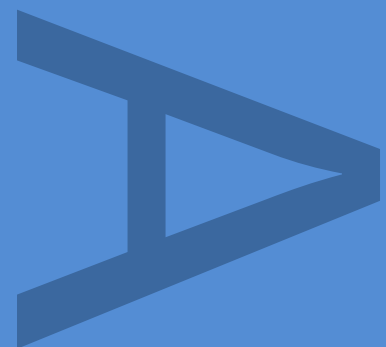


**WHITEHALL STREETScape  
IMPROVEMENT PROJECT  
CITY OF WESTMINSTER**

**ASSESSMENT OF AN  
ARCHAEOLOGICAL WATCHING  
BRIEF**

**WQH 07  
MAY 2011**



**PRE-CONSTRUCT ARCHAEOLOGY**

WHITEHALL STREETSCAPE IMPROVEMENT  
PROJECT  
CITY OF WESTMINSTER

WATCHING BRIEF

Quality Control

Pre-Construct Archaeology Limited			K1451
	Name & Title	Signature	Date
Text Prepared by:	Paw Jorgensen		April 2011
Graphics Prepared by:	Jennifer Simonson		April 2011
Graphics Checked by:	Josephine Brown		April 2011
Project Manager Sign-off:	Jon Butler		April 2011
Client Sign Off	Andrew Holmes, Atkins		April 2011

Revision No.	Date	Checked	Approved
1	May 2011	Jon Butler	Jon Butler

Pre-Construct Archaeology Ltd  
Unit 54  
Brockley Cross Business Centre  
96 Endwell Road  
London  
SE4 2PD

# **Assessment of an Archaeological Watching Brief During the Whitehall Streetscape Improvement Project, City of Westminster**

**Site Code: WQH07**

**National Grid Reference: north TQ 3008 8022; central TQ 3015 7996; south TQ  
3015 7967**

**Written and Researched by Paw Jorgensen**

**Pre-Construct Archaeology Ltd. May 2011**

**Project Manager: Chris Mayo**

**Post-Excavation Manager: Jon Butler**

**Commissioning Client: Atkins Heritage on Behalf of Westminster City Council**

**Contractor:**

**Pre-Construct Archaeology Limited**

**Unit 54**

**Brockley Cross Business Centre**

**96 Endwell Road**

**London**

**SE4 2PD**

**Tel: 020 7732 3925**

**Fax: 020 7732 7896**

**E-mail: [cmayo@pre-construct.com](mailto:cmayo@pre-construct.com)**

**© Pre-Construct Archaeology Limited**

**May 2011**

© The material contained herein is and remains the sole property of Pre-Construct Archaeology Limited and is not for publication to third parties without prior consent. Whilst every effort has been made to provide detailed and accurate information, Pre-Construct Archaeology Limited cannot be held responsible for errors or inaccuracies herein contained

## CONTENTS

1	Abstract	4
2	Introduction	5
3	Planning Background	9
4	Geology and Topography	11
5	Archaeological and Historical Background	12
6	Archaeological Methodology	20
7	The Archaeological Sequence	22
8	Archaeological Phased Discussion	103
9	Original Research Questions, Response and Revised Research Questions	117
10	Contents of the Archive	119
11	Importance of the Results, Further Work and Publication Outline	120
12	Acknowledgements	123
13	Bibliography	124

## APPENDICES

1	Context Index	126
2	Pottery Assessment By Chris Jarrett	139
3	Clay Tobacco Pipe Assessment by Chris Jarrett	146
4	Glass Assessment by Chris Jarrett	150
5	Animal Bone Assessment by Kevin Rielly	153
6	Human Bone Assessment by James Langthorne	156
7	Building Material Assessment by Kevin Hayward	157
8	Environmental Sample Assessment by QUEST	175
9	OASIS Form	180

## ILLUSTRATIONS

Figure 1	Site Location	7
Figure 2	Trench Location	8
Figure 3	Phase 2: Trench Location	46
Figure 4	Phase 2: Trench 44	47
Figure 5	Phase 3: Trench Location	48
Figure 6	Phase 3: Trench 44	49
Figure 7	Phase 3: Trench 53	50

---

Figure 8	Phase 4: Trench Location	51
Figure 9	Phase 4: Trench 59	52
Figure 10	Phase 5: Trench Location	53
Figure 11	Phase 5: Trenches 43 & 52	54
Figure 12	Phase 5: Trench 55	55
Figure 13	Phase 5: Trench 58	56
Figure 14	Phase 6: Trench Location	57
Figure 15	Phase 6: Trenches 32 & 43	58
Figure 16	Phase 7: Trench Location	59
Figure 17	Phase 7: Trench 13/28	60
Figure 18	Phase 7: Trench 36	61
Figure 19	Phase 7: Trench 52	62
Figure 20	Phase 7: Trenches 58, 59 & 62	63
Figure 21	Phase 8: Trench Location	64
Figure 22	Phase 8: Trench 52	65
Figure 23	Phase 9: Trench Location	66
Figure 24	Phase 9: Trench 42	67
Figure 25	Phase 9: Trench 44	68
Figure 26	Phase 9: Trench 50	69
Figure 27	Phase 9: Trenches 51 & 52	70
Figure 28	Phase 9: Trenches 96 & 98	71
Figure 29	Phase 10: Trench Location	72
Figure 30	Phase 10: Trenches 4 & 9	73
Figure 31	Phase 10: Trenches 13/18 & 23	74
Figure 32	Phase 10: Trenches 14 & 20	75
Figure 33	Phase 10: Trench 36	76
Figure 34	Phase 10: Trench 44	77
Figure 35	Phase 10: Trench 52 & 56	78
Figure 36	Phase 10: Trench 54	79
Figure 37	Phase 10: Trench 55	80
Figure 38	Phase 10: Trench 58	81
Figure 39	Phase 10: Trench 59	82
Figure 40	Phase 10: Trench 61	83
Figure 41	Phase 10: Trench 62	84
Figure 42	Phase 11: Trench Location	85
Figure 43	Phase 11: Trench 13/28	86
Figure 44	Phase 11: Trench 14	87
Figure 45	Phase 11: Trenches 18 & 33dg	88
Figure 46	Phase 11: Trench 36	89

Figure 47	Phase 11: Trench 55	90
Figure 48	Phase 11: Trench 57	91
Figure 49	Phase 11: Trench 57 (detail)	92
Figure 50	Phase 11: Trenches 58 & 99	93
Figure 51	Phase 11: Trench 59	94
Figure 52	Phase 11: Trench 62	95
Figure 53	Phase 11: Trench 63	96
Figure 54	Sections 1	97
Figure 55	Sections 2	98
Figure 56	Sections 3	99
Figure 57	Sections 4	100
Figure 58	Fisher's Plan of Whitehall Palace 1680	116

## **PLATES**

Plate 1	Working shot	101
Plate 2	Saxon pits in Trench 44	101
Plate 3	Fireplace/oven [414] in Trench 53	102
Plate 4	Wall [412] in Trench 53	102

## 1 ABSTRACT

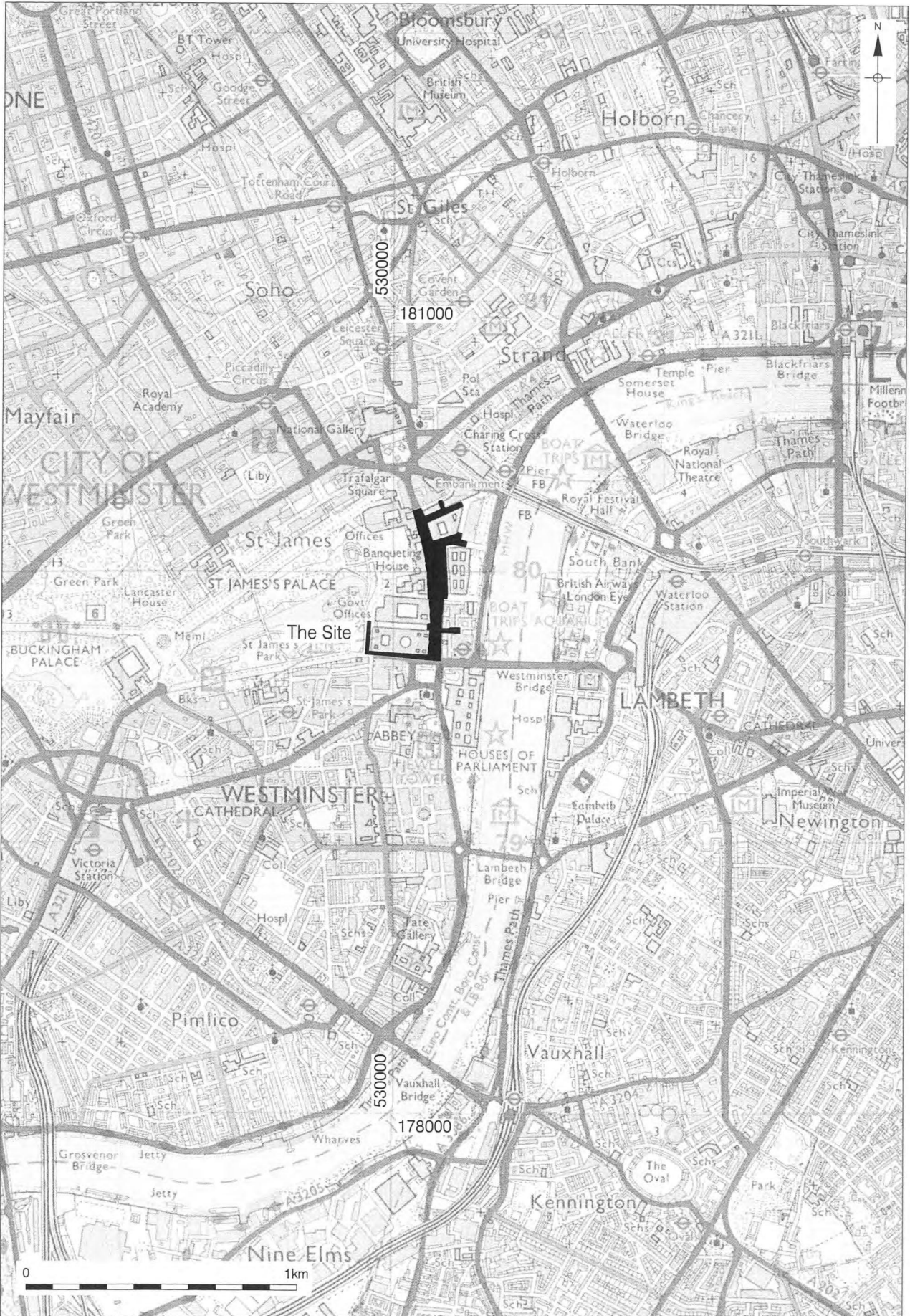
- 1.1 This document details the results and working methods of an archaeological watching brief undertaken by Pre-Construct Archaeology Ltd along Whitehall and adjoining streets in the City of Westminster between May 2007 and October 2010. The work was carried out as part of the Whitehall Streetscape Improvement Project commissioned by Atkins Heritage on behalf of the City of Westminster.
- 1.2 The site is centered at National Grid Reference TQ 3015 7996 and lies within an Area of Special Archaeological Priority as defined in the City of Westminster Unitary Development Plan. It is an area of known historical significance, given the royal and political history associated with Whitehall since the medieval period.
- 1.3 Evidence for activity dating from the Saxon period to present-day was recorded during the watching brief.
- 1.4 A palaeochannel, which yielded finds dating to the Middle Saxon period was excavated. Several pits, three of which also dated to the Saxon phase were also recorded in the vicinity of the channel. One of these contained the fragmentary remains of a human skull.
- 1.5 Dumped deposits and pits dating to the medieval period attest to activity within the area during this time.
- 1.6 Several structural remains relating to the buildings within York Place and later Whitehall Palace were recorded. These were predominantly located to the west of Whitehall in the vicinity of the Ministry of Defence Main Building, The Old War Office Building and Scotland Yard although the remains of the King Street Gate were also recorded near the corner of Downing Street and Whitehall. The walls that were revealed formed part of the kitchen and Chapel Royal of York Place and several parts of Whitehall Palace including parts of the Privy Gallery range, the Court Gate, the Privy Garden, King Street Gate and parts of a Gun Platform and Gun Battery.
- 1.7 Evidence of the post-palace buildings and features was recorded in many of the trenches. The structures that were recorded including parts of Pelham House, Taylor House and Vanbrugh House. Other buildings were recorded which were built during the 19th century.

## 2 INTRODUCTION

- 2.1 An archaeological watching brief was undertaken by Pre-Construct Archaeology along Whitehall and adjoining streets in the City of Westminster, London (Figs. 1 & 2). The site was located within what was historically part of Whitehall Palace. It was roughly bounded to the west by the River Thames, to the south by Great George Street, to the north by Trafalgar Square and to the east by Horse Guards Parade. The watching brief took place between May 2007 and October 2010. The work was commissioned by Atkins Heritage on behalf of the City of Westminster as part of the Whitehall Streetscape Improvement Project. It was supervised by Rebecca Haslam and Paw Jorgensen and project managed by Chris Mayo. The archaeological consultants responsible for planning and overseeing the archaeological mitigation works in consultation with the Archaeological Advisor to the City of Westminster (English Heritage) were Tom Wilson, Andrew Holmes, Andrea Bradley and Tony Lee of Atkins.
- 2.2 The site has previously been the subject of a Desk Based Assessment (Atkins 2006).
- 2.3 A number of archaeological investigations had previously been carried out within the study site. These were mostly related to the clearing, and later development, of the site of the Ministry of Defence Main Building in the 1920s, 1930s and 1950s. Another investigation had been carried out at the Treasury Green, the site of the Old Treasury Building in the early 1960s (Green & Thurley 1987; Cowie & Blackmore 2008, 90-100). During the 1990s investigations were carried out in the vicinity in association with the Jubilee Line extension project (Thomas *et al* 2006). In addition a number of chance finds dating from the Mesolithic period to the post-medieval period have been recorded within the site boundaries. The previous investigations recorded the remains of Saxon timber buildings, flood defences and ditches as well as structural remains associated with York Place and Whitehall Palace. A total of 78 listed buildings are located within the site; these include 14 Grade I, 17 Grade II\*, and 47 Grade II Listed Buildings (Atkins 2006).
- 2.4 The work carried out during the Streetscape Improvement Project included alterations to walls and bollards around the Treasury, alterations to walls and gardens around the Ministry of Defence building, adjustment of paving levels around the Foreign and Commonwealth Office, removal of trees and replanting and other miscellaneous works in connection with the above (Atkins 2006).



- 2.5 The site lies within an Area of Special Archaeological Priority as defined in the City of Westminster Unitary Development Plan (adopted January 2007). It is an area of known historical significance, given the royal and political history associated with Whitehall since the medieval period. The central National Grid Reference for the site is TQ 3015 7996, with the northernmost point at TQ 3008 8022 and the southernmost at TQ 3015 7967. Across the site ground level was recorded at a highest height of 5.50m OD and at a lowest height of 4.20m OD.
- 2.6 The archaeological investigations were monitored by the Archaeological Advisor to the City of Westminster, Diane Walls (English Heritage GLAAS).
- 2.7 The completed archive comprising written, drawn and photographic records and artefactual material from the watching brief will be deposited with the London Archaeological Archive and Research Centre (LAARC) under the site code WQH07.



© Crown copyright 2006. All rights reserved. License number 36110309

© Pre-Construct Archaeology Ltd 2011

Figure 1  
 Site Location  
 1:20,000 at A4

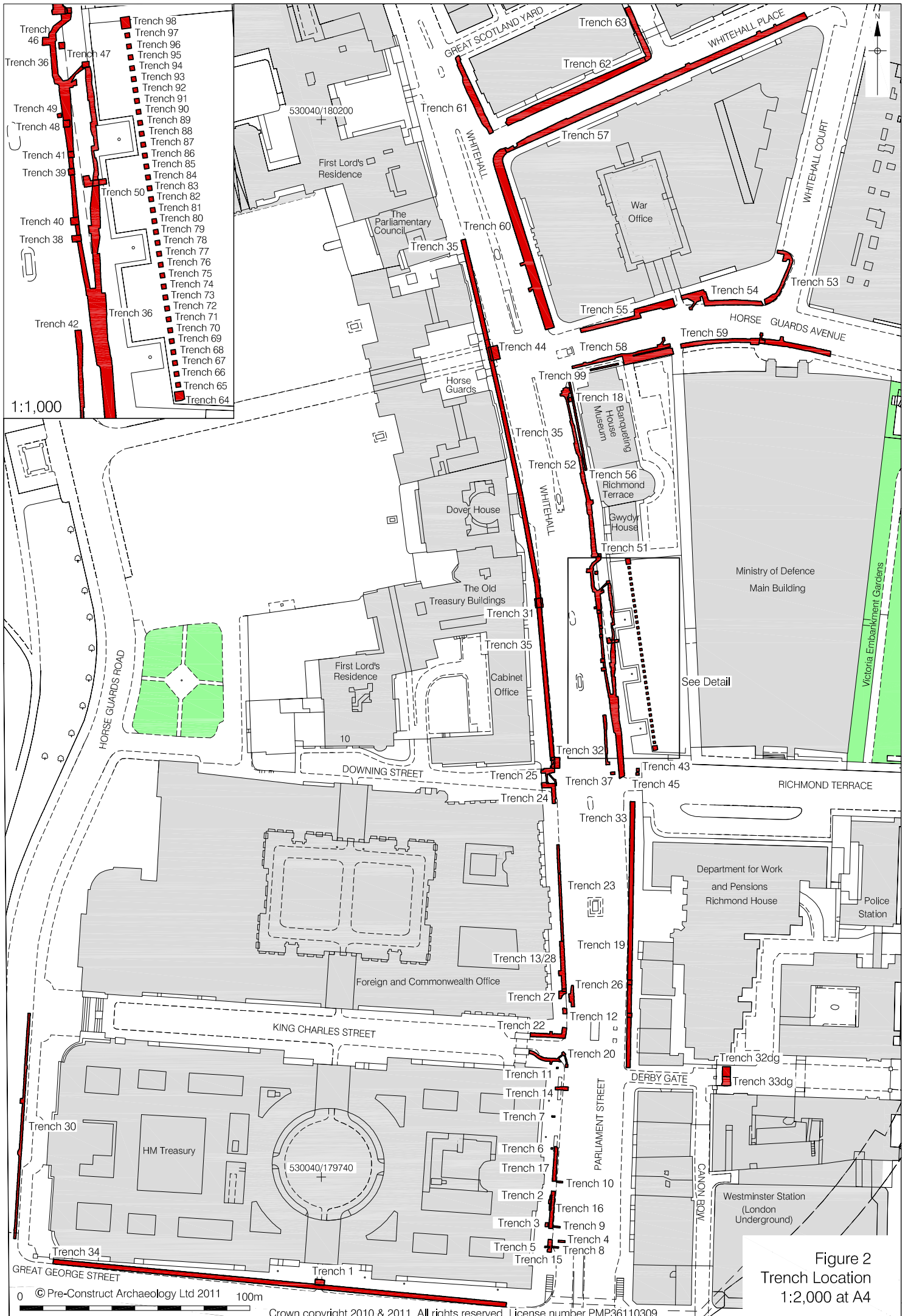


Figure 2  
Trench Location  
1:2,000 at A4

### 3 PLANNING BACKGROUND

3.1 The archaeological investigation aimed to satisfy the objectives of the City of Westminster, which fully recognises the importance of the architectural and archaeological resources for which they are custodians. In January 2007 the City adopted the Unitary Development Plan (UDP), which contains policy statements in respect of protecting both the listed buildings and the buried archaeological resource. The UDP identified a number of areas of special historic and/or archaeological interest.

