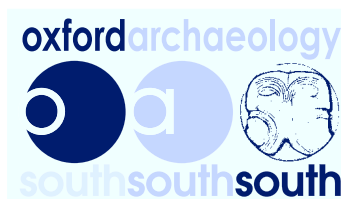


Excavation of a Rain Water Harvesting Tank at Middle Temple Garden Corporation of London



Archaeological Watching Brief Report



October 2010

**Client: Estate's Office,
The Honourable Society of
the Middle Temple**

Issue No: 1
OA Job No: 4732
NGR: TQ 3115 8087



Client Name: Estate's Office, The Honourable Society of the Middle Temple

Client Ref No:

Document Title: Excavation of a Rainwater Harvesting tank at Middle Temple Garden, Corporation of London

Document Type: Archaeological Watching Brief Report

Issue/Version Number: 1

Grid Reference: TQ 3115 8087

Planning Reference:

Invoice Code: MDIWB

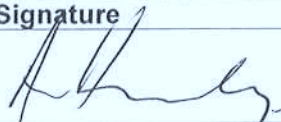
OA Job Number: 4732

Site Code: MDI 10

Receiving Museum: Museum of London

Museum Accession No.: MDI 10

Event No.:

Issue	Prepared by	Checked by	Approved by	Signature
1	Jim Mumford Project Officer	Jodie Ford Project Officer	Alan Hardy Senior Project Officer	

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Excavation of a Rainwater Harvesting tank at Middle Temple Garden, Corporation of London

Archaeological Watching Brief Report

Written by Jim Mumford

and illustrated by Georgina Slater

Table of Contents

Summary.....	2
1 Introduction.....	2
1.1 Scope of work.....	2
1.2 Location, geology and topography.....	2
1.3 Archaeological and historical background.....	2
2 Project Aims and Methodology.....	2
2.1 Aims.....	2
2.2 Methodology.....	2
3 Results.....	2
3.1 Description of deposits.....	2
3.2 Finds.....	2
3.3 Environmental remains.....	2
4 Discussion and conclusions.....	2
Appendix A. Archaeological Context Inventory.....	3
Appendix B. Bibliography and references.....	4
B.1 Appendix numbered heading 1.....	4
Appendix C. GLSMR/RCHME NMR Archaeological Report Form.....	5

List of Figures

Fig. 1 Site location

Fig. 2 Site plan

Fig. 3 Plans 1 and 2 and west facing section



Summary

On the 1st May 2010, Oxford Archaeology South undertook a watching brief within the boundary of the Middle Temple Garden, a Grade II Registered Park and Garden (English Heritage), within the Corporation of London. Archaeological observation and recording was undertaken on the excavation of a trench for a new rain water harvesting tank. The buttress for the 1770 embankment was encountered beneath 19th- and 20th-century layers. Nineteenth century-drainage systems related to the Middle Temple Library were also uncovered.

1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology South (OAS) was commissioned by the Director of Estates for The Honourable Society of the Middle Temple to undertake an archaeological watching brief within the boundary of the Middle Temple Garden, a Grade II Registered Park and Garden (English Heritage), within the Corporation of London (centred on National Grid Reference TQ 3115 8087, see Fig.1).
- 1.1.2 It was determined by the Development Manager Historic Environment (City of London) that the site was located in an area of archaeological interest and that the planning permission would require a full Written Scheme of Investigation (WSI) for an archaeological watching brief, supported by an appraisal of the archaeological potential of the site (email from Ms K Stubbs to OA on 02.02.10). OAS produced a WSI in response to this requirement which was agreed with the Development Manager - Historic Environment (City of London) prior to the fieldwork being undertaken.

1.2 Location, geology and topography

- 1.2.1 The site lies in central London approximately 80 m north of the river Thames.
- 1.2.2 The site is recorded as lying on (or very close to) the boundary between alluvium and exposed London Clay (British Geological Survey map no. 256, 1994). It is basically flat, at a height of approximately 4 m above OD. The site consists of a lawn surrounded on three sides by existing buildings. The site is located on an area of made ground on the interface between the Thames Embankment of the 1770s and the 1860s .

