TOL 158 The Byward Postern Sewer Repairs, HM Tower of London

An Archaeological Watching Brief



Alexandra Stevenson December 2016

Accession Code: 3910030 NGR: TQ 33488 80511.



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1 Location and Scope of work

- 1.1 An archaeological watching brief was carried out by HRP's in-house archaeologist at the Tower of London in the London Borough of Tower Hamlets (Fig. 1). The watching brief monitored the excavation of a small trench in front of the Byward Postern entrance following the detection of a number of blockages to the toilet facilities located within the area of the Sally Port. A CCTV survey carried out had revealed that a section of a pipe running to the main sewage outlet had collapsed and required repairs. The watching brief was undertaken in order to mitigate the possible effects upon the fabric of the building as well as to record and protect anything of archaeological significance.
- 1.2 The Tower of London is a World Heritage Site and Scheduled Ancient Monument (Greater London No.10).
- 1.3 Phase I monitoring was undertaken between the 20 and 22 June 2016, whilst further work was carried out to complete the project during the week of the 28th November. The watching brief was undertaken by Alexandra Stevenson.
- 1.4 The excavated trench initially measured 1.1 m (N-S) x 0.8 m (E-W) x 0.9 m but was widened to 1.30 m to provide better access to the damaged pipe.
- 1.5 The works were centred on National Grid Reference TQ 33488 80511.
- 1.6 The site code assigned to this project was **TOL 158**. An accession code, **3910030**, was assigned to this project and encompasses all the paper and digital archives.



FIGURE 1: LOCATION OF THE EXCAVATION AREA



2 Aims and Methodology

- 2.1 The repair work carried out near the Byward Postern required an archaeological watching brief in order to record and protect any archaeological remains uncovered as well as preventing any negative effects upon the historical fabric of the Byward Tower and Postern Gate. Despite the fact that this area of the site has already been heavily disturbed by the installation of a number of services, it remains a highly sensitive spot in terms of historical and archaeological interest.
- 2.2 The watching brief was designed to:
 - Monitor the removal of the granite set-stone cobbles along the walkway and in front of the Byward Postern entrance
 - Assess any possible effects caused by vibrations from the drilling on the Byward Tower and specifically on the 14th century wall painting within
 - Observe the removal of the backfill deposits overlying the sewer.
 - Record any archaeological features
 - Create an ordered archive of the work for deposition with Historic Royal Palaces
- 2.3 An application for Scheduled Monument Clearance at Tower of London was granted from Historic England for the proposed scheme of works. It is part of the Historic Royal Palaces' commitments and conservation principles as well as a condition of consent that a qualified archaeologist oversees the excavation of trenches with the potential to impact on the fabric of the buildings and/or archaeological remains at the Tower of London.

Methodology

- 2.4 A drill was firstly used to break through the mortar surrounding the granite set-stone cobbles in order to loosen them enough to allow removal. A layer of bedding concrete 0.07 m thick was then removed using a chisel and hammer before reaching backfill material, which was excavated by hand until the location of the sewer main was exposed. The northern end of the trench was filled with a thick layer of concrete measuring approximately 0.4 m depth, which was covering electrical cables. This had to be removed using a Kango hammer drill in order to reach the pipe concerned by the works. This was carried out in the evening so as to cause the least amount of disturbance as possible. Due to the potential risk of the vibrations caused by the machinery, the floor above the Byward Tower archway was monitored closely upon commencing this phase to check for any possible threat to both the fabric of the building itself and the 14th century wall painting. Once it was establish that there were no risks the work continued unhindered.
- 2.5 The second phase of the project in November and December 2016 concentrated on further removal of the thick layer of concrete and the excavation of the soil down to a depth where the pipe could be reached and replaced. This was monitored closely by the archaeologist.





FIGURE 2: LOCATION OF THE TRENCH

3 Historical Background

The Tower of London

3.1 The building of the Tower of London was begun shortly after the Conquest by William the Conqueror, whose great keep, the 'White Tower', sits at its heart. The fortress was first constructed within the south eastern corner of the ancient Roman city walls, along the riverbank of the Thames. Extended beyond the boundaries of the Roman city walls by Henry III, and developed as a concentric castle by Edward I in the 13th century, the Tower – the monarch's stronghold amidst an often hostile city – became the home of major State Institutions such as the Royal Mint, as well as the setting for nationally significant historical events. The Tower is the home of the Coronation Regalia and Crown Jewels, and the Royal Armouries Museum, which still displays part of its collection within the White Tower. The fortress is most strongly associated in the popular imagination with the Tudors, and the turbulent events of the 16th century, particularly with the many prisoners kept within its walls. The 19th century Romantic perception of the Tower, and the castle's emerging identity as a tourist attraction, led to the demolition of many institutional structures and the addition of new 'medieval' style neo-gothic buildings.