3.2 The entire study site is located within the *Lundenwic* and Thorney Island Area of Special Archaeological Priority and entirely within the Whitehall Conservation Area. In addition, the eastern portion of the site is situated within the Victoria Embankment Gardens. St James's Park and Trafalgar Square lie adjacent to the site to the west and north respectively. All of these have been designated Parks and Gardens of Special Interest.

3.3 A total of 78 listed buildings are located within the confines of the site. Of these 14 are Grade I listed, 17 Grade II\* and 47 Grade II. Furthermore, the World Heritage Site of the Palace of Westminster, Westminster Abbey including St Margaret's Church (WHS number 462) abuts the southern extreme of the project site.

3.4 The following policies set out in Chapter 10 (Urban Design and Conservation) of the UDP are particularly relevant to the study site:

- **DES 9: Conservation Areas:** Especially section (E), Change of Use within Conservation Areas, which states that 'Permission will only be granted for development, involving a material change of use, which would serve either to preserve or enhance the character and appearance of the conservation area, bearing in mind the detailed viability of the development.'
- **DES 10: Listed Buildings:** Particularly section (D), Setting of listed buildings

Planning permission will not be granted where it would adversely affect:

- a) the immediate or wider setting of a listed building, or
- b) recognised and recorded views of a listed building or a group of listed buildings, or

c) the spatial integrity or historic unity of the cartilage of a listed building.

- **DES 11: Scheduled Ancient Monuments and Sites of Archaeological Priority and Potential:**

(B) Areas and Sites of Special Archaeological Priority and Potential

Permission will be granted for developments where, in order of priority:

- 1) all archaeological remains of national importance are preserved in situ
- 2) remains of local archaeological value are properly, evaluated and, where practicable, preserved in situ
- 3) if the preservation of archaeological remains in situ is inappropriate, provision is made for full investigation, recording and an appropriate level of publication by a reputable investigating body.

- **DES 12: Parks, Gardens and Squares**

(B) Development on or under open spaces: Permission will not be given for development on or under those parks, landscaped spaces and public or private gardens, where the open spaces:

- (1) form an important element in the townscape, part of a planned estate or street layout
- (2) are characteristic features of Conservation Areas
- (3) provide the setting of a Listed Building
- (4) are of significant ecological value”

- **DES 16: World Heritage Site:**

Permission will only be granted for developments that protect and conserve the character, appearance, setting and ecological value of the World Heritage Site

## 4 GEOLOGY AND TOPOGRAPHY

- 4.1 The latest geological deposits in the area of archaeological investigation consist of London Clay, covered by a series of river Terrace gravels which have been eroded over time by the River Thames. The Terrace gravels are overlain by brickearth. Along the Thames and the Tyburn alluvium has been deposited.
- 4.2 The site is located in an area where the River Tyburn met the River Thames. The southern part of the area of investigation was located on a gravel eyot or island known as Thorney Island which was formed by the bifurcation of the Tyburn where it met the Thames (Thomas *et al* 2006, 9). The shape of Thorney Island has changed over time (see Sidell *et al* 2000, 62, fig. 28) as erosion by the rivers and marine transgression and regression have allowed larger areas of island to become accessible as the water receded. By the Middle Saxon period it is likely that Thorney Island extended just to the north of Great George Street with the area currently occupied by Treasury and Foreign and Commonwealth Office within the Tyburn channel which may have extended just to the north side of Downing Street. The main area on either side of Whitehall lay on a gravel spur that extended into the channel where the Tyburn met the Thames and it was on this gravel spur that the possible Middle Saxon royal hall lay (Green & Cowie 2008, 90-100, fig. 93).

## **5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

### **5.1 Prehistoric**

5.1.1 Evidence of activity during the Mesolithic, Neolithic and Bronze Age periods have been found both during the excavations of the Jubilee Line Extension in the 1990s to the southeast of the site (Thomas *et al* 2006) and across the wider area of the site, with this activity probably being dictated by the changing hydrology of the area (Atkins 2006).

### **5.2 Roman**

5.2.1 Although the focus for Roman occupation was upstream at *Londinium*, evidence has been found near to the site, most notably in the area around Downing Street and in the vicinity of the Old War Office, for activity of this period (Atkins 2006).

### **5.3 Saxon**

5.3.1 At least some evidence for Saxon settlement in the Whitehall area exists. In 1961 and 1963 the London Museum performed rescue excavations at the Old Treasury Building, the Privy Council Offices and 10 Downing Street. This work recorded the remains of three Middle Saxon timber buildings including a sunken-floor building and a large possible annexed hall interpreted as a possible royal hall. The western and northern extents of the complex were defined by a boundary ditch while the southern limit seems to have been a branch of the Tyburn River. Due to the limited extent of the work the eastern boundary was not reached, although excavations undertaken in 1980 behind Richmond Terrace failed to uncover any Middle Saxon occupation levels (Green and Cowie 2008).

5.3.2 Westminster Abbey, to the south, was founded or refounded by St. Dunstan during the third quarter of the 10th century. St. Dunstan's was described as a small monastery, or *monasteriolum*, inhabited by an abbot and 12 monks. Although this description was written near a century after the foundation, which it describes, it is likely that it accurately portrays the modest nature of the early monastery (Thomas *et al* 2005).

5.3.3 Archaeological investigations on Thorney Island in the 1970s and 1990s recovered at least some evidence for 8th-9th century occupation on the island. While the charter of Offa for the foundation of a monastery on Thorney Island in AD 785 is believed to be spurious, the growing body of archaeological evidence suggests that there may have been a minster on the abbey site during the 8th or 9th century (Thomas *et al* 2005).

- 5.3.4 If there was indeed a Middle Saxon minster on Thorney Island that could lend credence to the theory that the large timber hall recorded on the Treasury Green site (discussed above) represent the remains of a royal hall as at least some Anglo-Saxon royal sites seem to have been deliberately sited next to minsters (Cowie 2004).
- 5.3.5 The hall at Treasury Green appears to have abandoned sometime during the mid 9th century and this also seems to be the case for the site on Thorney Island and *Lundenwic*. While the exact reason for the lack of late 9th century occupation in these areas is not known it is interesting to note that the abandonment roughly coincides with a period of intensified Viking attacks along the Thames (Green and Cowie 2008).
- 5.3.6 With Edward the Confessor's ascension to the throne Westminster Abbey was again refounded. The completion of the Confessor's new royal palace adjacent to the abbey is likely to have led to a population boom within the surrounding area (Sullivan 1994). Certainly by 1086 the village by the new palace contained 86 households (City of Westminster 2003; Whitehall Conservation Area Audit). It is likely that this is the core of this settlement was located in what would later become known as Endiff or Enedehythe along King Street.

## **5.4 Medieval**

- 5.4.1 In 1245 Walter de Grey, Archbishop of York, gave his house in Westminster to the See of York and from then on, as York House, it became the Archbishop of York's official London residence (Weinreb and Hibbert 1983, 976). The earliest documentation pertaining to the individual buildings of York Place comes in the form of accounts of the years 1298-9 and 1304-5, which contain references to existing buildings within the complex including the King's ante chamber, the King's lesser chamber, the King's chapel. In addition the accounts also mention materials purchased for the construction of a wardrobe for the King's chaplains, a hall for the Queen's household and a house over the water for the Queen's wardrobe (Cox and Norman 1930).
- 5.4.2 During the tenure of George Neville, Archbishop of York and Chancellor of England (1465-1476), York Place underwent a major phase of rebuilding. Many of the old structures were torn down and replaced by more fashionable red brick buildings turning the complex into one of the largest, most modern and most desirable palaces in England (Thurley 2008).
- 5.4.3 Archaeological excavations prior to the construction of the Ministry of Defence Main Building revealed the remains of several buildings that have been attributed to



George Neville's York Place. These included a new great hall, a cloister, an alteration to the chapel, some boundary walls and the demolition of some of the earlier buildings (Thurley 1999).

5.4.4 While the east side of King Street underwent substantial development the west side, known then as Staynour's Croft, remained relatively unchanged throughout the medieval period. In 1466 John Millyng leased Staynour's Croft from Westminster Abbey for 5s *per annum*, on the provision that he would develop the site within 16 years. By 1490 at least seven cottages and a barn occupied the west side of King Street directly across from York Place (Rosser and Thurley 1990).

5.4.5 At York Place, Lawrence Booth succeeded George Neville as archbishop although his tenure lasted only four years. Booth's main focus was the completion of Bridge Court in Battersea, a task which left little time or money for improvements at York Place. Following the death of Booth in 1480 Thomas Scott, more commonly known as Thomas Rotherham, was appointed as his successor. It appears that the Rotherham's primary contribution to the evolution of York Place was the construction of a square kitchen building north of the Great Hall (Thurley 1999).

## **5.5 Post-medieval**

5.5.1 By the early 1500s the palace occupied the majority of the land extending from the present day Whitehall to the west to the Thames to the east. To the north and south York Place stretched approximately from just south of where Gwydyr House stands today to just north of present day Horse Guards Avenue.

5.5.2 It is likely that the palace at this time comprised a brick and stone gatehouse, great hall, private chapel, cloister, the archbishop's private lodgings, a large garden as well as an extensive complex of kitchens and lodgings for the archbishop's household (Thurley 2008).

5.5.3 Upon gaining possession of York Place in 1514 Archbishop Thomas Wolsey, later Cardinal Wolsey, almost immediately initiated a grand scheme of repairs and rebuilding. The accounts for the years 1514-16 show that "reparacions and workemanshypp... in my lord of Yorke's Place" were being extensively carried out (Cox and Norman 1930).

5.5.4 The ambitious building program envisioned by the Cardinal required the acquisition of a substantial amount of land. In 1519 the area known as Scotland, to the north of the expanding palace, was granted to Wolsey by the King. The following year two

privately owned properties to the south were purchased and cleared and land was reclaimed from the Thames in order to facilitate the construction of a new long gallery extending south from Endive Lane along the river from the core of the palace to the north (Thurley 2008).

- 5.5.5 With the gallery completed Wolsey turned his attention to two of the largest buildings within the complex, the great hall and the chapel; both of these were presumably constructed during the medieval period. These buildings were demolished and new ones put up in their place in 1528. The Cardinal retired to Durham Place, in the Strand, because of “the hall of York Place, with other edifices there, being now in building” (Cox and Norman 1930).
- 5.5.6 An archaeological excavation carried out in the undercroft of the banqueting house in 1964 revealed a series of walls associated with a range of lodgings that would have adjoined the Court Gate to the north and extended as far back as the privy garden. While no documentary evidence pertaining to this range has been found it seems likely that it should date to Cardinal Wolsey’s tenure at York Place. This is supported by the fact that the alignment of the building follows the medieval property boundary rather than the boundary created by Henry VIII’s expansion (Thurley 1999).
- 5.5.7 One of Wolsey’s final contributions to the evolution of the York Place complex was the addition of a low (single storey) gallery to the west of the long gallery sometime between 1528 and 1529. This new range essentially formed the eastern boundary of the Cardinal’s orchard. From Endive Lane in the south it extended north by at least 154 feet to the old medieval boundary wall. Like many of the new buildings the low gallery was of brick construction (Thurley 1999).
- 5.5.8 When, on October 22<sup>nd</sup> 1529, the Cardinal pleaded guilty to *praemunire* his various properties, including York Place, were seized by Henry VIII. Later that year the Venetian ambassador claimed that Henry spent Christmas designing “new lodgings and a park adjoining York House which belonged to the late Cardinal Wolsey. The plan is on so large a scale that many hundreds of houses will be levelled” (Green and Thurley 1987).
- 5.5.9 The King spent 1530 acquiring the leases to the tenements along King Street and in spring of 1531 the displacement and demolition of the medieval suburb commenced. Great care was taken in the demolition of the old buildings in order that the materials could be recovered and reused in the construction of the new palace. Tilers were

provided with wicker baskets, “for takyng downe of tyles of howses” and a gate was erected in a nearby area that was to become used as a storage yard (Thurley 1999).

- 5.5.10 Following the acquisition and development of the land on the west side of The Street (present day Whitehall) the palace, renamed Whitehall, now awkwardly straddled the ancient thoroughfare. In order to facilitate private communication between the two halves the construction of two gates, which would bridge The Street, was commissioned (Atkins 2006).
- 5.5.11 The accounts for 1531 show that Henry VIII that year authorised payment for the “Fulfilling and workmanship of two Foundations digged for a Toure annexid unto the newe Gatehouse sette directlye ovir the high weye leeding from Charing crosse towards Westmenster.” The northernmost of these gates became known as the Holbein Gate after the traditional belief that it was designed by Hans Holbein, although there is no actual evidence suggesting any association with Holbein (Cox and Forrest 1931).
- 5.5.12 The c.1560 Agas map shows a gatehouse leading from Whitehall into the area labelled “The Court”, which later became Whitehall Court. Between 1531 and 1539 a number of references were made to the “new gate”. The building accounts for 1531-32 contain the item “The wagies of Bricklayers and Roughlayers to the noubre of IV working by alle the tyme of this paye upon a walle by the highway side leeding from the news Gatehouse towards Charing Crosse”. This suggests that it was constructed just prior to or just after, Henry VIII’s takeover of York Place (Cox and Norman 1930).
- 5.5.13 In addition to these works Henry VIII also ordered the construction of a privy gallery in 1531. The gallery was evidently constructed from material reclaimed from Cardinal Wolsey’s gallery at Esher Place. It was a timber framed building resting on a brick foundation. The gallery survived, although heavily modified, until 1685 when it was demolished to make room for more modern privy apartments for the queen (Thurley 1999).
- 5.5.14 A second gate was constructed allowing pedestrian traffic between the two halves of the palace. This became known as the King Street Gate. Little is known about this gate as few records of it have survived. While the exact construction date for the gate is not known it must postdate 1542 and the closure of Lamb Alley. Certainly it was nearing completion in 1548 as a payment was made for the furnishing of the new gate. It is possible that the work on the gate, like other buildings, came to a halt shortly after Henry’s death in 1547 and that it was not completed until the building

programme at Whitehall was restarted by Elizabeth I in 1559 or 1560 (Thurley 1999). The gate would have stood roughly where Downing Street intersects with Whitehall today.

- 5.5.15 During the reign of Elizabeth I the privy garden was relocated to the south of the privy gallery; the location of the former orchard (later the great garden). A wall had been built around the orchard when it was enlarged by the acquisition of land to the south by Henry VIII (Thurley 1999).
- 5.5.16 Elizabeth I also constructed a total of three temporary banqueting houses at the palace, the last of which survived for about 25 years. In 1606 this structure was replaced by a “very strong and statelie” banqueting house constructed by James I. Construction of this building was completed in 1609. The present-day banqueting house was designed by Inigo Jones and constructed in 1622 after the earlier building burnt down in 1619 (Atkins 2006).
- 5.5.17 In the late 1630s plans to completely redesign the ageing palace were conceived by King Charles I. A number of plans were prepared by Inigo Jones and John Webb although none of these were ever actualised (Atkins 2006).
- 5.5.18 During the Civil War Whitehall Palace was captured and in 1649 Charles I was publically executed on a temporary scaffold erected in front of the Banqueting House. Following the king’s execution the palace was turned into a vast complex of parliamentary offices. During this time many of the royal paintings and furnishings were stripped out and sold off (Thurley 1999).
- 5.5.19 Following Charles II’s restoration to the throne in 1660 plans to modernise the palace were once again drawn up. Throughout 1661 John Webb drew up a series of proposals for the new palace. According to the Venetian ambassador’s report dated November 1664 the King had decided to have Whitehall rebuilt in the style of the Banqueting House; a design that has largely been attributed to Christopher Wren (Thurley 1999).
- 5.5.20 While several areas of the palace were rebuilt, the entire plan for a new Whitehall Palace never came to fruition. In 1691 fire swept through the palace destroying many of the older buildings. Seven years later the palace was once again hit by fire. The conflagration of 1698 destroyed much of the eastern part of the palace although the banqueting house survived (Atkins 2006).

- 5.5.21 Following the 1698 fire many of the state offices were removed to the west side of present day Whitehall and the eastern part of the palace grounds was sold off in plots to noblemen of the court and several large houses erected (Atkins 2006).
- 5.5.22 An Act for the construction of Westminster Bridge was passed in 1735. However, it did not account for extensive approaches to the bridge. Three years later the Act was amended, giving the Bridge Commissioner “full power and authority, not only to widen and render more convenient the several ways, streets and passages now leading to and from the intended bridge, but also make, open, design, assign or lay out such new ways, streets and passages, as they shall find proper to be opened and made” (Cox 1926).
- 5.5.23 As a result of this Act the majority of the buildings between King Street and the Thames were demolished and the area redesigned to provide a more suitable thoroughfare from Charing Cross to the proposed bridge. Following the new road layout the island of buildings between King Street and Parliament Street was constructed in the late 1740s to early 1750s (Cox 1926).
- 5.5.24 During the 19th century the area to the east of Whitehall continued to develop primarily as a residential area while on the west side of the road larger government buildings started to appear. The Victoria Embankment was completed in 1870 providing convenient access from Westminster Bridge to Charing Cross. By the close of the century the clearing of large swaths of land for the construction of the War Office and other government offices had commenced (Atkins 2006).
- 5.5.25 Throughout the first half of the 20th century the construction of the new government offices that had started in the later part of the preceding century continued. Construction of The (Old) War Office was completed in 1906 and the Government Offices on Great George Street were completed in 1908 and 1917. The site now occupied by the Ministry of Defence Main Building had been selected for the construction of more government office in the 1920s (Atkins 2006).
- 5.5.26 Excavation for the footings for the new building started in the 1920s and continued into the 1930s. During this work the foundations of several of the palace buildings were uncovered. The outbreak of World War II halted the construction of the new building and the work was not restarted again until the 1950s (Atkins 2006).

## 6 ARCHAEOLOGICAL METHODOLOGY

- 6.1 The archaeological methodology for the site was documented in the Written Scheme of Investigation (Atkins 2007) and the Archaeological Method Statement (Mayo 2007).
- 6.2 The excavation of a total of 99 trenches was monitored (Fig. 2). The vast majority of these did not exceed 1.00m in depth. However, a few trenches, namely along Whitehall and Horse Guards Avenue, were excavated to a depth in excess of 3.00m. Where trenches were excavated to a depth of at least 1.20m below ground level steel shoring was installed in order to prevent the sides from collapsing. In these instances ladders were used to allow for safe access and egress.
- 6.3 Prior to any ground reduction commencing the excavation areas were CAT scanned and where available service plans were consulted to locate any live utilities. In addition, a banksman was assigned to monitor the ground reduction in order to further reduce the risk of damaging below ground services.
- 6.4 Once archaeologically significant deposits were reached these were recorded and, where appropriate, excavated by hand. Dumped deposits and widespread layers of low significance were first explored by hand and then removed in spits using a mechanical excavator.
- 6.5 Archaeological deposits, features or structures encountered were subject to archaeological excavation or preservation *in situ* depending on their significance and following consultation with English Heritage.
- 6.6 A Total Station was used to plot the limits of excavation and survey in the trench baselines. Height data was obtained from survey station points established by the principal contractor.
- 6.7 The recording system used was the single context recording system, with individual descriptions of all archaeological strata and features excavated and exposed entered onto pro-forma recording sheets. All plans and sections of archaeological deposits and features were recorded on polyester based drawing film, the plans being drawn at a scale of 1:20 and the sections at 1:10. The OD height of all principal strata was calculated and indicated on the appropriate plans, sections and context sheets.

