Archaeology South-East

ASE

Archaeological Evaluation at the Passivhaus Housing Development, New Road, Rainham London Borough of Havering

NGR: TQ 5170 8250

ASE Project No: E2704
Site Code: NRD13
Planning ref: Z0014.12

ASE Report No: 2013208
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Abstract

Archaeology South-East (ASE), the contracting division of the Centre for Applied Archaeology (CAA), Institute of Archaeology (IoA), University College London (UCL) were commissioned by RPS Planning and Development, acting on behalf of Climate Energy Homes Ltd (in association with Old Ford Housing Association and the Greater London Authority) to undertake an archaeological evaluation at New Road, Rainham (NGR: TQ 5170 8250) in advance of residential development.

The trenching consisted of twelve trenches arranged along the route of the proposed roadway to encircle the houses. No significant archaeological remains were encountered in the excavated trenches, possibly due to modern disturbance and truncation. The evaluation did not highlight any areas of archaeological potential which might warrant further on site investigation. The evaluation did, however, provide a valuable insight into the alluvial stratigraphy present on site. At the southern end of the site, there was a clear drop in the level of the underlying gravel terrace; and the identification of a deposit of silty peat present in the south-eastern corner of the site probably represents the edge of a channel or a floodplain deposit. The evidence points towards a channel oriented roughly ENE-WSW.

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1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East (ASE), the contracting division of the Centre for Applied Archaeology (CAA), Institute of Archaeology (IoA), University College London (UCL) were commissioned by RPS Planning and Development, acting on behalf of Climate Energy Homes Ltd (in association with Old Ford Housing Association and the Greater London Authority) to undertake an archaeological evaluation at New Road, Rainham (NGR: TQ 5170 8250) in advance of residential development.

1.1.2 The scheme comprises an energy efficient 'Passivhaus' housing development of 51 units together with associated amenity space, car parking and cycle parking, vehicle access, hard and soft landscaping works, pumping station and associated works.

1.2 Location, Topography and Geology

1.2.1 The site is located approximately 1km to the west of Rainham, 2km to the south-east of Dagenham and 7km to the south of Romford, within the London Borough of Havering. The site covers an area of 0.97ha and is currently vacant, having formerly been occupied by a retail unit and at the time of the evaluation all that remained on the site was a concrete floor slab. The site is relatively flat, lying at c.2.80m AOD in the north and falling slightly towards the south end of the plot which lies at c.2.20m AOD. Immediately to the east lies a small watercourse and to the south the C2C and CTRL railway lines and a sewage treatment works.

1.2.2 The site is located on Flood Plain Gravels with recent (Holocene) alluvium covering the site (BGS 1996, Sheet 257). The underlying London Clay, is described as undivided clay, silty in part, sandy at top and base. The tributary Ingrebourne River runs through Rainham to the east.

1.2.3 Geo-technical site investigation works undertaken by Delta-Simons (2013) identified made ground ranging in depth between 0.45m in the central-western area to 1.7m in the south-west area, overlying alluvial clay, which in turn sealed sand and gravel. Of particular note, DS103, in the south-east corner of the site, demonstrated 0.8m of made ground above 2.2m of sandy organic clay with small peat inclusions and silty sandy clay with pockets of gravely sand with small peat inclusions. This deeper alluvium to over 3m below the existing ground level may represent a channel running through the south-east corner of the site.

1.3 Planning Background

1.3.1 The planning consent for the Passivhaus housing development (Z0014.12) has a condition for archaeological works. The site lies within an Archaeology Priority Area. APAs are used by GLAAS as an indication of areas with known archaeological potential and often lead to planning conditions on development sites within their boundaries. The nature and scope of the

requirement was discussed and agreed with the English Heritage Greater London Archaeological Advisory Service (GLAAS) in a meeting on the 18th of April 2013. The requirement was for archaeological trenching on the line of the deeper ground works in order to evaluate the archaeological potential of the site and assess the likely impact of the proposed development.

1.3.2 An approved Written Scheme of Investigation (WSI) was prepared by RPS Planning and Development (dated 20th May 2013), in response to the following condition:

> *"A) No development shall take place until the applicant has secured the implementation of a programme of archaeological works in accordance with a Written Scheme of investigation which has been submitted by the applicant and approved by the local planning authority.*
>
> *B) No development or demolition shall take place other than that in accordance with the Written Scheme of Investigation approved under Part (A).*
>
> *C) The development shall not be occupied until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation approved under Part (A), and the provision made for analysis, publication and dissemination of the results and archive deposition has been secured.*
>
> *Informative – the development of this site is likely to damage heritage assets of archaeological interest. The applicant should therefore submit detailed proposals in the form of an archaeological project design. The design should be in accordance with the appropriate English Heritage guidelines."*

1.3 Aims and Objectives

1.3.1 The general aims of the evaluation were defined as being:

- To establish the presence/absence of archaeological remains within the site.
- To determine the extent, condition, nature, character, quality and date of any archaeological remains encountered.
- To record and sample excavate any archaeological remains encountered.
- To assess the ecofactual and environmental potential of any archaeological features and deposits.
- To determine the extent of previous truncations of the archaeological deposits.
- To enable the archaeology advisor to the London Borough of Havering, to make an informed decision on the status of the condition, and any possible requirement for further work in order to satisfy that condition.
- To make available to interested parties the results of the investigation.

