

Written Scheme of Investigation for Excavations at

48 CHURCH STREET WEST HAM

For Bugler Developments Ltd.

Guy Hunt BA

L~P:ARCHÆOLOGY

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Client:	Bugler Developments Ltd.
Local Authority:	London Borough of Newham
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A trading name of the L ~ P : Partnership Ltd.

The Truman Brewery | 91 Brick Lane | London, E1 6QL | +44 [0]20 7 770 6045 | +44 [0]20 7 691 7245

www.lparchaeology.com

TABLE OF CONTENTS

Table of Figures

Table of Appendices

1. Introduction and Scope of Study
2. Site Background
3. Aims of Archaeological Works
4. Excavation Methodology
5. Recording System
6. Finds and Samples
7. Evaluation Report
8. Archive
9. Access, Monitoring and Safety

TABLE OF FIGURES

Figure 1 - Site Location General

Figure 2 - Excavation Zones

TABLE OF APPENDICES

Appendix I Sources Consulted

1. Introduction and Scope of Study

- 1.1.This Written Scheme of Investigation (WSI) has been prepared by Guy Hunt of L - P : Archaeology on behalf of Bugler Developments Ltd.
- 1.2.The site is located at 48 Church Street, West Ham. The site is centered on National Grid Reference 539415, 183785 (Figure 1). The Local Authority is London Borough of Newham who take archaeological advice from the Greater London Archaeological Advisory Service (GLAAS).
- 1.3.English Heritage's Greater London Archaeology Advisory Service (GLAAS) as advisors to the Local Planning Authority have recommended that before any development can take place a programme of archaeological excavation should be undertaken. This is to be followed by a programme of post excavation work and publication of the results.
- 1.4.It has been possible to build up a model of the archaeological deposits expected on site. This has been built up from the desk based assessment of the site as well as the results of an archaeological evaluation carried out by L – P : Archaeology in December 2007 under site code CWJ07 (HUNT 2008).
- 1.5.This Written Scheme of Investigation (WSI) sets out the nature and extent of the archaeological resource on site, the impact of the proposed development and then sets out in detail the archaeological strategy for the project both during excavation and post excavation.
- 1.6.This document sets out the research aims of the project, these have been written in light of the research framework for London (MUSEUM OF LONDON 2002).
- 1.7.Fieldwork will be carried out by L – P : Archaeology.

2. Planning Background

- 2.1. In November 1990 the Department of the Environment issued PPG 16, “Archaeology and Planning”. This document provides guidance for planning authorities, property owners, developers and others on the preservation and investigation of archaeological remains.
- 2.2. In considering any planning application for development the local planning authority, the London Borough of Newham, is bound by the policy frameworks provided by Planning Policy Guidance Note 16 (PPG 16), and the policies within the borough's Unitary Development Plan (adopted June 2001). On matters concerning archaeology and the historic environment the Newham Borough Council take impartial advice from the Greater London Archaeological Advisory Service (GLAAS).
- 2.3. The UDP is due to be superseded by a new Local Development Framework in September 2007 but will continue to inform planning decisions until this time. The relevant policy contained within the UDP is as follows:

POLICY EQ43

The council will promote the conservation, protection and enhancement of the archaeological heritage of the borough. Developers of sites of potential archaeological importance will be required to produce a written report, as part of the application for planning permission, on the results of an archaeological assessment or field evaluation carried out by a suitably qualified archaeological contractor; and when remains of importance are identified, the council will see preservation of the remains in situ. On other important sites, where the balance of other factors is in favour of granting planning permission by means of the imposition of conditions on the grant of planning permission, and possibly by legal agreements, the council will ensure that adequate provision is made for the protection, excavation and recording of remains, and the subsequent publication of the records of excavation, providing a written account of the archaeological exploration, including records of finds.

- 2.3.1. In accordance with the recommendations of GLAAS the Council has attached an archaeological condition to planning approval, as included below. This specification has been produced as part of the archaeological project design for the site.

3. ARCHAEOLOGY

The development of this site is likely to damage archaeological remains. The applicant should therefore submit detailed proposals in the form of an archaeological project design. This design should be in accordance with the appropriate English Heritage guidelines.

2.3.2. During the evaluation of the site meetings were held with David Divers of GLAAS and it was agreed that a programme of archaeological excavation will now undertaken in order to mitigate the impact of the development on the buried archaeological remains on the site. This WSI therefore forms the archaeological project design required by the planning condition.

3. Archaeological & Historical Background

3.1. TIMESCALES USED IN THIS REPORT:

PERIOD	FROM	TO
PREHISTORIC		
PALAEOLITHIC	450,000	12,000 BC
MESOLITHIC	12,000	4,000 BC
NEOLITHIC	4,000	1,800 BC
BRONZE AGE	1,800	600 BC
IRON AGE	600	43 AD
HISTORIC		
ROMAN	43	410 AD
EARLY MEDIEVAL	410	1066 AD
MEDIEVAL	1066	1485 AD
POST MEDIEVAL	1485	PRESENT

3.2. A full desk based assessment was carried out for the site in 2006 by the Museum of London Archaeology Service (MOLAS 2004). This report contains details of the archaeological and historical background information for the site as well as a summary of the potential impact of the development on the archaeological remains. The site was evaluated by L – P : Archaeology under site code CWJ07. Full details of the evaluation can be found in the report (HUNT 2008).

