GREAT ORMOND STREET HOSPITAL REDEVELOPMENT Phase 2B, New Cardiac Wing Great Ormond Street London WC1

London Borough of Camden

Written Scheme of Investigation for an archaeological evaluation

National Grid Reference: 530481 182071

Project Manager Simon Davis

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Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED tel 0207 410 2200 fax 0207 410 2201 email enquiries@mola.org.uk
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Planning reference 2007/4116/P

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Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED tel 0207 410 2200 fax 0207 410 2201 email:enquiries@mola.org.uk

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Registered office: Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED

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1 Introduction

1.1 Project background

- 1.1.1 This Method Statement (also 'Written Scheme of Investigation' or WSI) for an archaeological evaluation on the site of Great Ormond Street Hospital has been commissioned from MOLA by Skanska on behalf of the client Great Ormond Street Hospital.
- 1.1.2 Great Ormond Street Hospital lies on the north side of Great Ormond Street, and is bounded on the west by Queen Square, on the north by Guilford Street, and by Lambs Conduit Street to the east (Fig 1). Within this report the hospital complex is known as 'the site'. The Ordnance Survey National Grid reference is 530481 182071 in the centre of the site. Modern street level adjacent to the site varies between c 21.60 and c 22.50m OD to the north and c 23.00m OD to the south. The existing basement slab of the cardiac wing lies at 21.145m OD.
- 1.1.3 The development and the associated archaeological evaluation fieldwork is being undertaken in three phases (see Fig 1, Fig 2). The phase 2A archaeological evaluation has been completed (MoLAS 2006). The proposed Phase 2B development involves the partial demolition and refurbishment of the cardiac wing and the construction of an extension. The evaluation trenches proposed in this document are to fulfil the evaluation requirement for the Phase 2B work only.
- 1.1.4 The development received planning permission on 27/11/07 (Ref 2007/4116/P) and included Condition No 11 relating to archaeology. The condition requires:

No development shall take place until the applicant has secured the implementation of a programme of archaeological investigation which has been submitted by the applicant and approved by the local planning authority. The development shall only take place in accordance with the detailed scheme pursuant to this condition. A suitably qualified investigating body acceptable to the local planning authority shall carry out the archaeological works.

REASON: Important archaeological remains may exist on the site. Accordingly the Council wishes to secure the provision of archaeological investigation and the subsequent recording of the remains prior to development in accordance with the requirements of policy B8 of the Camden Replacement Unitary Development Plan 2006.

- 1.1.5 Details of the consented development are available at http://www.camden.gov.uk/ccm/navigation/environment/planning-and-built-environment/
- 1.1.6 The principal archaeological interest on the site is the potential for remains of medieval and post-medieval water supply systems and post-medieval structures in areas of the site that are currently undeveloped.
- 1.1.7 The purpose of archaeological evaluation as defined by the Institute for Archaeologists is to 'determine, as far as is reasonably possible, the nature of the archaeological resource within a specified area using appropriate methods and practices' (IFA, 2008). The results of the evaluation will inform the construction design and allow the Project Team and Local Planning Authority to identify an appropriate mitigation strategy for any archaeological remains that would be affected by the development. Should any archaeological mitigation be necessary an additional written scheme of

- investigation will be prepared and submitted for approval, specifying the archaeological works and covering fieldwork, post-excavation analysis, publication and archiving
- 1.1.8 The evaluation works consist of the excavation and recording of 2 no. 2m x 2m trial trenches within Area E of the proposed Phase 2B development scheme, outlined further in Section 2 (Fig 3). MOLA will be working with the Principal Contractor (Skanska) who will provide the site attendance.
- 1.1.9 The results of the evaluation will be set out in a report to be issued within 6 weeks of completing the fieldwork. The site archive will be deposited with the London Archaeological Archive within 6 months of issuing the report.
- 1.1.10 This document sets out the methodologies (including Health & Safety) which will be followed during the excavation of the evaluation trenches and during the post-excavation analysis and reporting stages. These will follow the Standards and Code of Practice laid down by the Institute for Archaeologists, local and regional planning authority archaeology guidance, English Heritage Centre for Archaeology Guidelines where appropriate and research priorities established in the Museum of London's, 'A research framework for London Archaeology', 2002
- 1.1.11 Other relevant documents include:
 - The Archaeological desk-based assessment (MoLAS 2006).
 This presented the initial assessment of archaeological potential on the site.
 - The Phase 2a archaeological evaluation report (MOLA 2009).
 This presented the results of the phase 2a archaeological evaluation undertaken in May 2009.

1.2 Planning and legislative framework

1.2.1 National Planning Policy Framework

The planning and legislative background to the site was summarised in the previous desk-based assessment (MOLA 2006). However since that date the Government issued the National Planning Policy Framework (NPPF) in March 2012 (DCLG 2012) and supporting Planning Practice Guidance in 2014 (DCLG 2014). One of the 12 core principles that underpin both planmaking and decision-taking within the framework is to 'conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations' (DCLG 2012 para 17). It recognises that heritage assets are an irreplaceable resource (para 126), and requires the significance of heritage assets to be considered in the planning process, whether designated or not. The contribution of setting to asset significance needs to taken into account (para 128). The NPPF encourages early engagement (i.e. pre-application) as this has significant potential to improve the efficiency and effectiveness of a planning application and can lead to better outcomes for the local community (para 188).

NPPF Section 12: Conserving and enhancing the historic environment, is produced in full below:

Para 126. Local planning authorities should set out in their Local Plan a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. In doing so, they should recognise that heritage assets are an irreplaceable resource and conserve them in a manner appropriate

to their significance. In developing this strategy, local planning authorities should take into account:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring:
- the desirability of new development making a positive contribution to local character and distinctiveness; and
- opportunities to draw on the contribution made by the historic environment to the character of a place.