1.3.2 The specific objectives of the evaluation were defined as being:

- To determine the presence of any prehistoric evidence within or beneath alluvium on site and vulnerability to construction impact (including any

Palaeolithic findings from the upper levels of the underlying gravels if gravels can be safely reached).

- To determine the presence/absence of significant peat deposits within the alluvium, or organic rich alluvium, at the site (or within deeper palaeochannels). NB the evaluation will establish broad potential for the alluvium and/or peat to contain significant ecofacts but any detailed palaeo-environmental work, if necessary, would be considered as a mitigation exercise.
- To determine the presence of any Romano-British, Saxon, Medieval or later activity on site and vulnerability to construction impact.
- To make public the results of the investigation, subject to any confidentiality restrictions.

1.4 Scope of Report

1.4.1 This report seeks to summarise the results of the archaeological evaluation and assesses the potential for further analysis. It has been prepared in accordance with the guidelines laid out in Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (English Heritage 2008).

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 The following summary is derived from the RPS written scheme of investigation which itself summaries a Cotswold Archaeology (CA) Desk Based Assessment (DBA) carried out in 2009 for an adjacent site immediately to the west, conducted for Havering Collage. The reader is directed to this DBA (Cotswold Archaeology 2009) for further background information.

2.1.1 Palaeolithic artefacts from the area include occasional redeposited handaxes from the terrace gravels. There are no very local Neolithic finds, but Bronze Age settlement areas are indicated by excavations of ditched enclosures (one defined by a circle of pits) and associated field-systems on the higher gravel to the north-east. A Bronze Age trackway allowing access to the marshland was found within the alluvium to the east (Meddens & Beasley 1990). Stakes driven into the foreshore and a Bronze Age ditch sealed by flood deposits are also noted within CA study area. These, combined with stray finds of Bronze Age date recovered from the Rainham peat, indicate both farming of the marsh edge and marsh-exploitation (e.g. fishing and fowling) in the vicinity of the site.

2.1.2 Iron Age activity to the south-east includes enclosure ditches and possible structural elements that may relate to more extensive excavated settlement remains at Rainham Town Football Club. The activity there continued into the Roman period. Roman field-systems are known north of the site, whilst a cemetery is located over a kilometre away to the north-west. Other Roman period finds and isolated features were noted elsewhere in the CA study area and suggested general occupation and farming of the gravels beyond the floodplain.

2.1.3 Some early Saxon pottery has been recovered from Roman ditches in the area, suggesting disuse of the ditches themselves, in the period after AD410, but probably continued use of the associated field-enclosed landscapes. Medieval occupation at Rainham to the east was focussed on the early medieval Church of St Helen and St Giles.

2.1.4 A medieval manor was probably located in the vicinity of the 12th century Church of St Helen and St Giles at Rainham. There are various documentary references to Rainham Bridge and a hospital at Rainham which indicates substantial medieval occupation at Rainham itself, whilst Dovers Manor at South Hornchurch indicates a further area of medieval settlement of the gravel terrace (ibid, 8).

2.1.5 The early mapping of 1580-1630 (Havering-atte-Bower, Hornchurch and Romford Libertie of Havering) shows the land as open farmland, and the tithe apportionment for the 1849 tithe map for the parish of Hornchurch described the site area as 'Big Marsh' and that it was used as meadow (ibid, 9). This indicates reclamation of the marsh for use as meadow. New Road was constructed in the early 19th century, with the railway to the south built in the 1850's. The site remained open marsh farmland until the construction of a depot and timber yard warehouse on the site by 1967, presumably following levels raise with Made Ground. The main depot warehouse covered the southern end of the present site but was demolished by 1972. The former Carpetright warehouses were constructed by 1994, with the eastern extent of the largest building (Amberley House) covering the central area of the site (apart from a strip along the eastern side). The demolition of Amberley House had left the site open again.

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Fieldwork

3.1.1 The evaluation was to comprise the excavation of thirteen trial trenches measuring 10m in length by 1.8m wide, arranged along the route of the proposed perimeter roadway encircling the housing development. The trenches were located in order to assess the archaeological impact of the proposed deep service trenches to be dug along the perimeter road. The foundations for the houses themselves are to consist of concrete piles. Trench 1, to be located over the footprint of a proposed pumping station, was abandoned due to design alterations. The remaining twelve trenches were located and excavated as specified, with only minor alterations to positioning due to live services and on-going demolition works.

3.1.2 The investigation also required the excavation of geoarchaeological test pits at the ends of some or all of the trenches in order to fully evaluate the site to the depth of natural gravels where the deeper alluvial deposits were present. These test pits were successfully excavated in all but two of the trenches (trenches 7 and 8) where the presence of a live service restricted access.

3.2 The site archive

ASE informed the London Archaeological Archive and Research Centre (LAARC) prior to the commencement of fieldwork that a site archive would be generated. The site archive is currently held at the offices of ASE and will be deposited at LAARC in due course. The contents of the archive are tabulated below (Table 1).