3.3. This section presents a short summary of the archaeological background of the site based on these reports. For full details the reader is advised to consult both reports directly.

3.4. The site is located within a Council designated Archaeological Priority Area which covers the Medieval settlement at West Ham. There have been several archaeological investigations in the area revealing mainly Medieval and Post Medieval features and little evidence of any earlier activity.

3.5. Although the site is situated on the well-drained gravels of the Thames floodplain and thus is an attractive location for Prehistoric settlement, no prehistoric remains

were identified during the evaluation. During the evaluation particular care was taken to hand clean all exposed areas of natural deposits to be sure that ephemeral prehistoric features were not accidentally missed.

- 3.6. The site is located south of the Roman Road from London to Colchester which approximately follows the line of Romford Road. However there is little evidence of extensive activity around the study site and no Roman remains were identified during the evaluation.
- 3.7. Although the site lies within the Saxon parish of West Ham, there are no known sites or finds from this period within the site area. The site was likely open fields or possibly woodland throughout the Saxon period and it is unlikely there will be any remains present on the study site.
- 3.8. The site is located approximately 15m to the south of All Saints Church. Medieval settlement was centred around the church as early as the 12th century and most likely included the site area. West Ham was a village in Essex throughout the medieval period. Its proximity to the city of London (6 miles) would have put it in an excellent position to sell provisions to the city, but it should be stressed that as late as the 19th century West Ham was essentially a rural settlement.
- 3.9. Results from the evaluation are still provisional in terms of spot dating at the time of writing, but evidence dating to the mediaeval period was recovered from site including small quantities of residual medieval pottery in later features. Several features were identified that have been provisionally dated to the medieval period, these include a possible wooden structure and pits.
- 3.10. Evidence from trench 1 nearest the Church Street frontage suggests that medieval deposits may have been truncated by Post Medieval activity. However, survival of medieval remains appears to have been better in the centre of the site where Post Medieval levelling dumps may well have protected earlier archaeological deposits.
- 3.11. In trench 2, a deep pit was provisionally dated to the medieval period and another deep pit or well which remains undated, possibly also dating to the medieval period.
- 3.12. In trench 3 there was evidence of a possible beam slot surrounded by a

brickearth construction backfill or packing. In this area, the earliest phase of features were sealed by a cultivation or garden soil that may itself date to the late medieval period.

- 3.13. The medieval features were located at around 3.95m AOD in trench 3.
- 3.14. There is therefore known evidence of medieval structures on the study site.
- 3.15. During the Post Medieval period, the site appears to be occupied by residential buildings and their associated gardens.
- 3.16. The earliest post medieval remains on the site are rubbish pits in the back yard areas of these buildings. “Bellarmine” type salt glazed earthenware and tin glazed earthenware (probably “English Delft”) were found in pits on the site and hint at high status residents of the site during the 16th or 17th century.
- 3.17. During the 18th century, the area at the front of the site is redeveloped with the construction of a very substantial brick house with flagstone floors. The front of this house would have been directly opposite the south door of All Saints Church. There is evidence from the evaluation that this building and its neighbour to the west remained in occupation right up until the 20th century. Both were demolished in around the 1940s either as a result of bomb damage or post war redevelopment.
- 3.18. It is important to note that West Ham in the 18th century would have been considered a pleasant rural retreat and could be compared to a Georgian equivalent of the modern day stockbroker belt. The substantial brick house on the site could perhaps belong to a wealthy resident of the city of London.
- 3.19. It is only during the end of the 19th century that West Ham really becomes incorporated into the metropolitan area of London. It was still part of the county of Essex at this time. The population of the parish of West Ham was still only 6,500 in 1801 only reaching its peak of 320,000 in the 1920s.
- 3.20. There are remains dating to the Post Medieval period on the study site. These are represented by early post medieval rubbish pits and garden soils and by later 18th century houses.

4. Archaeological Deposit Model

4.1.GEOLOGY

- 4.1.1. Broadly speaking, the site is situated on Thames floodplain gravels with brickearth capping on higher the ground of the gravel terraces to the east of the River Lea (MOLAS 2006).
- 4.1.2. A site investigation has identified 'made ground' deposits varying in thickness from 0.40m to 1.95m (MOLAS 2006).
- 4.1.3. This picture was further refined during evaluation works. At the north of the site (closest to All Saints Church) the natural geology is river terrace gravels at around 4.60m AOD. At the centre of the site and the south of the site, the natural is a bright orange clay at around 4.00m AOD. During the evaluation, no brickearth capping was observed in the terrace gravels and it seems most likely that this was removed in antiquity.