1.3 Archaeological and historical background

- 1.3.1 The archaeological and historical background to the watching brief was prepared for the WSI (OA 2010) and is reproduced below.
- 1.3.2 The River Thames has been subject to manmade reclamation since the Roman period. The precise extent of the River Thames at Middle Temple during each period is not clear. However, the projected line of the Neolithic, Roman, Saxon and medieval river has been plotted by MoLAS (2000, maps 4, 8, 10 and 13), and all show the foreshore at between c 25 m and c 45 m north of the proposed tank location, thus placing the proposed tank location within the River Thames during these periods. However, the level of the river would have risen and fallen during these periods suggesting the proposed tank location may have been above the water line for isolated periods.
- 1.3.3 The foreshore of the River Thames would have been an attractive location for prehistoric populations. As the level of the river rose and fell, alluvial deposits would



have been deposited, which would have overlain, and subsequently protected early prehistoric archaeological remains. Excavations at Arundel House (GLSMR ref MLO77636, c 145 m to the south west of the proposed tank location) also recorded Neolithic peat deposits. Due to peat forming in marsh-like areas, archaeology associated with these deposits tends to be linked to human interaction with the river and could include trackways and boats.

- 1.3.4 Middle Temple lies to the west of the Roman City of London (Londinium), although Roman remains have been found within the vicinity of the site, including Roman inhumations within the Inner Temple (c 270 m to the north east of the proposed tank location), and structural evidence beneath St Bride's Church (c 450 m to the east of the proposed tank location) (Butler 2005, 4).
- 1.3.5 Middle Temple is east of the Saxon settlement of Ludenwic, although the boundaries are ill defined, and evidence of Saxon occupation has been found as close to Middle Temple as Arundel House. Foreshore evidence has also been found along the River Thames close to Middle Temple, suggesting that similar foreshore evidence may be protected beneath the made ground of the 1770 embankment on which the proposed tank location lies.
- 1.3.6 A number of archaeological investigations within the vicinity of Inner and Middle Temple have helped to establish a more precise projected line of the medieval waterfront which is believed to be located just south of Middle Temple Hall (Butler 2005, Fig 19). Medieval occupation is believed to have extended up to the foreshore, with evidence for medieval pits having been recorded beneath the Middle Temple Hall (ibid, 14).
- 1.3.7 Braun and Hogenberg's Map of London of c. 1572 shows the Middle Temple as having its own gate onto the River Thames at the end of what is now Middle Temple Lane. Subsequent maps also show a bridge or pier. Although these were located c 50 m to the north west of the proposed tank location (based on the projected medieval foreshore of the river) it is possible that some evidence of bridges or piers may be present beneath the made ground within Middle Temple, and potentially within the area to be excavated. An illustration of the Temple in c 1700 by Johannes Kip shows the extent of reclaimed land within the Temple at this time, and the wall constructed to protect the reclaimed land from the river. Any surviving evidence for this wall is likely to be located c 10m to the north of the proposed tank location.
- 1.3.8 A small section of land (approximately 20m deep) was reclaimed in 1770. This new area of reclaimed land included the site of the proposed tank location, as shown on a plan of the Middle Temple after 1732 (Ingpen, 1910). The Middle Temple Library was located in the same location as the current Queen Elizabeth Building, which is c 3m to the north east of the proposed tank location. The photograph also shows that like the earlier defences, the 1770 embankment was bordered by a wall.
- 1.3.9 The proposed tank location was situated at the very southern extent of the embankment until the construction of the Victoria Embankment in the 1860s, which placed it c 80m north of the River Thames. Post-medieval maps of the Middle Temple Garden, both before and after the extension of the Victoria Embankment, show no additional buildings within the footprint of the proposed tank location, and the gardens are shown as formal gardens laid out with trees.



