

# 14–20 ALIE STREET AND 14–16 NORTH TENTER STREET London E1

London Borough of Tower Hamlets

Watching brief report

November 2010



Site code: ALX10

NGR: 533881 181133



Museum of London Archaeology Mortimer Wheeler House 46 Eagle Wharf Road, London N1 7ED tel 020 7410 2200 | fax 020 410 2201 www.museumoflondonarchaeology.org.uk MOLAGeneralEnquiries@museumoflondon.org.uk

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Project Manager Jo Lyon Author Michael Tetreau Graphics Judit Peresztegi

## 14–20 ALIE STREET AND 14–16 NORTH TENTER STREET London E1

Site Code ALX10

A report on the archaeological watching brief

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Graphics: Judit Peresztegi

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#### SUMMARY (NON-TECHNICAL)

This report has been commissioned by Kyson Group Limited, on behalf of Prideway Developments Limited, in order to record and assess the results of an archaeological watching brief carried out at 14–20 Alie Street and 14–16 North Tenter Street, London E1.

Ground reduction was monitored between 22 October and 5 November, 2010, during redevelopment of the site.

During the ground reduction (down to 9.10mOD or about 4m below the surrounding ground level), it was observed that the site had previously been horizontally truncated throughout, down to naturally-deposited terrace gravels (at or below 9.95mOD; ie, 3m or more below the surrounding ground level). This truncation had probably occurred piecemeal and repeatedly over the course of the 18th, 19th and 20th centuries, removing all traces of former ground surfaces, floors, and natural subsoil. Apart from two isolated, horizontal (layer-like) deposits that had been laid down on the truncated gravel during the 18th or 19th centuries, probably as ground make-up or levelling deposits during basement construction, only the lower portions of deeply-cut pit features were present. The oldest of the these features was a possibly-medieval pit or trench of undetermined function. The other features were all post-medieval in date.

Two of the post-medieval pits were brick-lined and represented backfilled wells, cesspits, or possibly, in the case of one, a soakage pit ('soakaway'). These probably date to no earlier than the mid-17th century (and probably no later than the 19th century). The other post-medieval pits did not have masonry lining and their function could not be determined; however, in the case of two pit bases, analysis of botanical and animal bone remains found within the pit fills suggested that they may have been storage pits (or, perhaps less probably, thoroughly mucked-out cesspits). Apart from the one medieval pit described above, all of the pits without brick lining probably date to the 17th and early 18th centuries.

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Front cover: Looking south-eastwards towards the sheet-pile retaining wall at the southern limit of the ground-reduction area, after reduction to 9.1mOD. The site is underlain by naturally-deposited sandy gravel.

The illustrations listed below are bound together in sequence at the back of the report, after all text.

- Fig 1 Site location
- Fig 2 Plan of reduction area and archaeological features
- *Fig 3 Looking south-west towards the southern limit of the reduction area. Note brickwork [50] near centre.*
- *Fig 4 Looking north towards pit fill [77] in pit [78], with fill [79] in pit [81] visible in background (below ladder)*
- Fig 5 South-facing section at south-western corner of pit [81]. Top fill is [79], with [80] below.

#### **1** INTRODUCTION

#### 1.1 Site background

The watching brief took place at 14–20 Alie Street and 14–16 North Tenter Street, hereafter called 'the site'. The site (see Fig 1) is situated to the east of Mansell Street and is bounded by the Alie Street pavement to the north, the North Tenter Street pavement to the south, and by standing buildings to the east (10–12 Alie Street and 18 North Tenter Street) and to the west (22 Alie Street and 12 North Tenter Street). The centre of the site lies at National Grid reference 533881 181133. Modern pavement level near to the site lies at c 13.1mOD to the north (in Alie Street) and approximately 12.7mOD to the south (in Tenter Street), although Alie Street is known to slope upwards to the west such that the pavement level near the north-western corner of the site is at approximately 13.4mOD. The site code is ALX10.

Until recently, the site was a car park occupying an area where buildings had been demolished in the early 1990s (Bowsher 2000, 33). Engineering/geotechnical test pits dug on site (see Bowsher 2000 and Aitken 2001) had revealed a variety of buried basement floor levels (between 9.77 and 11.14mOD) left *in situ* after the 1990s demolition:

- 14 Alie Street (ie, the north-west corner of the site): 10.54 and 10.85mOD
- 16 Alie Street: 10.89mOD
- 18 Alie Street: 10.19 and 11.14mOD
- 20 Alie Street (ie, the north-east corner of the site): about 10.2mOD (as revealed during the watching brief)
- 14 North Tenter Street (ie, south-east corner of the site): 9.77 and 9.96mOD
- 16 North Tenter Street (ie, the south-west corner of the site): unknown.

An archaeological (desk-based) assessment (Bowsher 2000) was previously prepared by the Museum of London Archaeology Service (now trading as Museum of London Archaeology). This document, which covers the whole area of the site, should be referred to for information on the natural geology, the archaeological and historical background of the site, and the initial assessment of archaeological potential.

Pursuant to the recommendations presented in the archaeological assessment report (Bowsher 2000, 39), an archaeological watching brief was carried out on a series of engineering pits excavated across the site in 2001 (Aitken 2001). During that watching brief, low-grade archaeological deposits were observed below the basement slabs, above natural river-terrace gravels, including dumping and the bases of a number of deeply-cut features (pits and a well or soak-away). It was concluded that the area had been extensively re-worked during the post-medieval period and that remaining archaeological deposits and features would probably be only of local significance. Nevertheless, it was noted that the potential presence of archaeological remains should be considered when redevelopment of the site was undertaken. It was recommended that a watching brief would be the most appropriate mitigation strategy for the site, with provision for stopping and recording deposits as they become uncovered.

#### 1.2 The planning and legislative framework

The legislative and planning framework in which the archaeological exercise took place was summarised in the written scheme of investigation (WSI) which formed the project design for the watching brief (see MOLA 2010, Section 1.2).

#### 1.3 Planning background

Planning consent (Conditional Permission for Development) was given to proposed redevelopment of the site on 15 June 2010 (Planning Reference No PA/09/02135).

The following condition (condition 4) relating to archaeology was attached to the consent:

4. 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.

#### 1.4 Origin and scope of the report

This report was commissioned by Kyson Group Limited, on behalf of the client Prideway Developments Limited, and has been produced by Museum of London Archaeology (MOLA). The report has been prepared within the terms of the relevant Standard specified by the Institute for Archaeologists (IFA, 2001).

The purpose of the watching brief was to determine whether archaeological remains or features were present on the site and, if so, to record the nature and extent of such remains. A number of more site-specific research aims and objectives were established in the preceding WSI (MOLA 2010), and are outlined in the following section.

The purpose of the present report is to analyse the results of the watching brief against the original research aims, and to suggest what further work, including analysis or publication (if any), should now take place.

#### 1.5 Aims and objectives

The archaeological watching brief was essentially limited to establishing where, if at all, archaeological deposits had survived (presence/absence), recording where necessary, and ensuring that the redevelopment groundworks did not involve the destruction of any archaeological deposits of national significance. In addition, a few research questions were be suggested in the WSI (MOLA 2010, Section 2.2):

- What is the level of natural geological deposits on the site, and have such deposits been truncated?
- What are the earliest deposits identified?
- Is there any evidence for the Roman cemetery on the site?
- Is there any evidence for Roman ditches or boundary features on the site?
- Is there any evidence for Roman-period quarrying or other activity on the site?

- Is there any evidence for medieval quarrying or other activity on the site?
- What is the date and pattern of any post-medieval quarry pits?
- Are there any post-medieval pits or wells associated with the earliest 18thcentury buildings on the site or with occupation in the 17th century?

