

New Gas Pipe  
and Service Trenches  
Royal Hospital  
Chelsea  
London



**Archaeological  
Watching Brief Report**



**Oxford Archaeology**

March 2005

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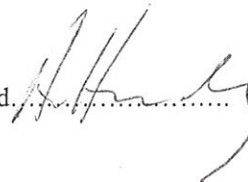
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## New Gas Pipe and Service Trenches, Royal Hospital, Chelsea, London

### *ARCHAEOLOGICAL WATCHING BRIEF REPORT*

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Cover Plate: View of new trenching along West Road to the garages from the south.

## SUMMARY

*From October to December 2004 Oxford Archaeology (OA) carried out an archaeological watching brief at Royal Hospital, Chelsea, London (NGR TQ 2830 7800). The work was commissioned by Capita Symonds during the installation and replacement of gas and water mains to the hospital. The watching brief revealed remains of 18th-century culverts and a cobbled surface of the Coal Creek wharf, sealed below a series of 19th- and 20th-century make up and landscaping layers.*

### 1 INTRODUCTION

#### 1.1 Location and scope of work

- 1.1.1 From October to December 2004 Oxford Archaeology (OA) carried out an archaeological watching brief at Royal Hospital, Chelsea, London (Fig. 1). The work was commissioned by Capita Symonds during the installation and replacement of gas and water mains to the hospital.
- 1.1.2 A brief was discussed and agreed with Diane Walls of English Heritage concerning the monitoring and recording of the works by Oxford Archaeology.

#### 1.2 Geology and topography

- 1.2.1 The site lies on first river terrace gravel overlying London Clay at 5 m above OD. The site is situated in the park grounds of the Royal Hospital opposite the Chelsea Barracks.

#### 1.3 Archaeological and historical background

- 1.3.1 The archaeological background to the watching brief was prepared from the Watching Brief Report carried out by Oxford Archaeology (OA 2004) during the construction of new buildings for the Superintendent of Grounds and is reproduced below.
- 1.3.2 The Royal Hospital is situated in the ancient parish of Chelsea on the edge of the first gravel terrace of the River Thames. The medieval centre of the village, clustered around the church, lies to the west of the hospital and it appears that when originally constructed the hospital lay in open fields running down to the Thames.
- 1.3.3 No prehistoric or Roman sites have been identified in the immediate vicinity of the Royal Hospital. However the location of the site on the first gravel terrace overlooking the river suggests that it would have been an attractive place to settle, both agriculturally and strategically. The area has produced chance finds of prehistoric material including a Bronze Age palstave, a number of Palaeolithic and Mesolithic flint flakes and a considerable amount of later prehistoric metalwork dredged from the River Thames. The grounds of the Royal Hospital itself have produced Roman material: a coin of Tetricus (259-274 AD) was found in College Court during the construction of a sewer in 1886.

- 1.3.4 The parish would appear to be able to demonstrate pre-Conquest roots. Chelsea is mentioned in a number of Anglo-Saxon charters and the Anglo-Saxon Chronicle tells us that Offa, King of Mercia, held a synod in Chelsea about AD 787. No recorded Anglo-Saxon material has been discovered in the immediate vicinity of the hospital.
- 1.3.5 During the medieval period the site of the hospital lay in the open fields of the parish of Chelsea to the east of the village which clustered around the church. Hamilton's 1717 map of the parish of Chelsea, (which probably reflects the medieval settlement pattern of the parish) coupled with the various documents relating to the purchase of the land for the hospital allows us to reconstruct fairly exactly the medieval settlement pattern. The site of the hospital lies within Thameshott, an arable field at the eastern edge of the parish of Chelsea. This field was separated from Eastfield, the main open field of the medieval parish of Chelsea (now partly occupied by Burton Court) by the road from Westminster to Chelsea. This road, known as Paradise Row, to the east of the Royal Hospital and Jews Row to the west of the Hospital appears likely to have existed as a straight thoroughfare in the medieval period. It ran from Chelsea to Westminster and, as marked on Hamilton's map passed over the Creek to the west via a stone bridge. When the Royal Hospital was built this road was diverted around Burton Court. The road was only re-routed along its original routeway, through the grounds of the hospital, along what is now Royal Hospital Road, following an act of parliament in 1845.
- 1.3.6 The Royal Hospital was built partly on the site of an unsuccessful Theological College built in the reign of James I with the stated intention of training Protestant clergy to refute the doctrines of the Catholic Church. Although this building was originally planned as having a double quadrangle, the smaller of which was to have been partly telescoped within the larger, commentators such as Faulkner (1829, 221) have argued that only one side of one, the largest, quadrangle was ever built. The college, which appears to have struggled against financial collapse from the first moment of its foundation, is recorded as 'dissolved' in a document of 1655 and between 1664 and 1666 it is recorded that it was used as a prison for Dutch Prisoners of War. Dean (1950 31) records that many of these prisoners died during the Great Plague of 1666 and were buried in the college forecourt.
- 1.3.7 In 1667 the building was transferred to the newly founded Royal Society although it appears to have been of little use to them. Despite various attempts to sell the college and its lands the property was to remain in the hands of the Royal Society until 1682 when the land was finally sold to the crown as the site of the Royal Hospital.
- 1.3.8 In this year Christopher Wren was commissioned to design and build the new Hospital. The original plan was for buildings around a single courtyard (Figure Court); the side courtyards (Light Horse Court and College Court) were additions of 1686. In 1689, 476 old pensioners were admitted although the building was not finished until 1690. With a few minor changes the main buildings that we see today are essentially those of the 1690's.
- 1.3.9 These comprised an elaborate mixture of canals, boulevards and gardens, which are clearly marked on Sturts 1692 plan of the Royal Hospital. Along the south front of the college Wren laid out a wide terrace and to the south of this the ground fell away