Features that were evidently modern were not given context numbers, and were recorded as modern intrusions in plan and section.

- 6.8 Photographs, on colour slide, black and white print film and in digital format were taken of the archaeological features where relevant. Site staff used 35mm and digital cameras on a day to day basis.
- 6.9 A total of 8 bulk samples were taken during the excavation in order to recover environmental information. After processing, these were transferred to Quaternary Scientific (QUEST), University of Reading, for sub-sampling and assessment.
- 6.10 No unusual health and safety issues were encountered.

## 7 THE ARCHAEOLOGICAL SEQUENCE

### 7.1 Phase 1: Natural

- 7.1.1 Due to the very limited depth of the vast majority of the trenches the natural sand and gravels were only encountered in a three areas (Trenches 31, 32 and 44). All of the interventions where natural stratigraphy was recorded were located along the west side of Whitehall.
- 7.1.2 In Trench 31 the earliest deposit encountered consisted of a layer of naturally deposited firmly compacted mid reddish-yellow silty clay [80], probably brickearth (Fig. 54 Section 31A). It was observed at a maximum height of 1.90m OD. A layer of loosely compacted mid brownish yellow fluvial sand [79] overlaid this deposit. The fluvial sand was recorded at a maximum height of 1.90m.
- 7.1.3 A deposit of fluvial sand, [144], identical to [79] was observed in the westernmost portion of Trench 44 at a maximum height of 2.30m OD. The deposit here extended beyond the northern, southern and western limits of the trench and was truncated to the east by a later intrusion.
- 7.1.4 Also observed in Trench 44 was a sequence of light to mid brown alluvial sand and gravels, [191]-[195]. The individual deposits varied in composition from silty sand to fine sand and measured between 0.10m and 0.21m in thickness. The top of the alluvial sequence was at 1.78m OD.
- 7.1.5 Isolated from the rest of the natural deposits discussed above, in the southwest corner of Trench 44, was a natural sand deposit, [304], comprising friable fine to medium light brownish yellow sand with occasional orange to red lenses of manganese staining. This was first observed at a height of 1.93m OD.
- 7.1.6 Sealing both the uppermost layer, [191], of the alluvial sequence and deposit [304] was a 0.45m thick waterlain layer of firm mid yellow clayey silt measuring 1.10m north-south by 0.60m east-west. It was first observed at a height of 2.12m OD and had been truncated to the south by a post-medieval intrusion.
- 7.1.7 In Trench 32 the earliest deposit recorded was a compact dark brown natural gravel deposit, [95] (Fig. 54 Section 32D), which was first seen at a height of 1.90m OD. It was only observed in a small hand excavated 0.50m square sondage at the very



base of the trench. This layer was overlain by a compact layer of mid yellowish red naturally deposited sandy gravel, [92] and [96] (Fig. 54 Sections 32A & 32B). At a height of 2.85m OD the uppermost gravel horizon, [92] / [96] marked the top of the sequence of natural deposits in the trench.

## **7.2 Phase 2: Saxon (Figs. 3 & 4; Plate 2)**

7.2.1 Cutting into layer [190] in Trench 44 was an east-west aligned palaeochannel, [301]. The sides of the channel were steep and appeared to be stepped in places with a sharp break of slope at the top and a gradual break at the base. It was filled by loosely compacted mottled dark bluish grey silty sand [300] containing occasional sub-angular gravels. The channel had been truncated to the east by the construction cut, [140], for a north-south aligned brick culvert, [131], and extended beyond the western limits of the trench. It measured 1.54m north-south by at least 2.68m east-west by 0.77m in depth and was first observed at a height of 2.15m AOD. A 10 litre bulk sample (Environmental Sample 8) was extracted from the fill of the channel. A fragment of Middle Saxon glass was recovered from the fill together with a single sherd of pottery dating from 1050-1200 was recovered from the top of [300]. It is possible that it was intrusive and was rather related to the context above.

7.2.2 The palaeochannel was truncated towards the east by two pits, [156] and [197]. Pit [156] had been heavily truncated by later intrusions and it was therefore difficult to determine its exact shape in plan. Judging from what remained of the pit it is possible that it was roughly sub-circular with steep to concave sides and a concave base. The overall dimensions of the feature as seen were 0.84m north-south by 0.76m east-west with a depth of 0.43m; it was first observed at a level of 1.93m OD. Pit [197] appeared similar in size and shape to [156] although it extended to a depth of 0.94m.

7.2.3 A third pit cut the fill of [197]. This pit, [167], was sub-circular in plan with steep sides sloping towards a concave base. It measured 1.24m north-south by 1.20m east-west and was 1.16m deep. It was recorded at a maximum height of 2.21m OD.

7.2.4 Pits [156], [167] and [196] were filled by [155], [166] and [196] respectively. The fills of the pits all consisted of loose mid bluish grey coarse silty sand containing occasional gravel inclusions. Pit [156] contained a single human skull, while pit [196] contained a sherd of Ipswich ware (AD 730-850/70) and a fragment of Middle Saxon glass. Pottery dating to 900-1050 and a fragment of possible Saxon clear glass were recovered from pit [167]. The latter two pits also contained residual Roman ceramic building material.

### 7.3 Phase 3: Medieval (Fig. 5)

- 7.3.1 The earliest deposit encountered within Trench 18 was dump layer [60] (Fig. 54 Section 18). This consisted of mid greenish-brown sandy silt with frequent inclusions of oyster shells. Only the top 0.10m of the deposit was excavated, and as a result dating evidence was limited consisting of a glazed peg tile dated 1180-1450. The deposit was observed at a height of 2.65m OD.
- 7.3.2 In Trench 32 the natural gravels were overlain by a layer of loose mid yellowish grey silty sand, [91] (same as [99]), containing occasional rounded pebbles (Fig. 54 Section 32A). Layer [91] was only recorded in the south facing section of the trench so its southern extent is unknown. It measured 0.17m east-west and was 0.13m thick; it was recorded at a top height of 2.94m OD. This layer was in turn overlain by deposit [90], a loose mid brown silty sand containing frequent rounded and sub rounded flint pebbles. Like the underlying layer it was also only recorded in the south facing section where it was seen to measure 0.18m east-west and 0.67m in thickness. It was first observed at a height of 3.60m OD.
- 7.3.3 A layer of firm mid brown humic clayey silt, [370], was recorded in Trench 36 along the west side of Whitehall. It had been truncated on all sides and the surviving layer measured 1.00m square in plan and only the top 0.13m was excavated. Occasional flecks of charcoal and fragments of animal bone as well as few sherds of pottery were observed throughout the layer. The pottery recovered suggests that the layer dated from 1000 to 1150. Layer [370] was first observed at a height of 2.94m OD.
- 7.3.4 The palaeochannel, [301], in Trench 44 was cut by a sub-circular pit, [165], at a maximum height of 2.13m OD (Fig. 6). It was recorded as having concave sides, which gradually transitioned into a slightly concave base. Overall the pit measured 1.08m east-west by 0.86m north-south and 0.29m in depth. It was filled by deposit [164], which consisted of loose mid bluish grey silty sand with occasional inclusions of small sub-angular pebbles. This pit was then cut by another sub-circular pit, [154], with gently sloping sides at the top that became steeper towards the flat base. This feature measured 1.14m north-south by 1.04m east-west and was 0.48m deep. It was filled by [153], a firm dark brown to dark grey silty clay containing frequent small to medium angular and sub-angular pebbles. Pottery recovered from the pit dates it to sometime between 1080 and 1200.

7.3.5 Trench 53 extended along the east side of the Old War Office Building from the corner of Horseguards Avenue and Whitehall Court to the corner of Whitehall Place and Whitehall Court (Figs. 5 & 7; Plates 3 & 4). Towards the south end of the trench an east-west aligned stone wall [412] was uncovered at a maximum height of 4.12m OD (Fig.57 Sections 121, 122 & 123). This was largely constructed of square hewn ragstone blocks measuring between 226mm x 224mm x 112mm and 441mm x 228mm x 117mm and set in soft pale yellow lime mortar with occasional chalk flecks and small pebble inclusions. The wall extended east and west beyond the confines of the trench, but the observed part measured 2.44m east-west by 0.53m north-south by at least 0.85m high.

7.3.6 On the south side, approximately 0.48m from the top, the wall stepped out to form a 0.66m (north-south) by 1.05m (east-west) by 0.28m (high) step. Towards the back of this step was a mortar covered area at 3.72m OD that appeared to have been damaged in antiquity. This suggests that there may have been another step up against the wall or more likely that it represents an external buttress to the wall.

7.3.7 Towards the eastern limit of excavation and along the north side of the wall an area of truncation, where a later brick wall [416] had been keyed into it, was observed. Wall [416] was part of the structure, [415,] which in addition to the wall consisted of a semi-circular brick surface, [414], measuring 1.3m by 0.60m; both had been constructed using 210mm x 100mm x 50mm unfrosted orange to red Tudor bricks. A shallow rectangular layer of charcoal and burned material approximately 2-5mm thick sealed part of the brick surface. The semi-circular feature represents either a small fireplace or more likely an oven built against the earlier wall.

#### **7.4 Phase 4: Cardinal Wolsey 1515-1529 (Fig. 8)**

7.4.1 The excavation of Trench 59, on the south side of Horse Guards Avenue in front of the north entrance to the Ministry of Defence Main Building, revealed a segment of an east-west aligned green sandstone and chalk wall, [586] (Fig. 9). Towards the east end of the exposed wall segment it was abutted by [587], a north-south aligned chalk wall foundation.

7.4.2 Wall [586] extended east and west beyond the confines of the trench and was not excavated to its full vertical extent. The exposed segment measured 1.10m north-south by 1.50m east-west and 0.30m high. It was constructed using square hewn blocks of green sandstone built around a rubble core consisting of chalk and green

sandstone fragments. The stone blocks and rubble core were set in a soft coarse light brownish yellow to pale yellow lime mortar containing moderate small chalk flecks.

7.4.3 The abutting wall foundation, [587], was constructed using chalk blocks set in a similar mortar to [586] although it appeared slightly paler in colour. This segment measured 1.10m north-south by 0.80m east-west by 0.25m in height; its full extent was not seen as it extended beyond the limits of the excavation to the east and below the base of the trench. Towards the south end it had been truncated by later wall [532]. The upper part of the wall appeared to have been clad with a 50mm thick layer of lime render.

## **7.5 Phase 5: Henry VIII 1530-1558 (Fig. 10)**

7.5.1 Trench 43 was excavated along the east side of Whitehall and measured approximately 1.15m east-west by 1.30m north south. The earliest feature encountered during the excavation was a north-south aligned brick wall [129]/[130] extending beyond the limits of the trench to the north, south, and west (Fig. 11). Unfrogged red bricks measuring 228mm x 104mm x 64mm and dated 1480-1800 were used for the construction of the wall. They did not appear to have been laid in any discernable bond. The bonding material comprised very light grey hard sandy silty mortar with coarse angular calcareous inclusions. As observed the wall measured 1.18m north-south by 0.46m east-west by over 0.45m high.

7.5.2 In Trench 52, located along the east side of Whitehall in front of Gwydyr House and the Banqueting House, a number of features related to this phase were recorded. These consisted of four brick walls, [308], [309], [335] and [341] (Fig. 11); a brick feature, [344]; and three layers of garden soil, [334], [343] and [345].

7.5.3 It is likely that walls [308] and [335] (Figs. 11 & 55 Section 113) formed part of the same wall, which was later truncated by a modern service cut. Both of these had been constructed using unfrogged red bricks measuring 210mm x 105mm x 55mm. These were set in soft light brownish yellow sandy lime mortar containing very occasional charcoal flecks. Both wall segments were observed at the base of the excavation at 3.43m OD. As only the top course was exposed it could not be determined what bond had been employed in their construction.

7.5.4 Another east-west aligned wall comprising contexts, [309] and [341], was observed to the north of [308]/[335] (Figs. 11 & 55 Section 113). A combination of unfrogged red bricks measuring 210mm x 105mm x 55mm and ragstone blocks measuring on

average 690mm x 190mm x 210mm were used in the construction of the wall. These were set in soft light brownish yellow sandy lime mortar. Like wall [308]/[335] this wall was first seen at the very base of the excavation at a level of 3.74m OD. It had been truncated to the west by a modern service cut.

- 7.5.5 To the north of [341] was an unidentified brick feature, [344] (Fig. 11). Only three bricks remained visible at the very base of the trench at 3.34m OD and it is unknown whether or not more of the feature survived below this depth. The bricks observed were all unfrogged orange to red fabric bricks measuring 230mm x 100mm x 60mm and set in light pinkish grey coarse lime mortar.
- 7.5.6 In three locations within the trench deposits of humic soil, [334], [343] and [345], were recorded. It is likely that these represented a single horizon, which had been truncated by later intrusions leaving only three patches remaining. Two of these, [334] and [345], clearly overlaid walls [341] and [344] respectively. All three patches consisted of firm dark greyish brown humus rich sandy silt and measured over 0.5m in thickness with the top of layer [334] recorded at 3.64m OD and the other two deposits at 3.37m OD .
- 7.5.7 Trench 55 was excavated along the north side of Horse Guards Avenue towards its intersection with Whitehall. Four contexts were recorded belonging to this phase; layers [434] and [435], construction cut [437] and wall [436] (Fig. 12).
- 7.5.8 The earliest of these was a layer, [435], of very firmly compacted dark brown sandy silt with moderate flecks of ceramic building material and patches of crushed lime mortar. As seen, it measured 3.62m east-west by 1.80m north-south by 0.65m in thickness, although it did extend north and south beyond the limits of the trench. At the western extreme the layer had been truncated by [437] and to the east by Phase 10 wall [423].
- 7.5.9 A north-south aligned cut, [437], had been excavated through layer [435]. The cut was seen as linear in plan and extended beyond the limits of the excavation to both the north and south and as such was measured as 1.80m north-south by 0.76m east-west by 0.70m deep. It had vertical sides with a sharp break of slope at both the top and bottom where it gave way to a flat base.
- 7.5.10 The cut was filled entirely by wall [436] (Fig. 12), which had been constructed using a combination of ragstone, Reigate and chalk blocks, some of which appeared to have been roughly hewn. The stone blocks were set in thick coarse pale yellow lime

mortar. Overall the wall, as seen, measured 0.68m north-south by 0.76m east-west and only 0.20m of it was exposed vertically. The top of the wall, which was first observed at 2.87m OD, appeared to have been robbed, but when this was done the original construction was followed, hence the discrepancy between the depth of the cut and the height of the wall.

7.5.11 Abutting the wall on the west side was a 0.15m thick layer, [434], of moderately compact mid yellowish brown gravel with very occasional inclusions of chalk flecks. The layer appeared to have been laid down against the west side of the wall and over a truncated portion of layer [435]. This layer was only exposed in a small hand excavated sondage put in to explore [436]. It measured 0.68m north-south by 0.76m east-west, but extended beyond the limits of the sondage to the north, south and west. The top of the layer was first seen at a height of 2.95m OD.

7.5.12 In Trench 58, which was located along the south side of Horse Guards Avenue towards its intersection with Whitehall, this phase was represented by a brick plinth, [515], and two layers, [492] and [493] (Fig. 13).

7.5.13 The brick plinth, [515], consisted of two narrow unfrogged red bricks laid side by side and set in soft pale pinkish yellow lime mortar. It was constructed using bricks measuring 200mm x 100mm x 50mm and survived to a maximum height of 3.32m OD. In order to determine the actual height of the feature a small exploratory slot was excavated on the south side of the brickwork. This showed that at least three courses of bricks survived although the base was not reached.

7.5.14 Towards the central portion of the trench a layer, [493], of loose humus rich dark brownish grey silty sand was recorded. Unfortunately the extend of this layer is not known as it was only observed in section although it did appear in both the south facing and east facing sections of the trench. It can therefore be assumed that it measured at least 1.20m north-south while it was seen to extend 1.70m east-west with a thickness of 0.34m and was first observed at 2.36m OD.

7.5.15 This layer was overlain by a 0.20m thick layer of loose light yellowish brown clayey sand and mortar, [492]. The mortar component of the layer consisted of crushed pale pinkish yellow coarse lime mortar, which occurred in substantial patches throughout the layer. Overall the layer measured at least 1.20m north-south by 5.27m east-west and was first seen at a level of 2.48m OD.

## 7.6 Phase 6: Elizabeth I 1558-1603 (Fig. 14)

- 7.6.1 Trench 32 contained the remnants of two north-south aligned brick walls, [82] and [100], a chalk floor surface, [93], and a chalk foundation, [94] (Figs. 14 & 54 Sections 32A, 32B & 32D). The eastern wall, context [82], was observed at a height of 3.60m OD. It consisted of a foundation constructed from limestone and green sandstone blocks, chalk rubble and red brick within construction cut [88] which was backfilled with mid yellow grey mortar [84], brownish yellow clayey silt [85] and mid grey silt [86]. It extended south from the northern section for 1.40m at which point it had been truncated by the installation of a British Telecom brick service box. The top of the wall represents a rebuild of an earlier wall [83] following the same alignment. The earlier phase of the wall was observed at 2.65m OD (Figs. 15 & 54 Section 32D). It comprised five courses of brickwork laid in header bond and resting atop a chalk foundation [94] at a height of 2.20m OD, which was revealed only in a small sondage. The base of the chalk foundation was recorded at 1.90m OD where it rested on the natural gravel, [95]. A small compacted chalk layer, [93], abutted the brick wall at a depth of 2.18m OD.
- 7.6.2 The second brick wall [100] was recorded in the east facing section of the trench and extended just within the confines of the trench (Figs. 15 & 54 Sections 32A & 32B). Only one to two courses of brickwork survived above the chalk and brick foundation. The top of the wall was recorded at a maximum height of 3.05m OD and the wall extended below the base of the excavation. No brickwork was observed towards the south end of the wall where a 0.15m thick layer of cemented very fine sand [101] with very occasional brick inclusions rested atop the foundation. The top of this layer was recorded at 3.00m OD
- 7.6.3 Excavation of Trench 36 revealed a layer of firm mid brownish grey humic sandy silt, [109]/[402], which extended the entire length of the trench north to south and also east and west beyond the limits of the excavation. It was first observed at a height of 3.15m OD and measured in excess of 0.10m in thickness.
- 7.6.4 In Trench 43 walls [127] and [128] were abutting walls [129] and [130] respectively (Fig. 15). The later masonry consisted of unfrosted purple bricks tempered with coarse inclusions of clinker and crushed brick set in moderately soft mid brownish yellow lime mortar. It appeared that these contexts were cladding the east side of the earlier walls. The bricks measured 108mm x 236mm x 62mm and were laid in a header bond. Only two courses were visible, but the masonry was seen to extend below the base of the trench.

