



**YORK ARCHAEOLOGICAL TRUST**



## **ARCHAEOLOGICAL INVESTIGATIONS AT LORD MAYORS WALK SEWER REPAIR**

By Toby Kendall

*WATCHING BRIEF REPORT*

Report Number 2017/112      December 2017

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### Abbreviations

AAI - Area of Archaeological Importance

BGL - Below Ground Level

BGS - British Geological Survey

CBM - Ceramic Building Material

YAT - York Archaeological Trust

## NON-TECHNICAL SUMMARY

Between the 21<sup>st</sup> November and the 10<sup>th</sup> December 2017 York Archaeological Trust conducted an archaeological watching brief during the sewer repair works at Lord Mayors Walk, York (NGR SE 60427 52381).

The work was undertaken for Amey Utilities & Yorkshire Water to fulfil the requirements of an Area of Archaeological Importance Operations Notice, co-ordinated by City of York Council (Operations Notice no.17029). The work followed the standard practices for a watching brief as conducted by York Archaeological Trust.

The works involved the recording of archaeological remains exposed during excavations to locate a failure within the live sewer system.

Although the excavations were predominantly within the backfill of the extant drainage system there were areas where older archaeology was encountered. This took the form of post-medieval accumulation and rapid infilling of the medieval ditch adjacent to the medieval City walls. In addition a brick culvert, pre-dating the current drainage system, was revealed.

## KEY PROJECT INFORMATION

Project Name	Lord Mayors Walk, York
YAT Project No.	6016
Document Number	2017/112
Type of Project	AAI Operations Notice - Watching Brief
Client	Amey Utilities & Yorkshire Water
Planning Application No.	Operations Notice no.17029
NGR	SE 60427 52381
Museum Accession No.	tbc
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## REPORT INFORMATION

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## 1 INTRODUCTION

Between the 21<sup>st</sup> November and the 10<sup>th</sup> December 2017 YAT conducted a watching brief at Lord Mayors Walk, York (SE 60427 52381) (Figure 1 Site and Works Location).

The work was undertaken for Amey Utilities & Yorkshire Water to fulfil the requirements of an Area of Archaeological Importance Operations Notice, co-ordinated by City of York Council (Operations Notice no.17029). The work followed the standard practices for a watching brief as conducted by York Archaeological Trust.

Observations were made during the opening up and machine excavation of two trenches which measured 7.2m x 1.3m and 6m x 1.3m

## 2 METHODOLOGY

Continuing issues with blocked/slow drainage prompted investigations into the sewer system running along the base of the ditch southwest of Lord Mayors Walk. Investigation with a remote camera identified one area of collapse (Trench 1). Further camera investigations identified another area of collapse/restriction (Trench 2).

The excavation procedure involved the following;

- Machine excavation (2 tonne, 360°, rubber tracked excavator) down to the top of the installed drain at c.1.2m BGL
- Insertion of shoring braces
- Further excavation by machine or hand tools to formation for the new drain section
- Installation of replacement drain sections
- Backfill with uprisings from original excavation

The recording methodology followed the standard archaeological watching brief methodology as employed by YAT. Virtually all recording was completed from outside of the trench because of restrictions to access linked with health and safety or contamination of materials due to sewerage.

A combination of notes, sketch plans/sections and photographs were used to record the deposit sequence on site.

No individual context numbers were assigned due to the simple, predominantly modern, archaeological sequence encountered.

No finds were removed from the site for further study.

The trenches were located on a scale base map

The site archive is currently stored by YAT under Project Number 6016.

The excavated trenches have been backfilled and reinstated by Amey Utilities

### 2.1 Trenches

Two separate trenches were excavated during the works monitored. They were both positioned directly over the line of the sewer to minimise disruption.

No.	Size (m)	Rationale
1	7.2m long 1.3m wide	Reveal and replace salt glazed sewer pipe
2	6m long 1.3m wide	Reveal and replace salt glazed sewer pipe

### 3 LOCATION, GEOLOGY & TOPOGRAPHY

The trench was located in the lowest part of the northwest-southeast ditch running parallel to the medieval City Walls, to the southwest of Lord Mayors Walk. Investigating the initial location of the collapse indicated that the sewer pipe was fractured to the top and sides beyond where the fault had been identified. This resulted in a longer section being exposed and repaired and a further trench excavated to replace another fractured section.