Number of Contexts	47
No. of files/paper record	1
Plan and sections sheets	0
Bulk Samples	3 (as yet unprocessed)
Block Samples	1 (as yet unprocessed)
Column Samples	1 (as yet unprocessed)
Photographs	38 (digital)
Bulk finds	0
Registered finds	0
Environmental flots/residue	0

Table 1: Quantification of site archive

4.0 RESULTS

4.1 Summary

4.1.1 The trenching consisted of twelve trenches arranged along the route of the proposed roadway to encircle the houses. A proposed thirteenth trench (trench 1) was to be located over the footprint of a proposed pumping station but; due to alterations with the development design, this trench was abandoned prior to excavation.

4.1.2 The trenches were excavated to a maximum depth of 1.2m below ground level, leaving various deposits at their bases. In all cases a deposit of clean alluvium or the natural silt or gravel was revealed. In ten of the twelve trenches, a geoarchaeological test pit was excavated at one end of the trench in order to reveal or further investigate the underlying gravels. Test pits could not be excavated in trenches 7 or 8 due to the presence of a live service.

4.1.3 No archaeological remains were encountered in any of the excavated trenches, although the investigation did provide a valuable insight into the alluvial stratigraphy present on site. Of greatest significance was the identification of a deposit of silty peat present towards the south-eastern corner of the site (trenches 2, 3 and 4) which probably represents the edge of a channel or a floodplain deposit. Samples were recovered from the peat deposit that have the potential to yield valuable palaeoenvironmental information. The geoarchaeological test pit results are fully explored in a subsequent section of this report (5.0).

4.1.4 The stratigraphy present in each trench was recorded. The trench results are tabulated below and are divided into two groups, moving from south to north (lower to higher ground). Trenches 2, 3, 4 and 13 revealed deep alluvial deposits with sand encountered at 2.3-2.5m below ground level. The remaining trenches all revealed natural silt or gravel at much shallower depths (0.8-1.4m below ground level).

4.1.4 In the following descriptions alluvial deposits have been divided into separate contexts based on observed variations in colour and consistence. These variations are sometimes merely the result of differing levels of oxidisation meaning some deposits here divided are amalgamated as single units in the geoarchaeological test pits results (5.0).

4.2 Trenches 2, 3, 4 and 13

The results for these trenches have been separated from those for the remaining trenches due to the significantly lower depths at which gravels were encountered. No archaeological remains were present, although the deep alluvial deposits present in all four trenches, and the layer of peat present in trenches 2, 3 and 4, suggests the presence of a channel or flood plain in the south-west corner of the site, which is of some interest. The upper alluvial deposits appear to be post-medieval in date and a likely to have formed during seasonal flooding events while the site was still marshland prior to development in the mid-20th century. These layers appear less weathered than the earlier alluviums, probably due to the sealing caused by the modern concrete development.

4.2.1 Trench 2 (Figs.2 and 4)

Height AOD at top of trench: 1.93m (W), 1.96m (E)

Context	Type	Description	Deposit Thickness (m)
(2/001)	Layer	Modern made ground – mainly concrete	0.4 - 0.42
(2/002)	Layer	Mid grey brown silty clay alluvium	0.15
(2/003)	Layer	Dark grey silty clay alluvium	0.2 – 0.35
(2/004)	Layer	Mid-light orange brown silty clay alluvium	0.15 – 0.3
(2/005)	Layer	Mid-light greenish grey silty clay alluvium (limit of excavation at 1.2m)	0.2+

Comments

The geoarchaeological test pit revealed a continuation of the silty clay alluvium sealing a peat deposit at 2.1m below ground level (-0.17m AOD) which in turn sealed the natural sand at 2.3m below the surface (-0.37m AOD).

4.2.2 Trench 3

Height AOD at top of trench: 1.95 (W), 1.97 (E)

Context	Type	Description	Deposit Thickness (m)
(3/001)	Layer	Modern made ground – mainly concrete	0.5
(3/002)	Layer	Dark blue grey silty clay alluvium (limit of excavation at 1.1m)	0.6+

Comments

The geoarchaeological test pit revealed a continuation of the silty clay alluvium sealing a peat deposit at 2.1m below the surface (-0.15m AOD) which in turn sealed the natural sand at 2.3m below ground level (-0.35m AOD).

4.2.3 **Trench 4**
Height AOD at top of trench: 2.32 (N), 2.47 (S)

Context	Type	Description	Deposit Thickness (m)
(4/001)	Layer	Modern made ground – mainly concrete	0.56 – 0.6
(4/002)	Layer	Dark grey silty clay alluvium	0.22 – 0.26
(4/003)	Layer	Mid blue grey silty clay alluvium (limit of excavation at 1.22m)	0.44 – 0.52+

Comments
The geoarchaeological test pit revealed a continuation of the blue grey silty clay alluvium sealing a brown grey sticky silt clay at 1.9m below ground level (0.57m AOD), which in turn sealed a peat deposit at 2.44m below the surface (0.03m AOD), which in turn sealed the natural sand at 2.54m below ground level (-0.07m AOD).

