

**Archaeological and Geoarchaeological
Evaluation Report**

**Land at Pembury Circus
London Borough of Hackney
NGR 534654 185098
(TQ 346 850)**

Planning Ref: 2011/3009

**ASE Project No: 5394
Site Code: PMC12**

**ASE Report No: 2012165
OASIS ID - archaeol6-131769**

**By Diccon Hart
With contributions from Luke Barber**



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Abstract

Archaeology South-East was commissioned by CgMs on behalf of their client to undertake an archaeological evaluation on land at Pembury Circus, London Borough of Hackney in advance of the redevelopment of the site.

Two archaeological evaluation trenches, measuring approximately 20.00m and 25.00m respectively, were excavated on the site to reveal the underlying Hackney Gravels at maximum elevations of 12.36m OD in the west of the site and 13.75m OD to the east. A single 17th-18th century quarry pit was identified in the far west of the site, cut into the natural geology. This was sealed by possible subsoil and topsoil horizons, which survived only intermittently across the site.

Elsewhere, the depth of truncation as a result either of the construction of basements or landscaping of the site, exceeded the height of the natural geology and in these areas, sequences of 19th or 20th century made ground directly overlay the Hackney Gravels.

Within the archaeological trenches, two deeper test pits were excavated for geoarchaeological observation. Very limited potential for recovering Palaeolithic artefacts or palaeoenvironmental information was recorded and no further investigation is recommended.

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1 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East (ASE), the contracting division of The Centre for Applied Archaeology (CAA) at the Institute of Archaeology (IoA), University College London (UCL) was commissioned by CgMs Consulting on behalf of their client to undertake an archaeological evaluation in advance of development of land at Pembury Circus, London Borough of Hackney. The site is centred on National Grid Reference (NGR) 534654 185098 and its location is shown in Figure 1.

1.2 Geology and Topography

1.2.1 The underlying geology of the site, according to the British Geological Survey consists of Hackney Gravel Member above the London Clay Formation (BGS 2012).

1.2.2 The site is broadly level, at around 14.00m OD and, currently consists of open ground cleared of previous buildings. The site is bounded to the west by Pembury Road, to the south by Dalston Lane and to the north and east by residential buildings.

1.3 Planning Background

1.3.1 Outline planning permission for the residential redevelopment of the site was granted in 2010 (Planning Reference: 2010/2596). A planning condition was attached to the subsequent detailed consent that required the implementation of a programme of archaeological work, stating that:

No development shall take place until the applicant has secured the implementation of a programme of archaeological work in accordance with the scheme of investigation which has been submitted in writing and approved by the Local Planning Authority. The development shall only take place in accordance with the detailed scheme pursuant to this condition. The archaeological works shall be carried out by a suitably qualified investigating body acceptable to the Council.

Reason: To safeguard the archaeological interest in the site.

1.3.1 A Desk Based Assessment of the archaeological potential of the site was subsequently prepared by CgMs Consulting Ltd (CgMs 2012a). A Written Scheme of Investigation was also prepared by CgMs (CgMs 2012b) and approved by the Greater London Archaeological Advisory Service (GLAAS) in its capacity as advisors to the Local Planning Authority on archaeological matters. All work was undertaken in accordance with this document at with the relevant standard and guidance documents of the Institute for Archaeologists (IfA 2009) and GLAAS (GLAAS 2009)

1.4 Aims and Objectives

1.4.1 The Aims and Objectives of the archaeological work were set out in the Written Scheme of Investigation (CgMs 2012b) and are reproduced below.

- *To establish whether any archaeological sites exist in the area, with particular regard to any which are of sufficient importance to require preservation in situ.*
- *The evaluation should aim to determine, as far as is reasonably possible, the location, form, extent, date, character, condition, significance and quality of any surviving archaeological remains, irrespective of period, liable to be threatened by the proposed development. An adequate representative sample of all areas where archaeological remains are potentially threatened should be studied, and attention should be given to sites and remains of all periods (inclusive of evidence of past environments).*
- *The evaluation should also seek to clarify the nature and extent of existing disturbance and intrusions and hence assess the degree of archaeological survival of buried deposits and any surviving structures of archaeological significance.*
- *Within these parameters, the evaluation of this site presents an opportunity to address the following objectives:*
 - 1) *To establish the presence or otherwise of any prehistoric activity, together with any earlier or later activity, and to define the date and nature of such activity.*
 - 2) *To establish the environmental context of any prehistoric activity, together with any earlier and/or later activity.*
 - 3) *Evaluate the likely impact of past land use and development.*
 - 4) *Provide sufficient information to construct an archaeological mitigation strategy.*
 - 5) *Where physical preservation is likely to be considered as a mitigation option, the primary factors affecting the present state of preservation and the direct and indirect effect of the proposed development should also be considered.*

1.5 Scope of Report

1.5.1 This report details the results of the archaeological evaluation carried out on the site on the 1st and 2nd August 2012 and has been prepared in accordance with the Written Scheme of Investigation (CgMs 2012b). The work was carried out by Diccon Hart (Senior Archaeologist) and John Cook (Archaeologist) and was managed by Andy Leonard (fieldwork) and Dan Swift (post-excavation).

2.0 ARCHAEOLOGICAL BACKGROUND

- 2.1 The following archaeological background is drawn from the Desk Based Assessment of the site (CgMs 2012). For a full account of the archaeological background of the site and area, the reader is referred to that document.

Palaeolithic and Mesolithic

- 2.2 The Hackney Gravels have long been associated with significant finds of Palaeolithic material. During the later 19th century, significant assemblages of Palaeolithic flint with associated faunal and floral assemblages were recorded during gravel extraction to the northeast and northwest of the subject site in Stoke Newington and Clapton, most notably by Worthington G. Smith (e.g. Smith 1884). Much of this material was recovered in fresh condition from primary contexts in the fine grained deposits which overlie the Hackney Gravels, while material recovered from the gravels themselves often proved more abraded.
- 2.3 Finds of Palaeolithic material recorded in the vicinity of the site in the Greater London Historic Environment Record (GLHER) include significant quantities of handaxes, roughouts and various modified and unmodified flakes from Clapton, to the northeast of the site, as well as numerous finds of handaxes, retouched and unmodified flakes in the general Hackney area, including Palaeolithic material associated with the Hackney Brook to the west of the site. In view of these finds, the Desk Based Assessment of the site deemed the Palaeolithic potential of the site to be moderate, prior to 19th and 20th century development.
- 2.4 Finds of Mesolithic date in the vicinity of the site include a macehead and associated flakes and blades found in association with the Hackney Brook to the west of the site, while a single unstratified flint blade was found at Mare Street to the south. A low potential for the Mesolithic was thus suggested.

Neolithic, Bronze Age and Iron Age

- 2.5 Finds of later prehistoric date in the vicinity of the site are limited to a single undiagnostic flint blade from Mare Street to the south of the site. a low potential for the later prehistoric periods has been identified.

Roman

- 2.6 Finds of Roman material in proximity to the site include residual Roman tile and pottery to the northeast and northwest of the site at Lin kRoad, Dalston Lane, Downs Park Road and Lower Clapton and the archaeological potential for Roman activity on the site was identified as low.

Saxon and medieval

- 2.7 Saxon material recovered in the vicinity of the site is limited to a single Saxo-Norman pit excavated at Link Street to the northeast of the site.

- 2.8 The advent to the medieval period saw the development of settlement along Dalston Lane to the south of the site and Clapton road to the east and a variety of medieval features including rubbish pits, foundations and a sluice have been recorded during various excavations in the vicinity. However, during the medieval period, the site itself is considered to have lain in open ground away from documented areas of settlement and a generally low potential for the period is identified, with the possible exception of agricultural activity in the hinterland of medieval settlement.

Post-medieval

- 2.9 Linear settlement had developed along Mare Street to the south of the site by the end of the 16th century, although the site itself is shown to lie in open ground in John Roque's map of 1745. However, The Street frontage of Dalston Lane, which bounds the site to the south, had developed by the time of Starling's map of 1831, with further development along Pembury Road to the west by the time of the first edition Ordnance Survey map of 1870. Subsequent maps show several phases of redevelopment along the street frontages throughout the remainder of the 19th and 20th centuries, accompanied with the construction of basemented buildings on both the Dalston Lane and Pembury Road frontages.

