Archaeology South-East

ASE

# Archaeological Watching Brief and Geoarchaeological Test Pit Report
# 22-44 London Lane, London Borough of Hackney, E8 3PR

**NGR: 534845 184382**
**(TQ 34845 84382)**

**By Ian Hogg**
**April 2016**

# Archaeological Watching Brief and Geoarchaeological Test Pit Report 22-44 London Lane, London Borough of Hackney, E8 3PR

## NGR: 534845 184382 (TQ 34845 84382)

**Planning Ref: 2012/3916 & 2013/0045**

**ASE Project No: 6136**
**Site Code: LDL 15**

**ASE Report No: 2016167**
**OASIS id: archaeol6-249204**

| | | | |
|---|---|---|---|
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| **Date of Issue:** | April 2016 | | |
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***Abstract***

*Archaeology South-East was commissioned by CgMs Consulting to undertake an archaeological watching brief at 22-44 London Lane, London Borough of Hackney. The archaeological work comprised monitoring asbestos remediation and the excavation of three geoarchaeological test pits.*

*The natural gravels were recorded between 15.45m and 16.45mOD. The gravels were overlain by between 0.75m and 1.45m of natural brickearth; the brickearth and gravel showed frequent signs of modern disturbance and contamination mainly associated a garage which previously occupied the site. The natural deposits were overlain by modern made ground up to 1.60m in thickness.*

*No archaeological remains were recorded on site.*

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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) was commissioned by CgMs Consulting to undertake an archaeological watching brief and geoarchaeological test pits at 22-44 London Lane, London Borough of Hackney, E8 3PR (Figures 1 and 2, NGR: 534845 184382). The watching brief focussed on the monitoring of asbestos remediation.

1.1.2 The site is bound by houses fronting Ellingfort Road to the north, commercial buildings to the east, London Lane to the south, and Mentmore Terrace to the west.

## 1.2 Geology and Topography

1.2.1 The solid geology of the site is shown by the British Geological Survey (BGS Map Viewer online) as London Clay deposits (clay and silt) with overlying deposits of Hackney Gravels (sand and gravel).

1.2.2 The site lies immediately east of a large area of made ground, present due to massive programmes of brickearth and gravel extraction during the eighteenth and nineteenth centuries (CgMs 2013).

1.2.3 A geotechnical survey was undertaken on the site in October 2007 (CgMs, 2011). Boreholes 1 and 3 derived from the southern part of the site revealed made ground 2-3m thick, above clay and Hackney Gravels, which accords with the former presence of the terraced houses along the London Lane street frontage. Boreholes 2, 4 and 5 on the northern part of the site show deposits of concrete and made ground 0.3-0.8m thick, above clay and Hackney Gravel, which reflects the generally undeveloped nature of this part of the site, prior to the construction of the garage facility.

1.2.4 The site is generally level with a spot height of 16.8m AOD situated on Mare Street to the east of the site.

## 1.3 Planning Background

1.3.1 Planning permission has been granted with conditions by Hackney Council (Planning Refs: 2012/3916 & 2013/0045) for the demolition of all existing buildings and redevelopment to provide 49 residential units in a range of buildings, together with commercial units and associated hard and soft landscaping works, highways, access, disabled parking, cycle parking and infrastructure works. Condition 10 of the decision states:

*"No development shall take place until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme for investigation which has been submitted by the applicant 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 Local Planning Authority.*

*Reason: Important archaeological remains may exist at this site. Accordingly the planning authority wishes to secure the provision of archaeological investigation and the subsequent recording of the remains prior to development, in accordance with English Heritage guidance."*

1.3.2 An archaeological desk-based assessment was prepared in support of the application (CgMs 2011). Archaeological potential was recorded as modest for early prehistoric and medieval periods.

1.3.3 A Written Scheme of Investigation (WSI) for archaeological evaluation by trenching was prepared by CgMs (CgMs 2013) and agreed with the Greater London Archaeological Advisory Service (GLAAS). The site has since been identified as containing significant quantities of asbestos contaminants and consequently the trenching is no longer viable. A watching brief under the auspices of the asbestos remediation contractor has been determined as the only practicable approach to meet the requirements of the archaeological condition. Geoarchaeological pits will be excavated into the natural deposit following completion of the remediation programme. This alternative fieldwork strategy, for watching brief on contamination remediation, and test pitting, was agreed with GLAAS.

1.3.4 An archaeological WSI was prepared prior to the commencement of works (ASE 2016), this document set out the methodology for the works. All works were carried out in accordance with the CIfA standards and guidance (CIfA 2015a, b and c) and the Greater London Archaeology Advisory Service's (GLAAS) Archaeological Guidance (GLAAS 2015).

## 1.4 Aims and Objectives

1.4.1 The general aims of the watching brief were:

- To define, insofar as possible, the date, character, form and function of any archaeological features observed on site.
- To establish the presence or absence of archaeological remains within the footprint of the proposed development and to preserve by record any such remains
- To determine the survival, extent and minimum depth below modern ground level of any such remains
- To determine the nature and significance of any archaeological deposits

1.4.2 Specific research objectives were:

- To assess the gravels for the presence of early prehistoric material by means of geoarchaeological test pits
- To establish the environmental context of prehistoric and later activity.

