Bromley by Bow South

Archaeology Impact Topic Report

April 2016
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INTRODUCTION

1.1 AECOM Infrastructure and Environment UK Ltd (AECOM) have been instructed by Danescroft Land Ltd, on behalf of the group of landowners (Danescroft Land Ltd, Lindhill Properties Ltd, British Land PLC, Vastint Holding B.V, Southern Housing Group, LLDC), to undertake an assessment of archaeology in relation to the redevelopment of the Bromley by Bow South site (herein referred to as ‘the Site’), allocated as Sub Area 4.1 of the London Legacy Development Corporation (LLDC) Local Plan 2015 to 2031 (Ref. 1).

1.2 It is the intention of the landowners to submit an illustrative masterplan to the Planning and Policy Decisions Team (PPDT) of the LLDC. This illustrative masterplan has been subject to environmental testing, and this report forms part of a series of Environmental Impact Topic Reports which have been produced to form a separate evidence base identifying any potential significant environmental effects of the operation of the maximum extents/parameters of the illustrative masterplan, and where further work might be required to support a planning application for redevelopment of the Site, or any part thereof.

1.3 Both the illustrative masterplan and Environmental Impact Topic Reports will provide the basis upon which a series of redevelopment parameters and design guidelines will be developed for the Site. These parameters and guidelines will be adopted as a Supplementary Planning Document (SPD) for the Site. Both the illustrative masterplan and Environmental Impact Topic Reports will be appended to the SPD.

1.4 The report presents the archaeological baseline of the Site and surrounding study area. Using this data, the report then sets out the potential impact upon the archaeological resource from the illustrative masterplan. This information can then be used in the development of the design guidelines and SPD, as necessary for the Site.

1.5 The assessment will provide conclusions and recommendations where appropriate to mitigate impacts on the archaeological resource.

1.6 It is a requirement of paragraph 128 of the National Planning Policy Framework (NPPF) (Ref. 2) (where there are thought to be assets of heritage value within the proposed development area and surroundings) to produce an assessment of impacts on heritage assets.

1.7 A separate assessment has been undertaken that considers the potential effects of the illustrative masterplan on the setting and views to/from the above ground heritage assets, particularly the listed buildings and Conservation Area to the east of the Site.

Planning History

1.8 Two planning permissions have previously been granted which cover the Site in part or whole and are summarised below. Where relevant, reference is made in this report to the information within these two planning applications:

- Hybrid planning permission (with some elements approved in detail) was granted for the Tesco application PA/09/02574 by the GLA in July 2010 for a mixed-use development, including a District Centre and a superstore. The area covered by the Tesco application sits entirely within the Site.

- Hybrid planning permission (with detailed planning permission for Phase 1) was granted for the Bromley by Bow (North) planning application PA/11/02423 by the GLA in July 2012 for a residential led mixed-use development. The Bromley by Bow (North) site comprises the area directly to the north of the Site, and includes the northern most portion of the Site.

Site Location, Topography and Geology

1.9 The Site is approximately 6ha in size and is located in Bromley, in the London Borough of Tower Hamlets (LBTH) and falls within the planning jurisdiction of the LLDC. The Site is centred on National Grid Reference TQ 38122, 82721 and covers a total of approximately 6 ha.
1.10 The Site is roughly wedge-shaped and bounded on the western side by the A12 and on the eastern side by the River Lea. The southern boundary is formed by the London Underground District Line and to the north by the Bow River Village/Bromley-by-Bow North development which is under construction.

1.11 The topography of the Site has been partially shaped by its river side location and historic land reclamation. The Site slopes from north to south, from a height of 9m Above Ordnance Datum (AOD) to 5.4m AOD at the southern boundary. There is a less-marked slope from west to east from 8.5m AOD at the western boundary to 7.2m AOD at the edge of the River Lea. The lowest point of the Site is at the south-east corner, by the London Underground District Line where the height is 4m AOD. The topography of the Site could be indicative of a natural slope down to the River, or could represent a build-up of land moving west in order to construct buildings over the centuries.

1.12 The Site lies on the east facing slope of the River Lea floodplain. The solid geology of the area is formed by London Clay (www.bgs.ac.uk). The Site is located on the edge of a large area of alluvium; the floodplain of the River Lea. The alluvium is defined as mainly sands, slits and clay above gravel.
LEGISLATIVE AND PLANNING POLICY CONTEXT

Introduction

2.1 This section reviews the legislative and planning policy context in relation to archaeology.

Relevant Legislation

Ancient Monuments and Archaeological Areas Act (1979)

2.2 The Ancient Monuments and Archaeological Areas Act 1979 (Ref. 3) is the central piece of legislation which protects the archaeological resource. The first section of the Act requires the Secretary of State for National Heritage to maintain a schedule of nationally important sites. For the purposes of the Act, a monument is defined as:

"a) any building, structure or work, whether above or below the surface of the land, and any cave or excavation; b) any site comprising the remains of any such building, structure or work or of any cave or excavation; and c) any site comprising, or comprising the remains of, any vehicle, vessel, aircraft or other moveable structure or part thereof which neither constitutes nor forms part of any work which is a monument as defined within paragraph a) above; d) and any machinery attached to a monument shall be regarded as part of the monument if it could not be detached without being dismantled' (Section 61 (7))."

2.3 The Act further defines an ancient monument as:

"any Scheduled Monument; and any other monument which in the opinion of the Secretary of State is of public interest by reason of the historic, architectural, traditional, artistic or archaeological interest attaching to it' (Section 61 (12))."

2.4 A set of criteria, defined as survival/condition, period, rarity, fragility/vulnerability, diversity, documentation, group value and potential, assist in the decision making process as to whether an asset is deemed of national importance and best managed by scheduling.

National Planning Policy

National Planning Policy Framework (NPPF) (DCLG 2012)

2.5 The conservation and enhancement of heritage assets forms an important part of the NPPF and is one of the twelve core planning principles that underpins plan-making and decision-taking. There are policies protecting the historic environment throughout the NPPF, but section 12, paragraphs 126 to 141, deal specifically with conserving and enhancing the historic environment.

2.6 The NPPF recognises that heritage assets, which it defines as "a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest" are irreplaceable (DCLG 2012, Annex 2: Glossary). Advocating their conservation, it further notes that their alteration or destruction can harm their significance. "The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting" (DCLG 2012, Annex 2: Glossary). Importantly, it adds that significance is not only derived from an asset's physical presence but also from its setting: "The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral" (DCLG 2012, Annex 2: Glossary).

2.7 The NPPF makes clear the importance of being able to assess the significance of heritage assets that may be affected by a development and states that when determining applications local authorities should require an applicant to describe the significance of assets that may be affected by a development. This description should be to a level of detail that is proportionate to their importance
and that is no more than sufficient to understand the potential impact on their significance; this should also include assets where their setting may be affected by a proposal (DCLG 2012, section 12, paragraphs 128-129).

2.8 With regard to development sites where there are known heritage assets, or there is potential for heritage assets with archaeological interest, the NPPF directs local planning authorities to require developers to submit an appropriate desk-based assessment and, where necessary, field evaluation (DCLG 2012, section 12, paragraph 128).

2.9 The NPPF recognises that a balance needs to be struck between the preservation of the significance of a heritage asset and delivering public benefit. It therefore sets out considerations to be taken into account when determining a planning application which would result in substantial harm or total loss of significance of a designated heritage asset. It states that the LPA should weigh the public benefits of the proposed development against any harm, and in cases where it cannot be demonstrated that substantial harm or total loss is not outweighed by the public benefit, it directs the LPA to refuse consent (DCLG 2012, section 12, paragraphs 133-135).

2.10 A clear link is drawn in the NPPF between the importance of the asset and the weight that should be placed on its conservation, and the NPPF highlights proportionality (DCLG 2012, section 12, paragraph 141).

2.11 Section 12 states the following:

"As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional".

"Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use".

"The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset".

2.12 The NPPF recognises that in some cases non-designated heritage assets of archaeological interest may be of equivalent significance to a Scheduled Monument. In such cases the NPPF directs that such assets are to be considered subject to the policies for designated assets (DCLG 2012, section 12, paragraph 139).

2.13 The effect of a development on non-designated heritage assets should also be taken into account (DCLG 2012, section 12, paragraphs 135 & 139), with a balanced judgment being reached between the significance of the heritage assets and the scale of any harm or loss, when considering assets directly or indirectly affected (DCLG 2012, section 12, paragraph 135).

Planning Practice Guidance (PPG) (2014)

2.14 The Planning Practice Guidance (PPG) was launched on 6 March 2014 (Ref. 4) and provides a web-based resource in support of the NPPF. Following its launch, a number of previously published planning guidance documents have been cancelled and are detailed within the Written Ministerial Statement titled 'Making the Planning System Work More Efficiently and Effectively', also dated 6 March 2014 (Ref. 5).

2.15 Relevant guidance is contained in the Conserving and Enhancing the Historic Environment section. It addresses matters relevant to decision-taking including guidance in assessing substantial harm. The guidance is that for there to be substantial harm the adverse impact of development would need to seriously affect a key element of its special architectural or historical interest (DCLG 2014, paragraph 017). It is the degree of harm to significance rather than the scale of development that requires assessment. Harm to the significance of an asset can be minimised or avoided by early appraisal and understanding of the significance of the asset. An understanding of the significance of an asset can
assist in identifying opportunities for the delivery of public benefit in a more sustainable and appropriate way (DCLG 2014, paragraph 019).

Regional Planning Policy


2.16 On 10 March 2015, the Mayor of London published ‘The London Plan - The Spatial Development Strategy for London Consolidated with Alterations Since 2011’ (London Plan, March 2015) (Ref. 6). From this date, the document forms part of the development plan for Greater London.

2.17 Regional policy is defined by The London Plan which now includes the Revised Early Minor Alterations (REMA) published in October 2013 (Ref. 7), and Further Alterations to the London Plan (FALP) Consultation Draft published in 2014 (Ref. 8). Together these set out the overall strategic plan for London, comprising a fully integrated economic, environmental, transport and social framework for the development of the capital to 2031.

2.18 Policies within the London Plan that specifically pertain to the historic environment include policy 7.8 (Heritage Assets and Archaeology), policy 7.9 (Heritage Led-Regeneration) and 7.10 (World Heritage Sites).

2.19 Of greatest relevance herein is policy 7.8 which establishes the contribution that designated and non-designated heritage assets make to London’s world class city status. The policy seeks to ensure the sensitive management and promotion of London’s heritage assets and highlights the importance of identifying and recording London’s heritage through character appraisals, conservation plans, local lists, and the Greater London Historic Environmental Record (GLHER).

2.20 Policy 7.8 Heritage assets and archaeology establishes the following clauses regarding archaeology and buried heritage remains:

2.21 “Strategic:

A) London’s heritage assets and historic environment, including listed buildings, registered historic parks and gardens and other natural and historic landscapes, conservation areas, World Heritage Sites, registered battlefields, scheduled monuments, archaeological remains and memorials should be identified, so that the desirability of sustaining and enhancing their significance and of utilising their positive role in place shaping can be taken into account.

B) Development should incorporate measures that identify record, interpret, protect and, where appropriate, present the site’s archaeology.

Planning Decisions:

C) Development should identify value, conserve, restore, re-use and incorporate heritage assets, where appropriate.

D) Development affecting heritage assets and their settings should conserve their significance, by being sympathetic to their form, scale, materials and architectural detail.

E) New development should make provision for the protection of archaeological resources, landscapes and significant memorials. The physical assets should, where possible, be made available to the public on-site. Where the archaeological asset or memorial cannot be preserved or managed on-site, provision must be made for the investigation, understanding, recording, dissemination and archiving of that asset.”