All research is undertaken within the priorities established in the Museum of London's *A research framework for London Archaeology 2002*.

## 2 TOPOGRAPHICAL AND HISTORICAL BACKGROUND

The site lies in an area of considerable archaeological and historical interest and this has been recognised by the designation of this area of Tower Hamlets as an *Area of Archaeological Importance*. A description of the geology, archaeology and history of the site was provided in the previous archaeological (desk-based) assessment report (Bowsher 2000) and the report on the archaeological watching brief undertaken in 2001 (Aitken 2001). A brief resume is provided below (with citations removed. For references see Bowsher 2000 and Aitken 2001).

## 2.1 Geology and Topography

The site is underlain by river terrace gravels of the Taplow Gravels formation which were deposited on London Clay. Typically, the Thames Valley river terrace gravels were overlain by a light-coloured sandy silt known as 'brickearth' that formed the parent material for development of the local soils.

Previous works on site, including boreholes and geotechnical/engineering test pits, have encountered natural sand and gravels (ie, geological drift deposits) at between 8.85 and 10.04mOD. It was suggested in the archaeological assessment report (Bowsher 2000, 6) that brickearth may originally have overlain the natural sand and gravel at about 10.8mOD.

## 2.2 Prehistoric

There is little surviving evidence for prehistoric activity in the vicinity of the site and it is thought that Roman-period and later activities in the area will have inevitably disturbed much of the pre- Roman evidence (if any).

#### 2.3 Roman

The arrival of the Romans in AD43 brought about a distinct change in the settlement pattern in the London area. *Londinium*, a major city and later the Roman provincial capital, developed on the north bank of the River Thames where the City of London now stands. The site lies c 500m east of the Roman city.

A network of roads led from *Londinium* to a number of surrounding towns such as *Camulodunum* (Colchester), *Calleva* (Silchester) and *Verulamium* (St Albans). The road to Colchester left the Roman city through the east gate in the city wall and passed *c* 200m north of the site.

In line with Roman law, the burial grounds of *Londinium* were situated outside the city walls and a large Roman cemetery is known to have been situated immediately to the east of the city. The site lies in the centre of this cemetery area, which has been the subject of considerable archaeological interest. A number of sites have been excavated in the vicinity of the site, for example at Leman Street, West Tenter Street, East Tenter Street and Mansell Street. Hundreds of human burials have been recorded from the Roman cemetery area and the Mansell Street site produced evidence for a ditch, aligned east to west, which may have defined the northern limit of this cemetery. It has been suggested that this ditch may extend across the present site. The locations of archaeological sites in the area around Alie Street and North Tenter Street are shown in the archaeological assessment report (Bowsher 2000).

No evidence for Roman activity was found during the previous archaeological watching brief on the site (Aitken 2001).

## 2.4 Saxon

There is no evidence for Saxon period activity on the site, but parts of the Roman cemetery may have continued in use until the 5th century. The Roman city may not have been occupied immediately by the Saxon settlers but may have been reoccupied by the late 6th century, as St Paul's Cathedral was consecrated in AD604.

## 2.5 Medieval

The area east of the Roman city developed during the medieval period and the main focus of interest during that time was the Abbey of St Clare or Minoresses, founded in 1293 and situated c 400m to the east of the site.

The site itself was probably still open land during the medieval period and may have been used as a source of sand, gravel or brickearth. A number of medieval extraction pits have been recorded in the area, for example east of the site at 24 Alie Street, where pottery sherds dating to the late medieval period were recovered. No evidence for medieval activity was found during the previous archaeological watching brief on the site (Aitken 2001).

#### 2.6 Post-medieval

The site was intensively developed during the post-medieval period. St Clare's was dissolved in 1538 and, from the 16th and 17th centuries, the area began to take on an urban character as described in the archaeological assessment report (Bowsher 2000, 20–23). Alie Street approximately follows the alignment of a road laid out prior to the publication of Morgan's map of 1682 and by 1746 (as shown on Roque's map of that year) the layout of Mansell Street, Alie Street, Leman Street and Prescott Street had been fixed around what remained a large, open area. This open area was referred to as Goodman's Fields on the 1682 map and was known, by 1746, as a 'tenter ground' where tenters or wooden frames were used to stretch cloth.

The 1682 map depicts houses fronting on the alignment approximated by the present Alie Street and it is likely that the yards to the rear of such houses had rubbish pits, wells and cesspits. The 1746 map shows terraced housing on the site, fronting on Alie Street with gardens at the rear. By 1799 (as shown on Horwood's map of that year), buildings had also been constructed on the south side of the site, apparently adjacent to where North Tenter Street would later be laid out.

By the later 19th century, Ordnance Survey maps show the street plan as it is presently, with buildings along the south side of Alie Street and the north side of North Tenter Street (or Tenter Street North as it was labelled on the 1875 OS map).

The buildings on the site were demolished in the early 1990s and the vacant land was used as a car park. Geotechnical/engineering pits excavated on site since that time have shown that the basement floors were left intact, at least in several places, and that the basements of the demolished buildings were filled with rubble to maintain the ground at more or less the level of the adjacent streets. As established by the archaeological watching brief undertaken during the excavation of engineering pits in 2001, there are dump deposits, ground-make-up layers and pit-bases (including one well or soak-away) of post-medieval date below the basement slabs (Aitken 2001).

#### **3 THE WATCHING BRIEF**

#### 3.1 Methodology

All archaeological excavation and recording during the watching brief was done in accordance with the WSI (MOLA 2010) and the *Archaeological Site Manual* (*Museum of London* 1994).

Surviving basement walls, slabs, stanchions and concrete pad foundations were broken out and cleared by contractors under MOLA supervision and the area of the proposed new basement (with the exception of a narrow strip against the east limit of the property that was reserved for underpinning works) was machine-excavated to a formation level of 9.1mOD under the supervision of staff from MOLA.

The location of the area of excavation was recorded by staff from MOLA by offsetting from adjacent standing walls (including pile walls) and was plotted on to a topographical survey drawing provided by the client (CAD-format survey prepared by Watts Engineering Ltd). This information was then plotted onto the OS grid.

The heights of observations and/or archaeological remains were recorded relative to Ordnance Datum by onsite measurement (by hand or with staff and laser level) from temporary bench marks (in metres above Ordnance Datum) established on site by the contractor's (Prideway Developments Limited's) groundworks engineer.

Numbered contexts were allocated where appropriate. Context numbers are quoted below in square brackets. It should be noted that context numbering began at 50 (due to initial uncertainty about whether or not an older site code, with associated numbered contexts, would be re-activated).

In addition to observation notes and working drawings, the site has produced: 1 trench location plan, 31 context records and 29 photographs, and 1 box of finds was recovered from the site.

The site finds and records can be found under the site code ALX10 in the MOL archive.

