STRATFORD CITY DEVELOPMENT
BRIDGE HO8

LONDON BOROUGH OF NEWHAM

A REPORT ON THE EVALUATION

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Stratford City Development

Bridge H08

London Borough of Newham

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Summary (non-technical)

This report presents the results of an archaeological evaluation carried out by the Museum of London Archaeology Service and Pre-Construct Archaeology Limited upon the site of Bridge H08 in the Stratford City Development, within the area designated PDZ9, in the London Borough of Newham. The report was commissioned from MoLAS-PCA by Lend Lease Development Limited.

Following the recommendations of GLAAS, one evaluation trench was excavated on the site and the results have helped to refine the initial assessment of its archaeological potential. The trench was excavated to gravel recorded at just under +1m OD. This is around 0.5 to 2m lower than sites excavated in the Stratford area to the east and confirms that the Lea floodplain descends from the low terrace into a deeper channel or wetland area, as indicated by current mapping of the topography buried beneath made ground and alluvium. The site appears to lie at the edge of the Lea or a tributary, as the valley floor falls to greater depths to the west (-1 to -2m OD). This may have been incised by the ancient Lea or Bow Backs Rivers, of which the Waterworks and Channelsea Rivers flanking the site today form part. Directly over gravels, channel deposits indicate a flowing river existed on the site, entraining sand from banks upstream and reworking and depositing early Roman pottery sherds (AD 50-100) and worked timber. If the area lay on dry ground at the margin of the low terrace during the prehistoric period, it is clear that by Roman times the main river or a tributary flowing from the terrace migrated onto the site. Organic silts (just under +2m OD) suggest stream flow slowed and marshy wetland and reed beds developed. This probably took place in the late Roman and early medieval period as river flow was impeded downstream with relative sea-level rise, and may be an indication that local waterways were becoming less navigable, leading to associated structures (such as the Saxon jetty at the Stratford Box) falling into disuse.

This gradual ponding back upstream and stagnation of water, as river levels gradually rose, eventually led to frequent overbank flooding and alluviation on the floodplain. At Stratford Bridge H08, the process is illustrated by slight differences between the alluvial clay layers. Alluvium initially contained root fibres, possibly indicating vegetation growth on the floodplain. As overbank flooding became more frequent, clays are more blue grey, indicating prolonged periods of waterlogging. A long episode of drying out and weathering of the sediment took place, probably in the late medieval and post-medieval periods, perhaps as alluviation outstripped water level, or river walls afforded protection, leading to the development of land surfaces. Nineteenth and twentieth century made ground deposits sealed the area.

The archaeological horizons, artefactual material, and palaeoenvironmental evidence suggest that although the site has a low archaeological potential and local significance, it has great

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1 Introduction

1.1 Site Background

1.1.1 The evaluation took place within the London Borough of Newham. The site was bounded to the north by a pond, to the west by the River Lea, and to the south and east by railway lines. This area is designated Planning Delivery Zone 9 (PDZ9) and falls within the Stratford City Development Site (Figure 1). The OS National Grid References for the centre of the area is TQ 3774 8460.

1.1.2 Current ground level across the site varies from approximately 5.01m OD to 4.97m OD. The site code is SZE 08.

1.1.3 The proposed development of the evaluated site involves the construction of Bridge H08, as part of the Stratford City Development, which is anticipated to impact upon the archaeological resource (MoLAS-PCA 2007b). Two trenches were originally planned to evaluate the impacted area, but these were combined into one trench for practical reasons. The trench was undertaken to assess the potential of the area that would be impacted upon by this development work, and was positioned as such. A desk-based assessment was undertaken for PDZ9 (MoLAS-PCA 2007a), and should be referred to for information on the geology, archaeological and historical background of the site, and the initial interpretation of its archaeological potential. A Written Scheme of Investigation (WSI) was prepared for PDZ9 (MoLAS-PCA 2007b), and formed the project design for the evaluation.

1.2 Planning and Legislative Framework

1.2.1 A general background to the planning and legislative framework covering all sites included in the Stratford City and Lower Lea Valley Olympic applications was included in the previous *Environmental statements* (ARUP 2003 & Capita Symonds 2004).

1.3 Planning Background

1.3.1 In accordance with local and national policies, archaeological evaluation and survey of the areas of PDZ9 to be impacted upon in advance of its redevelopment was required as part of the planning process. Evaluation is intended to define the archaeological potential and significance of any deposits present on the site, so that the local authority can formulate responses appropriate to any identified archaeological resource.

1.3.2 The evaluation of the subject site, Stratford City Bridge H08, was undertaken in support of a condition applied by the Olympic Delivery Agency Planning Decisions Team and attached to The Olympic, Paralympic and Legacy Transformation Planning Applications. The condition (16) states:

> *No works shall take place until the Application 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 works 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 investigation body acceptable to the Local Planning Authority.*
>
> *Reason: Significant archaeological remains may survive on site. The planning authority wishes to secure the provision of archaeological investigation and the subsequent recording of the remains prior to development, in accordance with the guidance and model condition set out in PPG 16 and in accordance with policies 4B.14 of the London Plan, BHE17 of Waltham Forest Unitary Development Plan 2006 and EQ 29 of Hackney Unitary Development Plan 1995.*

1.4 Origin and Scope of the Report

1.4.1 This report was commissioned from MoLAS-PCA by Lend Lease Development Limited. The report has been prepared within the terms of the relevant Standard specified by the Institute of Field Archaeologists (IFA 2001). Field evaluation, and the *Evaluation Report* which comments on the results of that exercise, are defined in the most recent English Heritage guidelines (English Heritage, 1998) as intended to provide information about the archaeological resource in order to contribute to the:

- Formulation of a strategy for the preservation or management of those remains; and/or
- Formulation of an appropriate response or mitigation strategy to planning applications or other proposals which may adversely affect such archaeological remains, or enhance them; and/or
- Formulation of a proposal for further archaeological investigations within a programme of research.

1.5 Archaeological Background

1.5.1 The following section summarises the site background based upon the desk based assessment for PDZ9 (MoLAS-PCA 2007a) and previous MoLAS-PCA work. For

highlighted terms see the glossary (Appendix 1) and for sites mentioned in the text, see Figure 7.

Modern Topography

1.5.2 Planning Delivery Zone Nine (PDZ9) is located on the centre and the eastern side of the floodplain of the Lea Valley, to the east of the Waterworks River, which forms the western boundary of the zone. The Channelsea River flows across the western part of the zone to the east of the site. These rivers are two of the Bow Back Rivers that form part of the river Lea.

1.5.3 The modern River Lea and its tributaries have been canalised, diverted and culverted in places. This is due to management and reclamation in response to rising river levels and increased flooding as well as historic development, such as medieval adaptation for mill streams and diversion for the Victorian railway.

1.5.4 The extent of modification is often difficult to ascertain and for example, the origins of the Channelsea (whether a natural river or manmade water course) remain unclear. Where exposed today, the Channelsea exists as a stagnant-looking ditch.

1.5.5 Modern ground level varies greatly across the site, as a result of modern and historic ground raising associated with construction of the present railway depots and freight terminal. Generally the modern land surface lies at around 5m-6m OD. Land levelling and construction disguise the fact that the rivers were major topographic features that would have played a significant part in the lives of people in the past.

Geology and topography

1.5.6 **Alluvium** is mapped across the zone (British Geological Survey Sheet 256) and represents a range of different environments on the floodplain of the Lea from the Mesolithic period onwards. Excavation in the Thames and Lea valleys suggests that archaeological remains of the prehistoric and early historic periods lie buried within the alluvium. Pleistocene Gravel (the Lea Valley Gravels) lies under the alluvium. Immediately beyond the eastern part of the site, areas of older gravels and exposed bedrock are mapped on the valley side.

1.5.7 The gravels below the floodplain were deposited during glacial outwash at the end **Pleistocene** (during the Palaeolithic period) approximately 10 to 15 thousand years ago (ka) following scouring-out of the valley floor (at the end of the **last glacial maximum** *c* 18ka). The Lea Valley Gravels are the most recent in a series of Pleistocene river terrace deposits that form a flight of steps on the valley side. Kempton Park Gravels and the older Taplow Gravels form higher, older terraces and are mapped beyond the eastern limits of PDZ9.

1.5.8 The site lies to the west or at the western edge of a 'Low Terrace' identified by previous and current (Olympics) mapping of the sub-surface deposits (Lea Valley Mapping Project (LVMP) Burton *et al* 2004) that forms part of the Lea Valley Gravels. This landscape feature exists as a wide ledge running along the eastern side of the valley floor between Temple Mills and Stratford and is thought to have been formed at the **late glacial** to interglacial transition as the river scoured the valley bottom further west, leaving the low terrace as an upstanding feature.

1.5.9 Tertiary bedrock, which in this area is variably London Clay and Woolwich and Reading Beds, underlies the gravels. Bedrock pre-dates the period of human evolution and thus its surface acts as the bottom line for deposits of archaeological interest.

Prehistoric

1.5.10 Previous investigations and findspots indicate prehistoric activity took place within the zone.

1.5.11 Early prehistoric or Palaeolithic flint artifacts have not yet been found reworked within gravels at sites locally, even though gravels terraces are recognised as important repositories of Palaeolithic finds (Bridgland, 2006). However, evidence for Late Upper Palaeolithic environments that relate to the end of the Ice Age have been found within gravels at the Stratford Box (SBX00) and the Eastway Cycle Circuit to the north of the zone. If discovered, there is good potential for further work on these types of deposit to provide a better understanding of the dramatic landscape processes that took place in the Lower Lea as the climate fluctuated at the end of the Ice Age.