2.22 The Glossary for The Revised Early Minor Alterations to the London Plan (2013) also contains definitions for ‘Heritage Assets’ and ‘Substantial Harm’.

Revised Early Minor Alterations to the London Plan (2013)

2.23 The REMA to the London Plan (2013) sets out minor alterations in relation to The London Plan and changes to UK legislation including the Localism Act (2011) (Ref. 9) and the NPPF. The revisions amend and split Paragraph 7.31 supporting Policy 7.8 Heritage Assets and Archaeology with regard to developments affecting the setting of heritage assets, the need to weigh developments causing less
that substantial harm on heritage assets against the public benefit and the reuse or refurbishment of heritage assets to secure sustainable development.

Further Alterations to the London Plan (2015)

2.24 The FALP (2015) (Ref. 10) updates policy in relation to World Heritage Sites in London and the assessment of their setting.

2.25 Both the REMA and the FALP have now been consolidated into the London Plan 2015.

Local Planning Policy

LLDC Local Plan 2015 to 2031

2.26 In 2012, the Mayor of London established the LLDC. As the Local Planning Authority for its area, the LLDC has prepared the Local Plan 2015-2031 which sets out the key elements of the planning vision and strategy for the area. The local plan began in 2012 after extensive consultation and engagement and was adopted in July 2015.

2.27 Policy BN.12: Protecting archaeological interest. Proposals for development will only be considered acceptable where they protect archaeological remains that will be affected by development on sites that include or have the potential to include archaeological interest.

2.28 Reasoned justification 6.40: the LLDC area is covered by a number of Areas of High Archaeological Potential that have been established as Archaeological Priority Areas on the advice of Historic England.

2.29 Policy application 6.41: “The level of investigation that applicants are required to undertake through a desk-based assessment or field evaluation will depend on the significance of the archaeological interest in question. Evaluation may lead to further site work to protect archaeological interests.”

Other Relevant Policy and Guidance

Historic England Guidance

2.30 Historic England (formerly English Heritage) has produced a number of guidance papers in respect of a variety of conservation issues. These guidance papers are intended to establish broad frameworks and guidance in order to assist in the making of decisions about England’s historic environment.

2.31 Historic England produced a small number of good practice advice (GPA) guides which have replaced the Planning Policy Statement 5; Planning Practice Guide (Ref. 11). To date only three notes have been produced; GPA1: The Historic Environment in Local Plans (Ref. 12), GPA2: Managing Significance in Decision Taking (Ref. 13) and GPA3: The Setting of Heritage Assets (Ref. 14). Of relevance to this assessment are GPA2 and GPA3.

2.32 GPA2 provides guidance on decision making within the historic environment. The document makes clear the need to establish the significance of the heritage resource to enable informed decision making. It sets out the principles for identifying heritage significance, in line with the NPPF, reinforcing the contribution that setting can make to this significance. The document sets out a staged approach to establishing significance and assessing impacts on that significance; progressing from understanding significance, through processes for avoiding or mitigating impacts and seeking opportunities for enhancement, to the justification and/or offsetting any residual harm. The document reinforces the requirement of the NPPF that the information provided should be proportionate to the significance of the asset and sufficient to make an informed decision.

2.33 GPA3 replaces the 2011 Setting of Heritage Assets document (Ref. 15) and has been specifically written to address the complexities associated with making decisions associated with the setting of heritage assets. The document describes the key terms of curtilage, character and context and explains the extent of setting and that it is not fixed and changes depending on the asset. The document also highlights the importance of views to the understanding of setting and states which views could contribute to understanding the significance of a heritage asset. It then offers a staged approach to proportional decision-taking.
2.34 In 2008, Historic England published ‘Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment’ (Ref. 16). The aim of this guidance is to ensure consistency of approach in English Heritage’s role as the Government’s statutory advisor on the historic environment in England. It aims to set out a logical approach to decision making and offers guidance about all aspects of the historic environment and reconciling its protection with the economic and social needs and aspirations of the people who live in it.
METHODOLOGY AND IMPACT SIGNIFICANCE CRITERIA
METHODOLOGY AND IMPACT
SIGNIFICANCE CRITERIA

Introduction

3.1 This section of the report presents the following:

- Relevant standards and guidance which have been reviewed and referenced throughout preparation of this report;
- Identification of information sources which have been used throughout preparation of this assessment;
- Details of any consultation undertaken with respect to archaeology;
- The methodology used in the assessment of effects upon archaeology, including the criteria for the determination of sensitivity of receptor/importance of resource and magnitude of change from the existing or ‘baseline’ conditions;
- An explanation as to how the identification and assessment of potential effects upon archaeology has been reached; and
- The significance criteria and terminology for assessment of the residual effects to archaeology.

3.2 The following sources of information that define the illustrative masterplan have been reviewed and form the basis of the assessment of likely significant effects on archaeology:

- Bromley-by-Bow South Masterplan – Quality Review Panel Presentation (Ref. 17); and
- Bromley-by-Bow South – Phasing and Delivery Strategy (Ref. 18).

Standards and Guidance

3.3 This assessment has been carried out with reference to standards and guidelines published by heritage organisations. These include:

- Code of Conduct of the Chartered Institute for Archaeologists (CIfA 2014) (Ref. 19); and
- Greater London Archaeology Advisory Service Standards for Archaeological Work (HE 2015) (Ref. 20).

3.4 AECOM is a Registered Organisation of the CIfA.

Data Sources

3.5 The preparation of the archaeological assessment was informed by material gathered and collated from various sources (see Figures 1 to 4), including:

- Historic England National Heritage List for England (NHLE), for nationally designated heritage assets, scheduled monuments, registered parks and gardens, registered battlefields, world heritage sites;
- Greater London Historic Environment Record;
- Published and unpublished documentary sources;
- Databases of known archaeological sites, findspots, historic buildings and previous archaeological works.
- Documentary sources and non-Ordnance survey mapping held by London Metropolitan Archives, London Archaeological Archive and Research Centre;
- Historic Ordnance Survey mapping (Envirocheck);
• British Geological Survey (BGS) Geology of Britain Viewer and GeoRecords+;
• London County Council Bomb Damage Maps 1935-1945;
• Archaeology Data Service; and,
• Tower Hamlets Borough Council planning portal.

3.6 Assets identified within the Study Area have unique reference numbers issued by GLHER or Historic England. Numbers are noted in the text, can be cross-referenced to the gazetteers in Appendix A and are located on Figures 2 and 3.

Assessment Methodology

Methodology for Determining Baseline Conditions and Sensitive Receptors

3.7 A study area of 500m from the Site centre was chosen (Figure 1) to identify the baseline conditions and to identify designated and non-designated archaeological assets. This study area allows identification of assets within the footprint of the Site, but also identifies assets beyond the footprint in order to establish the archaeological context of the area. Conversely, the study area was limited enough to ensure that only the archaeological information which would be relevant to the illustrative masterplan was examined, allowing the assessment to be focussed on achieving the aims and objectives.

3.8 The study area is shown on Figures 2 and 3 located at the end of this report.

3.9 The data gathered during the baseline phase will be sourced from the locations listed above, and are augmented by the results of the site walkover and an assessment of a study of the historic mapping and borehole evidence from the Site. This would help to build a picture of the depositional sequence beneath the Site and help to identify areas of archaeological potential, or areas where modern development had removed archaeological deposits.

Methodology for Determining Operational Effects

3.10 The operational effects will be determined by examination of the illustrative masterplan. Elements such as the location and depth of any below ground areas/piled foundations will be cross-referenced with the known and potential archaeological resource to identify areas where direct, physical effects may occur.

3.11 As the illustrative masterplan is only an indication of how the Site could be built out within the parameters set by the SPD for the Site, the operational effects identified here represent the effect based on the information currently available.

Significance Criteria

Value of Resource/Receptor

3.12 Paragraph 132 of the National Planning Policy Framework (NPPF) (Department for Communities and Local Government, 2012) recognises that heritage assets with the highest level of ‘significance’ (‘heritage value’ in this assessment) include Scheduled Monuments, Registered Battlefields and World Heritage Sites.

3.13 Paragraph 139 of the NPPF also recognises that non-designated heritage assets of archaeological interest may be of equivalent ‘significance’ (‘heritage value’ in this assessment) to a scheduled monument, and in such cases are to be considered subject to the policies for designated assets. The proposed criteria for assigning heritage value (NPPF ‘significance’) are set out below.

<table>
<thead>
<tr>
<th>(Heritage Value (NPPF ‘significance’))</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| High                                  | • Assets of inscribed international importance, such as World Heritage Sites;  
• Registered Battlefields;  
• Scheduled Monuments; and |
<table>
<thead>
<tr>
<th>(Heritage Value (NPPF ‘significance’)</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>• Non-designated archaeological assets of schedulable quality and importance.</td>
</tr>
<tr>
<td>Low</td>
<td>• Non-designated heritage assets of a regional resource value as identified through consultation; and • Non-designated heritage assets whose heritage values are compromised by poor preservation or damaged so that too little remains to justify inclusion into a higher grade.</td>
</tr>
<tr>
<td>Very Low</td>
<td>• Assets of very low or no heritage value</td>
</tr>
</tbody>
</table>

**Magnitude of Impact**

3.14 The significance of archaeology effects will be determined by combining the identified impact magnitudes, with the significance of the archaeological assets affected by those impacts. This will follow the generic matrix presented below.

**Table 3.2  Archaeology – Magnitude Criteria for Impacts**

<table>
<thead>
<tr>
<th>Magnitude of Impact</th>
<th>Example Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>• Change such that the heritage value of the asset is totally altered or destroyed. • Or comprehensive change to setting affecting heritage value, resulting in a serious loss in our ability to understand and appreciate the resource and its historical context and setting.</td>
</tr>
<tr>
<td>Medium</td>
<td>• Change such that the heritage value of the asset is affected. • Or noticeably different change to setting affecting heritage value, resulting in erosion in our ability to understand and appreciate the resource and its historical context and setting.</td>
</tr>
<tr>
<td>Low</td>
<td>• Change such that the heritage value of the asset is slightly affected. • Or slight change to setting affecting heritage value resulting in a change in our ability to understand and appreciate the resource and its historical context and setting.</td>
</tr>
<tr>
<td>Very Low</td>
<td>• Changes to the asset that hardly affect heritage value. • Or minimal change to the setting of an asset that has little effect on heritage value resulting in no real change in our ability to understand and appreciate the resource and its historical context and setting.</td>
</tr>
</tbody>
</table>

**Significance of Effect**

3.15 The table below sets out the proposed general framework for identifying the degree of impact that might occur as a result of the development. These criteria would be used to define the magnitude of impact and, taken together with the heritage value of the asset, would be used to determine whether significant effects are likely.

**Table 3.3  Archaeology – Generic Classification of Effects**

<table>
<thead>
<tr>
<th>Heritage Value of Asset/Resource/Receptor</th>
<th>Magnitude of Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>High</td>
<td>Major</td>
</tr>
<tr>
<td>Medium</td>
<td>Major</td>
</tr>
<tr>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td>Very Low</td>
<td>Minor</td>
</tr>
</tbody>
</table>
Following the classification of an effect using this methodology, a clear statement will be made as to whether that effect is significant or not significant. As a general rule, major and moderate effects are considered to be significant, whilst minor and negligible effects are considered to be not significant. However, professional judgement will be applied, including taking account of whether the effect is permanent or temporary, its duration/frequency and/or its likelihood.