4.2.4 **Trench 13**
Height AOD at top of trench: 2.31 (N), 2.31 (S)

Context	Type	Description	Deposit Thickness (m)
(13/001)	Layer	Modern made ground – mainly concrete	0.96
(13/002)	Layer	Dark blue grey silty clay alluvium (limit of excavation at 1.2m)	0.24+

Comments
The geoarchaeological test pit revealed a continuation of the silty clay alluvium sealing the natural sand at 2.5m below ground level (-0.19m AOD).

4.3 Trenches 5-12

The remaining trenches also revealed an absence of archaeological remains. The central part of the site in particular has experienced substantial levels of modern activity, likely to have caused a great deal of truncation (Fig.5) The trenches were excavated to either the natural gravels or in the cases of trenches 7, 8, 9 and 10, to a clean sandy silt layer. As was observed elsewhere on the site, the upper alluvial deposits appear to be post-medieval in date.

4.3.1 **Trench 5**
Height AOD at top of trench: 2.31 (N) 2.33 (S)

Context	Type	Description	Deposit Thickness (m)
(5/001)	Layer	Modern made ground – mainly concrete	0.3 – 0.7
(5/002)	Layer	Green grey clay alluvium	0.2 – 0.7
(5/003)	Layer	Yellow brown silty clay alluvium	0.1 – 0.2
(5/004)	Layer	Natural - light grey sandy silt and gravel (limit of excavation at 1.2m)	Excavated in test pit only

Comments
The geoarchaeological test pit revealed a continuation of the natural gravels, and was excavated to a depth of 2m below ground level (0.31m AOD).

4.3.2 **Trench 6**
Height AOD at top of trench: 2.33 (N), 2.32 (S)

Context	Type	Description	Deposit Thickness (m)
(6/001)	Layer	Modern made ground – mainly concrete	0.38 – 0.7
(6/002)	Layer	Mid grey brown silty clay alluvium	0.2
(6/003)	Layer	Mid yellow brown clay silt alluvium	0.26 – 0.24
(6/004)	Layer	Natural - Light sandy silt and gravel (limit of excavation at 1.1m)	0.26+

Comments
The geoarchaeological test pit revealed a continuation of the natural gravels, and was excavated to a depth of 1.8m below ground level (0.52m AOD).

4.3.3 **Trench 7 (Fig. 3)**
Height AOD at top of trench: 2.73 (W), 2.82 (E)

Context	Type	Description	Deposit Thickness (m)
(7/001)	Layer	Hardcore	0.14
(7/002)	Layer	Modern made ground – dark grey silty clay	0.4
(7/003)	Layer	Dark orange grey clay silt alluvium	0.22
(7/004)	Layer	Light yellow grey silty clay alluvium	0.24
(7/005)	layer	Natural – light orange yellow sandy silt (limit of excavation at 1.04m)	Unexcavated

Comments
Geoarchaeological test pit abandoned due to a live service at the base of the trench.

4.3.4 **Trench 8**
Height AOD at top of trench: 2.79 (W), 7.79 (E)

Context	Type	Description	Deposit Thickness (m)
(8/001)	Layer	Hardcore	0.1 – 0.12
(8/002)	Layer	Modern made ground – dark grey silty clay	0.36 – 0.44
(8/003)	Layer	Mottled dark orange and grey silty clay alluvium	0.28 – 0.3
(8/004)	Layer	Light yellow grey clay silt alluvium	0.14 – 0.2
(8/005)	Layer	Natural – light orange yellow sandy silt (limit of excavation at 0.98m)	Unexcavated

Comments
Geoarchaeological test pit abandoned due to a live service at the base of the trench.

4.3.5 **Trench 9**
Height AOD at top of trench: 2.76 (W), 2.72 (E)

Context	Type	Description	Deposit Thickness (m)
(9/001)	Layer	Hardcore	0.02 – 0.2
(9/002)	Layer	Modern made ground – dark grey silty clay	0.37 – 0.45
(9/003)	Layer	Dark blue grey silty clay alluvium	0.2 – 0.26
(9/004)	Layer	Light orange brown silty clay alluvium	0.27 – 0.29
(9/005)	Layer	Natural – light orange yellow sandy silt (limit of excavation at 1.16m)	Excavated in test pit only

Comments
The geoarchaeological test pit revealed a continuation of the sandy silt with the underlying sand and gravel revealed at 1.3m below ground level (1.42m AOD). The test pit was excavated to a depth of 1.6m below ground level (1.12m AOD).

4.3.6 **Trench 10**
Height AOD at top of trench: 2.35 (N), 2.33 (S)

Context	Type	Description	Deposit Thickness (m)
(10/001)	Layer	Hardcore	0.1
(10/002)	Layer	Modern made ground – dark grey silty clay and concrete rubble	0.4 – 0.42
(10/003)	Layer	Dark blue grey silty clay	0.14 – 0.24
(10/004)	Layer	Light yellow brown clay silt	0.16 – 0.2
(10/005)	Layer	Natural – light orange yellow sandy silt	Excavated in test pit only

Comments
The geoarchaeological test pit revealed a continuation of the sandy silt with the underlying sand and gravel revealed at 1.4m below ground level (0.93m AOD). The test pit was excavated to a depth of 3m below ground level (-0.67m AOD).