Para 127. When considering the designation of conservation areas, local planning authorities should ensure that an area justifies such status because of its special architectural or historic interest, and that the concept of conservation is not devalued through the designation of areas that lack special interest.

Para 128. In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

Para 129. Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal.

Para 130. Where there is evidence of deliberate neglect of or damage to a heritage asset the deteriorated state of the heritage asset should not be taken into account in any decision.

Para 131. In determining planning applications, local planning authorities should take account of:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
- the desirability of new development making a positive contribution to local character and distinctiveness.

Para 132: When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. 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.

Para 133. Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:

- the nature of the heritage asset prevents all reasonable uses of the site; and
- no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
- conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and
- the harm or loss is outweighed by the benefit of bringing the site back into use.

Para 134. 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.

Para 135. 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.

Para 136. Local planning authorities should not permit loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred.

Para 137. Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites and within the setting of heritage assets to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.

Para 138. Not all elements of a World Heritage Site or Conservation Area will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage Site should be treated either as substantial harm under paragraph 133 or less than substantial harm under paragraph 134, as appropriate, taking into account the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage Site as a whole.

Para 139. Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets.

Para 140. Local planning authorities should assess whether the benefits of a proposal for enabling development, which would otherwise conflict with planning policies but which would secure the future conservation of a heritage asset, outweigh the disbenefits of departing from those policies.

Para 141. Local planning authorities should make information about the significance of the historic environment gathered as part of plan-making or development management publicly accessible. They should also require

developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.

1.2.2 Greater London regional policy

The London Plan

The overarching strategies and policies for the whole of the Greater London area are contained within the London Plan of the Greater London Authority (GLA July 2011). Policy 7.8 relates to Heritage Assets and Archaeology:

- 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.
- 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.
- F. Boroughs should, in LDF policies, seek to maintain and enhance the contribution of built, landscaped and buried heritage to London's environmental quality, cultural identity and economy as part of managing London's ability to accommodate change and regeneration.
- G. Boroughs, in consultation with English Heritage, Natural England and other relevant statutory organisations, should include appropriate policies in their LDFs for identifying, protecting, enhancing and improving access to the historic environment and heritage assets and their settings where appropriate, and to archaeological assets, memorials and historic and natural landscape character within their area.

As part of the *Revised Early Minor Alterations to the London Plan* (GLA Oct 2013), amended paragraph 7.31 supporting Policy 7.8 'Heritage Assets and Archaeology' adds that '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. Enabling development that would otherwise conflict with planning policies, but which would secure the future conservation of a heritage asset should be assessed to see if the benefits of departing from those policies outweigh the disbenefits.' It further adds 'Where there is evidence of deliberate neglect of and or damage to a heritage asset the deteriorated state of that asset should not be taken into account when making a decision on a development proposal'.

The Draft Further Alterations to the London Plan (GLA Jan 2014), incorporate the changes made to paragraph 7.31 but add no further revisions to the elements of the London Plan relating to archaeology and heritage.

1.2.3 Archaeology and Planning in the borough

Following the Planning and Compulsory Purchase Act 2004, Planning Authorities have replaced their Unitary Development Plans, Local Plans and Supplementary Planning Guidance with a new system of Local Development Frameworks (LDFs). UDP policies are either 'saved' or 'deleted'. In most cases archaeology policies are likely to be 'saved' because there have been no significant changes in legislation or advice at a national level.

Camden Borough Council's LDF replaced it's UDP in November 2010. As part of the LDF the Core Strategy Policy CS14 - Promoting high quality places and conserving, our heritage, relates to the historic environment:

The Council will ensure that Camden's places and buildings are attractive, safe and easy to use by:

- a) requiring development of the highest standard of design that respects local context and character;
- b) preserving and enhancing Camden's rich and diverse heritage assets and their settings, including conservation areas, listed buildings, archaeological remains, scheduled ancient monuments and historic parks and gardens;
- c) promoting high quality landscaping and works to streets and public spaces;
- d) seeking the highest standards of access in all buildings and places and requiring schemes to be designed to be inclusive and accessible;
- e) protecting important views of St Paul's Cathedral and the Palace of Westminster from sites inside and outside the borough and protecting important local views.

Policy CS14 is implemented through Development Policy DP25 - Conserving Camden's heritage:

Conservation areas

In order to maintain the character of Camden's conservation areas, the Council will:

- a) take account of conservation area statements, appraisals and management plans when assessing applications within conservation areas;
- b) only permit development within conservation areas that preserves and enhances the character and appearance of the area;
- c) prevent the total or substantial demolition of an unlisted building that makes a positive contribution to the character or appearance of a conservation area where this harms the character or appearance of the conservation area, unless exceptional circumstances are shown that outweigh the case for retention;
- d) not permit development outside of a conservation area that causes harm to the character and appearance of that conservation area; and
- e) preserve trees and garden spaces which contribute to the character of a conservation area and which provide a setting for Camden's architectural heritage.

Listed buildings

To preserve or enhance the borough's listed buildings, the Council will:

e) prevent the total or substantial demolition of a listed building unless exceptional circumstances are shown that outweigh the case for retention;

- f) only grant consent for a change of use or alterations and extensions to a listed building where it considers this would not cause harm to the special interest of the building; and
- g) not permit development that it considers would cause harm to the setting of a listed building.

Archaeology

The Council will protect remains of archaeological importance by ensuring acceptable measures are taken to preserve them and their setting, including physical preservation, where appropriate.

Other heritage assets

The Council will seek to protect other heritage assets including Parks and Gardens of Special Historic Interest and London Squares.