to an area of trees and lawns. These gardens were bisected by a raised causeway that ran down to a water gate on the river, flanked by two summerhouses. The causeway was flanked on either side by two 40ft (c. 12 m) wide canals, which ran to the bottom of the south Terrace before branching off to run north-east and south-west along its base. On either side of the two major canals Wren laid out plantations of fruit and flowering trees (Ascoli 1974, 100-1).

- 1.3.10 This arrangement survived fairly unscathed for the next 150 years although a gradual diminution is apparent on the various historic maps consulted. The most notable change is the disappearance of the orchards, which is apparent on maps from the mid 18<sup>th</sup> century onwards. Maps of this date, and later, show that the canals survive throughout the 18<sup>th</sup> and into the 19<sup>th</sup> century but that as early as 1717 the orchards had disappeared to be replaced by a Kitchen Garden to the south-west and by a area of meadow, described as the Governors Garden Meadow, to the north-east.
- 1.3.11 The most drastic change came in the 1850s when the construction of the Chelsea Bridge Road and the building of the Embankment carved off the southern edge of the gardens. This led to not only the loss of the Water Gate and the southern edge of Wren's Gardens but also to the infilling of the canals. Later 19<sup>th</sup>-century and early 20<sup>th</sup>-century maps show something very close to the modern layout of the gardens with a gravelled pathway following the line of the raised causeway and lawns laid out on the site of the canals and gardens and orchards that flanked them. These fields are now in use as playing fields and will form the site of the new permanent Marquee.
- 1.3.12 A watching brief carried out in 2003 by Oxford Archaeology during the construction of a new building for the Superintendent of Grounds revealed no archaeological features or deposits pre-dating the 19th century, suggesting the site remained undeveloped during the construction of the Royal Society College and later Royal Hospital. Activity pre-dating the 19th century was represented only by a thick layer of cultivated soil, which had been disturbed by later activity. A large quarry pit was observed in the south-west corner of the site was possibly excavated to provide material for the construction of the Chelsea Bridge Road and was subsequently used as a rubbish pit. From the mid 19th century, a series of greenhouses, outbuildings and related features for the care and maintenance of the hospital grounds were constructed at the site.

## 2 PROJECT AIMS AND METHODOLOGY

### 2.1 Aims

- 2.1.1 To identify and record the presence/absence, extent, condition, quality and date of archaeological remains in the areas affected by the development.
- 2.1.2 To make available the results of the archaeological investigation.

### 2.2 Methodology

- 2.2.1 The trenching consisting of pipe boring along the front of the north and south sides of the hospital and excavations along existing pipe trenches replacing the old

services. These works were carried out without archaeological supervision as they were within earlier disturbed service trenches. The two stretches of trench that were observed were from the south end of West Road along new routes. These were from the end of West Road to rear of Gordon House and southwards to the garages at the end of West Road (Fig. 2).

- 2.2.2 All archaeological features were planned at a scale of 1:100 and where excavated their sections drawn at scales of 1:20. All excavated features were photographed using colour slide and black and white print film. A general photographic record of the work was made. Recording followed procedures detailed in the *OAU Fieldwork Manual* (OAU 1992).