#### 3.2 Results of the watching brief

Ground reduction area	
Location	As shown in Fig 2
Dimensions	33m NW–SE (site N to site S) by 24m NE–SW (site E to site W), in an inverted L shape as shown in Fig 2
Area of observed ground reduction (to formation level)	532m²
Modern ground level/top of slab	Varied between 11.14mOD and 9.77mOD, as described in Section 1.1
Base of modern deposits	Avg. 9.5mOD (varied between 9.95mOD and 9.10mOD, with some deeper cuts extending below 9.10mOD as shown in Fig 2)

Depth of archaeological deposits seen	<i>Inserted (cut) features:</i> 0.85m (not bottomed)
	Horizontal deposits: 0.2m (2 isolated
	deposits on truncated natural gravel)
Level of base of deposits observed	9.10 mOD (except for isolated
	excavations to 9.00mOD and 8.90mOD
	within archaeological features).
Natural observed	9.95mOD (highest truncation level; avg.
	truncation level was 9.5mOD)

The base of the ground-reduction area was cut into natural sandy gravel at 9.10mOD, although, as shown in Fig 2, there were several areas around the perimeter of the excavation where 19th/20th/21st-century backfill remained at that level. The highest level of natural gravel present on the site was 9.95mOD, recorded in the north-western part of the site (in the southern half of 14 Alie Street). The level of the truncated surface of natural gravel varied across the site. Generally, this truncated surface was overlain by 19th/20th/21st-century deposits of earth, rubble and rubbish (demolition debris); however, two isolated deposits of possibly earlier date were identified: one [51] in the south-western corner of the site at 9.65mOD and one [52] near the centre of the site's east side at 9.55mOD. Both deposits were removed during the course of ground reduction. They both feathered out at their edges and did not show any evidence of being within cut features.

The deposit [51] in the south-eastern corner of the site (16 North Tenter Street) measured approximately 1m east to west and 2m north to south and was of indeterminate purpose. It was composed of dark brown sandy silt with some pebbles, some white shell fragments, and frequent inclusions of broken red brick dating to any time after the mid 17th century (including some well-made pinkish bricks that probably date to the late 19th century at the earliest). This deposit is probably a remnant of 19th/20th-century construction activity.

The deposit [52] at the eastern edge of the site (see Fig 2) measured approximately 8.8m north to south by at least 5.3m east to west (it probably extended further eastwards into the area reserved for underpinning). This up-to-0.23m-thick deposit was in fact composed of two distinct layers of sandy silt. The about 0.1m-thick bottom layer, lying directly on the truncated natural gravel, was dark greyish brown with inclusions of charcoal, red brick fragments (probably dating to any time after the mid 17th-century), oyster shell and occasional fragments of post-medieval earthenware ceramics such as yellow-glazed buff earthenware, orangey-red-glazed brown earthenware, and later post-medieval refined white earthenware. Above this lower layer there was a layer (up to about 0.13m thick) of greenish grey-brown sandy silt with frequent inclusions of 19th/20th-century brick rubble, concrete fragments, charcoal and black (possibly burnt) pieces of tongue-and-groove boards or flooring blocks. The composition of this upper layer probably resulted from one or more episodes of ground disturbance related to construction on the site from the 19th century and after. Overall, this layered deposit probably represents later postmedieval (18th/19th-century) ground make-up or levelling during basement construction, using re-deposited, rubbish-rich earth.

The other archaeological features recorded (see Fig 2) include2 post-medieval (mid-17th century or later) brick-lined pits (probably wells or cess pits, or in one case perhaps a soakage pit), 7 other post-medieval pits of undetermined function, and 1 possibly-medieval (if not post-medieval) pit or trench, all cut down into the natural gravel and truncated by later demolition and construction activities. The bases of 11 of these features remained *in situ* after ground reduction to 9.10mOD. Near the centre of the site, a long pit or trench [54] was found running north to south with a truncated upper surface at 9.60mOD. The base of the feature was not reached during the excavation because the cut extends downward below the limit of ground reduction at 9.10mOD. The feature was sub-rectangular in outline, measuring 2.7m wide (east to west) at most and was 5.2m in length (north to south); however, it had been truncated to the north by concrete foundations and may have been at least somewhat longer. The fill [53] of this pit was a soft, dark-brownish-grey silt with charcoal, fragments of red ceramic building material, shell fragments (probably oyster and mussel), animal bone fragments, occasional pebbles and many seams and nodules of lighter brown silt (possibly with some organic content). Several fragments of ceramic roofing tile were recovered from this fill and have yielded a date range of AD1180–1480 (see Section 9.1). Accordingly, this pit or trench feature [54] may well be medieval in date, although as will be seen below, many other pits on the site are of post-medieval date and have residual artefacts included in their fills. In fact, a residual sherd of Roman-period pottery was found in the fill [53] of this pit as described in Section 9.2.

At the northern end of 16 North Tenter Street, a brick-lined round pit (see Fig 2 [61]) had been truncated by the contiguous concrete pile retaining wall at the western side of the reduction area. The uppermost survival of the pit was at 9.60mOD, although the brick lining [61] had been demolished down to 9.05mOD. The base of the feature was not reached and it remains *in situ* below the 9.10mOD formation level. The brick lining had been crudely but solidly made with re-used red bricks that date to the later post-medieval period (mid-17th century or later) and that had been bedded in a soft, grey mortar. The solid and fairly well-mortared construction suggests a well or cesspit. The backfill within this pit included bricks of late-19th/20th-century date. Thus, this masonry feature [61] probably represents a well or cesspit constructed from re-used brick no earlier than the mid-17th century and then backfilled and partially demolished much more recently, perhaps during the construction of the last building to stand on the site.

Another brick feature [50] was recorded in the south-eastern corner of the site (see Fig 3). The feature was identified at 9.10mOD at the edge of a large cut recently made (in the 20th century) for underpinning works to support the party wall to the east. Only the very-broken upper surface of this feature was observed, at formation level. The red bricks had been shattered and moved about by heavy machine traffic, but it could be discerned that they were arranged in a curve that suggested a round pit-lining with its interior towards the south-east of the surviving remnant. No mortar could be detected, although this may be due to disturbance. The feature may be another well or cesspit, but alternatively it may have been a soakage pit (soakaway). The brickwork was left *in situ* below the 9.10mOD level of ground reduction.

The remaining cut features, all pits of undetermined purpose (although one may have been a quarry pit), were found within the Alie Street properties. They are all interpreted as post-medieval features, albeit with many residual artefacts dating as far back as perhaps the Iron Age (see Section 9.2).

A sub-rectangular pit [57] near the eastern limit of the site at the south-eastern corner of 20 Alie Street was first observed at 9.30mOD and was excavated down to formation level at 9.10mOD. The base of the pit was not reached. This pit, which measured about 3.4m north–south by at least 2.6m east–west, had been filled with soft, dark brown sandy silt that exhibited occasional inclusions of pebbles, charcoal, oyster shell, animal bone, fragments of red brick and tile, fragments of chalk, and nodules of disintegrated mortar or plaster. Roofing-tile recovered from this fill [56] has been dated to the earlier post-medieval period (AD1450–1600, see Section 9.1) and a fragment of Surrey-Hampshire border redware pottery with brown glaze was also recovered from the fill, yielding a date (of manufacture) between about AD1580 and 1800. Taken together, these artefact date ranges suggest a late 16th-century date for the fill; however, there is a good chance that all of the artefacts in the fill had been discarded long before the earth in which they were embedded found its way into the pit. The best date estimate for the pit is therefore sometime between the late 16th century and the early 18th century.

Just to the west of this pit [57] was the base of another small pit feature [59] first observed at 9.30mOD; however, this latter feature was completely removed by machine excavation down to the 9.10mOD formation level. The lowest point of the pit base was at about 9.20mOD and in plan the feature was indistinct but probably subround and about 2m north—south by 1.5m east—west. Its brown, silty fill was very similar to that of the pit [57] to the east. Roofing tile recovered from this fill has been dated to between AD1180 and AD1800 (see Section 9.1). Most likely, this feature dates to about the same time as the pit [57] immediately to the east: sometime between the late 16th century and the early 18th century.