1.3 Archaeological background

1.3.1 A detailed description of the geology, archaeology and history of the site was provided in the earlier Archaeological desk-based assessment (MOLA 2006). A brief resume is provided here:

Geology and topography

1.3.2 It is probable that truncated natural gravel is to be found beneath the site at c 21.50m OD, although it may be deeper in the north-central part of the site where there is a depression in the modern street level. Modern street level adjacent to the site varies between c 21.60 and c 22.50m OD to the north and c 23.00m OD to the south, presumably as a result of undulations in the underlying topography. Truncated natural gravels were recorded during the phase 2a evaluation at c 19.30m OD and 19.97m OD.

Prehistoric

1.3.3 Occasional finds of flint tools in the vicinity indicate a prehistoric presence from the Palaeolithic onwards. The edge of the Lynch Hill gravel terrace was probably an attractive area for early prehistoric activity as flint tools are found in a band across the southern end of Camden Borough. Palaeolithic finds within the site surroundings include a handaxe and flint flakes found at the Gray's Inn Road 500m to the east of the site. Numerous Palaeolithic handaxes, a Mesolithic tranchet axe and a Neolithic polished axe have been recovered in the nearby vicinity. No direct evidence of settlement has been noted near to the site.

Roman

- 1.3.4 The site is located some distance outside of the Roman City (Londinium) within the presumed rural hinterland on the fringes of the city. The site is located c 500m to the north of the Roman road from Londinium to Silchester and c 400m north of another Roman road which joins the road to Silchester. Activity recorded along these roads is principally in the form of cemeteries, as Roman law required the dead to be buried outside the City perimeter. Several finds associated with roadside burial have been found in the vicinity of the site and an urned cremation was recorded at Southampton Row 200m south of the site. In 1911 a marble tombstone was recovered from Lambs Conduit Street some 180m east of the site.
- 1.3.5 Other finds in the vicinity include a silver coin of Septimus Severus (AD 193–211) discovered in Russell Square. And a Roman coin hoard found during the

construction of the National Hotel in Bedford Way. No evidence of any occupation has been found in the vicinity of the site.

Saxon

- 1.3.6 The area to the south of the site contains the majority of Middle Saxon (7th—9th- century) evidence for settlement in the London area. This is where the settlement of Lundenwic grew up, north of the Strand, between approximately the line of Kingsway and Trafalgar Square. Lundenwic took over as the main centre of population after the city of Londinium was abandoned in the 5th century and remained so until the Viking attacks of the late 9th century forced a retreat behind the city walls.
- 1.3.7 A series of excavations have suggested that the settlement was at least 60 hectares in size, extending south to the shoreline of the Thames, north to Seven Dials, west to Trafalgar Square and east to Aldwych. Lundenwic was primarily a trading centre, with a waterfront embankment for sea-going ships. The northern edge of Lundenwic is uncertain, but lies south of the present site.
- 1.3.8 Excavations at Kingsway Hall in Great Queen Street recorded Middle Saxon rubbish pits and structures in the southwest corner of the site. At the City Literary Institute a variety of Middle Saxon features were excavated, including a wattle lined well, cesspits, postholes, timber structures and possible yard surfaces.

Medieval

- 1.3.9 The site lies in the northwest of the ancient parish of St Andrew, Holborn near the parish boundaries of St Pancras to the north and St Giles in the Fields to the west and southwest.
- 1.3.10 The site stands within the 100-acre medieval manor of Blemundsbury derived from the 13th-century owners the Blemunds Family. The Blemunds purchased the land from the Fitzwalter family, who are recorded as the owners in the 12th century (LeFaye 1980).
- 1.3.11 The management of the land and the springs appears to have passed into the hands of the Greyfriars (Franciscan Brothers) of Newgate at around 1230. The holy brothers established a water supply system for the monastery in 1258 sourced near the Fleet River. After fifty years useage the supply was declared inadequate and the lead pipe was extended to a reservoir in the vicinity of Queens Square which was fed by nearby springs. A conduit associated with the reservoir, the Devil's or Chimney conduit, remained accessible under 20 Queen Square until 1911, when it was dismantled and re-erected at the Metropolitan Water Board offices in Rosebery Avenue. Fragments of the water supply have been recorded in the locality at the junction of Lambs Conduit Street and Great Ormond Street.
- 1.3.12 Besides the springs the land around the site appears to have remained pastoral and open, presumably turned into agricultural fields to supply produce to the monks in the City of London.

Post-medieval

- 1.3.13 The site may lie on or near the estimated line of the Civil War defensive ditch (see MOLA 2006) although no evidence of the ditch has been recorded in the vicinity.
- 1.3.14 The area of Queen Square remained open ground until the late 17th century. Expansion around Holborn progressed rapidly with the interests of property