7.6.5 Context [340] in Trench 52 represents a patch of garden soil measuring 0.30m north-south by 0.80m east-west (Fig. 55 Section 113). The thickness of the deposit is not known as it was only recorded in the base of the trench at 3.36m OD and was not excavated below this level. This layer was abutting earlier wall [309].

## **7.7 Phase 7: James I, Charles I & Interregnum 1604-1660 (Fig. 16)**

7.7.1 The earliest deposit unearthed within Trench 13 was a mid greenish brown dump layer, context [29], which contained a sherd of residual pottery dated 970-1100 and occasional flecks of charcoal. It was observed at a depth of 3.80m OD and was over 0.10m thick, its dimensions being 0.42m north-south by 1.06m east-west. The layer had been truncated to the north by a modern intrusion and to the south by construction cut [28].

7.7.2 Truncating layer [29] was construction cut [25], which contained the remains of well [24] (Fig. 17). The top of the well was observed at 3.78m OD. It measured 0.84m north-south as exposed, and was composed of header bonded red fabric bricks, one course wide. Only half the well was observed, as it continued beyond the western limit of excavation. It had also been partially truncated by a modern service, which ran parallel with the western edge of the trench.

7.7.3 In Trench 36 a north-south aligned linear cut, [108], truncated the earlier garden soil horizon, [109] (Fig. 18). The cut measured at least 6.20m north-south by 0.18m east-west and was excavated to a depth of 0.10m. It was filled by [107], which comprised loose very light grey silty sand containing frequent pockets of crushed lime mortar, clay tobacco pipe dated 1610-40 and pottery dated 1630-80.

7.7.4 Overlying [340] in Trench 52 at a maximum height of 3.55m OD was a layer of dumped material, [327], consisting of loose mid greyish brown silty sand containing charcoal flecks and pockets of crushed lime mortar. Elsewhere a layer of demolition debris, [326], formed the basal layer of the trench (Fig. 55 Section 113). Towards the central portion of Trench 52 was an east-west aligned wall [359]/[360], which had been truncated by a later service cut (Fig. 19). It had been constructed using red bricks measuring 220mm x 100mm x 65-70mm. These were laid in regular courses set in soft coarse yellow lime mortar which contained moderate charcoal flecks and small angular pebbles. The wall measured 0.50m north-south by at least 2.00m east-west by at least 0.27m high; it was first recorded at a level of 3.69m OD.



- 7.7.5 Towards the western end of Trench 58 was a brick surface, [475], and resting on top of that the remains of a brick wall, [483] (Fig. 20). Both were constructed using 200mm x 100mm x 55mm red bricks set in soft pale yellow to pale yellowish brown moderately coarse lime mortar. The brick surface was aligned northwest-southeast and the brick wall constructed along the northeastern edge of it. Only three courses of the wall survived towards the southern limits of the trench and to the north only a mortar trace with brick impressions survived. The floor measured at least 1.65m northwest-southeast by 1.20m northeast-southwest and 0.20m in thickness; it was first observed at 3.11m OD. The wall survived to a maximum height of 3.41m OD and measured at least 1.65m northwest-southeast by 0.24m northeast-southwest and survived to a maximum height of 0.30m.
- 7.7.6 In Trench 59 two walls, [519] and [532], and a brick surface, [533], were recorded (Fig. 20). Wall [532] appeared to have truncated the earlier wall, [587]. It is likely that walls [519] and [532] formed part the southern and western boundary of a building extending north beyond the limits of the excavation. Along the southern wall was a 0.90m wide interruption, probably an entranceway, and further to the east the wall had been truncated by 20th century drains. The base of the opening was laid with bricks forming a surface, which was keyed into the two walls and extending north into the building. Both wall segments were constructed using unfrosted 200mm x 100mm x 55mm red bricks laid in a header bond set in soft fine grained pale yellow lime mortar. The bricks used in the construction of the surface were identical to those used in the wall construction although the mortar used was slightly different in that it contained moderate lime or chalk flecks while the mortar of the walls did not. A stone-capped brick drain [534] aligned east-west was also revealed in the trench. It measured 1.35m in length as exposed but continued beyond the eastern and western limits of excavation.
- 7.7.7 Towards the western extreme of Trench 62, which was excavated along the south side of Whitehall Place, two brick walls were revealed, [558] and [559] (Fig. 20), as well as a patch of redeposited garden soil, [557].
- 7.7.8 Wall [558] was constructed on a roughly east-west alignment using unfrosted red to orange bricks measuring 230mm x 110mm x 70mm set in soft fine grained light greyish white sandy lime mortar with frequent chalk and lime flecks and very occasional flecks of charcoal. The wall measured 1.60m east-west by 0.60m north-south and was exposed to a depth of 0.30m. It had been truncated to the east by [546] and continued beyond the limits of the trench to the west.

7.7.9 The second wall was keyed into the north side of [558] at its eastern end. This wall was aligned roughly north-south and had been heavily truncated during the construction of [546] to the east. It measured 0.16m east-west by 0.65m north-south and was at least 0.17m high. The materials used in the construction of [559] were identical to those used for [558]. Both of the walls were first observed at a level of 3.53m OD.

## **7.8 Phase 8: Charles II 1660-1685 (Fig. 21)**

7.8.1 A compact layer of light greyish brown to light whiteish grey coarse lime mortar, [307], abutted the south side of wall [341] in Trench 52, although it was not visible in plan as the surface was still partially covered at formation level by a later dump layer (Fig. 22). This layer had been heavily truncated to the east, west and south by later activity and only a small portion survived. It was first seen at 3.68m OD and measured between 20mm and 40mm in thickness. To the north of wall [309] a similar mortar surface, [342], was revealed. Within Trench 18 was a humus rich sandy clayey silt layer, [59], observed at a depth of 3.70m OD.

## **7.9 Phase 9: James II & William & Mary and the destruction of Whitehall Palace 1685-1698 (Fig. 23)**

7.9.1 Trench 42 was excavated along the east side of Whitehall just north of Richmond Terrace. Two archaeological features were observed towards the central portion of the trench; an east-west aligned brick path, [118], and a brick drain, [119] / [120] (Fig. 24).

7.9.2 The path consisted of two courses of unfrogged red bricks dated 1600-1700+ measuring 210mm x 108mm x 55mm laid in an irregular bond and set in moderately soft grey lime mortar containing clinker inclusions. It was first observed at a height of 2.64m OD and measured at least 0.96m east-west by 0.60m north-south by 0.12m high. To the north the surface was abutted by an east-west aligned brick drain constructed using identical materials. It consisted of two parallel lines of bricks laid in a stretcher bond, [119] and [120]. The drain was filled by firm very dark grey sandy clayey silt, [121]. Both the surface and the drain extended beyond the east and west boundaries of the trench.

7.9.3 A north-south aligned arched brick culvert, [131], observed at a maximum height of 2.69m OD was uncovered in eastern part of Trench 44 (Fig. 25). It had been truncated horizontally by a modern pipe trench. The base of the drain had been

constructed over a thin levelling deposit, [305], lining the base of its construction cut, [140]. It had been constructed using unfrogged red to dark orange bricks dated 1664-1750+ measuring 210mm x 110mm x 70mm and laid predominantly in a header bond. The bricks were set in a soft greyish white lime mortar containing flecks of charcoal and chalk. Overall the culvert measured 0.36m east-west by at least 4.00m north-south and survived to a height of 1.10m.

- 7.9.4 Trench 50 was excavated along the east side of Whitehall approximately halfway between Gwydyr House and Richmond Terrace. One north-south aligned brick wall, [160], was revealed protruding slightly from the northern section of the trench (Fig. 26). This had been constructed using unfrogged red post-Great Fire bricks dated 1664-1900 measuring 230mm x 110mm x 55mm. Only six courses of brickwork survived and of these the top four were laid header bond and the lower two stretcher bond. The bonding agent used was recorded as a soft pale yellow moderately coarse lime mortar. Wall [160] had been truncated to the south by a modern service trench and was thus only visible in section, and was first observed at a height of 3.42m OD.
- 7.9.5 A north-south aligned wall constructed of Reigate and Caen limestone was recorded during the excavation of Trench 51 to the west of the southwest corner of Gwydyr House (Fig. 27). It consisted of roughly hewn stone blocks laid in irregular courses. The bonding material comprised soft pale yellow lime mortar with coarse inclusions of calcareous granule. Wall [168] had been truncated to the north and south by modern service trenches. It was first observed at 3.54m OD and was recorded only in the west facing section where it survived as a 0.66m wide and 0.37m high wall segment although it did extend below the base of the trench. To the west the wall was abutted by an indurated gravel surface, [171], first seen at 3.13m OD and measuring 60mm in thickness. Like the wall it had been truncated to the north and south and also to the west by modern service trenches. This surface was overlain by a 50mm thick layer of burnt debris, [170].
- 7.9.6 In Trench 52, in front of Gwydyr House, an east-west aligned wall, [183], was recorded (Fig. 27). The wall was of red brick construction and measured 0.90m north-south by at least 1.35m east-west by at least 0.22m high; it was first seen at 3.55m OD. It had been constructed using unfrogged red bricks measuring 230mm x 110mm x 55mm and laid in irregular courses and set in moderately soft lime mortar. To the west it had been truncated by a modern service trench and to the east it extended beyond the confines of the trench. It was abutted to both the north and south by a layer of humic soil, [182]/[184].

7.9.7 Two cut features belonging to this phase were also recorded in Trench 52 (Fig. 27). Cut [324] truncated an earlier wall, [308], horizontally in the central portion of the trench. It was roughly linear in shape with near vertical sides sloping towards an irregular base. The cut measured 1.11m north-south by at least 0.50m east-west by 0.45m deep and was filled with loose dark greyish brown silty sand, [323]. It may have been excavated to rob out masonry. To the south was the second cut, [333], which had truncated the western continuation of Phase 5 wall [335]. This cut had been heavily truncated by modern service trenches and little remained of it.

7.9.8 Two brick garden paths, [256] and [259], aligned east-west, were revealed in Trenches 98 and 96 (Fig. 28).

#### **7.10 Phase 10: 18th century (Fig. 29)**

7.10.1 A fragment of masonry, [9], was revealed in Trench 4 (Figs. 30 & 55 Sections 4.1 & 4.2). It was constructed from red bricks dated 1664-1900 bonded together with indurated light grey mortar with inclusions of flint and charcoal. The wall was truncated to the east and continued beyond the northern, western and southern limits of excavation; it measured at least 0.80m north-south by at least 0.85m east-west and was at least 0.55m high. Sitting on top of this masonry and perhaps representing a rebuild was wall [8] constructed from similar brick but bonded together with a more friable grey sandy mortar.

7.10.2 In Trench 9 an apparent north-south aligned wall, [15], constructed from red bricks dated 1664-1900 bonded together with light grey mortar (Fig. 30). The wall continued beyond the northern, western and southern limits of excavation and as exposed measured 0.62m north-south by 1.77m east-west and was at least 0.34m high.

7.10.3 Truncating layer [29], in Trench 13, to the south was construction cut [28] for east-west wall [27] (Fig. 31). Wall [27] was composed of unfrogged, irregularly coursed, header and stretcher bonded red bricks dated 1664-1900, three courses wide and two courses deep, continuing beyond the vertical limit of excavation.

7.10.4 Trench 14 was situated to the immediate south of the junction between Parliament Street and King Charles Street (Fig. 32). The trench contained a basement that had been built in several phases. Its dimensions, as seen within the confines of the trench, were over 5.25m east-west and 1.44m north-south, extending beyond the northern edge of the trench. The exposed masonry consisted of an east-west wall with a north-south return to the east and was constructed in three distinct phases. It

had been severely truncated in the centre by several substantial modern services that ran north-south across the trench.

- 7.10.5 The earliest phase of the wall, [37]/[38]/[43], was composed of handmade, unfrogged red bricks, the form and fabric of which suggests a 1664-1900 date. The top of the masonry was observed at a depth of 4.45m OD, extending down for another 0.55m, at which point it became obscured by a later rebuild (Figs. 32 & 54 Section 14.1).
- 7.10.6 Trench 20 was situated on the southern side of King Charles Street at the eastern end, bending south into the western side of Parliament Street (Fig. 32). The trench was approximately 1.50m wide and was roughly "L"-shaped, being 7m long in a north-south direction and 14.55m long in an east-west direction. It was excavated to a maximum depth of 0.78m.
- 7.10.7 Trench 20 contained the remnants of a brick wall and floor surface, recorded in the southern end of the eastern "arm" of the trench (Fig. 32). The wall, [62], was constructed using reused 17th-century bricks and was observed at a depth of 4.35m OD, immediately below a thick layer of modern concrete deposited as a bedding layer for the modern road surface. It ran parallel with the western edge of the trench for 1.50m in a north-south direction, continuing beyond the limits of excavation to the north and south. The wall was 0.10m wide as seen, continuing beyond the western trench edge. Its full length and width were not observed.
- 7.10.8 Floor surface [63] butted wall [62] to the west (Fig. 32). The dimensions of the floor, as observed within the confines of the trench, were 4.10m north-south and 1.20m east west, continuing beyond the eastern and western limits of excavation. It was 0.06m thick, being composed of one course of red bricks dated 1664-1900, and was observed at a depth of 4.30m OD. The floor surface sat on top of a mortar bedding layer, [64], which was not excavated.
- 7.10.9 Trench 23 was situated to the immediate north of Trench 13 and was orientated north-south. It was 42m long and 1.00m wide and was excavated to a depth of 3.43m OD. The top of a stretcher-bonded, red brick wall foundation, [67], was revealed at a depth of 3.65m OD (Fig. 31). It was orientated east-west, continuing beyond the eastern and western limits of excavation.
- 7.10.10 Aligned east-west, Trench 34 was excavated along the north side of Great George Street. From the corner of Parliament Street and Great George Street it extended 56.71m to the east, measured 1.85m in width and was excavated to a depth of 4.60m

OD. Three brick wall segments were recorded in the north facing section towards the western end of the trench. Two of the walls were aligned east-west and abutted the third segment [104], which was aligned north-south, to the east [102] and west [103]. Brick samples extracted from these walls show that all three date to sometime between 1750 and 1850. All three wall segments were observed at a maximum height of 4.90m OD.

7.10.11 In Trench 36 a fragmented north-south aligned stone wall foundation extended north to south through approximately half the trench (Fig. 33). In several places the continuation of the wall had been interrupted by truncations caused by the installation of modern services. This was followed by a phase of rebuilding.

7.10.12 A levelling layer, [369]/[401], sealed the earlier garden soil horizons, [370] and [402]. These comprised firm mid brownish grey clay and silt containing occasional brick fragments, charcoal flecks, pebbles and patches of crushed lime mortar. Layer [369] was first seen at a level of 3.09m OD while [401] was observed at 3.11m OD; both measured between 0.07m and 0.15m in thickness.

7.10.13 These were overlain in places by layers of charcoal and burnt debris, [368] and [398]. Both of these consisted of loose dark brown to grey charcoal rich silt containing frequent fragments of burnt debris and both were first seen at 3.15m OD.

7.10.14 Upon these layers a layer of compacted lime mortar, [394]/[403], had been laid down as bedding for a stone wall foundation, [354]/[377]/[393]/[395] (Fig. 33). The stone wall foundation extended through approximately half the trench from north to south. It was constructed using a mix of predominantly roughly hewn ragstone and Reigate stone blocks although some reused 17th-century red bricks were also observed. The stone blocks had been laid in irregular courses and bricks had been used in places to fill in gaps between individual blocks. Very light grey lime mortar containing flecks of chalk, charcoal and small shell fragments had been used as the bonding agent. The foundation extended beyond the eastern boundary of the trench, but measured at least 0.60m east-west. It also extended below the base of the trench and was first observed at a level of 3.68m OD.

7.10.15 On the west side the foundation was abutted by a layer of mid reddish yellow compacted silty clay and gravel, [162]/[174]/[399]. This layer was first observed at a height of 3.22m OD and appeared to form a level surface. It extended beyond the western limit of the trench although it had been heavily truncated in places by modern

services leaving as little as 0.54m (east-west) intact. Covering this layer was light grey mortar surface [387]/[397] which abutted the stone foundation to the east.

7.10.16 Resting atop the stone foundation was a north-south aligned brick wall, [306]/[389] (Fig. 33). It had been constructed using a variety of unfrosted red bricks measuring from 110mm x 105mm x 70mm to 220mm x 105mm x 60mm. The bricks had been laid in regular courses although no standard pattern could be discerned. Both coarse soft yellow lime mortar and hard greyish white lime mortar had been used as a bonding agent for the bricks.

7.10.17 Towards the northern end of the wall the gravel layer to the west was overlain by a layer of loose reddish brown demolition rubble, [396], to a height of 3.61m OD. This was subsequently overlain by the remains of a brick surface, [390] (Fig. 33). This had been constructed using unfrosted half-bat red bricks measuring 140mm x 100mm x 60mm. The single course of bricks had been set in very light grey coarse lime mortar containing small flecks of chalk and shell. It had been truncated by modern service trenches and only survived as a small patch of brickwork measuring 0.78m north-south by 0.50m east-west; it was first observed at 3.78m OD.

7.10.18 In the southern part of Trench 36 a north-south aligned wall, [161], constructed from roughly faced greensand stone blocks bonded together with creamy grey lime mortar (Fig. 33). The wall continued beyond the southern and eastern limits of excavation and measured 2.5m in length by 0.20m wide as exposed. To the west lay a sub-rectangular pit, [161], measuring 1.14m by 1.14m by 0.33m deep.

7.10.19 A roughly east-west aligned linear cut, [159], bisected Trench 44 at a maximum height of 2.23m OD (Fig. 34). It had vertical sides with a sharp break of slope at the top and base. The base itself was flat and the signs of badly degraded timber planking were seen along both sides. Cut [159] measured 1.86m north-south by at least 4.00m east-west by 1.15m deep; it extended beyond the limits of the trench both to the east and west. The feature had partially truncated the earlier brick culvert, [131]. Filling it was [159], which comprised loose mid brownish yellow coarse sandy clayey silt with moderate inclusions of flint nodules and angular gravels.

7.10.20 In Trench 52 five pits ([186], [188], [199], [318] and [322]) cut into the earlier features and deposits (Figs. 35 & 55 Section 113). These measured between 0.44m north-south by 0.12m east-west by 0.75m deep and 0.90m north-south by 0.42m east-west by 0.60m deep. None of the pits were fully excavated as they all extended below the formation level for the project. The pits were near identical in shape and all had

vertical or near vertical sides with a sharp break of slope at the top. In addition they were all filled by similar loose mid pinkish grey silty sand and lime mortar. Pit [186] contained pottery dated 1740-1830 and clay tobacco pipe dated 1680-1710, whilst pit [322] contained pottery clay tobacco pipe dated 1700-1740.

7.10.21 In the central portion of the trench a north-south aligned brick wall, [328], abutted the north side of one of the earlier Phase 5 east-west aligned walls, [308] (Fig. 55 Section 113). This wall was built using unfrogged red and yellow bricks laid in English bond and set in soft coarse pinkish yellow lime mortar. The bricks measured between 185mm x 110mm x 60mm and 220mm x 100mm x 60mm. On site inspection dated the bricks to sometime between 1700 and 1850. The wall was only observed in the west facing section, so the width of it is unclear. Along the north-south axis it measured 1.42m; it was first encountered at 3.89m OD.

