine the location, depth, extent, date, character, condition, significance and quality of the surviving geoarchaeological remains
- Assess the ecofactual and environmental potential of the geoarchaeological deposits.

• Inform subsequent evaluation/excavation strategy and sampling policy if further work is required.

Results

Notification will be given to CBCAO when the fieldwork has been completed.

An appropriate archive will be prepared to minimum acceptable standards outlined in *Management of Research Projects in the Historic Environment* (Historic England 2015b).

The report will be submitted within 6 months of the end of fieldwork, with a copy supplied to CBCAO as a PDF.

The report will contain:

- Location plan of the groundworks in relation to the proposed development. At least two corners of the site will be given 10 figure grid references.
- Section/s drawings showing depth of deposits from present ground level with Ordnance Datum, vertical and horizontal scale.
- Archaeological methodology and detailed results including a suitable conclusion and discussion and results referring to Regional Research Frameworks (Medlycott 2011).
- All specialist reports or assessments
- A concise non-technical summary of the project results.

An EHER summary sheet will also be completed and supplied to CBCAO.

Results will be published, to at least a summary level (i.e. round-up in *Essex Archaeology & History*) in the year following the archaeological field work. An allowance will be made in the project costs for the report to be published in an adequately peer reviewed journal or monograph series.

A PDF copy of the full report will be uploaded by CAT to the OASIS website and the Colchester Archaeological Trust's Online Report Library (<u>http://cat.essex.ac.uk/</u>), both of which are publicly accessible.

Archive deposition

It is a policy of Colchester Borough Council that the integrity of the site archive be maintained (i.e. all finds and records should be properly curated by a single organisation), with the archive available for public consultation. To achieve this desired aim it is assumed that the full archive will be deposited in Colchester Museums *unless otherwise agreed in advance*. (A full *copy* of the archive shall in any case be deposited).

By accepting this WSI, the client agrees to deposit the archive, including all artefacts, at Colchester & Ipswich Museum.

The requirements for archive storage will be agreed with the curating museum.

If the finds are to remain with the landowner, a full copy of the archive will be housed with the curating museum and provision must be made for additional recording (e.g. photography, illustration and analysis) as appropriate.

The archive will be deposited with Colchester & Ipswich Museum or an alternate repository (approved by COLEM and CBCAO) within 3 months of the completion of the final publication report, with a summary of the contents of the archive supplied to CBCAO. Digital archives will be curated with the Archaeology Data Service, or similar accredited digital archive repository, that safeguard the long-term curation of digital records.

The CBCAO will be notified of the archiving timetable throughout the project and once deposition has occurred.

A digital / vector drawing of the site be given to the CBCAO for integration into the HER.

Monitoring

CBCAO will be responsible for monitoring progress and standards throughout the project, and will be kept regularly informed during fieldwork, post-excavation and publication stages.

Notification of the start of work will be given to CBCAO one week in advance of its commencement.

Any variations in this WSI will be agreed with CBCAO prior to them being carried out.

CBCAO will be notified when the fieldwork is complete.

The involvement of CBCAO shall be acknowledged in any report or publication generated by this project.

References

Note: all CAT reports, except for DBAs, are available online in PDF format at http://cat.essex.ac.uk

Brown, D	2011 2nd ed	Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation
Campbell, G, Moffett, L & Straker, V	2011	Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation. 2nd edition
CAT	2021	Health & Safety Policy
CAT Report 100	2000	An archaeological evaluation at 9-11 Hythe Quay, Colchester, Essex: October 2000
ClfA	2014a	<i>Standard and Guidance for an archaeological watching brief.</i> Revised June 2020
ClfA	2014b	Standard and guidance for the collection, documentation, conservation and research of archaeological materials. Updated Oct 2020
ClfA	2014c	Code of Conduct. Revised Oct 2019
Gurney, D	2003	Standards for field archaeology in the East of England. East Anglian Archaeology Occasional Papers 14 (EAA 14).
Historic England	2015a	Digital Image capture and File Storage: Guidelines for best practice. By S Cole & P Backhouse
Historic Englan	2015b	Management of Research Projects in the Historic Environment (MoRPHE)
Historic England	2018	The Role of the Human Osteologist in an Archaeological Fieldwork Project. By S Mays, M Brickley and J Sidell
Medlycott, M	2011	Research and archaeology revisited: A revised framework for the East of England. East Anglian Archaeology Occasional Papers 24 (EAA 24)
MHCLG	2019	National Planning Policy Framework. Ministry of Housing, Communities and Local Government.
RPS	2021	Archaeological Desk-Based Assessment: Hythe Quay, Colchester – Beyond the Box, by Rob Masefield