Two other pre-19th-century pit features (see Fig 2, [66] and [68]) were recorded in 20 Alie Street, to the north. One of these (pit [66]) had been truncated by the later insertion of pit [64] of 19th/20th-century date. This truncated pit [66] had also been truncated horizontally, at 9.65mOD, by construction of the last building to stand on the site. The pit [66] was apparently rectangular in outline and measured about 3.5m north–south by at least 3.5m east–west. Its lowest level was not reached, and its base was left *in situ* after reduction to 9.10mOD; however, this base was much narrower because the northern side of the pit sloped steeply down and in towards the south. The fill [65] of this pit [66] was soft brown silt from which roofing tile was recovered and dated to between AD1200 and 1800 (see 9.1). The best date estimate for this pit is probably some time between the late 16th century and the early 18th century, based on the dates assigned to the pits [57 and 59] just to the south.

A thin sliver of the edge of another pit [68] was recorded to the north-west of the pit [66] just described, in an area very disturbed by 20th-century construction (stanchion bases and other steel beams in concrete set into the natural gravel). The fill [67] of this pit appeared to be very similar to that just described [65], and these pits [68 and 66] are probably of broadly similar date.

Shifting to the western side of the site, at 14 Alie Street, there was a stratified sequence of two or three pits [70, 72 and 74]. Most probably, there were in fact only two pits [72 and 72], but a separate context number [74] was assigned to a small hollow at the base of the westernmost of these due to a slight difference in the composition of the fill [73, when compared to fill [69] in pit [70]). The eastern pit [72] was truncated horizontally at about 9.80mOD by 19th/20th-century construction activities and had been cut vertically to the north by the insertion of the steel sheetpile retaining wall that formed the limit of the ground reduction area. It was rectangular in plan and had vertical sides extending down to formation level at 9.10mOD, and continuing to an unknown depth below (the pit base having been left in situ below the limit of reduction). The fill [71] of this pit [72] was greyish clay-silt with inclusions of charcoal, oyster shell, pebbles and occasional fragments of pottery and red ceramic building material. Roofing tile recovered from this context has been dated to the earlier post-medieval period (between AD1480 and 1700, see Section 9.1) and a fragment of Surrey-Hampshire border whiteware pottery with green glaze was also recovered, yielding a date between about AD1550 and 1700 (see Section 9.2). Accordingly, this pit feature [72] probably dates to no earlier than the late 16th

century. It was probably backfilled at some point between the late 16th century and the early 18th century.

The large, irregularly-shaped pit [70] at the western edge of the site was cut down through the south-western corner of the pit [72] just described and so must be of at least slightly later date. The irregularity of this pit in plan (see Fig 2) was matched by irregularity in the shape of its base, which broadly divided into two large concavities, one to the north and one to the south. The base to the south was at about 9.20mOD, while that to the north (not including the small hollow referred to as a separate context [74]) was at about 9.29mOD. This large pit measured at least 11m northsouth and at least 9.5m east-west, and was truncated horizontally above (by 19th/20th-century construction) at 9.95mOD. The pit was filled with soft, dark grey clayey silt with seams, veins and nodules of very light yellowish brown silt and with inclusions of charcoal, small red ceramic building material particles, pebbles, and occasional animal bone fragments. As noted above, a small hollow [74] in the base of this pit [70] was recorded as a separate context. There is some chance that it is the base of an earlier pit; however, it seems much more likely to be simply a deeper part of the irregular base of the larger feature [70]. The rim of the concave hollow was at 9.29mOD and its base was at 9.14mOD. It measured about 1m north-south by 0.7m east-west and was filled with dark brownish grey silty clay with frequent seams, veins and nodules of very pale yellowish brown sandy silt and with inclusions of small bone chips and fragments, occasional larger and abraded-looking mammal bone fragments and frequent rootlets. A single, very abraded fragment of Roman pottery was recovered from this fill [73] (see Section 9.2.4). The best interpretation of this find is that it was residual within the fill when the fill was dumped into the pit.

As shown in Fig 2, archaeological deposits at the western side of the site in Alie Street have been truncated to the north by the steel sheet-pile retaining wall, to the west by 19th-century footing construction and 20th-century underpinning works and to the south by 20th-century excavation (possibly probing prior to pile-insertion) near the steel sheet-pile wall on that side of the site.

Moving eastwards along the north edge of the site in Alie Street, there was a pit feature [76] that had been truncated horizontally at about 9.80mOD (by 19th/20th-century construction) as well as by the insertion of the steel sheet-pile wall and the construction of a manhole (of 19th/20th-century date). Only the western part (perhaps about half) of the pit feature remained visible. This pit feature [76] appeared to be sub-round in plan, with sloping sides. The base was left *in situ* at some depth below the 9.10mOD limit of ground reduction. It measured at least 3m north–south by at least 1.2m east–west and was filled with dark brownish grey clayey silt with occasional charcoal inclusions. The similarity of this fill to that of other pit fills on the site suggests that it probably shares the same date (ie, post-medieval: perhaps between the late 16th century and the early 18th century).

The last two pit features [78 and 81] identified on the site were in the area of 16 Alie Street (see Fig 2). Both were observed at 9.10mOD, at formation level, having been truncated above by construction and demolition disturbance associated with the building that stood on the site until the 1990s. The basal fill of the northernmost of these [81] was practically identical in composition to the fill within the southern pit [78], of which only a thin basal portion remained. Accordingly, it seems likely that these two pits were very similar in function or in the manner in which they were finally backfilled and sealed. Because of this similarity and given that the northernmost pit presented a stratigraphic sequence of two fills [79 over 80], bulk samples of the fills [77, 79 and 80] of these pits were collected in the hope that they might shed light on

the function of the features. Zooarchaeological and botanical examination of these samples is described in Sections 9.3 and 9.4 of this report.

The southernmost [78] of these two pits (see Fig 4) measured 2.5m north–south by 2.4m east–west and was sub-rectangular in plan. Its base was very shallowly concave and reached down to 9.00mOD, as measured after excavation by hand shovel. The fill [77] within the pit was a somewhat plastic, dark brown silt with significant organic content and with inclusions of charcoal, oyster shell, pebbles, red ceramic building material (such as tile and brick), animal bone and antler, and some fragments of pottery. The brick and tile have yielded a date of about AD1480 to 1580, while the latest-dating pottery from the context [77] is Surrey-Hampshire border whiteware with green glaze dating to between about AD1550 and 1700. Taken together, these finds suggest that the fill [77] dates to no earlier than the late 16th century. Most likely, this pit was backfilled at some time between the late 16th century and the early 18th century.

Approximately 2.6m to the north of this pit [78], the larger rectangular pit [81] had been truncated to the north by the insertion of the steel sheet-pile retaining wall (as well as having been horizontally truncated as described above). This pit measured 2.9m east-west by at least 3.0m north-south. The south-western corner of the pit was excavated by hand-shovel in an area measuring approximately 1.5m east-west by 1m north-south, revealing two layers of fill (see Fig 5). The basal fill [80] was about 0.14m thick in the area excavated and was almost identical in composition to the fill [77] in the pit [78] to the south. It was somewhat plastic, dark brown silt with a significant organic content and with inclusions of charcoal, oyster shell, pebbles, animal bone, large red ceramic tiles and some pottery fragments. The ceramic tiles were all roofing tile fragments with the exception of one large, green-glazed floor tile of Low Countries origin (see Section 9.1). This latter tile is particularly interesting due to its unusual edge profile (see Section 9.1.1 for more detail). It is thought that the floor tile may have originally been used locally in some higher-status building. perhaps part of the Abbey of St Clare, before ending up in a rubbish tip and ultimately landing at the bottom of this pit. Taken together, the building materials in the basal fill [80] of the pit [81] suggest a date of between AD1480 and 1580. The pottery found in the same fill is possibly-medieval, imported, Siegburg (Rhenish) stoneware (see Section 9.2) dating to between about AD1300 and 1500. Given the dating of the building material, these stoneware fragments are most probably either post-medieval in date or became entrained in the pit fill long after they were made.