1.4.3 The excavation of test pits within the natural Hackney Gravels were designed to:

- Retrieve stratigraphic data to aid understanding site formation
- With appropriate specialist input, assess the Palaeolithic potential of the brickearth and gravels

## 1.5 Scope of Report

1.5.1 This report details the results of the archaeological watching brief carried out on the site between the 13th and 20th April 2016; the geoarchaeological work was carried out on the 15th April 2016. The report has been prepared in accordance with the Written Scheme of Investigation (ASE 2016). The work was carried out by Ian Hogg (Archaeologist).

## 2.0 ARCHAEOLOGICAL BACKGROUND

2.1 The following has been taken from the DBA report produced by CgMs (2011) with due acknowledgement

### 2.2 Prehistoric

2.2.1 The Hackney and Lynch Hill Gravels underlying the site have proved to be one of the richest sources of Palaeolithic material in the country. In Stoke Newington and Clapton, northeast and northwest of the site, significant flint assemblages, floral and faunal remains were observed during basement excavation, brickearth and gravel extraction in the late nineteenth century, notably by Worthington G. Smith. These finds were predominantly observed in or below the brickearth, overlying the gravel terraces, usually in their primary context.

2.2.2 Finds of Palaeolithic date within the area include two handaxes and a scraper from Graham Road, found at a depth of 10 feet (c.3m) to the northwest of the site. A flint handaxe has been identified at Paragon Road to the northeast of the site, while another has been identified in 'South Hackney' to the southeast. Worthington Smith recorded Palaeolithic finds and a possible chipping floor at London Fields to the west of the site.

2.2.3 The sole find of Mesolithic date within a 750m radius of the site comprised a single unstratified blade from 277-287 Mare Street to the north of the site.

2.2.4 No finds or features of Neolithic, Bronze Age and Iron Age date have been identified within a 750m radius of the site.

### 2.3 Roman

2.3.1 No finds or features of Roman date have been identified within a 750m radius of the site.

### 2.4 Anglo-Saxon and Medieval

2.4.1 The exact derivation of the name Hackney appears uncertain and there are two Saxon alternatives: Haccan indicating a place of battle; *ey* meaning river; or the island or raised ground (*eyot*) of the Saxon chief *Hacca*. Hackney is not mentioned as a discrete entity in Domesday Book (1086); it has been suggested that the existing settlement formed a hamlet within the Manor of Stepney (*Stebeunheath*) with the lord of the manor residing at Bishops Hall, Bethnal Green. Hackney itself did not acquire manorial rights until 1652.

2.4.2 No finds or features of Anglo-Saxon date have been identified within a 750m radius of the site. The potential of the site for the Anglo-Saxon period can therefore be identified as low, although evidence of agricultural activity and land division could conceivably be present.

2.4.3 Mare Street itself, together with Lamb Street to the south of the site, is believed to be of medieval origin. Documents dating to 1443 refer to *Merestret*, and the name applied to a small settlement.

2.4.4 The presence of medieval settlement extrapolated from the 1745 Rocque map has been identified on Cambridge Heath Road, south of the site. The presence on Rocque's map of Morning Lane to the northeast, Well Street to the south-east, may also be evidence of their medieval antecedents. A settlement dating to the medieval period has also been identified at Well Street.

2.4.5 The site of a possible Manor House has been identified at 14-18 Shore Street, south-east of the site and south of Well Street. Excavation in this area has revealed a revetted stream, later blocked and covered by gravel and chalk floors. The site of a medieval building known to have been the last stop on the Pilgrims Way before Waltham Abbey has been identified on the north side of Well Street, southeast of the site.

2.4.6 Finds and features of medieval date within the area have included a pit and cultivation soil identified at 64-76 Wilton Way, northwest of the site, and on the east side of Mare Street, opposite the site. A well of medieval date has been identified towards Dalston, which may have fed baths in Cold Bath Lane, northwest of the site. Agricultural activity in the form of a ditch and a truncated pit have been identified at 23-47 Mare Street, south of the site. A bone tool for pin making was identified at Graham Road to the northwest of the site.

## 2.5 Post-medieval and Modern

2.5.1 The linear settlement had developed along Mare Street by the end of the sixteenth century, and London Field (singular) is first referred to in 1590. The number of hearths along Mare Street increased from 49 in 1664 to 78 in 1672. Development of the land between Mare Street and London Fields commenced in earnest from the later seventeenth century onwards.

2.5.2 John Rocque's Survey of London (1745) shows the existence of London Lane, linking Mare Street (at that time named Church Street) with London Field. The site remains undeveloped at this time, and appears to lie beneath the 'K' of Hackney on the map.