1.5.12 The low terrace to the east of the site would have remained as higher, drier ground during the prehistoric and early historic period, raised above the wetland of the valley floor, and prehistoric archaeology is known on at several sites in the area. To the east, lies the Stratford Box site (SBX00) (WA, 2002) notable for the evidence of Bronze Age cut features, late Iron Age wood chipped surface (dated to 380-160 BC) and palaeochannel deposits.

1.5.13 Bronze Age occupation including a ring-ditch, pits, post-holes and various fencing alignments is recorded on the east bank of the Lea at Oliver Close (PEM, 1992; PCA, 2001) and cremations on the site of the old cold stores (Frigoscandia SZD08) (Holden and Nicholls, in prep). The site of the new DLR platform (SZA07) where Bronze Age flints were found also lies in close proximity (Johnson and Nicholls, in prep). These finds attest to thriving Bronze Age communities.

1.5.14 A possible Iron Age willow tip fence or revetment stakes were identified during work on the Channelsea culvert (GNF06) to the north of Stratford station. In addition, elm

drains and timber associated with reclamation, modification of the river and railway construction were found (Eastbury and Nicholls, 2007).

1.5.15 Prehistoric and Roman dry land occupation is also documented on the higher ground locally at Warton Road (OL-00305) and Carpenters Road.

1.5.16 Although currently difficult to map exactly, it is certain that natural rivers crossed the Valley sides and flowed into the Lea for thousands of years in early prehistory. These rivers would have cut across Stratford Marsh in later prehistoric times

Roman

1.5.17 PDZ9 has a low to moderate potential for remains of Roman date. The line of a Roman road may cross the zone. Such a road was identified *c.*500m east of Delivery Zone Nine at Maryland Point.

1.5.18 A study of previous observations in the vicinity and recent excavations further to the north suggests that there is some potential for the survival of Roman remains within the area of the zone, possibly in the form of occupation, which may or may not be associated with the line of a Roman road, the exact location and alignment of which is currently uncertain.

1.5.19 As with the prehistoric period, areas of higher ground on the floodplain would have been suitable for settlement and activity. Prehistoric and Roman cut features were excavated at Warton Road (OL-00305) and Carpenters Road (Halsey and Hawkins, 2007; Howell et al, 2005) Stratford Langthorne and in the eastern part of the Stratford Box (SBX00) (WA, 2002).

1.5.20 It is likely that the watercourses were exploited throughout this period and there is the potential for waterfront installations such as timber jetties, platforms, revetments and mills. Any Roman remains would be located within the alluvial sequence, which, for much of the zone, lies beneath 20th century made ground of considerable depth.

Saxon

1.5.21 PDZ9 has high potential for remains of a Saxon date as a bridge abutment or jetty of Saxon date was recorded at the west end of Stratford Box and associated activity is likely to exist in the vicinity.

1.5.22 Saxon activity is reputed, but the account of Alfred the Great cutting the Channelsea to drain the Lea and strand the Danes in the late 9th century (Powell, 1973) is not substantiated by archaeological evidence.

Medieval

1.5.23 Chobhams manor lies within the northeast part of the zone and evidence of field systems associated with these properties may survive. The zone also has the potential for remains associated with medieval reclamation and water management, including flood defence embankments, revetments, drainage ditches and sluices. And later medieval remains would be located within channels and beneath made ground, which is known to be deep within the zone.

Post-Medieval – Modern

1.5.24 There is a high potential for archaeological features and artefacts relating to the post-medieval period in PDZ9, in the form of:

- Below ground remains of a domestic property or silk mill shown in 1746 as 'Hennekers Property' to the east of the Channelsea River.
- Remains of post-medieval structures and field systems associated with Chobhams manor and later farms, which survived until the late nineteenth century.
- Evidence for past land and water management, such as ditches, sluices and revetments, including possible diversions of the Channelsea river, Waterworks River and the River Lea.
- Possible evidence of late 19th century brick quarrying and manufacture, such as brick kilns, in the northeast of the zone.

Such remains would be located beneath the substantial made ground over much of the zone.

1.6 Aims and Objectives

1.6.1 The following research aims and objectives for PDZ9 were established in the Method Statement (MoLAS-PCA, 2007b) for the evaluation, and in the Desk Based Assessment for PDZ9 (MoLAS-PCA, 2007a), and are intended to address the research priorities established in the Museum of London's *A Research Framework for London Archaeology* (2003):

- What evidence is there for the preservation of organic remains?
- What environmental evidence suitable for past landscape reconstruction exists within deposits associated with ancient channels of the River Lea and its tributaries?
- Can episodes of channel activity and abandonment and wetland expansion across previously dry land surfaces on the zone be dated?

- Does evidence of prehistoric and historic occupation survive on the terraces?
- Is there any evidence for the Roman road from London to Dunmow?
- Is there evidence relating to the medieval settlement of Stratford?
- Is there evidence of milling and associated activities along the River Lea from the medieval period onwards?
- Is there any evidence of medieval and post-medieval agricultural activity present on the zone? Is this associated with Chobham manor and its later landholdings?
- What was the pre-modern/pre-Victorian topography of the zone?
- How extensive is modern truncation across the zone? Do made ground deposits bury or truncate the post-medieval/modern land surface?
- Is there evidence for past water management, i.e. drainage ditches, mill remains, sluices and revetments associated with earlier courses of the River Lea?

2 The Evaluation

2.1 Methodology

2.1.1 All archaeological excavation, monitoring and survey during the evaluation was carried out by a joint MoLAS-PCA team in accordance with the Method Statement (MoLAS-PCA 2007b).

2.1.2 One evaluation trench was excavated to assess the archaeological potential of the area to be impacted upon by Bridge H08 (Figure 2). This trench was excavated to the base of the archaeological sequence.

2.1.3 The trench was excavated by a mechanical excavator using a flat ditching bucket, supervised at all times by an archaeologist and a banksman.

2.1.4 The trench was located by the MoLAS-PCA surveyor using an EDM. This information was electronically collated and plotted onto the OS grid. Levels were calculated from a benchmark established by a Morrison engineer.

2.1.5 The excavation team included a MoLAS-PCA geoarchaeologist who interpreted and advised on the deposits and took samples for off-site examination as appropriate.

2.1.6 A written and drawn record of all archaeological deposits encountered was made in accordance with the principles set out in the MoLAS site recording manual (Museum of London 1994).

2.1.7 The site has produced: 1 trench plan at a scale of 1:20, 15 context records, and 1 section at a scale of 1:10. The site records will be deposited under the site code SZE 08 in the LAARC.

2.2 Survey Results

See Figure 2.

2.3 Results of the Evaluation Trench H08

2.3.1 Evaluation Trench H08 was positioned east-west, on the eastern side of the River Lea, to the north of the railway lines and Carpenters Road. It was excavated to a maximum depth of approximately 4.11m, where a base area of 8.50m by 4.05m was exposed (Figures 3-5).

Table 1: Details of depositional sequence in Evaluation Trench H08

Location		Immediately to the north of the railway lines adjacent to Carpenters Lane, to the east of the River Lea.	
Dimensions		8.50m x 4.05m at base; 4.11m in depth	
Modern ground level		5.01m OD to 4.97m OD	
Base of modern fill		2.64m OD	
Top of alluvium observed		2.89m OD	
Level of base of deposits observed		0.90m OD	
Thickness of deposits of archaeological interest observed		1.99m	
Context numbers		[1]-[15]	
Samples	*Type*	*Sample Number*	*Context Number*
	Bulk	6	[6]
		7	[4]
		8	[15]
		9	[5]
		10	[8]
		11	[10]
	Monolith	1	[4]-[11]
	C14	2	[6]
		3	[7]
		4	[8]
		5	[5]

Phase 1

2.3.2 The earliest deposit encountered in the trench was a layer of loose mid orangish-brown gravels [12]. These formed the basal limit of excavation and were encountered at +0.93m OD.

Phase 2

2.3.3 Overlying the basal gravels was a fluvial deposit composed of loose light yellowish-grey sand and small sub-angular gravels [11], which contained early Roman pottery in the form of a re-deposited basal sherd from a South Gaulish dish, c. AD50-100. This layer was 0.09m thick and was encountered at 1.10m OD. This was overlain by another fluvial layer of light yellowish-grey sand [10], with lenses of dark brown clay

and silt. This was 0.16m thick, encountered at 1.20m OD. This layer also contained re-deposited Roman period pottery, from a Gauloise wine amphora c. AD50-250/300.

2.3.4 Two pieces of worked timber, [13] and [14], were also present in layer [10]. Timber [13] is likely to have been part of a post, sub-rectangular in cross-section, box-quartered/eighth in conversion, with dimensions of 615mm x 110mm x 45mm. Timber [14] was also the remains of a post, being circular in cross section, whole in conversion, shaped to a point at one end, with dimensions of 1420mm x 100mm x 100mm.

2.3.5 The layer [10] was overlain by a fluvial layer of loose light greyish-yellow sand [9] with inclusions of mollusc shells and plant roots. This was 0.07m thick and encountered at 1.24m OD. Above this was a layer of soft dark-grey silt [8] containing fine lenses of sand and very occasional animal bone, which was 0.20m thick and encountered at 1.31m OD.

Phase 3

2.3.6 A layer of soft dark greyish-brown silt [7] with lenses of sand overlay this, being 0.12m thick and encountered at 1.42m OD. This was overlain by a layer of soft dark brown organic silt [6] that was 0.46m thick and was encountered at 1.78m OD.

Phase 4

2.3.7 Above the organic silt layer [6] was a layer of soft mid brownish-grey clayey-silt [5]. This was 0.19m thick and was encountered at 1.86m OD, and alluvial in nature. This was overlain by an alluvial layer of soft light bluish-grey clay with orange mottling [4], which was 0.80m thick and encountered at 2.61m OD.