7.10.22 An east-west aligned red brick wall, [364], was also recorded within the northern portion of Trench 52 (Fig. 35). This wall had been heavily truncated by modern services and to the east by a culvert, [363] (Fig. 55 Section 114). It was constructed of unfrogged red to orange bricks. Too little of it remained intact to obtain accurate measurements or to identify the coursing. The bonding material consisted of indurated greyish white mortar with occasional chalk flecks and very small angular pebbles.

7.10.23 Other masonry at the top end of Trench 52 (Fig. 35) consisted of an east-west aligned brick wall, [357]/[358] which measured up to 1.04m wide and at least 0.54m high and was bonded with light yellow lime mortar. To the north lay the remains of three culverts, [362], [363] and [367] and a fragment of heavily truncated masonry, [361], which may have represented the remains of a chamber associated with the culverts.

7.10.24 Trench 54 was located between Whitehall Court to the east and the south entrance to the Old War Office Building to the west. Few archaeological remains were uncovered during the excavation of the trench. In the easternmost part of the trench an east-west aligned ragstone foundation [404] was observed at a maximum depth of 4.22m OD (Figs. 36 & 55 Section 54). It had been constructed entirely out of large regular courses of ragstone ashlar blocks measuring on average 600mm x 200mm x 300mm and set in moderately soft yellowish grey sand rich lime mortar with occasional fragments of chalk and shell. Overall the foundation wall measured 4.10m east-west by 0.40m north-south by 0.74m high and continued beyond the eastern limits of the trench.



- 7.10.25 Towards the west end later repair work, [406], had been carried out on the south side using red bricks measuring 221mm x 112mm x 60mm and along the north side approximately 1.40m from the west end a brick drain had been installed, [405] (Fig. 55 Section 54).
- 7.10.26 Approximately 3.50m to the east of Phase 5 wall [436] in Trench 55, was a north-south aligned brick wall [423] roughly following the same alignment as the earlier stone foundation (Fig. 37). This wall was constructed using 230mm x 105mm x 60mm red bricks laid in a stretcher bond and set in moderately hard light grey lime mortar containing a moderate amount of small chalk flecks. It had been partially truncated by a later water main. The overall dimensions of the wall were 0.78m east-west by at least 1.60m north-south by at least 0.34m high.
- 7.10.27 Immediately to the east of [423] lay a cobbled surface [422] at 3.36m OD and to the east of this was another cobbled surface [421] at 3.40m OD (Fig. 37). It is possible that these two surfaces were at some point linked and then separated by later truncation. Surface [422] consisted almost entirely of medium sized rounded or sub-rounded cobbles as did the eastern part of surface [421]. The western half of the latter was constructed using larger squared cobbles forming a line 0.97m wide (east-west) and running the extent of the trench north to south.
- 7.10.28 To the east of [421] was another north-south aligned brick wall, [419], constructed using 220mm x 100mm x 60mm red to orange bricks set in very light grey flush pointed hard lime mortar (Fig. 37). The outer skin of the wall was constructed using 180mm x 50mm x 60mm queen closers. Overall the wall measured 1.09m east-west by at least 0.84m north-south by at least 0.28m high. It continued south beyond the limits of the trench and had been truncated to the north by the installation of a water main. To the east lay another brick wall, [418], aligned north-south and measuring 0.81m long by 0.70m wide, which was truncated to the north and continued beyond the southern limit of excavation.
- 7.10.29 Two elements of brick wall, [440] and [441], were recorded at 3.72m OD in Trench 56 (Figs. 35 & 55 Section 56). These formed an east-wall wall with a north-south return, which had been truncated by the installation of modern services. The wall was constructed using unfrogged red fabric bricks measuring 220mm x 110mm x 55mm laid in regular courses using a combination of header and stretcher bond. They were set in compact very light yellowish grey lime mortar.

- 7.10.30 In Trench 58 the brick footings of an 18th-century building were recorded as context [501] (Fig. 38). These consisted of a roughly east-west aligned brick foundation wall with a polygonal bay extending north near the eastern extreme of the trench. It was first observed at a height of 3.78m OD and had been constructed predominantly of red reused Tudor and post-Great Fire bricks although occasional yellow fabric bricks of the same size were also observed. The bricks were laid in header bond and set in moderately hard light grey lime mortar with moderate amounts of charcoal flecks. Towards the eastern edge of the trench the wall had been truncated by a modern drain and the western end of the wall had been truncated by modern services.
- 7.10.31 In addition to the footings five other fragments of brick wall, [472]/[481], [484], [503], [504] and [505], and three north-south aligned brick drains were also recorded, [495], [506] and [508] (Figs. 38 & 57 Section 129). These had all been constructed using red fabric bricks laid in stretcher bond and bonded with moderately hard light grey lime mortar very similar to that used in the construction of [501].
- 7.10.32 Towards the eastern part of Trench 59 an east-west aligned foundation wall, [518], was recorded (Figs. 39 & 54 Section 59A). This was constructed using a variety of material including unfrogged red brick fragments, green sandstone, Portland stone and a few marble fragments. These components were all set in coarse moderately soft pale yellow lime mortar. The outer courses of the wall were header bonded and consisted of unfrogged red bricks measuring 111mm x 75mm x 55mm set in the same mortar as the core. The wall had been subject to refacing, [528] and a rebuild and refacing to the east, [521] (Fig. 54 Section 59A).
- 7.10.33 At the east end [518] was abutted to the south by a substantial ragstone stone foundation, [526] (Fig. 39). This had been constructed using roughly hewn blocks of ragstone laid in regular courses and set in similar mortar to that used in [518]. The stone foundation was aligned north-south and measured 1.52m north-south by 1.05m east-west by 0.26m high although the exact north-south extent and height are not known as the wall extended beyond the limits of the trench to the south and also below the base.
- 7.10.34 In Trench 61 a cobbled surface, [569], was encountered at 3.20m OD (Figs. 40 & 57 Section 134). This was only observed in a machine excavated slot at the northern extreme of the trench. The section exposed measured 2.52m north-south by 0.65m east-west and consisted of medium sized rounded cobbles. It was overlain by a 0.11m thick layer of compacted gravel, [568].

7.10.35 Excavation of Trench 62 revealed a series of cellar walls (Fig. 41). These consisted of a roughly east-west aligned brick wall, [540]/[545], running along the northern boundary of the trench. Another brick wall, [547], parallel to [540], formed the southern wall of the cellars. Adjoining these and dividing the cellars into individual compartments were roughly north-south aligned walls, [546] and [548]. These partitions supported the arched roof of the cellar. All of the walls had been constructed using shallow frogged red and yellow bricks measuring 220mm x 110mm x 70mm laid in regular courses. The bonding material was recorded as consisting of indurated mid brownish grey mortar containing occasional charcoal flecks and very small angular flint pebbles. The walls were later repaired, [544], and refaced, [550].

7.10.36 In Trenches 32, 38, 39, 43 and 53 material had been dumped to raise the ground level up to 3.55m OD in Trench 32 and to 4.39m OD in Trench 53. This material was largely comprised of demolition rubble, probably derived from the destruction of properties along Whitehall in order to facilitate the widening of the road.

#### **7.11 Phase 11: 19th century (Fig. 42)**

7.11.1 The remains of a yellow fabric brick culvert, context [31], were recorded to the north of Trench 13, within construction cut [32] (Fig. 43). The culvert ran across the trench in an east-west direction and was over 0.45m wide, continuing below a later deposit of dumped rubble to the north. It was observed at a height of 3.70m OD.

7.11.2 A layer of late 19th-century dumped rubble, context [21], sealed the entire trench. The layer was observed at a height of 4.18m OD, and was found to be between 0.45m and 0.75m thick.

7.11.3 A fragment of floor surface, context [50], was uncovered in Trench 14 (Fig. 44). The surface was located in the northeast corner of the earlier building and was composed of two fragments of limestone slab. It was observed at a level of 1.61m OD and its dimensions were 0.60m north-south by 0.42m east-west with a thickness of 0.08m. Its eastern edge was sealed by context [47], a later rebuild to wall [37]/[38]/[43] (Fig. 54 Section 14.1). The floor surface sat on top of mortar bedding layer [51], which was not excavated.

7.11.4 Rebuild [47] partially sealed floor surface [50] and butted the internal face of [37]/[38]/[43]. It was composed of red bricks measuring 220mm x 110mm x 60mm. The rebuild may have been added to its earlier counterpart in order to thicken the wall

and provide extra strength. The top of the rebuild was observed at a height of 2.74m OD. An additional rebuild was observed to the west as [44].

- 7.11.5 An additional, internal north-south wall, context [52], was then added to the basement. It divided the structure into two separate compartments, the eastern one being 1.92m wide and the western one being 3.11m wide. The wall itself was 0.22m wide, being composed of between one and two courses of stretcher or header bonded masonry. It was observed at 1.75m OD, its upper courses having been truncated away by a large modern intrusion.
- 7.11.6 The basement was then partially backfilled with context [49], a 1.14m thick deposit of loose, mid greyish brown mortar-rich material, the top of which was observed at 2.65m OD. The fill contained 19th-century pottery, clay tobacco pipe dated 1760-1800 and mid to late 18th-century glass. It had been dumped against rebuild [47] to the south and east, and internal wall [52] to the west.
- 7.11.7 Rebuild [47] was then modified at a later date (Figs. 44 & 54 Section 14.1). The top courses were removed and replaced with context [35], which was composed of machine-pressed, yellow bricks suggestive of a later 19th-century date. The top of this rebuild was observed at 3.82m OD.
- 7.11.8 The partial remains of a later floor surface, context [46], was observed at a depth of 2.75m OD. It sealed backfill [49] and was formed from two sandstone slabs, held together by friable, mid grey sandy mortar. Its dimensions were 0.96m north-south by 0.56m east-west with a thickness of 55mm. It butted rebuild [35] to the south and east and had been robbed away to the west.
- 7.11.9 Context [42], a thick deposit of dumped backfill, sealed the floor surface. The backfill was deposited after the basement finally fell out of use, probably in the late 19th century. It was 0.73m thick and was observed at a height of 3.45m OD. This deposit was sealed by a layer of demolition debris, context [41].
- 7.11.10 In Trench 18 the possible soil horizon, [59], was partially truncated by construction cut [58], observed at a depth of 3.90m OD (Figs. 45 & 54 Section 18). It contained arched brick culvert [57], orientated north-south within the trench. The culvert was 0.90m wide and 0.71m deep and was observed at a depth of 3.32m OD. It was constructed from predominantly stretcher bonded frogged red bricks dated 1750-1900 measuring 220mm x 100mm x 60mm. After the drain ceased to function, it silted up with a 0.27m thick deposit of water-lain sandy silty clay, [56].

- 7.11.11 Three small fragments of red brick wall, [200], [203] and [206], perhaps representing part of a 19th-century cellar, were observed in Trench 33dg (Fig.45).
- 7.11.12 A fragmented brick wall, [353], was recorded to the south of [306] in Trench 36 (Fig.46). It was constructed using red bricks measuring on average 210mm x 100mm x 65mm laid in English bond and set in compact white chalky mortar. Overall it measured 1.78m north-south by 0.50m east-west by at least 0.78m high and was observed at a maximum height of 3.61m OD. To the south of this was another wall fragment, [350], almost identical in construction to [353] although the bricks were seen to sit on a Reigate stone foundation, which had not been observed beneath the brickwork of [353]. A further two brick wall segments ([348] and [349]), likely belonging to this wall, were recorded to the south of [350].
- 7.11.13 In Trench 55 an east-west aligned red brick wall, [424], was uncovered (Fig. 47). It had been constructed using fragmented bricks set in light grey lime mortar. To the south the wall had been truncated by the installation of a water main during the 20th century and to the north by 20th-century cut [430]. The surviving wall fragment measured 0.81m north-south by 0.81m east-west; it was first seen at 3.29m OD and extended below the base of the excavation.
- 7.11.14 Excavation of Trench 57 revealed a 0.30m to 1.10m wide (north-south) brick feature, [447], consisting of wall [449], foundations [453], [454], [455], [456] and [457], repair [458] and cellar [450], which extended through most of the trench (Figs. 48 & 49). The structure appeared to have been truncated to the south, probably during the construction of the Old War Office Building in the early 1900s. Further investigation of the feature revealed a series of arched cavities in the south side of the wall. The structure was constructed using poorly made gently frogged post-Great Fire red bricks (1664-1900) adhered with a type of lime cement consistent with an 18th- or 19th-century construction. A number of the arches, [509] and [510], had been repaired or replaced using well made deep-frogged post-Great Fire bricks (1750-1900) set in Roman cement, which dates the repairs to the late 19th century.
- 7.11.15 In Trench 58 a north-south aligned brick wall, [465], was recorded in the north facing section of the trench (Figs. 50 & 56 Section 130). It had been constructed within construction cut [467], which truncated an earlier dumped deposit, [470]. The wall had been constructed using red bricks measuring 240mm x 95mm x 62mm and laid in regular courses; these had been bonded using lime mortar.

7.11.16 Abutting the east side of one of the earlier walls, [501], was a surface, [502] (Fig. 50), comprising medium to large sized rounded cobbles. The surface covered an area measuring at least 0.62m north-south by 0.70m east-west and was recorded at a level of 3.62m OD. It had been truncated to the east by a later intrusion and it extended north beyond the confines of the trench.

7.11.17 Another north-south aligned brick wall, [463], was recorded to the east of [465] (Fig. 50). This was also only recorded in the north facing section. It had been constructed using red fabric bricks measuring 234mm x 94mm x 62mm and set in light greyish white lime mortar. To the east a brick built structure consisting of east-west wall [512], north-south return [513] with a top height of 3.79m OD and brick floor [511] at 3.13m OD was observed. A cobbled surface, [502], lay to the north.

7.11.18 During this phase a brick wall, [520], was built or rebuilt on top of earlier stone wall [526] in Trench 59 (Fig. 51). Only one course of bricks survived and these were set in hard grey lime mortar containing occasional charcoal and chalk flecks. The bricks used in the construction of [520] measured 215mm x 95mm x 62mm although fragmented bricks had been used to form the core of the wall.

7.11.19 In Trench 62 repair work ([541] and [543]) to wall [540] was observed (Fig. 52). This seemed to be concentrated around an entrance in the west end of the wall, which was eventually filled in completely by [551]. One of the internal walls, [548], of the cellar was also refaced, [549], during this time. To the east a series of cellars formed by east-west wall [560] and dividing walls [562], [563], [564], [565] and [566], were observed.

7.11.20 Trench 63 was excavated along the west side of Scotland Place and adjoined Trench 62 to the south. Excavation of this trench revealed the east side of the building recorded in Trench 62 (Fig. 53). This was represented by a roughly north-south aligned brick wall, [570], which had been truncated in several places by modern service trenches (Fig. 57 Section 135). The wall was identical to those seen in the previous trench.

7.11.21 In Trenches 8, 12, 23, 24, 41, 44, 52 and 61 a layer of demolition debris covered the earlier deposits entirely. This consisted of brick rubble mixed with sandy silt.

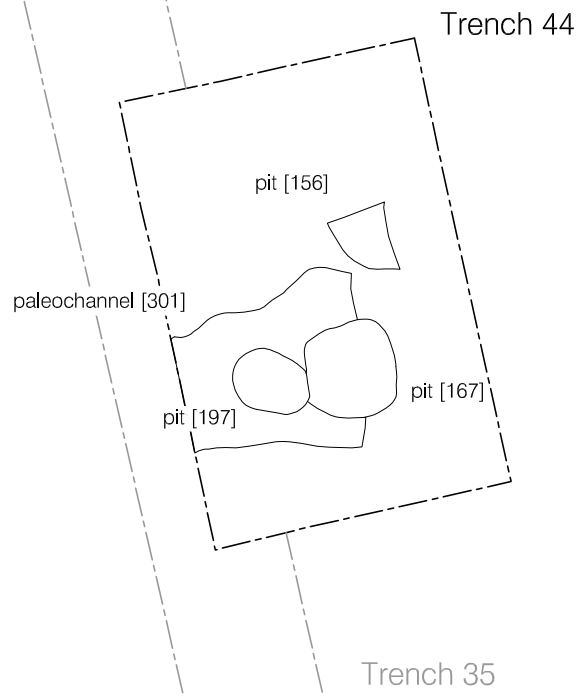
## **7.12 Phase 12: 20<sup>th</sup> century**

7.12.1 Sealing the earlier deposits in all trenches were various bedding layers for the current road surfaces and pavements across the site. These 20th century deposits covered the entire site.