2.5.3 Merrington's Map of Hackney (1823) shows London Lane linking Mare Street with London Fields. The site appears empty. Starling's Map (1831) shows the presence of a short terrace of houses along the southern boundary, labelled Walcot Cottages.

2.5.4 The St John at Hackney Tithe Map (1843) and associated apportionment indicates no substantial change within the site from the previous map.

2.5.5 First Edition Ordnance Survey (1870) shows the site occupied by a terrace of houses fronting London Lane to the south, with gardens to the rear, and an open area containing ancillary buildings on the northern boundary.

2.5.6 The Great Eastern Railway, which opened through Hackney in 1872 on a viaduct raised above ground level, separated Mare Street from London Fields, and resulted in the layout of Mentmore Terrace running along the eastern side of the railway.

2.5.7 The Second Edition Ordnance Survey (1894) therefore shows the presence of the railway. The site itself remains largely unchanged, save for the construction of further ancillary buildings on the northern part of the site. The 1921 Land Registry edition Ordnance Survey shows no changes other than the northern part of the site is labelled Swan Yard.

2.5.8 The LCC Revised Ordnance Survey (1933) shows that some of the gardens behind the houses fronting London Lane have been foreshortened to enable the creation of a garage facility.

2.5.9 The World War Two bomb damage map (1946) shows the terraced houses fronting London Lane occupying the southern part of the site are coloured dark red, signifying 'serious damage, doubtful if repairable'.

2.5.10 The 1948 Ordnance Survey shows the site largely unchanged from previous editions. The 1953 Ordnance Survey shows the garage buildings to the north and houses to the south, with the building on the eastern boundary labelled 'ruinous'. The 1951/1958 GOAD Insurance Plan shows the garage facility and the houses (comprising 2 storey dwellings), with No 28 London Lane labelled as 'ruinous'.

2.5.11 The 1964 Ordnance Survey shows the absence of 28-34 London Lane fronting the southern part of the site, and the presence of the garage to the north.

2.5.12 The 2008 Ordnance Survey shows that Ellingfort Road/Mentmore Terrace are now linked to form the western boundary of the site. All of the houses fronting London Lane within the site, save for 22-24 in the south-eastern corner have been removed, the garage building lies on the northern boundary in an abbreviated form, and the site itself has been divided into two properties.

## 3.0 ARCHAEOLOGICAL METHODOLOGY

### 3.1 Watching Brief Methodology

3.1.1 The work comprised the stripping of the entire site to remediate the asbestos present within the ground. Contaminated made ground was removed in successive spits until either brickearth or uncontaminated made ground was visible.

3.1.2 Spoil from the stripping was visually scanned for finds.

3.1.3 All deposits were recorded using standard ASE recording sheets, with colours recorded by visual inspection.

3.1.4 A digital photographic record was taken of the work.

### 3.2 Geoarchaeological Methodology

3.2.1 This work comprised the excavation of three geotechnical test pits (Figure 2) each measuring 2.00m x 2.00m in plan. The excavations were carried out by QUEST and specific methodologies are outlined in the report in Appendix 1.

3.2.2 Spoil from the test pits was kept separate to allow the correlation of artefacts to spits.

3.2.3 A digital photographic record was taken of the work.

### 3.3 The Site Archive

3.3.1 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 the LAARC in due course. The contents of the archive are tabulated below (Table 1).

| | |
|---|---|
| Number of Contexts | 3 |
| No. of files/paper record | 1 |
| Photographs | 16 |

Table 1: Quantification of site archive

## 4.0 RESULTS

### 4.1 Asbestos Remediation

| Context | Type | Description | Deposit Thickness (m) | Height (m aOD) |
|---|---|---|---|---|
| 001 | Layer | Modern made ground | 0.56-1.60 | |
| 002 | Layer | Natural Brickearth | 0.75-1.45 | 16.05-16.38 |
| 003 | Layer | Natural Hackney Gravels | - | 15.45-15.78 |

Table 2; Archaeological monitoring, list of recorded contexts

4.1.1 Approximately two thirds of the asbestos remediation stripping was monitored; in light of the results generated by this work and following discussions between CgMs and GLAAS it was decided not to conduct any further monitoring (Figure 3).

4.1.2 Natural brickearth (002) was recorded in parts of the east, centre and south of the site between 16.05m and 16.38mOD. The brickearth was extremely truncated with modern intrusions evident across the area particularly in the area of the former garage where heavy diesel contamination was observed.

4.1.3 The natural brickearth was overlain by between 0.56m and 1.45m of modern made ground (001) comprising dark brown grey silt clay with frequent inclusions of CBM, concrete, metal and plastic. Along the southern side of the site demolition material from both the post-war clearance and the recent phase of demolition were recorded.

4.1.4 No archaeology was recorded on the site.

### 4.2 Geoarchaeological Test Pits

4.2.1 Quest carried out the excavation of three geoarchaeological test pits (Figure 2). All three measured 2.00m x 2.00m in plan and were between 3.80m and 4.00m in depth. The full report is included in Appendix 1 but the results are summarised below.