Consultation

AECOM submitted a Scoping Opinion request to the LLDC PPDT setting out the proposed approach, methodology and scope of the Environmental Impact Topic Reports, including this Archaeology Impact Topic Report, on the 10th March 2016. The Scoping Opinion request also set out the committed developments to be included within the assessment of cumulative effects for each environmental impact topic report. The LLDC PPDT did not request any changes to the approach set out in the Scoping Opinion Request.

Subsequent to the submission of the Scoping Opinion Request, and a further review of the committed developments in the area, those currently under construction are taken to be in the baseline scenario (rather than assessed cumulatively) as these developments are likely to be completed and occupied prior to any works for the redevelopment of the Site getting underway. Table 3-4 (and Figure 5) below sets out the list of committed developments and where these are considered within this report.

Consultation is currently being undertaken with the Greater London Archaeological Advisory Service (GLAAS) advisor to Tower Hamlets Borough Council regarding this project. A response is awaited.

Limitations and Assumptions

Baseline evidence gathering has been very limited by the closure of the Tower Hamlets local archive due to roof collapse. This is the local archive repository and holds much of the source material usually used to create the baseline and describe the historical and archaeological chronology of the area. The archive is due to re-open within the next month with access to all material.
<table>
<thead>
<tr>
<th>Application No.</th>
<th>Scheme</th>
<th>Applicant</th>
<th>Address</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14/00191/FUL</td>
<td>Cooks Road</td>
<td>Bellway Homes</td>
<td>Cooks Road, London, E15 L.B Newham</td>
<td>Demolition of existing buildings and erection of two blocks ranging from five (5) to eight (8) storeys above ground level with a maximum parapet height of 30m AOD to provide: 349 residential units including affordable housing (Use Class C3), 3,113 sq. m of commercial floor space (Use Classes A1-A3/B1/D1/D2), together with podium level, car parking including blue badge parking, cycle parking, refuse areas, plant room, servicing, open space, landscaping. <strong>Considered in the assessment of cumulative effects</strong></td>
</tr>
<tr>
<td>14/00422/FUL</td>
<td>Marshgate</td>
<td>Workspace 14 Limited</td>
<td>Land at Marshgate Lane, Pudding Mill, Stratford, London, E15 2NH</td>
<td>Demolition of existing buildings and the erection of 8 buildings ranging from 3 to 12 storeys in height, comprising a total of 254 residential dwellings and 4,257 sq. m GIA of B1 (business) floor space, together with basement, servicing, car parking, cycle parking, cycle storage, plant, open space and landscaping. <strong>Considered in the assessment of cumulative effects</strong></td>
</tr>
<tr>
<td>11/90619 FUMODA</td>
<td>68-70 Stratford High Street</td>
<td>Lancaster PLC</td>
<td>68-70 Stratford High Street, London, E15 2NE</td>
<td>Demolition of existing buildings and erection of new development comprising linked buildings of one, five, nine and eighteen storeys to provide 731 sq. m of commercial floor space (A1,A2,A3,B1,D1&amp;D2) at ground floor and 173 residential units, with 36 car parking spaces, 213 cycle parking spaces, refuse and recycling facilities, access, landscaping and amenity areas. <strong>Considered in the assessment of cumulative effects</strong></td>
</tr>
<tr>
<td>06/90011 FUMODA</td>
<td>80-92 Stratford High Street</td>
<td>Manser Homes Ltd</td>
<td>Stratford Edge, 80-92 Stratford High Street, London, E15 2NE</td>
<td>Redevelopment of the site to provide a 27 storey tower with a 6-storey street building comprising of 2902 residential units, 792 sq. m of offices at ground floor and first floor, 218 sq. m of a café/bar (Class A3/A4) or office or leisure use at ground and first floor with 65 car parking spaces, 150 cycle spaces, 32 motorcycle spaces in a basement car park with access via the High Street and associated landscaping. <strong>Considered in the assessment of cumulative effects</strong></td>
</tr>
<tr>
<td>Application No.</td>
<td>Scheme</td>
<td>Applicant</td>
<td>Address</td>
<td>Description</td>
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<tr>
<td>10/90519/FUMODA 14/00112/VAR <em>S73 App to increase the car park by one floor but no alteration to the overall height</em></td>
<td>Capital Towers</td>
<td>Galliard Homes</td>
<td>2 - 12 High Street, Stratford, London, E15 2PW</td>
<td>Development comprising 15 and 35 storey building to provide 765 sq. m of commercial floor space and 191 residential units with 41 car parking spaces, 307 cycle parking spaces, gym, crèche, landscaping and riverside walkway. <strong>Considered in the baseline</strong></td>
</tr>
<tr>
<td>11/90621/OUTODA/P DZ8 <em>Newham</em></td>
<td>Pudding Mill</td>
<td>LLDC</td>
<td>Pudding Mill Lane LB Newham</td>
<td>Pudding Mill site (Site PDZ8), received outline planning permission with a total of 158,235sqm of floorspace, delivering 118,290m² residential (Class C3) (including up to 4000m² of Sheltered Housing), 5,045m² retail (Classes A1-A3), 23,791m² office (Class B1a), 12,158m² employment (Class B1b/B1c), 169m² leisure (Class D2) and 1,482m² community (Class D1). The proposals also include a drop-in health centre, nursery school and general community space. <strong>Considered in the assessment of cumulative effects</strong></td>
</tr>
<tr>
<td>PA/08/1161 <em>Tower Hamlets</em></td>
<td>St Andrews</td>
<td>Barratt Homes</td>
<td>St Andrews Hospital, Devas Street, E3 3NT</td>
<td>Demolition of existing hospital and construction of: 27 storeys &amp; basement (block D), 18 storeys (Block E), and between 4-13 storeys (Blocks A-C) for 964 dwellings, 303 sq. m of A1, A2, A3 &amp; A4 floor space, Up to 897 sq. m (D1) and/or (D2) &amp; 2,004sq. m Primary Care Trust (PCT) facility (D1). Granted planning permission in 2009 <strong>Considered in the baseline</strong></td>
</tr>
<tr>
<td>PA/11/02423</td>
<td>Bow River Village</td>
<td>Southern Housing Association</td>
<td>Thames Gateway (East London)</td>
<td>Planning permission was granted in 2012 for a Masterplan delivering over 700 units and 100,000 sq. ft. of commercial space. As a portion of this committed development sits within the Site itself, only the elements outside of the Site are considered within the assessment of cumulative effects, comprising demolition of the existing buildings and construction of 8 blocks to provide 453 residential units, a car dealership, an additional 1,718m² GIA commercial floorspace, open space and parking. <strong>Considered in the baseline</strong></td>
</tr>
<tr>
<td>Application No.</td>
<td>Scheme</td>
<td>Applicant</td>
<td>Address</td>
<td>Description</td>
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<tr>
<td>12/00336/LTGOUT</td>
<td>Strand East</td>
<td>Vastinct LandProp</td>
<td>Strand East</td>
<td>10 Hectare mixed-use development comprising: 1,200 new homes (40% 3 beds), 620,000 sq. ft. of business and commercial space, including local shops =, cafes, restaurants and other community facilities, together with a 350-bedroom hotel.</td>
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<tr>
<td>PA/11/03549/A1 <em>Tower Hamlets</em></td>
<td>Lock Keepers</td>
<td>Peabody</td>
<td>Units 1, 2 &amp; 3 Riverside Industrial Estate, 18 Gillender Street, E3</td>
<td>Demolition of existing storage/warehouse buildings &amp; redevelopment to provide 1,778 sq. m mixed commercial (B1) &amp; 109 residential units (C3) within three buildings from 5/6 to 12/13 storeys, new ground level community amenity &amp; children’s playspace; disabled and car club residential parking spaces and commercial service bays.</td>
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<td>Granted planning permission in 2012</td>
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<td><strong>Considered in the baseline</strong></td>
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**Considered in the assessment of cumulative effects**
**BASELINE CONDITIONS**

**Introduction**

4.1 This section of the report provides a description of the current baseline conditions present at the Site in relation to archaeology.

**Baseline Conditions**

**Designated Assets**

4.2 There are no designated assets located within the study area for archaeology. There are no scheduled monuments, registered battlefield, registered parks and gardens or world heritage sites within the 500m study area.

**Non-Designated Assets**

4.3 A search of the GLAAS HER database identified 38 non-designated assets within the study area. Only one asset was identified within the footprint of the illustrative masterplan, but the site walkover identified relict archaeological features which have also been considered.

4.4 The study area also straddles three areas of Archaeological Priority Areas and a number of archaeological fieldwork event have been recorded within the study area.

4.5 The assets are shown on Figure 2 and listed in Appendix A.

**Prehistoric Period (10,000BC – 43AD)**

4.6 No assets dating from this period have been identified within the footprint of the illustrative masterplan.

4.7 Four assets have been identified from the prehistoric period within the study area. To the north of the Site boundary are the findspots of two Neolithic artefacts, a flint dagger and a stone axe ([MLO1920](#), [MLO1958](#)) were found in ballast loaded at Bow. At the very southern edge of the 500m study area to the south of the Site boundary, a Neolithic stone axe was found near Gillander Street ([MLO3950](#)).

4.8 A later Bronze Age findspot is located to the north of the Site and was uncovered during works in the River Lea under Bow Bridge in the 19th century. A bronze tanged spearhead ([MLO22736](#)) was recovered during the works which is currently in the possession of the British Museum.

4.9 A large research project was undertaken between 2002 and 2007 (Ref 21) by Museum of London Archaeology to map the historic landscape within the lower Lea Valley. The study was undertaken using geoarchaeological techniques to map the geology and deposits along this valley to get a sense of how the course of the river and changing topography and landscape shaped the archaeological record. It was also undertaken to identify prehistoric land surface and establish the potential for prehistoric deposits to be encountered beneath the modern made ground, in areas of alluvial sands and gravels. Part of this study was undertaken within the study area. The landscape zone is identified within the study as LZ1.8 and is represented by the eroded sides of river terrace outcrops and islands formed by the movement of the modern Bow creek and tributaries. Palaeolithic and Neolithic hand axes have been recovered from this area, as well as evidence of Neolithic activity suggesting that the edges of the river terraces were exploited for their resources. The study noted that this area has potential for the recovery of evidence of prehistoric land use, however there is the potential that modern river scour and the movement of the tributaries and creeks will have diminished this.

4.10 The prehistoric findspots have all been located in close proximity to the course of the River Lea and at depth, within the sands and gravel alluvium. As findspots, they are of no intrinsic value as the asset they record has been removed from its context. However the findspots give an indication as to the potential for the recovery of further assets of this period in similar geological and topographical locations. There is the potential for the recovery of prehistoric artefacts and for palaeoenvironmental evidence within these alluvial gravels close to the River. The potential decreases further west and up the slopes of the floodplain.
Roman Period (43AD – 410)

4.11 No assets dating to the Roman period have been located within the footprint of the illustrative masterplan.

4.12 One asset from the Roman period has been identified within the study area. This is the findspot of a number of Roman coins (MLO12973) including coins of the Trajanic period found during the 19th century. This coin hoard could have been a deliberate placement, hidden during a time of unrest with the owner intending to retrieve the coins, or it may have been an offering placed in the waters of the River Lea.

4.13 There is Roman evidence in the wider surrounding landscape to the north at Stratford Market Depot and Old Ford, possible a crossing point of the River Lea. There is potential for the recovery of Roman archaeology within the Site, but this is likely to be at the level below the made-ground and on the sands and gravels beneath. In particular there may be potential for a crossing point where the River Lea and the Three Mills Wall River meet, at the location of Three Mills Lane.