Phase 5

2.3.8 Above this was a layer of soft mid bluish-grey alluvial silty-clay with brownish-red mottling [15], which was 1.35m thick and encountered at 2.89m OD. This displays signs of weathering and plant root activity and may indicate a period of stabilistion or land surface. A layer of soft dark bluish-grey clayey-silt [3] containing very occasional pottery followed. It was 0.11m thick, and was encountered at 2.90m OD.

Phase 6

2.3.9 Above this was a layer of made ground composed of firm sandy-clayey-silt [2] that was dark brownish-grey with patches of mid greyish-brown. This contained occasional small pieces of CBM, coal, charcoal, and pottery, was 1.77m thick, and was encountered from 4.57m OD. The final layer observed in the trench was a layer of firm mid orangish-brown clay [1]. This was 0.50m thick, encountered at 5.01m OD, and sealed the trench.

2.4 Geoarchaeology

2.4.1 Introduction and Methodology

2.4.1.1 A visit was made to the site by MoLAS-PCA geoarchaeologists to examine the natural sediment sequence exposed within the evaluation trench (Figures 6 & 7). The deposit sequence was described and interpreted (Table 2) and is discussed from the base of the section upwards. Contexts have been broadly groups on the basis of common formation process (facies) which are equivalent to the archaeological phasing. Monolith and bulk samples were taken for the assessment of micro- and macro-biological remains within the deposits. Assessment of environmental remains within bulk samples is presented (section 2.5) and work on the monoliths was not undertaken at this stage of work.

2.4.2 Results and Discussion

Prehistory

2.4.2.1 Fine to medium coarse iron-stained sands and gravel (facies 1, phase 1) (at approximately +0.90m OD) are thought to represent the Lea Valley gravels. Although the timing of gravel deposition remains uncertain (see e.g. Burton et al, 2004; summarised in Eastbury and Nicholls, 2007; Johnson and Nicholls, 2007), it is considered late Pleistocene possibly before the last glacial maximum (LGM). Gravels appeared naturally deposited with no evidence of truncation and no cultural material recovered.

2.4.2.2 The gravel surface at SZE08 lies between 0.5 and 1m lower than at some recently evaluated sites in the surroundings such as the Woolwich Line enclosure (WWI07) (Johnson and Nicholls, 2007), Powerhouse (Stratford City Development Package A, PWS06) and the watching brief on the Channelsea culvert (GNF06) (Eastbury and Nicholls, 2007) where the top of gravels was recorded between +1.50 and +2m OD. These other sites lie on the 'Low Terrace' (see section 1.5.8). The buried topography has been characterised by compiling previous borehole and trench evaluation data

Table 2: West west south facing sectional OL-01607 SZE08 Stratford bridge H08 MoLAS-PCA					
Facies	Deposit thickness (m)	Description	Interpretation	[contexts] and bulk {samples}	Monoliths
c +2.72m OD					
Facies 5	0.33	Brownish grey slightly shelly silty clay. Blocky, weathered structure	Estuarine alluvial clays with blocky structure indicating soil formation	[15]{8}	{1} 3 of 4
c +2.39m OD irregular surface/contact					
Facies 4	0.57	Grey brown silty clay with fine root fibres becoming more gleyed clay (becoming more noticeable above 2m OD)	Alluvial clay. Possibly estuarine or accretionary soils developing with overbank flooding	[4]{7}	{1} 4 of 4
c +1.82m OD					{1} 2 of 4
Facies 3	0.56	Dark brown organic silts with discrete sand patches occ near base occ shell frags throughout. Reeds seen occ throughout	marshy and vegetated slow-flowing stream bed with molluscs preserved indicating a quieter or semi-abandoned channel	[5]{9}{5} [6]{2}{6} [7]{3} [8] {4}	
c +1.26m OD					
Facies 2	0.33	Mollusc rich medium sands with fine sub-angular pebbles throughout. Occ wood (roots 3cm diameter) and discrete patches of organic silt	Channel deposit. Sand entrained presumable from banks upstream and forming channel point bars in an active river channel location	[9] [10] [11]	{1} 1 of 4
c +0.93m OD					
Facies 1	>0.06	Fine to medium coarse beige sands and gravel with some iron staining	Top of late glacial river terrace gravels (Lea Valley/Shepperton)	[12]	
c +0.87m OD Limit of excavation					

(the Lea Valley Mapping Project) (LVMP) (Burton et al, 2004 and in press) and work on the Olympics (Figure 7).

2.4.2.3 SZE08 therefore appears to lie within a deeper area near the higher ground of the low terrace, as mapped by the LVMP and Olympic deposit model. However, the main river channel exists a few hundred metres further to the west, where the floodplain gravels lie significantly deeper at -1 to -2m OD. Wetland deposits (such as peat) that often fill deeper zones were not observed on site. Therefore SZE08 appears to lie on the western edge of the terrace or at the edge of a deeper channel.

2.4.2.4 The deeper channel (Figure 7) could be a tributary of the Lea, although not necessarily the Channelsea because the modern course of the waterway has been greatly modified from its natural precursor. For example, the gravel topography at WWI07 suggested that in this area the modern Channelsea does not follow the course of a natural river, and it is likely that the modern Channelsea is a manmade tributary of the Waterworks River.

2.4.2.5 The terrace would have been dissected by streams flowing down into the Lea or along the low terrace, and SZE08 may lie on the edge of or within one such channel. It is suggested that the current topographic map requires consideration and possibly adjustment.

Roman Period

2.4.2.6 Mollusc rich sands with occasional organic inclusions and discrete patches of organic silt (facies 2, phase 2/3) were recorded over gravels (approximately 0.30m thick from +1.26 and 0.93m OD). These sediments are interpreted as being deposited within a flowing channel entraining material from sand banks upstream. The patches of organic silt may indicate turbulent flow and material being disturbed from higher up the river sides. Roman pottery and worked timber within the sands suggest that, although dry ground during the prehistoric period, a flowing channel existed here during Roman times. Possible scenarios can be considered to explain the origins of facies 2. A tributary flowing from the terrace may have migrated or switched to flow across the site, or sands could have been deposited at the edge of the main river channel as it swelled or moved with river level rise.

2.4.2.7 Prehistoric and Roman dryland occupation is documented on the higher ground locally at Warton Road (OL-00305), Powerhouse (PWS06) and in the eastern part of the Stratford Box (SBX00) (WA, 2002). Trench 3839TT, part of the Stratford Box site is very close to and should be compared to the SZE08 trench. The early Roman date of the pottery is of note, as Roman period activity in the vicinity is more prevalent after c. AD250.

2.4.2.8 Dark brown organic silts (facies 3, phase 3) suggest the stream flow slowed and marsh and reed beds developed. Assessment of the biological remains shows the presence of wetland plant species as well as insects and molluscs. This gradual stagnation of river flow is due to water ponding back as river levels rose and is characteristic of the Thames Valley in the late Holocene. Marsh land would have developed as the waterways became choked with vegetation. This may be an indication that local waterways were becoming less navigable, leading to associated structures, such as the Saxon jetty or bridge abutment at the Stratford Box, falling into disuse.

Medieval and Post-Medieval Deposits

2.4.2.9 Facies 4 comprised grey brown silty clay alluvium. Fine root fibres in the lower horizons may indicate some vegetation growth on the floodplain. As overbank flooding became more frequent and of greater magnitude, deposits are more gleyed and blue-coloured (above 2m OD) indicating sustained waterlogging. Continued river level rise further impeded flow and overbank flooding increased, perhaps outstripping flood levels and leading to weathering. Alternatively, drying out and weathering may have taken place if the area lay protected behind river walls. The blocky structure of the upper alluvium results from such sub-aerial weathering. The sediments structure suggests soil formation took place. Evidence therefore suggests the upper alluvium represents an accretionary floodplain soil. This may have formed a pre-industrial land surface, but it is likely that the entire alluvial facies represents a series of reasonably dry land surfaces as flood clays were episodically washed onto the floodplain. The microfossil content of these deposits will add information to sediment-based interpretations.

Late Post-Medieval Made Ground

2.4.2.10 The trench was sealed by a sequence of Victorian to modern made ground, which was composed of deposits intended to raise and level the ground surface, forming its present state.

2.5.2 Recommendations

2.4.2.11 The stratigraphic, dating and sample assessment data is entered into the MoLAS-PCA geoarchaeological stratigraphic database and ArcGIS. This may lead to re-interpretation of landscape characteristics and adjustments to the edges of landscape zones.

2.4.2.12 Transects across the valley incorporating SZE08 should be drawn in order to compare sediment characteristics. For example, the sequence requires comparison to the Stratford Box trench 3839 TT and the Carpenters Road gravely channel deposits. Assimilating the results into a zone-wide assessment of all archaeological interventions will enable significance to be better assessed and refinement of the importance of the archaeological survival.

2.4.2.13 It is recommended that the monolith sample (4 tins) are sub-sampled and assessed for microfossils (pollen and diatoms). It is likely that *c* 8 sub-samples for assessment of each pollen and diatoms are likely to be needed. Research aims that might realistically be addressed by the samples need to be identified on the basis of the wider context inferred.

2.4.2.14 Ostracods and foraminifera need to be assessed to identify whether the prehistoric and Roman sands are freshwater (as at Carpenters Road (OL-00105)) or estuarine or tidal. Similarly, such characteristics of the upper clay can only be assessed using microfossils. This is a key issue for further work.

2.4.2.15 Radiocarbon dating should be undertaken on selected organic remains from the geoarchaeolgical bulk samples. Dating the base of the facies 3 organic silt may date the onset of marsh development. This will help to correlate the stratigraphy recorded at SZE08 with other PDZ9 sequences.