*GTP1*

4.2.2 This test pit revealed 3.2m of sandy gravel (15.45-12.25mOD). Above the gravel was 0.8m of silt clay (16.25-15.45mOD).

*GTP2*

4.2.3 GTP2 revealed approximately 2.55m of sandy gravel (15.85-13.30mOD) beneath 1.25m of silt clay (17.10-15.85mOD). Diesel contamination was recorded within the gravel from a depth of 15.25mOD.

*GTP3*

4.2.4 At the base of GTP3 was a sandy gravel deposit approximately 1.5m thick,

(16.45-14.95mOD) beneath 1.25m of silty clay (17.70-16.45mOD)

4.2.5 No archaeological features or finds were located within the test pits and it was concluded that the potential for recovering Palaeolithic artefacts or palaeoenvironmental information is very limited.

# 5.0 DISCUSSION AND CONCLUSIONS

## 5.1 Overview of stratigraphic sequence

5.1.1 Natural Hackney gravels were only recorded within the test pits on site, observed between 15.45m and 16.45mOD. The gravels were overlain by natural brickearth which was recorded across much of site and measured between 0.75m and 1.45m in thickness. The brickearth was uniformly sealed by modern made ground.

5.1.2 No archaeological features or finds were recorded during the watching brief.

## 5.2 Deposit survival and existing impacts

5.2.1 The watching brief confirmed the presence of modern made ground deposits across the site. These deposits were associated with 20$^{th}$ century activity, particularly the garage that had previously stood in the centre of the site. Demolition deposits associated with the post-war clearance and the recent phase of demotion was found in the south of the site. In many areas the asbestos remediation works did not extend to the natural deposits and stopped within the lower portion of the made ground.

5.2.2 As well as asbestos, the geoarchaeological trial pits highlighted the presence of contamination and truncation within the area of the former garage in the centre and east of the site.

## 5.3 Consideration of research aims

5.3.1 The work established the absence of archaeological remains on site with no evidence of Palaeolithic activity recorded within the test pits. Across the remainder of the site the remediation works did not extend to a sufficient depth to expose the gravels and in many places stopped within the made ground.

## 5.4 Conclusions

5.4.1 No archaeological evidence was recorded on site. The geoarchaeological trial pits established a uniform sequence of brickearth overlying Hackney gravels. No overlying soils were recorded with modern made ground directly overlying the brickearth.

## BIBLIOGRAPHY

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CgMs 2013 *Written Scheme of Investigation: 22-44 London Lane, Hackney, London E8 3PR*

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CIfA 2015c *Standard and guidance for an archaeological watching brief.*

Greater London Archaeology Advisory Service. 2015, *Standards for Archaeological Work in Greater London*

## ACKNOWLEDGEMENTS

ASE would like to thank CgMs Consulting for commissioning the work and for their assistance throughout the project, and John Gould of GLAAS for his guidance and monitoring.

## HER Summary

| | | | | | | |
|---|---|---|---|---|---|---|
| Site Code | LDL 15 | | | | | |
| Identification Name and Address | 22-44 London Lane | | | | | |
| County, District &/or Borough | London Borough of Hackney | | | | | |
| OS Grid Refs. | 534845 184382 | | | | | |
| Geology | Brickearth, Hackney Gravels | | | | | |
| Arch. South-East Project Number | 6136 | | | | | |
| Type of Fieldwork | | | Watching Brief | | | |
| Type of Site | | Shallow Urban | | | | |
| Dates of Fieldwork | | | 13-04-2016 to 20-04-2016 | | | |
| Sponsor/Client | CgMs Consulting | | | | | |
| Project Manager | Andy Leonard | | | | | |
| Project Supervisor | Ian Hogg | | | | | |
| Period Summary | | | | | | |
| | | | | Other None | | |

Summary

Archaeology South-East was commissioned by CgMs Consulting to undertake an archaeological watching brief at 22-44 London Lane, London Borough of Hackney. The archaeological work comprised monitoring asbestos remediation and the excavation of three geoarchaeological test pits.

Natural hackney gravels were recorded between 15.30m and 15.78m aOD. The gravels were overlain by between 0.75m and 1.45m of natural brickearth; the brickearth and gravel showed frequent signs of modern disturbance and contamination mainly associated a garage which previously occupied the site. The natural deposits were overlain by modern made ground.

No archaeological remains were recorded on site.