- speculator Dr Nicholas Baron, who had acquired Red Lion Square in 1684. Part of the area of the site itself appears to have been laid out c 1682 bordering the Bedford Estates. Although the site was not built up until c 1720 with buildings along the north side of Great Ormond Street and the west side of Lambs Conduit Street with what appears to be open ground to the rear.
- 1.3.15 The south-western part of the site covers the northern end of Powis Place, which runs off Great Ormond Street. This marks the site of Powis House built at the end of the 17th century for the 2nd Marquess of Powis.
- 1.3.16 In 1793–7 (Upper) Guilford Street was formed with buildings on the south side of the street, and behind within Landsdown Mews, being situated along the northern part of the site. The central part of the site appears to have remained largely open ground. This situation seems relatively unchanged by c 1826.
- 1.3.17 Archaeological investigations in the vicinity show expansion into, and development of, the Bloomsbury area north of High Holborn from the late 17th century onwards.
 - Great Ormond Street Hospital
- 1.3.18 Great Ormond Street Hospital (GOSH) was founded in February 1852, in a converted 17th-century townhouse on the corner of Powis Place. It was the first children's hospital in the English speaking world, and grew to an internationally famous centre of excellence in child healthcare.
- 1.3.19 By February 1852 No. 49 Great Ormond Street, a mansion with a previous medical connection as the home of Queen Anne's physician, Dr Richard Mead 150 years earlier became part of the hospital. In 1858, No. 48 Great Ormond Street was purchased, increasing the bed capacity from 20 to 75. By 1875, along Powis Place in the gardens of the original houses, a new building was constructed. By 1914 more hospital buildings can be seen. This model of expansion continued up the present day, with the hospital now taking up the entire area between Great Ormond Street, Powis Place, Guilford Street, and Lambs Conduit Street to the east.
 - Results of the Phase 2A evaluation
- 1.3.20 Following the recommendations of the previous archaeological impact assessment (MOLA 2006) an earlier phase of archaeological evaluation was undertaken as part of the Phase 2A development and a report produced (MOLA 2009). An evaluation pit was excavated in the location of the proposed construction crane base (in Area C). The evaluation trench exposed the surface of natural Terrace Gravels, c 1m below present ground level, beneath c 0.6m of firm mid brown clay silt. The silt layer was truncated vertically by concrete foundations and horizontally by modern made ground and the current floor slab, at 20.5m OD.
- 1.3.21 Area D was excavated, after initial clearance of the concrete slab. Natural truncated terrace gravels were located at 18.32m OD, beneath c 0.6m of disturbed made ground consisting of redeposited silty clays and mixed made ground.
- 1.3.22 Where truncation had occurred from previous foundations, this was seen to have locally removed all deposits into natural gravels. No archaeological features were observed.

1.4 MOLA team and other responsibilities

In the document below the following terms should be understood:

- 1.4.1 MOLA (Museum of London Archaeology) is a company limited by guarantee registered in England and Wales with company registration number 07751831 and charity registration number 1143574. Registered office: Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED.
- 1.4.2 *Project Manager* MOLA office based manager who is the client's principal point of contact and who has overall responsibility for the project budget and delivery.
- 1.4.3 Site Supervisor MOLA site based manager who is responsible for the direction of the field team. Site supervisors on larger sites will tend to be Project Officers in grade, whilst on other sites they will be Senior Archaeologists. On some sites there may be both a Project Officer and/or one or more Senior Archaeologists.
- 1.4.4 Archaeologists MOLA excavation staff responsible on site for archaeological excavation.
- 1.4.5 Field Manager MOLA office based manager responsible for allocation of staff and supply of equipment and resources.
- 1.4.6 Health and Safety Manager The MOLA manager with sole responsibility for site inspections, reporting and issuing of recommendations for the Site Supervisor and Project Manager to implement. Reports directly to MOLA CEO
- 1.4.7 *Principal Contractor* appointed directly by the Client with overall responsibility for site H&S under CDM regulations.
- 1.4.8 Attendance Contractor the contractor responsible for providing such attendances to MOLA as are deemed necessary to carry out their archaeological work (see section 3.2). These might for instance include but not be restricted to shoring, lighting, facilities, fencing, additional labour, spoil removal, etc. The Attendance Contractor may be the same as the Principal Contractor, or it may be subcontracted to the Principal Contractor or it may sub-contracted to MOLA.
- 1.4.9 Sub-contractor where this term is used in this document it refers to any contractor employed directly by MOLA during the course of its work on the site.

1.5 Objectives of the evaluation

1.6 General considerations

- 1.6.1 The purpose of an archaeological field evaluation as defined by the Institute for Archaeologists (IFA, 2008) is to 'determine, as far as is reasonably possible, the nature of the archaeological resource within a specified area using appropriate methods and practices.'
- 1.6.2 This is further explained as 'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site.... If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate.'

- 1.6.3 Para 3.2.12 of the IFA guidelines states that 'the archaeologist must be mindful that the purpose of evaluation is to determine the presence, or not, of archaeological deposits and to assess their nature, extent etc, and must not unnecessarily interfere with archaeological remains. The archaeologist must make every effort to ensure that field evaluation is minimally-intrusive and minimally-destructive to archaeological remains in both the design and execution of work.'
- 1.6.4 An evaluation should thus augment any previous desk-based assessment, and provide all parties, particularly the Local Planning Authority, with sufficient material information upon which to base informed decisions regarding mitigation. An evaluation may therefore result in the need for further archaeological action and a further written scheme of investigation may be required in order to comply with planning conditions.
- 1.6.5 MOLA's archaeological evaluation methodology will conform to best professional practice as summarised in the appropriate Institute for Archaeologists Guideline for Evaluation (rev 2008)

1.7 Site specific objectives

- 1.7.1 The construction of the extension to the cardiac wing as part of the Phase B redevelopment is likely to remove any surviving archaeological features in this area. The primary objective of the evaluation is to confirm the extent, nature and significance of any surviving archaeological deposits or structures within the area of the Phase 2B redevelopment of the site.
- 1.7.2 The assessment of significance of any surviving remains is undertaken in the context of the wider archaeological research priorities for London. These are set out in the Museum of London's 'A research framework for Greater London' (MOL, 2002).
- 1.7.3 A number of broad objectives and research questions have been identified for this evaluation:

What is the nature and level of natural topography at the site?

What are the earliest deposits identified?

Is there any evidence for prehistoric activity on the site?

What evidence is there for Saxon/medieval activity on the site?

What are the latest deposits identified?

What is the extent of modern disturbance?