### 3 RESULTS

#### 3.1 Description of deposits

##### *Trench from West Road to Gordon House (Figs 3 and 5)*

- 3.1.1 This trench was approximately 65 m long, 0.4 m wide and was between 0.8 - 1.1 m in depth. It cut into a layer of dark brown silty sand loam (3) cultivated soil horizon forming part of the 17th century terrace. At the east end of the trench this layer was overlain by a compact mortar and brick (2) demolition material and about mid way along the trench were two Brick culverts. These were built in a vertical sided trench (4) with a flat base. The culverts (5 and 8) were built of brick with a coarse light grey mortar bond with a stone slab across the top to form a 0.4 m wide by 0.35 m deep channel (see Fig. 5, section 2). A loose dark reddish brown silty sand (6) in-filled along the sides of the channel and a compact dark brown silty sand (7) back filled the trench. These were of the same build and materials as the former orangery built by Robert Walpole in the early 18th century.
- 3.1.2 At the north-west end of the trench, where the new services would enter the boiler house, layer 3 was sealed by a dark brown silty sand loam (14) layer of cultivated soil, which was similar to the cultivated soil layer (1) at the east end of the trench forming part of the 17th century terrace (see Fig. 5, section 3). Sealing this was a 0.30 m thick layer of light reddish brown silty sand (12) building rubble. This had been cut by a foundation trench (11), which had vertical sides and flat base measuring 1.35 m x 0.30 m x 0.50 m. It was filled by a 0.23 m thick layer of light grey cement (10) foundation for a brick wall (9). This stood three courses high built in English running bond with a grey sand cement bond and measured 0.80 m x 0.30 m x 0.26 m. It had a 0.15 m thick layer of dark reddish brown silty sand (13) disturbed soil against its west side. Sealing all these was a 0.16 m to 0.24 m thick layer of compact stone chipping and hardcore (24) base for the 0.10 m thick tarmac surface of the present roadway.

##### *Trench from the Creek Lodge to the Garages (Figs 4 and 5)*

- 3.1.3 This trench measured approximately 115 m long and was 0.40 m wide and 0.8 m - 1.1 m in depth. It cut into a make up layer of mid brown silty sand (31) on which a cobbled surface (30) was laid. This surface consisted of rough rectangular cut cobbles set in a 0.18 m thick bedding of reddish brown sand. Although no dating

evidence was recovered, this surface is thought to be related to the wharf at the head of the Coal Creek, which was in-filled in the late 19th century. Overlying this was a series of make up layers (23, 28, 29, 32 and 33) between 0.10 m - 0.50 m thick of dark brown and reddish brown silty sand with building debris. This material filled in and made up the ground level for the present landscaped garden. Sealing this was a 0.10 m thick compact light yellowish brown silty clay and gravel (18, 27 and 34) and was the surface for the continuation of the West Road into the grounds. Overlying this was a dark brown silty sand (17 and 26) make up layer. Layer 18 had been cut by foundation trench (19) for the west wall of the south terrace (see Fig. 5, section 4). It had vertical side with a shallow sloping edge and measured 1.2 m in depth and had an open east side. It had a concrete base 0.2 m thick with a four course high brick wall footing (21), onto which the present brick wall (22) with limestone cut capstone of the garden terrace wall was built. Between the wall (22) and cut 19 was a dark grey brown silty sand (20) back fill, which was overlain by hardcore and stone chipping layer (15 and 24). This was for the tarmac (25) surface of West Road to the garages.

- 3.1.4 The spur trench went from under the west south garden terrace wall and across to connect to the irrigation tank. The trench was 0.4 m wide and 0.9 m in depth. This cut into a reddish brown silty sand (23) make up layer. Sealed by a 0.4 m thick very dark grey brown silty sand cultivated topsoil. In the south-west corner the stone slab garden patio surface was lifted and the trench cut a small soakaway 0.4 m x 0.32 m x 0.35 m with a brick lining. This was filled by silting up of garden soil.

### 3.2 Finds

- 3.2.1 No finds were recovered during the watching brief.

### 3.3 Palaeo-environmental remains

- 3.3.1 No deposits suitable for environmental sampling were identified during the watching brief.

## 4 DISCUSSION AND CONCLUSIONS

- 4.1.1 The watching brief was only carried out in two areas as the other routes were along existing service trenches and ducts. The trench that cut from West Road to the boiler house at the rear of Gordon House exposed a the soil horizon to the 18th century garden terrace and two brick built culverts from the Robert Walpoles orangery. A brick footing was also exposed at the north-west end of the trench and relates to 19th construction works by Soane. The area to the rear of Gordon House had been badly truncated by services and WWII bomb damage in the late 20th century.
- 4.1.2 The second trench that ran southwards along the West Road from Creek Lodge to the garages. No evidence of the Coal creek was exposed. A series of layers of later in-filling and landscaping from the mid 19th century were recorded. At the north end of the trench from the base of the South Terrace and extending approximately 20 m southwards the remains of a cobble surface was uncovered. This is thought to be part of the surface for wharf area at the head of the Coal Creek shown in the Thompson's Map of Chelsea 1836.