3.0 ARCHAEOLOGICAL METHODOLOGY

- 3.1 Two trenches measuring 20.00m by 2.20m at base were mechanically excavated on the site, as shown in Figure 2.
- 3.2 Both trenches were scanned using a Cable Avoidance Tool prior to excavation. Excavation was undertaken in spits of no more than 0.10m to the top of the underlying natural substrate, or to the top of archaeological deposits, whichever was higher.
- 3.3 Some revision to trench locations was necessary due to existing site conditions and obstructions, including trees, existing services and monitoring wells. The western end of Trench 1 was extended in order to better define archaeological deposits revealed, while Trench 2 was excavated in two discrete parts to a due to the existence of a live electricity feed. Any significant revisions were made with the agreement of GLAAS through CgMs.
- 3.4 All deposits were recorded using ASE standard context sheets, with colours recorded by visual inspection only. Test pits were recorded on plastic drawing film at appropriate scales.
- 3.5 Spoil heaps and trench bases were scanned by eye, for unstratified artefacts.
- 3.6 Trenches were backfilled and compacted by machine but no further reinstatement was undertaken.

3.0 RESULTS

3.1 Archive Quantification

Number of Contexts	14
No. of files/paper record	1
Plan and sections sheets	1
Bulk Samples	none
Photographs	1 roll, b/w, 1 roll colour
Bulk finds	1 box
Registered finds	none
Environmental flots/residue	none

Table 1: Archive quantification

3.2 Trench 1 (Figure 3)

Length: 19.93m at base Width: 4.10m max. at base Depth: 2.25m

Number	Type	Description	Max. Length	Max. Width	Max. Depth	Max. height OD
1/001	Layer	Demolition horizon	Tr.	Tr.	0.20m	14.12m
1/002	Layer	Made ground	Tr.	Tr.	0.80m	13.98m
1/003	Fill	Buried topsoil	6.5m	Tr.	0.25m	12.66m
1/004	Cut	Subsoil	6.5m	Tr.	0.15m	12.41m
1/005	Fill	Fill of 1/006	5.00m	Tr.	0.30m	12.36m
1/006	Cut	Quarry pit	5.00m	2.70m	0.30m	12.36m
1/007	Layer	Natural	Tr.	Tr.	-	12.36m

Table 2: Trench 1 recorded contexts

Summary

- 3.1.1 Natural geology, consisting of Hackney Gravels, was encountered at a maximum height of 12.36m OD at the western end of the trench, falling away to 11.61m OD to the east.
- 3.1.2 The northern edge of a single large probable quarry pit was identified at the western end of the trench, cut into the underlying natural gravels. This comprised a single straight edge with rounded profile [1/006] and was backfilled with light grey silty sand [1/005]. Peg tile and brick recovered from this deposit indicates a 17th-18th century date for the infilling of the feature.
- 3.1.3 A layer of light yellowish brown silty sand [1/004] overlay fill [1/005] and may represent the surviving subsoil horizon of the site, although it is possible that it represents a later fill of quarry [1/006]; subsequent truncation from 19th century cellars and tree throws means that it extends little further than the quarry itself. This deposit was sealed by a layer of dark brown sandy silt [1/003] that probably represents a buried topsoil horizon though, again, later truncation has reduced this extent of this deposit to the westernmost 6.00m of the trench.

3.1.4 A substantial depth of 19th and 20th century made ground [1/002] sealed the buried topsoil horizon [1/003]. Across the remainder of the trench this made ground directly overlay the underlying natural gravel, indicating extensive truncation as a result of prior development on the site.

3.1.5 The sequence was capped by a horizon of recent demolition material [1/001].

3.2 Trench 2 (Figure 4)

Length: 25.4m Width: 2.20m Depth: 1.40m max.

Number	Type	Description	Max. Length	Max. Width	Max. Depth	Max. height OD
2/001	Layer	Topsoil	Tr.	Tr.	0.20m	14.78m
2/002	Layer	Made ground	7.30m	Tr.	0.60m	14.58m
2/003	Fill	Made ground	16.50m	Tr.	0.30m	14.05m
2/004	Cut	Buried soil horizon	7.30m	Tr.	0.40m	13.98m
2/005	Fill	Natural	Tr.	Tr.	-	13.75m
2/006	Cut	Tarmac and makeup	16.50m	2.70m	0.45m	14.50m
2/007	Layer	Subsoil	Tr.	Tr.	0.20m	13.58m

Table 3: Trench 2 list of recorded contexts

Summary

3.1.6 This trench was excavated in two parts (designated Trench 2 and Trench 2a) due to the presence of a live electricity feed.

3.1.7 The underlying natural Hackney Gravels [2/005] were revealed at a maximum height of 13.75m OD towards the centre of Trench 2 falling away to 13.38m OD to the west (Trench 2a) and 13.33m OD to the east (eastern end of Trench 2). This was overlain by a partially surviving subsoil horizon of mid yellowish brown silty sand [2/007] that survived at the far western and eastern ends of the trench only; subsequent horizontal truncation to around 13.60m OD, seemingly from landscaping operations, had entirely removed the subsoil horizon from the centre of the trench where the underlying natural geology stands somewhat higher.

3.1.8 At the far western end of the trench (Trench 2a), a thin layer of remnant topsoil survived over the subsoil horizon (2/004), while a layer of imported garden soil [2/003] sealed the surviving subsoil horizon and natural geology across the remainder of Trench 2. This was in turn sealed by 20th century tarmac and associated makeup [2/006]. A thick layer of made ground also sealed the buried topsoil horizon [2/004] in Trench 2a and was capped with a layer of modern topsoil (2/001).

3.1.9 No archaeological features were identified.

4.0 FINDS

4.1 The Ceramic Building Material by Luke Barber

4.1.1 The evaluation recovered just two pieces of building material from the site. Both were recovered from context [1/005]. The largest piece consists of part of a somewhat abraded 50mm tall red brick. This is quite well formed and medium fired with a moderate fine sand (sugary) tempering with rare sub-rounded flint pebble inclusions to 10mm.

4.1.2 The other fragment is from a peg tile, some 13mm thick, with slightly 'D'-shaped peg holes. The tile is quite well formed and fired with only sparse fine sand tempering being evident.

4.1.3 Both brick and tile can be placed within a 17th- to 18th- century date range.

5.0 DISCUSSION AND CONCLUSIONS

- 5.1 Only one archaeological feature was identified during the course of the investigation – a 17th-18th century quarry pit [1/006], presumably dug for gravel extraction. The quarrying of gravel and brickearth was common practice in the area throughout much of the post-medieval period.
- 5.2 Extensive truncation was evident in both excavated trenches as a result of previous development on the site. Survival of a subsoil horizon was limited to the westernmost 6.00m of Trench 1 and the far eastern and western ends of Trench 2 only; elsewhere the depth of truncation, as a result either of the construction of basements on the site (Trench 1) or landscaping works (Trench 2), exceeded the height of the natural geology. The survival of potential archaeological deposits in these areas can be assumed to be minimal.
- 5.3 Within the archaeological trenches, two deeper test pits were excavated for geoarchaeological observation. Very limited potential for recovering Palaeolithic artefacts or palaeoenvironmental information was recorded and no further investigation is recommended.

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GLAAS 2009 *Greater London Archaeology Advisory Service: Standards for Archaeological Work.* London Region, English Heritage External Consultation Draft July 2009.

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ACKNOWLEDGEMENTS

Archaeology South-East would like to thank CgMs and their client for commissioning the work and Adam Single of GLAAS for his assistance throughout the project.