2 Evaluation methodology

2.1 Archaeological considerations

- 2.1.1 The previous archaeological impact assessment (MoLAS 2006) identified 5 areas of archaeological potential within the site (Areas A–E, see Fig 2). The proposed Phase 2B development involves the partial demolition and refurbishment of the cardiac wing and the construction of an extension. Phase 2B of the redevelopment will affect Area E, an open area located in the southern part of the site, to the south of the existing cardiac wing. The existing building is basemented and no archaeological survival is anticipated within its footprint. The current proposed development does not impact on deposits beneath the existing basement.
- 2.1.2 It is not clear at present whether the ground level of Area E has previously been reduced. The archaeological impact assessment notes that the tarmac surface appears to lie at the same level as the basement of the buildings to the north (21.145m OD). However it is equally possible that the lower level reflects a slope in the underlying topography and it is assumed that there is potential for archaeological survival until proved otherwise.
- 2.1.3 The evaluation involves the excavation of two archaeological trial trenches located within Area E where it coincides with the footprint of the new extension (detailed in Table 1 and Fig 3).

Table	1	Archaeological investigations
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Investigation Type	Location	Dimensions	Approx. Depth
Trench 1	Western part of Area E	2m x 2m	c. 1.5m
Trench 2	Central/eastern part of Area E	2m x 2m	c. 1.5m

- 2.1.4 Initial location of the trenches will be undertaken by MOLA in consultation with the Principal Contractor. A degree of flexibility should be allowed: in the case of unforeseen health and safety or logistical constraints, some adjustment to the location may be required.
- 2.1.5 In order to establish whether live services are present, all archaeological evaluation trench locations will be scanned with a Cable Avoidance Tool (CAT) by a competent person, before any excavation commences. If necessary further scanning will be undertaken within the location once the trench is opened.
- 2.1.6 Breaking out of the slab/modern ground surface will be undertaken by the Attendance Contractor and will be monitored by MOLA staff.
- 2.1.7 All undifferentiated material of recent origin (normally defined as twentieth century and later) within trenches will be removed down to the first significant archaeological horizon. This will be done by the Attendance Contractor under archaeological supervision by MOLA. The MOLA Site Supervisor will decide when remains of archaeological significance requiring recording are revealed.

- 2.1.8 Following initial exposure of archaeological horizons, investigation will be by hand, with cleaning, examination and recording both in plan and section. Any archaeological remains revealed will be recorded in the appropriate manner. Resort to machine excavation may be necessary. This technique is only appropriate for the removal of homogeneous and 'low-grade' layers where it can reasonably be argued that more detailed attention would not produce information of value, and where their removal may give a 'window' onto underlying levels.
- 2.1.9 Archaeological excavation will proceed only until significant archaeological levels have been reached and will be sufficient to allow the nature and extent of these to be identified. The levels at which all excavations will cease will be determined by on-site consultations between the Archaeology & Planning Officer of the local Authority (or their agent), the MOLA Project Manager and a representative of the client or his agent.
- 2.1.10 Investigation will not be at the expense of any structures, features or finds which might reasonably be considered to merit preservation in situ Where archaeological remains are to be preserved in situ they will be adequately protected from deterioration. Normally this involves covering or wrapping the deposits and features in a geo-textile such as Terram and sealing this with a layer of sand or other suitable soft materials.
- 2.1.11 Some features, such as pits and wells may merit excavation to a greater depth, and modern cut features will be used to provide a 'window' onto earlier levels.
- 2.1.12 In addition to the excavation of man-made deposits some assessment of 'naturally deposited' levels may be necessary, especially when these are organically preserved and laid down within archaeological timescales; for example alluvial or peat deposits.
- 2.1.13 Any finds of human remains will be left in situ, covered and protected. If removal is essential it can only take place under appropriate Faculty jurisdiction, Ministry of Justice (Coroner's Division) licence, environmental health regulations, coroner's permission, and if appropriate, in compliance with the Disused Burial Grounds (Amendment) Act 1981 or other local Act. It will be necessary to ensure that adequate security is provided.

2.2 Recording systems

- 2.2.1 A unique-number site code will be agreed with the London Archaeological Archive (LAA).
- 2.2.2 The recording systems adopted during the investigations will be fully compatible with those most widely used elsewhere in London, and those required by the Archive Receiving Body, the Museum of London.

2.3 Treatment of finds and samples

- 2.3.1 All recovery, retention and treatment of finds and samples will be carried out mindful of the overall purpose of the exercise, ie to evaluate for further decision making, as expressed in IFA (2008) para 3.2.12.and 3.3.8. To this end, all artefactual and ecofactual material will be reviewed on site for its capability to inform the evaluation report.
- 2.3.2 Where necessary, a supplementary strategy for sampling archaeological and environmental deposits and structures may be developed by MOLA in accordance with GLAAS and IFA guidelines. Advice will be sought from

- the LPA Archaeological Advisor and the English Heritage Regional Archaeological Science Advisor throughout the project, as appropriate. Subsequent off-site work and analysis of the processed samples and remains will be undertaken by MOLA Specialists
- 2.3.3 All retained finds and samples will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in a proper manner and to standards agreed in advance with the Museum of London.
- 2.3.4 All finds of gold and silver, or other objects definable as 'treasure', will be removed to a safe place and reported to the local Coroner according to the procedures of the Treasure Act 1996 and the Treasure (Designation) Order 2002. Where removal cannot be effected on the same working day as the discovery suitable security measures will be taken to protect the finds from theft.

2.4 Ownership of finds

- 2.4.1 Whereas ownership of any finds on the site lies with the landowner, it is necessary that the landowner gives the necessary approvals, licences and permissions to donate any finds recovered from the site to the Museum of London, to enable that body to carry out its obligations to curate the finds, in perpetuity, as part of the archaeological Archive from this site.
- 2.4.2 These approvals, licences and permissions shall be either confirmed in the Agreement and Contract regulating the archaeological works and/or confirmed by the completion of the relevant Deed of Transfer form (draft appended).
- 2.4.3 The client (or their agent) will make arrangements for the signing of the Deed of Transfer Form by the client or, if the landowner is different to the client, by the landowner.
- 2.4.4 Notwithstanding the above, subsequent arrangements may be made if required between the landowner and/or the client and the Museum for the conservation, display, provision of access to or loan of selected finds in or near their original location.