The basal fill [80] of the pit [81] was covered by approximately 0.06m (truncated above) of a secondary fill [79] which comprised soft silt of mixed grey and brown colour, with inclusions of charcoal, oyster shell, pebbles, some roofing tile fragments and some pottery fragments. The roofing tile fragments have been dated to between AD1480 and 1580 (see Section 9.1), while the pottery (see Section 9.2) included medieval London-type ware (AD1080–1350) and Kingston-type ware (AD1240–1400). Despite the medieval date of the pottery (and, in this particular case, the uncertainty around the dating of the roofing tile, which could also be a medieval product), the stratigraphy of the pit demonstrates that this rubbish-rich fill [80] was finally deposited after the primary fill below, and must therefore have landed in the pit no earlier than the late 15th century. Furthermore, the striking similarity in composition between the basal fill in this pit [81] and that of the pit [78] to the south suggests that their date of deposition is probably also similar: that is, dating to between the late 16th century and the early 18th century.

With regard to the function of these last two pits [78 and 81], it should first be noted that the botanical analysis, and to a lesser degree also the zoological analysis, has

confirmed the field observation that the basal fills [77 and 80] of the pits were very similar. Both of these dark brown, silty fills contained peaty masses of plant stems (probably straw) and the overall botanical assemblages recovered from the fills are strikingly similar to stable waste (see 9.3). The botanical remains were not those that can be expected of human faeces, suggesting that these fills did not accumulate in a functioning cesspit. The faunal remains (see 9.4) are, however, typical of medieval and post-medieval rubbish derived from human consumption and processing (ie. general rubbish). Perhaps the best explanation for the composition of these fills is that they represent a mixture of dirty straw and rubbish (including large ceramic tiles as well as faunal remains) used to line the bases of the pits. Only one pit presented a secondary fill [79], which is best interpreted as having been dumped in to seal the pit. and which probably derived from waste ground or from a stockpile of surplus earth. The pits themselves may have been storage pits, with lined bases, in which the stored goods were kept in separate containers; nevertheless it could still be that they were well-mucked-out cesspits (ie, no longer containing significant amounts of faecal matter) to which a basal lining had been added.

It should also be mentioned that a fragment of possibly-Iron Age pottery was recovered from the fill [79] of the northernmost [81] of these two pits (see Section 9.2.3), possibly attesting to Iron Age activity in the vicinity (although the source of the backfill material may have been at some distance from the site).

## 4 POTENTIAL OF ARCHAEOLOGY

#### 4.1 Research aims

The results of the watching brief are discussed below with reference to the original research aims set out in the WSI (MOLA 2010, Section 2.2).

• What is the level of natural geological deposits on the site, and have such deposits been truncated?

The uppermost level of natural geological deposits on the site was 9.95mOD. The observed deposits, comprising sandy gravel that is probably a component of the Taplow Gravels formation, had been truncated across the site at varying level between 9.95mOD and 9.10mOD, with some localised truncations extending below the lower limit of ground reduction at 9.1mOD.

• What are the earliest deposits identified?

Not including the naturally-deposited sandy gravel, the earliest deposit identified was a possibly-medieval backfill [53], perhaps dating to between the 12th and the 15th centuries, found within a pit or trench near the centre of the site at a depth of 9.60mOD (where it had been horizontally truncated by post-medieval development).

- Is there any evidence for the Roman cemetery on the site?
- Is there any evidence for Roman ditches or boundary features on the site?
- Is there any evidence for Roman-period quarrying or other activity on the site?

No Roman-period deposits or cut features were identified on the site, although residual fragments of Roman pottery were found in pit fills of later date.

• Is there any evidence for medieval quarrying or other activity on the site?

A possibly-medieval pit or trench [54], perhaps dating to between the 12th and the 15th centuries, was found near the centre of the site at the north end of 16 North Tenter Street; however, the function of this pit could not be determined. It is too small a pit to suggest quarrying in the absence of corroborating evidence.

• What is the date and pattern of any post-medieval quarry pits?

Only one pit [70] on the site could potentially be interpreted as a quarry pit, based on the facts that, a) the pit seems large enough to have possibly been worthwhile with regard to quarrying, b) the base and outline of the pit were highly irregular, which suggests that it was not excavated for the erection of a structure, c) there was no evidence that pit had been lined or shored in any way, and d) the depth of the pit was probably not sufficient for it to have been a well. If it was in fact a quarry pit, then whether its primary purpose was to obtain brickearth or gravel cannot be determined. No finds were recovered from this pit and its date must be inferred from stratigraphy. Given that it cut through an earlier post-medieval pit [72], it is best dated to the 17th century or early 18th century and may be related to construction in the area undertaken during that time as described in Section 2.6.

• Are there any post-medieval pits or wells associated with the earliest 18thcentury buildings on the site or with occupation in the 17th century? The majority of pits recorded on the site contained fills dated, on the basis of artefact inclusion (typically ceramic roofing tile and pottery), to no earlier than the late 16th century. But, given that many years may have gone by before roofing tile and pottery were discarded and found their way into rubbish tips, it is reasonable to assume that the actual date of backfilling of the pits (with rubbish-rich earth) was later. As established in Section 2.6, the area around what would become Alie Street began to be developed in the 17th century, with the land on the north side of the street being partly built up by the 1680s. Furthermore, map evidence shows that the site itself would have featured structures fronting Alie Street (then Ayliff Street) by 1746. Thus, these pits, all of which are situated on the Alie Street properties rather than the North Tenter Street Properties (with the exception of the two brick-lined features [50 and 61]), most likely date to the initial development of the area in the 17th and early 18th centuries. The function of these pits could not be determined, although it is suggested that two of the pits [78 and 81] at 16 Alie Street may have been for storage.

Finally, two brick-lined pits [50 and 61] of post-medieval date were found on the North Tenter Street side of the site. One of these [61], at the northern end of 16 North Tenter Street, was probably either a well or cesspit. The other [50], near the south-eastern corner of 14 North Tenter Street, may have been a well, a cesspit, or even a soakage pit (soakaway). Both of these brick-lined features probably date to no earlier than the mid-17th century and no later than the 19th century.

#### 4.2 Significance of the data

Whilst the archaeological remains are undoubtedly of local significance there is nothing to suggest that they are of regional or national importance.

#### 5 PUBLICATION AND ARCHIVING

Information on the results of the watching brief will be made publicly available by means of a database in digital form, to permit inclusion of the site data in any future academic researches into the development of London.

The site archive containing original records and finds will be stored, in accordance with the terms of the WSI (MOLA 2010), with the Museum of London within 12 months of the end of the watching brief.

In view of the limited potential of the material and the relatively limited significance of the data (Section 4.2) it is suggested that a short note on the results of the watching brief should appear in the annual round up of the *London Archaeologist*.

#### **6** CONCLUSIONS

As shown in Fig 2, essentially the entire property at 14–20 Alie Street and 14–16 North Tenter Street has been reduced down to 9.10mOD, below which depth there are the bases of several post-medieval pits, including two brick-lined features, cut deeply into natural terrace gravel. During the ground reduction, it was observed that the site had previously been horizontally truncated throughout down to natural terrace gravel. This truncation had probably occurred piecemeal and repeatedly over the course of the 18th, 19th and 20th centuries, removing all traces of former ground surfaces, floors, and natural subsoil. No evidence of Roman burial was found on the site and the earliest feature identified was a possibly-medieval pit or trench of undetermined purpose. Other than this one early feature, all recorded archaeological deposits were of post-medieval date.