Figure 3  
 Phase 2: Saxon  
 Trench Location  
 1:2,000 at A4





© Pre-Construct Archaeology Ltd 2011

Figure 4  
Phase 2: Saxon  
Trench 44  
1:100 at A4

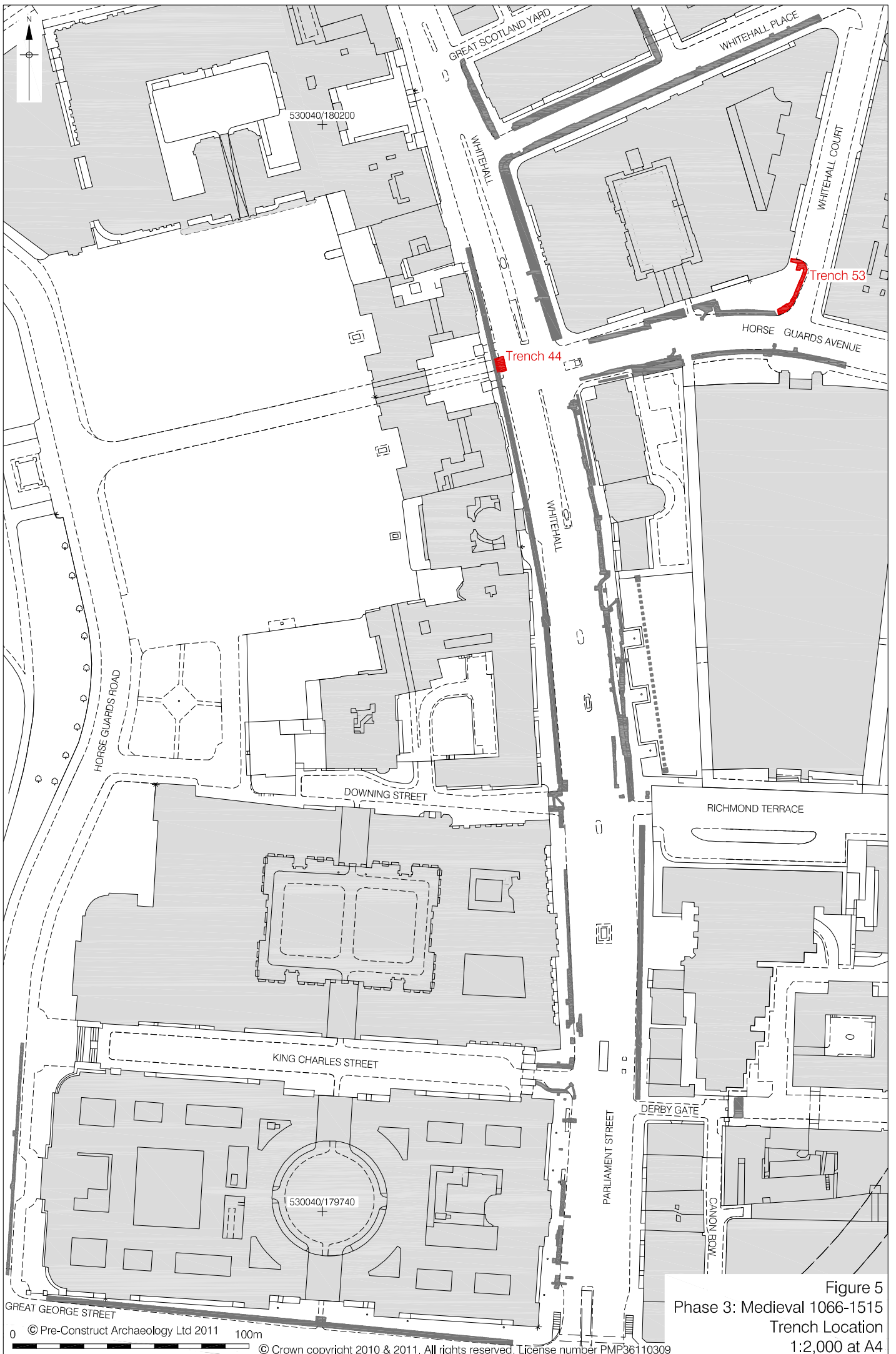


Figure 5  
 Phase 3: Medieval 1066-1515  
 Trench Location  
 1:2,000 at A4



Trench 35

Trench 44

pit [154]  
pit [165]

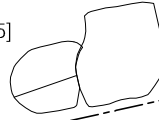
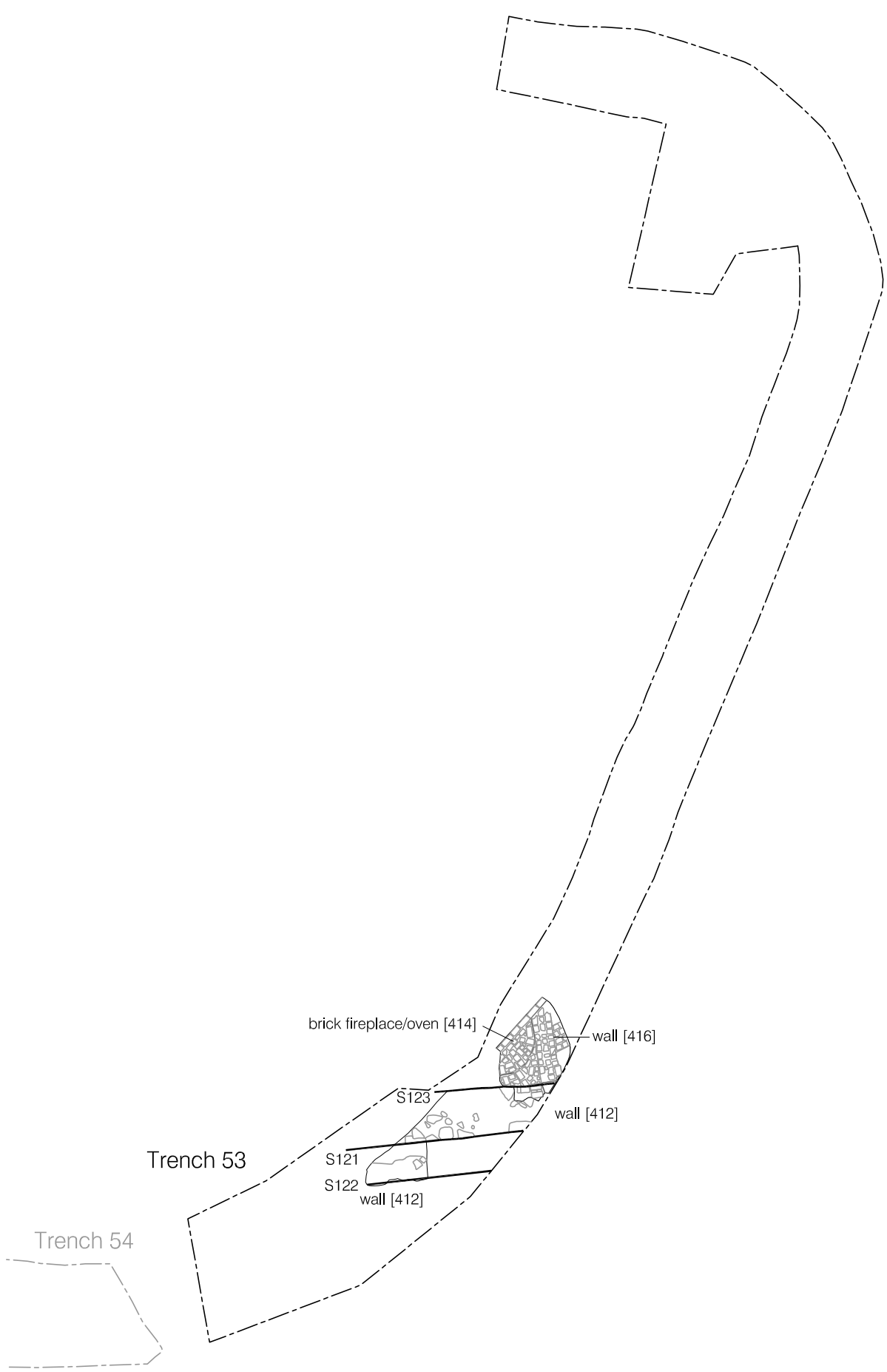


Figure 6  
Phase 3: Medieval 1066-1515  
Trench 44  
1:100 at A4



0 5m  
© Pre-Construct Archaeology Ltd 2011

Figure 7  
Phase 3: Medieval 1066-1515  
Trench 53  
1:100 at A4

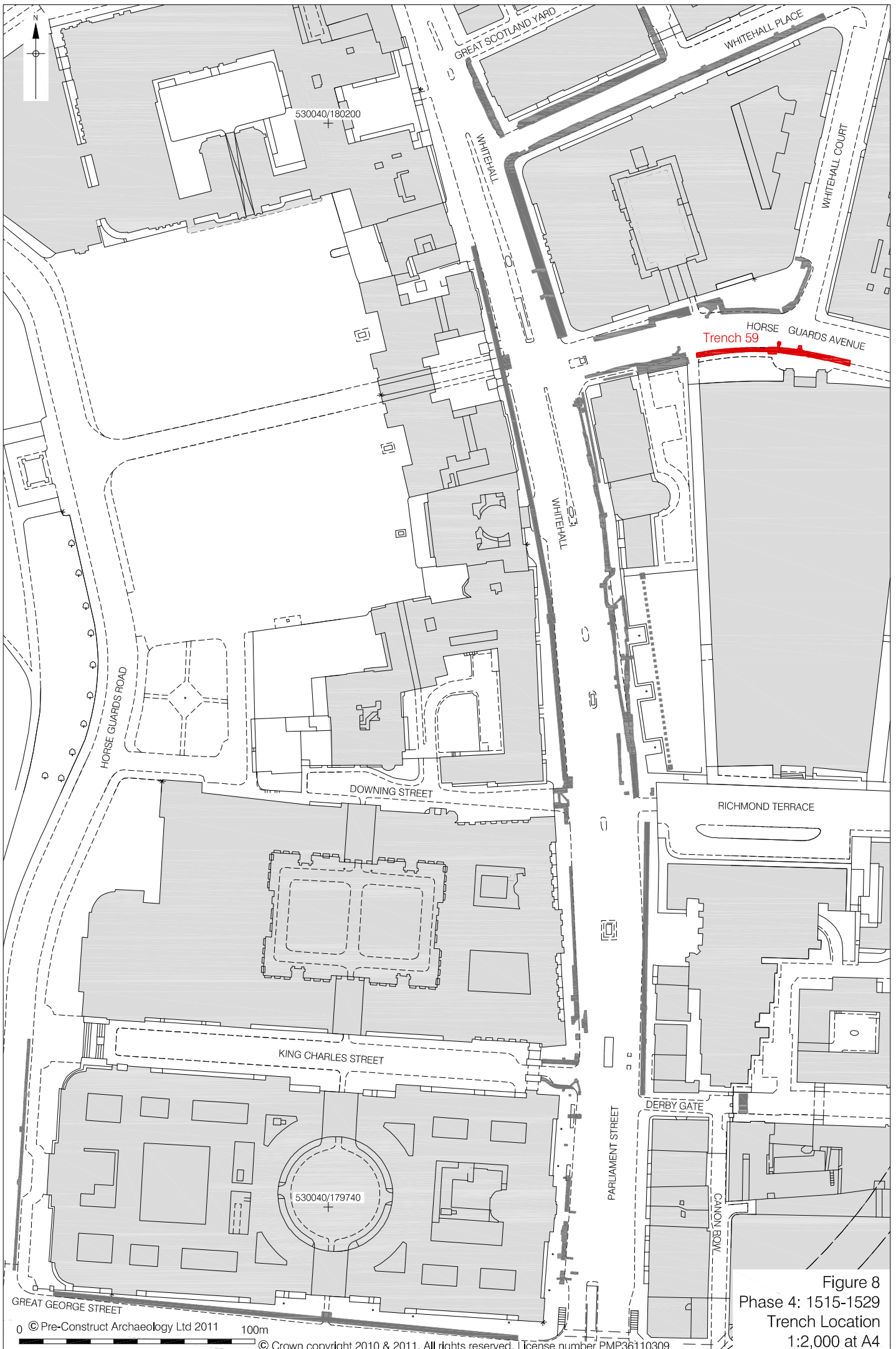
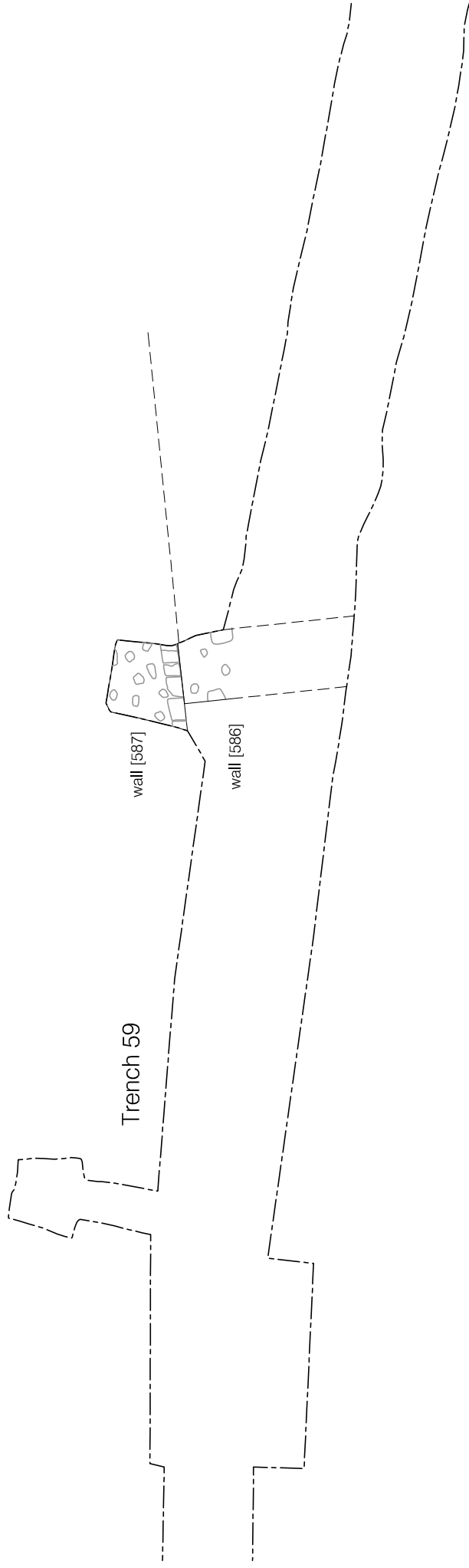
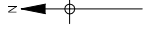


Figure 8  
Phase 4: 1515-1529  
Trench Location  
1:2,000 at A4



© Pre-Construct Archaeology Ltd 2011

Figure 9  
Phase 4 1515-1529  
Trench 59  
1:100 at A4

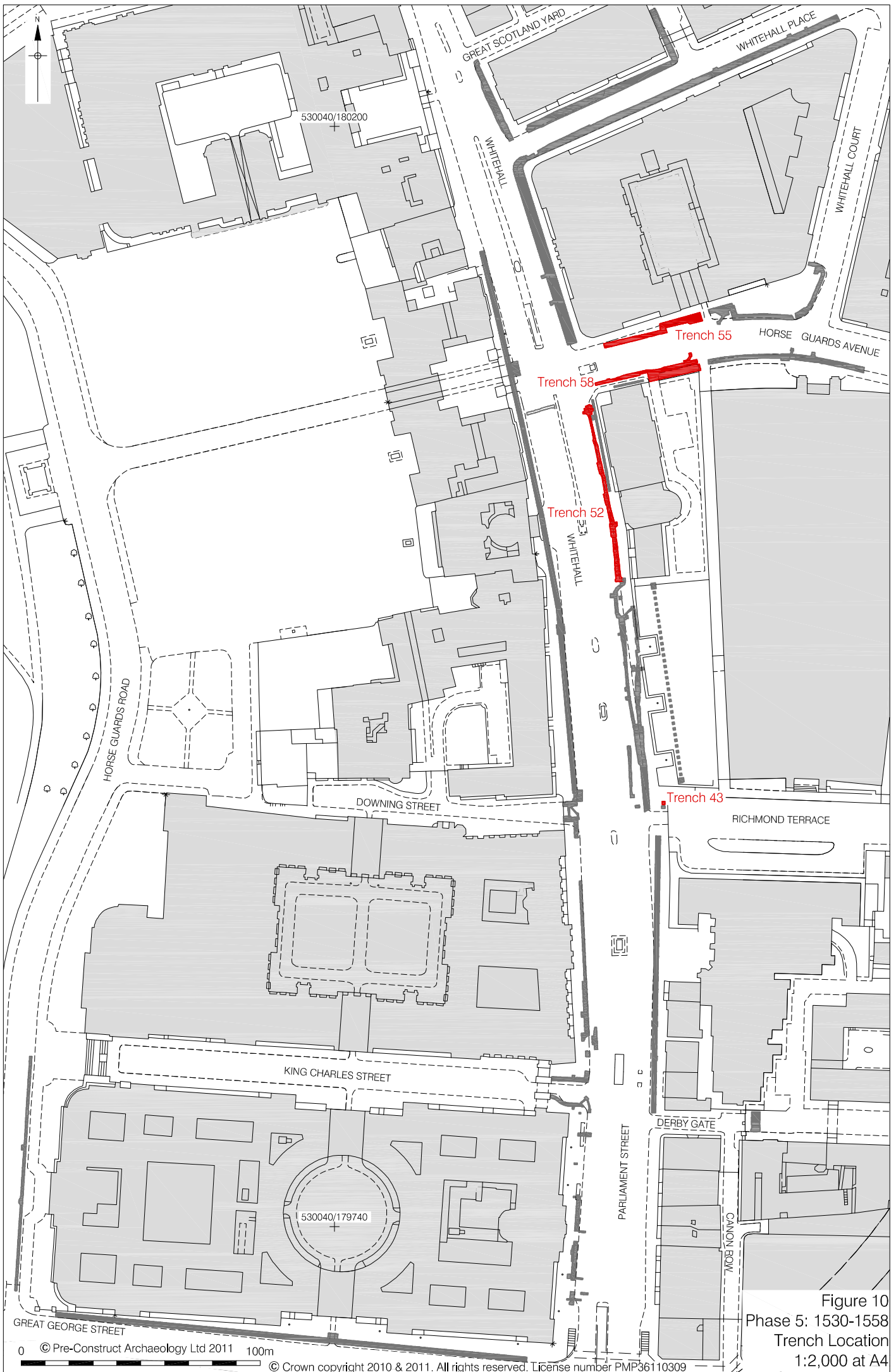


Figure 10  
 Phase 5: 1530-1558  
 Trench Location  
 1:2,000 at A4

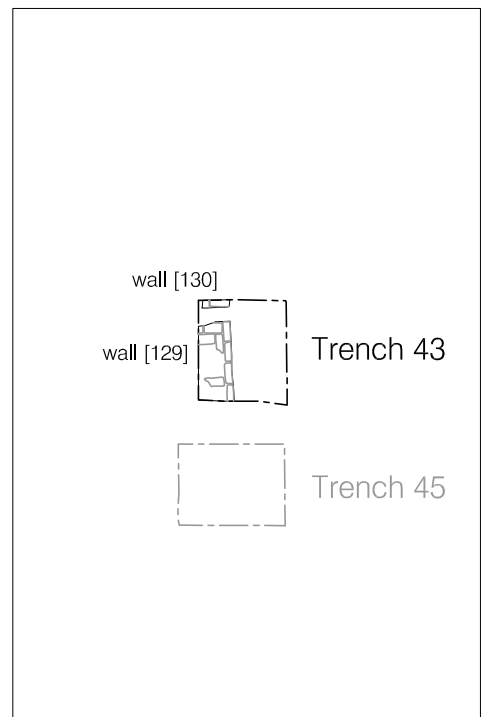
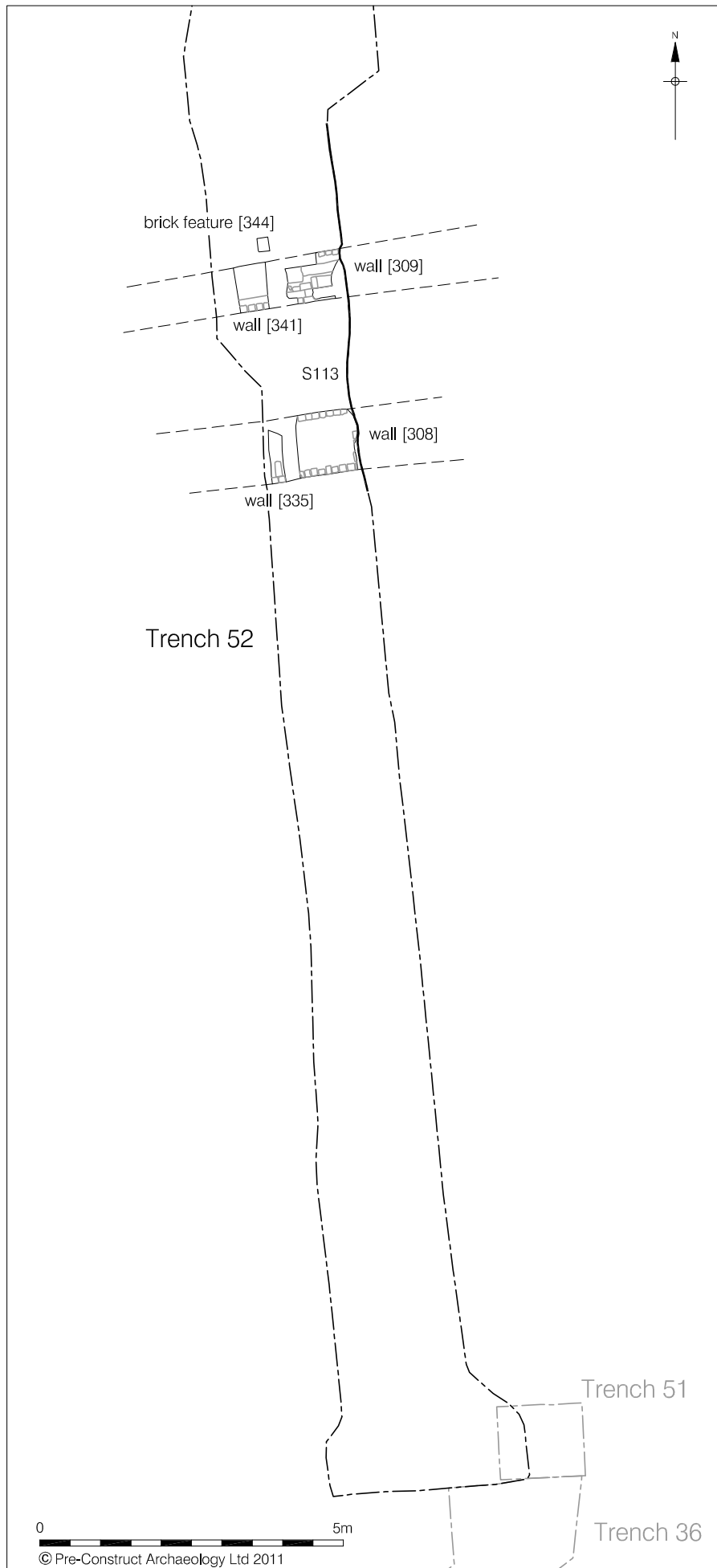