Early Medieval (410AD – 1066)

4.14 No assets dating to the early medieval period have been located within the footprint of the illustrative masterplan.

4.15 One asset dating to the early medieval period has been identified within the study area. This is the site of the Benedictine convent known as the priory of St. Leonard established with a manor in Bromley in the 11th century, therefore just falling into the category of early medieval (MLO7743). The convent was located near St. Leonard’s Street and is first mentioned in 1122. The true origins of the convent are not certain but by the 15th century, the nuns had come to accept that the house was founded by the Bishop of London at the time, William who was Bishop from 1051-75 (www.british-history.ac.uk). However, no manor attributed to house of Benedictine nuns is recorded in Domesday but mention is made of a 5-hide manor in Bromley in the Middlesex Hidage after 1096 (ibid). It is therefore more likely that in fact this house was established in the medieval period by either Maurice, Bishop of London from 1086 or the next bishop, Richard de Belmeis I (1108 – 27).

4.16 The convent stood to the south of the priory church of St. Mary which also served as the parish church of St. Leonard parish in Bromley. The priory, though small, gained some prominence and was the residence for a short time of Elizabeth of Hainault, the Prioress in Chaucer’s Canterbury Tales who left instructions that she should be buried in the chapel of St. Mary’s.

4.17 There are records from the history of the St. Leonard’s priory that give a good indication of the ground conditions of this area and the potential for activity in the surrounding area. Taxation documents from 1359 show that the priory was excused payment for their land in Bromley which had been flooded by the Lea (ibid). This was enforced by Richard II in 1380 and the exemption from taxation was enforced again in 1409 when the nuns were excused from taxation on all of their lands in Bromley. This is an indication that the lands within the River Lea floodplain were unsuitable for agriculture or for any sort of continued activity which could generate revenue. However recent archaeological work undertaken for the Stratford Market Depot site to the northwest of the Site, outside the study area has provided evidence that the floodplain of the Lea was being utilised for agriculture during the medieval period and possibly earlier (MOLA 2011, 188) (Ref 22).

4.18 By the time of the Dissolution, the priory owned the manor of Bromley including at least two water mills on the Lea. It is uncertain if these mills are the Tide Mills located to the immediate east of the Site, or if these are different. It is known that the length of the Lea was heavily utilised by watermills throughout the medieval period.

4.19 The existence of the Benedictine House and priory church to the northwest of the Site boundary indicates that there is potential for elements of the priory precinct and grounds to extend into the Site boundary. In addition, the water mills, one of which is shown as being partially located within the Site (MLO3951) just north of Three Mills Lane, may have been under the ownership of the priory. There is the potential that the Three Mills were under the ownership of the larger Stratford Langthorne Abbey located ot the northeast of the Site, outside the study area.

4.20 It is likely that the floodplain of the River Lea demarcated the land available for development and agriculture and therefore it is the higher ground along the western boundary which is more likely to
contain elements of the priory precinct, with the lower ground dropping the River Lea to the east would have been frequently flooded.

**Medieval Period (1066 – 1540)**

4.21 One asset has been identified from within the Site from this period. This is the site of Three Mills (MLO3951) which probably belonged to the Stratford Langthorne Abbey belonging to Located to the northwest of the Site, north of Bakers Row in West Ham. Stratford Langthorne Abbey acquired at least two if not three mills during the 13th century and it is during this time the area became known as Three Mills, though there is some potential that these mills were owned by St. Leonard’s Priory. At the time of the Dissolution, the mills were granted to Sir Peter Meuatis and descended with his other properties. In the latter half of the 16th century, Three Mills was actually consisted of two mills, one a gunpowder mill, the other a corn mill (CGMS 2000, 8).

4.22 The actual location of the medieval and post-medieval iteration of the mills is difficult to locate with certainty. The earliest mapping available, the 1746 Roque map locates all of the mills to the east of the Lea, with the main building located at the confluence of the Three Mills Wall River and the Three Mills Back River. It is unlikely that the earlier iterations of the mills would have occupied a greatly different location than this and therefore it is likely that although the GLAAS HER marker places the mills within the Site, it is unlikely that the mills ever extended to the left bank of the River Lea.

4.23 Associated with the mill site, though located just outside the Site boundary is the record of two trenches excavated at the Bridport site just off Three Mills Lane (MLO76214) in 2003. These two trenches recorded made-ground consisting of made ground overlying waterlogged deposits. The earliest layers of made ground contained 15th and 16th century pottery indicating that this area was reclaimed from the floodplain marshland of the Lea around the 16th century. The made ground would therefore have sealed earlier deposits beneath it.

4.24 Although dated to the early medieval period, it is more likely that St. Leonard’s Priory was established during this period, with the main bulk of it history dates the medieval period. It seems that the floodplain of the River Lea was being used for agricultural purposes during this period. This could indicate that some form of drainage or water management was also being implemented here and there is the potential that evidence for this could be located beneath the made ground within the Site (MOLA 2011, 188). Other elements associated with the Abbey include the chapel (MLO38594). After the Dissolution, this was renamed as the parish church of St. Mary and continues to be used. Also associated with the Abbey during the medieval period is the line of St. Leonard’s Street (MLO9164). The route was established during the medieval period and lies along the ridge of higher ground overlooking the floodplain and marsh land next to the River Lea. The Abbey would have controlled the access to this road and, given the location on the low terraces overlooking the River Lea, would have also controlled a number of crossing points along the River. This could include a crossing at Three Mills, but also perhaps at Old Ford located to the east of the Abbey.

4.25 A medieval boundary ditch (MLO98931) was recorded during an archaeological evaluation at St. Andrew’s Hospital (directly south-west of the Site) in 2007(Pre-Construct Archaeology 2007) (Ref. 23). The ditch was aligned north-south and was filled with a number of layers including charcoal, building dumping material and pottery fragments. There is the possibility that this could have been associated with Stratford Langthorne Abbey and may have marked a boundary of their lands, or a delineation of land between agricultural and ecclesiastical.

4.26 Three medieval assets have been recorded at Old Ford, all closely associated with the location of the River Lea adjacent. A bakehouse (MLO8876) and a number of corn and fulling mills (MLO8875) are recorded at this location, but this is likely to be a generic central point for a number of mills utilising the tidal power of the Lea both to power the mills and to provide transport for the finished article. The final asset in this location is the site of an abattoir (MLO23239) known from the 14th century onwards where it is recorded as a location for the slaughter of large animals.

4.27 At the northern edge of the study area are a group of medieval assets around the location of Bow Bridge. The original Bow Bridge was constructed in the medieval period (MLO3901), replacing an earlier ford or crossing point of the Lea which may have been located further upstream at Old Ford. The bridge was built in 1110 by Matilda, wife of King Stephen and by 1465, the responsibility for the upkeep of the bridge had been given to Stratford Langthorne Abbey. In 1741, the bridge was widened and demolished in 1835. A chapel was constructed on the bridge (MLO30317). The bridge carried the Whitechapel Road (MLO3892) across. This road became the main route to Essex when the Bow Bridge was constructed.
Remnants of the original bridge survived until the 18th century. Two arches of the original structure (MLO55688) were found during the demolition of a pub on the Essex side of the bridge in the late 18th century, but the entire structure has now been replaced.

The final asset dating from the medieval period is located to the south of the Proposed Development near Maltings Close. The marker identifies the rough location of Four Mill Street (MLO3936) which was recorded in 1551 and from which the putative existence of four mills located along the River Lea has been taken.

Post-medieval Period (1540 – 1750)

It is likely that during this period, or around the 16th century, the Site was reclaimed from the floodplain of the River Lea. The topography of the land shows the higher ground on the western portion of the Site, sloping down to the river and it is likely then that the ground level was raised up using imported materials to raise the ground level above the floodplain and provide a sure base for construction. Although there are no assets dating to the post-medieval period within the Site, it is likely that some of the buildings shown on the later Roque map were established during this period, including the windmill, within the central area of the Site.

There are a number of assets within the study area dating from the post-medieval period with a cluster identified on Three Mills Island. Some of these are remnants of buildings identified during archaeological investigations including the sites of houses constructed for or by the owners of the mills (MLO35422, MLO35421).

There is another cluster of post-medieval archaeological assets located around the area of the Stratford Langthorne Abbey. After the dissolution of the Abbey, the parish church continued in use and the original manor house was replaced by Sir John Jacob (MLO454) in 1634. This new manor house was partially built within the footprint of the former priory. An archaeological evaluation carried out in 1996 (MLO68999) within the area of the former priory and manor house did not identify any evidence of the priory but did identify an early post-medieval building, thought to be Bromley House. The evaluation also identified 19th century housing foundations. The formal gardens (MLO72150) extended east from Bromley House to the River Lea and a description of the manor house and gardens describes the house as raised above the surrounding garden which contains a rabbit warren, fish ponds and a park. The Roque map of 1746 shows these formal grounds and the fishponds located directly to the north of the northern boundary of the Site. It also shows three fishponds located in a line within the northern part of the Site.

In addition to Bromley House, a grand residence known as Bromley Palace was constructed along St, Leonard’s Street in the post-medieval period (MLO23630). It was also reportedly known as St. Anne’s Palace. The building was extremely grand, even after it was divided into two houses in 1750. It was demolished in 1893 to make way for the LCC Board School, but one of the rooms is preserved in the Victoria and Albert Museum.

After the Abbey had fallen into disrepair, St. Mary’s church was built on the Site incorporating some of the medieval fabric (MLO7890) located on Bromley High Street. Adjacent to this is the site of a former Huguenot cemetery (MLO71229). This cemetery was utilised in the 17th and 18th centuries but was no longer used for burials by the end of the 19th century. By 1896, there were plans to open the cemetery as a public garden. However this was never carried out. St. Mary’s Church was destroyed by bombing in World War II and the adjacent graveyard was vandalised. Further dereliction came with the construction of the A12 in the late 20th century which left the patch of land as disused wasteland.

Further post-medieval assets include the site of the Bow China Works (MLO66611) near Bow Bridge. This was established in the 1730s, again, taking advantage of the transport links of the River Lea and of the road network in the area.

Early Modern Period (1750 – 1914)

The earliest map of this area available for this assessment was the 1746 Roque map. The line of the River Lea is shown as a slightly straighter channel then the more sinuous course the river takes today. The site of Three Mills (MLO3951) can be seen on this map. The early medieval period sees a more detailed record of the activity taking place at Three Mills, but more significantly is the period in which the Site changed from a rural area with small scale, high status development to an intensely developed and industrialised area, absorbed into the sprawl of London.
4.37 On Three Mills Island in 1776, House Mill, one of the original mills was rebuilt and with the associated miller’s house constructed at the same time. Clock Mill was constructed in the mid-18th century and was rebuilt in 1817 after a fire. This mill was used as a gin distillery by J & W Nicholson Gin Distillers. All of the mills on Three Mills Island were closed in 1941, and Clock Mill and House Mill are still extant.

4.38 The early modern period also saw the construction of elements associated with the mills such as the Miller’s House identified on early mapping and through archaeological evaluation (MLO63652, MLO63560, MLO63561, and MLO63564). The Miller’s House was constructed in 1770 and although it is shown as outside the Site boundary, the Roque map of 1746 shows a cluster of buildings by the bridge across to Three Mills Island, one of which could be the Miller’s House. It is more likely however that the Millers House was located south of Three Mills Lane on the island between the River Lea and the Three Mills Back River.