4.3.7 **Trench 11 (Fig. 5)**
Height AOD at top of trench: 2.32 (N), 2.32 (S)

Context	Type	Description	Deposit Thickness (m)
(11/001)	Layer	Modern made ground – mainly concrete	0.3 – 0.4
(11/002)	Layer	Natural - Light brown yellow sandy silt	0.3
(11/003)	Layer	Natural - Light orange yellow gravel	Unexcavated

Comments
The majority of the trench was heavily truncated by concrete, which was left in-situ. Where gravel was revealed at the southern end of the trench also constitutes the geoarchaeological test pit; excavated to a depth of 0.72m below ground level (1.6m AOD).

4.3.8 **Trench 12**
Height AOD at top of trench: 2.31 (N), 2.32 (S)

Context	Type	Description	Deposit Thickness (m)
(12/001)	Layer	Modern made ground – mainly concrete	0.3 – 0.5
(12/002)	Layer	Dark black grey silty clay	0.1 – 0.2
(12/003)	Layer	Mid blue grey silty clay	0.2 – 0.4
(12/004)	Layer	Light yellow brown silty clay	0.1 – 0.6
(12/005)	Layer	Natural – light grey sand and gravel (limit of excavation at 1.2m)	Excavated in test pit only

Comments
The geoarchaeological test pit revealed a continuation of the natural gravels, and was excavated to a depth of 1.7m below ground level (0.62m AOD).

5.0 THE GEOARCHAEOLOGICAL TEST PITS by Kristina Krawiec

5.1 Summary

5.1.1 The test pitting has characterised the deposits across the site as fluvial in nature. The underlying gravels did not contain any archaeological material and were not truncated by any archaeological features. The gravels were mainly unsorted and were shown to be at their highest at the northern end of the site. Where the overlying deposits were intact the gravels in the northern half of the site were sealed by an orange yellow sandy silt up to 0.55m thick.

5.1.2 In the southern part of the site the influence of alluviation was recorded. The basal sands were overlain by a 0.20m thick layer of poorly humified silty peat which contained frequent woody roots and reed remains. This reed peat probably represents the edge of a channel or floodplain deposit where stagnant water conditions allowed peat to accumulate. This appears to have been shortlived although absolute dating is required to confirm the possible accumulation rate. This was overlain by a blue grey alluvial silt clay which became less organic towards the top of the sequence. This indicates a change in river regime, with the river possibly moving away from the site leading to the deposition of minerogenic sediments through overbank flooding. This alluvium was up to 1.70m thick and was heavily oxidised in places.

5.1.3 The peat deposit was encountered in three trenches (2,3,4) and samples were recovered in the form of monolith tins and bulk bags. These deposits have the potential to yield palaeoenvironmental information that may help to elucidate the early vegetation history of the site. The samples can also be radiocarbon dated which will allow any data recovered by laboratory analysis to be placed within the wider context of the Thames valley and its tributary system.

5.2 Test pit results

This section provides a detailed description of the deposits observed in the geoarchaeological test pits. The composition and characteristics of the deposits are described with the aid of a recognised system of letter codes outlined in the key below.

Degree of Darkness (Da)		**Degree of Stratification (St)**		**Degree of Elasticity (El)**	
nig.4	black	strf.4	well stratified	elas.4	very elastic
nig.3		strf.3		elas.3	
nig.2		strf.2		elas.2	
nig.1		strf.1		elas.1	
nig.0	white	strf.0	no stratification	elas.0	no elasticity
Degree of Dryness (Sicc)		**Sharpness of Upper Boundary (UB)**			
sicc.4	very dry	lim.4	< 0.5mm		
sicc.3		lim.3	< 1.0 & > 0.5mm		
sicc.2		lim.2	< 2.0 & > 1.0mm		
sicc.1		lim.1	< 10.0 & > 2.0mm		
sicc.0	water	lim.0	> 10.0mm		

Key for explaining letter codes (*Troels-Smith, 1955*)

Trench 2 test pit 2 (West end)

0-0.40m Concrete

0.40-0.90m

Da	St	El	Sicc	UB
3	0	0	4	4

As2 Ag2 Sh+
Brown Grey alluvial clay

0.90-2.10m

Da	St	El	Sicc	UB
2	0	0	3	3

As2 Ag2 Sh+ Dh+
Blue-Grey alluvial silt clay, occasional reed remains

2.10-2.30m

Da	St	El	Sicc	UB
3	0	0	3	4

Ag2 DH1 TI1
Mid brown silty peat, frequent reed remains and woody roots

2.30m White grey fine sand

Trench 3 test pit 3 (West end)