#### 7 ACKNOWLEDGEMENTS

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#### 8 **BIBLIOGRAPHY**

This bibliography includes works referred to in addition to those specifically cited in the text of the report.

Aitken, R, 2001 14–20 Alie Street and 14–16 North Tenter Street, London E1: An archaeological watching brief report. Client report prepared by the Museum of London Archaeology Service (MoLAS)

Bowsher, D, 2000 14–20 Alie Street & 14–16 North Tenter Street, London E1: An archaeological assessment. Client report prepared by the Museum of London Archaeology Service (MoLAS)

Dept. of Communities and Local Government, 2010 *Planning Policy Statement 5, Planning for the Historic Environment* 

English Heritage, 1991 *Exploring Our Past, Strategies for the Archaeology of England* 

English Heritage, 1991 Management of Archaeological Projects (MAP2)

English Heritage Greater London Archaeology Advisory Service, 2009 Archaeological Guidance Papers 1-5

English Heritage, May 1998 Capital Archaeology. Strategies for sustaining the historic legacy of a world city

Institute for Archaeologists (IFA), 2001 By-Laws, Standards and Policy Statements of the Institute for Archaeologists (rev. 2001), Standard and guidance: watching brief

Institute for Archaeologists (IFA), supplement 2001, *By-Laws, Standards and Policy Statements of the Institute for Archaeologists: Standards and guidance – the collection, documentation conservation and research of archaeological materials* 

MOLA [Museum of London Archaeology], 2010 14–20 Alie Street and 14–16 North Tenter Street, London E1: Written Scheme of Investigation for an archaeological watching brief

Museum of London, 1994 Archaeological Site Manual 3rd edition

Museum of London, 2002 A research framework for London archaeology 2002

Schofield, J, with Maloney, C, (eds), 1998 Archaeology in the City of London 1907-1991: a guide to records of excavations by the Museum of London and its predecessors, Archaeol Gazetteer Ser Vol 1, London

Thompson, A, Westman A, and Dyson, T (eds), 1998 *Archaeology in Greater London 1965-90: a guide to records of excavations by the Museum of London*, Archaeol Gazetteer Ser Vol 2, London

#### 9 SPECIALIST SUMMARIES

The summaries presented below describe the results of specialist examination of the recovered finds and the results of botanical and zooarchaeological analysis of three bulk deposit samples (taken from two post-medieval pit features [78 and 81]).

#### 9.1 Summary note on building materials

#### Ian M. Betts

A total of 35 fragments of building material were recovered from ALX10 (contexts [53], [56], [58], [65], [71], 77], [79] and [80]). These comprise mainly roofing tile and brick. One glazed floor tile is also present.

The building material from ALX10 has been fully recorded and the information added to the Oracle database.

Context	Fabric	Туре	Context Date
[53]	2271, 2586, 3216	Peg roofing	1180–1480
[56]	2271	Peg roofing	1450–1600
[56]	2271	Ridge tile	
[56]	3046	Brick	
[58]	2586	Peg roofing	1180–1800
[65]	3094	Peg roofing	1200–1800
[71]	2586, 3094?	Peg roofing	1450–1700
[71]	3046	Brick	
[77]	2271, 2276, 2586	Peg roofing	1480–1580
[77]	3030, 3046	Brick	
[79]	2586	Peg roofing	1180/1480–1800
[80]	2271, 2276, 2816	Peg roofing	1480–1580
[80]	2504	Floor tile	

Listed below is a summary of the building material in each context:

#### 9.1.1 Discussion

London-made medieval splash glazed peg roofing tile were recovered from contexts [53], [56] and [77]. Vast numbers of peg tiles are found in the City of London and surrounding neighbourhoods suggesting that this was the standard ceramic roof covering used from the early–mid 12th century onwards.

The other London-made peg roofing tiles are of post-medieval date. These have round and diamond shaped nail holes, the latter being a feature of certain post-1480 peg tiles. Both medieval and post-medieval tiled roofs would have had curved ridge tiles running along the roof crest. One piece of post-medieval ridge tile was recovered from context [56].

The most interesting building material from the site is part of a large green glazed floor tile of Low Countries origin which was found in context [80]. This is incomplete but would have been over 227mm in length/breadth. It has a thickness of 26–33mm.

Vast numbers of Low Countries floor tiles were brought into London, but the ALX10 is highly unusual in having a tapered edge cut prior to firing. Similar features have been noted on medieval tile (Betts 2002, 7) but they are very rarely encountered on tiles of

1480–1580 date. Presumably it was made to fit a specific area of floor, perhaps in the Abbey of St Clare or Minoresses.

#### 9.1.2 Reference

Betts, I M, 2002 Medieval 'Westminster' floor tiles, MoLAS Monogr ser 11

#### 9.2 Summary note on pottery

Nigel Jeffries

#### 9.2.1 Site archive: finds and environmental, quantification and description

Finds and environmental archive general summary

	5
Roman pottery	2 fragments. Total 0.1kg
Medieval pottery	6 fragments. Total 0.1kg
Post-medieval pottery	3 fragments. Total 0.01kg
Prehistoric pottery	1 fragment. Total 0.01kg

#### 9.2.2 Introduction

This note considers the multi-period pottery recovered from a small range of seven contexts from this site. Retrieved in a poor condition (with most sherds weighing under 5g) this material was examined macroscopically, using a binocular microscope (x 20) where appropriate, and recorded on paper and computer, using standard Museum of London codes for fabrics, forms and decoration. The numerical data comprises sherd count (SC), estimated number of vessels (ENV) and weight (by grammes) and was entered onto the ORACLE database. This note evaluates the character and the date range of the assemblage and additionally includes the material retrieved from three environmental samples <1> [77] <2> [79] <3> [80].

#### 9.2.3 Prehistoric pottery

A friable quartz and chalk tempered sherd of pottery in context [79] attributed to the late Iron Age/early Roman period is a noteworthy find for the archaeology of this area, although its significance is diminished by being found alongside two sherds of medieval pottery and must therefore be residual.

#### 9.2.4 Roman pottery

One sherd each of Roman pottery was found in isolation in contexts [53] and [73]. The base sherd in [53] is small-sized, abraded and can only be broadly categorised as a general oxidised ware fabric with [73] yielding a better preserved Baetican early Dressel 20 amphora.

#### 9.2.5 Medieval and later pottery

The majority of the pottery from this site is medieval and later dated, recovered in contexts [56], [71, [77], [79] and [80] which comprised small fragmented sherds with few diagnostic features. In addition, pottery of this date was also retrieved from three environmental samples <1> [77] <2> [79] <3> [80]. Dating the land use with precision is difficult as nearly all the medieval pottery - with the exception of the Rhenish sourced Siegburg stoneware in [80] - was often located together with later post-medieval pottery, with the white and red fired products of the Surrey-Hampshire border ware industry dominating the last.

## 9.3 Summary note on plant remains in three samples

#### Anne Davis

Three environmental samples, one from fill [77] of pit [78] and two from fills [79] and [80] of pit [81], were processed by flotation and the resultant flots and residues briefly assessed for biological and artefactual remains.