4.39 The Roque map of 1746 (see Plate 1 below) is the first detailed map available in this assessment showing the Site. The Site is somewhat difficult to pick out, in the absence of the A12 alongside the western Site boundary. However the course of the River Lea is shown, somewhat straighter than the current course, and Three Mills Lane can be seen bisecting the area. The northern portion of the Site contains part of the grounds of Bromley House. The area contains three fishponds and it seems that a wall was constructed along the river, down and along lining Three Mills Lane. A small cluster of buildings are shown around the entrance to Three Mills Bridge, one on the north side, and five on the south side. The buildings closest to the river are enclosed in their own garden area and to the south of this, abutting the southern boundary is the site of an orchard. A windmill is shown to the south of Three Mills Lane presumably in the area which is now known as Maltings Close.
The next available map for this assessment was the Greenwood 1830 map (see Plate 2). This shows the start of the transformation of the Site from rural to industrial. The grounds of Bromley House have been cleared and the fishponds have either been infilled, or there is the possibility the line of the River Lea has been moved slightly west to absorb them. The windmill is also no longer shown. The small cluster of buildings around the entrance to Three Mills Bridge has been replaced by a large brewery. The majority of the buildings are south of Three Mills Lane. There are a cluster of unlabelled buildings around the junction of Three Mills Lane and St. Leonard’s Street but other than this, the Site is shown as rough grazing land.
The 1st edition Ordnance Survey map of 1873 shows the first arrival of domestic housing within the Site. The land to the east of St. Leonard’s Street and down to Three Mills Lane had been divided into a ladder type street pattern and terraced housing constructed along each street. The north – south aligned street to the west of St, Leonard’s Street was called Hancock Road and terraced housing was also constructed on the south side of Three Mills Lane. The southern portion of the Site was occupied by the Steam Boiler and Tank Works and the former site of the brewery was now labelled the Imperial Works producing washing chemicals. A number of cranes can also be seen appearing on the banks of the River Lea.
4.42 The 1873 – 1882 Ordnance Survey (OS) map also shows the line of the railway running to the south of the Site and shows the St. Leonard’s Street Workhouse (MLO107309). This workhouse was constructed in 1861-3 and designed to hold 800 inmates, with walls specially constructed to stop inmates escaping across the railway lines. The building suffered bomb damage during WWII and was later renamed as Bromley House and used as housing for families made homeless during the war. The building was closed in 1966 and demolished. This map also shows the tidal lock (MLO72996) on the River Lea to the south of the Site which extends throughout the 20th century as the need for control and water management increases year on year.

4.43 The first detailed map of the Site was the Goad Fire Insurance Plan produced in 1893 (see Plate 3). This shows that the majority of the Site was now developed with a mixture of terraced housing and heavy industry. The development seen on the previous mapping had continued to stretch south, beyond Three Mills Lane but no basements are shown. Industrial development is located along the edges of the Site, namely along the southern and eastern edges adjacent to the transport networks. The Goad plan of 1893 shows the south side occupied by the Fraser and Fraser Boiler & Tank Works, The Alex Cleugh Jute Spinning Mill and the F. Brayne & Co pottery with four kilns shown. A moat and a dock are shown leading from the River Lea into the south portion of the Site. Along the River bank were the Safety Oil Co, the Vulcan Chemical Co and the Kemball Bishop & Co Crown Chemical Works. North of Three Mills Lane was a wine and spirit warehouse and A. C. Engert & Co Picture Frame Manufacturers. A number of wharves are also shown along the river bank. Although the level of below ground disturbance these large industrial units will have created, given the river bank location and sloping ground, it is possible that these units will have required either deep pile foundations or some form of terracing to provide a level construction surface.

4.44 The 1896 Ordnance Survey map shows the same elements within the Site as the Goad plan and also shows the second workhouse to be built in the area, the Poplar and Stepney Sick Asylum (MLO98932). This workhouse was constructed from 1869 – 71 designed by Arthur and Christopher Harston. The building was renamed St. Andrew’s Hospital following World War I and remained in use until 2009-10 when it was demolished to make way for housing. This OS map also shows the Bromley by Bow gasworks, consisting of eight gasholders (MLO23336). The holders were erected in 1872 by the Imperial Gas and Coke Co. Eight holders survived and are shown on the 1965 OS map, however after this one demolished leaving seven still extant today.

4.45 Following this, there are few changes to the Site until the 20th century. The works may have expanded locally, but there is no wholesale change visible until the 1940s.

4.46 The early modern period sees the development of the entire Site. It is known that ground levels were raised in the 16th century and there is the possibility that ground levels were further raised in the 19th century to facilitate the construction of the industrial buildings. None of the domestic residences had basements at this point, probably due to a high water table. Therefore the removal of deposits seen on other sites with basemented terraced housing may not have occurred to the same extent at the Site.
Plate 3: 1893 Goad Fire Insurance Plan

Modern Period (1914 – present)

4.47 No assets from this period have been identified within the Site. However, analysis of the Ordnance Survey mapping throughout the 20th century shows the continued transformation and re-use of the Site. The modern period also sees the construction of the A12 which cut the Site off from the former area of the Abbey and resulted in the Site being enclosed on all sides with hard boundaries.

4.48 As stated in the previous section, once the Site had become occupied by residential and industrial development by the end of the 19th century, there was little change until the mid-20th century. At this point as shown on the 1948 – 50 OS maps, the boiler works at the southern boundary of the Site had been consolidated into a very large building labelled as Engineering Works and the pottery has been
removed, along with the moat and the dock. To the north of Three Mills Lane, the picture frame manufacturer is shown in ruins.

4.49 The 1958 Goad Fire Insurance Plan once again shows the Site in great detail. At the northern end of the Site is Empress Wharf surrounded by a number of tanks and boilers and to the south of this is the Dussek Bitumen & Petroleum plant whose buildings are shown to have basements. A number of the residential streets have had the houses removed and replaced with prefabricated sheds. The entirety of the area to the south of Three Mills Lane is occupied by either industrial buildings, tanks and ancillary buildings or terraced housing.

Plate 4: 1958 Goad Fire Insurance Plan

4.50 The next significant change occurred in the 1970s with the construction of the A12. The construction of this road necessitated the removal and demolition of the majority of terraced housing around Hancock Road. This road survived, but the houses are no longer extant. By 1982, the large Kemball and Bishop Crown Chemical Works had been demolished.
4.51 The construction of the supermarket in 1990 caused the diversion of Three Mills Lane from its original straight line from the bridge across to the west, formerly terminating at St. Leonard’s Street but latterly truncated by the A12. The line of the Lane now travelled west, then when meeting with the supermarket, diverted to run northwest to meet up with Hancock Road. The construction, as seen on the 1990 OS maps also shows the removal of the engineering works along the southern boundary of the Site, along with the clearance of the industrial buildings north of Three Mills Lane. The Site as it appears on the 1990 OS map is much the same as it is today.

4.52 The only asset identified from the modern period within the study area is one of a line of anti-tank blocks (MLO105609) located on the west side of the River Lea. The anti-tank blocks appear to be grouped in three rows of ten or twelve blocks, alternating with one short one tall. The study area was badly hit during the Blitz with the Church of St. Mary destroyed during the bombing. The anti-tank blocks would have been crucial to guard the crossing points of the River Lea and therefore there is the potential for the some form of defence to have been placed around the Three Mills Bridge.

Archaeological Priority Areas

4.53 There are three Archaeological Priority Areas (APAs) within the study area:
- DLO35895 – Canning Town/Newham Way
- DLO35892 – River Lea
- DLO35950 – Tower Hamlets APA

4.54 The Site is entirely located in APA DLO35950 – Tower Hamlets APA. This has not been broken down into finer grained detail but is likely to have been designated for the potential for prehistoric and palaeoenvironmental remains associated with the river, along with the Roman and medieval potential around the St. Leonards Priory. There is also the potential for the 19th century industrial archaeology, particularly within the Site. The significance of the APA can be seen in the context of the significance of the adjacent APA DLO35892 which highlights the importance of the River Lea both to the landscape and to the archaeology. The River Lea shaped this area geologically and topographically. The archaeology of this area is also shaped by the river. It would have been an important focus in the landscape in the prehistoric period, both as a transport route but also as a source of water for possible industrial activities and may have been a focus for seasonal settlement. The sands and gravels of the floodplain and river channel would contain evidence of this prehistoric and Roman activity. The location of a number of crossing points along the River indicates that these are historically advantageous and therefore there could be evidence of older crossings lying along the river bank.

4.55 The importance of the River Lea continued into the medieval period with the establishment of a number of tidal mills along the Lea, a number of which are reported in Domesday. This utilisation of transport networks continued into the post-medieval and the early modern period with the transformation of this area from rural and agricultural, with high-status dwellings into a densely populated industrial area. It is the relationship with the river which will be important to preserve within the context of any future redevelopment of the Site.

Archaeological Events

4.56 A record of 29 archaeological events has been recorded within the study area. Two are recorded within the Site. They are ELO11662: a desk-based assessment undertaken in 2010 by CGMS on land in Bromley by Bow (CGMS 2010) (Ref. 24). The assessment identified the medieval potential with the land at Stratford Langthorne Abbey and the tidal mills and industrial archaeology of the 19th century.

4.57 The second event is ELO749 a trial trench evaluation undertaken just outside the Site boundary at the Bridport Site in Bromley in 2003 (Pre-Construct Archaeology 2003) (Ref. 25). Two trenches were excavated across this site. In one trench a series of make-up layers were recorded above water-lain deposits. The earliest pottery was 15th and 16th century. This was evidence that this site had been built up and reclaimed from the low-lying marsh at some point in the medieval period.

Previous Ground Disturbance

4.58 Although no non-designated assets have been identified within the Site boundary itself, within the central area of the Site, the site walkover identified a small number of historic mooring points and
patches of relict historic ground surface in the form of areas of cobbling. Photographs of these can be seen in Appendix 3.

4.59 Geotechnical investigations have been undertaken within the confines of the Site (see Figure 4). A number of these investigations are published on the British Geological Survey online data. A group located within the northern half of the Site are confidential and are therefore unavailable (marked on the location map as black dots).

4.60 To create the deposit model two transects were created running in a north-south (Transect A) and east-west (Transect B) direction.

4.61 Transect A consisted of four boreholes (see Appendix 2):
   - TQ38SE253
   - TQ38SE4108
   - TQ38SE2863
   - TQ38SE4111

4.62 Transect B consisted of five boreholes (see Appendix 2):
   - TQ38SE2864
   - TQ38SE4113
   - TQ38SE4109
   - TQ38SE2866
   - TQ38SE1334

4.63 The boreholes revealed layers of made ground, including brick, concrete and ashclinker directly overlying the natural sands and gravels.

4.64 Transect A indicates a consistent level of approximately 2m of made ground across the north – south transect.

4.65 Transect B indicates a consistent level of approximately 2m of made ground across the majority of the east – west transect. The depth of made ground increases significantly towards the River Lea to a maximum depth of approximately 4m.

4.66 The deposit modelling has identified significant depths of made ground covering the Site. This made ground may have been laid down to reclaim land for construction from the floodplain of the River Lea and lift it above the level for potential flooding. Below the made ground are layers of re-deposited river terrace gravels, sand and alluvium. The topography of the Site is therefore a result of intervention to raise up the ground level from its original level. However there is the potential that there is evidence for Roman riverside activity and prehistoric activity within the sands and alluvial gravels below the made ground.

4.67 This potential is particularly acute adjacent to the River Lea. Any development, such as underground car parking which has the potential to reach below the level of the made ground has the potential to impact upon these river terrace gravels.

**Site Walkover**

4.68 A Site walkover was undertaken in March 2016 by an Associate Heritage Consultant of Aecom (photos provided in Appendix 3). Conditions were dry and visibility was good.

