41–51 BOLSOVER STREET W1

City of Westminster

An archaeological evaluation report

April 2009

REGISTERED ORGANISATION IFA

MUSEUM OF LONDON

Archaeology Service

41–51 BOLSOVER STREET W1

City of Westminster

An archaeological evaluation report

Site Code: RHY07
National Grid Reference: 528934 182118

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Summary (non-technical)

This report presents the results of an archaeological evaluation carried out by the Museum of London Archaeology Service on the site of 41-51 Bolsover Street, W1, City of Westminster. The report was commissioned from MoLAS by Bolsover Street Ltd

Following the recommendations of a previous Archaeological assessment (MoLAS 2006) which recommended the need for archaeological field evaluation, three evaluation trenches were excavated across the southern half of the site.

The results of the field evaluation have helped to refine the initial assessment of the archaeological potential of the site. The evaluation recorded limited survival of features truncating the surface of natural terrace gravels, mainly comprising post-medieval (late 18th to late 20th century) construction and demolition; a redeposited garden soil and a probable palaeochannel of late glacial provenance. Waterlain silts were present in section in the central evaluation trench (Trench 2), consistent with the basal silts formed within a pond type feature as depicted by Rocque in the 18th century. Considerable depths of modern levelling material overlay and truncated earlier deposits.

In the light of revised understanding of the archaeological potential of the site the report concludes the impact of the proposed redevelopment is low.

Contents

List of Illustrations

1 Introduction

1.1 Site background

The evaluation took place at 41-51 Bolsover Street, W1, City of Westminster, hereafter called 'the site'. It is bounded to the north by commercial office blocks and a public house on Euston Road, to the south by Greenwell Street, to the west by Bolsover Street and to the east by Howard House (Fig 1). Most of the north and central part of the site is occupied by the Royal National Orthopaedic Hospital that includes the Grade II listed Outpatients' Hall in the centre of the site. The south west corner of the site is occupied by three terraced houses; the southern area of the site is occupied by a small car park.

The site is centred on NGR 528934 182118. The modern ground drops slightly from north to south. At the northwest corner of the site, the ground lies at 28.39m OD, and at the northeast corner 28.58m OD. This falls to 27.57m OD at the southwest corner of the site and 27.84m OD at the southeast corner. The site code is RHY07.

A desk-top *Archaeological (impact) assessment* was previously prepared, which covers the whole area of the site (MoLAS, 2006). The *assessment* document should be referred to for information on the natural geology, archaeological and historical background of the site, and the initial interpretation of its archaeological potential.

An archaeological field evaluation was subsequently carried out on a series of trenches within the area of the site to establish if any archaeological features or deposits existed.

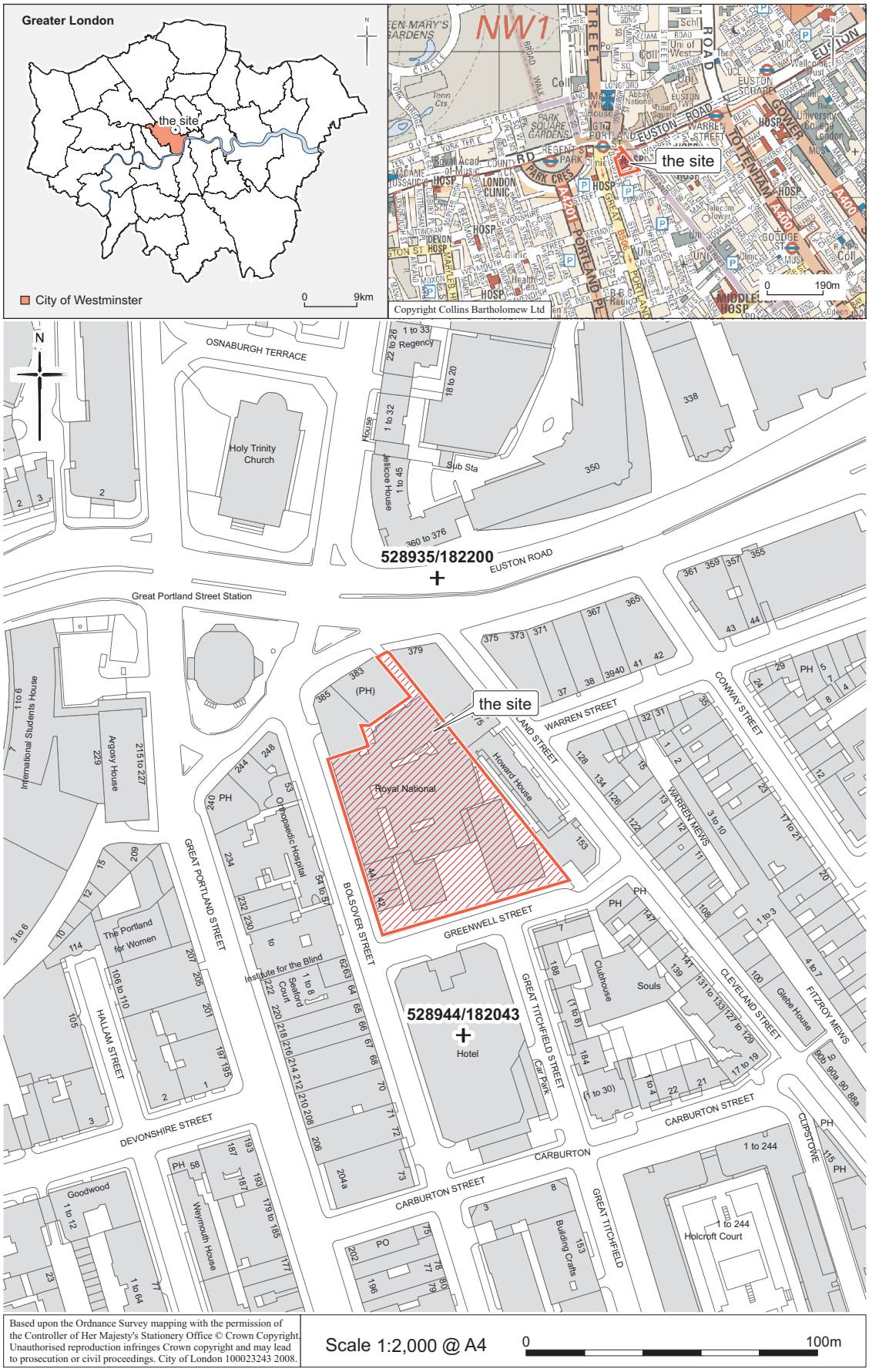

Fig 1 Location map

1.2 Planning and legislative framework

The legislative and planning framework in which the archaeological exercise took place was summarised in the *Desk Based Assessment* which informed the project design (*Method Statement*) for the evaluation (see Section 1.2, MoLAS, 2006).