In this area bedrock is of the Sherwood Sandstone Group overlain by superficial Vale of York Formation clays sands and gravels (BGS <http://www.bgs.ac.uk/> accessed 05/12/17).

The topography of the site is harder to identify as the intervention took place at the base of the ditch between the City Walls and Lord Mayors walk. The carriageway immediately adjacent is at c.15.3m OD.

### 4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

This stretch of the City Walls has a well studied history, which has continued with a number of nearby archaeological investigations.

The archaeological and historical background of the site was covered in detail during an evaluation carried out by YAT in 2013 (YAT 2013). It is reproduced as follows;

“The site is located immediately north-east of the medieval city walls, below which lie the remains of the Roman legionary defences. These consist of earth and timber structures of the late 1st/early 2nd century AD, which were replaced in stone from the early-mid 2nd century onwards (Ottaway, 2004, 67). Excavations in the 1920s by SN Miller cut through the medieval ramparts, exposing the Roman structures below. Some 220m north-west of the site, one of these earlier excavations located Roman walls up to 1.2m wide and 3.6m high, deep within the later rampart (RCHMY 1, 1962, 33). Immediately adjacent to the site is a double-depression in the medieval rampart associated with the likely position of the *porta decumana*: the gateway in the Roman wall through which the *via decumana* passed (RCHMY 2, 1972, 125), the alignment of which is today preserved by Groves Lane (Wilson and Mee, 2005, 53).

The remains of the Roman walls are thought to have been covered by ramparts topped with palisades by the Anglo-Scandinavian period (Wilson and Mee, 2005, 1). It would appear from excavations and documentary sources that the stone walls are a product of the 13th century onwards, progressively replacing a substantial earth and timber defensive circuit of Norman date (Dean, 2008, 47). The medieval stone walls were very heavily refurbished and modified during the late 19th century, and in the possible position of the *porta decumana*, substantial amounts of the earlier Roman work were also removed along with the later medieval fabric (RCHMY 2, 1972, 125). A 2010 evaluation of the medieval wall foundations included a trench immediately behind the garage site, in which it was clear that the 19th century work had

included the re-instatement of the medieval rampart with fresh soil imported from a variety of sources (Evans et al, 2010, 18-20 and pers. comm.).

The ditch in front of the medieval wall is still open north-west of the site, and besides functioning as a moat seems also to have been used as pasture from the 14th century (Raine, 1955, 6-7). The first series OS mapping from the 1850s shows the area of the garage occupied by housing and yards, demonstrating that the ditch below the current site had been in-filled by this time. A pair of pan-tile roofed early 19th century houses, numbers 17 and 19 Lord Mayor's Walk, were recorded by the Royal Commission in the position of the current garage front forecourt (RCHMY IV, 1975, 83); these buildings do not survive, and the further two to the north-west had presumably been demolished prior to the 1970s. Image y647\_9434\_70 held in the City Of York Council's Imagine York Archive (<https://cyc.sdp.sirsidynix.net.uk/client/yorkimages>) suggests that no. 19 may have been the site of the Unicorn Inn public house, which was demolished after 1956; this would accord with comments made by local passers-by during the evaluation. The space now forms the north-eastern courtyard of the garage and the location of Trench 2. To the south-east of the site, the rest of the 19th century buildings from number 15 to 1 survive."

In 2015 an archaeological watching brief undertaken during construction work over the ditch to the southwest (YAT 2015) included the monitoring of geotechnical boreholes and window samples. The borehole along the closest alignment of the sewer had a sequence as follows;

- Natural clays
- Initial organic silting of medieval ditch
- Deliberate infilling of the medieval ditch
- Rubble rich dumping and backfilling
- Rubble and soil makeup for previous buildings and yards.