4.69 As stated in the introduction, the topography of the Site slopes fairly steeply eastwards from the A12, which lies at approximately 7.3m above ordnance datum (AOD). The slope is apparent on Three Mills Lane which drops approximately 2m to a point midway to the River Lea. To the east of this point the gradient becomes more gradual and the current car parks and areas of hard standing become relatively flat. At the eastern Site boundary there is a further drop of approximately 1.5m AOD from the Tesco car park to the River Lea toe-path at approximately 4.4m AOD.
4.70 To the north of Three Mills Lane the Site is occupied by several different landownerships, the northern most occupied by a large steel framed commercial/light industrial unit with block paved car parks to the front (west) and rear, and an access road along its northern side. The plot to the south of this unit is currently occupied by Petit Forester vehicle rental with a brick two storey office at the western entrance to several tarmacked yard areas. A steel framed and clad workshop/garage and substation are located to the rear of the office beyond which lies a second yard used to park vans. Immediately south of Petit Forester a large two storey building currently used as a club/bar occupies the corner of Otis Street and Three Mills Lane. The eastern side of the Site at this point currently forms the first of two car parks for the Tesco store. The car park is relatively flat with a tarmac surface.

4.71 At the eastern end of Three Mills Lane is a steel span foot bridge and bridge for vehicles to access Three Mills. On the northern side of the steel footbridge lies a ramp down to the River Lea tow-path, surfaced with granite sets and probably forming a surviving element of the late 19th or early 20th century working canalised river.

4.72 To the south of Three Mills Lane the central and eastern parts of the Site are occupied by the Tescoes supermarket to the south-west of which is situated a petrol filling station. On the southern side of the supermarket lies a service surrounded by a 2m high brick wall and a ‘click and collect’ facility. To the east of the supermarket lies the second of the two car parks. Again this is essentially flat, with a tarmac surface, patched and repaired in places. Along the eastern boundary of the car park runs a tree-lined public space with seating overlooking the River Lea. The southern boundary of the car park is formed by a 5m high brick and concrete wall.

4.73 The southern third of the Site is occupied by three principal land parcels, two derelict and currently unoccupied. In the south-west corner of the Site bounded by the A12 flyover lies a vacant plot containing an extensive concrete yard/car park area in the southwest corner of which are situated a number of derelict structures including a five storey office building, two storey office and a steel framed, open fronted workshop building. To the east of this plot running along the southern side of Imperial Street stand a block of brick two storey offices of TRAD Scaffolding with car parking to the rear. Several non-designated heritage assets were identified on Imperial Street comprising street furniture in the form of three cast iron mooring points/buoys and a section of granite set road surfacing showing through the tarmac at the western end of Imperial Street.

4.74 South of the TRAD offices stands a derelict steel framed and clad commercial unit, formerly occupied by Volker Highways, the concrete surfaced yards run parallel to the District Line and have been used for fly-tipping. The south-east corner of the Site comprises TRAD Scaffolding’s large concrete surfaced storage yard which extends from the river wall of the Lea to the former Volker Highways building and which is also bounded to the south by the District Line.
DESCRIPTION OF THE ILLUSTRATIVE MASTERPLAN
DESCRIPTION OF THE ILLUSTRATIVE MASTERPLAN

Introduction

5.1 This section provides a description of the illustrative masterplan in relation to archaeology. This section also outlines the redevelopment parameters which are applicable to the assessment of a worst-case scenario for archaeology. In addition, design guidelines which will form part of the illustrative masterplan are also summarised.

Review of Illustrative Masterplan

5.2 The redevelopment of the Site will comprise the demolition of the existing buildings and the construction of a residential led mixed-use development to be accommodated over a number of new buildings shown in the illustrative masterplan to be ranging in height from up to 2 storeys to a maximum of up to 25 storeys.

5.3 The illustrative masterplan comprises the following uses and quantum of development:

- 1,690 residential units;
- 4,159 m² gross internal area (GIA) workspace;
- 2,323 m² GIA retail (excluding the new Tesco store);
- 1,341 m² GIA retail store (Tesco);
- 727 m² GIA social infrastructure;
- 2,844 m² GIA primary school;
- Parking; and
- Public open space, public realm, communal courtyards and play areas.

5.4 The illustrative masterplan does not include the provision of any basements.

5.5 This report is based on the Karakusevic Carson Architects (KCA) illustrative floor plans dated 29/02/2016 (KCA drawings 266-A-D-100-00, 266-A-D-100-05 and 266-A-D-100-Roof).

Environmental Design and Management

5.6 Design measures which will reduce impacts upon the archaeological resource include continuation of the absence of basements across the Site. The reduction in large areas of open excavation will reduce the requirements for archaeological evaluation and mitigation at later stages of development.

5.7 The restoration and retention of the sites relationship with the river is key as development of the Site comes forward through detailed design and corresponding planning applications. Although this will not reduce any physical impacts to the archaeological resource, the setting of the surrounding archaeology, both standing and buried along with the setting of the Archaeological Priority Area will be preserved and enhanced by the reconnection of the Site with the River Lea.

5.8 The site walkover identified remnant features of historic interest within the footprint of the Site, including relic elements of street furniture, mooring points and cobbled floor surfaces. These elements could be used as touchstones for elements of the masterplan and the retention of historic floor surfaces wherever possible would give a unifying element to the illustrative masterplan.

5.9 The restoration of the line of Three Mills Lane is welcome and a benefit to the heritage of the Site.
POTENTIAL EFFECTS AND MITIGATION MEASURES
POTENTIAL EFFECTS AND MITIGATION MEASURES

Introduction

6.1 This section outlines the significance of likely operational effects of the illustrative masterplan in relation to archaeology and provides mitigation measures and further considerations recommended for later detailed design associated with any future planning application/s for the Site, or any part thereof.

Operational Effects

6.2 There will be no operational effects to the archaeological resource from the illustrative masterplan. Once operational, no further ground disturbance would occur as a result of the redevelopment of the Site and consequently there would be no additional effect upon buried heritage assets. Effects on archaeology during the construction phase would need to be addressed through assessment/EIA undertaken as part of any future planning applications for the Site, or any part thereof, as set out below.

Further Considerations for Detailed Design and Future Planning Applications

6.3 There are a number of considerations regarding archaeology as this masterplan continues to emerge and for future planning applications. The discussion of future considerations for this site has been framed around the phasing presented in the illustrative masterplan and how this could directly impact upon the archaeological resource.

Phase 1 Works

6.4 A number of elements of works for the proposed Phase 1 (southern portion of the Site) have the potential to impact upon archaeological assets. The potential archaeological assets are unknown at this stage but within the Phase 1 area could consist of the footprint of the industrial buildings, particularly the engineering works which occupied the Site from the late 19th century onwards. The works within Phase 1 include the provision of new employment and commercial space and the demolition of buildings in the southern area. Any levelling or remediation which will involve excavation has the potential to remove archaeological deposits though the level of impact may not be as high as during the delivery phase of the buildings. The value of the archaeology associated with the industrial remains is low.

6.5 The provision of open space and public realm improvement along the towpath has the potential to impact upon archaeology associated with the river bank. These are likely to be associated with the industrial activity and may include the exposure of former wharves and dock areas. The value of the industrial archaeology on the riverbank is anticipated to be low.

6.6 The Phase 1 delivery also involves the demolition of buildings within the northern sites. There is potential for archaeology relating to the industrial development of the site, and also the residential elements of the terraced housing. This archaeology is considered to be of low value. There is also the potential for the recovery of archaeology relating to the medieval occupation of the area associated with St. Leonard's Priory, particularly agricultural evidence and evidence of water management. This archaeology is also considered to be of low value.

Phase 2 Works

6.7 Phase 2 (northern portion of the Site) includes the demolition of the existing supermarket, the delivery (i.e. construction) of a new supermarket and the provision of ground floor commercial space.

6.8 The demolition of the existing superstore has the potential to impact upon archaeological deposits. It is likely that the construction of the original store would have disturbed the archaeological deposits beneath the area which may consist of evidence of 19th century residential development and some industry. If the demolition of the store requires the removal and remediation of any ground slab and below-ground infrastructure there is the potential for the disturbance of further archaeological deposits.
This would probably consist of industrial archaeology associated with the development in the 19th century. This archaeology is considered to be of low value.

**Phase 3 Works**

6.9 The works as part of Phase 3 (central part of the Site) include the realignment of the Three Mills Lane and the provision of a school and community centre. The delivery of the new buildings has the potential to impact upon below-ground archaeology. The previous remediation of the sites will have removed some of the archaeological potential but the construction of the new buildings has the potential to cause greater disturbance at a greater depth. Depending on the construction methods used, the delivery of the two buildings has the potential to impact upon industrial archaeology including the Kemball and Bishop Crown Chemical Works and the wharves located along the River. There is also the potential that the buildings will impact upon prehistoric deposits, sealed by later made ground. This archaeology is considered to be of low to medium value.

6.10 The realignment of Three Mills Lane has the potential to impact upon the original Mill Lane. This could be in the form of the discovery of the original cobbled surface. If this can be retained then the effect could be reduced.

**Archaeology Fieldwork**

6.11 For all phases of development and for any future planning applications, a staged programme of archaeological fieldwork would likely be required. This may be in the form of pre-determination geophysical survey, or more likely targeted trial trenching to provide information on the level of potential for archaeological remains to survive. It would also establish the level of previous ground disturbance which could then be cross-referenced with the construction depths of the proposed planning application to identify areas where archaeological mitigation would not be required. Pre-determination archaeological fieldwork could also involve consideration of the palaeoenvironmental potential for the Site. This could be in the form of a geo-archaeologist monitoring boreholes being undertaken as part of the geotechnical investigations and would provide information of the depth of potential archaeology and any issues associated with possible de-watering of deposits resulting from piling adjacent to the river.

6.12 Should the archaeological trial trenching identify significant archaeological or palaeoenvironmental deposits, a programme of mitigation may be required and placed as a condition of consent on any future planning applications. This could involve a more detailed sampling and coring strategy undertaken by a geo-archaeologist, watching brief by an archaeological contractor on groundworks, or excavation on targeted areas of the Site. This would be followed by the preparation of a post-exavcation report and publication where necessary.

6.13 It is recommended that a programme of archaeological trial trench evaluation is undertaken across the Site to establish if the Made Ground identified in the deposit models is of archaeological significance. The area adjacent to the River Lea has the potential to contain Roman and/or prehistoric deposits within the sands and gravels which are sealed by the Made Ground.

6.14 It is also recommended that any boreholes being drilled during any ground investigation programme be monitored by a specialist geo-archaeologist. This will further help to establish the sequence of deposits beneath the site and identify areas of archaeological potential.

6.15 The programme of evaluation would help to establish the levels of archaeological risk in the Site and inform the emerging masterplan by avoiding the siting of any proposed underground parking in areas of high significance, or by the intelligent location of the public realm and green corridors alongside the river in the more sensitive archaeological areas to avoid impacting upon the archaeological resource.

**Additional Mitigation and Monitoring**

**Operational Phase Mitigation**

6.16 No operational phase mitigation is required. All effects to the archaeological resource will have been mitigated during the construction phase or earlier, and therefore no further mitigation is proposed.
RESIDUAL EFFECTS
AND CONCLUSIONS
RESIDUAL EFFECTS AND CONCLUSIONS

Introduction

7.1 This section provides a summary of the residual effects for archaeology.

Residual Effects

7.2 The operation of the illustrative masterplan will not result in any effects on archaeology, as these will already have taken place during the construction phase.