## APPENDICES

## APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

<i>Context</i>	<i>Type</i>	<i>Depth</i>	<i>Width</i>	<i>Length</i>	<i>Comments</i>
1	Layer	0.28 m			Material making up ground level
2	Layer	0.20 m			Building debris
3	Layer	0.20 m			Garden soil horizon
4	Cut	1.10 m	0.75 m	0.80 m	Construction trench for culvert
5	Structure	0.38 m	0.40 m	0.40 m	Stone culvert
6	Fill				Back fill of culvert trench
7	Fill				Back fill of culvert trench
8	Structure	0.38 m	0.40 m	0.80 m	Stone culvert
9	Structure	0.26 m	0.40 m	0.85 m	Brick foundation
10	Structure	0.15 m			Concrete foundation
11	Cut	0.50 m	0.30 m	1.35 m	Foundation cut
12	Layer	0.24 m			Demolition make up layer
13	Layer	0.16 m			Ground make up
14	Layer	0.18 m			Cultivated garden soil
15	Layer	0.12 m			Hardcore make up for surface
16	Layer	0.18 m			Cultivated garden soil
17	Layer	0.16 m			Make up layer
18	Layer	0.08 m			Gravel surface
19	Cut	0.55 m	0.26 m	0.50 m	Foundation trench for wall
20	Fill				Back fill of foundation trench
21	Structure				Brick wall foundation
22	Structure				Brick wall of garden
23	Layer	0.50 m			Ground make up layer
24	Layer	0.18 m			Stone Hardcore make up
25	Layer	0.10 m			Tarmac
26	Layer	0.06 m			make up layer
27	Layer	0.06 m			Gravel surface
28	Layer	0.15 m			Ground make up layer
29	Layer	0.12 m			Ground make up layer
30	Layer	0.20 m			Cobbled surface
31	Layer	0.14 m			Ground make up
32	Layer	0.40 m			Ground make up layer

<i>Context</i>	<i>Type</i>	<i>Depth</i>	<i>Width</i>	<i>Length</i>	<i>Comments</i>
33	Layer	0.15 m			Ground make up layer
34	Layer	0.08 m			Gravel surface

## APPENDIX 2 BIBLIOGRAPHY AND REFERENCES

- Dean C G T, 1950 The Royal Hospital Chelsea (London)
- OAU, 1992 Oxford Archaeological Unit Fieldwork Manual (ed. D Wilkinson)
- OAU, 1996 A Desk-Top Assessment of the possible archaeological implications of the Installation of an Automatic Irrigation System at the Royal Hospital, Chelsea. Oxford Archaeological Unit (unpublished).
- OAU 1997 An Archaeological Watching Brief conducted during the installation of an Automatic Irrigation System at the Royal Hospital, Chelsea. Oxford Archaeological Unit (unpublished).
- OAU 1999a Installation of a Communication Duct System. Archaeological Watching Brief Report. Oxford Archaeological Unit (unpublished).
- OAU 1999b Chelsea Flower Show 2000, New Marquee. Archaeological Watching Brief Report. Oxford Archaeological Unit (unpublished)
- OAU 2000 Chelsea Royal Hospital, Ranelagh House, Drainage, rehabilitation works. Archaeological Watching Brief Report.
- OA 2004 Royal Hospital Chelsea Replacement of Superintendent of Grounds Watching Brief Report