HER Summary Form

Site Code	BOW 12					
Identification Name and Address	Land at Pembury Circus, London Borough of Hackney.					
County, District &/or Borough	Tower Hamlets					
OS Grid Refs.	534654 185098					
Geology	Hackney Gravels					
Arch. South-East Project Number	5394					
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. 01- 02.08.12	Excav.	WB.	Other		
Sponsor/Client	CgMs					
Project Manager	Andy Leonard					
Project Supervisor	Diccon Hart					
Period Summary	Palaeo.	Meso.	Neo.	BA	IA	RB
	AS	MED	PM ✓	Other Modern ✓		
<p>Archaeology South-East was commissioned by CgMs on behalf of their client to undertake an archaeological evaluation on land at Pembury Circus, London Borough of Hackney in advance of the redevelopment of the site.</p> <p>Two archaeological trenches, measuring approximately 20.00m and 25.00m respectively, were excavated on the site to reveal the underlying Hackney Gravels at maximum elevations of 12.36, OD in the west of the site and 13.75m OD to the east. A single 17th-18th century quarry pit was identified in the far west of the site, cut into the natural geology. This was sealed by possible subsoil and topsoil horizons, which survived only intermittently across the site. Elsewhere, the depth of truncation as a result either of the construction of basements or landscaping of the site, exceeded the height of the natural geology and in these areas, sequences of 19th or 20th century made ground directly overlay the Hackney Gravels.</p> <p>Within the archaeological trenches, two deeper test pits were excavated for geoarchaeological observation. Very limited potential for recovering Palaeolithic artefacts or palaeoenvironmental information was recorded and no further investigation is recommended.</p>						

OASIS FORM

OASIS ID - archaeol6-131769

Project details

Project name Land at Pembury Circus, London Borough of Hackney

Short description of the project Archaeology South-East was commissioned by CgMs on behalf of their client to undertake an archaeological evaluation on land at Pembury Circus, London Borough of Hackney in advance of the redevelopment of the site. Two trial trenches, measuring approximately 20.00m and 25.00m respectively, were excavated on the site to reveal the underlying Hackney Gravels at maximum elevations of 12.36, OD in the west of the site and 13.75m OD to the east. A single 17th-18th century quarry pit was identified in the far west of the site, cut into the natural geology. This was sealed by possible subsoil and topsoil horizons, which survived only intermittently across the site. Elsewhere, the depth of truncation as a result either of the construction of basements or landscaping of the site, exceeded the height of the natural geology and in these areas, sequences of 19th or 20th century made ground directly overlay the Hackney Gravels. Within the archaeological trenches, two deeper test pits were excavated for geoarchaeological observation. Very limited potential for recovering Palaeolithic artefacts or palaeoenvironmental information was recorded and no further investigation is recommended.

Project dates Start: 01-08-2012 End: 02-08-2012

Previous/future work No / Not known

Any associated project reference codes 5394 - Contracting Unit No.

Any associated project reference codes PMC12 - Sitecode

Type of project Field evaluation

Site status None

Current Land use Vacant Land 1 - Vacant land previously developed

Monument type QUARRY Post Medieval

Significant Finds BRICK Post Medieval

Significant Finds ROOF TILE Post Medieval

Methods & techniques "Targeted Trenches"

Development type Urban residential (e.g. flats, houses, etc.)

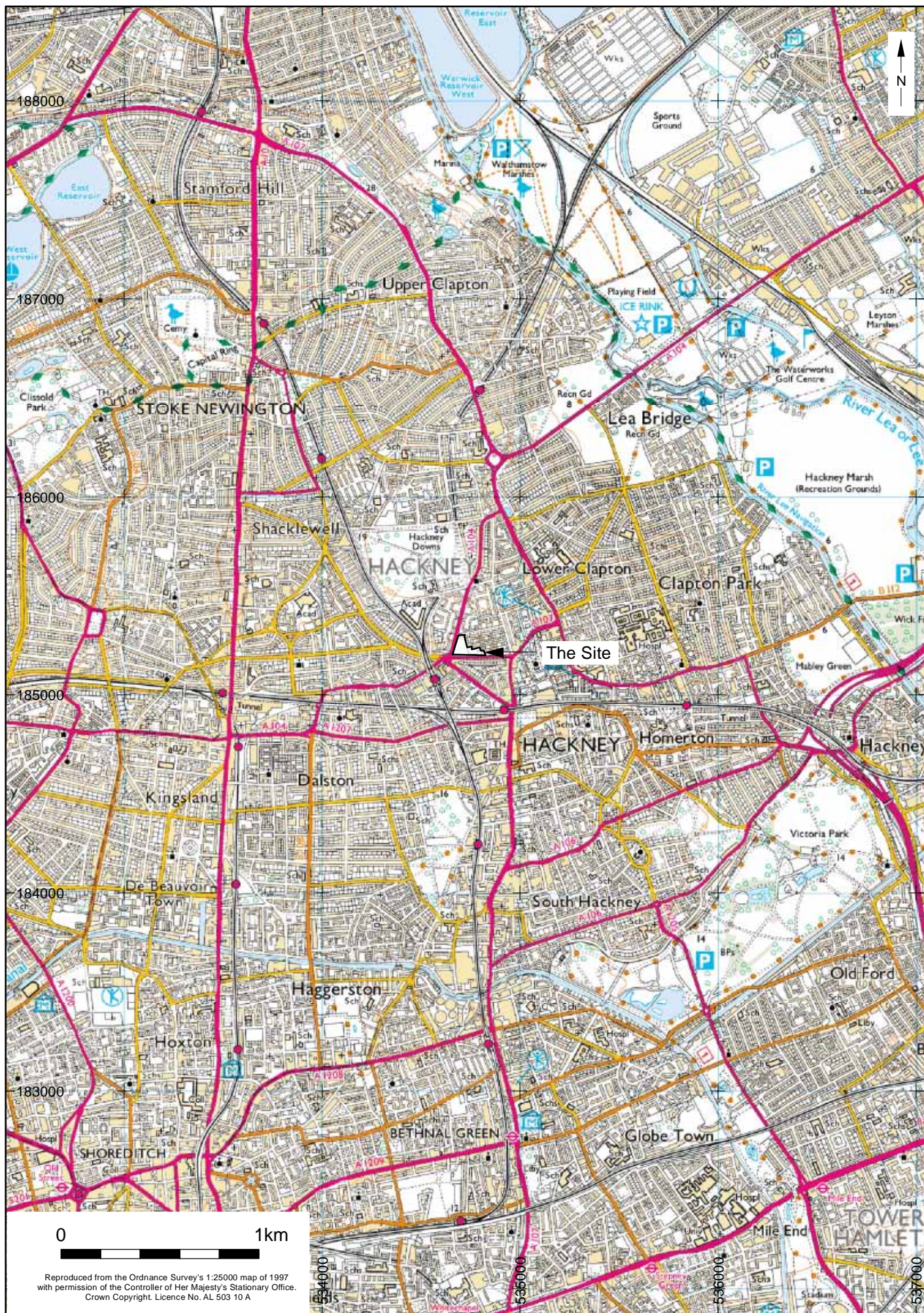
Prompt Direction from Local Planning Authority - PPS

Position in the planning process After full determination (eg. As a condition)