The sample contents were found to be broadly similar, with all containing wellpreserved organic remains. Fills [77] and [80] contained peaty masses of compressed plant stems, probably cereal straw, smaller amounts of moss and wood fragments (in [77]), and large assemblages of waterlogged seeds. Fill [79] was also rich in seeds but appeared to contain fewer vegetative plant remains. The seeds in all samples came almost exclusively from wild plants, with those of buttercups (Ranunculus acris/bulbosus/repens), wild grasses (Poaceae) and sedges (Carex spp.) particularly abundant in [77] and [80], along with smaller numbers of typical arable weeds such as wild radish (Raphanus raphanistrum), corncockle (Agrostemmma githago) and shepherd's needle (Scandix pectin-veneris), and occasional cereal grains. These assemblages are typical of dumped stable waste, consisting of bedding materials (straw, sedges) mixed with the remains of fodder (hay, cereals) deposited in dung. The plant remains from fill [79] were rather different, although many of the same taxa were represented, being dominated by seeds of arable weeds and other disturbed-ground species, especially those of oraches (Atriplex spp.) and fool's parsley (Aethusa cynapium), with few stem fragments. While the origin of this material may be similar to that from the other samples, it could equally well have come from plants growing on waste or cultivated ground on, or close to, the site. While very occasional seeds of grape (Vitis vinifera) and fig (Ficus carica) were seen in samples [77] and [80] there was no evidence that either of these pits was used significantly for the disposal of kitchen food waste or human faeces.

#### 9.4 Summary note on wet-sieved animal bone in three samples

Alan Pipe

## 9.4.1 Introduction and methodology

This short report quantifies, identifies and interprets the animal bone recovered by wet-sieving from sample {1} from fill [77] of pit [78]; and samples {2} and {3} from fills [79] and [80] of pit [81].

Bulk samples were washed through 1.0mm flexible nylon mesh and the residues then air-dried and visually sorted for faunal, floral and artefactual material; animal bone was then bagged and labelled as sample groups.

The animal bones from each sample group were described and recorded directly onto the MOLA animal bone post-assessment Oracle database. Whenever possible, each fragment was recorded in terms of species, skeletal element, body side, age, sex, fragmentation, and modification. Evidence for age at death was derived from surface texture and epiphysial fusion as the assemblage produced no dental evidence. Interpretations of age at death were made using data cited by Amorosi 1989. Species and skeletal element were determined using the MOLA animal bone reference collection together with Cannon 1987; Cohen & Serjeantson 1996; Schmid 1972; and Wheeler & Jones 1989. Butchery was described using standard codes and conventions in use by MOLA Osteology. In general, each bone fragment was assigned to species and skeletal element and recorded as an individual database entry; when this was impracticable due to extreme fragmentation and/or erosion, fragments were recorded at an approximate level of identification as 'cattle-sized' or 'sheep-sized mammal'. Fragments too damaged to be identified to at least these

approximate levels were not recorded and neither were fragments identifiable only as 'long bone mid-shaft'.

The table below (Section 9.4.7) shows the overall assemblage catalogue in terms of species, skeletal representation, epiphysial fusion, age at death, sex and modification. All data are available for consultation on the MOLA Oracle animal bone post-assessment database on request.

#### 9.4.2 Preservation and quantification

The wet-sieved bone fragments were generally in at least moderate, usually good, surface condition with little difficulty experienced in the identification of species, skeletal element, body side, ageing evidence or modification. Fragment size ranged from <25 mm to 25-75mm. A total of 34 identifiable fragments were recorded onto the MOLA Oracle database; 21 from [77] {1}, one from [79] {2] and 12 from [80] {3}.

#### 9.4.3 Faunal composition

The faunal assemblage included fish, poultry, the major domesticates, ox (cattle), sheep/goat and pig, small (sparrow-sized) passerine bird and game. Faunal composition was: marine/estuarine fish (elasmobranch, perhaps dogfish or ray, herring (family) Clupeidae, cod (family) including cod *Gadus morhua*, plaice/flounder Pleuronectidae), chicken *Gallus gallus*, ox *Bos taurus*, sheep/goat *Ovis aries/Capra hircus*, pig *Sus scrofa*, fallow deer *Dama dama* and rabbit *Oryctolagus cuniculus* with small numbers of unidentifiable 'cattle-sized' and 'sheep-sized' long bone mid-shaft fragments. There was no measurable bone.

Wet-sieved bone from sample {1} of fill [77] of pit [78] included 21 fragments derived from elasmobranch vertebrae, herring (family) vertebra, plaice/flounder vertebra, cod (family) vertebra, chicken sternum, passerine bird humerus (upper wing), cattle- and sheep-sized rib fragments, sheep/goat femur (thigh bone) mid-shaft, pig skull and third phalange (hoof joint) and fallow deer antler. The fallow deer antler base had been shed indicating collection of the antler during the months of May-August rather than removal from a killed animal. Size and branching of the antler suggests a young adult buck perhaps in the second or third year (Page 1971, 37).

Wet-sieved bone from sample {2} of fill [79] of pit [81] included a fragment of rabbit humerus (upper fore-leg) only.

Wet-sieved bone from sample {3} of fill [80] of pit [81] included 12 fragments derived from cod (family) cleithrum (pectoral fin area) and vertebra, chicken adult radius (lower wing), ox (cattle) scapula (shoulder blade) and radius (lower fore-leg), sheep-sized rib, pig infant skull and rabbit sub-adult lumbar (lower back) vertebrae.

#### 9.4.4 Modification

Clear evidence of butchery was recorded on single bones from sample {1} from fill [77] of pit [78]; and sample {3} from fill [80] of [81]. Sample {1} included a sub-adult pig skull which had been split along the mid-line, probably during division of the carcase into 'sides' and removal of the brain. Sample 3} included an ox (cattle) radius split down the mid-line which would have enabled removal of the marrow. There was no evidence for gnawing, burning or bone-working.

#### 9.4.5 Interpretation

This very small but well-preserved assemblage derives very largely from butchery and, particularly, post-consumption waste associated with consumption of a diverse range of species, including migratory and marine/estuarine fish, chicken and the major domesticates; cattle, sheep/goat and pig. There is no evidence for disposal of non-consumed domestic species and none for recovery of small local vertebrate fauna, except for one bone of a very small passerine bird, possibly of sparrow size, and there is therefore no suggestion that the pits were acting as 'pit-fall' traps.

Species-representation of marine/estuarine fish indicates consumption of fish available from the tidal Thames, the estuary and adjacent coastal waters (elasmobranch, herring, cod, plaice). There is no evidence for consumption of freshwater or migratory species. All these species are very much staples of the medieval and post-medieval London archaeological fish diet and are ubiquitous on City of London and adjacent east London sites.

Carcase-part recovery of chicken indicates disposal of two bones from the breast and wing of adult birds, areas of good meat-bearing quality. Cattle and sheep/goat are represented by carcase areas of moderate and good meat-bearing quality; rib, upper fore-leg, lower fore-leg and upper hind-leg, from adult animals. Pig showed recovery of sub-adult and infant skull and adult third phalange, areas respectively of moderate and negligible meat-bearing quality, with recovery of adult, juvenile and infant animals indicating consumption of beef, lamb and pork of varying, although always at least moderate, qualities. Only recovery of the ox (cattle) skull fragment and horn core indicates disposal of primary processing waste, all other components of the assemblage indicate disposal of butchery and post-consumption waste from a fish and meat diet of good, although not necessarily affluent or 'high-status', quality.