## APPENDIX 3 SUMMARY OF SITE DETAILS

**Site name:** New Gas Pipe and Service Trenches, Royal Hospital, Chelsea, London

**Site code:** RHCRAW 04

**Grid reference:** NGR TQ 2830 7800

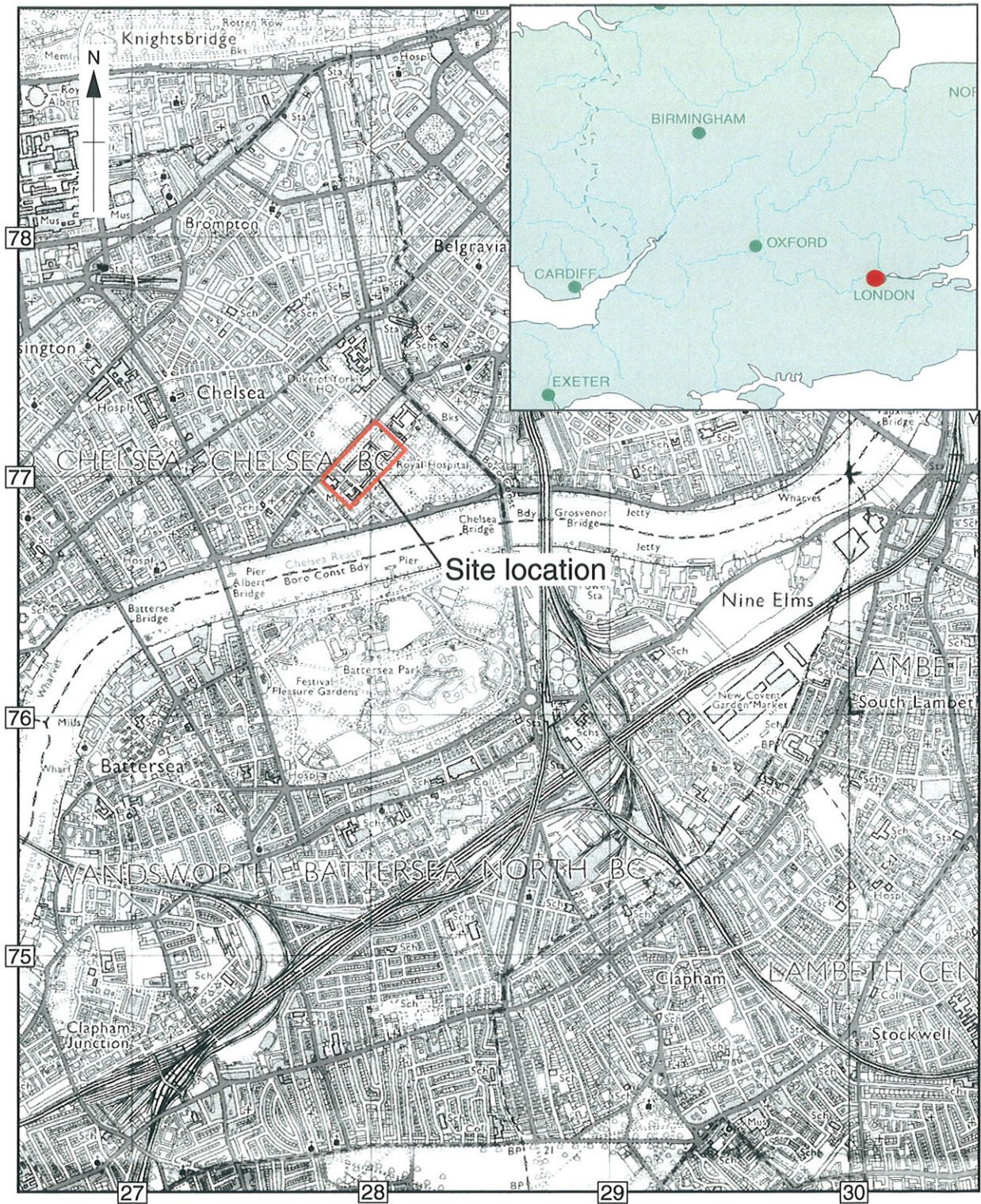
**Type of watching brief:** Monitoring of new service trenches around the hospital.

**Date and duration of project:** A total of seven visits from the 8/10/2004 to the 14/12/2004.

**Area of site:** Approximately 1440 m of trench was excavated.

**Summary of results:** The watching brief revealed remains of 18th century culverts and a cobbled surface of the Coal Creek wharf, sealed below a series of 19th and 20th century make up and landscaping layers.