The depth of these deposits was of course variable and dependant on the position with profile of the ditch and adjacent ramparts.

Historical mapping of the site shows little variation from how it is currently set out, with the only exception being the presence of a 'Rope-Walk' on the 1852 Ordnance Survey map.

## 5 RESULTS

Works undertaken on the site were dynamic due to the unknown nature of the damage to the sewer pipe, and also how much other degradation of the extant system was present.

### 5.1 Trench 1 (Plates 1 & 2)

This was initially 1.2m wide and 6m long. It was widened to 1.3m and extended to become 7.2m long. The depth excavated from 1.3m to 1.5m BGL.

The earliest deposit encountered was up to 500mm+ of dark clayey silt, which continued beyond the limit of excavation. This was interpreted as accumulation, possibly silting, where the ditch had previously been backfilled. Finds were relatively infrequent, but what was seen in the way of pottery and CBM dated to the medieval or immediate post-medieval period. A number of brick fragments c.54mm were observed, and these suggested a date of 16<sup>th</sup> to late 18<sup>th</sup> century.

On top of the darker silt was a dry, loose, greyish brown sandy silt with rubble (stone, CBM and mortar) layer up to 700mm thick. The nature of this deposit suggested that it had been rapidly put down as infilling or levelling. This material contained a significant number of residual medieval finds in the way of pottery and CBM. It also contained similar finds which were post-medieval in date.

Cut into the infilling or levelling, continuing into the northeast section of the trench, was a brick culvert. This was made of bricks measuring 230mm long, 113mm wide and 65mm deep. The regular shape of the bricks and form of the culvert would suggest a date of possibly late 18<sup>th</sup> or, more likely, 19<sup>th</sup> century. It ran parallel to the current sewer system, and presumably falls gradually to the southwest.

The earlier culvert was partially truncated by the salt glazed ceramic sewer that was subject to these repairs. The fabric of the pipe itself and finds within the backfill indicated it was late 19<sup>th</sup> century or later.

Finally the uppermost 300mm of deposits was made of a dark topsoil, the current ground surface.

A representative section can be seen in Figure 2. An interpretative section of the trench can be seen in Figure 3.

## **5.2 Trench 2 (Plate 3)**

Trench 2 was located to the northwest of Trench 1, positioned immediately to the southeast of a manhole providing access to the sewer system. It was 6m long, 1.3m wide and 1.5 deep.

The deposit sequence was identical to that which was seen in Trench 1, bar the infilling or levelling deposit being slightly darker grey in colour.

There were standing liquids in the base of this trench which originated from the sewer system itself, not higher natural groundwater.

## **6 DISCUSSION**

The repair of the sewer within the ditch adjacent to Lord Mayors Walk provided an almost unique opportunity to investigate the archaeological sequence. Other works nearby have been conducted, but they were either higher up on the sequence or smaller interventions in the way of boreholes or windows samples.

Although there was significant truncation of the archaeological deposits by the two separate phases of sewer it was still possible to see a section of the backfilling and levelling within the ditch.

All of the archaeology encountered was post-medieval in date, though it contained a significant number of residual medieval finds in the way of pottery, brick and tile.

The earliest encountered infilling deposits at c.1.5m BGL at the base of the ditch were not organic in nature, indicating there were not the correct waterlogged conditions for organic material to survive. This may be due to a number of reasons, the most obvious being the adjacent trees and their roots dewatering deposits across the site. In fact the material above was unusually dry for the time of year and recent weather.



The presence of the earlier brick culvert at a relatively shallow depth within the later rubble rich infilling of the ditch is not unusual. Before the creation of the deep sewerage system of the late 19<sup>th</sup> century brick culverts were often not at a significant depth. Waste was channelled towards the nearest watercourse where it would flow away. However, it may be possible that the later infilling was required to create a natural fall and thus allow the culvert to operate.

Further works in the immediate vicinity should be closely monitored, particularly anything greater than 1.5m BGL or shallower if outside the line of the sewer being repaired.