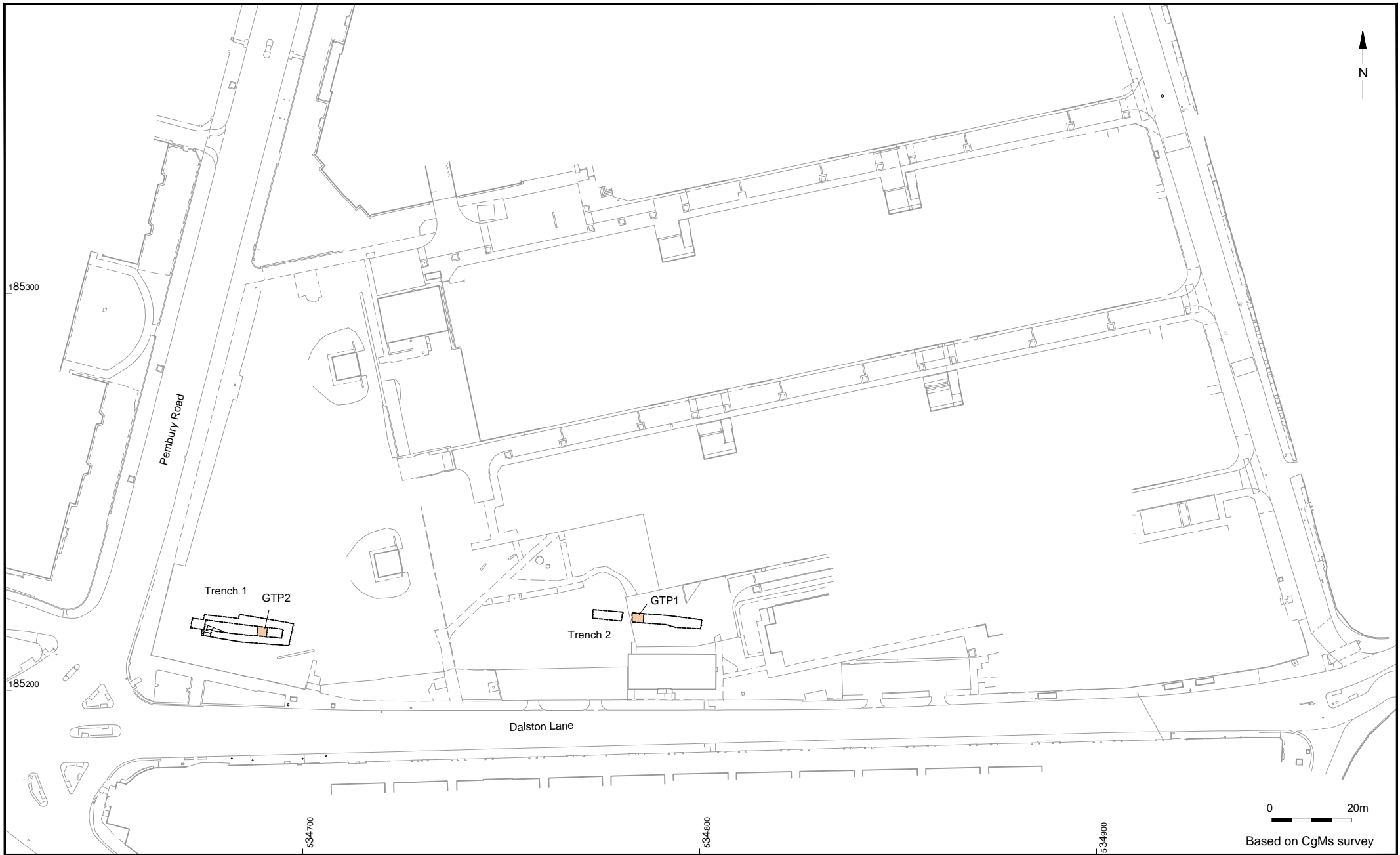
Project location

Country	England
Site location	GREATER LONDON HACKNEY HACKNEY Land at Pembury Circus
Postcode	E8 1LQ
Study area	11.00 Hectares
Site coordinates	TQ 346 850 51 0 51 32 50 N 000 03 30 W Point
Height OD / Depth	Min: 12.36m Max: 13.75m
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	CgMs Consulting
Project design originator	CgMs Consulting
Project director/manager	Andy Leonard
Project supervisor	Diccon Hart
Type of sponsor/funding body	Client
Project archives	
Physical Archive Exists?	No
Digital Archive recipient	LAARC
Digital Contents	"Survey"
Digital Media available	"Images vector"
Paper Archive recipient	LAARC
Paper Contents	"Stratigraphic"
Paper Media available	"Context sheet", "Correspondence", "Photograph", "Plan", "Section"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological evaluation report: Land at Pembury Circus, London Borough of Hackney.
Author(s)/Editor(s)	Hart, D
Other bibliographic details	2012165
Date	2012
Issuer or publisher	Archaeology South-East

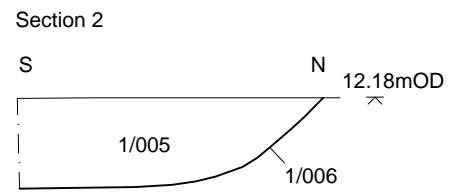
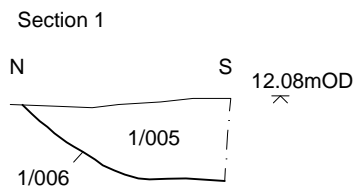
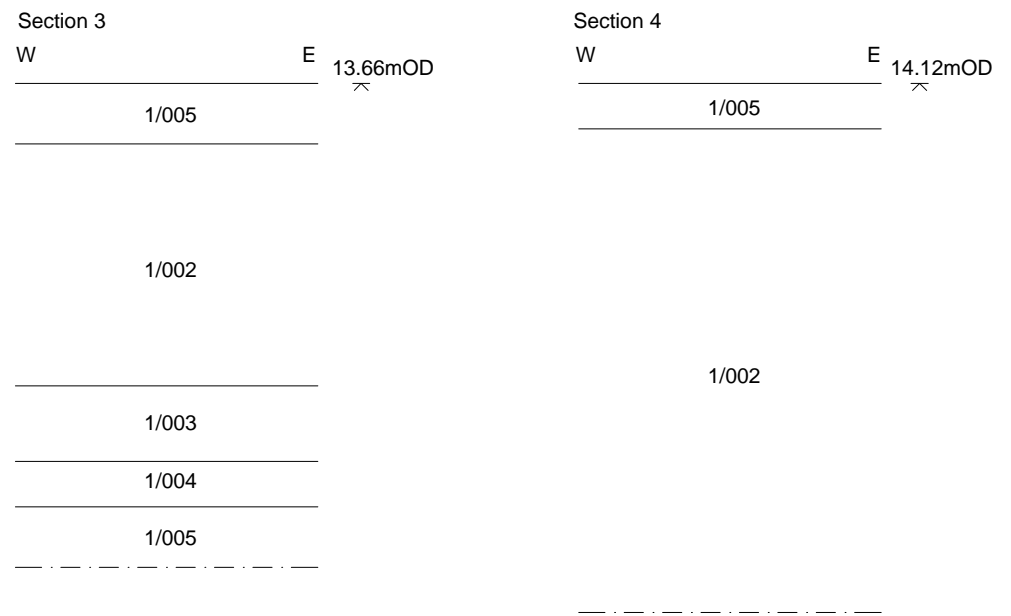
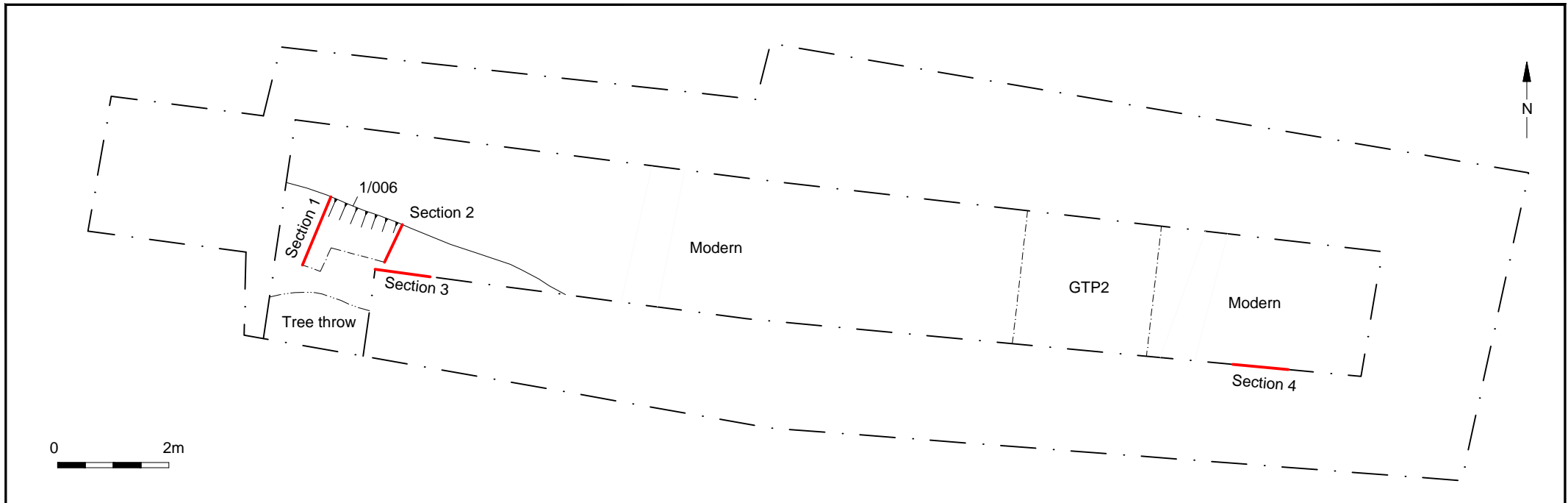
Place of issue or publication	Archaeology South-East
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Entered by	D Hart (d.hart@ucl.ac.uk)
Entered on	6 August 2012