Conclusions

7.3 This report has presented the archaeological baseline of the Site. It has shown that although there are no previously identified archaeological assets within the Site boundary, there is a medium potential for archaeology to exist.

7.4 There is the potential for prehistoric archaeology to be located within the Site, particularly in the eastern portion, close to the course of the river. Although the deposits modelling has demonstrated significant depths of made ground, there is the potential for prehistoric deposits to be located beneath this, within the river gravels. Any prehistoric archaeology which is located would be of regional significance.

7.5 The assessment has also demonstrated the potential for medieval archaeology associated with St, Leonard’s Priory located to the north-west of the site. This could include elements of the priory precinct or archaeology associated with the agricultural use of the floodplain of the river. Any medieval archaeology recovered would be of local to regional significance.

7.6 The first major phase of development on this site did not occur until the 19th century, when the site transformed from rural fringe to heavily urbanised and developed. Although there was a precedent for industrial development with the mills located along the River Lea, the 19th century saw the complete development of the site for heavy industry, including bleach works, engineering works and later areas of pre-fabricated sheds made of asbestos. There is the potential for the recovery of industrial archaeology within the area. Any archaeology of this type would be of local significance.

7.7 There will be no effect on the archaeological resource during operation.

7.8 Archaeology will be a consideration for any future application for the Site, or any part thereof. Future planning applications will require a desk-based assessment or EIA, and archaeological fieldwork will be required to establish fully the potential for archaeology to survive. This would be in the form of geophysical survey, if appropriate and feasible, or, more likely in the form of archaeological trial trenching.
CUMULATIVE EFFECTS ASSESSMENT
CUMULATIVE EFFECTS ASSESSMENT

Introduction

8.1 This section provides an assessment of cumulative effects in relation to archaeology.

Assessment of Type 1 Interaction Effects

8.2 There will be no Type 1 interaction effects on the archaeological resource within the Site. This is due to the fact no additional physical impacts to the archaeological receptors other than those likely to take place during the construction phase, as described in Section 6 under ‘Further Considerations for Detailed Design and Future Planning Applications’.

Assessment of Type 2 In-Combination Effects with Committed Developments

8.3 The setting of the archaeological assets and the APAs within the study area will experience change as a result of the committed developments in conjunction with the future redevelopment of the Site, however the current setting of the assets contributes little to their significance – the elements that do contribute, such as the location of the river will not change as a result of in-combination effects.
References

Ref. 1 London Legacy Development Corporation (LLDC) Local Plan 2015 to 2031
Ref. 2 National Planning Policy Framework (NPPF)
Ref. 3 Ancient Monuments and Archaeological Areas Act 1979
Ref. 4 Planning Practice Guidance (PPG) was launched on 6 March 2014
Ref. 5 Written Ministerial Statement titled ‘Making the Planning System Work More Efficiently and Effectively’, also dated 6 March 2014
Ref. 7 Revised Early Minor Alterations (REMA) published in October 2013
Ref. 8 Further Alterations to the London Plan (FALP) Consultation Draft published in 2014
Ref. 9 Localism Act (2011)
Ref. 10 FALP Further Alterations to the London Plan (2015
Ref. 11 Planning Policy Statement 5; Planning Practice Guide
Ref. 12 GPA1: The Historic Environment in Local Plans
Ref. 13 GPA2: Managing Significance in Decision Taking
Ref. 14 and GPA3: The Setting of Heritage Assets
Ref. 15 2011 Setting of Heritage Assets document
Ref. 16 Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment’
Ref. 17 Bromley-by-Bow South Masterplan – Quality Review Panel Presentation
Ref. 18 Bromley-by-Bow South – Phasing and Delivery Strategy
Ref. 19 Code of Conduct of the Chartered Institute for Archaeologists (CIfA 2014
Ref. 20 Greater London Archaeology Advisory Service Standards for Archaeological Work (HE 2015)
Ref. 23 MOLA 2011, 188)
Ref. 24 Pre-Construct Archaeology 2007
Ref. 25 CGMS 2010 Heritage Assessment: Bromley – by – Bow
Ref. 26 Pre-Construct Archaeology 2003, Archaeological Evaluation of Land at the Bridport Site , Three Mills, Bromley by Bow
Figures
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LOCATION OF ARCHAEOLOGICAL EVENTS

Legend
- Site Boundary
- 500m Study Area
- Historic Environment Record - Event (pt)
- Historic Environment Record - Event (ply)

Client: DANESCROFT LAND LTD
Title: NORTH BROMLEY-BY-BOW

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LEGEND

- Site Boundary
- Borough Boundary
- Cumulative Impacts

1: Cooks Road (14/00191/FUL)
2: Marshgate (14/00422/FUL)
3: 68-70 Stratford High Street (11/90619/FUMODA)
4: 80-92 Stratford High Street (06/90011/FUMODA)
5: 2-12 Stratford High Street (10/90519/FUMODA)
6: Pudding Mill Lane (PDZ8 LCS) (11/90621/OUTODA/PDZ8)
7: St Andrews Hospital (PA/08/1161)
8: Bow River Village (PA/11/90425) (Outside Site boundary Only)
9: Strand East, Vastinct (12/00334/LTOUT) (Outside Site boundary Only)
10: Lock Keepers (PA/11/90548/VA1)

COMMITTED DEVELOPMENTS
BROMLEY-BY-BOW SOUTH

Based up boundaries sourced from London borough planning portals
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Appendix 1 - Gazetteers
Table 1 Archaeological Assets within the Study Area

<table>
<thead>
<tr>
<th>MonUID</th>
<th>Period</th>
<th>Name</th>
<th>Summary</th>
<th>MonType</th>
<th>Finds</th>
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<td>Neolithic</td>
<td>BOW</td>
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<td>FINDSPOT, FINDSPOT, DAGGER (Neolithic), LITHIC IMPLEMENT (Neolithic)</td>
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<td>Neolithic</td>
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<td>Neolithic</td>
<td>Gillender Street, Tower Hamlets {Neolithic Axe}</td>
<td>A Neolithic axe was found near Gillander Street, Tower Hamlets.</td>
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<td>MLO22736</td>
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<td>RIVER LEA STRATFORD E15</td>
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<td>FINDSPOT, FINDSPOT, SPEARHEAD (Late Neolithic to Early Bronze Age)</td>
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<td>MLO12973</td>
<td>Roman</td>
<td>RIVER LEA (NEAR ST LEONARD S)</td>
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<td>FINDSPOT, SPEARHEAD (Late Neolithic to Early Bronze Age)</td>
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<td>BOW</td>
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<td>FINDSPOT, SPEARHEAD (Late Neolithic to Early Bronze Age)</td>
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<td>MLO88931</td>
<td>Medieval</td>
<td>Saint Andrew's Hospital, Bromley-by-Bow (Medieval boundary ditch)</td>
<td>A Medieval boundary ditch was recorded during an archaeological evaluation carried out by Pre-Construct Archaeology at St Andrew's Hospital, Bromley-by-Bow, in September 2008.</td>
<td>BOUNDARY DITCH, POTTERY (Medieval)</td>
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<td>WATERMILL</td>
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<td>Medieval</td>
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<td>MLO9164</td>
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<td>ALLUVIUM</td>
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<td>MLO454</td>
<td>Post Medieval</td>
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<td>MANOR HOUSE</td>
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<td>MLO71229</td>
<td>Post-medieval</td>
<td>High Street [St Mary's Churchyard] Bromley-by-Bow, Tower Hamlets, E14 (17th century burial ground)</td>
<td>This site was used by Huguenots in the 17th and 18th centuries. It is currently an overgrown patch of waste land.</td>
<td>CEMETERY</td>
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<td>ROYAL PALACE, HOUSE</td>
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<td>In 1861-3, the St. Leonard’s Street Workhouse was constructed to care for the poor of the Stepney Union area. The Workhouse was constructed in brick and the central block was designed facing south</td>
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<td>Site recorded as part of the Defence of Britain project from field and documentary work carried out between April 1995 and December 2001. The purpose of the Project was to record the 20th century military sites across the United Kingdom, and with a view of anti tank block.</td>
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Appendix 2 – Borehole Logs


## Geotechnical Borehole Log

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### Remarks

1. Hand dug inspection pit to 1.0 metres depth
2. Water added at 1.0 metres

### Strata Description (thickness in metres)

- **MADE GROUND** recovered as brown soft silty sandy clay with much fine to medium gravel and some brick fragments with occasional white silty pockets and glass fragments (1.90)
- Loose brown very sandy fine to coarse subrounded flint GRAVEL with occasional black dark grey silty pockets (1.90)
- Stiff to very stiff brown, reddish brown mottled CLAY with occasional iron staining and ferric deposit partings and rare flint gravel (0.60)
- Firm to stiff brown grey thinly laminated silty CLAY with very occasional sand partings and calcarceous traces (1.40)
- Firm to stiff, becoming very stiff brown grey thickly laminated, extremely closely to very closely fissured CLAY with occasional silty sand partings and calcarceous traces. Figures smooth and planar (2.65)
- Stiff becoming very stiff brown grey very silty sandy CLAY with indistinct rough tight fissures, sand partings and calcarceous traces and occasional pyritized wood fragments (2.00)

### Note:

For explanations of symbols and abbreviations see accompanying notes.
### Borehole Log

**Sites**
- Popular Abbey Mills

**Job No.**
- 80520

**Date**
- 31.10.21-82

**Machine Type**
- DANNO

**Vertical Scale**
- 1:50

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**Co-ordinates**
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<td>0.30</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>6.90</td>
<td>5 5 5 7 7 8 8 8 8</td>
<td></td>
<td>8.40</td>
<td>0.30</td>
<td></td>
</tr>
</tbody>
</table>

**Description of Strata**

- **Torwood (driller's description)**
- **Hardcore fill (driller's description)**
- **Made Ground**
- **Medium dense settled dark brown gravelly silty clayey occasionally sandy silty clayey with brickwork concrete piles' etc. and with some plant material with minor chalk gravel and coarse sand**
- **Made Ground**
- **Medium dense dark orange gravelly very slightly clayey medium to coarse sand**
- **Frames Ballast**
- **Medium dense orange-brown sandy fine to medium angular to rounded gravelly siltstone and silt siltstone ballast**
- **Frames Ballast**
- **Firm brown fissured silty clay with occasional bands of very weak pale greenish-grey mudstone**
- **London Clay**
- **Firm to stiff brown fissured silty clay**

**Water level observations during boring**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Depth of Hole (m)</th>
<th>Depth of Casing (m)</th>
<th>Depth of Water (m)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.9.98</td>
<td>9.05</td>
<td>21.80</td>
<td>21.00</td>
<td>21.80</td>
<td>Strike standing</td>
</tr>
</tbody>
</table>

**Remarks**

- Co-ordinates (E18071, N182652)
- Water added to assist drilling from 1.90m
<table>
<thead>
<tr>
<th>Hole Size: 200mm dia to 150mm dia to 25.50 m.</th>
<th>Ground Level: 5.28 m. O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coords: 536293 mE 182703 mN</td>
<td>Scale 1:50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Borehole</th>
<th>Type Blows</th>
<th>Water</th>
<th>Legend</th>
<th>O.D. Level m</th>
<th>Depth m</th>
<th>Description of Strata</th>
</tr>
</thead>
<tbody>
<tr>
<td>109 07/08/91</td>
<td>B1</td>
<td></td>
<td>MADE GROUND - Paving slab over sand</td>
<td>4.98</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.73</td>
<td>0.55</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MADE GROUND - Concrete boulder-size rubble</td>
<td>4.08</td>
<td>1.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>109 08/08/91</td>
<td>B2</td>
<td></td>
<td>MADE GROUND - Soft to firm dark greyish brown and brown mottled very gravelly silty clay with brick fragments, slight organic odour. Gravel includes chalk</td>
<td>1.28</td>
<td>4.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B3</td>
<td></td>
<td>Soft dark grey and brown peaty silty CLAY with part decayed reed stem fragments and occasional white fine gastropod shell debris</td>
<td>-0.42</td>
<td>5.70</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B4</td>
<td></td>
<td>Very loose grey slightly silty sandy subangular to rounded, fine to medium flint GRAVEL. Oil odour</td>
<td>7.42</td>
<td>7.70</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B5</td>
<td></td>
<td>Very stiff, fissured, locally closely fissured, greyish brown and grey mottled, slightly silty, locally silty, CLAY with occasional light brown silty fine sand pockets</td>
<td>-4.72</td>
<td>10.00</td>
<td></td>
</tr>
</tbody>
</table>