**Location of archive:** The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Royal Hospital Chelsea, London.



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Figure 1: Site location

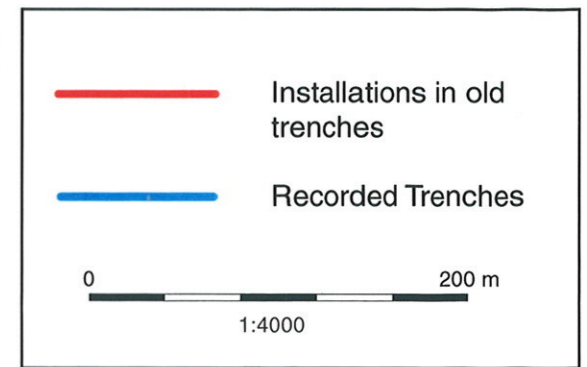
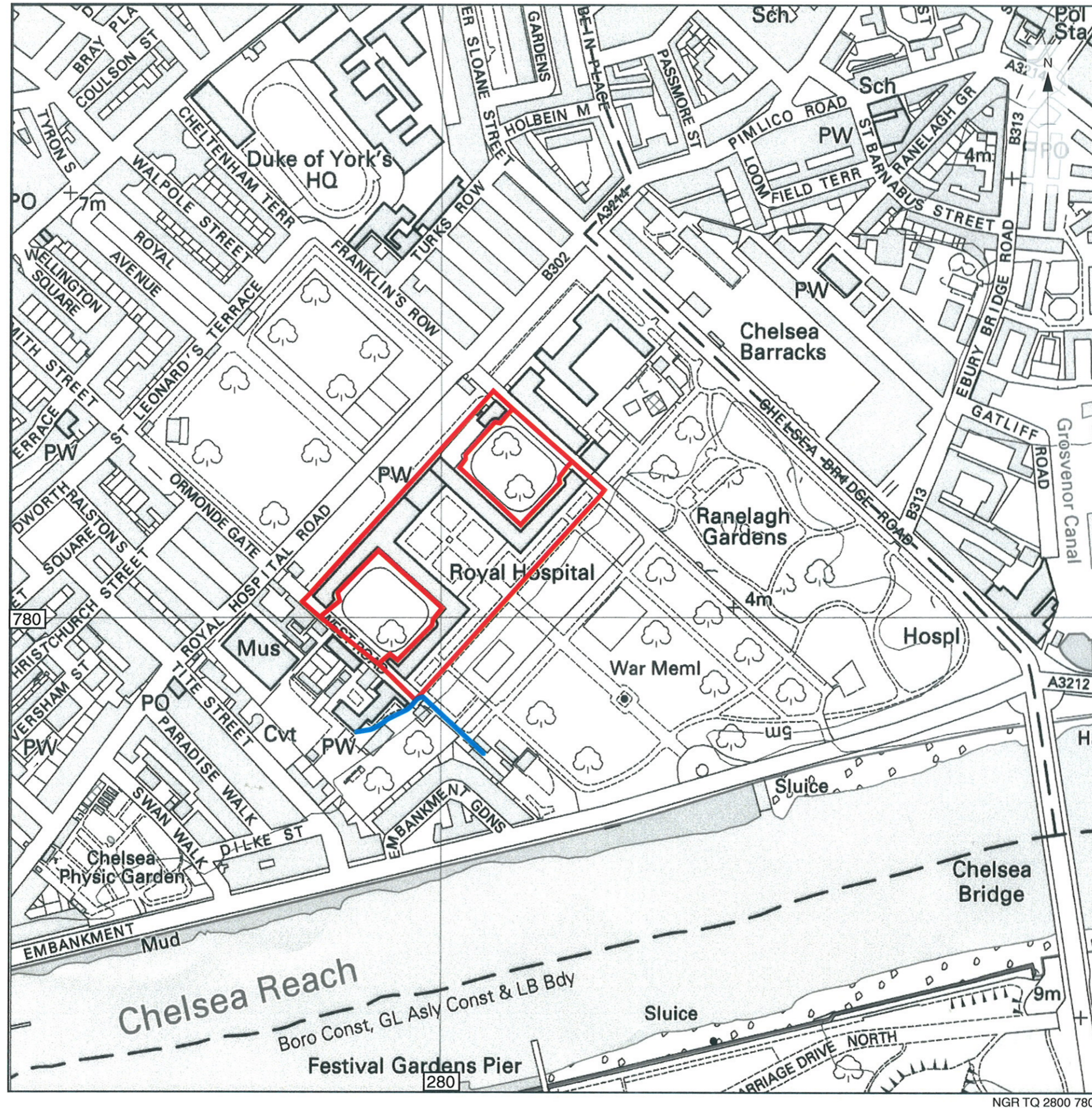