4.2.TOPOGRAPHY

- 4.2.1. The site covers an area of approximately 2000 square metres. Modern ground levels slope gradually from the north to the south, ranging from 6.36m OD in the northeast to 4.44m OD in the southwest.
- 4.2.2. The natural levels are more sharply sloping than this, with the northern part of the site being located on the edge of a patch of the river terrace gravels. At this stage, a tentative picture of the natural topography would be that All Saints Church itself is built on the centre of what was a raised area of natural gravels with the levels sloping away to the south.
- 4.2.3. On the west, the site is bounded by a car park. The levels of the car park slope more steeply than those of the study site, suggesting that the study site itself is highly likely to have been 'made up' to level it by human action.
- 4.2.4. The site is bounded by residential dwellings and Rebecca Cheetham Nursery School to the east with the playground of the school to the south of the study site.
- 4.2.5. Church Street bounds the site to the north. The medieval church of All Saints

West Ham is directly opposite the site on the other side of Church Street, the south door of the church facing the study site.

4.3.LAND USE

- 4.3.1. All buildings on the study site have been razed to ground level and the majority of the demolition rubble removed from site, there is however a thick protective mat of brick and concrete rubble overlying the entire area of the site.
- 4.3.2. No foundations or ground beams were removed during the demolition process. Several large pad foundations were noted during the evaluation as well as the presence of numerous steel reinforced concrete ground beams and other brick footings. In addition, there are numerous service runs and drains across the site.
- 4.3.3. The site was formerly occupied by a disused two storey factory building surrounded by external hardstanding. There is no evidence to suggest that there were any basements in these buildings.

4.4.DEPOSIT MODEL

- 4.4.1. The following deposits are therefore expected on the study site:
- 4.4.2. The site is covered by a layer of recently formed demolition rubble. This lies across the entire site being between 0.25m and 0.5m thick. This is acting as a protection for the buried remains.
- 4.4.3. Below this layer, there are the remnants of the 20th century structures on site. These include deep pad foundations and concrete ring beams. In addition there are drainage runs and other lighter elements of these buildings.
- 4.4.4. There are make up and dump layers dating to the 20th century up to 1m thick especially the case at the rear of the site, where dumping of material has raised the levels of the site considerably.
- 4.4.5. There are the structural remains of Post Medieval buildings. In places these are substantial (large brick walls and stone floors) in others these are less

substantial (garden walls and drainage features). In places these remains have truncated earlier remains, but in other places these remains seal the earlier deposits and will need to be removed in order to reach the earlier deposits.

4.4.6. There are a variety of earlier Post Medieval features on the site including rubbish pits.

4.4.7. In places these are sealed by thick (0.25m-0.5m) cultivation or garden soils that date to this period. These soils in turn seal the earlier medieval remains.

4.4.8. The medieval remains on the site are known to include pits and a possible structure and are sealed beneath later cultivation/make up levels.

5. Proposed development

5.1. The proposed development is for 57 units of affordable housing. The development will occupy the entire site area almost to the boundary on all sides. This includes provision of a basement car park.

5.2. The proposed development is divided into approximately 3 zones (FIGURE 2):

5.3. ZONE 1 - CHURCH STREET FRONTAGE:

5.3.1. In this area there will be a ramp along the eastern boundary of the site providing access from Church Street into the basement. In the western portion of the site there will be a ground level slab, but with piled foundations supporting the structure. The slab itself will in effect be supported by these piles and columns.

5.3.2. Impact in this area will therefore be from the excavation of the ramp area (including additional working room and space for make up beneath) and from pile probing to remove obstructions in the remainder of the area. Evaluation has shown this zone to be full of obstructions and pile probing in this area will have a very detrimental effect to archaeological remains.

5.4. ZONE 2 - GARAGE AREA:

5.4.1. In the central third of the site there will be a basement level garage. The retaining wall of this garage will be a contiguous pile wall.

5.4.2. The construction will therefore involve the removal of all archaeological remains in this area.

5.5. ZONE 3 - REAR OF SITE:

5.5.1. In the rear third of the site there will be a similar ground floor slab with piled foundations as at the front of the site.

5.5.2. Impact in this area will therefore be principally from the pile probing. Evaluation has shown there to be numerous large obstructions in this area and pile probing is therefore highly likely to destroy all archaeological remains in this area.

6. Research Aims

6.1. The research aims of the project are based on both the revised research aims of the evaluation and on the research agenda for London (MUSEUM OF LONDON 2002).

6.2. The aims of the work can be viewed in several ways according to the potential of the site. The aims have been characterised in two groups:

6.2.1. Periods: It is expected that archaeology from several specific periods will be present on site therefore aims have been formulated which are specific to these periods.

6.2.2. Themes: Based on these aims, there are general themes that are to be addressed during the excavation.

6.3. The period specific revised aims can therefore be summarised as follows:

6.4. PRE – MEDIEVAL

6.4.1. Is there any evidence for Pre-Medieval activity or occupation in the study area?

6.4.2. If so, what was the character, date and nature of this activity.

6.5. MEDIEVAL

6.5.1. At what date did the earliest occupation of the site take place? Is there any evidence that may be early medieval in date?