The site contains the Grade II listed Outpatients' Hall. Apart from this, the site does not contain any nationally or locally designated (protected) archaeological sites, such as Scheduled Monuments or other Listed Buildings. The site does not lie within any Areas of Special Archaeological Priority (ASAP) as designated by Westminster City. The site lies outside but adjacent to the Regent's Park and Harley Street Conservation Areas as defined by the local authority

The present document forms the report of the archaeological evaluation on the site as required under the archaeological planning condition placed on the development

1.3 Planning background

The evaluation was carried out in accordance with the *Method Statement* (MoLAS 2007) in order to discharge the archaeological planning condition placed on the development proposal of the site (condition ref PT/ 06/094987/LBC) by Westminster City council and its archaeological advisor – GLAAS (Greater London Archaeological Advisory Service).

1.4 Origin and scope of the report

This report was commissioned by Bolsover Street Ltd and produced by the Museum of London Archaeology Service (MoLAS). The report has been prepared within the terms of the relevant Standard specified by the Institute of Field Archaeologists (IFA, 2001).

Field evaluation, and the *Evaluation report* which comments on the results of that exercise, are defined in the most recent English Heritage guidelines (English Heritage, 1998) as intended to provide information about the archaeological resource in order to contribute to the:

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

1.5 Aims and objectives

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

The following research aims and objectives were established in the *Method Statement* for the evaluation (Section 2.2):

- What is the nature and level of natural topography?
- What are the earliest deposits identified?
- Is there any evidence for the pond shown on Rocque's Map of 1746 in the south of the site?
- Is there any evidence for buildings relating to Bilson's Farm.
- What are the latest deposits identified?

2 Topographical and historical background

A detailed description of the geology, archaeology and history of the site was provided in the earlier *Archaeological (impact) assessment* (MoLAS 2006). A brief resume is provided here:

2.1 Site topography and geology

The majority of the site except for the car park in the southern part is underlain by a single level of basement. The western boundary of the site has level vaults extending under the pavement. Similar vaults run under the southern boundary of the site below the pavement in Greenwell Street (Soil Mechanics 2006).

The modern ground drops slightly from north to south. At the northwest corner of the site, the ground lies at 28.39m OD, and at the northeast corner 28.58m OD. This falls to 27.57m OD at the southwest corner of the site and 27.84m OD at the southeast corner (MoLAS, 2006).

BGS Sheet 256 (1994) shows Quaternary Lynch Hill Gravel River Terrace Deposits overlying Palaeogene deposits which comprise the London Clay Formation which rest on the Lambeth Group.

2.2 Roman period (AD43-410)

The area immediately around the site in the Roman period is not well known. No evidence of any occupation or other activity has been found in the area, although seven incomplete Roman bone pins, an iron brooch and a small fragment from a plate were found that the SMR records as 150m to the south of the site, although the precise location is not known.

2.3 The medieval period (AD410-1485)

Tottenhall manor estate is mentioned in Domesday Book (1086) as Prebendal Manor of St Pauls. Here, two Saxon potsherds were found but no evidence of occupation for this period has been found in the vicinity (460m to the northeast of the site). The main focus of the Early and Middle Saxon settlement was a busy trading port around Aldwych and Covent Garden, in an area known to Bede in the 8th century as Lundenwic.

In all likelihood the site was in open fields or was wooded through much of the medieval period.

2.4 The post-medieval period

At the Dissolution of the monasteries, between 1535 and 1540, Henry VIII appropriated part of the land to create a hunting park. The site was probably located within the park rather than towards the edge where a ditch and rampart (park pale), later surmounted by a fence (paling), were constructed to keep the deer in and poachers out.

A 1591 plan of Tottenhall Manor shows the site as fields, a situation that continued into the 19th century. Rocque's more detailed map of 1747 shows the site as mainly open fields, with Bilson's farm located to the north and further small buildings to the east. A large pond occupies the southeast part of the site. This pond is one of a series of large ponds by the side of the road that may have started life as small-scale hand-dug quarries for the construction of the road itself.

A hospital had been established on the site by the beginning of World War I. During World War II the southern part of the site was badly damaged. The terraced houses along Buckingham Street (modern Greenwell Street) were bomb damaged – the eastern four houses seriously so, with the other houses in the terrace sustaining blast damage only. The building to the rear of the terrace was damaged beyond repair. This area became a car park and the site for prefabricated structures, since demolished. A major rebuilding programme was undertaken from 1951 onwards.

3 The evaluation

3.1 Methodology

All archaeological excavation and monitoring during the evaluation was carried out in accordance with the preceding *Method Statement* (MoLAS, 2006), and the MoLAS *Archaeological Site Manual* (MoLAS, 1994).

Three evaluation trenches were excavated: Trenches 1 and 3 ran east to west and Trench 2 north to south across the site (Fig 2).

The slab/ground was broken out and cleared by contractors under MoLAS supervision. Trenches were excavated by machine by the contractors, and monitored by a member of staff from MoLAS.

The locations of evaluation trenches were recorded by MoLAS offsetting from adjacent standing walls and plotted on to the available site topographic survey (Drg. No L 3083/9, Laser Surveys Ltd.). This information was then plotted onto the OS grid by MoLAS geomatic staff.

