

TRANSFORMING TATE MODERN
Bankside
London SE1

London Borough of Southwark

Watching brief

February 2012



TRANSFORMING TATE MODERN Bankside London SE1

Site Code TMB09

A report on the archaeological watching brief

Sign-off History:

Issue No.	Date:	Prepared by:	Checked/ Approved by:	Reason for Issue:
1	27.02.12	Hana Lewis	D Seeley	1st Issue

Graphics: Juan Jose Fuldain

© Museum of London Archaeology

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

Summary (non-technical)

This report has been commissioned from Museum of London Archaeology (MOLA) by Mills Whipp Projects on behalf of the client, the Tate Modern, in order to record and assess the results of a watching brief carried out at Tate Modern, Bankside, London SE1 .

The excavation of a crane base trench (TC2) was monitored between 30/01/2012 – 06/02/2012, during ground works for the construction of the new Tate Modern 2 building, located by the south-western corner of the existing Tate Modern building.

No archaeological deposits were uncovered, due to severe modern truncation, and natural ground was also not observed.

Table Of Contents

1	Introduction	1
1.1	Site background	1
1.2	The planning and legislative framework	1
1.3	Planning background	1
1.4	Origin and scope of the report	2
1.5	Aims and objectives	2
2	Topographical and historical background	3
2.1	Topography	3
2.2	Prehistoric	3
2.3	Roman	4
2.4	Saxon	4
2.5	Medieval	4
2.6	Post-medieval	5
3	The watching brief	6
3.1	Methodology	6
3.2	Results of the watching brief	6
4	Potential of archaeology	7
4.1	Original research aims	7
4.2	New research aims	7
4.3	Significance of the data	7
5	Publication and archiving	8
6	Acknowledgements	9
7	Bibliography	9
8	NMR OASIS archaeological report form	11

List Of Illustrations

Fig 1 Site location plan	14
Fig 2 Trench location plan	15
Fig 3 Crane base trench (looking west)	16
Fig 4 Crane base trench; piles and maximum depth of trench excavation (looking west)	16

1 Introduction

1.1 Site background

The watching brief took place at the Tate Modern, Bankside, London Borough of Southwark SE1, hereafter called 'the site'. The site is situated to the rear of the south-west section of the Tate Modern building and is bounded by Holland Street to the west, Park Street to the east and Sumner Street to the south (Fig 1). The centre of the site is at OS National Grid Reference 531925 180390. Modern pavement level near to the site lies at c 3.9m OD. The site code is TMB09.

Prior to the archaeological investigations, MOLA was commissioned to contribute a chapter in respect of archaeological remains and the built heritage to an *Environmental Statement* for the site (Planning application submitted by the board of Trustees of the Tate Gallery, Environmental statement Vol 1: Chapter 14, Archaeology and Built Heritage). This chapter summarised the likelihood for archaeological survival on the site and identified areas of maximum archaeological potential and it can be referred to for information on the natural geology, archaeological and historical background of the site (MOLA, 2008).

A field evaluation and a watching brief were previously carried out by MOLA on the site in April–July 2009, which involved the excavation of two archaeological evaluation trenches and the monitoring of six boreholes that were situated to the west and north of the Tate Modern building. An *Evaluation report* was written on the results (MOLA, 2009).

The archaeological evaluation and watching brief of 2009 were followed by a second watching brief of a single trench, which measured 25m by 15m, that was undertaken by MOLA in April 2010. A third watching brief also took place on site on 1/12/2011, which involved the monitoring of the drilling of a pile position.

The *Evaluation report*, the two watching brief summaries and the previous *Environment Statement* informed the design - the *Written Scheme of Investigation (WSI)* and the *Method Statement* - for the current watching brief, which was eventually carried out (Mills Whipp Projects, 2010; MOLA, 2010).

1.2 The planning and legislative framework

The legislative and planning framework in which the archaeological exercise took place was summarised in the *Written Scheme of Investigation (WSI)* (Mills Whipp Projects 2010, Section 3), which formed the project design for the watching brief.

The site is situated within the Southwark Archaeological Priority Zone and Bankside and Bear Gardens Conservation Area as specified by the London Borough of Southwark. Tate Modern 1 is not a Listed Building and no Listed Buildings are present within the site boundary.

1.3 Planning background

The archaeological investigations have been carried out at the site in response to Condition 10 which is attached to the planning permission of the Transforming Tate Modern Project (Ref: 10-AP-0928).