## **LIST OF SOURCES**

1852 1<sup>st</sup> Edition Ordnance Survey Map

## **REFERENCES**

YAT 2013. *Former Monk Bar Garage, Lord Mayor's Walk, York*. YAT Evaluation Report 2013/48

YAT 2015. *Archaeological Investigations at the Former Monk Bar Garage, Lord Mayors Walk, York*. YAT Watching Brief Report 2015/12

## **ACKNOWLEDGEMENTS**

Many thanks to the team from Amey Utilities for their assistance on site and communication during the works process. John Oxley (CYC City Archaeologist) also provided invaluable input during the observations.

**APPENDIX 1 – INDEX TO ARCHIVE**

Item	Number of items
Site record sheets & drawings	11
Digital photographs	38
Report	1

**Table 1 Index to archive**

**PLATES**



**Plate 1 Trench 1 drain being repaired beneath shoring sheet and older culvert to the right, facing northwest**

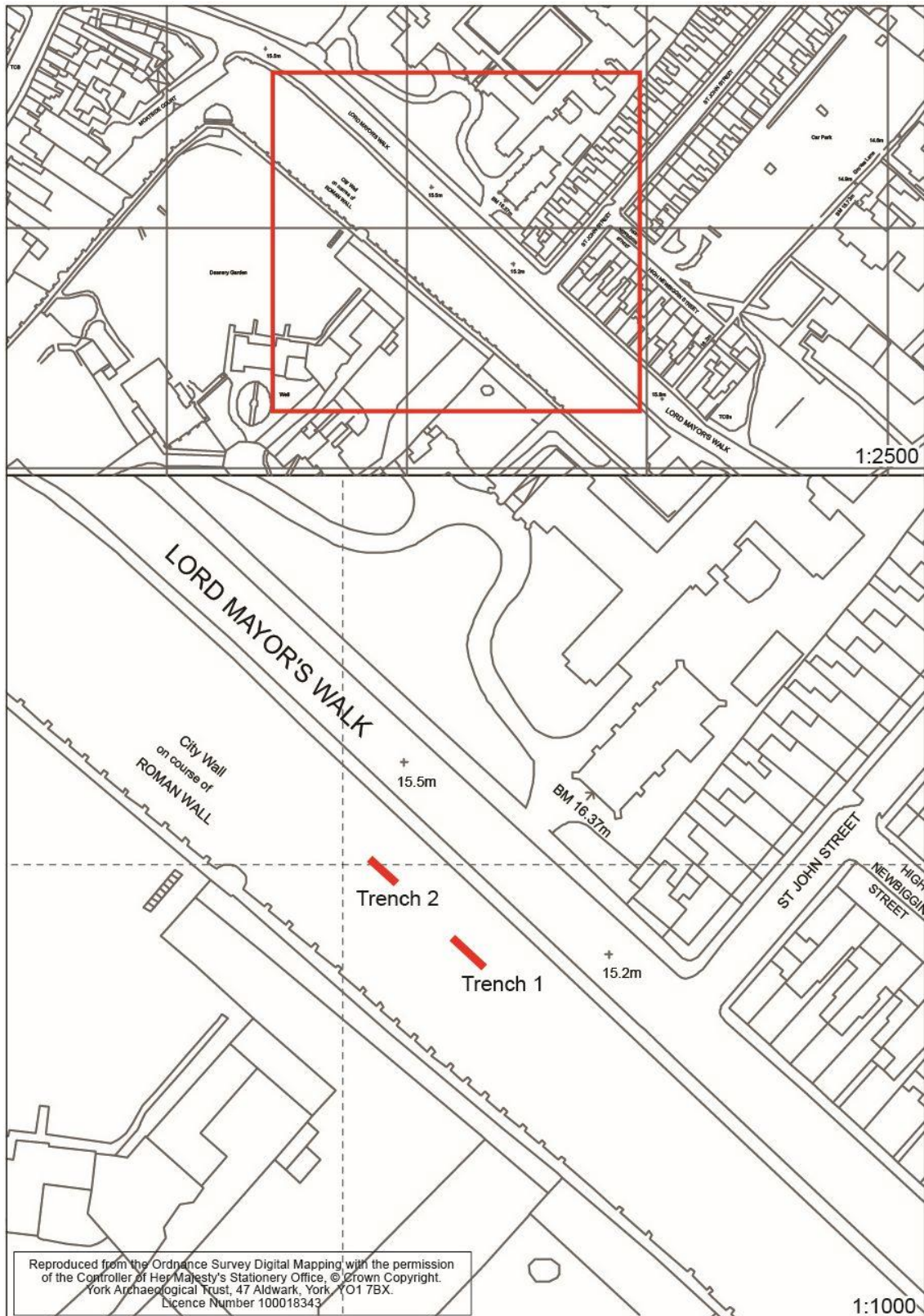