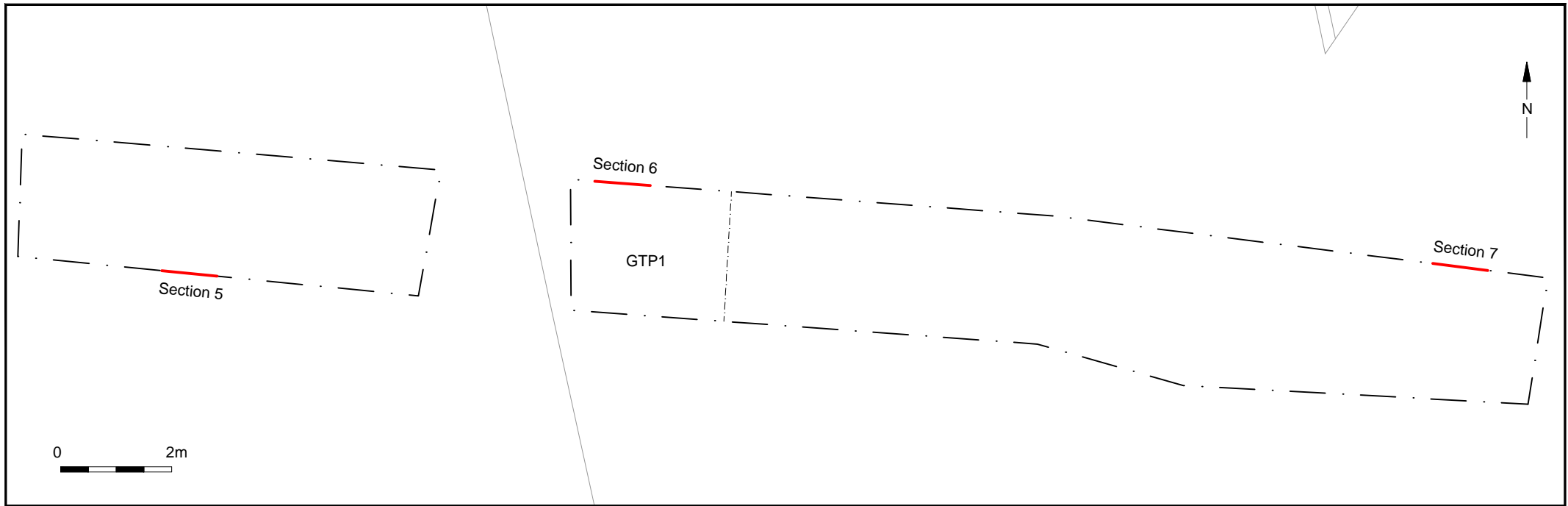


© Archaeology South-East		Pembury Circus, Hackney	Fig. 1
Project Ref: 5394	Aug 2012	Site location	
Report Ref: 2012165	Drawn by: JLR		



Archaeology South-East Project Ref: 5394 Aug 2012 Report Ref: 2012165 Drawn by: JLR		Pembury Circus, Hackney Trench location	Fig. 2
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Section 5		W	E
		14.78mOD	
2/001			
2/002			
2/004			
2/007			
2/005			

Section 6		W	E
		14.50mOD	
2/006			
2/003			
2/005			

Section 7		W	E
		14.08mOD	
2/006			
2/003			
2/007			
2/005			



A REPORT ON THE GEOARCHAEOLOGICAL INVESTIGATIONS AT PEMBURY CIRCUS, HACKNEY, EAST LONDON

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INTRODUCTION

This report summarises the findings arising out of the geoarchaeological investigations undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development at Pembury Circus, Hackney, East London. During recent archaeological investigations by Archaeology South East, two test-pits were put down across the site for geoarchaeological purposes. The main aims of the geoarchaeological investigations were to: (1) observe and record these investigations; (2) interpret the sub-surface stratigraphy across the site and (3) highlight sediments of potential palaeoenvironmental significance.

THE SITE

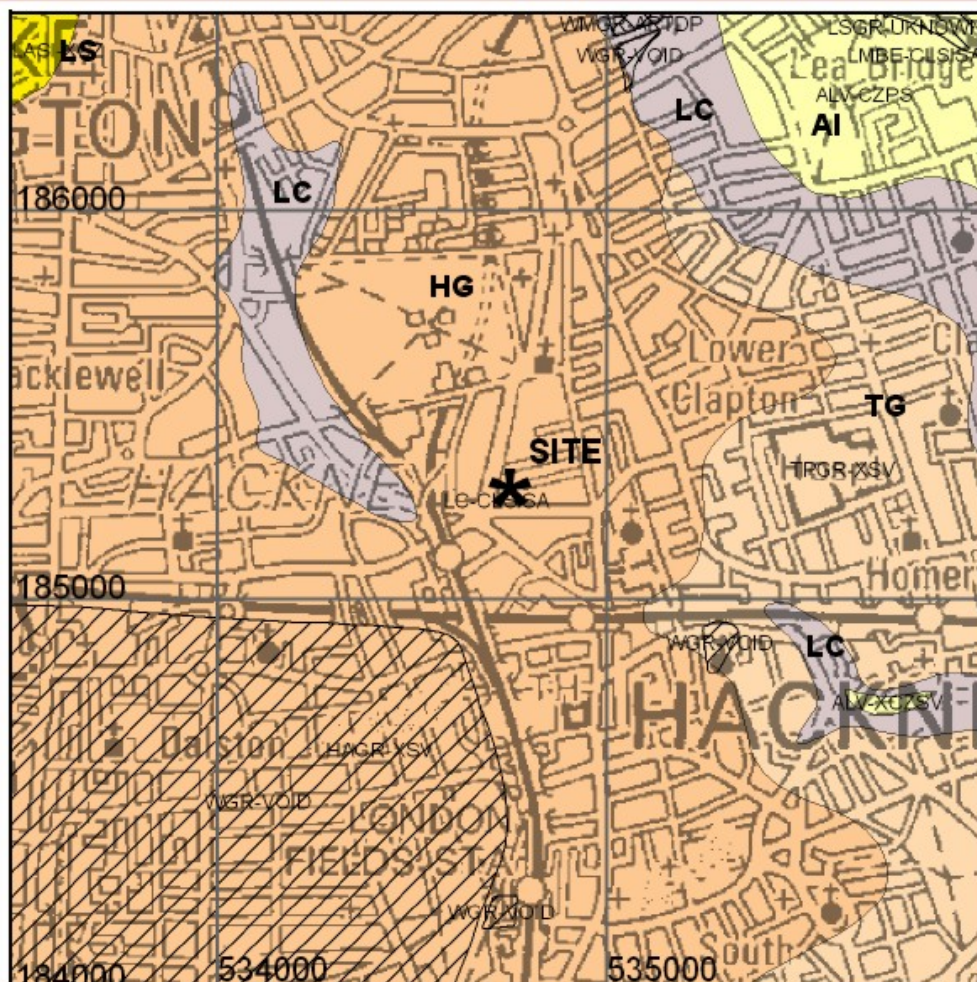
Pembury Circus lies approximately 0.5 km to the north-east of the centre of Hackney, at TQ 347 852. The local high point is Stamford Hill, 2.5 km to the north-west, on London Clay. From there the ground loses height southwards down through the Middle Pleistocene Thames terrace sequence but also eastwards to the River Lee, in both cases through the Hackney Gravel terrace and Taplow Terrace (Figures 1, 2; Table 1). Both terraces have a discontinuous cover of Devensian Langley Silt. Cutting across this is the shallow valley of the Hackney Brook, running south-eastwards to be confluent with the Lee at Hackney Wick. The site lies on ground sloping gently down to the east or south-east into the Hackney Brook valley (Figure 3 in Meager, 2012).

In Hackney, the pre-Quaternary bedrock is the London Clay, covered by terrace gravel, except to the north-west of the site where the London Clay is exposed in the valley of the Hackney Brook, immediately west of the railway line between Hackney Downs and Stoke Newington (Figure 1). The upper surface of the London Clay loses height eastwards from ca.15m OD at Clarence Road, ca.10.0m OD at the site, to ca. 8.0m OD at the railway line south of Hackney Downs station.