2.5 Environmental Remains

2.5.1 Introduction and Methodology

2.5.1.1 During evaluation at SZE08, environmental bulk soil samples were collected for the potential recovery of macro-biological remains, for information on the character of the local environment osits intended to raise and level the ground surface, forming its present state. and possible evidence of human activities in the area. The aim of the evaluation was simply to establish the presence and/or absence of biological remains and whether a full assessment of any materials within the samples should be carried out.

2.5.1.2 In total four 20ltrs bulk samples from an unknown range of deposits were processed and evaluated and one ten litre sample.

2.5.1.3 Each sample was sub-sampled: 10ltrs were processed and 10ltrs retained. The processed fraction was further sub-sampled: 8ltrs were floated onto a 0.25mm sieve

with the residue wet-sieved through a 0.5mm mesh in order that plant and insect remains may be recovered. The remaining 2ltrs were wet sieved separately, through a 0.25mm mesh for the potential recovery of molluscs and ostracods. It should be noted that all fractions could contain all these and other biological remains and/or artefactual remains. In the case of the single ten litre sample, four litres were floated, 1ltr was wet sieved and five litres retained. The flots that contained organic material were stored wet to prevent possible deterioration. The >0.5mm wet-sieved fractions were dried and sorted. The residue from the >0.25mm wet-sieving was dried but not sorted.

2.5.1.4 A visual examination of part of the flots and all of the >0.5mm residues was then carried out to establish the potential for the survival of different forms of biological and artefactual evidence. Small fractions of the wet flots were scanned using a binocular microscope and general comments can be made on item frequency and species diversity.

2.5.2 Results

2.5.2.1 A full summary of the results is presented in Table 3. No artefacts were retrieved from SZE08.

2.5.2.2 All samples (wet flots and dry sorted residues) produced organic plant remains, however most of this material consisted of varying amounts of fragmented wood and plant stems. Three samples (two flots and 1 residue) produced occasional flecks and very small fragments of charcoal. Identifiable fruits and seeds were present in all five samples from SZE08. Large numbers of fruits and seeds were present in samples, {6} (context [6]), {9} (context [5]), and {10} (context [8]) and occasional in the remaining two samples.

2.5.2.3 Two of the three samples that produced large quantities of seeds, samples {6} (context [6]) and {10} (context (8]) are of particular note as they are dominated by one species of wetland plant namely Oenanthe spp. The uniformity of sample {10} (context [8]) is particularly noteworthy.

2.5.2.4 Three samples produced insect remains. Large amounts were recovered from samples {6} (context [6]) and sample {10} (context [8]) with moderate numbers observed in sample {9} (context [5]). All these remains were highly fragmented, but included beetle fragments and numerous broken wing fragments.

2.5.2.5 Low numbers of molluscs, described and freshwater/terrestrial were noted in three samples from SZE08: {8} (context [15]), {9} (context [5]) and {10} (context [8])

2.5.2.6 Faunal remains were observed in the residue of sample {9} (context [5]). The small quantity is likely to have derived from a single small rodent (mouse/vole).

2.5.3 Recommendations

2.5.3.1 On the basis of this evaluation it is recommended that a detailed assessment be carried out on the plant and insect remains from all the productive samples discussed above. These samples are; from SZE08; samples {6} (context [6]), {9} (context [5]) and {10} (context [8]). Given the small number of samples coupled with the small size of the flots from the remaining two samples, it would also be worth assessing the seeds from these samples. The presence of both plant and insect remains in the same samples shows that there is good potential for recovering information on the character of the local environment. This information coupled with the environmental remains from other sites in the area may make a valuable contribution towards a wider landscape reconstruction.

Table 3: Presence of biological remains in environmental bulk samples at SZE08

Sample	Context	Type	Soil Proc (l) >0.5	Soil Proc (l) >0.25	Soil Retained (l)	Residue Vol (l)	Flot Vol (ml)	Fraction	Wood/ Roots	Seeds/ Fruit	Mammal	Insects	Molluscs	Finds	Comments	Potential
6	6		8	2	10	<0.010		Residue		++					Moderate seeds, low diversity most *Oenanthe* spp	**Mod** seeds
							300	Flot	Stems/ Roots +++ Wood +	+++ (half *Oenanthe* spp)		+++ (v small frags)			Good for seeds, mod diversity, Good for insects very fragmented	**Mod-Good** for seeds, **Moderate** for **insects**
7	4		8	2	10	<0.010		Residue							Stone	None Sterile
							10	Flot	Stems/ Roots +++ Crd/Wd +	+						**Poor**
8	15		8	2	10	<0.010		Residue							Stone	None Sterile
							3	Flot	Roots/ Stems ++ Chr/Wd +	+			++			**Poor**
9	5		4	1	5	<0.010		Residue		+	+ (1 sml rodent)					**Poor**
							50	Flot	Roots/ Stems +++ Wood +	+++		++	+		Good for seeds, low to moderate diversity. Moderate for insects, very fragmented	**Moderate** for **seeds** and **insects**
10	8		8	2	10	0.200		Residue	+ charred + wtr/lgd	++ (Mainly *Oenanthe* sp)			+		Moderate for seeds, low diversity all *Oenanthe* spp	**Good** for **seeds**
							350	Flot	Roots/ stem +++	+++ (Mainly		+++ (v small	+		Good for seeds, low	**Good** for **seeds**,

									Wd,Frags Sml++	*Oenanthe* spp		frags)			diversity. Good for insects very fragmented	moderate for **insects**

2.6 Assessment of the Evaluation

2.6.1.1 GLAAS guidelines (English Heritage, 1998) require an assessment of the success of the evaluation "in order to illustrate what level of confidence can be placed on the information which will provide the basis of the mitigation strategy".

2.6.1.2 In this case, the evaluation trenches exposed Pleistocene gravels and fluvial sands dating to the Roman period overlain by probably late Roman/early medieval organic silt, and medieval to post-medieval alluvium. The trench was finally sealed by 19th–20th century made ground and levelling deposits. No Palaeolithic artefacts were encountered, and gravels are considered of low archaeological potential. The trench was undertaken so as to gain an understanding of the archaeological potential of the area to be impacted upon by construction work, and represents an assessment of no less than 5% of this area. The trench thus satisfies the original requirements of the evaluation as stated in the Written Scheme of Investigation (MoLAS-PCA 2007b).

3 Archaeological Potential

3.1 Realisation of Original Research Aims

3.1.1.1 The extent to which the evaluation has been able to address the research objectives established in the Method Statement for PDZ9 is discussed below:

What evidence is there for the preservation of organic remains?

3.1.1.2 Worked timbers were preserved at the base of the sequence. All samples produced organic remains but mainly fragmented wood and plant stems. Assessment of the bulk samples has shown that preservation and diversity of seeds and insects is good with good potential for analysis.

What environmental evidence suitable for past landscape reconstruction exists within deposits associated with ancient channels of the River Lea and its tributaries?

3.1.1.3 Insect and plants species have been identified in bulk samples taken in association with the monolith tins. Species identification will inform on depositional environments as well as conditions in the local surroundings and fragments of wood can be dated to provide the geochronology.

3.1.1.4 Four monolith samples were also taken during evaluation and microfossils such as pollen and diatoms, likely to be preserved in the soft sediments, can be sampled from the tins. The organic silts are of particular interest.

Can episodes of channel activity and abandonment and wetland expansion across previously dry land surfaces on the zone be dated?

3.1.1.5 Roman pottery (dated to c.AD50-100 and c.AD50-250/300) and worked timbers were present within the sands directly over gravels, suggesting that a river large enough to carry sand flowed after early Roman times. However, the river may have migrated across an area that was dry land in prehistory.

D*oes evidence of prehistoric and historic occupation survive?*

3.1.1.6 No direct evidence of occupation was observed within the trench. However, re-deposited Roman pottery and worked timbers within fluvial deposits suggests activity

in the surroundings. No other cultural evidence exists until the deposition of made ground in the 19th-20th centuries.

Is there any evidence for the Roman road from London to Dunmow?

3.1.1.7 There was no evidence of any Roman road observed during the evaluation.

Is there evidence relating to the medieval settlement of Stratford?

3.1.1.8 No evidence dating to the medieval period was observed during the evaluation.

Is there evidence of milling and associated activities along the River Lea from the medieval period onwards?

3.1.1.9 No evidence of milling or associated activities along the River Lea from any period was observed during the evaluation.

Is there any evidence of medieval and post-medieval agricultural activity present on the zone? Is this associated with Chobham manor and its later landholdings?

3.1.1.10 There was no evidence of any phase of agricultural activity observed during the evaluation.

What was the pre-modern/pre-Victorian topography of the zone?

3.1.1.11 At the top of the alluvium, sediment weathering and structure indicates drying out of the profile. This may have occurred as sedimentation outstripped river level rise, or the land was protected behind river walls, and lea to soil development and land surface development. Information from microfossil analysis would characterise these horizons in more detail.

3.1.1.12 The height of the gravel surface (at +0.9m OD) indicates the site lies at a lower elevation to the sites on the low terrace (between +1.5 and 2m OD). However, the height difference is not vast (deeper areas lie to the west) and wetland deposits were not preserved. The site therefore probably lies on the edge of the terrace, the margins of the Lea of a tributary.

3.1.1.13 The site requires consideration within the broader landscape context and the current mapping of the buried topography need to be updated and possibly reassessed by

adding the data to the Olympic/Stratford City Lower Lea geoarchaeological deposit model.

How extensive is modern truncation across the zone? Do made ground deposits bury or truncate the post-medieval/modern land surface?