L Pooley



Colchester Archaeological Trust Roman Circus House Roman Circus Walk Colchester Essex CO2 2GZ

tel: 01206 501785 email: <u>lp@catuk.org</u>



OASIS DATA COLLECTION FORM: England

List of Projects | Manage Projects | Search Projects | New project | Change your details | HER coverage | Change country | FAQs | Log out

Printable version

OASIS ID: colchest3-419478

Project details

Project name	Archaeological monitoring and a geoarchaeological investigation at Hythe Quay, Colchester, Essex, CO2 8JP
Short description of the project	Archaeological monitoring was carried out on land at Hythe Quay, Colchester, Essex during the excavation of trial-pits, window sampler boreholes and boreholes as part of ground investigations during the pre-application stage of development. A brick structure which may have been associated with a series of lime kilns which stood here in the 19th century was observed, along with substantial make-up and demolition layers associated with the prior use of the site as an industrial area, activity which likely destroyed any earlier archaeological deposits which might have existed here.
Project dates	Start: 27-09-2021 End: 27-09-2021
Previous/future work	No / Not known
Any associated project reference codes	2021/04c - Contracting Unit No.
Any associated project reference codes	colchest3-419478 - OASIS form ID
Type of project	Recording project
Site status	None
Current Land use	Vacant Land 1 - Vacant land previously developed
Monument type	BRICK STRUCTURE Post Medieval
Monument type	BRICK STRUCTURE Modern
Monument type	CONCRETE FOOTING Modern
Significant Finds	POTTERY Post Medieval
Significant Finds	POTTERY Modern
Significant Finds	CBM Post Medieval
Significant Finds	CBM Modern
Investigation type	"Watching Brief"
Prompt	Planning condition

Project location

Country	England
Site location	ESSEX COLCHESTER COLCHESTER land at Hythe Quay
Postcode	CO2 8JP
Study area	0.2 Hectares
Site coordinates	TM 01521 24376 51.880943120361 0.9282922544 51 52 51 N 000 55 41 E Point

Project creators

Name of Organisation	Colchester Archaeological Trust
Project brief originator	none
Project design originator	Laura Pooley
Project director/manager	Chris Lister
Project supervisor	Megan Seehra
Type of sponsor/funding body	Developer

Project archives

Physical Archive Exists?	No
Digital Archive recipient	Colchester Museum
Digital Archive ID	tbc
Digital Media available	"Images raster / digital photography","Text"
Paper Archive recipient	Colchester Museum
Paper Media available	"Context sheet", "Drawing", "Miscellaneous Material", "Photograph", "Report", "Section"

Project bibliography 1

Grey literature (unpublished document/manuscript)

Publication type	
Title	Archaeological monitoring and a geoarchaeological investigation on land at Hythe Quay, Colchester, Essex CO2 8JP: September 2021
Author(s)/Editor(s)	Hicks, E.
Other bibliographic details	CAT Report 1730
Date	2021
lssuer or publisher	Colchester Archaeological Trust
Place of issue or publication	Colchester
Description	A4 loose-leaf ring-bound
URL	http://cat.essex.ac.uk
Entered by	Dr Elliott Hicks (eh2@catuk.org)
Entered on	22 October 2021



OASIS: Please e-mail Historic England for OASIS help and advice © ADS 1996-2012 Created by Jo Gilham and Jen Mitcham, email Last modified Wednesday 9 May 2012 Cite only: http://www.oasis.ac.uk/form/print.cfm?id=433312 for this page

Cookies Privacy Policy