#### 9.4.6 Bibliography

Amorosi, T, 1989 A postcranial guide to domestic neo-natal and juvenile mammals *BAR International Series* 533

Cannon, D, Yee, 1987 Marine fish osteology: a manual for archaeologists *Simon Fraser University Department of Archaeology publication no. 18* 

Cohen, A, and Serjeantson, D, 1996 (1986) *A manual for the identification of bird bones from archaeological sites*, revised edition London. Archetype

Page, FJ T, 1971 *Field guide to British deer* Oxford. Blackwell Scientific Publications

Schmid, E, 1972 Atlas of animal bones for prehistorians, archaeologists and *Quaternary geologists* London. Elsevier

Wheeler, A, & Jones, A B G, 1989 *Fishes* Cambridge University Press

#### 9.4.7 Table: Hand-collected and wet-sieved animal bone

CONTEXT		FEATURE		SCIENTIEIC NAME	BONE	FUSION		AGE	SEY		NOS
CONTEXT		TLATORE	fish.	SOLENTITIC NAME	BOIL			AGE	JLA	MODIFICATION	N05.
77	1	fill pit [78]	elasmobranch		vertebra						9
77	1	fill pit [78]	herring (family)	Clupeidae	vertebra						1
77	1	fill pit [78]	plaice/flounder	Pleuronectidae	vertebra						1
77	1	fill pit [78]	cod (family)	Gadidae	vertebra						2
77	1	fill pit [78]	chicken	Gallus gallus	sternum						1
77	1	fill pit [78]	bird, passerine		humerus						1
77	1	fill pit [78]	cattle-sized		rib						1
77	1	fill pit [78]	sheep-sized		rib						1
77	1	fill pit [78]	sheep/goat	Ovis aries/Capra hircus	femur						1
77	1	fill pit [78]	pig	Sus scrofa	skull			sub-adult		split midline	1
77	1	fill pit [78]	pig	Sus scrofa	phalange 3	fused					1
77	1	fill pit [78]	deer, fallow	Dama dama	antler			young adult	male		1
79	2	fill pit [81]	rabbit	Oryctolagus cuniculus	humerus		fused				1
80	3	fill pit [81]	cod (family)	Gadidae	vertebra						1
80	3	fill pit [81]	cod (family)	Gadidae	cleithrum						1
80	3	fill pit [81]	cod	Gadus morhua	dentary						1
80	3	fill pit [81]	chicken	Gallus gallus	radius	fused		adult			1
80	3	fill pit [81]	ox (cattle)	Bos taurus	scapula						1
80	3	fill pit [81]	ox (cattle)	Bos taurus	radius		fused	adult		split midline	1
80	3	fill pit [81]	sheep-sized		rib						3
80	3	fill pit [81]	pig	Sus scrofa	skull			infant			1
80	3	fill pit [81]	rabbit	Oryctolagus cuniculus	vertebra, lumbar			sub-adult			2
TOTAL											34

#### 10 NMR OASIS ARCHAEOLOGICAL REPORT FORM

#### OASIS ID: molas1-87756

Project details	
Project name	14-20 Alie Street and 14-16 North Tenter Street, London E1
Short description of the project	An archaeological watching brief was carried out during ground reduction for redevelopment. The ground was reduced down to 9.10mOD (about 4m below the surrounding ground level).It was observed that the site had previously been horizontally truncated throughout, down to naturally-deposited terrace gravels (at or below 9.95mOD; ie, 3m or more below the surrounding ground level). This truncation had probably occurred piecemeal and repeatedly over the course of the 18th, 19th and 20th centuries, removing all traces of former ground surfaces, floors, and natural subsoil. Apart from two isolated, horizontal (layer-like) deposits that had been laid down on the truncated gravel during the 18th or 19th centuries, probably as ground make-up or levelling deposits during basement construction, only the lower portions of deeply- cut pit features were present. The oldest of the these features was a possibly-medieval pit or trench of undetermined function. The other features were all post-medieval in date, including several pits that probably date to between the 17th and early 18th centuries and two brick-lined wells or cesspits (or in one case a soakage pit) that date to no earlier than the mid 17th-century and no later than the 19th century.
Project dates	Start: 22-10-2010 End: 05-11-2010
Previous/future work	Yes / No
Any associated project reference codes	ALX10 - Sitecode
Type of project	Recording project
Current Land use	Vacant Land 1 - Vacant land previously developed
Monument type	PIT Medieval
Monument type	PIT Post Medieval
Significant Finds	ROOF TILE Medieval

Significant Finds	ROOF TILE Post Medieval
Significant Finds	FLOOR TILE Post Medieval
Significant Finds	AMPHORA Roman
Significant Finds	SHERD Medieval
Significant Finds	SHERD Post Medieval
Investigation type	'Watching Brief'
Prompt	Planning condition
Project location	
Country	England
Site location	GREATER LONDON TOWER HAMLETS TOWER HAMLETS 14- 20 Alie Street and 14-16 North Tenter Street, London E1
Postcode	E1 8DE
Study area	600.00 Square metres
Study area Site coordinates	600.00 Square metres TQ 33881 81133 51.5127400423 -0.07042668339650 51 30 45 N 000 04 13 W Point
Study area Site coordinates Height OD / Depth	600.00 Square metres TQ 33881 81133 51.5127400423 -0.07042668339650 51 30 45 N 000 04 13 W Point Min: 9.10m Max: 9.95m
Study area Site coordinates Height OD / Depth	600.00 Square metres TQ 33881 81133 51.5127400423 -0.07042668339650 51 30 45 N 000 04 13 W Point Min: 9.10m Max: 9.95m
Study area Site coordinates Height OD / Depth Project creators	600.00 Square metres TQ 33881 81133 51.5127400423 -0.07042668339650 51 30 45 N 000 04 13 W Point Min: 9.10m Max: 9.95m
Study area Site coordinates Height OD / Depth <b>Project creators</b> Name of Organisation	600.00 Square metres TQ 33881 81133 51.5127400423 -0.07042668339650 51 30 45 N 000 04 13 W Point Min: 9.10m Max: 9.95m MOLA
Study area Site coordinates Height OD / Depth <b>Project creators</b> Name of Organisation Project brief originator	600.00 Square metres TQ 33881 81133 51.5127400423 -0.07042668339650 51 30 45 N 000 04 13 W Point Min: 9.10m Max: 9.95m MOLA Local Authority Archaeologist and/or Planning Authority/advisory body
Study area Site coordinates Height OD / Depth Project creators Name of Organisation Project brief originator	600.00 Square metres TQ 33881 81133 51.5127400423 -0.07042668339650 51 30 45 N 000 04 13 W Point Min: 9.10m Max: 9.95m MOLA Local Authority Archaeologist and/or Planning Authority/advisory body MOLA

Project supervisor Michael Tetreau

Type of Developer sponsor/funding body

Name of Prideway Developments Limited sponsor/funding body

#### **Project archives**

Physical Archive recipient	LAARC
Physical Archive ID	ALX10
Digital Archive recipient	LAARC
Digital Archive ID	ALX10
Paper Archive recipient	LAARC
Paper Archive ID	ALX10
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	14-20 Alie Street and 14-16 North Tenter Street, London E1: Watching brief report

Author(s)/Editor(s) Tetreau, M.

Date 2010

Issuer or publisher Museum of London Archaeology

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Descriptionclient reportEntered byMichael Tetreau (mtetreau@museumoflondon.org.uk)Entered on26 November 2010



Fig 1 Site location



Fig 2 Plan of reduction area and archaeological features

[ALX10] Watching report © MOLA 2010



Fig 3 Looking south-west towards the southern limit of the reduction area. Note brickwork [50] near centre



Fig 4 Looking north towards pit fill [77] in pit [78], with fill [79] in pit [81] visible in background (below ladder)



Fig 5 South-facing section at south-western corner of pit [81]. Top fill is [79], with [80] below