Figure 2: Site location of Areas of Watching Brief

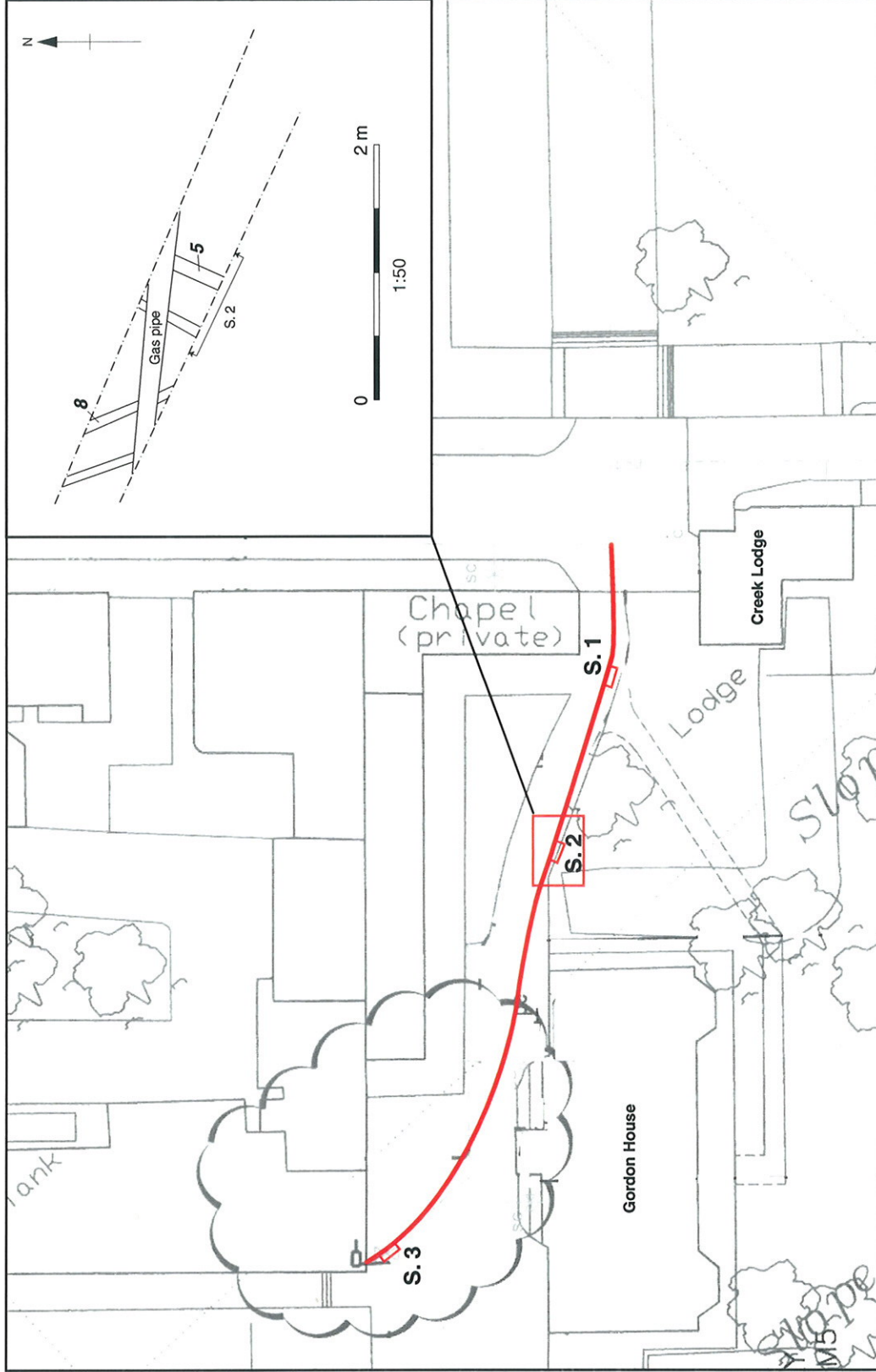


Figure 3: Detail of trench and location of sections

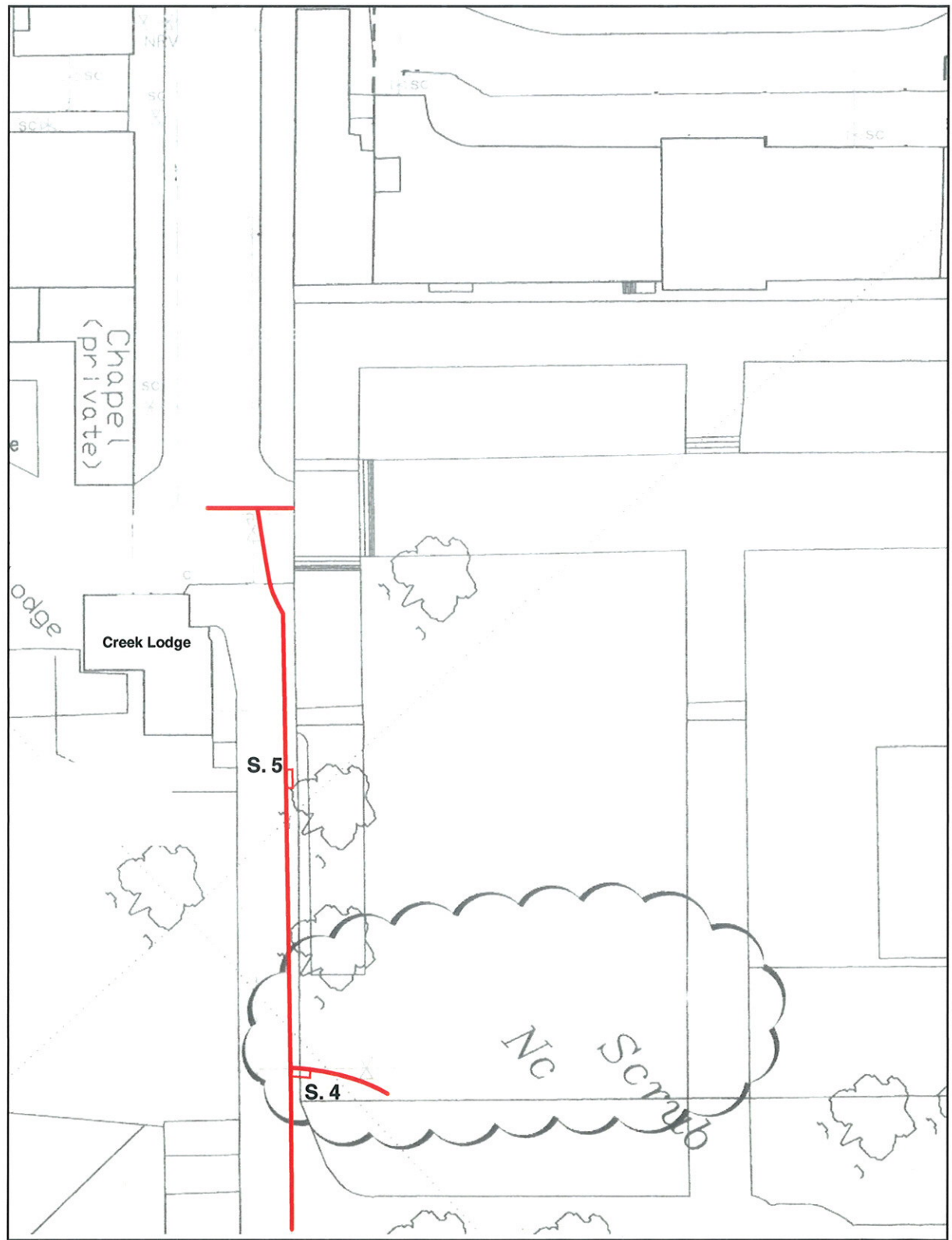