Brief historical background of the site

3.2 A full and comprehensive description of the area can be found in Appendix I.

Recent archaeological investigations in the area

3.3 A number of archaeological and building recording investigations have been carried out in the area around the Byward Postern and Tower in recent years. In 2002, the Byward Postern Phase II structural investigation took place, which was an excavation undertaken as part of a structural investigation and underpinning procedure designed to consolidate the Byward Postern building



that was subsiding into the backfilled moat (TOL87). The excavation revealed the foundations and the timber work beneath the Postern Tower as well as certain aspects of the Tower's construction and its associated drawbridge. To the west was also revealed a Victorian culvert.

- 3.4 A few years later in 2008, Oxford Archaeology were commissioned to undertake archaeological investigation and building recording on the Byward Tower exterior as part of a programme of repointing and restoration (TOL98). This enabled a clearer understanding of the Byward Tower's phasing and evolution.
- 3.5 Most recently in 2015, Pre-Construct Archaeology carried out a watching brief (TOL 150) to monitor the excavation of a small trench as part of repair works of a blocked drainage pipe under the passageway of the Byward Postern, much like the current excavation. This watching brief revealed masonry associated with the inner Passageway of the Byward Postern situated beneath fill material within the cut of the existing pipe. An ashlar block of Kentish Ragstone was seen at the base of the door jamb below a heavily weathered ashlar block of Caen stone. A section of yellow medieval brickwork abutted the Kentish Ragstone. It is believed these large blocks relate to the construction of the Postern Tower in the early 14th century. The bricks were less clearly interpreted as being either an earlier 13th century feature or part of the Byward Postern's construction using re-used bricks.

4 Description of Findings

4.1 No archaeological features, structures or layers were exposed during the course of the excavation as the location of the trench was in an area heavily disturbed by the installation of a number of services. A photographic record was nonetheless taken as the work progressed.



FIGURE 3: NORTH-FACING VIEW OF THE TRENCH





FIGURE 4: PHASE II OF THE PROJECT

5 Archive, Artefacts, and Ecofacts

- 5.1 No archaeological finds were uncovered during the course of this watching brief.
- 5.2 No environmental samples were taken.
- 5.3 The paper archive consists of a photographic register, notes, general plans and various miscellaneous documents.
- 5.4 The physical, digital and paper archives will be deposited according to the HRP *Deposition of Archaeological Excavation Archives Guidelines 2015.*



6 Bibliography

Dodds, D., 2003. Byward Postern Phase II Structural Investigation: Archaeological Investigation Report (ToL 87). Oxford Archaeology.

Impey, E. & Parnell G., 2006. The Tower of London: The Official Illustrated History. Merrell, London.

Gill, J., Munby, J., Simons, E. 2008. Tower of London Byward Tower: Historic Building Investigation and Recording (ToL 98). Oxford Archaeology.

Maher, S., 2015. The Tower of London: The Byward Tower – An Archaeological Watching Brief Monitoring Pipe Replacement (ToL 150). Pre-construct Archaeology.

Parnell, G. 1993. The Tower of London. B.T. Batsford/ English Heritage. London.



7 Appendix I

Photographic Register

Photograph No.	Description	View
1	View of excavation area prior to work commencing	S
2	View of excavation area prior to work commencing	S
3	Removal of granite cobbles	W/SW
4	Removal of granite cobbles	W/SW
5	View of partially excavated trench filled with rain water	Ν
6	Working Shot	NW
7	Working Shot	Е
8	Working Shot	Е
9	Excavated trench showing mass of concrete	S
10	Excavated trench showing mass of concrete	Ν
11	Yeoman in the rain	W
12	View of Byward Postern	S
13	Working Shot	W
14	Working Shot	S
15	View of the trench looking east	Е
16	South-facing section	Ν
17	South-facing section	Ν
18	View of the trench	W
19	View of the trench	Е
20	North-facing section	S



Appendix II

8

Extract from Jane Spooner's Historical Assessment and Statement of Significance for the Byward Postern (2005)

The Postern

The Byward Postern is a complex building incorporating elements of several periods. Its function has always been to provide access into the fortress from the wharf, by means of moveable bridge structures. With the addition of a turret on the south side, this means of access received protection in the form of installations for artillery weapons.