A written and drawn record of all archaeological deposits encountered was made in accordance with the principles set out in the MoLAS site recording manual (MoLAS, 1994). Levels were calculated from Ordnance Survey benchmark on Cleveland Street at 27.70m OD.

The site has produced: 1 trench location plan; 3 trench plans at 1:20; 15 context records; 3 section drawings at 1:20; and 8 photographs. In addition 1 small bag of finds was recovered from the site as well as a 10 litre environmental soil sample.

The site finds and records can be found under the site code RHY07 in the MoL archive.

3.2 Results of the evaluation

For trench locations see Fig 2.

Evaluation Trench 1	
Location	Corner Bolsover and Greenwell Street
Dimensions	20m by 2.0m by 4.20m depth
Modern ground level/top of slab	27.69m OD
Base of modern fill/slab	23.89m OD
Depth of archaeological deposits seen	N/A
Level of base of deposits observed and/or base of trench	23.49m OD
Natural observed	23.89m OD

The base of the trench at 23.49m OD cut 0.10m into a natural deposit of friable light yellow fine sand which in turn was sealed by a 0.30m thick deposit of natural pinkish

red, fine sand and gravels [1] (Fig 3). Covering the natural sands was a re-deposited 'garden soil' 0.60m thick, consisting of a mid-brown, sandy silt with frequent inclusions of crushed mortar and large fragments of *c* 19th-century brick and tile [2]. Truncating this deposit was a 19th-century stepped brick foundation which ran north to south across the trench. The foundation was associated with houses that fronted onto former Buckingham Street and were damaged by bombing during the Second World War. The foundation was constructed of red and yellow stock bricks and measured 0.75m high by 0.60m and bonded with grey mortar [3]. Deposit [2] and foundation [3] were heavily disturbed by a 3.50m thick modern demolition or made ground deposit [4] that comprised loose, mid–grey, sandy silt with frequent lenses of sand and gravels and large inclusions of concrete and brick. Deposit [4] was truncated by the construction cut for a concrete slab base that extended 4.40m from the western extent of the trench down to the natural sands at 23.59m OD. The fill of this cut comprised a 2.0m thick deposit of gravel which was sealed by a reinforced concrete slab that was sealed by modern brick rubble and tarmac to 27.69m OD.

Evaluation Trench 2	
Location	Running N–S from entry gate to site
Dimensions	15.0m by 2.0m by 2.5m depth
Modern ground level/top of slab	27.47m OD
Base of modern fill/slab	26.87m OD
Depth of archaeological deposits seen	0.47m
Level of base of deposits observed and/or base of trench	24.74m OD
Natural observed	25.30m OD

The surface of natural gravels was seen at 25.30m OD [11], at the northern extent of Trench 2 (Fig 4); this was sealed by a 0.50m thick layer of mid-orange brown, alluvial clay with occasional inclusions of charcoal and rooting [8]. Another water-lain deposit, measuring 0.10m thick, sealed [8]: this consisted of a loose, dark grey brown, sandy silt with frequent inclusions of charcoal, chalk, small gravels and abraded fragments of tile [7]. Diffused into [7] was a layer of compact, mid-grey brown, sandy clay with frequent flecks of charcoal and small rounded gravels [6] which was sampled {1}. Deposits [6], [7] and [8] all may be attributed to the pond shown on Rocque's map of 1746 (Fig 7). At the southern extent of the trench a 19th-century cellar truncated all deposits down to 24.70m OD which consisted of a red brick wall 0.30m thick with York Stone slab flooring [10]. This had been back filled with a demolition deposit of brick rubble and mortar [9]. Covering the whole trench was a layer of 'type 1' material comprising gravels and tarmac to 27.47m OD [5].

Evaluation Trench 3	
Location	Running E–W eastern extent of site
Dimensions	20.0m by 2.0m by 1.60m depth
Modern ground level/top of slab	26.06m OD
Base of modern fill/slab	24.96m OD
Depth of archaeological deposits seen	N/A
Level of base of deposits observed and/or base of trench	24.46 m OD

Natural observed	24.96m OD

The base of trench 3 cut 0.50m into the natural sand and gravels [12] (Fig 5), a Paleochannel 4.0m wide [13] (Fig 5, Fig 6) was excavated at the eastern end of the trench the fill on this channel consisted of a firm, mid-orange, sandy silt with lenses of fine gravels [14]. The western extent of the trench had been truncated by a 19th-century backfilled soak-away and the construction for the present day portacabin base. The whole trench was covered with type 1 purple stone levelling material and concrete slab to 26.06m OD.