**REMARKS**

1. Borehole cased to 25.0m depth
2. Chiselling from 0.3m to 1.2m (2 hrs) and from 13.0m to 13.4m (1 hr)
3. Water was added to assist progress from 5.1m to 8.0m
4. Water was added to assist progress from 5.1m to 8.0m
5. Level rose to 4.8m, (5 and 10 mins), 4.7m (15 and 20 mins)
6. Depth to water at end of shift 11.3m, hole stood at 11.5m (1/2)
7. Water at 4.0m at start of shift (2/8)
8. Depth to water at end of shift 9.8m, hole stood at 12.5m (2/8)

**KEY**

- D = Disturbed Sample
- E = Bulk Sample
- N = Undisturbed Sample
- M = Water Sample
- R = Mackintosh Probe
- S = Standard Penetration Test
- M = Vane Shear Test Cohesion (kN/m²)
- SP = P.I./C.P.I. Where 0.3m penetration not achieved, blow given for quoted penetration

SOILS ENGINEERING LIMITED, NEWARK ROAD, PETERBOROUGH. Tel: (0733) 68153
Communicated by \textit{L.C.C.}

Height above Ordnance Datum: 21.5.65 m. Rest level of water: 15.75 ' above OD.

Quality (with copy of analysis on separate sheet)

<table>
<thead>
<tr>
<th>GEOLOGICAL FORMATION</th>
<th>NATURE OF STRATA</th>
<th>THICKNESS</th>
<th>DEPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Made Ground.</td>
<td>9</td>
<td>2.74 m</td>
</tr>
<tr>
<td></td>
<td>Sand Gravel.</td>
<td>2</td>
<td>3.35 m</td>
</tr>
<tr>
<td></td>
<td>Yellow Clay.</td>
<td>4</td>
<td>5.57 m</td>
</tr>
<tr>
<td></td>
<td>Blue Clay.</td>
<td>35</td>
<td>15.24 m</td>
</tr>
<tr>
<td>GEOLOGICAL FORMATION</td>
<td>NATURE OF STRATA</td>
<td>THICKNESS</td>
<td>DEPTH</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Made Ground</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Thames Mud</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>River Clay</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Ballast</td>
<td>13</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Blue Clay</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Height above Ordnance Datum: 18.05' 55m
Rest level of water: 3831.8269
Yield: 256

Quality (with copy of analysis on separate sheet)
# Geotechnical Borehole Log

**Site:** NORTHERN DRAINAGE SEWER

**Borehole:** 206

**Date:** 15/02/93-19/02/93

**Coordinates:** 538209E 182659N

**Client:** London Docklands Development Corporation

---

<table>
<thead>
<tr>
<th>Soil samples/test</th>
<th>Depth (m OD)</th>
<th>Type</th>
<th>SPN value (100 blows)</th>
<th>Field Records</th>
<th>STRATA Description (thickness in metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.95</td>
<td></td>
<td></td>
<td>0.20</td>
<td>MADE GROUND with tarmac to 0.05 m depth underlain by limestone chippings ** (0.20)</td>
</tr>
<tr>
<td></td>
<td>5.00</td>
<td></td>
<td></td>
<td>1.15</td>
<td>MADE GROUND recovered as greyish brown fine to coarse sand and subrounded flint gravel with occasional cobble ** (0.95)</td>
</tr>
<tr>
<td></td>
<td>4.45</td>
<td></td>
<td></td>
<td>1.70</td>
<td>MADE GROUND concrete *** (0.55)</td>
</tr>
<tr>
<td></td>
<td>3.50</td>
<td></td>
<td></td>
<td>2.65</td>
<td>Loose to medium dense brown very sandy fine to coarse subrounded flint GRAVEL with occasional cobble (0.95)</td>
</tr>
<tr>
<td></td>
<td>4.40-4.85</td>
<td></td>
<td></td>
<td>(14)</td>
<td>Firm to stiff brown locally fissured slightly silty CLAY with some iron staining along fissure surfaces and very occasional fine traces of sand and pyritic nodules (1.20)</td>
</tr>
<tr>
<td></td>
<td>5.85</td>
<td></td>
<td></td>
<td></td>
<td>Stiff becoming very stiff brownish grey extremely closely fissured partially laminated silty CLAY with occasional shell fragments and very occasional sand partings (2.53)</td>
</tr>
<tr>
<td></td>
<td>7.40-7.85</td>
<td></td>
<td></td>
<td>(19)</td>
<td>thin band of pale yellow brown weak calcarious cemented mudstone</td>
</tr>
<tr>
<td></td>
<td>7.85</td>
<td></td>
<td></td>
<td></td>
<td>Very stiff grey extremely closely fissured thinly laminated silty CLAY with occasional fine yellowish brown sand partings (4.10)</td>
</tr>
<tr>
<td></td>
<td>8.85</td>
<td></td>
<td></td>
<td></td>
<td>3-4mm band of calcarious sand</td>
</tr>
<tr>
<td></td>
<td>9.40-9.85</td>
<td></td>
<td></td>
<td>(30)</td>
<td>structure becomes more distinct with depth</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>thin band of calcarious silty clay</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>becoming slightly more sandy with depth</td>
</tr>
</tbody>
</table>

**Remarks:**
1. **Driller's description**
2. **Driller's description**
3. **Driller's description**
4. Concrete hit at 1.15m depth, pit dug to break out and chisel through
5. Water added to assist drilling to 11.50m depth

**Note:** For explanations of symbols and abbreviations see accompanying notes.

**Logged by DT Scale (approx): 1:50 Figure number:** 92.232.8H206
Geotechnical Borehole Log

Method: Shell & Auger.
Date: 06/02/93

Site: NORTHERN DRAINAGE SEWER

Client: London Docklands Development Corporation

Bore-hole: 204
Sheet: 1/3

Soil samples/test
Depth | Type | UPT value (100 bls) | Field Records | Level (m OD) | Depth (m OD) | Strata Description (thickness in metres) | British Geological Survey

1.00  D1  

2.00  D2  
seepage at 1.50m rose to 1.40m not sealed 06.02.93/1.50 06.02.93/1.40

3.00  D3  

3.70  D4  

4.20  D5  

5.20  D6  

6.70  D7  

7.20  D8  

8.20  D9  

9.20  D10  

Strata Description:

MADE GROUND concrete overlying fill recovered as soft brown, yellow, black mottled silty sandy clay with flint gravel and brick fragments (2.00)

Brown very sandy fine to coarse subangular to subrounded flint GRAVEL with occasional soft yellow clayey pockets (1.70)

Stiff to very stiff brown-grey, yellow-brown mottled sandy gravelly CLAY with occasional iron staining (0.50)

Stiff, locally firm to stiff, grey becoming brown grey fissured CLAY with very occasional white calcareous traces and sandy silt partings (3.00)

Stiff grey silty CLAY with sandy pockets and partings with occasional black mottling and calcareous traces (2.00)

Very stiff brown grey silty CLAY with much sand partings and some calcareous and carbonaceous traces (1.00)

Remarks:

Note: For explanations of symbols and abbreviations see accompanying notes.

Logged by DT
Scale (approx) 1:50
Figure number 92.232.8h204
# Geotechnical Borehole Log

**Method:** Shell & Auger  
**Date:** 28/01/93 - 02/02/93  
**Site:** NORTHERN DRAINAGE SEWER  
**Borehole:** 202

**Diameter (mm):** 200mm Cased to 24.00m  
**Ground Level:** 5.65 m OD

---

**Soil samples/Test** | **SPT value (100 blows)** | **Field Records** | **Depth (m OD)** | **Depth (m)**
--- | --- | --- | --- | ---
1.00-1.45 | c1 | N=4 | 1/1/1/1/1 | 1.50
1.00-1.45 | b1 | N=21 | 7/4/5/6/6 | 4.15
1.60-2.05 | c2 | N=18 | 4/3/5/4/6 | 2.10
1.60-2.10 | b2 | | | 2.80
2.10-2.55 | c3 | N=18 | 4/3/5/4/6 | 3.55
2.10-2.50 | b3 | | | 3.50
2.80 | b4 | | | 3.80
2.80-3.30 | u5 | | | 4.30
3.30 | d6 | | | 4.60
3.50 | b7 | | | 4.80-5.30
3.80-4.30 | u8 | | | 6.30
4.30 | d9 | | | 6.50
4.60 | b10 | | | 6.80-7.30
4.80-5.30 | u11 | | | 7.30
5.30 | d12 | | | 8.50
5.50 | b13 | | | 8.80-9.30
5.80-6.30 | u14 | | | 9.50
6.30 | d15 | | | 9.80-10.30
6.50 | b16 | | |  
6.80-7.30 | u17 | | |  
7.30 | d18 | | |  
8.50 | b19 | | |  
8.80-9.30 | u20 | | |  
9.50 | b21 | | |  
9.80-10.30 | u22 | | |  

**Strata Description (thickness in metres):**

- MADE GROUND recovered as loose brown grey mottled gravelly silty clayey material with occasional sand pockets and friable black reddish brown ferric nodules (1.50)
- Medium dense brown silty very sandy subrounded to rounded GRAVEL (0.60)
- Medium dense brown very gravelly fine to coarse SAND with occasional subrounded cobbles (0.70)
- Firm to stiff grey, brown, yellow-brown, reddish brown mottled silty CLAY with occasional fine sand partings, much ferric compounds partings and staining and very occasional black carbonaceous and white calcareous traces (0.70)
- Firm to stiff brown, grey, reddish brown mottled extremely closely fissured silty sandy CLAY with iron staining on the fissure planes (2.00)
- Firm to stiff grey extremely closely fissured silty CLAY with occasional pyritized wood fragments and sand partings (5.50)
- Very stiff dark grey extremely closely fissured silty CLAY with occasional fine sand partings, calcareous traces and pyritized wood fragments (5.50)

**Remarks:**
1. Possible water strike at 2.60 metres depth (?)

**Note:** For explanations of symbols and abbreviations see accompanying notes.

Logged by DT  
Scale (approx) 1:50  
Figure number 92.232.8h202
Appendix 3 – Site Walkover Photographs
Plate 5 Extant historic street furniture

Plate 6 Extant historic ground surface
ABOUT AECOM
In a complex and unpredictable world, where growing demands have to be met with finite resources, AECOM brings experience gained from improving quality of life in hundreds of places.

We bring together economists, planners, engineers, designers and project managers to work on projects at every scale. We engineer energy efficient buildings and we build new links between cities. We design new communities and regenerate existing ones. We are the first whole environments business, going beyond buildings and infrastructure.

Our Europe teams form an important part of our worldwide network of nearly 100,000 staff in 150 countries. Through 360 ingenuity, we develop pioneering solutions that help our clients to see further and go further.

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