**Plate 2 Trench 1 dark silt post-medieval accumulation beneath rapid infilling, facing west**



**Plate 3 Trench 2 indicating similar deposit sequence, facing southsoutheast**

**FIGURES**



**Figure 1 Site and Works Location**

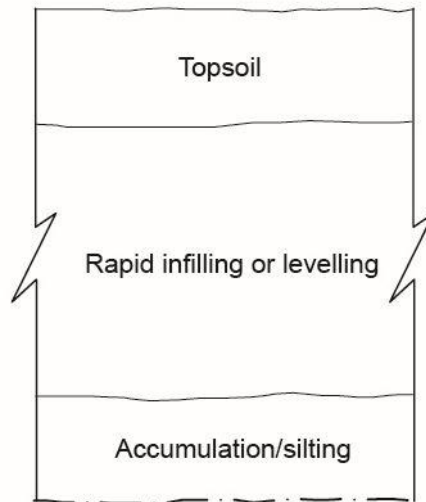


Figure 2 Representative Section, scale 1:20, northeast facing

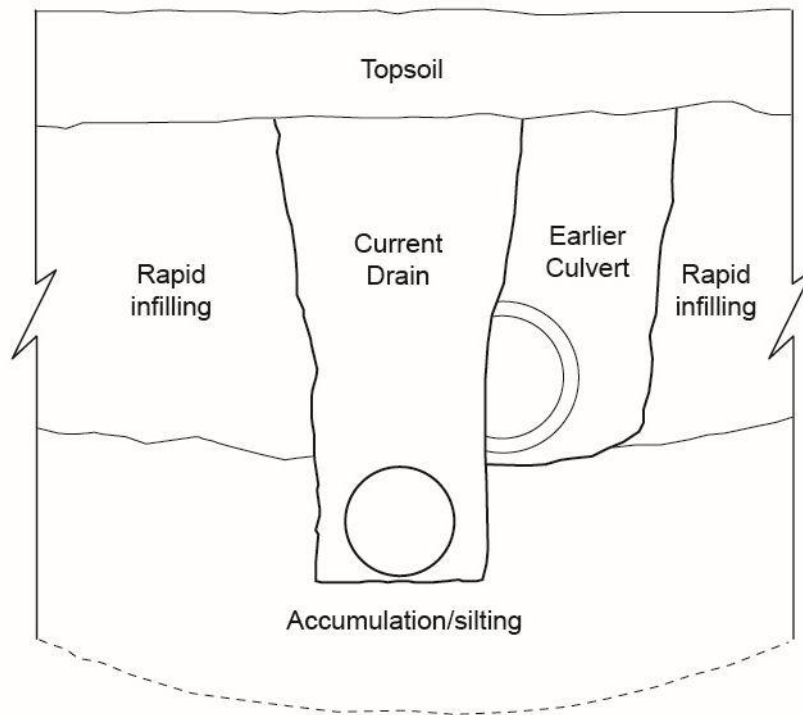


Figure 3 Interpretive Section, facing northwest



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**York Archaeological Trust, Cuthbert Morrell House, 47 Aldwark, York YO1 7BX**

Phone: +44 (0)1904 663000 Fax: +44 (0)1904 663024

Email: [archaeology@yorkat.co.uk](mailto:archaeology@yorkat.co.uk) Website: <http://www.yorkarchaeology.co.uk>

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