This states:

Prior to commencement of development works an archaeological evaluation shall be undertaken, according to the details submitted with this planning application. A report detailing the results of the evaluation will be submitted to and approved by the Local Planning Authority. Dependent upon the results of this evaluation a suitable programme of archaeological mitigation works will be agreed in writing with the Local Planning Authority. This agreement will include a timetable for undertaking the archaeological mitigation works and the production of a final report and publication.

1.4 Origin and scope of the report

This report was commissioned by Mills Whipp Projects on behalf of the client, Tate Modern, and produced by Museum of London Archaeology (MOLA). The report has been prepared within the terms of the relevant Standard specified by the Institute for Archaeologists (IFA, 2001).

The purpose of the watching brief was to determine whether archaeological remains or features were present on the site and, if so, to record the nature and extent of such remains. A number of more site-specific research aims and objectives were established in the preceding *WSI* (Mills Whipp Projects 2010, Section 5.1), and are outlined in the following section.

The purpose of the present report is to analyse the results of the excavation against the original research aims, and to suggest what further work, including analysis or publication (if any), should now take place.

1.5 Aims and objectives

The following research aims and objectives were established in the *WSI* for the watching brief (Section 5.1):

- RA1. What is the nature, elevation and depth below the existing ground surface of the natural geology?
- RA2. Are there indications of archaeological features at the surface and cut into the natural geology?
- RA3. What is the nature and date of the earliest deposits overlaying the natural ground surface?
- RA4. What was the nature of the environment on site in the prehistoric period and is there evidence for activity on the site in this period?
- RA5. What was the nature of the environment on site in the Roman period and is there evidence for activity on the site in this period?
- RA6. At what point does the land become reclaimed from the river? How is this achieved?
- RA7. What is the nature and date of later deposits with respect to the medieval and post medieval landuse, especially indications for the leisure industry, domestic development and later industrial landuse in the area?

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

2 Topographical and historical background

2.1 Topography

After the last ice age the area formed a low-lying floodplain with areas of higher ground intersected with streams and rivulets. The basic geology consists of London Clay of Eocene date overlain to the south by relatively recent flood plain gravel. Certain areas of higher ground have been identified and are referred to as 'eyots'. Generally the eyots have a surface level of 1m AOD. The land surface in these areas consisted of naturally deposited sand or gravels overlying clay.

The earliest deposit excavated at New Globe Walk, to the east of the site, was alluvium, overlain by organic material filling a former channel of the Thames from -0.05m OD to +0.15m OD. At Skinmarket Place, 150m to the east of the site, part of a natural sand and gravel island was recorded at +0.66m OD. Also to the east of the site, at Southbridge House, Tilbury IV peats, sealed by water-lain clays, were recorded at -0.30m OD. Important evidence of activity dating to the Neolithic/Bronze Age has been recorded immediately to the west of the site at Hopton Street, including possible land surfaces at a height of between +0.94m to +1.12m OD. Land use indicative of probable land clearance, agricultural practices and occupation was found, suggesting that this area may have been situated on an eyot. Natural sands and gravels were recorded at a height of between 0.10m OD and 0.42m OD.

Previous ground investigation in the vicinity of the site has revealed alluvium between 1m OD and -1.80m OD and natural gravels between 0m OD and -5.20m OD. London Clay has been recorded between -5.50m OD and -6.35m OD. The northern limit of the Tate Modern 2 Development is located approximately 155m to the south of the present bank of the River Thames, and the modern ground level in the vicinity ranges from approximately +3.80m to +4.20m OD.

2.2 Prehistoric

In prehistoric times the Thames was a much wider, shallower, slower flowing river than it is today. The Southwark bank comprised a marsh with numerous channels and gravel islands of higher, drier ground.

At Emerson Place, to the east of the site, flint implements dating to the Mesolithic period were recovered in the 19th Century and lithics discovered at Hopton Street, to the west of the site, were also found to contain a small percentage of Mesolithic to Early Neolithic material. An excavation at Skinmarket Place, 150m to the east of the site, revealed Neolithic pottery and flint artefacts. This evidence was found to be sealed by water-lain clays, which, in turn, were cut by early medieval ditches.