2.5 Reports and archives

- 2.5.1 On completion of the fieldwork an Evaluation report will be made available to the client and the Local Planning Authority within 6 weeks of the completion of fieldwork.
- 2.5.2 A short summary of the results of the evaluation will be submitted to the Greater London HER and NAR [using the appropriate archaeological report forms] and for publication in the appropriate academic journals.
- 2.5.3 Details of the project will be submitted to the online database maintained by the Online Access to the Index of Archaeological Investigations (OASIS) Project
- 2.5.4 Finds and records will be curated by a single organisation, and be available for public consultation in a site archive compatible with other archaeological archives in the Museum of London and adhering to standards set out in the following:
 - Archaeological Archive Forum, Archaeological Archives: a guide to best practice in creation, compilation transfer and curation (2011)

- Museum of London, General Standards for the preparation of archaeological archives deposited with the Museum of London, (2009),
- Museums and Galleries Commission's Standards in the Museum Care of Archaeological Collections (1992),
- Society of Museum Archaeologists' draft Selection, Retention and Dispersal of Archaeological Collections (1992).
- Society of Museum Archaeologists (1995) Towards an Accessible Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland, Scotland and Wales.
- United Kingdom Institute for Conservation Guidelines for the preparation of excavation archives for long term storage (1990)
- 2.5.5 Copyright of the written archive will be vested in the Museum.
- 2.5.6 Pursuant to these agreements the archive will be presented to the archive officer or relevant curator of the Museum within 6 months of the completion of fieldwork (unless alternative arrangements have been agreed in writing with the local planning authority). If there is further field work the archive for the evaluation will be presented with the archive for that field work.

2.6 Evaluation method agreement

- 2.6.1 An adequate archaeological methodology and trench layout for the evaluation must be approved by the Local Planning Authority prior to the start of work on site.
- 2.6.2 This recommended format attempts to define best practice but cannot fully anticipate conditions encountered as the evaluation progresses. Material changes to the approved evaluation format are however only to be made with the prior written approval of the Local Planning Authority.

3 Programme, staffing and attendances

3.1 Timetable and staffing

- 3.1.1 The timing and duration of the programme of archaeological evaluation will be determined by the contractor's overall programme and the nature and extent of any surviving remains. It is anticipated that the programme will not be longer than one week.
- 3.1.2 It is envisaged that a Senior Archaeologist will monitor the archaeological works, with one Archaeologists to help record any archaeological deposits revealed. Other specialists may be called in if necessary.

3.2 Attendances

- 3.2.1 For evaluations the attendances required by MOLA tend to be minimal. However, some provision for welfare and working conditions will need to be anticipated. Some or all of the following attendances may be required and supplied by the client or the client's agent.
- 3.2.2 The need for the shoring of trenches will be determined by a competent person taking into account ground conditions, groundwater conditions, weather conditions, nature of work to be undertaken, how long the work will take, adjacent structures. The shoring will be installed and maintained in accordance with CDM 2007 and HSG 150 throughout the occupancy of the site by a competent person employed by the Principal Contractor/client or his agents. The shoring will be inspected by a competent contractor (and a competent person form MOLA) before each shift, any event which may have affected the strength of the shoring, or any un-intentional falls of material or equipment.
- 3.2.3 Where mechanical or electric hoists are to be used in shored shafts, MOLA Health and Safety policy requires staff working in shafts less than 4m x 4m to leave the shaft before hoisting of buckets takes place and not to re-enter until the bucket is lowered back into position. Time for such evacuation will not form part of excavation programme. Beyond a depth of 3m within such shafts gas monitoring equipment will be required to ensure appropriate air quality for those working there. Where mechanical or electrical hoists are in use in larger excavation trenches, the area in which the hoist is in use must be clearly demarcated and no staff will enter this area while the hoist is being raised or lowered.
- 3.2.4 Safety guard-rails and suitable access points into the site and areas of excavation, away from any site traffic and machinery.
- 3.2.5 Ladders into all areas of excavation when the excavated depth requires such access.
- 3.2.6 If ground-water is encountered in the trenches, adequate pumps will be required to remove it in order to complete the excavations.
- 3.2.7 If necessary, an appropriate number of tungsten halogen lamps (500W minimum) with 110-volt transformer, adequate cabling, and power supply.
- 3.2.8 A suitable security system to operate overnight, weekends and holidays.
- 3.2.9 Labourers to assist in the removal of spoil from deeper areas of excavation.