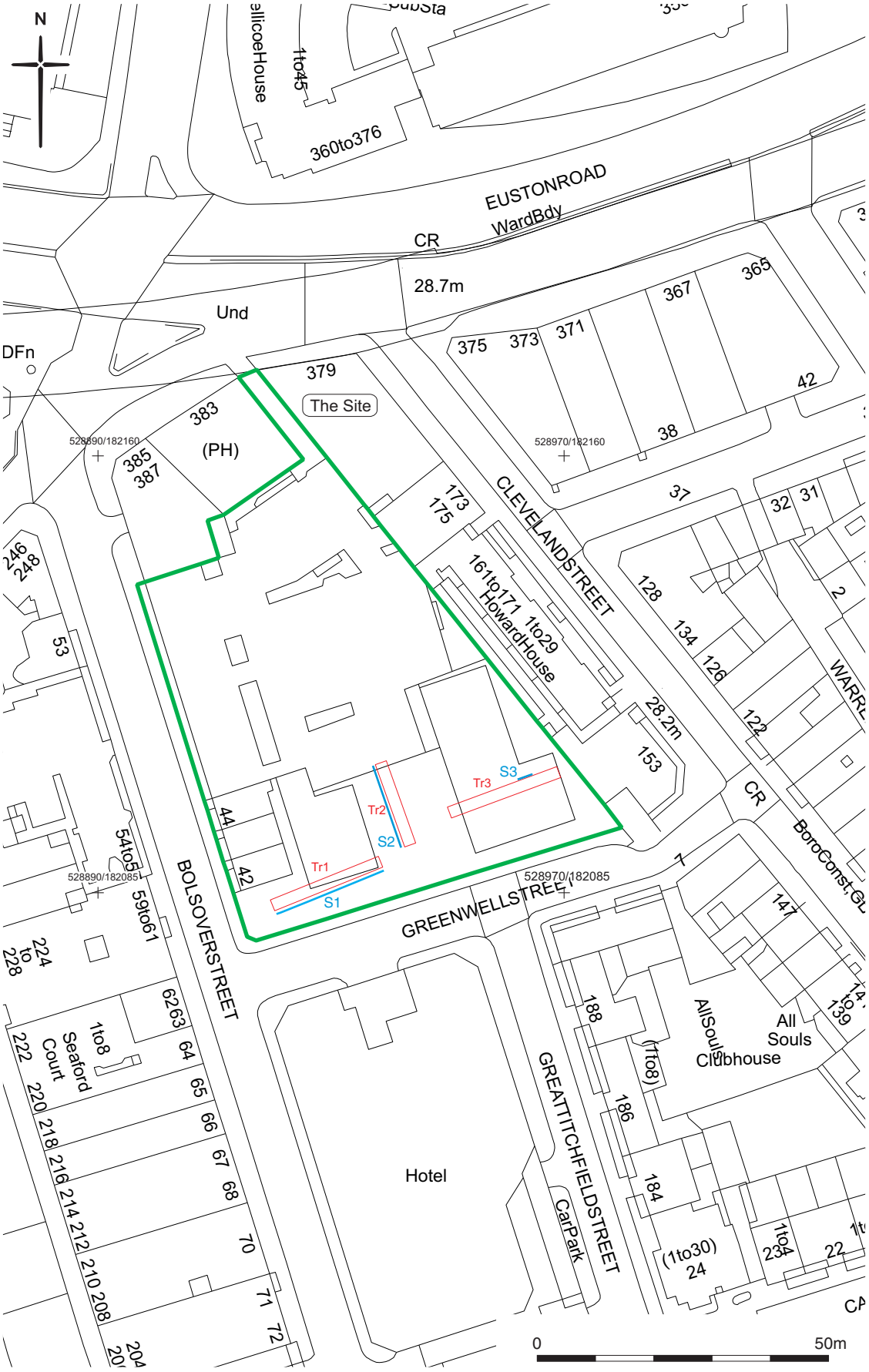

Fig 2 Evaluation trench locations

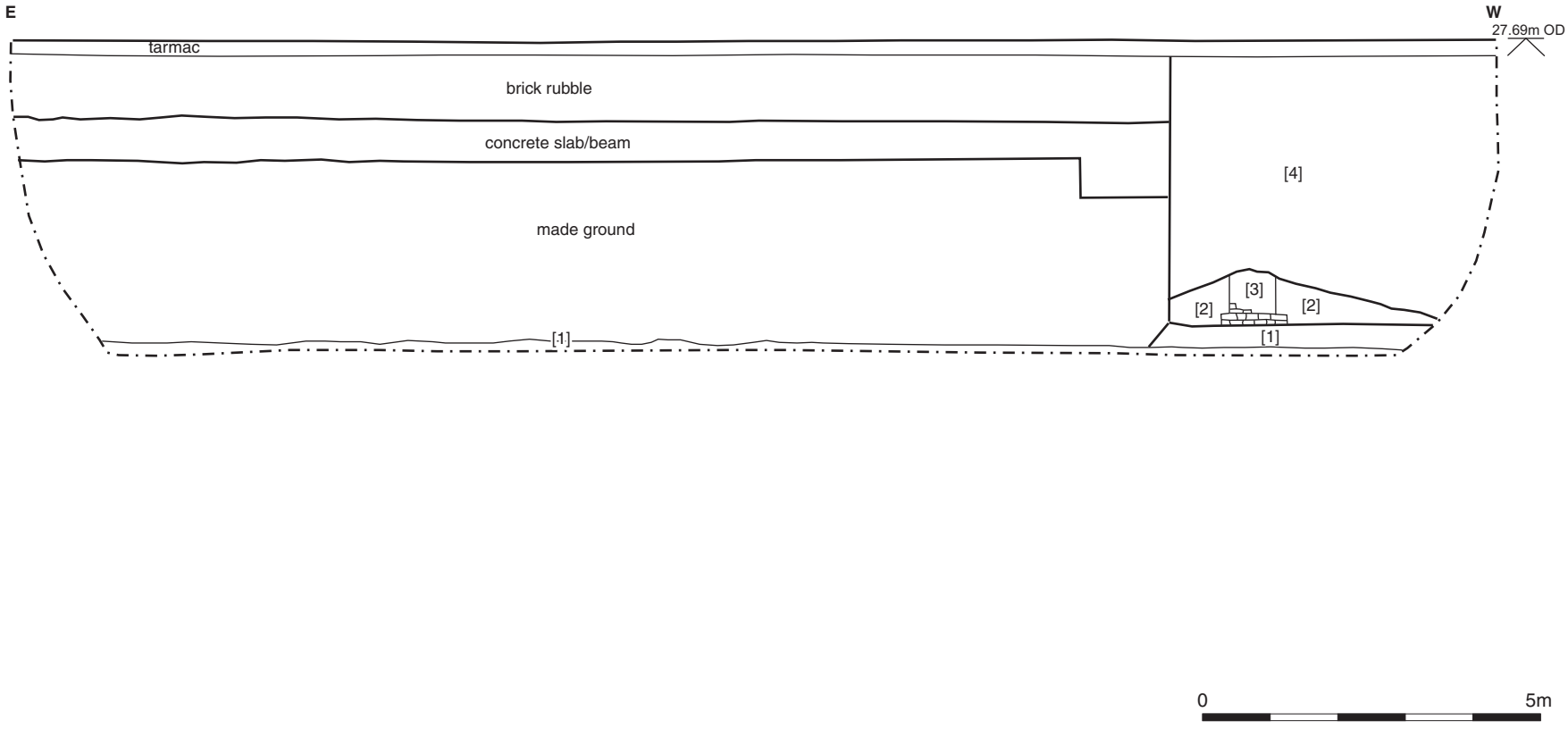

Fig 3 North facing section 1 of Trench 1

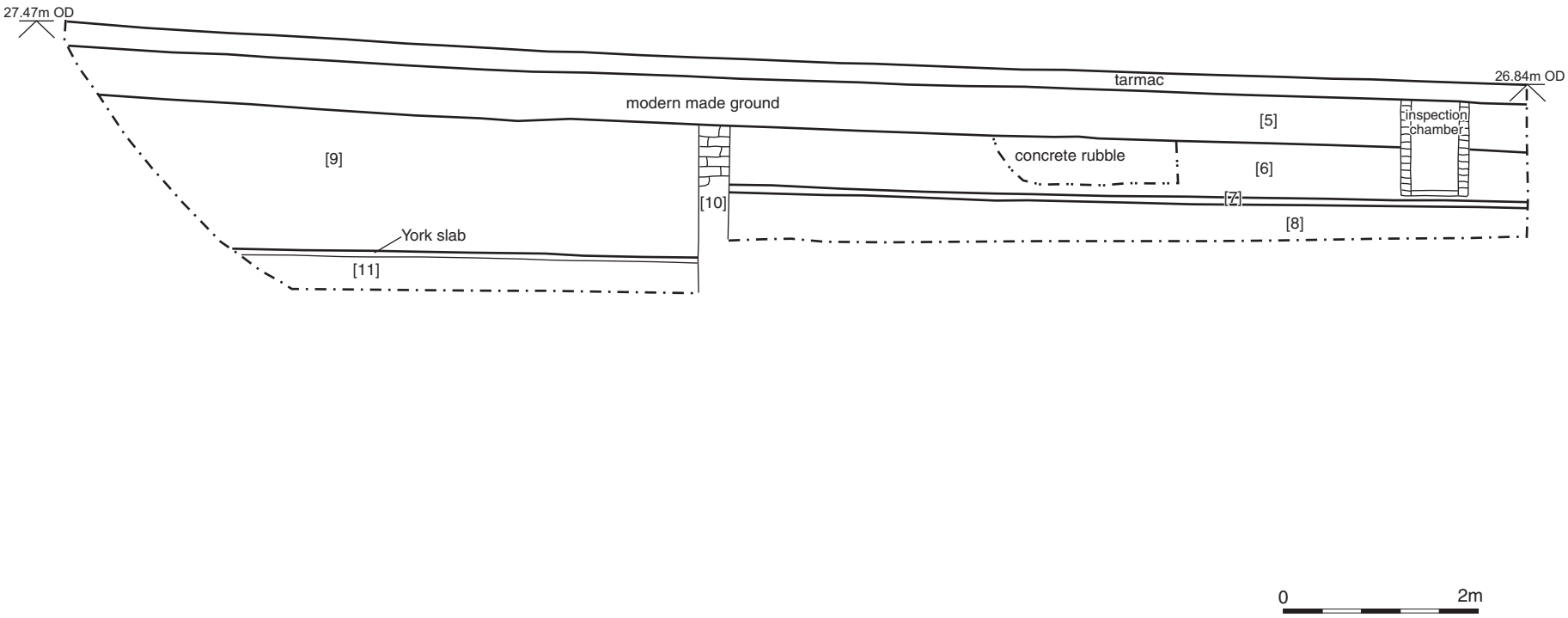

Fig 4 East facing section 2 of Trench 2

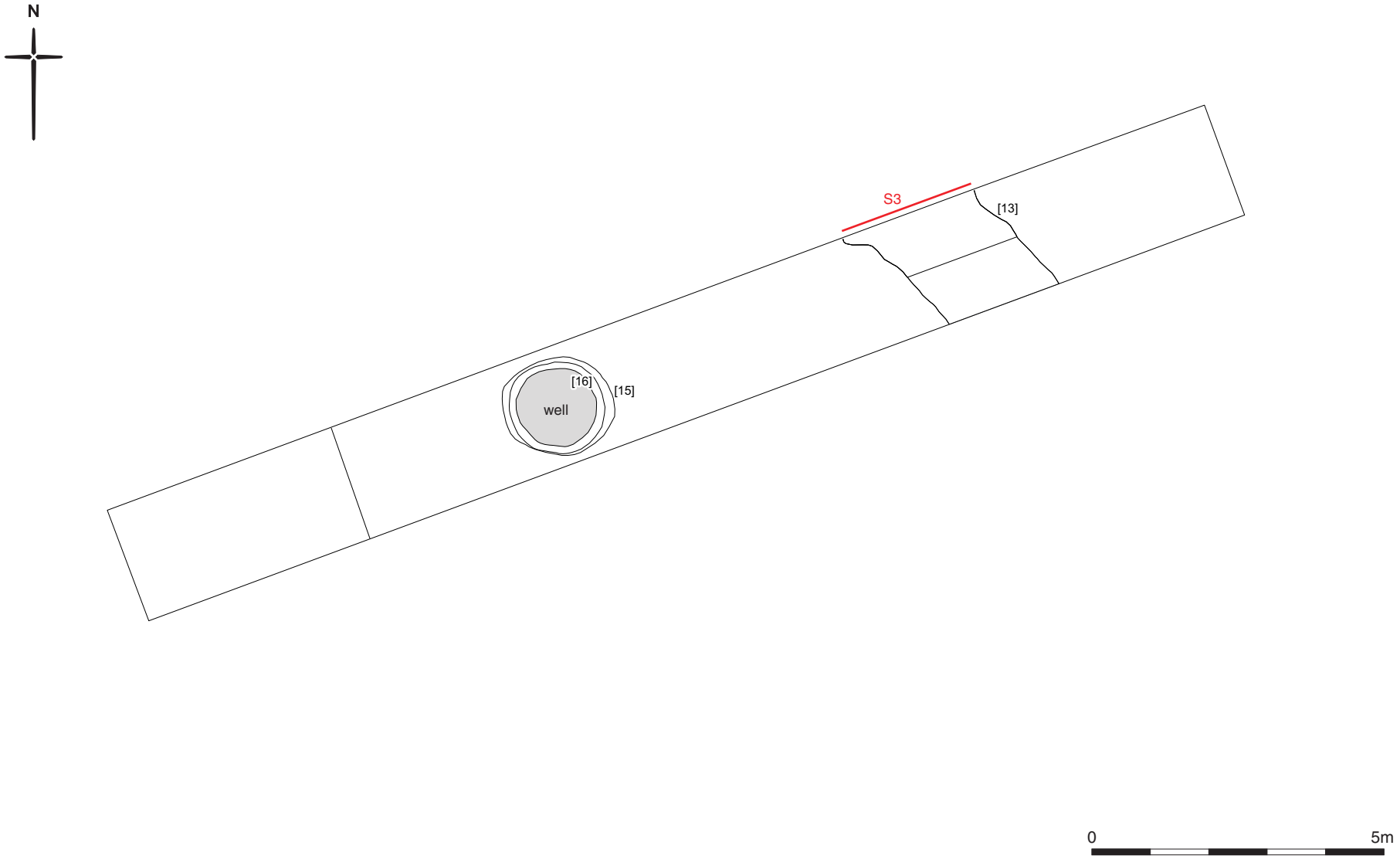

Fig 5 Plan of Trench 3

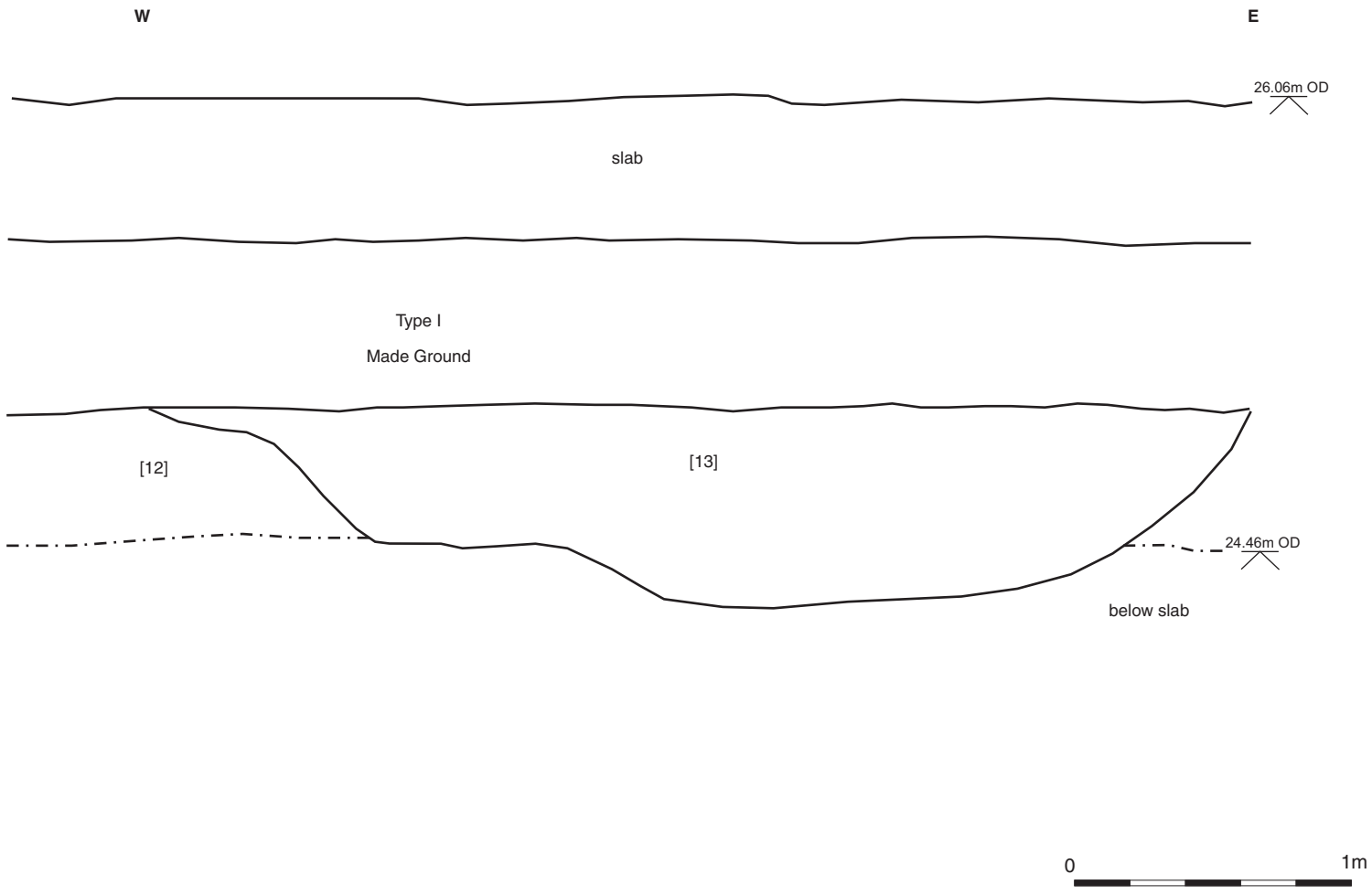

Fig 6 South-facing section 3 of palaeochannel [13], Trench 3

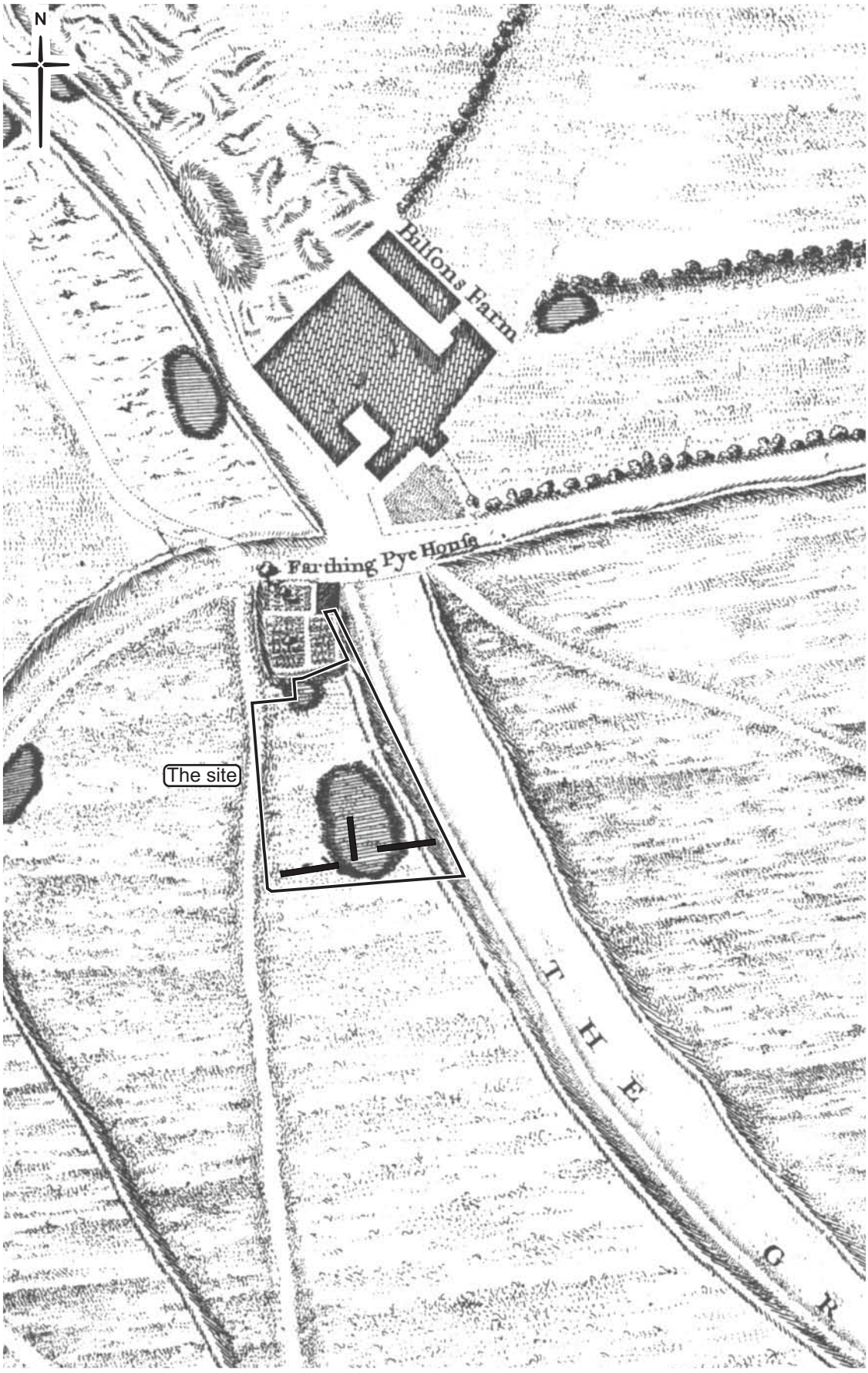

Fig 7 Location of trenches in relation to Rocque's map of 1746

3.3 Assessment of the evaluation

GLAAS guidelines (English Heritage, 1998) require an assessment of the success of the evaluation 'in order to illustrate what level of confidence can be placed on the information which will provide the basis of the mitigation strategy'. In the case of this site there is low potential for archaeological deposits.