2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 To preserve by record any archaeological remains that the development may remove or damage within the impacted area.
- 2.1.2 To signal, before the destruction of the material in question, the discovery of a significant archaeological find for which the resources allocated are not sufficient to support a treatment to a satisfactory and proper standard.
- 2.1.3 To make available the results of the investigation.

2.2 Methodology

- 2.2.1 The trench was excavated in two stages by a tracked mechanical excavator. The first stage measured 4.5 m by 10.55 m excavated down to a depth of 1.22 m (Fig. 3, Plan 1). The second stage was the excavation of a sondage within the first cut measuring 2.8 m by 4.5 m to a depth of 2 m (Fig. 3, Plan 2). The resultant trench had a total depth of 3.22 m. The base and sides of the trench were closely examined for archaeological evidence and the spoil was examined for artefactual remains.
- 2.2.2 A plan showing the extent of the excavations and the location of the recorded sections was maintained at a scale of 1:20 (Fig. 3). The trench and sections were photographed using colour digital photography and black and white print film. A general photographic record of the work was also made. Recording followed procedures detailed in the OA Field Manual (Wilkinson, 1992).

3 RESULTS

3.1 Description of deposits

- 3.1.1 After the excavation of the sondage a layer of very dark grey/black silty clay(23), measuring in excess of 0.35 m deep was exposed within the base of the trench (Fig. 3, Plan 2 and Section 1). This deposit contained lenses of grey-brown silty clay and fragments of brick provisionally dated as 18th-century.
- 3.1.2 Cutting this layer was a vertically sided construction cut (25), containing a solid brick structure (24). This structure was constructed of hand made bricks measuring 0.21 m x 0.13 m x 0.06 m bonded with a light grey coarse mortar. These were laid using English stretcher bond. A total of 13 courses were exposed with a slightly curved top sloping down from the south. The exposed extent of this structure measured at 1.75 m by 0.6 m and 1.1 m high. Sealing this construction was a 1.4 m deep layer of light grey-brown silty clay (22) This layer contained flecking of lime mortar, chalk and charcoal and produced fragments of brick and pottery dated to the 18th-century.
- 3.1.3 Overlying layer 22 was a layer of dark grey-brown silty clay (7) measuring between 0.42 m and 0.52 m in depth. This layer also produced mortar flecking and brick fragments. Cut into this deposit was a 1.1 m wide, by 1.1 m deep trench (15) This was composed of two parts, a deeper 1.8 m long east-west aligned branch (Fig. 3, Plan 2) and a shallower 4.6 m long north-south aligned branch (Fig. 3, Plan 1). The junction of the two branches had been enlarged forming a roughly circular pit.
- 3.1.4 Constructed within the east-west branch of the trench was a rectangular brick culvert (21). This was constructed using bricks measuring 0.22 m x 0.1 m x 0.07 m bonded using a lime mortar. The double brick base was 0.95 m wide with two-brick-course high



sides surviving, forming a 0.45 m high channel. The culvert was capped by a single thickness brick arch. The eastern end of this culvert terminated at the base of a 0.9 m diameter brick chamber (16). This was built using unfroged bricks, 0.230 m x 0.09 m x 0.06 m, bonded with a light grey coarse mortar bond. Built within the shallower north-south branch of cut 15 and discharging into the top of chamber 16 was a rectangular culvert (15) (Fig. 3, Plan 1). This was constructed of bricks measuring 0.23 m x 0.09 m x 0.06 m bonded with an off-white lime mortar. The culvert was constructed using a brick base and sides each three courses high and capped with bricks laid crossways leaving an internal channel 0.11 m wide and 0.23 m deep. The culvert trench had been backfilled using a dark grey-brown silt clay (18). Sealing the trench and overlying layer 7 elsewhere was a layer of red-brown silty gravel (8), measuring between 0.12 m and 0.18 m in depth. This material had probably been dredged from the Thames and possibly formed a courtyard surface