The Quaternary sequence is mapped as Hackney Gravel by the British Geological Survey (BGS) (Ellison *et al.*, 2004) though Bridgland (1994, 1995) would not consider it to be separate from his Corbets Tey Gravel (Lynch Hill terrace). Gibbard (1994) and Green *et al.* (2006) recognise a tripartite sequence of Leytonstone Gravel, Highbury Silts and Sands and

Hackney Downs Gravel (top, forming the ground surface). The BGS, Bridgland and Green *et al.* would date the sequence broadly to MIS 10-9-8.

In more detail, at the Nightingale Estate, ca.1 km to the north, Green *et al.* recognise the Hackney Downs Gravel as MIS 8, the Highbury Silts and Sands as MIS 9e and the top of the Leytonstone Gravel also as MIS 9e. The Highbury Silts and Sands were richly fossiliferous, with pollen, plant macrofossils, fish, herpetofauna, beetles, insects, molluscs, ostracods and earthworms (waste granules), giving much interglacial palaeoenvironmental information. The site was also yielded optical stimulated luminescence (OSL) and amino acid ratio (AAR) dates. Only the topmost part of the Leytonstone Gravel was examined, which yielded molluscs. The interglacial deposits lay at 14 to 17m OD.



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Key:	LS	Langley Silt	Devensian
	HG	Hackney Gravel terrace	Middle Pleistocene
	TG	Taplow Terrace gravel	Middle Pleistocene
	LC	London Clay	Tertiary

Figure 1: Geology of the Pembury Circus locale (British Geological Survey)

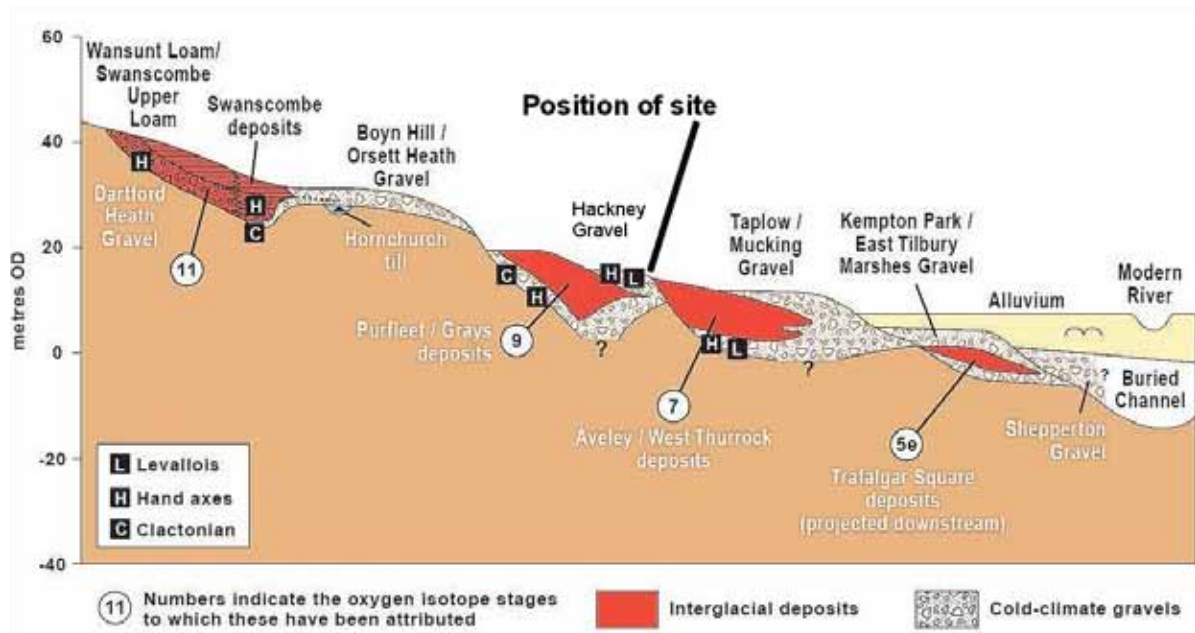


Figure 2: Thames terrace sequence, North London (Bridgland, 1994)

Table 1: Stratigraphy of the Pembury Circus Locale

Stratigraphy		Age
Langley Silt		Upper Pleistocene (Devensian)
Taplow Terrace		Middle Pleistocene (MIS 6-7-8)
Hackney Gravel	Hackney Downs Gravel Highbury Silts and Sands Leytonstone Gravel	Middle Pleistocene (MIS 8-9-10)
London Clay		Tertiary

RESULTS OF THE GEOARCHAEOLOGICAL INVESTIGATIONS

Two archaeological trenches were inspected, Trench 1 and Trench 2 (Figure 3), which were open to a depth of 1.0 m, showing the top of a sandy gravel. Positions within these trenches were selected to expose the gravels in test-pits, GTP1 (Trench 2) and GTP2 (Trench 1) (Figure 4). The test-pits were excavated by mechanical digger using a toothless bucket, 1.8m wide. The results are displayed in Tables 2 to 3 and Figures 5 to 8. In test-pit GTP1, sidewall collapse started shortly after the excavation commenced and affected everything below ca.1.5 bgs. Observations were carried out well back from the trial pit edge and are therefore not as detailed as hoped for.



Figure 3: Locations of the Archaeological Trenches, Pembury Circus

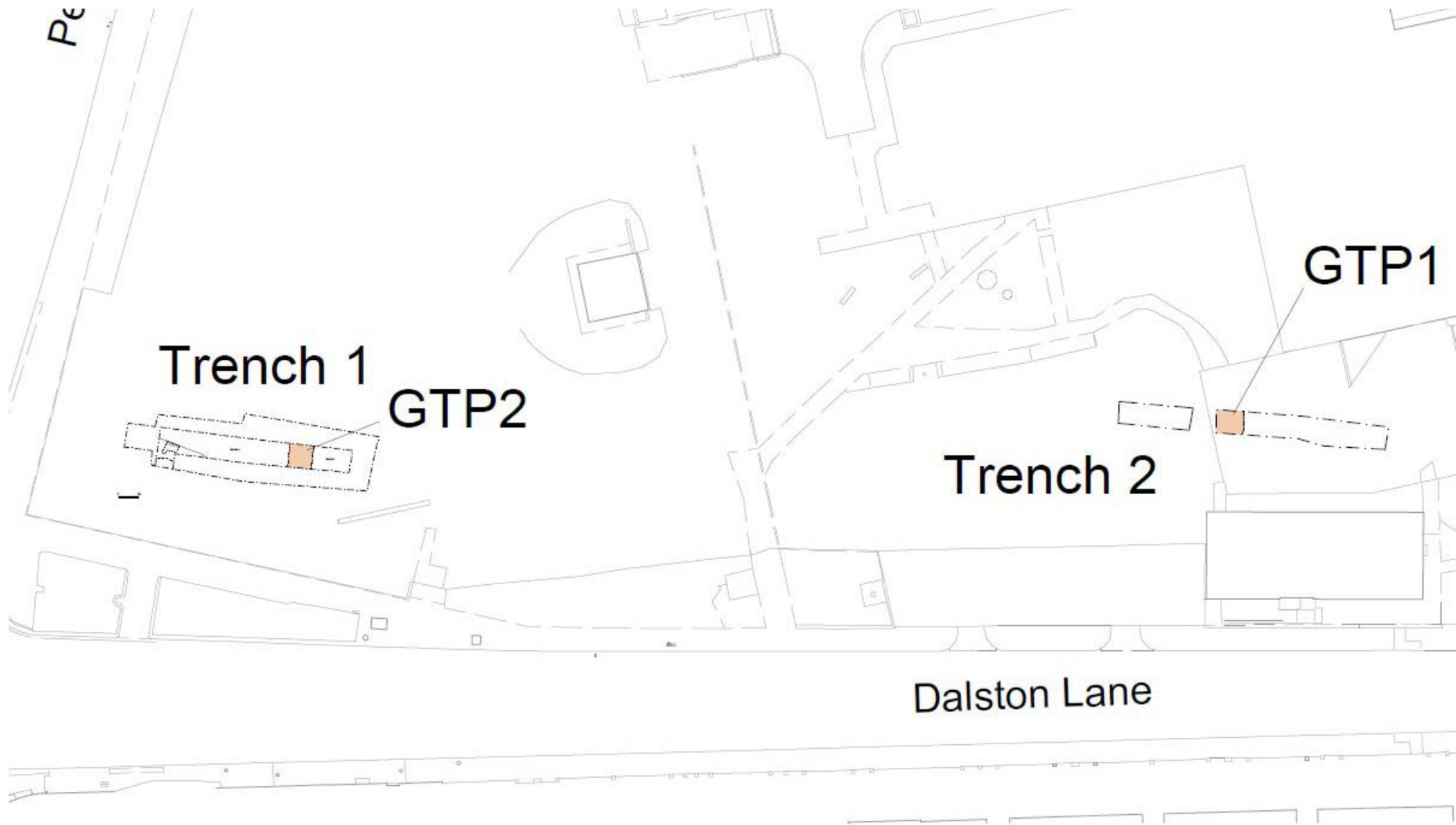


Figure 4: Locations of the Geoarchaeological Test-Pits

Table 2: Results of the Test-Pit GTP1 Geoarchaeological Descriptions, Pembury Circus