6.5.2. Do the deposits related to the occupation of the area provide evidence for the layout of medieval West Ham?

6.5.3. Is there evidence of occupation or activities relating to farming or other medieval production in the area?

6.5.4. What is the nature and character of the Medieval structures on the site?

6.5.5. Does the distribution and nature of these structures give any evidence as to the type and nature of land use in West Ham at this time?

6.5.6. Examine the other features such as pits. Can these features contribute to our understanding or the nature of West Ham at this time.

6.5.7. The aim should be to build up a picture of West Ham at this time both in terms of its physical layout and in terms of its social make up (M2 MUSEUM OF LONDON 2002: 59).

6.5.8. Medieval evidence from West Ham could certainly contribute toward “Studying rural housing before 1400 and the impact of the Black Death” (M5 MUSEUM OF LONDON 2002: 63).

6.6.POST – MEDIEVAL

6.6.1. Post medieval buildings are known to be present on site. Can this evidence for structures be related to other documentary evidence for structures or specific buildings on site?

6.6.2. What was the nature and character of this occupation?

6.6.3. Does the distribution and nature of this activity give any evidence as to the type and nature of land use in West Ham?

6.6.4. The aim should be to build up a picture of West Ham in this period, its layout and social make up.

6.6.5. The aim should be to identify changes in house design and construction during this period and consider what these changes might have meant for changing urban life (L2 MUSEUM OF LONDON 2002: 69).

6.6.6. In addition there may be evidence that contributes toward “Understanding how the proximity of the metropolis... affected the lives of people living and working in the immediate surrounding area” (L2 MUSEUM OF LONDON 2002: 69).

6.7.Thematic aims are summaries below:

6.7.1. Economy of London. The deposits and features on site may prove instructive to examining certain aspects of the economy of London. In particular, West Ham as a satellite settlement of London would undoubtedly have influenced and been influenced by the city of London itself.

6.7.2. Production. The site may contain evidence for activities relating to production of foodstuffs and perhaps also other products. This could include

primary raw materials and also secondary worked materials (THEME TE1 MUSEUM OF LONDON 2002).

6.7.3. Agricultural Production. Evidence from the site may well help develop an understanding of agricultural practices (THEME TE1 MUSEUM OF LONDON 2002).

6.7.4. Consumption. Evidence from the site may offer avenues for investigating ideas of core and periphery with regard to consumption by the core or commodities made in the periphery and vice versa. (THEME TE3 MUSEUM OF LONDON 2002).

6.7.5. Theme TD2 further explores issues of London in its hinterland. All of the sub headings of this theme are relevant to the site.

7. Excavation Strategy

- 7.1. The excavation will occur in 3 discreet areas due to the nature of the impacts as described above under (Section 5) and a logical and safe programme of excavation works. This number of excavation zones has been reduced to a minimum.
- 7.2. The initial stage of the works will be the removal of the recent demolition rubble. This work will take place under the direction of the archaeologist and will stop at the top of archaeological deposits or existing concrete slabs whichever is the higher. This initial phase of removal is not intended to reach archaeological levels, rather it is viewed as an enabling work phase.
- 7.3. Upon completion of the enabling works, excavation will then proceed zone by zone.
- 7.4. The zone to be excavated will be surveyed by L – P : Archaeology's surveyor, marked clearly and related to the National Grid. The breaking of ground slabs and obstructions will be supervised under a watching brief by a senior member of the project team. This is to ensure that only the designated zones are broken out and that no deep foundations are removed in such a way as to disturb the surrounding archaeological strata.
- 7.5. Archaeological deposits in the other zones not yet ready to be excavated will therefore remain protected under the modern overburden.
- 7.6. Existing foundations and other modern intrusions into the archaeology will be removed where appropriate in sequence with the archaeological excavation. The breaking and removal will be by hand where possible under supervision of the archaeological team. As these areas are highly likely to overlie earlier stratigraphy, caution will be used in their removal. It is deemed 'appropriate' that these intrusions be removed where their removal will not destroy more archaeological deposits than it will reveal.
- 7.7. If foundations are large deeply buried objects such as pad foundations, these will not be lifted whole out of the ground until all surrounding archaeological deposits have been removed.

7.8.Evidence of earlier structures on the site, including those dating to the 19th century and earlier will be recorded as part of the archaeological record.

7.9.All three zones will be excavated to the top of natural drift deposits. Recent work on the site indicates this may reach a depth of greater than 1.95m. In accordance with Health and Safety guidelines this means that some areas may require stepping. As the made ground is likely to vary widely across the site, each zone will be assessed individually and a decision taken by the field officer as to whether stepping is needed.

7.10.As a general rule, it is anticipated that a strip up to 2m wide round the entire perimeter of the site will be unavailable for excavation due to these constraints. Should significant archaeological remains extend into this zone, the field officer will call a meeting to assess the need to call on a contingency to localised shoring to enable excavation to continue right to the edge of the site.

7.11.The zones will be opened by appropriately sized plant. This will normally be a 360 degree tracked excavator with a 5' or 6' wide toothless bucket. A breaker may be required to remove any hardstanding and concrete structures.