Past excavations at Hopton Street and Holland Street, also to the west of the site, have revealed the site to be located on a natural sand eyot, which was occupied during the late Neolithic/early Bronze Age. This included a possible Neolithic/Bronze Age land surface and evidence of ard marks, postholes, pits, flint work and pottery of a similar date. Holland Street was subsequently covered by a layer of alluvium and not utilized until the 16th century.

2.3 Roman

During the Roman period the site would have been located on the edge of a river channel with an island of higher ground in the northern part of the site. With rising tidal levels in the subsequent centuries the area would certainly have become marshy and would have periodically flooded. However, to the south of the site, at Ewer Street, Roman finds were discovered in the 19th century. The finds included coins, pottery and glass objects, which were potentially associated with inhumations. A coin hoard was also found in 1864. This suggests that the site and immediate vicinity may have been accessible for a time during the Roman period.

In 1980, archaeological salvage work at 58 Park Street, to the east of the site, recorded a Roman timber revetment consisting of pile-driven oak posts with horizontal planks behind them, set into a marsh deposit. It most likely bordered a channel to the west, and formed part of a land reclamation scheme to contain the marsh and drain the ground. Dating evidence from behind the revetment suggests that it was not constructed before the late 3rd century.

2.4 Saxon

There is no archaeological evidence for Saxon activity in the locality of the site, although some development along the riverfront is documented by the time the Domesday Book was compiled in 1086 when the area was designated a 'Liberty' of autonomous monastic land.

2.5 Medieval

In 1127, the site area became part of the Bishop of Winchester's manor and came to be known as the Liberty of the Clink, after the Bishop's infamous prison. The area was also located within the parish of St. Saviour's Church (now Southwark Cathedral). Owing to its proximity to London and its lax regulations, the riverfront 'stews' developed into a series of inns, gambling dens and brothels. Maid Lane (now Park Street) to the south possibly owes its name to the brothels along the riverfront. The river channel to the east would have silted up by this time leaving deep alluvial deposits in this southeastern area of the site.

Work at Millennium Bridge, north of the site, revealed a sequence of timber revetments, of which the earliest activity was thought to be of c 12th century date. At 37–67 Bankside, excavation exposed the tops of at least three parallel east-west revetments which were of possible late medieval (and post-medieval) date.

The first recorded attempts of land reclamation around the site date to the 14th century and were probably as a response to rising river levels. At this time, revetments or dykes were constructed along the line of Upper Ground and Belvedere Road, to the northwest of the present site. The embankment also appears to have formed the common way between Lambeth and Bankside. Most of the land was marginal, although gradually drained and developed for agriculture.

A medieval sword has been found within the site area and evidence of late medieval activity has also been found on the site, in the form of a well, wall, piling and dumps of 16th century date.

2.6 Post-medieval

By the 16th century development was spreading south from the riverfront and the garden plots of residential houses, which lined the frontage of Bankside, were situated over the northern part of site at this time. By the 17th century, the site lay in a large field which was known as 'Pye Garden', which may have been the remains of the Pike Gardens. The centre of the site was open ground and the areas around the site which had not already been built over were extensively cultivated and a number of drainage channels were utilised. This open land was probably given over to grazing, orchards and market gardening.

Rocque's map of 1746 shows the area had developed considerably since the 17th century and the industrial focus of the area is clear. The area of the proposed site development lies over a number of properties. The western area lies over the Peacock brewhouse and Cockpit Court, which may have been associated with the Glassworks that lie just to the north. The eastern area lies over the southerly part of Pye Garden and south of an industrial timber yard.

From the late 18th century, commercial and industrial premises and tenements rapidly developed the area. Excavations at Hopton Street, to the west of the site, recorded the presence of a series of 18th–19th century glasshouses/kilns. By the later 19th century, the site was more extensively covered by structures, including the Phoenix gas works, an engineering works, whitelead works, saw mills and a timber yard, buildings and yards associated with Phoenix Wharf, stables and an iron yard in the north-west, as well as a number of residential tenements which were located over much of the remaining site area.