## OASIS Form

### OASIS ID: archaeol6-249204

| | |
|---|---|
| Project details | |
| Project name | 22-44 London lane, Hackney |
| Short description of the project | Archaeology South-East was commissioned by CgMs Consulting to undertake an archaeological watching brief at 22-44 London Lane, London Borough of Hackney. The archaeological work comprised monitoring asbestos remediation and the excavation of three geoarchaeological test pits. Natural hackney gravels were recorded within test pits. The gravels were overlain by natural brickearth; the brickearth and gravel showed frequent signs of modern disturbance and contamination mainly associated a garage which previously occupied the site. The natural deposits were overlain by modern made ground. No archaeological remains were recorded on site. |
| Project dates | Start: 13-04-2016 End: 20-04-2016 |
| Previous/future work | Yes / No |
| Any associated project reference codes | LDL 16 - Sitecode |
| Any associated project reference codes | 6136 - Contracting Unit No. |
| Type of project | Recording project |
| Site status | Area of Archaeological Importance (AAI) |
| Current Land use | Vacant Land 3 - Despoiled land (contaminated derelict and ?brownfield? sites) |
| Monument type | NONE None |
| Significant Finds | NONE None |
| Investigation type | "Test-Pit Survey","Watching Brief" |
| Prompt | National Planning Policy Framework - NPPF |
| Project location | |

| | |
|---|---|
| Country | England |
| Site location | GREATER LONDON HACKNEY HACKNEY 22-44 London lane |
| Postcode | E8 3PR |
| Study area | 2200 Square metres |
| Site coordinates | TQ 34845 84382 51.541709899676 -0.055297477505 51 32 30 N 000 03 19 W Point |

| Project creators | |
|---|---|
| Name of Organisation | Archaeology South-East |
| Project brief originator | GLAAS |
| Project design originator | CgMs Consulting |
| Project director/manager | Andy Leonard/Jim Stevenson |
| Project supervisor | Ian Hogg |
| Type of sponsor/funding body | CgMs Consulting |
| Name of sponsor/funding body | CgMs Consulting |

| Project archives | |
|---|---|
| Physical Archive Exists? | No |
| Digital Archive recipient | LAARC |
| Digital Contents | "Stratigraphic","Survey" |
| Digital Media available | "Images raster / digital photography","Survey" |
| Paper Archive | LAARC |

recipient

| | |
|---|---|
| Paper Contents | "Stratigraphic","Survey" |
| Paper Media available | "Context sheet","Plan","Survey " |
| Entered by | Ian Hogg (ian.hogg@ucl.ac.uk) |
| Entered on | 21 April 2016 |


| © Archaeology South-East | | 22 - 44 London Lane, Hackney, London | Fig. 1 |
|---|---|---|---|
| Project Ref: 6136 | April 2016 | Site location | |
| Report Ref: 2016167 | Drawn by: LG | | |


| © Archaeology South-East | | 22 - 44 London Lane, Hackney, London | Fig. 2 |
|---|---|---|---|
| Project Ref: 6136 | April 2016 | Watching Brief and Geoarchaeological Test Pit Location Plan | |
| Report Ref: 2016167 | Drawn by: LG | | |

GTP 1

GTP 2

GTP 3

Eastern side of site looking south

Centre of site looking south-west

| | | | |
|---|---|---|---|
| © **Archaeology South-East** | | 22 - 44 London Lane, Hackney, London | Fig. 3 |
| Project Ref: 6136 | April 2016 | Site Photographs | |
| Report Ref: 2016167 | Drawn by: LG | | |

QUEST
QUATERNARY SCIENTIFIC

University of Reading

# 22-44 LONDON LANE, LONDON BOROUGH OF HACKNEY

## Geoarchaeological Fieldwork Report

**NGR**: TQ 349 845

**Site Code:** LDL15

**Date:** 29th April 2016

**Written by:** P. Allen

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| v2 | 29/04/16 | P. Allen | | C.R. Batchelor | | Second edition |
| v1 | 29/04/16 | P. Allen | | C.R. Batchelor | | First edition |

# CONTENTS

# 1. NON-TECHNICAL SUMMARY

A program of geoarchaeological fieldwork was carried out by Quaternary Scientific (University of Reading) in connection with the proposed development of land at 22-44 London Lane, London Borough of Hackney. The work was commissioned by CgMs Consulting, and carried out in collaboration with Archaeology South East. The main aims of the investigation were to: (1) observe and record the sediments excavated; (2) interpret the sub-surface stratigraphy across the site and (3) highlight sediments of potential Pleistocene and Palaeolithic significance.

The results of the investigation revealed a sequence of silty clay (interpreted as the Langley Silt) resting on sands and gravels (interpreted as the Hackney Gravel). Palaeolithic artefacts and material likely to contain palaeoenvironmental remains was not recorded. No further work is recommended.

# 2. INTRODUCTION

## 2.1 Site context

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 22-44 London Lane, London Borough of Hackney (NGR: TQ 349 845; site code: LDL15; Figures 1-3). The work was carried out on behalf of CgMs Consulting, in collaboration with Archaeology South East.

## 2.2 Local Topography and Geology

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 1-3; Table 1). The ground surface on site at London Lane is ~18m OD. Both terraces have a discontinuous cover of Devensian Langley Silt.

**Table 1: Stratigraphy of the London Lane Locale**

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

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 c.15m OD at Clarence Road,

c.10.0m OD at the site, to c.8.0m OD at the railway line south of Hackney Downs station. On site, the London Clay surface is slightly undulating, between 11.5 and 12.0m OD.