7.12.EXCAVATION TECHNIQUES

7.12.1.The modern slab and made-up surface can be broken out using a breaker under strict archaeological supervision. An archaeological watching brief will cover ALL breaking and mechanical removal of modern material. One archaeologist must be present for every machine being used. The removal of modern material will be to the level identified by the archaeologist.

7.12.2.All features are to be recorded stratigraphically.

7.12.3.Hand excavation by context is required for all archaeological deposits. For example these may include:

- ◆ Ditch or linear feature termini and inter-sections
- ◆ Clusters of cuts and re-cut features
- ◆ Post holes
- ◆ Structures

- ◆ Areas of organic potential

7.12.4. Each significant archaeological horizon, will be hand excavated to meet the research requirements of the excavation:

- ◆ Pits and postholes will normally be fully excavated.
- ◆ Linear features will be sectioned as appropriate.
- ◆ Excavated material will be examined in order to retrieve artefacts to assist in the analysis of the spatial distribution of artefacts.

7.12.5. Examination and cleaning of all archaeological deposits will be by hand using appropriate hand tools. Any archaeological deposits will be examined both in plan and section.

7.12.6. Should large areas of homogenous deposits be encountered, these will be removed by machine. This should take place only after proper hand cleaning, sampling and investigation of these deposits in order to meet the research objectives of the project.

7.12.7. Once recorded to the proper archaeological standard as set out below, post medieval structures should be removed (by machine if necessary) in order to achieve the aims of the project and to excavate the underlying deposits.

7.12.8. In the unlikely event that nationally significant archaeological deposits be encountered on the site (worthy of preservation *in-situ*), excavation will cease. A site meeting will be held between L – P : Archaeology, English Heritage and the developer to assess the significance of the deposits and to decide on a strategy for sampling them to provide sufficient data for a useful assessment or subsequent mitigation strategy.

7.12.9. All finds, artefacts, industrial remains and faunal remains will be collected.

7.12.10. All finds which constitute Treasure under the 1996 Treasure Act for England and Wales will be reported to the coroner by the finder within 14 days of discovery.

7.12.11. Any human remains will be left *in situ*, covered and protected. If removal is essential it can only take place under appropriate government regulations.

Such regulations are currently in a state of uncertainty. The Ministry of Justice is not currently issuing licenses for removal and study of such remains on the basis that the Ministry is unclear as to what the law states. At this time it is therefore highly preferable to leave the remains *in situ* if at all possible whilst the regulation and the IFA guidelines are updated. If removal is essential, such removal will be in accordance with the Excavation and post Excavation Treatment of Cremated and Inhumed Human Remains (MCKINLEY & ROBERTS 1993) and the Guidelines for the Standards for Recording Human Remains (BRICKLEY & MCKINLEY 2004) as set out by the IFA.

8. The Recording System & Documentary Archive

- 8.1. We aim to maintain the archive at a very high standard during the course of the project. This means that the maximum amount of interpretation should take place in the field and be transferred immediately into the archive.
- 8.2. The production of the documentary archive is to be seen as an integral part of the field process.
- 8.3. The site code CWJ07 has been allocated by the Museum of London. This code will be used to label (using appropriate materials not adhesive labels) all sheets, plans and other drawings; all context and recording sheets; all photographs (but not negatives); all other elements of the documentary archive.
- 8.4. The recording system used will follow the Museum of London Archaeological Site Manual (SPENCE 1994).

8.5. WRITTEN ARCHIVE

- 8.5.1. The written archive will consist of recording forms that are based on the Museum of London forms to conform with the standards for archive deposition and to ensure maximum cross archive compatibility.
- 8.5.2. Context sheets will include all relevant stratigraphic relationships and for complex stratigraphy a separate matrix diagram will be employed.
- 8.5.3. The matrix will be fully checked during the course of the excavation. The field officer will be ultimately responsible for ensuring the integrity and completion of the matrix. The matrix will also form an integral part of the digital archive.
- 8.5.4. If there is any doubt over recording techniques, the Museum of London Archaeological Site Manual will be used as a guide. Copies of the manual will be available on site in the site office.
- 8.5.5. Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto prepared pro-forma recording sheets compatible with those used in London.

8.5.6. Sample registers, finds recording sheets and photo record cards will also be used.

8.5.7. Documentary material including the paper archive, photographic negatives and prints will be stored in boxes to the standard required for immediate submission into the Museum of London.

8.6.PHOTOGRAPHIC ARCHIVE

8.6.1. An adequate photographic record will be made of any significant archaeological remains viewing them both in plan and section.

8.6.2. This will include black and white prints and colour transparencies (on 35mm film), illustrating in both detail and general context the principal features and finds discovered. A set of two SLR cameras will be available on site at all times preloaded with colour transparency film and black and white print film respectively. All shots should be 'bracketed'.

8.6.3. A register of all photographs taken will be kept on standardised forms.

8.6.4. In addition each frame will contain a board showing the site code, context number, a north arrow and the date of the photograph. In some cases where publication of the photograph is possible an additional frame may be taken without the board.