By the 1950s, the Bankside Electricity Works was located on the position of the Tate Modern. Construction and minor changes continued on the site of the power station until it ceased operation in 1982. The present building was constructed as a power station in two phases, to a design by Sir Giles Gilbert Scott. The Building contractors were Sir Robert McAlpine and Sons for Phase 1, and Higgs and Hill for Phase 2. The first phase, which comprised the western half of the building including the single chimney, was completed in 1953, prior to demolition of the old coal-fired power station. The eastern section followed and was commissioned in 1963. The station was oil-fired and ceased operation in 1982. The building is a brick-clad steel structure, symmetrical with a central square tower-like chimney 99 metres (m) (325 foot (ft)) high. The site was later purchased by The Trustees of the Tate Gallery. The Boiler House and Turbine Hall were converted to form the first section of Tate Modern 1, which opened in 2000. The building has been converted by the leading Swiss architects Herzog & de Meuron, whose plans have highlighted the building's new function while respecting the integrity of Sir Giles Gilbert Scott's original design. The most noticeable change to the exterior of the building is a new two-storey glass structure or Light Beam spanning the length of the roof.

EDF Energy continues to use the Switch House as a major sub-station and control area. In the south-western area of the site, beneath a paved terrace lawn (i.e. underground), are three 40m diameter disused oil storage tanks, each having a capacity of 4,000 tons, which cover the southern area of proposed building (Tate Modern 2). To the east of the Tate Modern 2 site, between the remainder of the EDFE-occupied Switch House and the EDFE tunnel access to the south is an area currently occupied by the Southeast Annexe and neighbouring single storey buildings.

3 The watching brief

3.1 Methodology

All archaeological excavation and recording during the watching brief was done in accordance with the *WSI* (Mills Whipp Projects, 2010), the *Method Statement* (MOLA, 2010) and the *Archaeological Site Manual* (MoLAS, 1994).

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

The locations of the areas of excavation were recorded by the MOLA Geomatics team from survey plans originally provided by Gardiner & Theobald and this information was then plotted onto the OS grid.

The heights of observations were recorded relative to Ordnance Datum via an OS benchmark, at 7.8m OD, which was situated on the concrete slab top of the tank that formed the western limit of the crane base trench.

The site records can be found under the site code TMB09 in the MoL archive.

3.2 Results of the watching brief

One trench was monitored during the watching brief, which was located in a position which is to be allocated in use to a crane. The trench has been recorded as 'Tower Crane 2' (TC2) and has been located on Fig 2.

<i>Tower Crane 2 (TC2) trench</i>	
Location	Central site area
Dimensions	6m x 6m x 4m maximum depth
Modern ground level/top of slab	7.8m OD
Base of modern fill/slab	3.8m OD maximum depth
Depth of archaeological deposits seen	N/A
Level of base of deposits observed	3.8m OD
Natural observed	N/A

No archaeological deposits were found or recorded in the trench as the area had been entirely truncated by modern activity. The Tate Modern basement formed the northern limit of the trench, the western limit was bounded by an oil tank and live services, which had been encased in a concrete slab, were located in the eastern area of the trench (Fig 3). Concrete piles and steel shoring were situated within the trench and continued below trench formation level. They had been sealed by backfilled made ground, which also formed the southern boundary of the trench (Fig 4).

4 Potential of archaeology

4.1 Original research aims

The research aims (*RA*'s) are given in Section 1.5 above.

RA1. - RA2.

Natural topography was not identified on site due to the total modern truncation of the trench area.

RA3. – RA5.

Neither archaeological features nor evidence for the natural environment in the prehistoric or Roman periods was found on site, due to the total modern truncation of the trench area.

RA6.

No evidence for the occurrence of or dating of land reclamation was found on site, due to the total modern truncation of the trench area.

RA7.

Neither archaeological features nor indications of landuse of medieval or post-medieval date were found on site due to the total modern truncation of the trench area.

4.2 New research aims

No new research aims have been placed upon the watching brief, given that no archaeological features or natural ground were encountered within the trench.

4.3 Significance of the data

No significance has been placed upon the watching brief findings, as no archaeological features or deposits were encountered within the trench.

5 Publication and archiving

Information on the results of the excavation will be made publicly available by means of a database in digital form, to permit inclusion of the site data in any future academic researches into the development of London.

The site archive containing original records and finds will be stored in accordance with the terms of the *Method Statement* (MOLA, 2010) with the Museum of London within 12 months of the end of the excavation.

In view of the limited potential of the material (Sections 4) and the limited significance of the data (Section 4.3), it is suggested that a short note on the results of the watching brief should appear in the annual round up of the *London Archaeologist*. This should be within 12 months of the end of the site.

6 Acknowledgements

The author would like to thank the following for their contributions and help in producing this report: the client, Tate Modern, Mills Whipp Projects and Gardiner & Theobald, as well as Mace, for their on-site support.