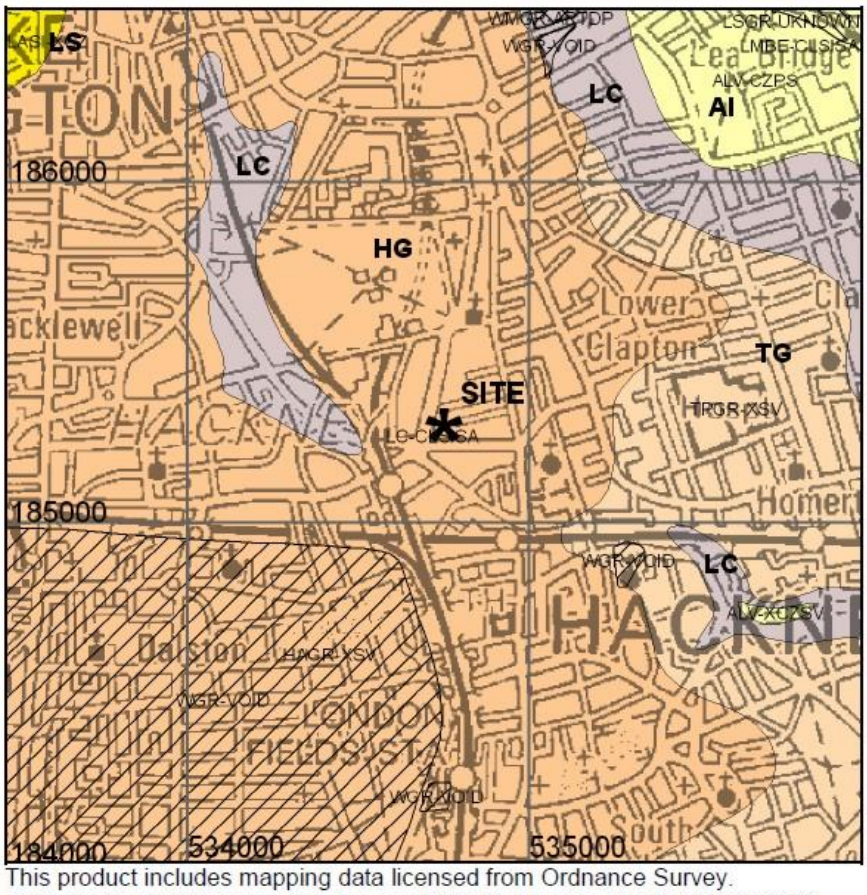
The Quaternary sequence is mapped as Hackney Gravel by the British Geological Survey (BGS) (Ellison et al., 2004), though Bridgland (1994, 1995) would not consider it to be separate from his Corbets Tey Gravel (Lynch Hill terrace). Further west, Langley Silt overlies the Hackney Gravel, but none is mapped in the area of the site. 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. Overlying this, the Langley Silt, where present, is dated to the Devesian.

In more detail, at the Nightingale Estate, c.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 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 fauna and flora were recovered from sands which lay at 14 to 17m OD.

Silty clay was found at the top of each trial pit. This was not expected as it is not mapped at, or near the site. It is interpreted as the Langley Silt although its height range, 15.45 to 17.70m OD, is within that of the Highbury Silts and Sands and the Highbury beds are predominantly sand. Also no biogenic material was observed on surfaces or in the cuts made during the trial pitting.

## 2.2 Aims and objectives

During recent investigations on the site, three trial-pits were excavated for geoarchaeological purposes. The main aims of the investigation were to: (1) observe and record the sediments excavated; (2) interpret the sub-surface stratigraphy across the site and (3) highlight sediments of potential Pleistocene and Palaeolithic significance.