The evaluation has shown survival of archaeology in the southern part of the site was limited to features truncating the surface of natural terrace gravels, mainly comprising post-medieval (late 18th to late 20th century) construction and demolition; a redeposited garden soil and a probable palaeochannel of late glacial provenance. Considerable depths of modern levelling material overlay and truncated earlier deposits

4 Archaeological potential

4.1 Realisation of original research aims

What is the nature and level of natural topography?
The surface of natural terrace gravels (Lynch Hill terrace) was recorded in all three trenches. The lowest survival was seen in Trench 1, where the friable light yellow to pinkish red sand and gravel was present at 23.89m OD. The surface of natural deposits in both Trench 2 and 3, by contrast, was significantly higher at 25.3m OD and 24.9m OD respectively.

What are the earliest deposits identified?
The possible course of a silt filled palaeochannel or glacial scar [13] was recorded in Trench 3. Although no dating evidence was recovered from the feature, the character of the channel and its fill is broadly consistent with late glacial fluvial/cryoturbation, bisecting the surface of the Lynch Hill gravels as a consequence of prolonged freeze–thaw activity.

Is there any evidence for the pond shown on Rocque's Map of 1746 in the south of the site?
Several alluvial/waterlain layers (contexts [6], [7] and [8]) were recorded towards the base of Trench 2, in the centre of the southern part of the site. Artefactual and other inclusions within the layers indicate a broadly post-medieval date of formation. No cut edges for the layers were recorded within the limits of the excavation, although it is the author's impression, based on the sharp contact and differentiated nature of the layers with the underlying gravel, that the layers were deposited within a cut feature, such as the pond. This corresponds to the trench location as conjectured on the Rocque map, see Fig 7.

Is there any evidence for buildings relating to "Bilson's Farm"?
The evaluation recorded no evidence of either buildings or activity associated with the structure referred to as Bilson's Farm.

What are the latest deposits identified?
Modern blinding/levelling deposits reflecting recent use of the site were recorded in all three trenches. These sealed demolition deposits of probable late 20th century date.

4.2 General discussion of potential

The evaluation has shown that the potential for survival of ancient ground surfaces (horizontal archaeological stratification) on the site is low. There is limited potential for survival of post-medieval cut features, mainly comprising the 18th century pond and later 19th century building foundations. However such survival is likely to be extremely limited in certain areas because of later demolition and truncation. The average depth of archaeological deposits where they do survive is likely to be 0.50m deep.