8.6.5. The photographic record will also include working shots to illustrate more generally the nature of the archaeological operation mounted. Additional working shots may also be taken using a digital camera.

8.6.6. All films will be processed immediately on their completion. Processing and archival storage of all prints negatives and transparencies will be to Museum of London standards at the time of processing. No photographic materials will be kept in temporary storage media at any time.

8.6.7. Photographic negatives will be stored in archival quality polypropylene sleeves with strip divisions, three ring holes, centres 107mm apart and dimensions no greater than, 255mm (from the punched side to the opposite edge) by 300mm. The sleeve should have a white writing strip.

8.6.8. All transparency and selected black and white films will be scanned at the time of processing so that digital images will be available during the excavation and to be linked into the site GIS.

8.7.DRAWN ARCHIVE

8.7.1. A site location plan will be prepared (using OS 1:1250 base data) showing the investigation area and development site in relation to the surrounding locality and street pattern.

8.7.2. This will be supplemented by a digital GIS plan, which will show the location of the areas investigated in relation to the investigation area and OS national grid. The locations of the OS bench marks used and site TBM will also be indicated.

8.7.3. Plans will be drawn on permatrace sheets usually at 1:20. A site grid will be provided (see below).

8.7.4. The field officer may choose to draw certain classes of features such as human remains at another appropriate scale, such as 1:10.

8.7.5. The extent of any visible archaeological deposits will be recorded in plan. Long sections showing layers and any cut features will be drawn at 1:50.

8.7.6. Sections containing significant deposits, including half sections, will be drawn at an appropriate scale, usually 1:10 or 1:20. All sections will be related to the Ordnance Datum using spot heights and registers of sections and plans will be kept.

8.7.7. The stratigraphy will be recorded, even if no archaeological deposits have been identified.

8.8.SURVEYING

8.8.1. The site grid will be tied in the the Ordnance Survey national grid and laid out using an EDM by the team's surveyor. These grid points will be checked and relayed as necessary during the course of the excavation.

8.8.2. Basic site surveying will be undertaken by the excavation team using 30m

tapes and a 5m grid.

8.8.3. A temporary benchmark will be set out on site and clearly marked with its level above ordnance datum.

8.8.4. A dumpy level will be present on site at all times and all members of the site team are expected to regularly take their own levels for plans and drawn sections

8.9.GEOGRAPHICAL INFORMATION SYSTEM (GIS) AND DATABASE

8.9.1. The entire drawn archive will be scanned, georeferenced to the National Grid, digitised, and maintained within a desktop GIS. All other related non-spatial data (context, photographic, and finds archives) will be linked to it from a MySQL database.

8.9.2. All plans will be scanned, georeferenced, and digitised on a daily basis to allow for easy and rapid production of phased top plans for archaeologists in the field.

8.9.3. As this will be a dynamic digital system, it can be easily modified as spot dates are provided and preliminary interpretations are updated.

8.9.4. The context records will be entered into an ARK database. These data will be made immediately available to all specialists.

9. Finds Collection and the Physical Archive

- 9.1. All identified finds, artefacts, industrial and faunal remains will be collected and retained. Certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained. No finds will, however, be discarded without the prior approval of English Heritage.
- 9.2. Unstratified material recovered from the spoil is to be recovered and included with the finds assemblage.
- 9.3. All finds remain property of the land owner unless deemed treasure trove.
- 9.4. Marking of finds will follow the requirements of the Museum of London. Bulk finds will be bagged in clear plastic bags marked with the same details.
- 9.5. Documentary material including the paper archive, photographic negatives and prints will be stored in boxes to the same standard as above.
- 9.6. Packaging of all organic finds and metalwork will follow the UKIC/Rescue guidelines, 'First Aid for Finds' (LEIGH ET AL 1993). Any necessary, conservation and treatment of metalwork will be arranged in conjunction with specialist conservators.
- 9.7. All finds and samples will be treated in a proper manner. They will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in the United Kingdom Institute for Conservation "Conservation Guideline No. 2" (UKIC 1983). Appropriate guidance set out in the Museums and Galleries Commissions "Standards in the Museum Care of Archaeological Collections (MGC 1992)" and the current IFA guidelines (IFA 2001A) will also be followed.

10. Environmental Sampling and Strategy

10.1. Should significant environmental deposits be encountered during the course of the excavation, the advice of the regional science advisor will be sought. If it is considered appropriate these will be sampled by a specialist in accordance with the English Heritage Environmental Guidelines (ENGLISH HERITAGE 2002). These deposits will be subject to the following treatment:

- ◆ Organic samples will be subject to appropriate specialist analysis. There may be a requirement to submit timbers for dendrochronological analysis and to process some samples to provide C14 dating.
- ◆ For carbonised remains, bulk samples a minimum of 10 litres (but up to 30 litres for early prehistoric features) will be collected.
- ◆ Bulk samples of 10 - 30 litres will be taken from waterlogged deposits for analysis of macroscopic plant remains.
- ◆ Columns for pollen analysis will be taken where appropriate.
- ◆ Mollusc samples will be gathered where appropriate.
- ◆ Other bulk samples for small animal bones and other small artefacts may be taken from appropriate deposits depending on the aims of the project.
- ◆ Environmental samples will be assessed for potential through summary analysis by an environmental specialist.
- ◆ Residues and any retained samples will be treated as part of the finds assemblage.