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

**Figure 1: Site location in relation to the local geology**

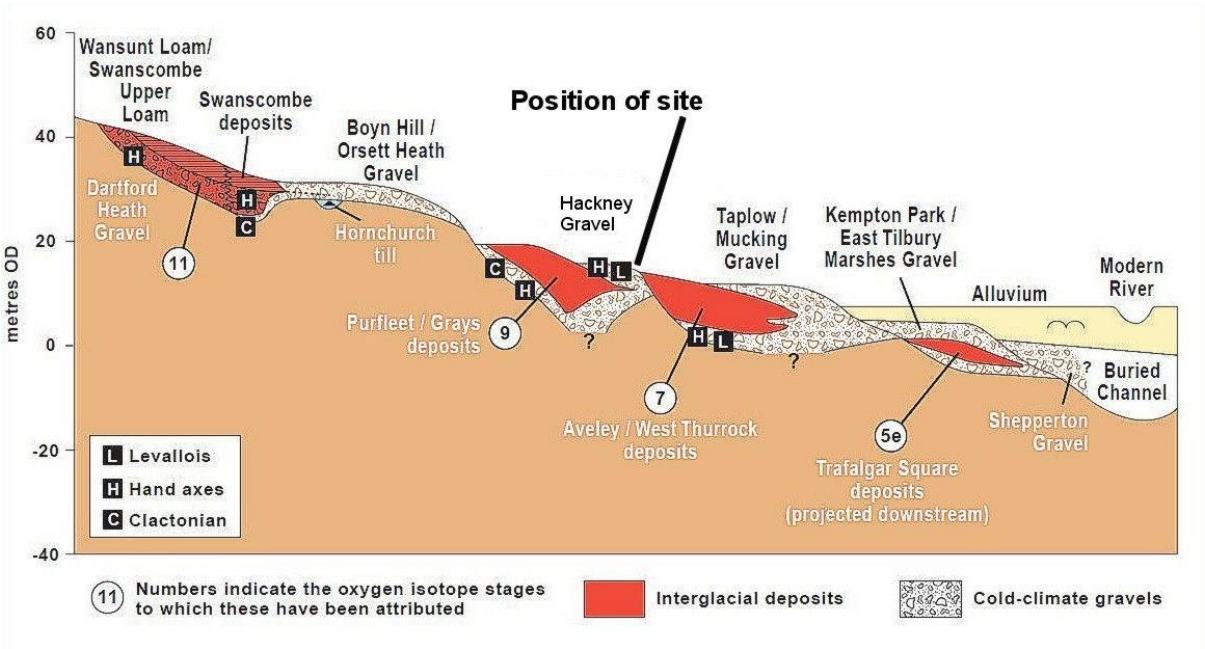



**Figure 2: Thames terrace sequence, North London (after Bridgland)**


**Figure 3: Locations of the geoarchaeological trial-pits**

# 3. METHODS

Three geoarchaeological trial-pits were inspected (GTP1 to GTP3; Figure 3), which were opened to a maximum depth of *ca*. 4m. The ground had been cleared of concrete and underlying debris, to expose the natural strata, a silty clay. This was interpreted as Langley Silt, though none was mapped at the site. Each trial pit was excavated by mechanical digger using a toothless bucket. The stratigraphic sequence was recorded by field log and photographically.

# 4. RESULTS OF THE GEOARCHAEOLOGICAL INVESTIGATIONS

Tabulated descriptions, logs and annotated photographs are provided for each trial pit (Tables 2-3; Figures 4-7).

**Table 2: Lithostratigraphic description of trial-pit GTP1, 22-44 London Lane, London Borough of Hackney**

| Depth (m bgl) | Depth (m OD) | Thickness (m) | Description | Unit |
|---|---|---|---|---|
| 0.0 - 0.8 | 16.25 – 15.45 | 0.8 | Silty clay | 1.01 |
| 0.8 – 4.0 | 15.45 – 12.25 | 3.2 | Sandy gravel, with silty clay bed at *ca*.14.95m OD<br>*ca*.50 litres of gravel trowelled through to check for lithics. | 1.02 |

*Sidewall collapse started when the underlying gravel was exposed. Observations were carried out well back from the trial pit edge.*

**Table 3: Lithostratigraphic description of trial-pit GTP2, 22-44 London Lane, London Borough of Hackney**

| Depth (m bgl) | Depth (m OD) | Thickness (m) | Description | Unit |
|---|---|---|---|---|
| 0.0 -1.25 | 17.10 – 15.85 | 1.25 | Silty clay | 2.01 |
| 1.25 – ~3.8 | 15.85 – ~13.30 | ~2.55 | Sandy gravel, with diesel contamination from *ca*. 15.25m OD.<br>*ca*. 30 litres of gravel trowelled through to check for lithics – none found. | 2.02 |

*Sidewall collapse started when the underlying gravel was exposed. Observations were carried out well back from the trial pit edge.*

**Table 4: Lithostratigraphic description of trial-pit GTP3, 22-44 London Lane, London Borough of Hackney**

| Depth (m bgl) | Depth (m OD) | Thickness (m) | Description | Unit |
|---|---|---|---|---|
| 0.0 -1.25 | 17.70 – 16.45 | 1.25 | Silty clay<br>Colour – 10YR4/6 (strong brown) | 3.01 |
| 1.25 – ~2.75 | 16.45 – c.14.95 | ~1.5 | Sandy gravel<br>Colour – 10YR5/8 (yellowish brown) and 10YR6/6 (brownish yellow)<br>Mostly flint, to ca. 3cm long axis, sub-angular to rounded, some quartzite and vein quartz.<br>ca. 100 litres of gravel trowelled through to check for lithics – none found. | 3.02 |

*Sidewall collapse started when the underlying gravel was exposed. Observations were carried out well back from the trial pit edge.*