3.1.1.14 No signs of modern truncation were observed within the evaluation trench, with the made ground burying the earlier land surface.

Is there evidence for past water management, i.e. drainage ditches, mill remains, sluices and revetments associated with earlier courses of the River Lea?

3.1.1.15 No evidence for any form of past water management was observed within the evaluation trench.

3.2 General Discussion of Archaeological Potential

3.2.1.1 The deposit sequence and gravel height has good potential for reconstructing the prehistoric and later landscape. Placing this site in its wider context is essential to gain a more detailed understanding of the past landscape. The site must be added to the Lower Lea MoLAS-PCA Rockworks database and to ArcGIS in order to be able to re-interpret the buried topography. Biological remains have good potential for analysis and will assist in reconstructing the characteristics of the environment, and may provide evidence for human activity.

3.2.1.2 The silts and clays within the monolith tins have good potential for microfossil assessment and analysis. The organic silts (facies 2) are of particular interest and diatom assessment would elucidate the salinity signal, as recent diatom work has shown that the Lea and/or its tributaries in the Carpenters Road area was freshwater until at least the Iron Age (Cameron, 2006).

3.2.1.3 The evaluation has shown that earlier deposits survive intact beneath 19th century made ground. These comprise layers of alluvial and fluvial deposits, up to 1.99m in thickness, which were overlying the basal gravels of the trench. Re-deposited pottery allows the fluvial sands and gravels overlying the base of the sequence in the trench to be dated to the early Roman period.

3.2.1.4 The trench appears to be situated either at the edge of the Lea or a tributary, or on the western edge of the low terrace as the valley falls westward. As such, the potential for

archaeological remains of settlement or occupation was good, although no evidence for past human activity was recovered from the evaluation. However, there is good potential for palaeoenvironmental remains to reconstruct the past landscape. Finds deposited within the river have also been recovered.

3.2.1.5 The early Roman date of the recovered pottery is of interest giving indirect evidence for early Roman settlement in the general area. Roman activity in the Lea Valley is more notable post c. AD250.

3.2.1.6 In geoarchaeological terms the evaluation was able to provide a notable degree of evidence and information. Observing the sediment sequence has enabled gravel surface height to be recorded and deposits to be characterised, which if analysis is undertaken could make a valuable contribution to the deposit model of the Valley.

3.3 Significance

3.3.1.1 The site is of local significance preserving sediments, environmental remains and few artefacts. However, the description of the sedimentary profile and interpretation of depositional environments will add to ongoing landscape reconstruction in the Lea Valley, and in this way the project assumes greater significance, probably of regional status.

3.3.1.2 The evaluation at Bridge H08, PDZ9 has added a small amount of archaeological information to the area. The presence of the re-deposited early Roman pottery and worked timbers is indicative of early Roman cultural activity in the vicinity. No direct evidence of human activity was found in the overlying deposits while the area began to experience periods of flooding. The subsequent Victorian and modern ground raising is of little archaeological importance.

4 Proposed Development Impact and Recommendations

4.1 It is proposed to construct the Bridge H08 during the development of the site. The construction method for this work as currently advised and evaluated is likely to destroy all of the archaeological deposits within its footprint. As such, these have been assessed as impacting fully upon the archaeological resource (MoLAS-PCA, 2007b).

4.2 The evaluation has shown that earlier deposits survive beneath the 19th century made ground. The observed archaeological deposits are of local significance. As the material from the early Roman period was re-deposited and no occupational horizons were evident the evaluation is a sufficient record of the observed deposits and no further work at the evaluated location is recommended.

4.3 The decision on the appropriate archaeological response to the deposits existing on the site rests with the Local Planning Authority and their designated archaeological advisor.

4.4 The site has geoarchaeological significance. However, observation of the deposits in section and samples taken during the excavation mean that further site work is not needed. The potential of the deposits might be realised by off-site work on these samples.

4.5 It is recommended that the monoliths are sub-sampled and assessed for microfossils (pollen, diatoms and ostracods/foraminifera) and radiocarbon dating should be undertaken on selected organic remains from the geoarchaeolgical bulk samples.

4.6 In addition, assessment on the plant and insect remains from the 3 geoarchaeological bulk samples is recommended. This information will, with the microfossil evidence, make a valuable contribution towards the historic landscape reconstruction.

4.7 The stratigraphic, dating and sample data needs also to be entered into the MoLAS-PCA geoarchaeological stratigraphic database of the Stratford City/Olympic area, and used to update the ArcGIS model and landscape themes. Environmental evidence can better be used to understand the past landscape context for the archaeology of the Stratford City/Olympic area if viewed at the larger site-wide scale.

5 Acknowledgements

5.1 MoLAS-PCA would like to thank Lend Lease Development Limited, especially Sarah Zagami, for commissioning this project, Russell Potrill (Atkins Heritage) for setting up the project and monitoring it on their behalf, and David Divers (English Heritage GLAAS) for monitoring the project on behalf of the London Borough of Newham.

5.2 The authors would like to thank John Payne and Jim Heathcote for their on-site assistance. Thanks are also given to Peter Moore for his project management, Jane Corcoran for her help with the geoarchaeology, Josephine Brown for her work on the illustrations, and James Gerrard for the pottery analysis.

5.3 Additional thanks are given to Morrison Construction for their co-operation and assistance during the project.

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7 OASIS DATA COLLECTION FORM: England

7.1.1 Printable version

7.2 OASIS ID: preconst1-44875

Project details

Project name	Stratford City Development, Bridge H08 (PDZ9)
Short description of the project	An evaluation of the area to be impacted upon by the construction of Bridge H08 as part of the Stratford City Development. The evaluation produced sherds of redeposited early Roman pottery and worked timbers within fluvial deposits, which formed part of an un-truncated natural sequence that underwent geoarchaeological investigation. The natural sequence was overlain by 19th-20th century made ground deposits. No occupational horizons were observed.
Project dates	Start: 16-06-2008 End: 26-06-2008
Previous/future work	No / No
Any associated project reference codes	SZE 08 - Sitecode
Type of project	Field evaluation
Site status	Local Authority Designated Archaeological Area
Current Land use	Vacant Land 2 - Vacant land not previously developed
Monument type	BURIED LAND SURFACE Post Medieval
Significant Finds	AMPHORA SHERDS Roman
Significant Finds	DISH SHERD Roman

Significant Finds	POSTS Roman
Methods & techniques	'Environmental Sampling','Sample Trenches'
Development type	Not recorded
Development type	London 2012 Development
Prompt	Direction from Local Planning Authority - PPG16
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	GREATER LONDON NEWHAM STRATFORD Stratford City Development, Bridge H08 (PDZ9)
Postcode	E15 2
Study area	11468.00 Square metres
Site coordinates	TQ 3774 8460 51.5429683581 -0.01348783095920 51 32 34 N 000 00 48 W Point
Height OD / Depth	Min: 2.44m Max: 2.61m

Project creators

Name of Organisation	Pre-Construct Archaeology Ltd
Project brief originator	Atkins Heritage
Project design originator	MoLAS-PCA
Project director/manager	Peter Moore

Project supervisor	Sarah Barrowman
Type of sponsor/funding body	Lend Lease
Name of sponsor/funding body	Lend Lease

Project archives

Physical Archive recipient	LAARC
Physical Archive ID	SZE 08
Physical Contents	'Ceramics','Environmental','Wood'
Digital Archive recipient	LAARC
Digital Archive ID	SZE 08
Digital Contents	'Stratigraphic'
Digital Media available	'Images raster / digital photography','Spreadsheets','Survey','Text'
Paper Archive recipient	LAARC
Paper Archive ID	SZE 08
Paper Contents	'Ceramics','Environmental','Stratigraphic','Survey','Wood'
Paper Media available	'Context sheet','Diary','Map','Matrices','Photograph','Plan','Report','Section'

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Stratford City Development, Bridge H08, London Borough of Newham. A Report on the Evaluation.
Author(s)/Editor(s)	Barrowman, S., Nicholls, M., and Andrews, J.
Date	2008
Issuer or publisher	MoLAS-PCA
Place of issue or publication	London
Description	Unpublished evaluation report.
Entered by	Peter Moore (pmoore@pre-construct.com)
Entered on	27 November 2008

Appendix 1: Glossary

Alluvium: Sediment laid down by a river, and usually well-sorted. Can range from sands and gravels deposited by fast flowing water and clays that settle out of suspension during overbank flooding. Other deposits found on a valley floor are usually included in the term alluvium. Peat develops when there is little mineral sediment deposition and impeded drainage, which limits biological decay; and tufa accumulates when springs rich in calcium carbonate discharge in damp well-vegetated situations.

Holocene: The most recent epoch (part) of the **Quaternary**, covering the past 10,000 years during which time a warm interglacial climate has existed. Also referred to as the 'Postglacial' and (in Britain) as the 'Flandrian'.

Last Glacial Maximum: The height of the glaciation that took place at the end of the last cold stage, around 18,000 years ago.

Late Glacial: The period following the Last Glacial Maximum and lasting until the climatic warming at the start of the Holocene. In Britain this period is subdivided into a warm 'interstadial' episode the Windermere Interstadial, followed by a renewed cold ('stadial') episode, in which local ice advances occurred (the Loch Lomond Stadial).