Figure 11  
Phase 5: 1530-1558  
Trenches 43 & 52  
1:100 at A4



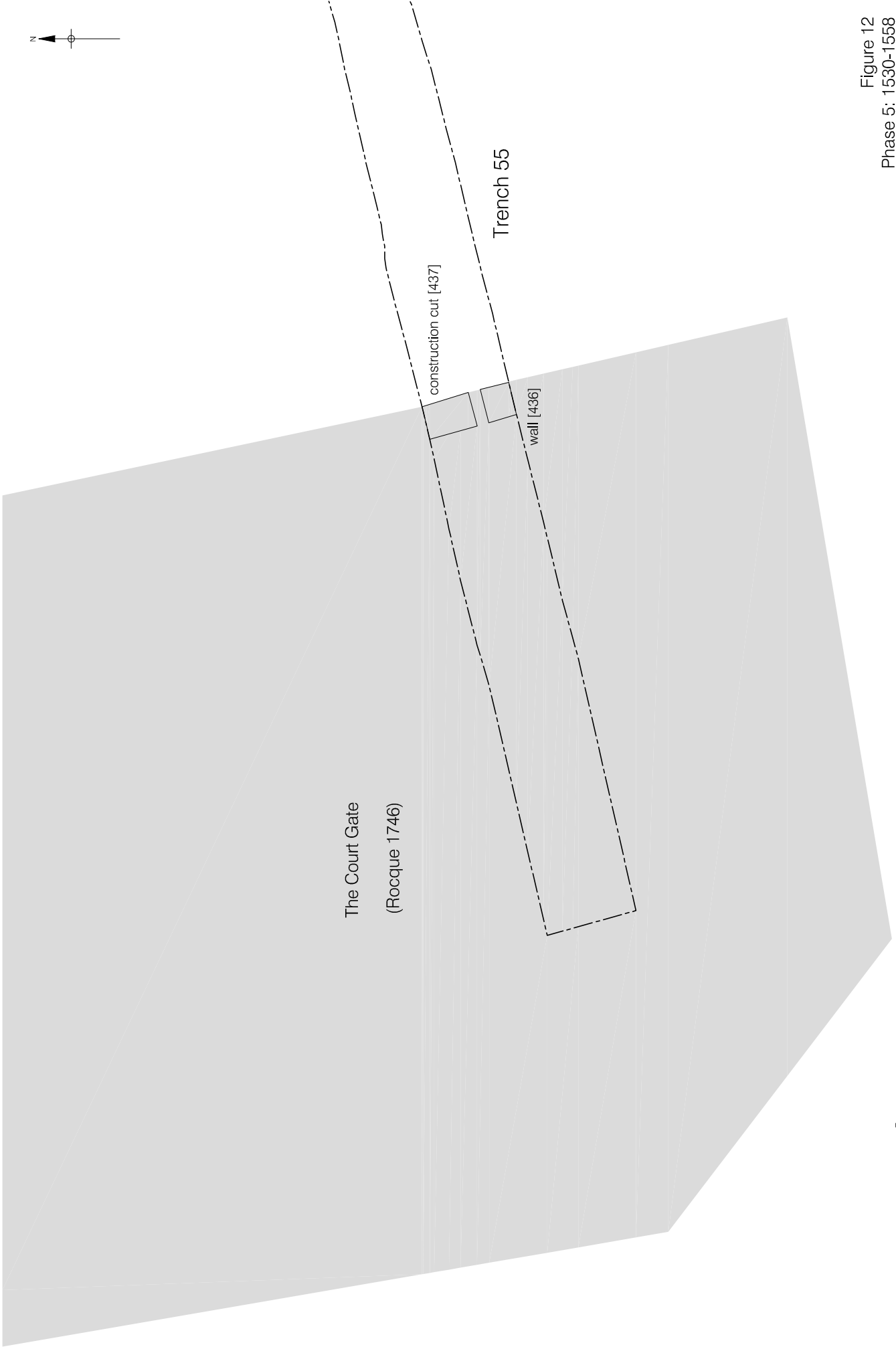


Figure 12  
Phase 5: 1530-1558  
Trench 55  
1:100 at A4

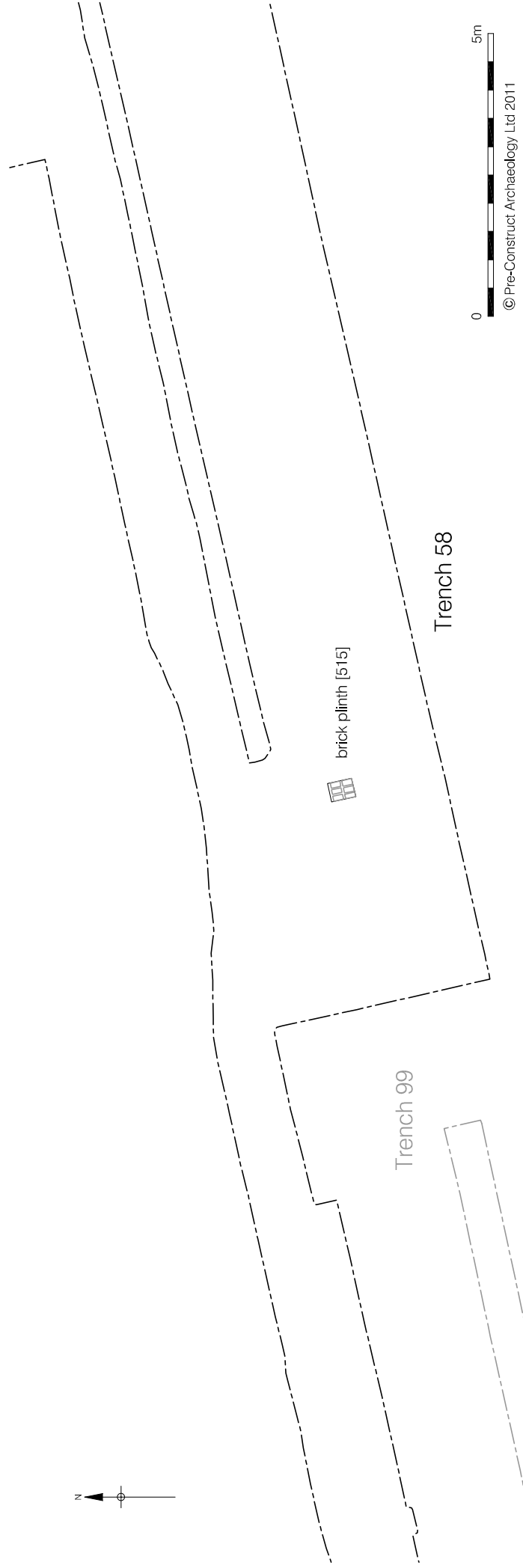


Figure 13  
Phase 5: 1530-1558  
Trench 58  
1:100 at A4

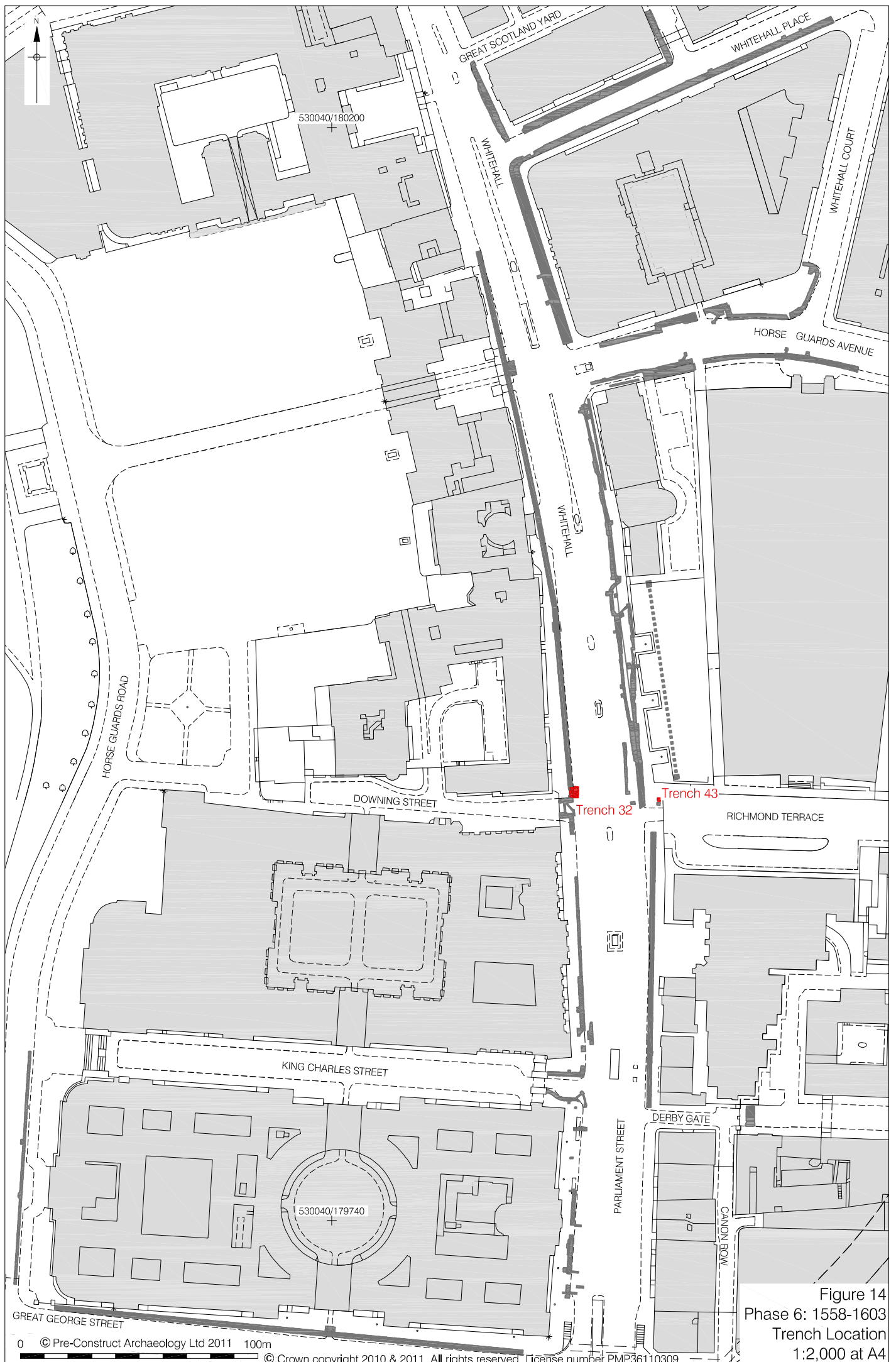


Figure 14  
Phase 6: 1558-1603  
Trench Location  
1:2,000 at A4

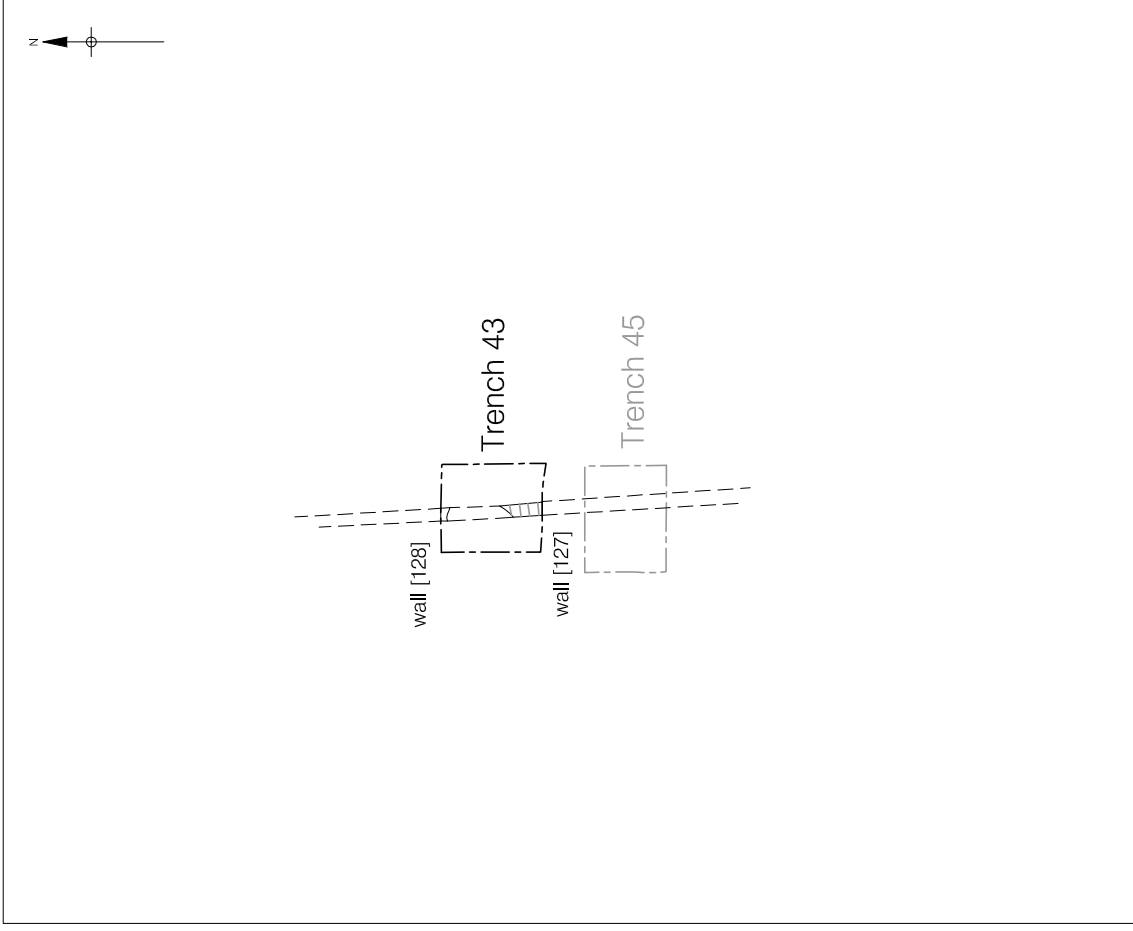
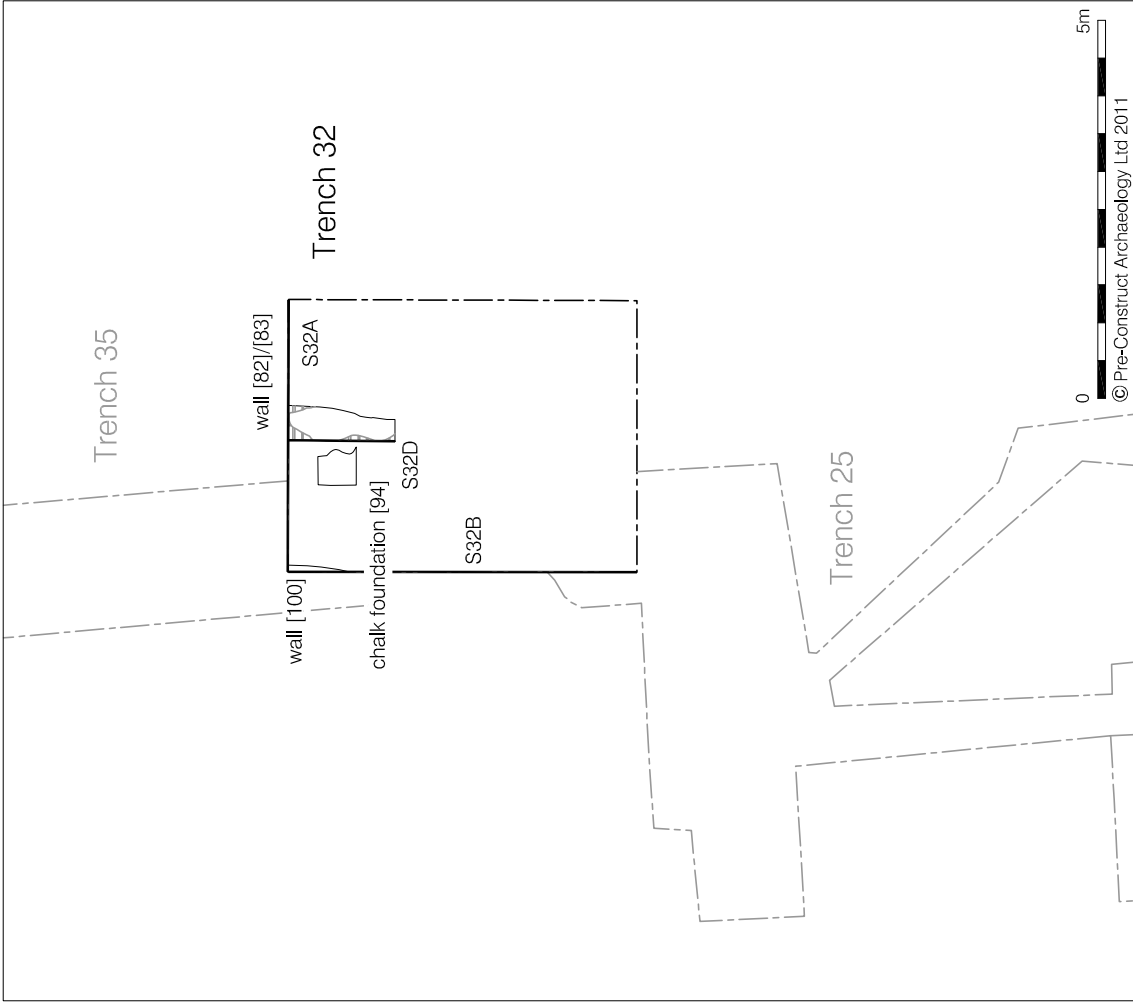