Depth (m BGS)	Depth (m OD)	Description
0.0 to 1.0	13.75 to 12.75	Infill
1.0 to 2.0	12.75 to 11.75	<p>Sandy gravel; gravel mostly fine (<1cm, occasionally up to 2cm), dominantly flint, rounded to sub-angular, the latter mostly weathered to a brown colour. Minor amounts of vein quartz, rounded. Matrix slightly clayey, presumably due to proximity to the London Clay.</p> <p>Dominant colour, strong brown (7.5YR5/6)</p> <p>No overt bedding, but the general disposition of long axes of clasts and of gravel stringers suggested horizontal bedding.</p>
2.0 to 3.1	11.75 to 10.65	<p>As above, but a number of larger flints was present, mostly black, rounded to sub-angular, up to 10cm.</p> <p>2.1 to 2.2m BGS (11.55 to 11.45m OD) matrix more clayey, with grey colouring discontinuous and variable in thickness and altitudinal position.</p> <p>2.5 to 2.7m BGS (11.25 to 11.05m OD) lens of silty clay, minor variations in thickness, dark grey (10YR4/1).</p>
>3.1	<10.65	London Clay. Mottled brown (dominant) and grey)

Table 3: Results of the Test-Pit GTP1 Geoarchaeological Descriptions, Pembury Circus

Depth (m BGS)	Depth (m OD)	Description
0.0 to 1.0	11.61 to 10.61	Infill
1.0 to 1.7 (lower boundary sloping to east)	10.61 to 9.91	<p>Sandy gravel; gravel mostly fine (<1cm, occasionally up to 2cm), dominantly flint, rounded to sub-angular, the latter mostly weathered to a brown colour. Minor amounts of rounded vein quartz. Matrix slightly clayey, presumably due to proximity to the London Clay.</p> <p>No overt bedding, but the general disposition of long axes of clasts and of gravel stringers suggested horizontal bedding.</p> <p>ca. 100 litres of sediment were passed through a 10 mm sieve to check for artefacts but none were noted. Boundary with the underlying London Clay was quite steeply sloping (ca. 30°) down to the east.</p>
>1.7	<9.91	<p>London Clay. Mottled brown (dominant) and grey)</p> <p>The slope to the east, away from the Hackney Brook, could represent the edge of a minor channel or be the side of an upward injection of the clay responding to the weight of the overlying gravel (a diapir/loading deformation structure).</p>

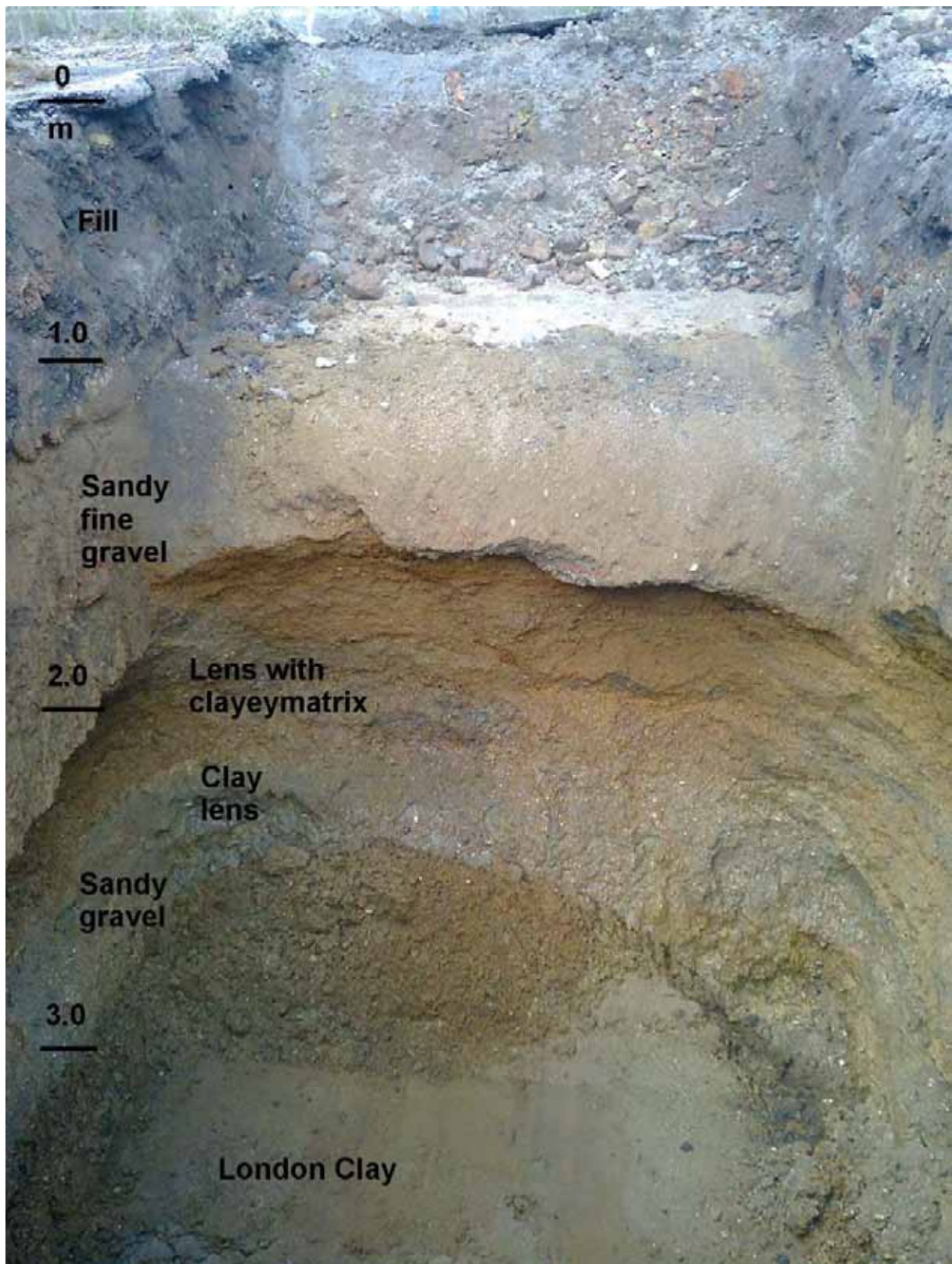


Figure 5: Annotated photograph of the sediments recorded in Test-Pit GTP1, Pembury Circus