The postern stands to the immediate right of the south turret of the Byward Tower. It is generally assumed that an original 13th century postern gate was built at the same time as the construction of the Byward Tower (1275-81), though this is not confirmed by any sources. In 1326 Edward II instructed that timber be supplied for a 'recently made' bridge to a postern in the right location. In 1336 during the reign of Edward III, masons were instructed to repair and crenellate the postern, and in the 1340's, the postern was underpinned, large scale timberwork was carried out, and a lead roof replaced. In the 14th-15th centuries the timber framing to the upper stories was constructed over the former postern entrance, with a new drawbridge abutting its west flank. This construction has been dated variously to the reigns of Richard III, Henry VII or Henry VIII. By the 16th century the projecting wedge shaped build and the two-storey timber-framed structure had been added to the original tower.

The building is now of three stories. The stone element of the tower is largely of Kentish ragstone, coped with Doulting stone. The timber framed addition is of the same build as that of the Byward Tower with tension bracing to vertical studding, moulded fascia to the second floor jetty and coved cornice with square oriel windows. The timber framed elements are shown as covered over by wooden weatherboarding, a wooden extension on the south side, and a large brick chimney in 19th century photographs. The photographic archive of Benjamin Stone shows that the weatherboarding and extension were removed considerably earlier than the 1925-29 restorations, and that no render was removed. It may be the case that the studwork and oriels on the north façade are more authentic than those exposed and reconstructed on the Byward Tower east façade. An elevation drawing of 1929 proposing reconstruction of the south elevation of the postern timber framing, states that the corner posts and the window opening above the cill appear to be original.

A four-centred archway provides access from Water Lane to a vaulted entrance lobby. The ribbed segmental vault has a lion's mask to its central boss of a similar style to those in the Bloody Tower vault, constructed by Robert Yvele for Edward III. To the west is a porter's lodge, Beyond the porch are two archways, one beyond the other, with segmental –pointed heads, the leaves of a wooden gate (possibly 16th century in date) opening between them. Beyond this was the location of the drawbridge, the rebate of which is still visible on the outer face of the furthest archway. The two holes also extant, one in the centre of the ceiling between the two archways and the other centrally above the head of the outer arch may have facilitated the lifting and lowering of the bridge. The 16th century addition to the building is indicated by a straight joint in the fabric to the west by the outer arch and the brick lined structure beyond it. At ground level it formed a spacious passage with gun loops to a segmental headed doorway giving access to a later drawbridge to the wharf. The gun loops are shaped as a double key hole and were used for both small pieces of ordnance mounted on stocks, the lower hole, and for hand guns at the higher level. The current fitted doors are heavily restored. A modern walkway gives access to the Wharf and a staircase gives access to the moat.



9

Oasis Data Form

OASIS FORM - Print view

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OASIS DATA COLLECTION FORM: England

List of Projects | Manage Projects | Search Projects | New project | Change your details | HER coverage | Change country | Log out

Printable version

OASIS ID: historic9-257927

Project details

Project name	The Byward Postern Sewer Repairs
Short description of the project	An archaeological watching brief was carried out by HRP's in-house archaeologist at the Tower of London in the London Borough of Tower Hamlets. The watching brief monitored the excavation of a small trench in front of the Byward Postern entrance following the detection of a number of blockages to the toilet facilities located within the area of Sally Port. The watching brief was undertaken in order to mitigate the possible effects upon the fabric of the building as well as to record and protect anything of archaeological significance. Nothing of archaeological significance was encountered.
Project dates	Start: 20-06-2016 End: 22-06-2016
Previous/future work	Yes / Not known
Any associated project reference codes	ToL158 - Sitecode
Any associated project reference codes	ToL150 - Sitecode
Type of project	Recording project
Site status	Scheduled Monument (SM)
Site status	World Heritage Site
Current Land use	Other 8 - Land dedicated to the display of a monument
Monument type	TURRET Medieval
Significant Finds	NONE None
Investigation type	"Watching Brief"
Prompt	Scheduled Monument Consent

Project location

Country	England
Site location	GREATER LONDON TOWER HAMLETS TOWER HAMLETS HM Tower of London
Postcode	EC3N 4AB
Study area	0.88 Square metres

https://oasis.ac.uk/form/print.cfm

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OASIS FORM - Print view

Site coordinates

TQ 33488 80511 51.50724307785 -0.076322929705 51 30 26 N 000 04 34 W Point

Project creators

Name of Organisation	Historic Royal Palaces
Project brief originator	Historic Royal Palaces
Project design originator	Historic Royal Palaces
Project director/manager	Sean Connor
Project supervisor	Alexandra Stevenson
Type of sponsor/funding body	Historic Royal Palaces

Project archives

Physical Archive Exists?	No
Digital Archive recipient	Historic Royal Palaces
Digital Media available	"Spreadsheets","Text","Images raster / digital photography"
Paper Archive recipient	Historic Royal Palaces
Paper Media available	"Correspondence", "Diary", "Map", "Miscellaneous Material", "Photograph"

Project bibliography 1

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