- 3.1.5 This layer had been cut by a later phase of culvert construction. Running roughly east west across the trench before turning and running north-south was a 0.6 m wide by 0.5 m deep trench (12) (Fig. 3, Plan 1). Built within this trench was a rectangular brick culvert (13). This was built using plain red bricks measuring 0.23 m x 0.11 m x 0.08 m bonded with a light grey lime mortar. The culvert was formed using a brick base with sidewalls constructed using two courses of bricks capped with a mixture of bricks laid crossways and stone slabs. The culvert trench had been backfilled using a dark grey-brown clay silt (14).
- 3.1.6 Connecting up to the eastern end of culvert 13 was a later phase of culvert (10). This took the form of a 5 m length of culvert running north-west to south-east across the excavation with a spur running off its northern side and connecting with culvert 12. This later culvert had been constructed within a 0.7 m wide by 0.6 m deep trench (9). Culvert 10 took the form of a circular channel with an approximate inside diameter of 0.28 m. It had been constructed using a single thickness of a yellow unfroged brick, 0.22 m x 0.11 m x 0.07 m in size, bonded with a light grey mortar. These bricks were also used to construct a rectangular chamber measuring 0.5 m by 0.3 m where culvert 10 connected with culvert 13. This phase of culvert trench was backfilled using a dark grey-brown clay silt (11), containing brick fragments and lenses of red-brown gravel, probably redeposited remnants from layer 8.
- 3.1.7 Sealing the backfilled culvert trenches and layer 7 elsewhere was a dark grey/brown silty sand (6), 0.18 m thick and containing occasional gravel and stone and brick fragments. Cut into this layer was a 0.5 m square vertical faced cut (20), 0.32 m in depth. Built within this cut was a brick plinth (19). This was built using two courses of brick 0.22 m x 0.11 m x 0.08 m in size laid upon a 0.15 m deep brick rubble and mortar foundation.
- 3.1.8 Overlying 19 and layer 6 within the rest of the excavation was a 0.15 m-0.25 m deep layer of a light reddish brown silty sand containing patches of dark grey/brown silty clay and occasional gravel and flecks of mortar and charcoal (5) (Fig. 3, Section 1). This was overlaid by a probable demolition layer of consisting of a compact light reddish brown silty clay containing quantities of crushed brick, tile and mortar fragments (4), measuring up to 0.4 m in depth.
- 3.1.9 Sealing layer 4 was a 0.34 m deep layer of dark grey-brown silty clay (3). This in turn was overlaid by a 0.1m - 0.14 m thick layer of light brown silty clay (2), a probable levelling layer. A 0.16 m deep layer of topsoil and turf (1), the present day lawn, completed the section.



3.2 Finds

- 3.2.1 Four sherds of post-medieval red earthenware were recovered from layer 22. Three sherds were of a sugar mould (cone) including two with internal white slip dating from probably 18th-19th century. The fourth was a base sherd of black-glazed conical drinking vessel dating from 17th-18th century.

3.3 Environmental remains

- 3.3.1 No deposits suitable for palaeo-environmental sampling were observed during the course of the watching brief.

4 DISCUSSION AND CONCLUSIONS

- 4.1.1 The earliest deposit observed was the layer of probable made ground 23, provisionally dated to the 18th century. No earlier features or residual finds were encountered. The underlying natural was not encountered during the course of the watching brief
- 4.1.2 The earliest structure was a brick buttress [24], which is thought to be a supporting buttress for the 1770 embankment. This was sealed below a deep layer of made ground (22) building up the ground level behind the embankment. A series of service trenches containing brick culverts (16, 17 and 21) servicing the Middle Temple Library were cut into this made ground. These were superseded by a later series of culverts (10 and 13) probably constructed when the ground level was raised during the construction of the 1860s embankment and the levelling layers 5 and 6 were deposited. These were sealed below a layer of demolition debris (4) following the bomb damage to the site during the Second World War. Layers 1 and 2 are landscaping layers dating from the building of the present Queen Elizabeth building and the associated garden landscaping.