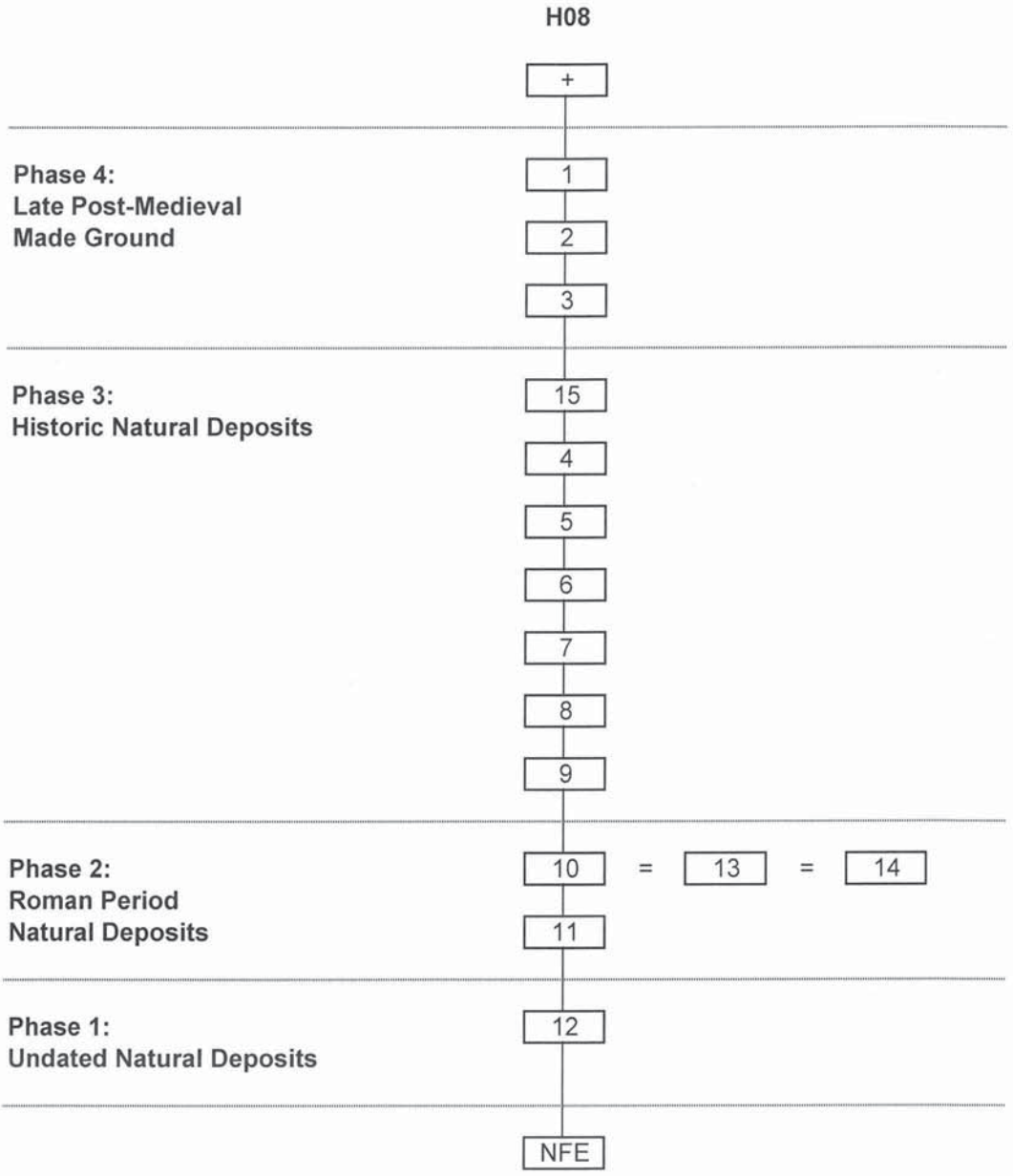
Pleistocene: Used in this report to refer to the earliest part of the Quaternary, the period of time until the start of the Holocene, about 10,000 years ago. However, since the present Holocene epoch is almost certainly only a warm interglacial episode within the oscillating climate of the Quaternary, it is often seen as being part of the Pleistocene epoch, in which case the terms Pleistocene and Quaternary are interchangeable. As it is necessary, in this report, to differentiate between the events that took place at various times during the last cold stage and earlier in the Quaternary and those that took place during the Holocene, the Pleistocene is used to refer to the parts of the Quaternary pre-dating the climatic amelioration that took place at the start of the Holocene.

Quaternary: The most recent major sub-division (period) of the geological record, extending from around 2 million years ago to the present day and characterised by climatic oscillations from full glacial to warm episodes, when the temperate was as warm as if not warmer than today. To a large extent human evolution has taken place within the Quaternary period.

Appendix 2: Context Index

Site Code	Context No.	Plan	Section / Elevation	Type	Description	Date	Phase	Drawings	Photos No.
SZE 08	1	-	S1	Layer	Levelling Deposit	Modern	4	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	2	-	S1	Layer	Made Ground	Late Post-Medieval	4	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	3	-	S1	Layer	Layer between made ground and natural - possible land surface	Late Post-Medieval	4	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	4	-	S1	Natural	Alluvial Clay	Unknown	3	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	5	-	S1	Natural	Alluvial Deposit	Unknown	3	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	6	-	S1	Natural	Organic Rich Silt Deposit	Unknown	3	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	7	-	S1	Natural	Silt Deposit	Unknown	3	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	8	-	S1	Natural	Silt Deposit with Sand Lenses	Unknown	3	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	9	-	S1	Natural	Fluvial Deposit of Gravels and Sands	Unknown	3	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	10	H08	S1	Natural	Fluvial Deposit of Sand and Gravel with Clay Lenses	Roman	2	-	1 (1-6) 2 (1-6) Digi (1-3)
SZE 08	11	-	S1	Natural	Fluvial Deposit of Sands and Gravels	Roman	2	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	12	H08	S1	Natural	Fluvial Deposit of Sandy Gravels	Unknown	1	-	1 (1-3) 2 (1-3) Digi (1-2)
SZE 08	13	H08	-	Timber	Re-deposited Fragment of Worked Timber within [10]	Roman	2	-	1 (4-6) 2 (4-6) Digi (3)
SZE 08	14	H08	-	Timber	Re-deposited Timber Post within [10]	Roman	2	-	1 (4-6) 2 (4-6) Digi (3)
SZE 08	15	-	S1	Natural	Alluvial Clay	Unknown	3	-	1 (1-3) 2 (1-3) Digi (1-2)

Appendix 3: Site Matrix



Appendix 4: Roman Pottery Report

James Gerrard

Discussion

The excavations produced fragments from two Roman vessels. The first is an imported Gauloise amphora [10] and the second a South Gaulish Dr. 18 dish [11]. Both are early Roman types. This may be significant as in general Roman activity in the Lea Valley tends to be more intense and widespread after c. AD250.

Catalogue

[10] - 3 fresh (235g), joining sherds (including handle scar) from a Gauloise wine amphora (GAUL). It is not possible to refine the form of the vessel more closely so a rough date of AD50-250/300 is appropriate.

[11] - 1 base sherd (32g) from a South Gaulish (SAMLG) Dr 18 dish. c. AD50-100.