7 Bibliography

Dept. of Communities and Local Government 2010, *Planning Policy Statement 5, Planning for the Historic Environment*

English Heritage, 1991 *Exploring Our Past, Strategies for the Archaeology of England*

English Heritage, 1991 *Management of Archaeological Projects (MAP2)*

English Heritage Greater London Archaeology Advisory Service, June 1998 *Archaeological Guidance Papers 1-5*

English Heritage Greater London Archaeology Advisory Service, 2009 *Archaeological Guidance Papers 1-5*

English Heritage, May 1998 *Capital Archaeology. Strategies for sustaining the historic legacy of a world city*

Institute for Archaeologists (IFA), 2001 *By-Laws, Standards and Policy Statements of the Institute for Archaeologists* (rev. 2001), *Standard and guidance: watching brief*

Institute for Archaeologists (IFA), supplement 2001, *By-Laws, Standards and Policy Statements of the Institute for Archaeologists: Standards and guidance – the collection, documentation conservation and research of archaeological materials*

Mills Whipp Projects, 2010 *Transforming Tate Modern, London Borough of Southwark, SE1: Written Scheme of Investigation for archaeological watching brief during construction of crane bases*, unpublished Mills Whipp Projects report

MOLA, 2008 *Environmental statement Vol 1: Chapter 14 , Archaeology and Built Heritage*, MOLA unpublished report

MOLA, 2009 *Transforming Tate Modern, Bankside, London SE1: An archaeological evaluation and watching brief report*, unpublished MOLA report

MOLA, 2010 *Transforming Tate Modern, Bankside, London SE1: Method statement for an archaeological watching brief*, unpublished MOLA report

Museum of London, 1994 *Archaeological Site Manual 3rd edition*

Museum of London, 2002 *A research framework for London archaeology 2002*

London Borough of Southwark, 1995 *Unitary Development Plan*, London

London Borough of Southwark, 2007 *Local Plan* (adopted July 2007), London

Schofield, J, with Maloney, C, (eds.), 1998 *Archaeology in the City of London 1907-1991: a guide to records of excavations by the Museum of London and its predecessors*, Archaeol Gazetteer Ser Vol 1, London

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

8 NMR OASIS archaeological report form

OASIS ID: molas1-118988

Project details

Project name Transforming Tate Modern, Bankside, London SE1

Short description of the project Prior to the construction of Tate Modern 2, the machine excavation of a crane base trench (TC2) was monitored on site in a watching brief. The entire trench was subject to modern truncation and hence no archaeological deposits, nor natural ground, was encountered.

Project dates Start: 30-01-2012 End: 06-02-2012

Previous/future work Yes / Yes

Any associated project reference codes molas1-61926 - OASIS form ID

Type of project Field evaluation

Site status Conservation Area

Current Land use Community Service 2 - Leisure and recreational buildings

Monument type NO DEPOSITS FOUND Modern

Significant Finds NO ARTEFACTS FOUND Modern

Methods & techniques 'Targeted Trenches'

Development type Urban commercial (e.g. offices, shops, banks, etc.)

Prompt Planning condition

Position in the planning process After full determination (eg. As a condition)

Project location	
Country	England
Site location	GREATER LONDON SOUTHWARK SOUTHWARK Transforming Tate Modern, Bankside, SE1
Postcode	SE1 9TG
Study area	1.00 Kilometres
Site coordinates	TQ 531925 180390 50.9408398465 0.180722322901 50 56 27 N 000 10 50 E Point
Height OD / Depth	Min: 3.80m Max: 7.80m
Project creators	
Name of Organisation	MOLA
Project brief originator	London Borough of Southwark
Project design originator	MOLA
Project director/manager	Derek Seeley
Project supervisor	Hana Lewis
Project supervisor	Heather Knight
Type of sponsor/funding body	Mills Whipp Projects on behalf of the Board of Trustees of the Tate Gallery
Project archives	
Physical Archive Exists?	No
Physical Archive recipient	LAARC

Digital Archive recipient	LAARC
Digital Media available	'GIS','Images raster / digital photography','Text'
Paper Archive recipient	LAARC
Paper Media available	'Photograph','Plan','Report'
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Transforming Tate Modern, Bankside, London SE1: A report on the archaeological watching brief
Author(s)/Editor(s)	Lewis, H.
Date	2012
Issuer or publisher	MOLA
Place of issue or publication	MOLA, London
Description	A bound grey literature report
Entered by	H. Lewis (hlewis@mola.org.uk)
Entered on	7 February 2012