APPENDIX A. ARCHAEOLOGICAL CONTEXT INVENTORY

Context	Type	Depth	Width	Comments	Finds	Date
1	Layer	0.18 m	-	Modern garden soil	-	20 th century
2	Layer	0.14 m	-	Landscaping layer	-	20 th century
3	Layer	0.34 m	-	Levelling & Landscaping layer	-	20 th century
4	Layer	0.40 m	-	Demolition Layer	Brick	20 th century
5	Layer	0.25 m	-	Levelling layer	-	19 th century
6	Layer	0.18 m	-	Make up/Levelling layer	Brick	19 th century
7	Layer	0.52 m	-	Make up layer	Brick	-
8	Layer	0.18 m	-	Levelling layer	-	19 th century
9	Cut	0.54 m	0.70 m	Construction cut	-	19 th century
10	Structure	0.28 m	0.28 m	Brick culvert	-	19 th century
11	Fill	0.54 m	-	Backfill of culvert trench	Brick	19 th century
12	Cut	0.40 m	0.54 m	Construction cut	-	19 th century
13	Structure	0.40 m	0.54 m	Brick culvert	-	19 th century
14	Fill	0.40 m	-	Backfill of culvert trench	-	19 th century
15	Cut	1.10 m	1.10 m	Construction cut	-	18 th century
16	Structure	0.65 m	0.75 m	Circular brickdrain	-	18 th century
17	Structure	0.23 m	0.32 m	Brick culvert	-	18 th century
18	Fill	1.10 m	-	Fill of culvert trench	Brick	18 th century
19	Structure	0.65 m	-	Brick pad	-	19 th century
20	Cut	0.32 m	0.50 m	Construction cut	-	19 th century
21	Structure	0.65 m	0.95 m	Brick culvert	-	19 th century
22	Layer	1.40 m	-	Make up layer	Pottery	18 th century
23	Layer	> 0.35 m	-	Make up layer	-	18 th century
24	Structure	0.96 m	0.60 m	Brick Buttress	-	18 th century
25	Cut	> 0.35 m	> 1.4 m	Construction cut	-	18 th century



APPENDIX B. BIBLIOGRAPHY AND REFERENCES

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OA, 2010 *Middle Temple Garden, City of London Written Scheme of Investigation for Archaeological Watching Brief, Oxford Archaeology*

Wilkinson, D (ed.) 1992 *OAU Field Manual*, Oxford Archaeology



APPENDIX C. GLSMR/RCHME NMR ARCHAEOLOGICAL REPORT FORM

1)TYPE OF RECORDING

Watching brief of the excavation of a rectangular pit to contain a rainwater harvesting tank.

2)LOCATION

Borough: Corporation of London

Site address: Middle Temple Garden

Site Name: Rain water Harvesting tank, Middle Temple, London

Site Code: MDI 10

Nat. grid Refs: TQ 311 808 to centre of site:

3)ORGANISATION

Name of archaeological unit/company/society: Oxford Archaeology

Address: Janus House, Osney Mead, Oxford OX2 OES

Site supervisor : Jim Mumford Project manager: Jodie Ford

Funded by: The Estate Office, The Honourable Society of the Middle Temple

4)DURATION

Date fieldwork started 1st May 2010 Date finished: 2nd May 2010

Fieldwork previously notified? NO

Fieldwork will continue? NO

5)PERIODS REPRESENTED

Late post-medieval

6)PERIOD SUMMARIES

The watching brief revealed a brick buttress relating to the 1770 embankment with make up layer above and 19th/20th- century services for the Middle Temple Library destroyed during the Second World War.

7)NATURAL

Type: Not exposed during excavation

Height above Ordnance datum: N/A



8) LOCATION OF ARCHIVES Presently located at Janus House, Osney Mead, Oxford, OX2 OES

a) Please provide an estimate of the quantity of material in your possession for the following categories:

Notes 15	Plans 3	Photos	Ngtives 15
Slides 15	Correspondence	MScripts (unpub reports, etc)	
Bulk finds 1.5kg	Small finds 0	Soil samples 0	
Other (please specify)			

b) The archive has been prepared and stored in accordance with MGC standards and will be deposited in the following location: Museum of London

c) Has a security copy of the archive been made?: YES

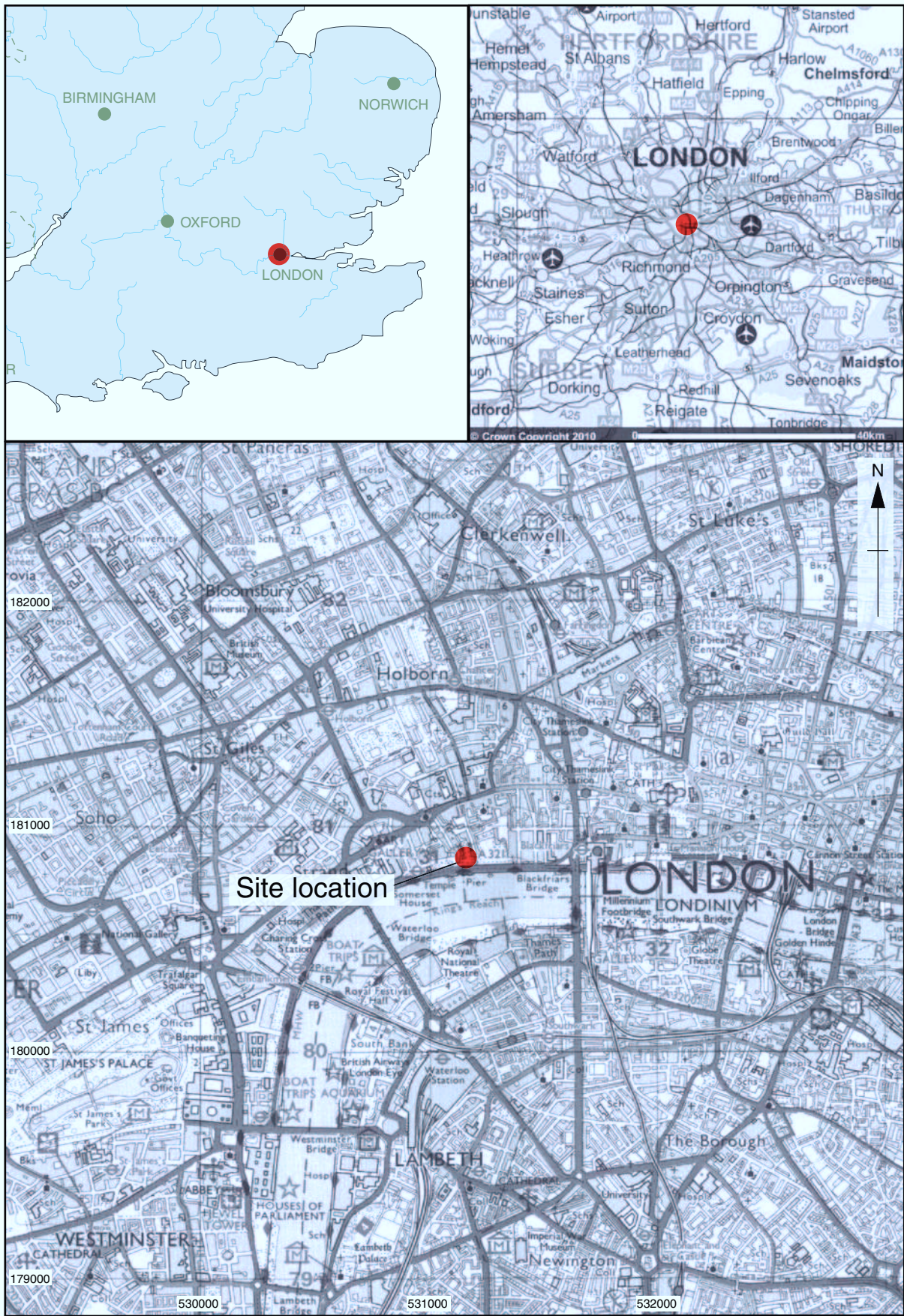
10) BIBLIOGRAPHY

See Appendix 2 Bibliography and References

SIGNED:

DATE: 11th October 2010

NAME (Block capitals): Jodie Ford



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Figure 1: Site location

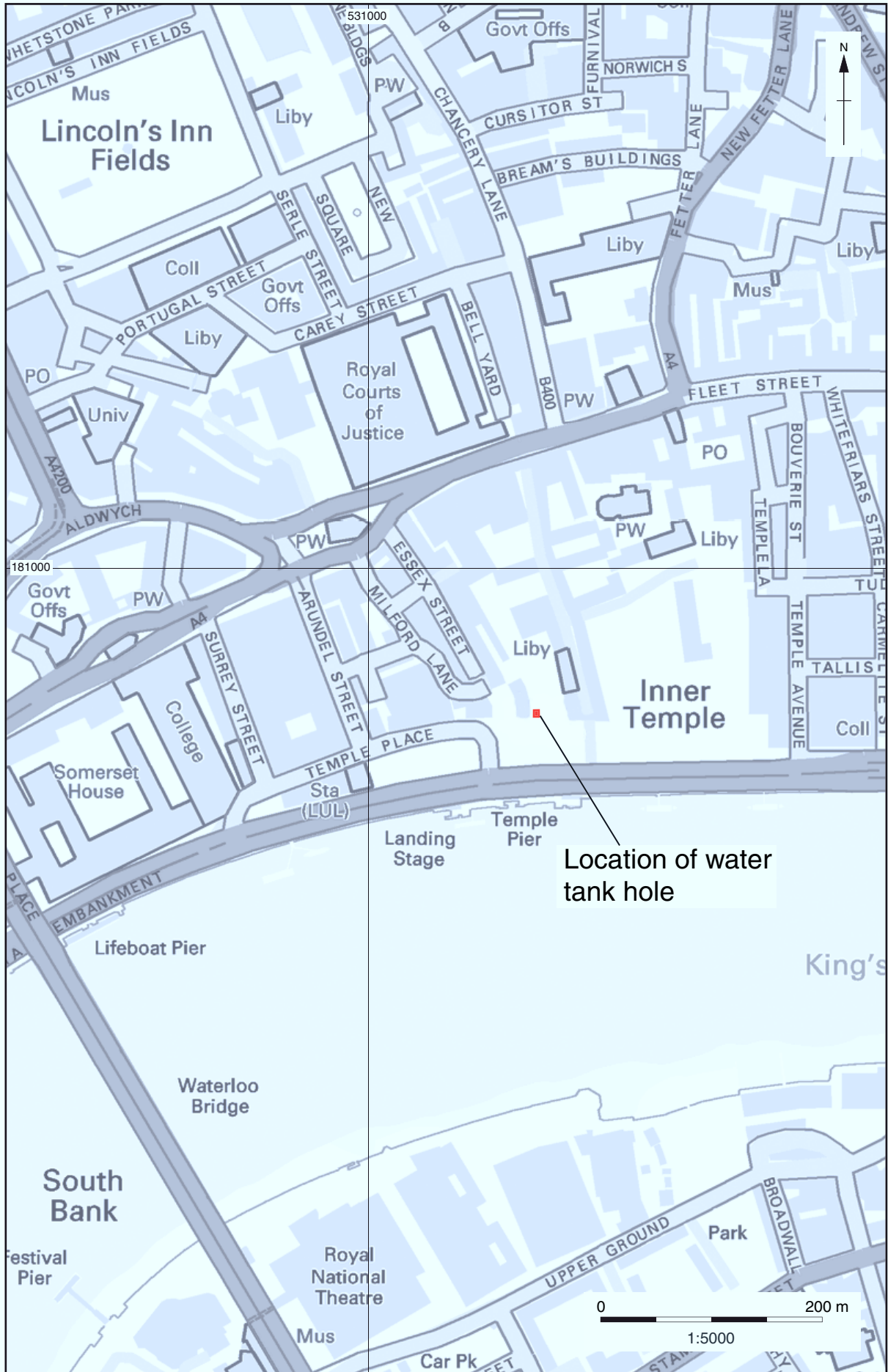