0-0.60m Concrete

0.60-1.80m	Da	St	El	Sicc	UB
	2	0	0	3	1
	As2 Ag2 Sh+ Dh+				
	Blue-Grey alluvial silt clay, occasional reed remains				
1.80-2.10m	Da	St	El	Sicc	UB
	3	0	0	3	1
	As2 Ag2 Dl++ Sh				
	Brown grey sticky silt clay, wood at top				
2.10-2.30m	Da	St	El	Sicc	UB
	3	0	0	3	4
	Ag2 DH1 Tl1				
	Mid brown silty peat, frequent reed remains and woody roots				
2.30m	White grey fine sand				

Trench 4 test pit 4 (South end)

0-0.60m Concrete

0.60-0.68m	Da	St	El	Sicc	UB
	3	0	0	3	4
	As2 Ag2 Sh				
	Brown Grey alluvial clay				
0.68-1.90m	Da	St	El	Sicc	UB
	2	0	0	3	1
	As2 Ag2 Sh+ Dh+				
	Blue-Grey alluvial silt clay, occasional reed remains				
1.90-2.44m	Da	St	El	Sicc	UB
	3	0	0	3	1
	As2 Ag2 Dl++ Sh				
	Brown grey sticky silt clay, wood at top				
2.44-2.54m	Da	St	El	Sicc	UB
	3	0	0	3	4
	Ag2 DH1 Tl1				
	Mid brown silty peat, frequent reed remains and woody roots				
2.54m	White grey fine sand				

Trench 5 test pit 5 (South end)

0-0.50m Concrete

0.50-1.60m	Da	St	El	Sicc	UB
	3	0	0	3	4
	As2 Ag2 Sh				
	Brown Grey alluvial clay				

1.60-1.70m Grey unsorted sand and gravel

1.70-2.00m orange-red unsorted gravel with sand patches

Trench 6 test pit 6 (South end)

0-0.64m Concrete

0.64-1.80m Grey sand and gravel, unsorted

Trench 9 test pit 9 (East end)

0-0.60m Made ground

0.60-0.80m	Da	St	El	Sicc	UB
	3	0	0	3	4
	As2 Ag2				
	Brown Grey alluvial clay				

0.80-1.30m	Da	St	El	Sicc	UB
	2	0	0	3	4
	Ag2 Gmin2				
	Orange yellow sandy silt				

1.30-1.40m Grey unsorted sand and gravel

1.40-1.60m Grey orange mixed gravel

Trench 10 test pit 10 (South end)

0-0.85m Made ground

0.85-1.40m

Da	St	El	Sicc	UB
2	0	0	3	4

Ag2 Gmin2
Orange yellow sandy silt

1.40-1.80m Grey unsorted sand and gravel

1.80-1.90m Orange, iron rich sand and gravel

1.90-2.80m Orange brown smaller gravel

2.80-3.00m Orange brown gravel with grey blue sand patch

Trench 11 test pit 11 (South end)

0-0.40m Concrete

0.40-0.72m

Da	St	El	Sicc	UB
2	0	0	3	4

As2 Ag2
Oxidised orange alluvial silt clay

0.72m Gravel

Trench 12 test pit 12 (South end)

0-0.60m Made ground

0.60-1.32m

Da	St	El	Sicc	UB
2	0	0	3	4

As2 Ag2
Oxidised orange grey alluvial clay

1.32-1.70m Grey sand and gravel

Trench 13 test pit 13 (North end)

0-1.00m Made ground

1.00-2.50m

Da	St	El	Sicc	UB
2	0	0	3	3

As2 Ag2 Sh+ Dh+
Blue-Grey alluvial silt clay, oxidised at top

2.50m Basal sands

6.0 DISCUSSION AND CONCLUSIONS

6.1 No significant archaeological remains were encountered in the excavated trenches. This may in part be due to the modern development that has taken place on the site, which has caused substantial levels of modern truncation and disturbance.

6.2 The evaluation did not highlight any areas of archaeological potential which might warrant further on site investigation.

6.3 The investigation did, however, provide a valuable insight into the alluvial stratigraphy present on site. At the southern end of the site, there was a clear drop in the level of the underlying gravel terrace; which indicates the presence of a channel as was suggested from the preceding geo-technical site investigation works. Of key significance was the identification of a deposit of silty peat present in trenches 2, 3 and 4, in the south-eastern corner of the site which probably represents the edge of a channel or a floodplain deposit. The evidence points towards a channel oriented roughly ENE-WSW.

6.4 **Potential for further study at mitigation stage**
Samples recovered from the peat deposit have the potential to yield palaeoenvironmental information that may help to explain the early vegetation history of the site, and through radiocarbon dating any data recovered could be placed within the wider context of the Thames valley and its tributary system. Samples were recovered in the form of monolith tins and bulk bags providing the potential for further study through laboratory testing and radiocarbon dating. These will be retained until a decision is made regarding further work.