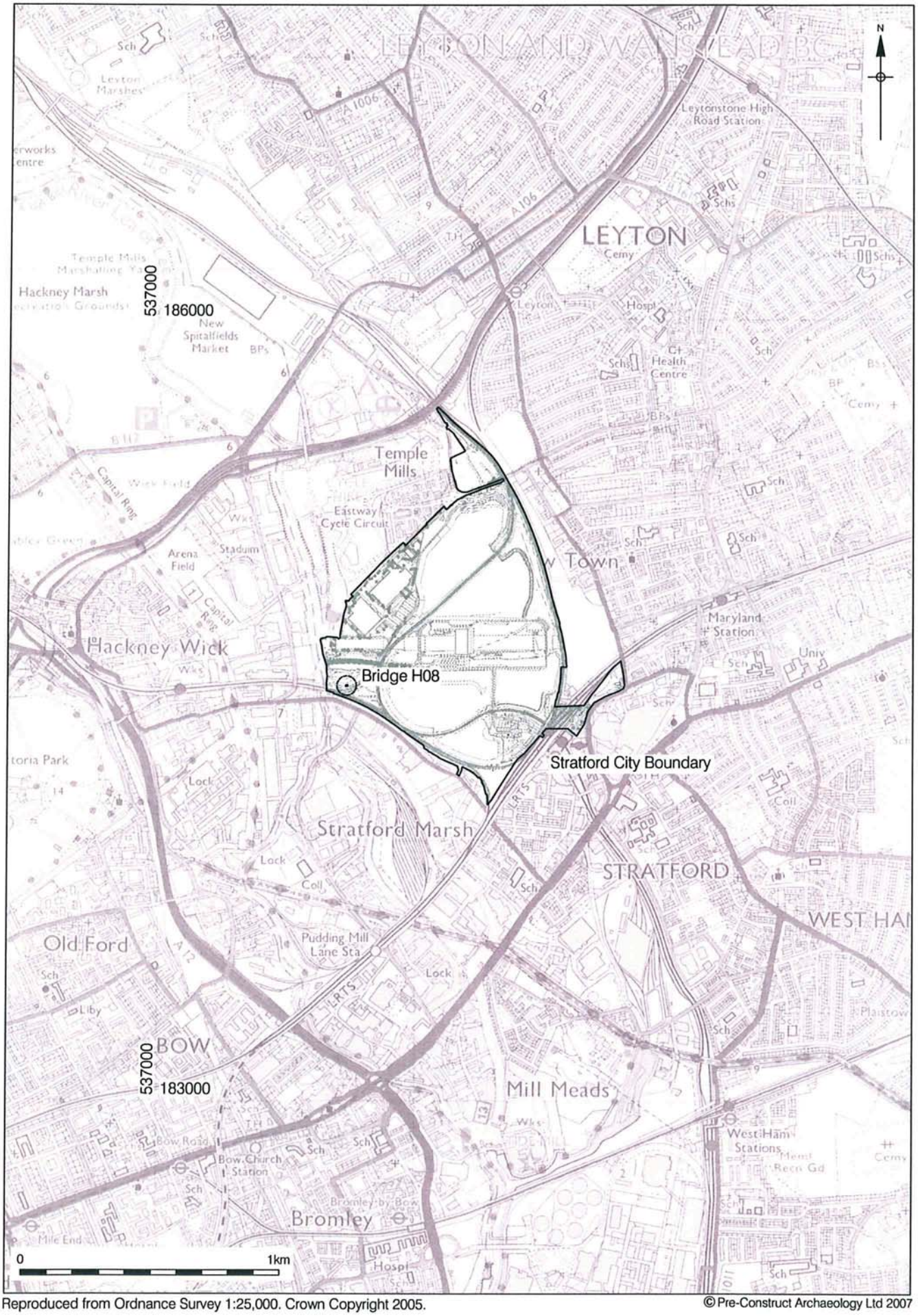


Figure 1
Site Location
1:20,000 at A4

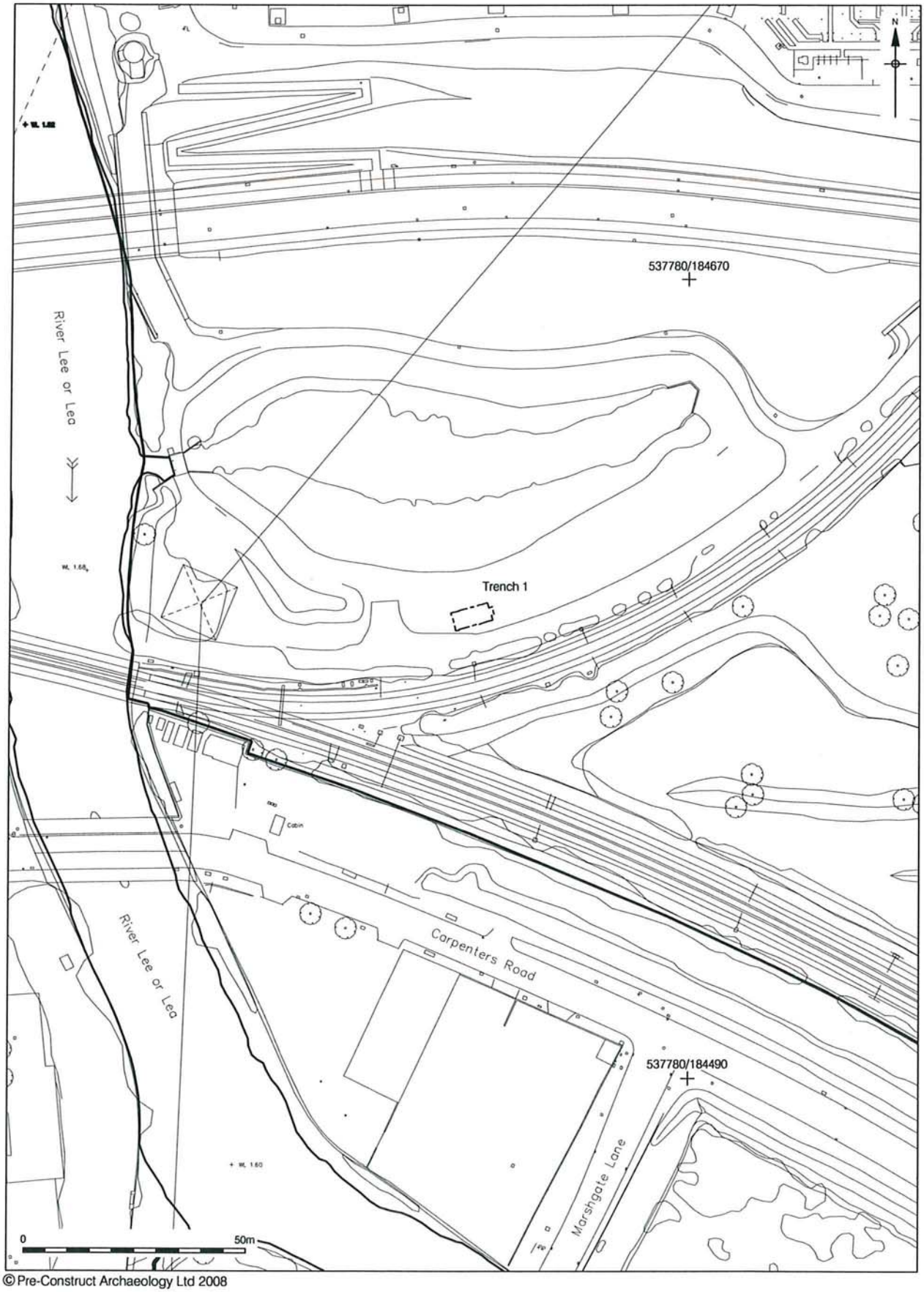


Figure 2
Trench Location
1:1,250 at A4

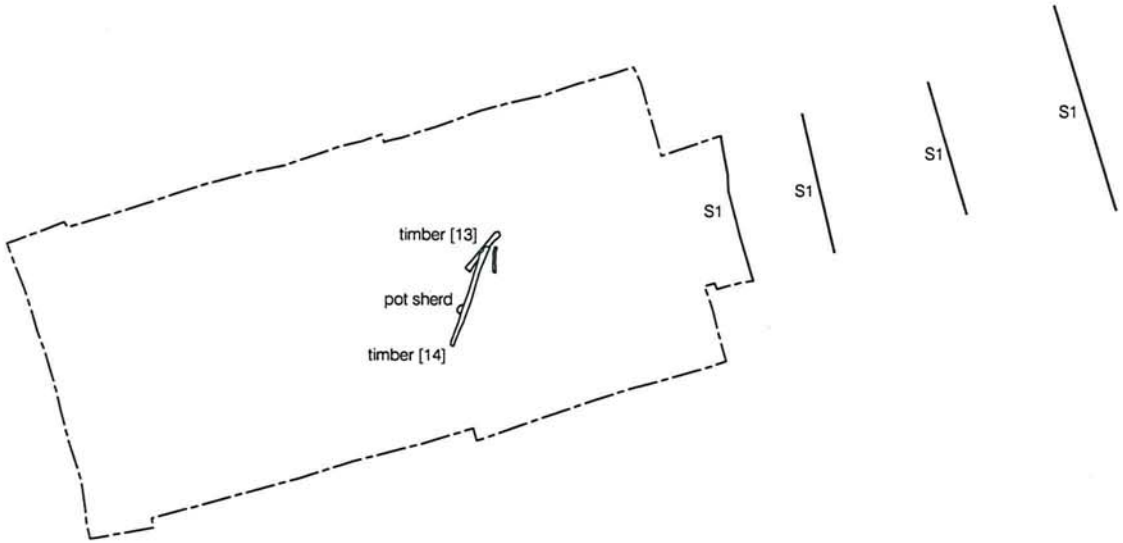
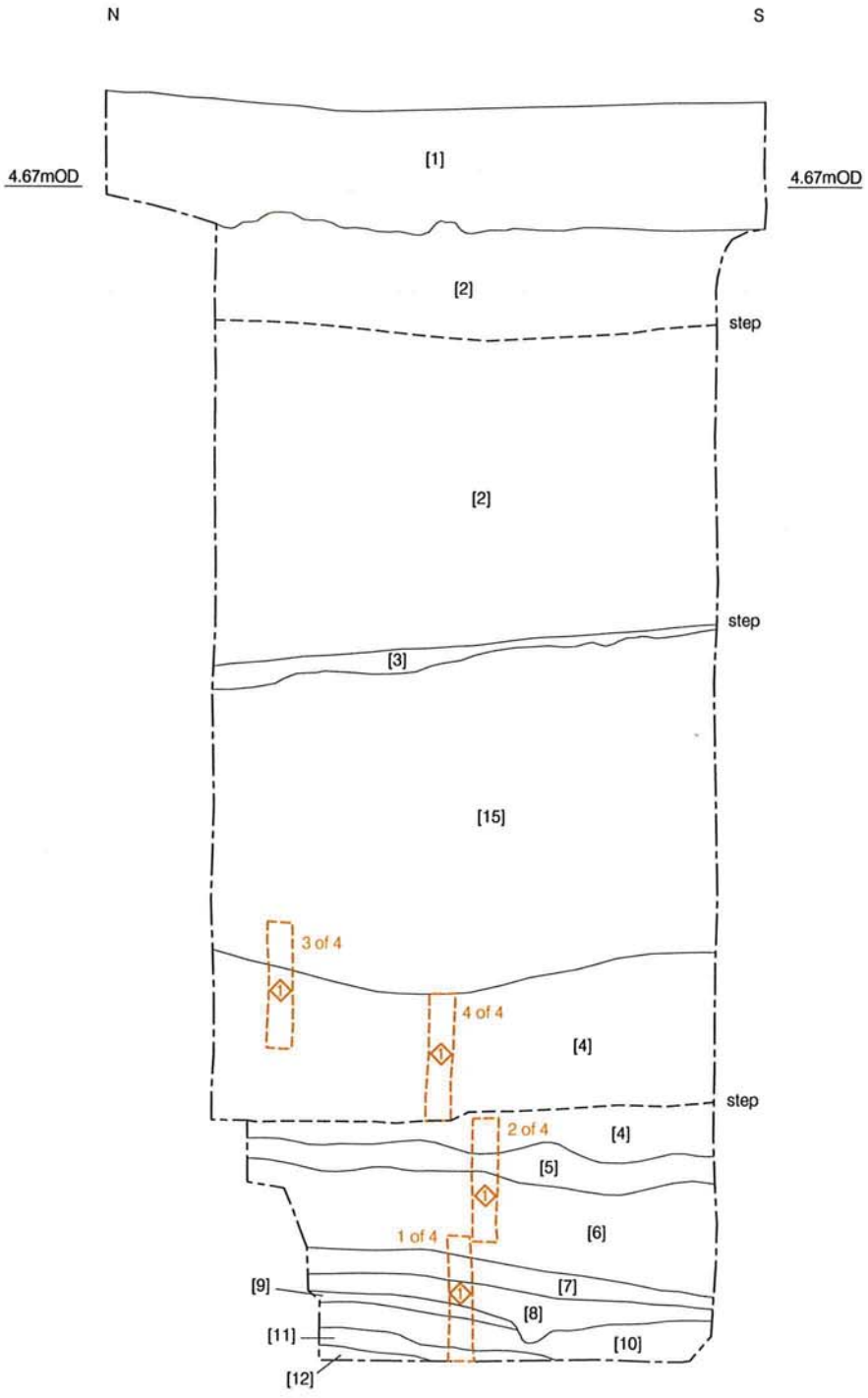