Figure 2: Site location

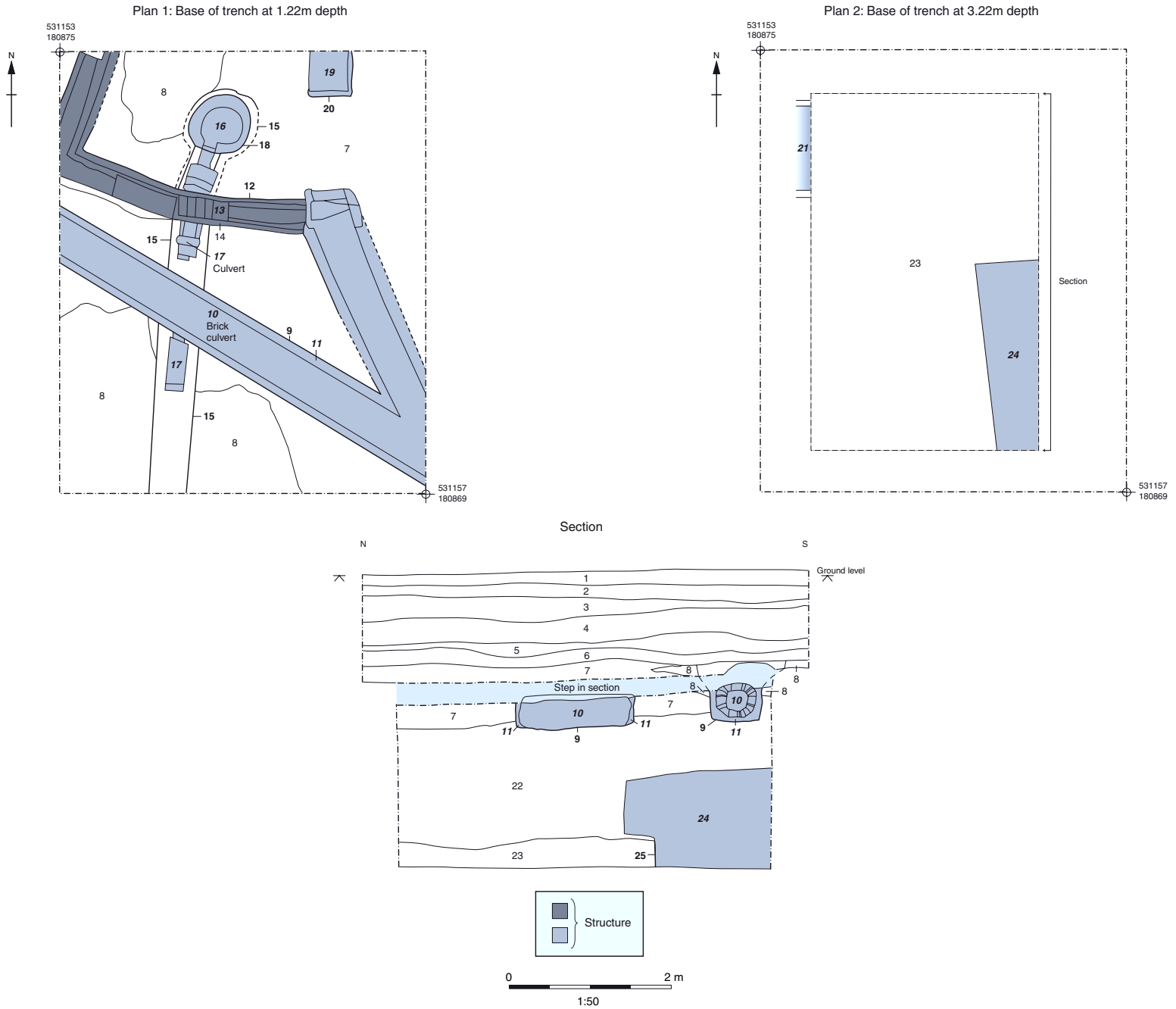


Figure 3: Plans 1 and 2, and west facing section



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