Figure 4: Detail of trench and location of sections

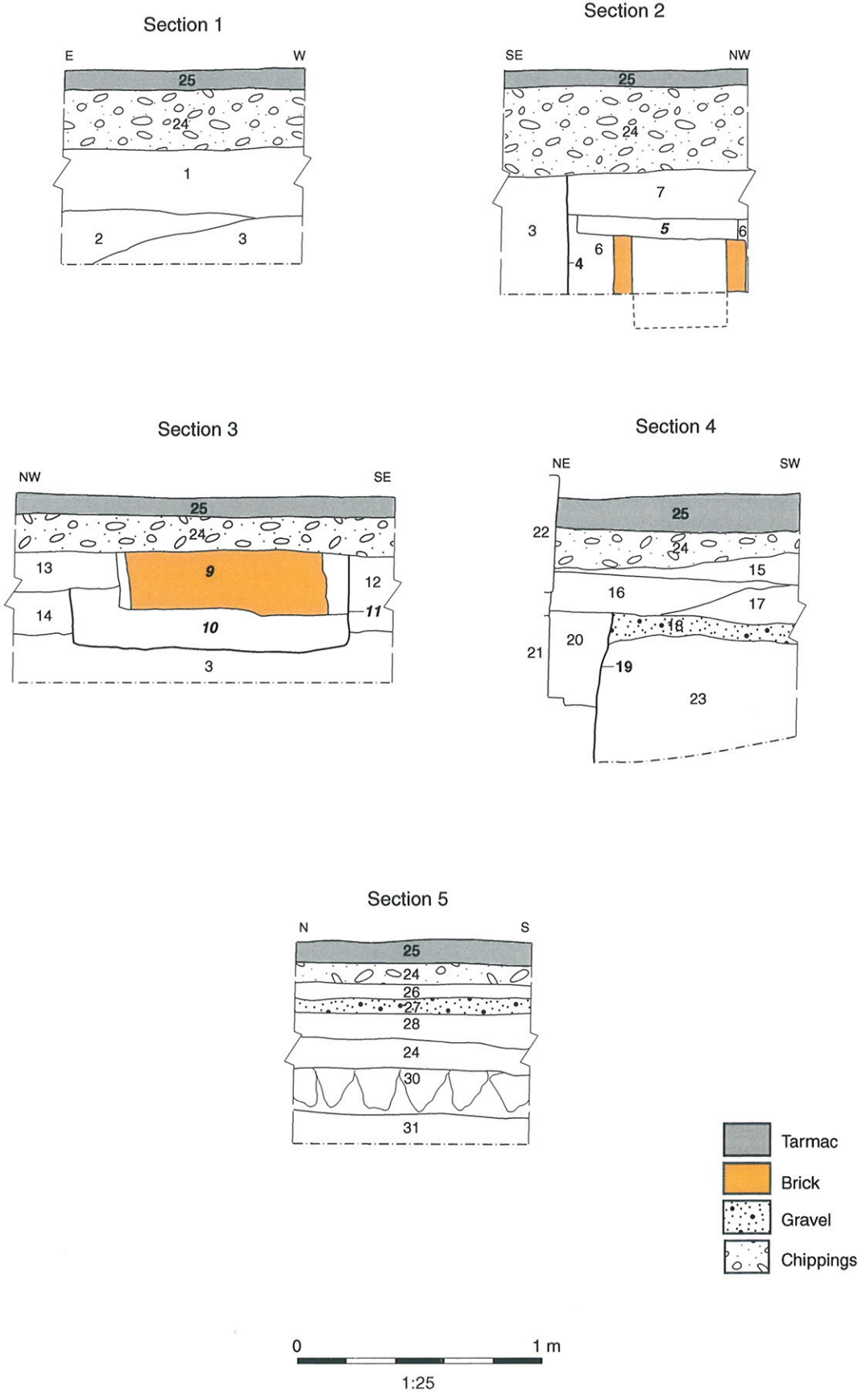


Figure 5: Sections 1-5



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