Pembury Circus, Hackney

GTP 1

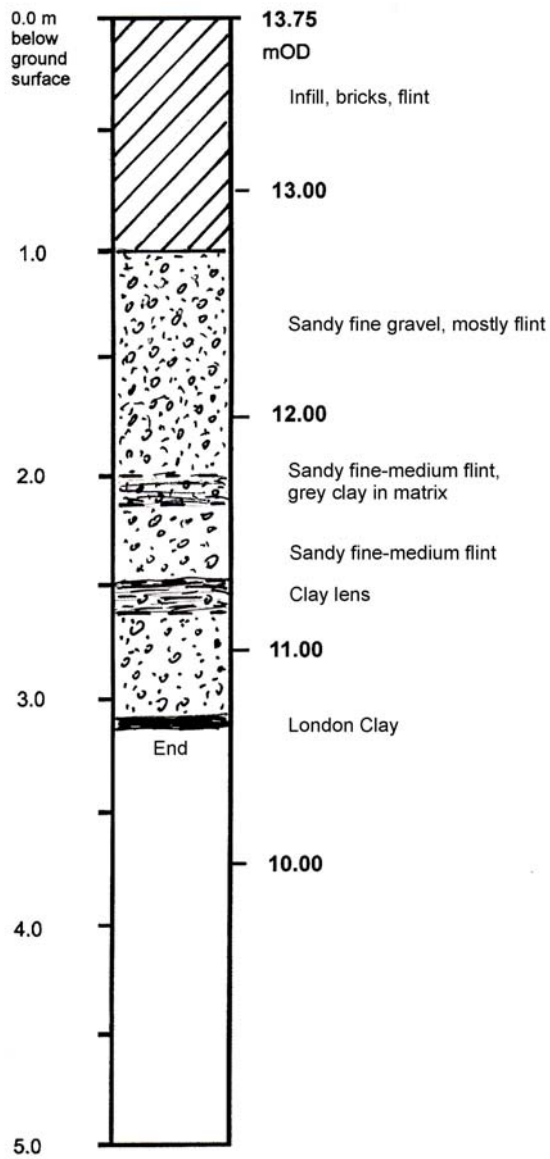


Figure 6: Geoarchaeological log of the sediments recorded in Test-Pit GTP1, Pembury Circus

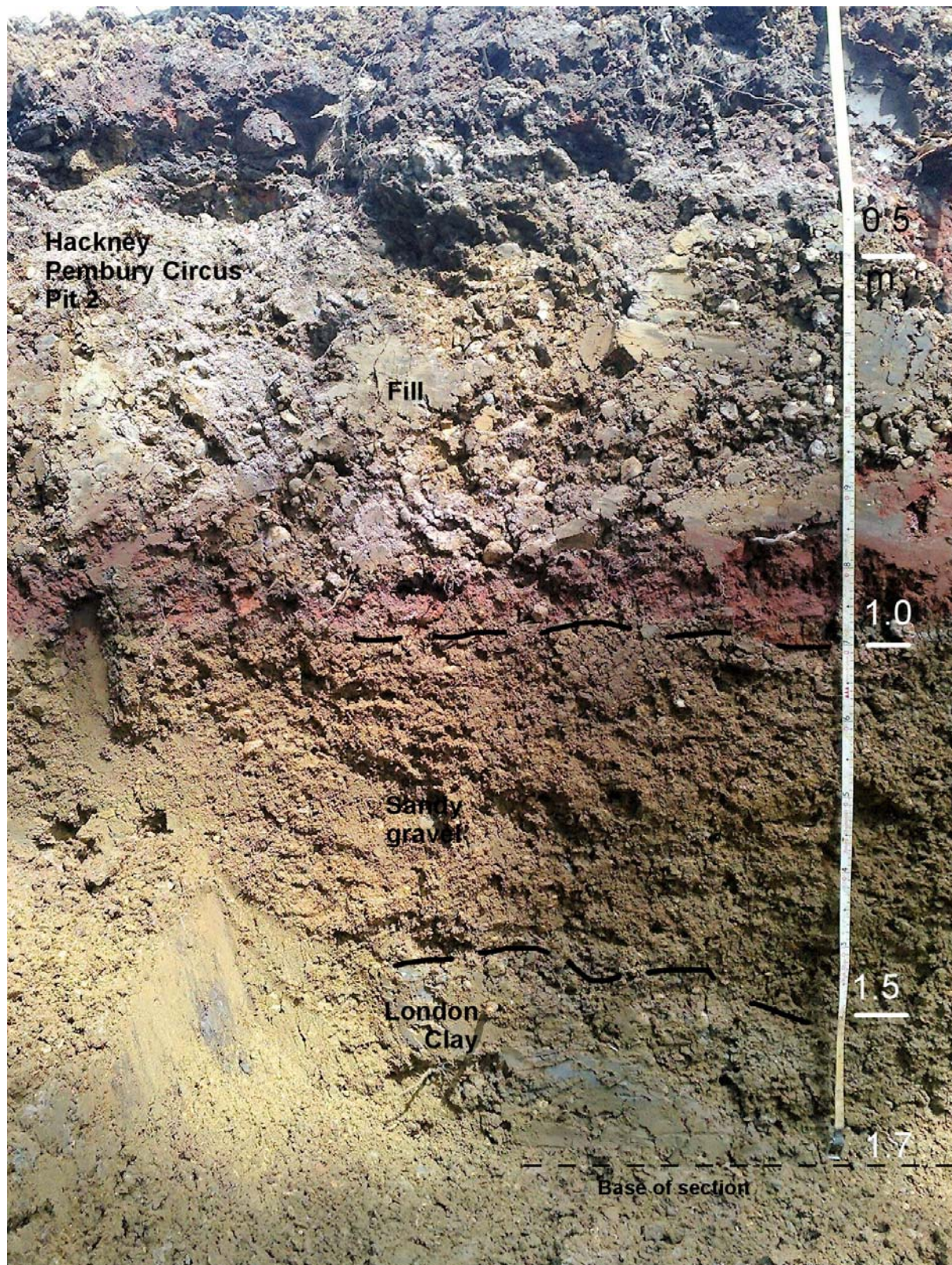


Figure 7: Annotated photograph of the sediments recorded in Test-Pit GTP1, Pembury Circus

Pembury Circus, Hackney

GTP 2

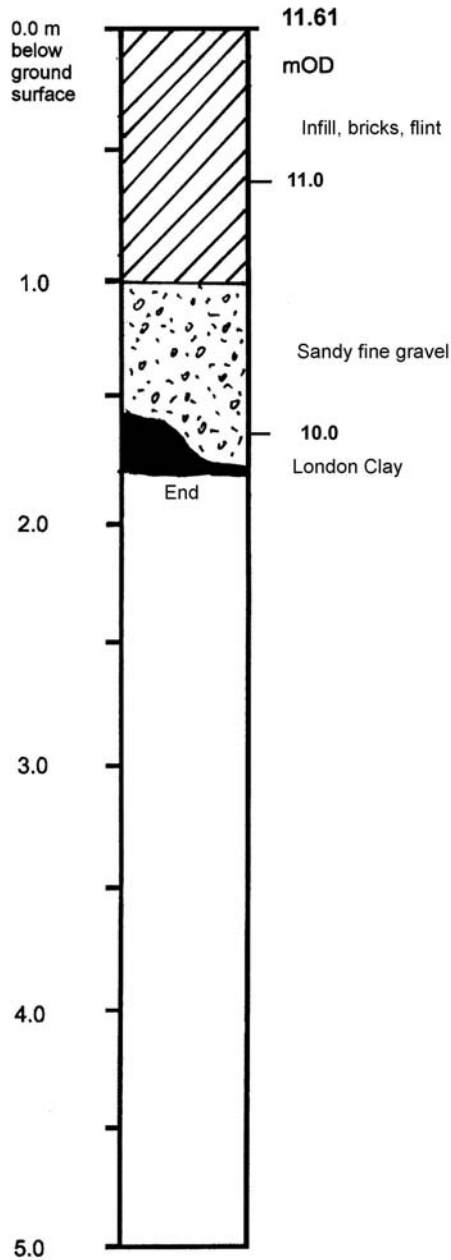


Figure 8: Geoarchaeological log of the sediments recorded in Test-Pit GTP2, Pembury Circus

CONCLUSIONS AND RECOMMENDATIONS

The clast gravels were predominantly 2cm or less (long axis) and weathered or reworked as rounded Tertiary beach pebbles and thus were unpromising parent material for artefacts. Sieving from GRP2 (Trench 1) confirmed this. A major sieving programme may yield a small, number of artefacts, probably mostly flakes but as they would not be in primary position, they would be of reduced value.

Inspection of the clayey lens in GRP1 (Trench 2) did not yield any macrofossil material (e.g. shells, plant macrofossils, bone), although it has some potential to yield microfossil material. The possible equivalence of the lens to the Highbury Silts and Sands was considered, but ruled out because the lens is at least 3m lower. Even if there were equivalence, the lack of macro-material and the thinness of the lens (0.2m as opposed to 3.0m), would indicate that it was of limited value.

There is very limited potential for recovering Palaeolithic artefacts or palaeoenvironmental information. Further investigation is not recommended.

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