10.2. At the beginning of the project the client and the archaeological advisor will be contacted regarding the preparation, deposition and ownership of finds.

11. Assessment Report

11.1.GENERAL STRATEGY

11.1.1.In line with the project philosophy, the assessment report at the end of the fieldwork stage is intended to be produced rapidly from the excavation data that will be already available.

11.1.2.The minimum acceptable standard for the archival report is defined in the “Management of Archaeological Projects” 5.4 and Appendix 3. It will include all materials recovered (or the comprehensive record of such materials) and all written, drawn and photographic records relating directly to the investigations undertaken. It will be quantified, ordered, indexed and internally consistent. It will also contain a site matrix and a site summary.

11.1.3.The assessment report and updated project design will be submitted to the GLSMR (using the appropriate archaeological report forms). This will include details of the archive deposition, date of deposition, and recipient museum.

11.2.ROLE OF THE ASSESSMENT REPORT

11.2.1.The assessment report is intended to bring together the results of the excavation phase of the project and suggest further works that will be undertaken during the post excavation stage.

11.2.2.The report will therefore bring together the assessments of the finds and environmental specialists alongside the stratigraphic analysis.

11.2.3.The assessment report is also intended to revise the research aims set out in this document in the light of the new evidence and in view of a practical allocation of the project’s resources.

11.2.4.The report will therefore has an important role in presenting the refined research objectives of the project.

11.3.CONTENTS OF ASSESSMENT REPORT

- 11.3.1.The formal assessment report on the results of the archaeological works will include:
- 11.3.2.Perceived archaeological potential of the site archive and vicinity from the Stratigraphy, Finds and Environmental Samples as well as documentary sources - historic, cartographic, archaeological, SMR, geographical, topographic and environmental.
- 11.3.3.The aims and methods adopted in the course of the excavation.
- 11.3.4.Illustrative material including maps, plans, sections, drawings and photographs as necessary.
- 11.3.5.The nature, extent, date, condition and significance of the archaeological finds.
- 11.3.6.Specialist reports on the classes of finds made and their potential for further study including parallels from other sites if required.
- 11.3.7.Recommendations for further action organised by class of material, identifying any areas suitable for further study.
- 11.3.8.This includes an updated project design and programme for further work.
- 11.3.9.The report will include an updated publication strategy, which will be an update of the publication strategy outlined below in section 11.
- 11.3.10.The report will include quantification of the archive and archiving arrangements.

11.4.TIMESCALE

- 11.4.1.The assessment report should be available within 6 months of the completion of the final element of fieldwork.
- 11.4.2.Two copies of the assessment report will be sent to the client and 2 copies to English Heritage. The project will be updated and maintained as part of the OASIS project.

12. Publication Strategy

12.1.GENERAL STRATEGY

12.1.1. At this stage the strategy is only a general guide. The formal publication strategy will be part of the assessment report (see Section 11).

12.1.2. Following the assessment report, a programme of further analysis of the material will be initiated. This is likely to include comparative research with other sites including published and archive material held at LAARC. It is also likely to include detailed analysis of various classes of material (ceramics, environmental evidence etc) according to the conclusions of the assessment report.

12.1.3. Where the above mentioned review indicates the need for further assessment and analysis, the recommendations set out in the Management of Archaeological Projects will be followed. English Heritage will be consulted at all review stages.

12.1.4. The review process and its results as presented in the assessment report are highly likely to indicate that significant archaeological remains uncovered in the course of the excavation require full publication in an appropriate journal. It is likely that the review process will conclude that such publication will include descriptions and interpretations of the remains uncovered, as well as specialist reports on the finds and samples recovered.

12.1.5. Our aim is to publish the material from the site as quickly as possible in a suitable journal e.g. London and Middlesex Archaeological Society (LAMAS) or London Archaeologist.

12.1.6. Contingency arrangements to provide funding resources for this element of work will be made before fieldwork commences. Site works will not commence until the Local Planning Authority has expressed itself satisfied that suitable arrangements have been made.

13. Access and Monitoring of Work

13.1. Reasonable access to the site will be arranged for representatives of the Local Planning Authority and English Heritage who may wish to make site inspections to ensure that the archaeological investigations are progressing satisfactorily.

13.2. Visits will be made regularly for monitoring (e.g. weekly) to site and weekly site progress summaries will be produced and forwarded to the developer and English Heritage.