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Appendix 1 HER Summary Form

Site Code	NRD 13					
Identification Name and Address	Archaeological Evaluation at the Passivhaus Housing Development, New Road, Rainham					
County, District &/or Borough	London Borough of Havering					
OS Grid Refs.	TQ 5170 8250					
Geology	Flood Plain Gravels with recent (Holocene) alluvium					
Arch. South-East Project Number	E2704					
Type of Fieldwork	**Eval.**	Excav.	Watching Brief	Standing Structure	Survey	Other
Type of Site	Green Field	**Shallow Urban**	Deep Urban	Other		
Dates of Fieldwork	**Eval.** **22-25th July 2013**	Excav.	WB.	Other		
Sponsor/Client	RPS Planning and Development, acting on behalf of Climate Energy Homes Ltd (in association with Old Ford Housing Association and the Greater London Authority)					
Project Manager	Adrian Scruby					
Project Supervisor	Adam Dyson					
Period Summary	Palaeo.	Meso.	Neo.	BA	IA	RB
	AS	MED	**PM**	**Modern**		

Archaeology South-East (ASE) was commissioned to undertake an archaeological evaluation in advance of residential development. The trenching consisted of twelve trenches arranged along the route of the proposed roadway to encircle the houses. No significant archaeological remains were encountered in the excavated trenches, possibly due to modern disturbance and truncation. The evaluation did not highlight any areas of archaeological potential which might warrant further on site investigation. The evaluation did, however, provide a valuable insight into the alluvial stratigraphy present on site. At the southern end of the site, there was a clear drop in the level of the underlying gravel terrace; and the identification of a deposit of silty peat present in the south-eastern corner of the site probably represents the edge of a channel or a floodplain deposit.

Appendix 2 OASIS Form

OASIS ID: archaeol6-157425

Project details	
Project name	Passivhaus Housing Development, New Road, Rainham, London Borough of Havering
Short description of the project	The trenching consisted of twelve trenches arranged along the route of the proposed roadway to encircle the houses. No significant archaeological remains were encountered in the excavated trenches. The evaluation did, however, provide a valuable insight into the alluvial stratigraphy present on site. At the southern end of the site, there was a clear drop in the level of the underlying gravel terrace; and the identification of a deposit of silty peat present in the south-eastern corner of the site probably represents the edge of a channel or a floodplain deposit.
Project dates	Start: 22-07-2013 End: 25-07-2013
Previous/future work	No / No
Any associated project reference codes	NRD 13 - Sitecode
Any associated project reference codes	E2704 - Contracting Unit No.
Type of project	Field evaluation
Current Land use	Vacant Land 1 - Vacant land previously developed
Monument type	STREAM Uncertain
Significant Finds	NONE None
Methods & techniques	""Sample Trenches"","Test Pits""
Development type	Housing estate
Prompt	National Planning Policy Framework - NPPF
Position in the planning process	Not known / Not recorded

Project location	
Country	England
Site location	New Road, Rainham, London Borough of Havering
Postcode	RM13 8RH
Study area	1.13 Hectares
Site coordinates	TQ 5169 8247 51 0 51 31 12 N 000 11 11 E Point

Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	GLAAS
Project design originator	RPS Consulting

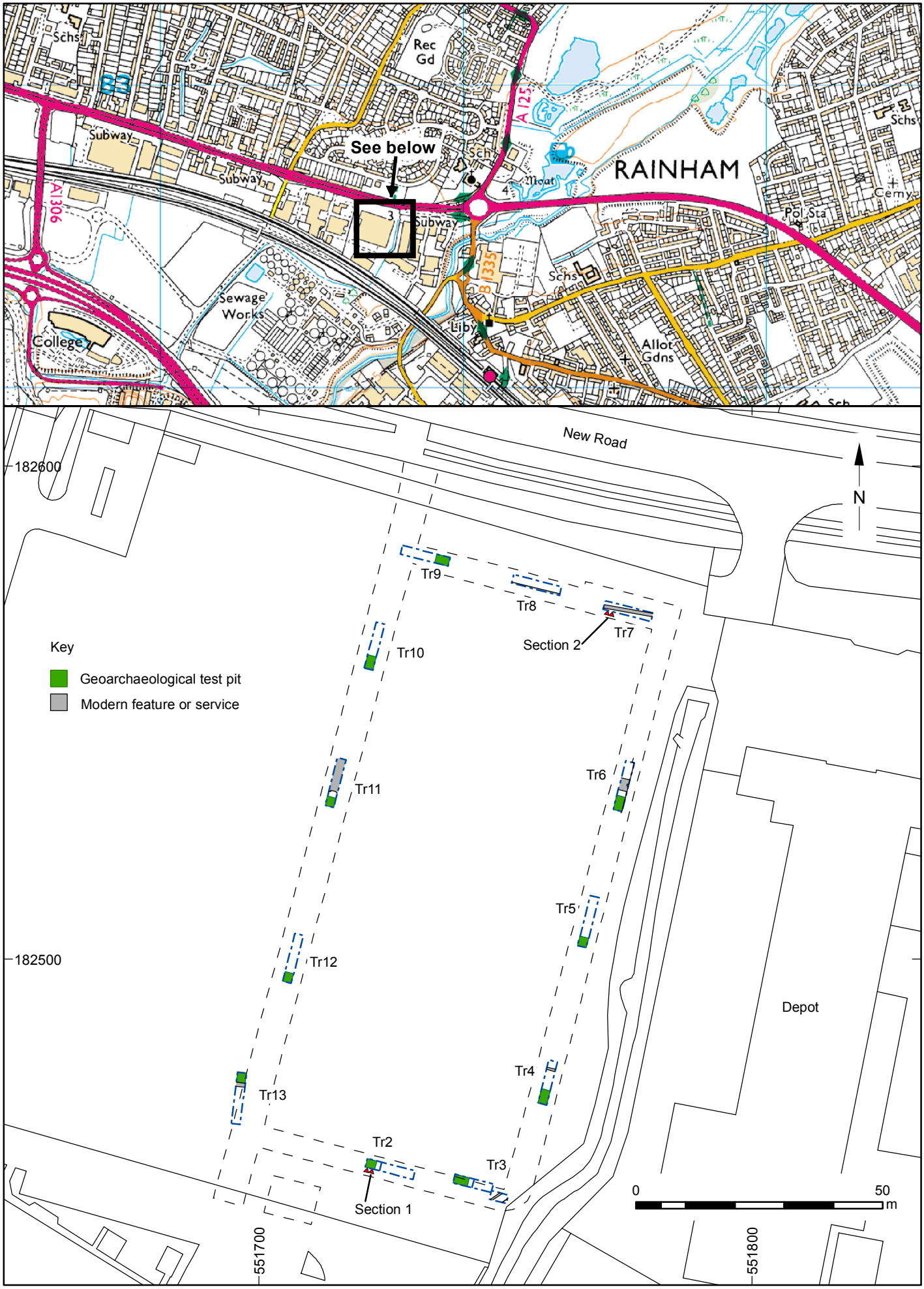
Project director/manager	Adrian Scruby
Project supervisor	Adam Dyson