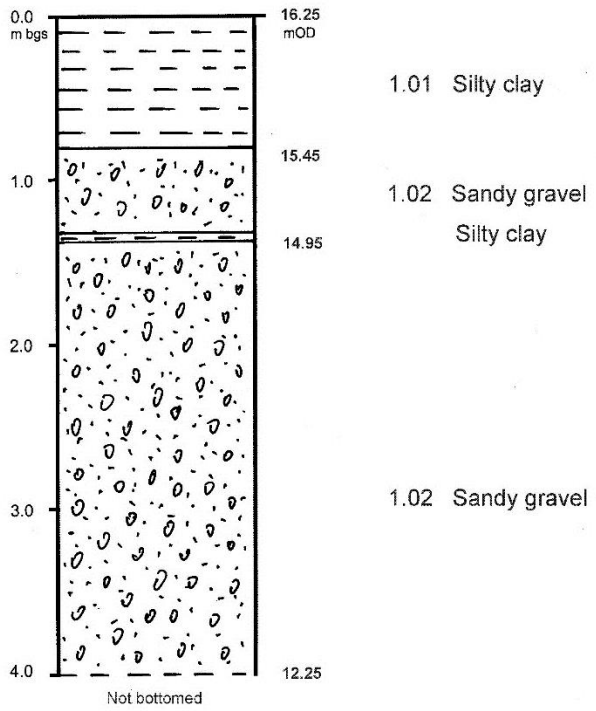



**Figure 4: GTP1 section, graphic log**


**Figure 5: GTP1 section, annotated photograph**

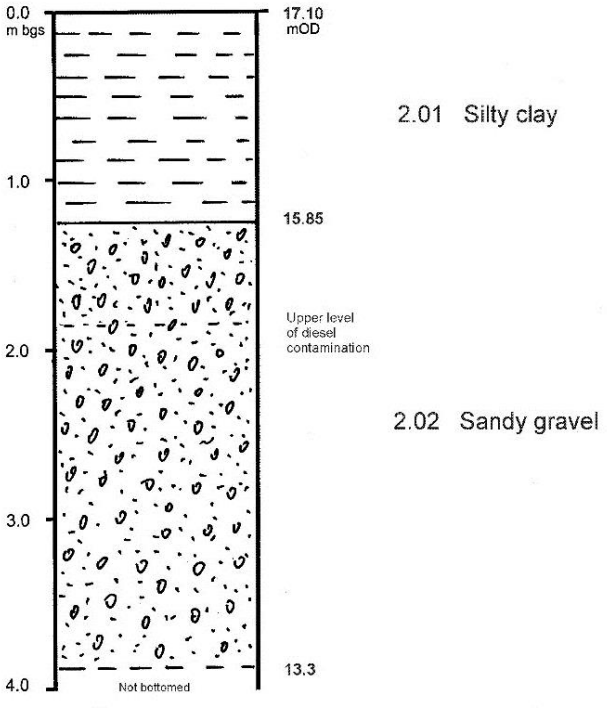



**Figure 6: GTP2 section, graphic log**


**Figure 7: GTP1 section, annotated photograph**

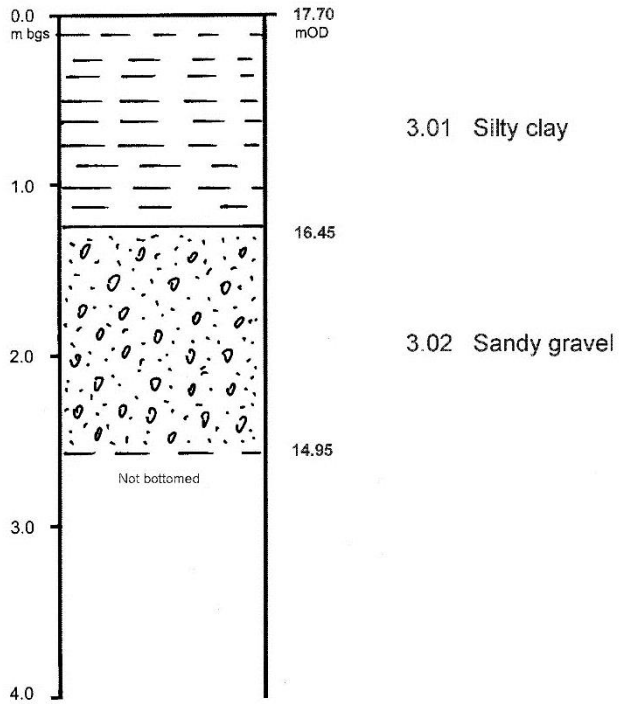



**Figure 8: GTP3 section, graphic log**


**Figure 9: GTP3 section, annotated photograph**

# 5. INTERPRETATION OF THE GEOARCHAEOLOGICAL INVESTIGATIONS

The clasts gravels were predominantly 3cm or less (long axis), variously sub-angular to rounded and weathered and thus were unpromising parent material for artefacts. Trowelling *ca*. 180 litres of the gravel confirmed this.

Inspection of the silty clay in the three trial pits did not yield any macro biological material (shell material, plant macros, bone). The possible equivalence of the silty clay to the Highbury Silts and Sands was considered, but ruled out as the Highbury beds are predominantly sandy.

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

# 6. RECOMMENDATIONS

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

# 7. REFERENCES

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