13.3. English Heritage should be given at least five working days notice of the commencement date.

14. Health and Safety

- 14.1. Archaeological sites are potentially dangerous places of work. Health and safety as well as general well-being and staff conditions will be treated with the highest regard by the archaeological team.
- 14.2. The risk assessment undertaken for the site by L – P : Archaeology will be supplied to all members of the site team who must read and understand the contents. In addition to this detailed statement, the following key issues are also noted here.
- 14.3. All health and safety regulations and law will be followed at all times.
- 14.4. L – P : Archaeology supplies safety helmets, visibility jackets and boots to all members of the project team (as well as any other necessary personal protective equipment (PPE)).
- 14.5. Any members of the project team not found to be using the supplied PPE will be formally warned once and then dismissed on any further occasion.
- 14.6. No personnel will work in deep unsupported excavations. Where the installation of temporary support work and other attendance are required, these will be provided by the developer as required.

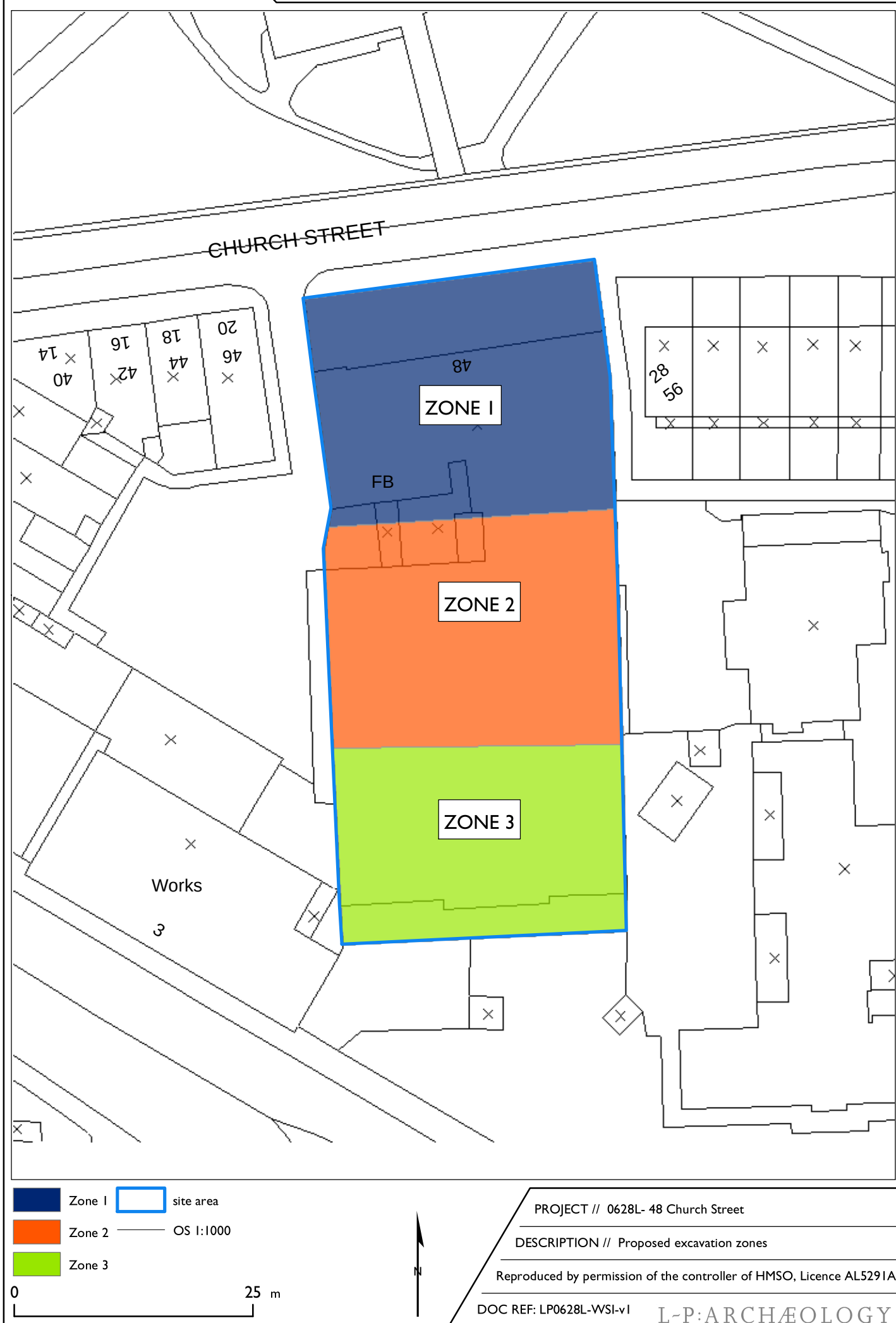
15. Agreement

15.1. This recommended format attempts to define best practice but cannot fully anticipate conditions encountered as the excavation progresses. Material changes to this Written Scheme of Investigation are however only to be made with the prior written approval of English Heritage.

FIGURES

A detailed black and white map of the Stratford and West Ham area in London. The map shows the River Lea flowing through the region, with various streets, parks, and landmarks labeled. A black circle highlights a specific area in West Ham, and an arrow points from a box labeled 'SITE AREA' to this circle. Other labels include 'Stratford Stations', 'West Ham Park', 'Plastow', 'Canning Town', and 'South Bromley'.

FIGURE 2 // Excavation Zones



SOURCES CONSULTED

APPENDIX I

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