Figure 3
Plan of Trench 1
1:100 at A4



Section 1
West facing
Trench H08

0 1m

Figure 4
Section 1
1:30 at A4

Figure 5
Working Shot

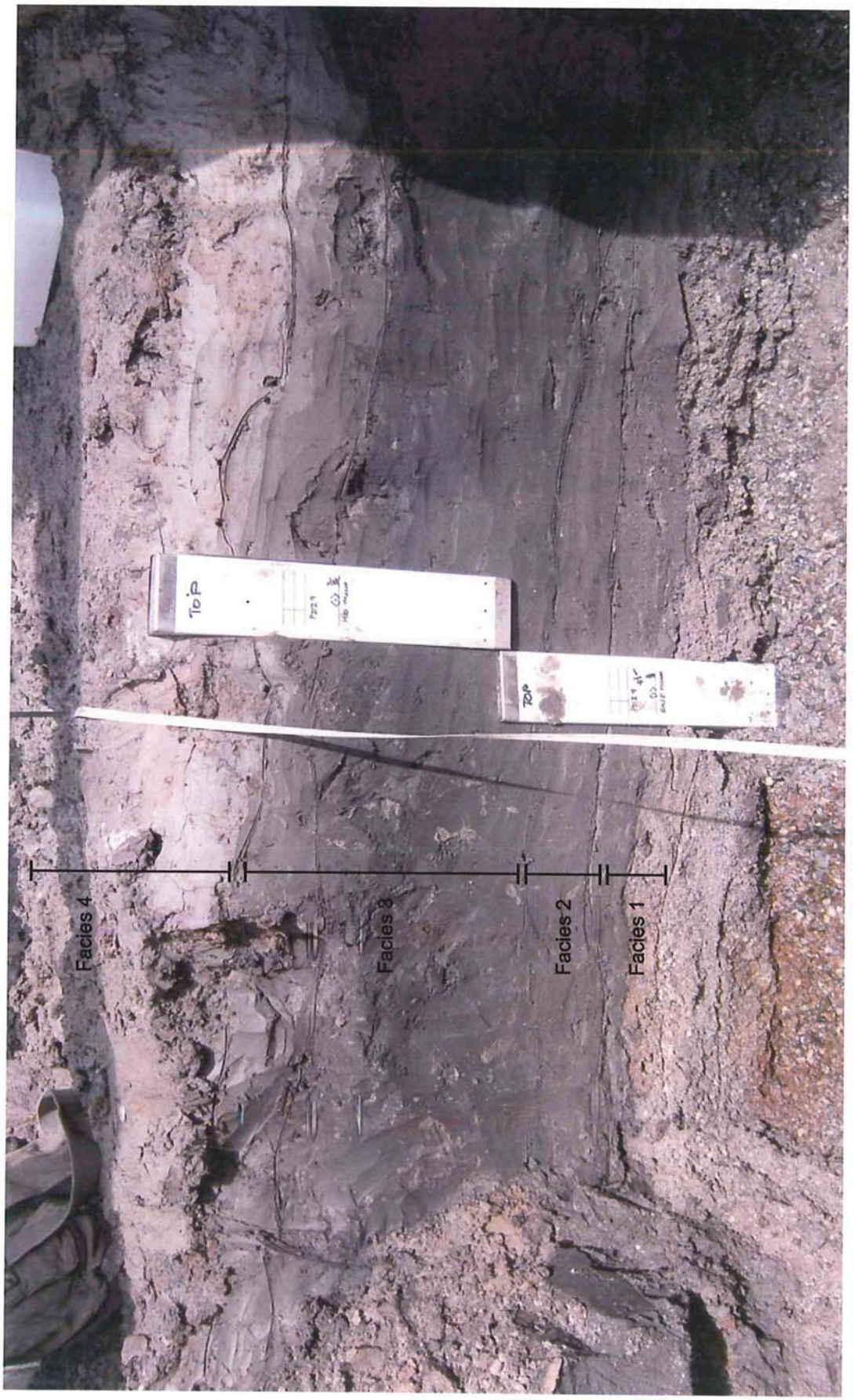


Fig 6 Photo of sediment profile in evaluation trench at Stratford Bridge H08 (SZE08) PDZ9 with facies 1–4 marked and showing three of the four monolith tins {1}. West west south - facing section OL-01607

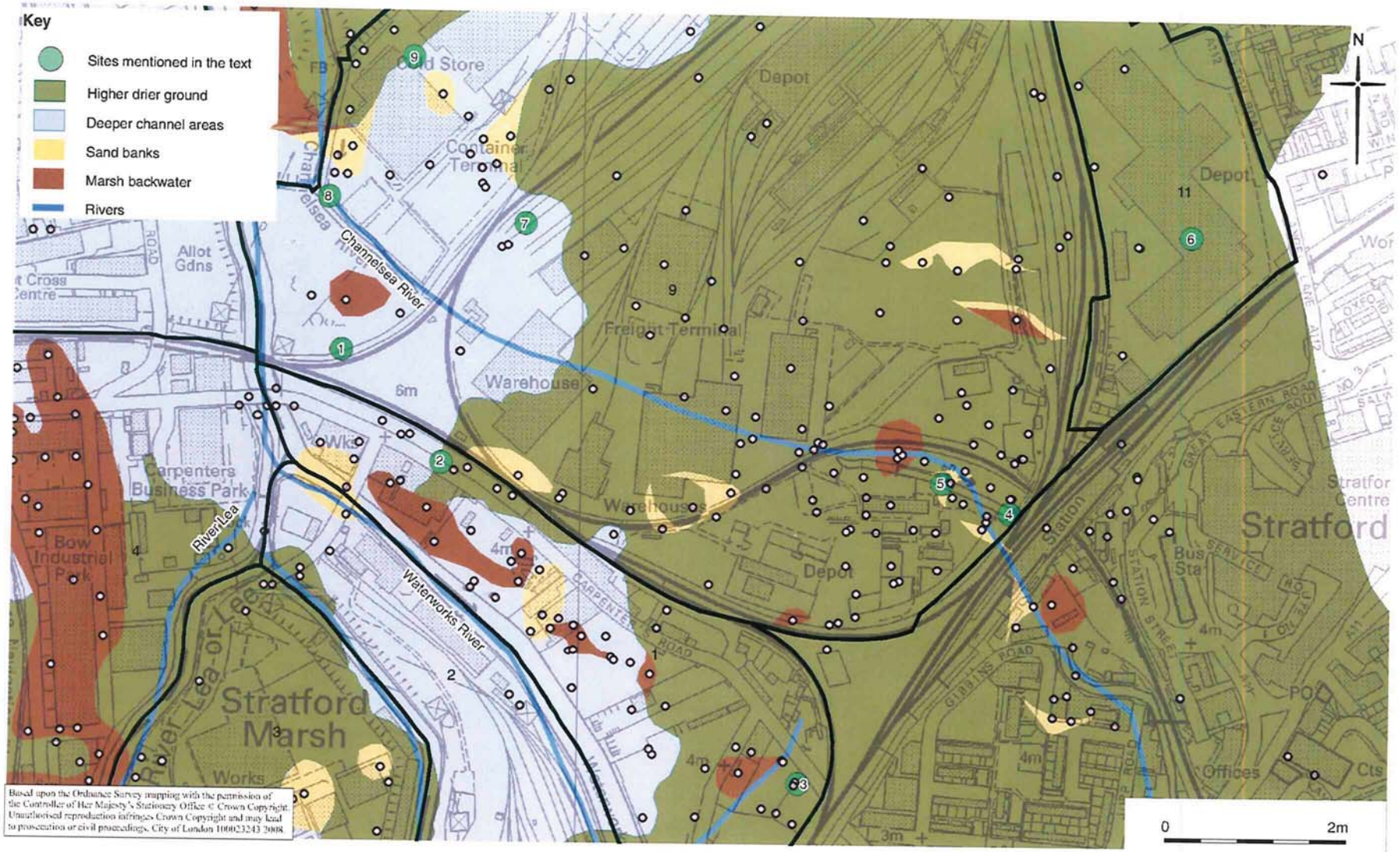


Fig 7 Lanscape zones indicating areas of wetland and dryland. Zones are characterised on the basis of current mapping of trench and borehole data in the Lea Valley. Sites mentioned in the text are indicated and include 1) SZE08 2) Carpenters Road 3) Warton Road 4) The Channelsea watching brief (GNF06) 5) Powerhouse (PWS06) 6) the east end of Stratford Box (SBX00) 7) DLR Platform 8 (SZA07) 8) the west end of Stratford Box (SBX00) and 9) Trench 3 Frigoscandia (SZD08)