4 Funding

4.1.1 Agreement on funding for the archaeological field evaluation is being sought via a separate document.

5 Bibliography

- ACAO, 1993 Model briefs and specifications for archaeological assessments and field evaluations, Association of County Archaeological Officers
- Archaeological Archive Forum, 2011 Archaeological Archives: a guide to best practice in creation, compilation transfer and curation
- BADLG, 1991 Code of Practice, British Archaeologists and Developers Liaison Group
- DCLG [Department of Communities and Local Government], March 2012 National Planning Policy Framework.
- English Heritage 2008 SHAPE 2008: A Strategic framework for Historic environment Activities and Programmes in English Heritage. Guidance for external grant applicants. Swindon English Heritage.
- GLA [Greater London Authority], July 2011 The London Plan. Spatial Development Strategy for Greater London.
- Greater London Archaeology Advisory Service, 2009: Standards for Archaeological Work London Region, External Consultation.
- Institute for Archaeologists (IFA), rev. 2008 By-Laws, Standards and Policy Statements of the Institute for Archaeologists: Standards and guidance
- MOLA 2009 Great Ormond Street Hospital Redevelopment Phase 2a Evaluation report (unpub MOLA rep)
- MoLAS, 2006 Great Ormond Street Hospital, Great Ormond Street, London, WC1, An archaeological impact assessment (unpub MoLAS rep)
- Museum of London, 1994 Archaeological Site Manual 3rd edition
- Museum of London, 2002 A research framework for London archaeology 2002
- Museum of London, 2009 General Standards for the preparation of archaeological archives deposited with the Museum of London
- Museums and Galleries Commission (1992) Standards in the Museum Care of Archaeological Collections.
- Society of Museum Archaeologists (1993) Selection, Retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland.
- Society of Museum Archaeologists (1995) Towards an Accessible Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland, Scotland and Wales.
- Standing Conference of Archaeological Unit Managers, 1991 revised 1997 Health and Safety in Field Archaeology, Manual
- Treasure Act 1996 Code of Practice (2nd Revision) 1996, DCMS
- Treasure (Designation) Order 2002, TSO
- Thompson, A, Westman A, and Dyson, T (eds), 1998 Archaeology in Greater London 1965-90: a guide to records of excavations by the Museum of London, Archaeol Gazetteer Ser Vol 2, London

6 Figures

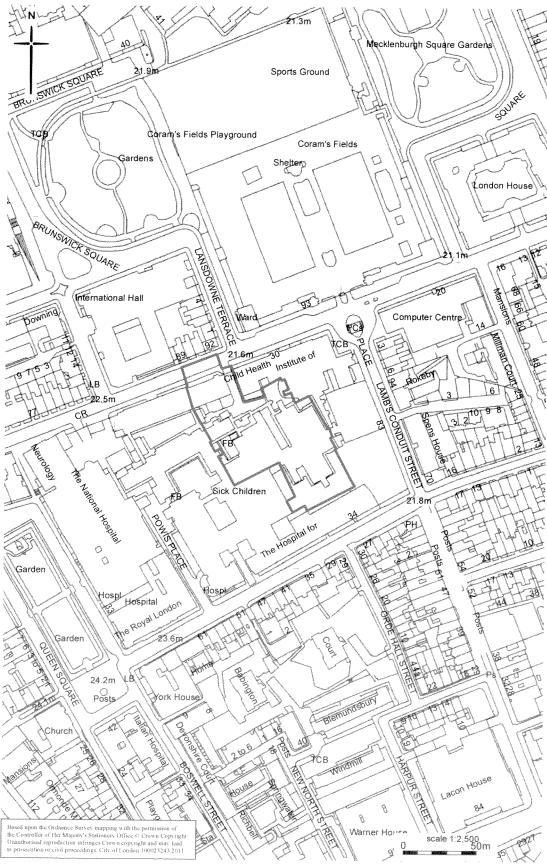


Fig 1 Site location

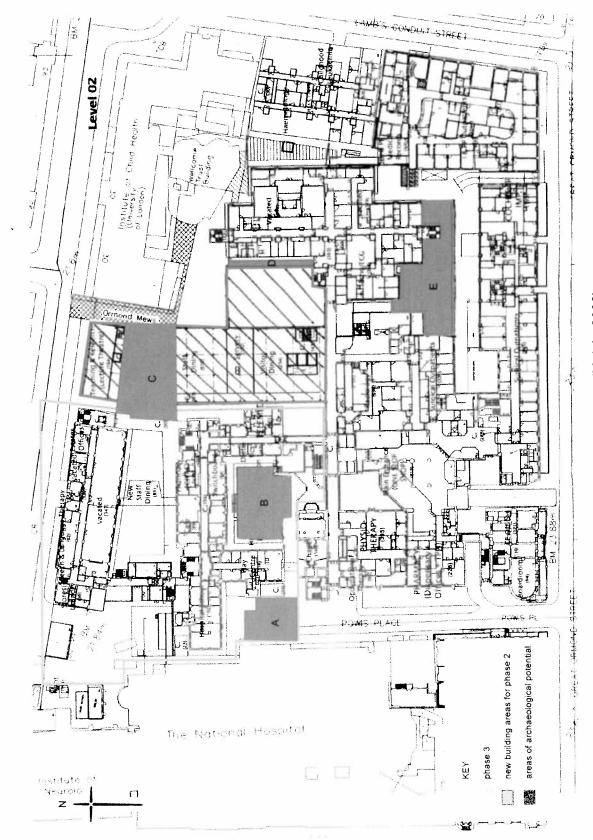
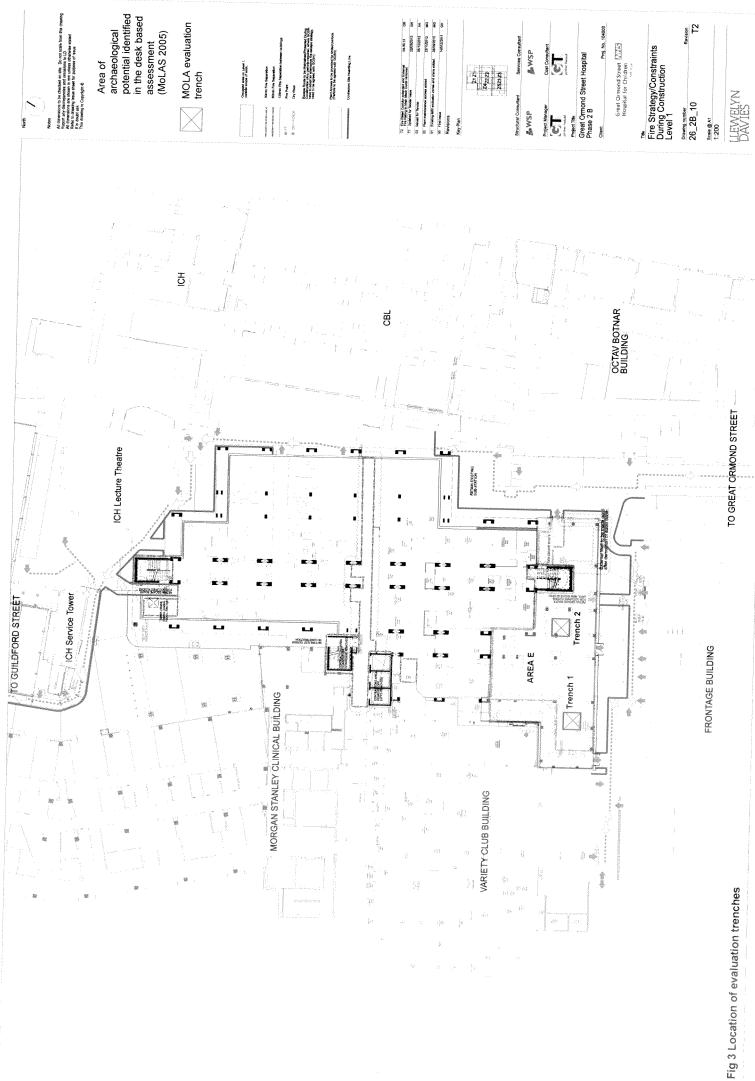