Fig 1 Site location

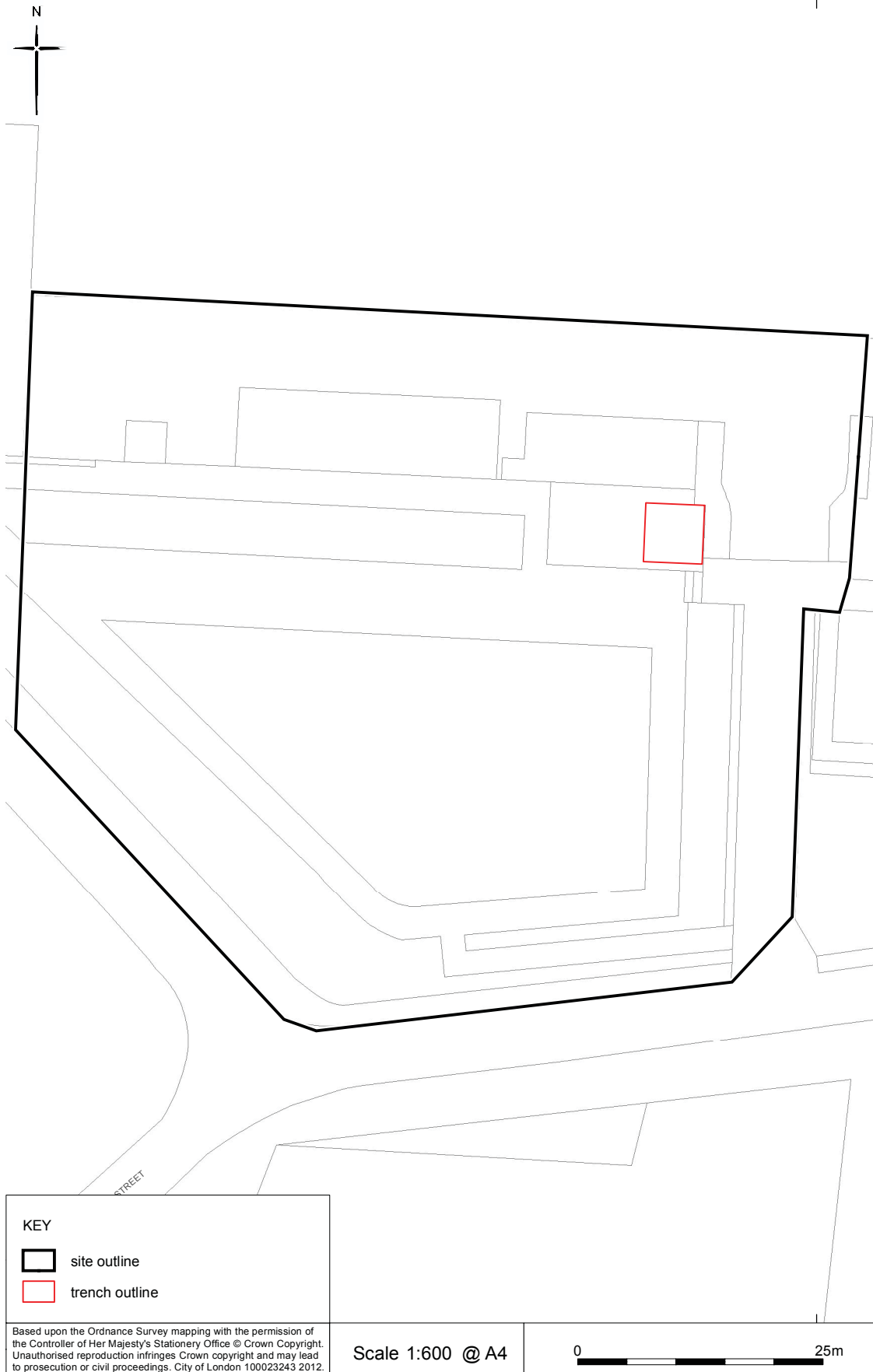


Fig 2 Trench location plan



Fig 3 Crane base trench (looking west)



Fig 4 Crane base trench; piles and maximum depth of trench excavation (looking west)