Project archives

Physical Archive Exists?	No
Digital Archive recipient	LAARC
Digital Contents	"Stratigraphic"
Digital Media available	"Images raster / digital photography"
Paper Archive recipient	LAARC
Paper Contents	"Stratigraphic"
Paper Media available	"Context sheet","Plan","Report","Survey "

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	An Archaeological Evaluation at the Passivhaus Housing Development, New Road, Rainham, London Borough of Havering
Author(s)/Editor(s)	Dyson, A. Krawiec, K.
Other bibliographic details	ASE Report No. 2013208
Date	2013
Issuer or publisher	Archaeology South-East
Place of issue or publication	Braintree
Description	Evaluation Report



© Archaeology South-East		Passivhaus Housing Development, New Road, Rainham	Fig. 1
Project Ref: E2704	July 2013	Location of archaeological evaluation trenches and geoarchaeological pits	
Report Ref: 2013208	Drawn by: APL		

Trench 2, Section 1

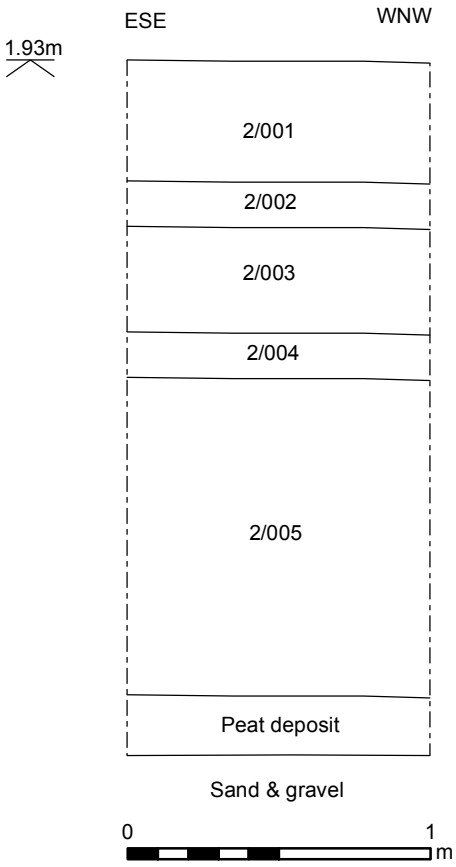


Fig. 2

Trench 7, Section 2

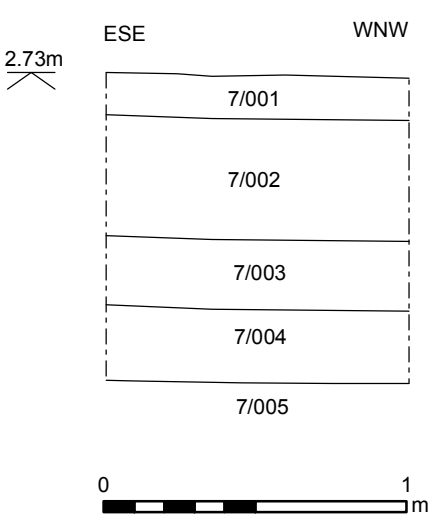


Fig. 3

© **Archaeology South-East**		Passivhaus Housing Development, New Road, Rainham	Figs. 2 & 3
Project Ref: E2704	July 2013	Sections 1 and 2	
Report Ref: 2013208	Drawn by: APL		

Fig. 4: Column sampling in trench 2. Looking south.

Fig. 5: Extent of modern truncation in trench 11. Looking north.

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