Fig 2 Areas of archaeological potential identified in the impact assessment (MoLAs 2006)



7 Appendix: Draft Transfer of finds ownership form

DATED 20

[]

-AND-

THE BOARD OF GOVERNORS OF THE MUSEUM OF LONDON

DEED OF TRANSFER

of Finds excavated at []

Site Code []

THIS DEED OF TRANSFER is made on the

day of

20

BETWEEN: -

[] a company registered in England under Reg. No [] whose registered office is situate at [] ("the Site Owner");

AND

THE BOARD OF GOVERNORS OF THE MUSEUM OF LONDON an exempt charity established under the Museum of London Acts 1965-1986, whose principal place of business is located at 150 London Wall, London EC2Y 5HN, ("the Museum") which expression shall include any Governors appointed from time to time acting in accordance with the powers vested in them under the Museum of London Acts 1965-1986.

WHEREAS

- A. The Site Owner is the owner of a property at [] known by its site code [] whereupon an archaeological intervention has been carried out ("Excavation").
- **B.** The Site Owner is the owner of any items of archaeological interest found during the Excavation.
- C. The Site Owner wishes to transfer to the Museum title to the items referred to in Recital B.
- D. The Museum has agreed to provide facilities for the accommodation and, at its discretion, the display of the items referred to in Recital B on condition that the same are assembled as an archive in accordance with the provisions of this Deed.

NOW IT IS HEREBY AGREED as follows: -

PREPARATION AND DELIVERY OF THE ARCHIVE

1.1 The Site Owner will procure the preparation of the items of archaeological interest found during the Excavation in accordance with the requirements of the Museum's General Standards for the Preparation of Archaeological Archives deposited with the Museum of London, a copy of which is available to the Site Owner for inspection, and generally in accordance with best archaeological practice. The Site Owner will also procure to be prepared a full inventory of the items so prepared ("the Finds Inventory") and a list of the boxes and other containers in which those items will be transported to the Museum ("the Final Transfer Summary"). The items of archaeological interest listed in the Finds Inventory are hereinafter referred to as "the Finds".

- 1.2 The Site Owner will arrange for delivery of the Finds, Finds Inventory and the Final Transfer Summary to the Museum without cost to the Museum, after consultation with the Museum as to the method and time of delivery.
- 1.3 Title to and risk in the Finds will pass to the Museum on delivery of the Finds to the Museum in accordance with clause 1.2.

2. WARRANTIES

- 2.1 The Site Owner warrants to the Museum that:
 - 2.1.1 [to the best of its knowledge and belief **delete as appropriate**] at the date of this Deed ownership of the Finds is vested exclusively in the Site Owner;
 - 2.1.2 [to the best of its knowledge and belief *delete as appropriate*] at the date of this Deed the Finds are free of all charges, encumbrances and third party rights and no right has been granted in respect of them which would affect the transfer of title to the Finds by the Site Owner to the Museum or otherwise give rise to any conflict with the provisions of this Deed;
 - 2.1.3 [to the best of its knowledge and belief *delete as appropriate*] at the date of this Deed the Site Owner has the unfettered right to transfer ownership and possession of the Finds to the Museum;
 - 2.1.4 the Site Owner will at its own cost take all steps which are or may be necessary at any time to cure any defects in the title to the Finds; and
 - 2.1.5 the Site Owner warrants that it or its contractors have complied with all of the requirements of the Treasure Act 1996 and any statutory modification or re-enactment of that Act, and all other legislative requirements relating to the Excavation.
- 2.2 The Site Owner will indemnify the Museum against any and all claims, demands, proceedings, costs, expenses, loss or damage, of whatever nature which may be made or brought against or incurred by the Museum arising out of or in connection with any breach of the warranties given respectively by the Site Owner in clause 2.1.

3. INTERPRETATION; GOVERNING LAW AND JURISDICTION

This Deed will be governed by and construed in accordance with the Laws of England and Wales regardless of the place of execution or performance. The English Courts will have exclusive jurisdiction to deal with any dispute or other difference arising out of or in connection with this Deed, unless the Museum chooses to invoke, or voluntarily submits to, the jurisdiction of some other tribunal.

IN WITNESS of which the parties hereto have executed the date first written above	nis document as a Deed on
[] By means of these signatures:	
	Director
	Director/Secretary
The COMMON SEAL of THE BOARD OF GOVERNORS OF THE MUSEUM OF LONDON was hereunto affixed in the presence of:	
	Chairman
	Secretary
	Ocuiciai y