4.3 Significance

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

5 Assessment by EH criteria

The recommendations of the GLAAS 1998 guidelines on *Evaluation reports* suggest that there should be:

'Assessment of results against original expectations (using criteria for assessing national importance of period, relative completeness, condition, rarity and group value) .....' (Guidance Paper V, 4 7)

A set of guide lines was published by the Department of the Environment with criteria by which to measure the importance of individual monuments for possible Scheduling. These criteria are as follows: *Period*; *Rarity*; *Documentation*; *Survival/Condition*; *Fragility/Vulnerability*; *Diversity*; and *Potential*. The guide lines stresses that 'these criteria should not...be regarded as definitive; rather they are indicators which contribute to a wider judgement based on the individual circumstances of a case'.[1]

In the following passages the potential archaeological survival described in the initial Assessment document and Section 3.2 above will be assessed against these criteria.

Criterion 1: period
Taken as a whole, archaeology in the application site is characteristic of the late post-medieval period, where extant. The evaluation indicates limited survival of 18th century open area features such as the pond fills in Trench 2 and brick building foundations and associated structures dating to the late 19th century. With the exception of the undated palaeochannel, no features or deposits prior to 18th century land use were uncovered.

Criterion 2: rarity
There is nothing to suggest that any of the likely archaeological deposits are rare either in a national or regional context.

Criterion 3: documentation
There are no surviving documentary records for remains in the area from the Roman period. Whilst there may be considerable contemporary documentation for the later medieval period from *c* 1300 on, it is unlikely that any of this will be specific enough to relate to individual features.

Criterion 4: group value
None of the likely archaeological deposits are associated with contemporary single Monuments external to the site.

Criterion 5: survival/condition
The results above have demonstrated that archaeological remains will be horizontally truncated to dramatically different levels across the site. No datable remains earlier than the 18th century were encountered and it is suspected that he site may have been

[1] Annex 4, DOE, Planning and Policy Guidance 16, (1990). For detailed definition of the criteria see that document. Reference has also been made to Darvill, Saunders & Startin, (1987); and McGill, (1995)

landscaped and levelled from the 19th century onward to provide suitable ground for construction. The partial evidence of an 18th century pond also indicates earlier truncation of the site as a consequence of quarrying.

Criterion 6: fragility
Experience from other sites has shown that isolated and exposed blocks of stratigraphy can be vulnerable to damage during construction work.

Criterion 7: diversity
Clearly, taken as a whole, the archaeological deposits which are likely to be found in the site do not represent a diverse and heterogeneous group of archaeological remains of all types and periods. However, this diversity is in itself the product of a random process of vertical and horizontal truncation and separation. There is no reason to suggest that the diversity *per se* has any particular value which ought to be protected.

Criterion 8: potential
(the term Potential in this context appears to mean that though the nature of the site, usually below-ground resources, cannot be specified precisely, it is possible to document reasons predicting its existence and importance)

There is little potential in the deposits and features found that contribute to a wider understanding of the area.

6 Proposed development impact and recommendations

The proposed redevelopment at 41–51 Bolsover Street comprises the construction of a new residential development with a basement car park over most of the site and a new outpatients department for the hospital. The impact of this on the surviving archaeological deposits will be to completely remove any potential surviving archaeological deposits across the southern half of the site, within the proposed footprint of the new build.

The assessment above (Section 5) does not suggest that preservation *in situ* would be the only appropriate mitigation strategy. MoLAS does not consider that any potential archaeological deposits, where extant, should be excavated archaeologically in advance of any further ground reduction (ie preservation by record). The evaluation has shown there is limited survival of late post-medieval features within the site, of limited local significance, truncated by modern activity to a variety of levels, in most cases removing all horizontal deposits. This report recommends that no further work is necessary

The decision on the appropriate archaeological response to the deposits revealed within rests with the Local Planning Authority and their designated archaeological advisor (GLAAS).

7 Acknowledgements

MoLAS wishes to thank Mike Keaveney from Ridgeford Properties Ltd and Diane Walls the English Heritage Monitor for the City of Westminster.

8 Bibliography

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9 NMR OASIS archaeological report form

9.1 OASIS ID: molas1-46111

Project details

Project name	41-51 BOLSOVER STREET
Short description of the project	MoLAS carried out a three trench evaluation across the southern part of the site. The evaluation recorded survival of archaeology in the southern part of the site was limited to features truncating the surface of natural terrace gravels, mainly comprising post-medieval (late 18th to late 20th century) construction and demolition; a redeposited garden soil and a probable palaeochannel of late glacial provenance. Waterlain silts were present in section in the central evaluation trench, consistent with the bsal silts formed within a pond type feature as depicted by Rocque in the 18th century. Considerable depths of modern levelling material overlay and truncated earlier deposits
Project dates	Start: 19-09-2007 End: 28-09-2007
Previous/future work	Yes / No
Any associated project reference codes	RHY07 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Other 3 - Built over
Monument type	PALAEOCHANNEL Uncertain
Monument type	POND Post Medieval
Significant Finds	NONE None
Methods & techniques	'Sample Trenches'
Development type	Urban residential (e.g. flats, houses, etc.)
Prompt	Planning condition
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	GREATER LONDON CITY OF WESTMINSTER MARYLEBONE ST JOHNS WOOD AND MAYFAIR 41–51 BOLSOVER STREET
Postcode	W1
Study area	3750.00 Square metres
Site coordinates	TQ 28934 82118 51.5227461006 -0.141324303360 51 31 21 N 000 08 28 W Point

Height OD	Min: 23.89m Max: 25.30m

Project creators

Name of Organisation	MoLAS
Project brief originator	Greater London Archaeology Advisory Service
Project design originator	MoLAS
Project director/manager	Ros Aitken
Project supervisor	Stephen Turner
Type of sponsor/funding body	Ridgeford Propoerties Ltd

Project archives

Physical Archive recipient	LAARC
Physical Contents	'Ceramics'
Digital Archive recipient	LAARC
Paper Archive recipient	LAARC
Paper Contents	'Stratigraphic','Survey'
Paper Media available	'Context sheet','Correspondence','Diary','Drawing','Plan','Report','Section','Survey'

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	41-51 BOLSOVER STREET: a report on the evaluation
Author(s)/Editor(s)	'Turner, S.'
Date	2008
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