Figure 15  
 Phase 6: 1558-1603  
 Trenches 32 & 43  
 1:100 at A4

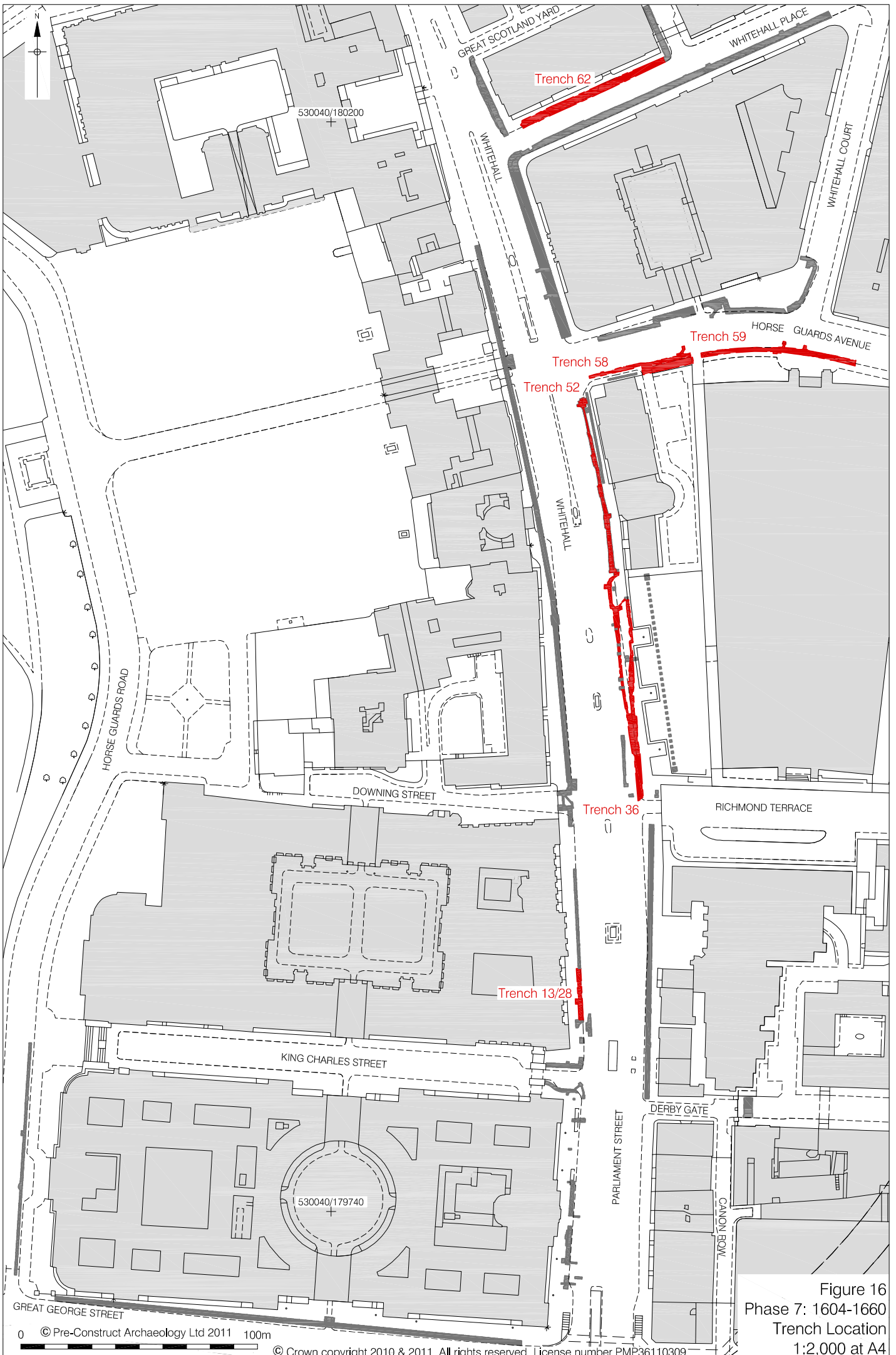
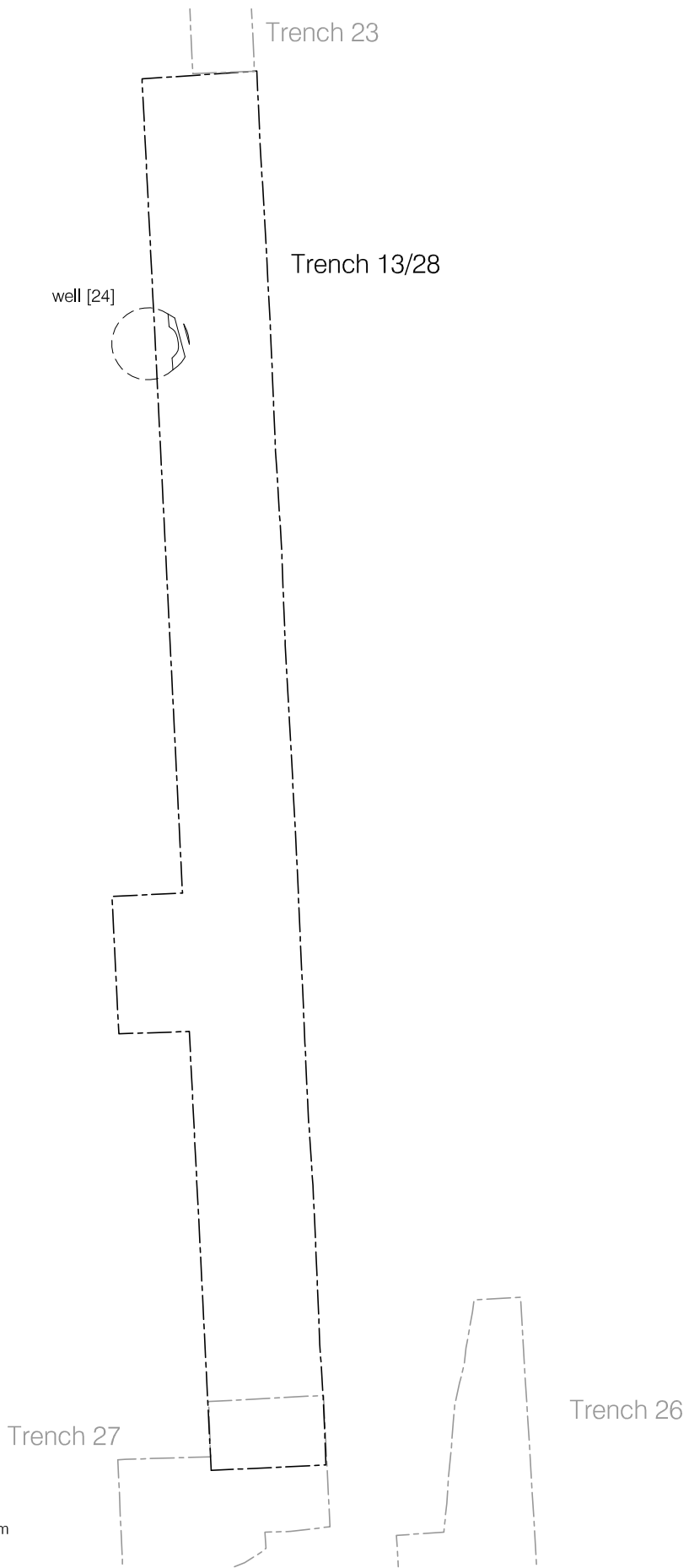
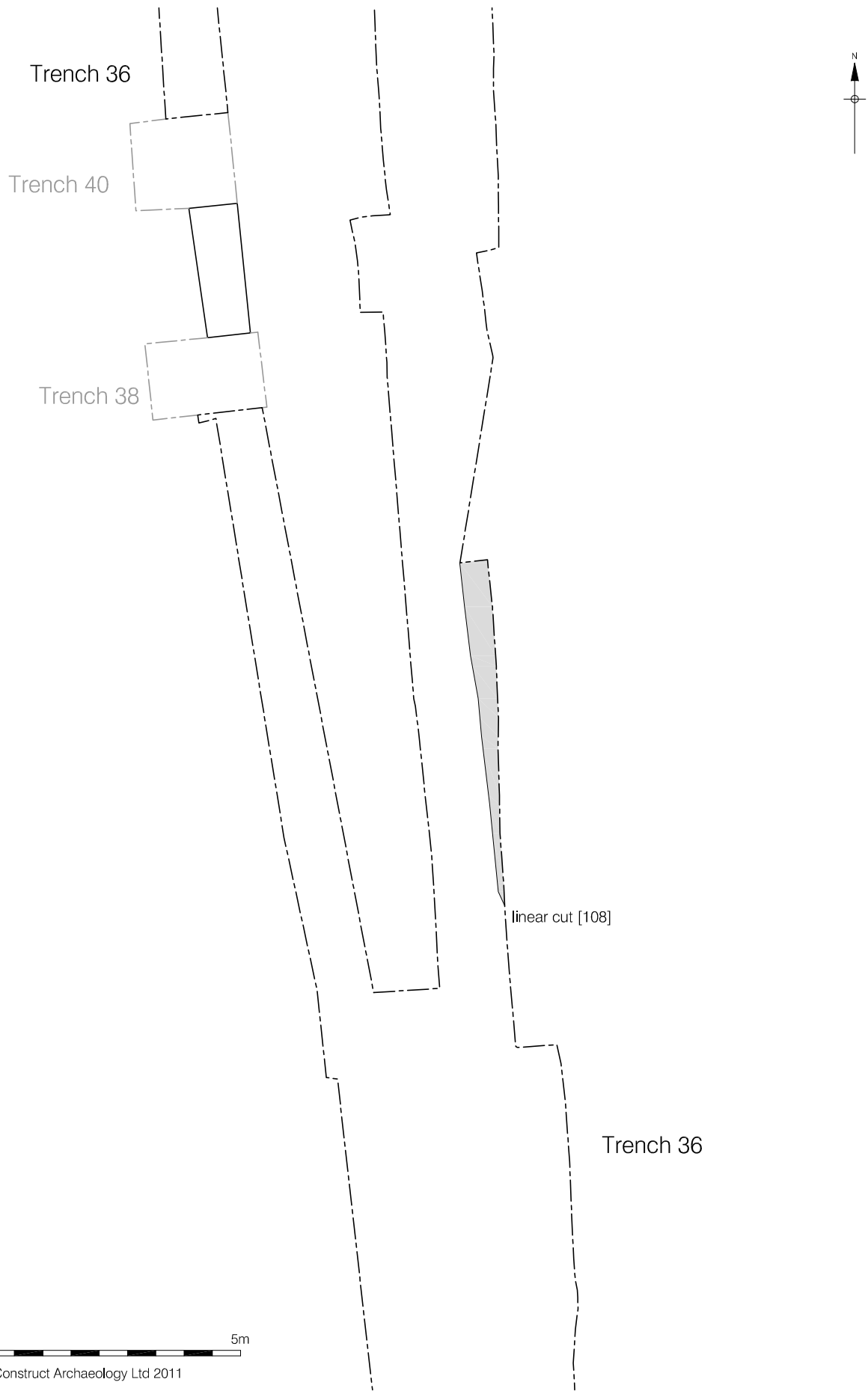


Figure 16  
 Phase 7: 1604-1660  
 Trench Location  
 1:2,000 at A4



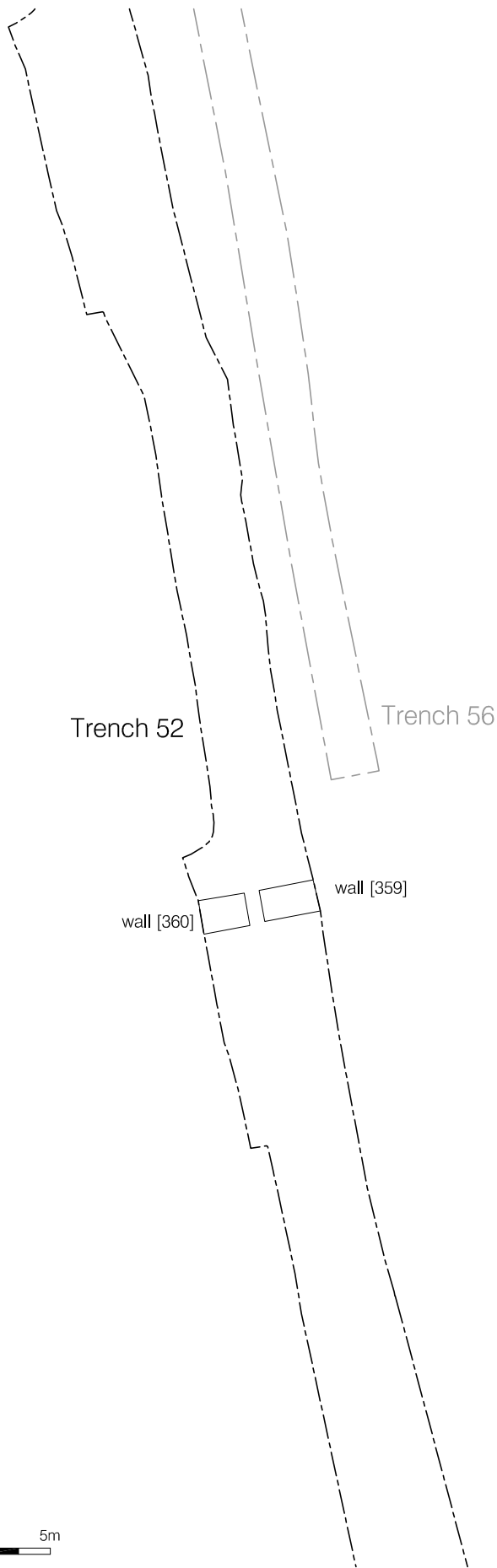
© Pre-Construct Archaeology Ltd 2011

Figure 17  
Phase 7: 1604-1660  
Trench 13/18  
1:100 at A4



0 5m  
© Pre-Construct Archaeology Ltd 2011

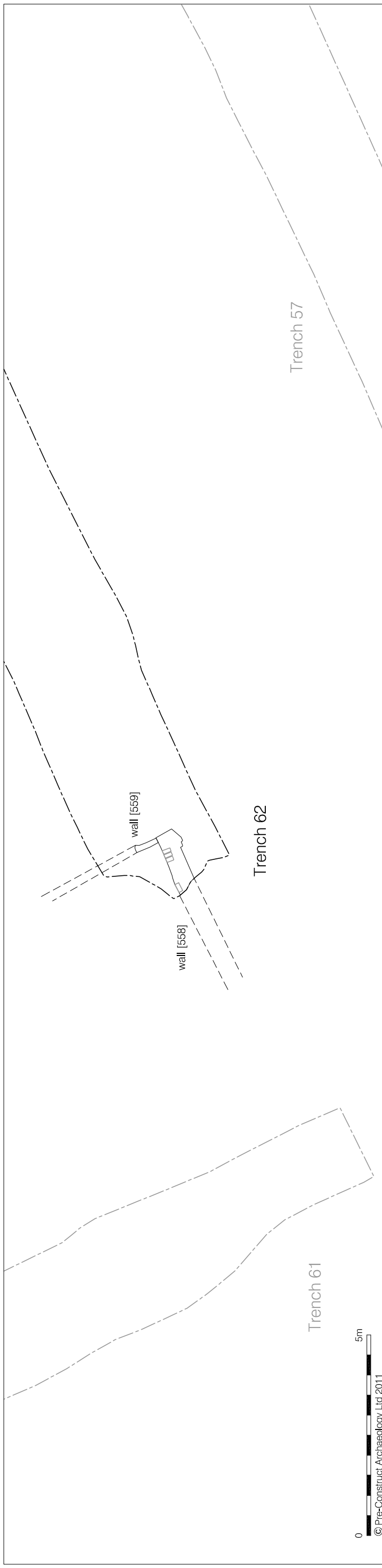
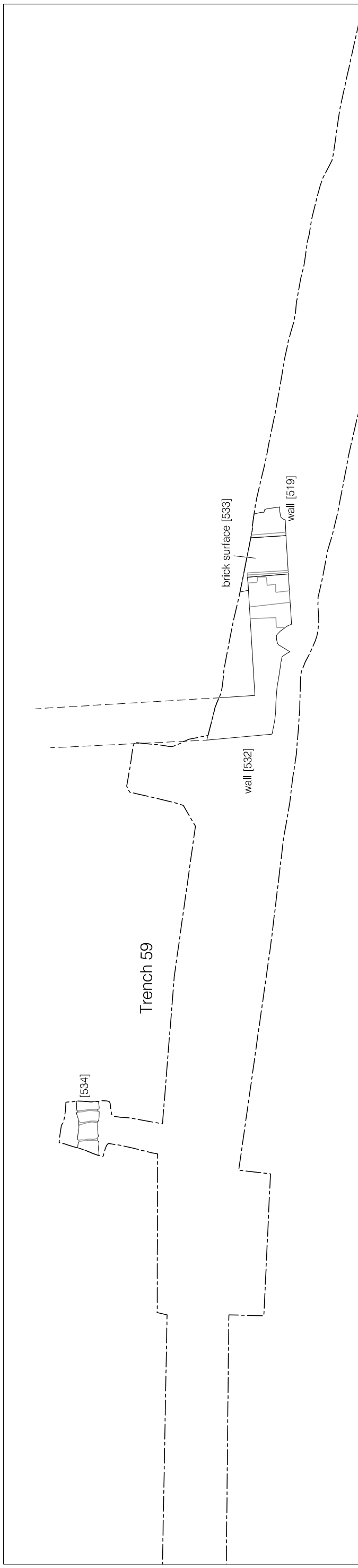
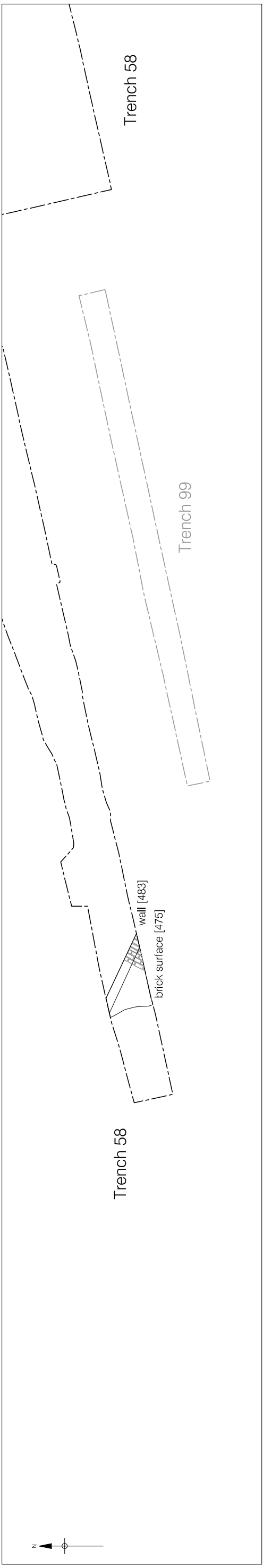
Figure 18  
Phase 7: 1604-1660  
Trench 36  
1:100 at A4



© Pre-Construct Archaeology Ltd 2011

Figure 19  
Phase 7: 1604-1660  
Trench 52  
1:100 at A4





© Pre-Construct Archaeology Ltd 2011

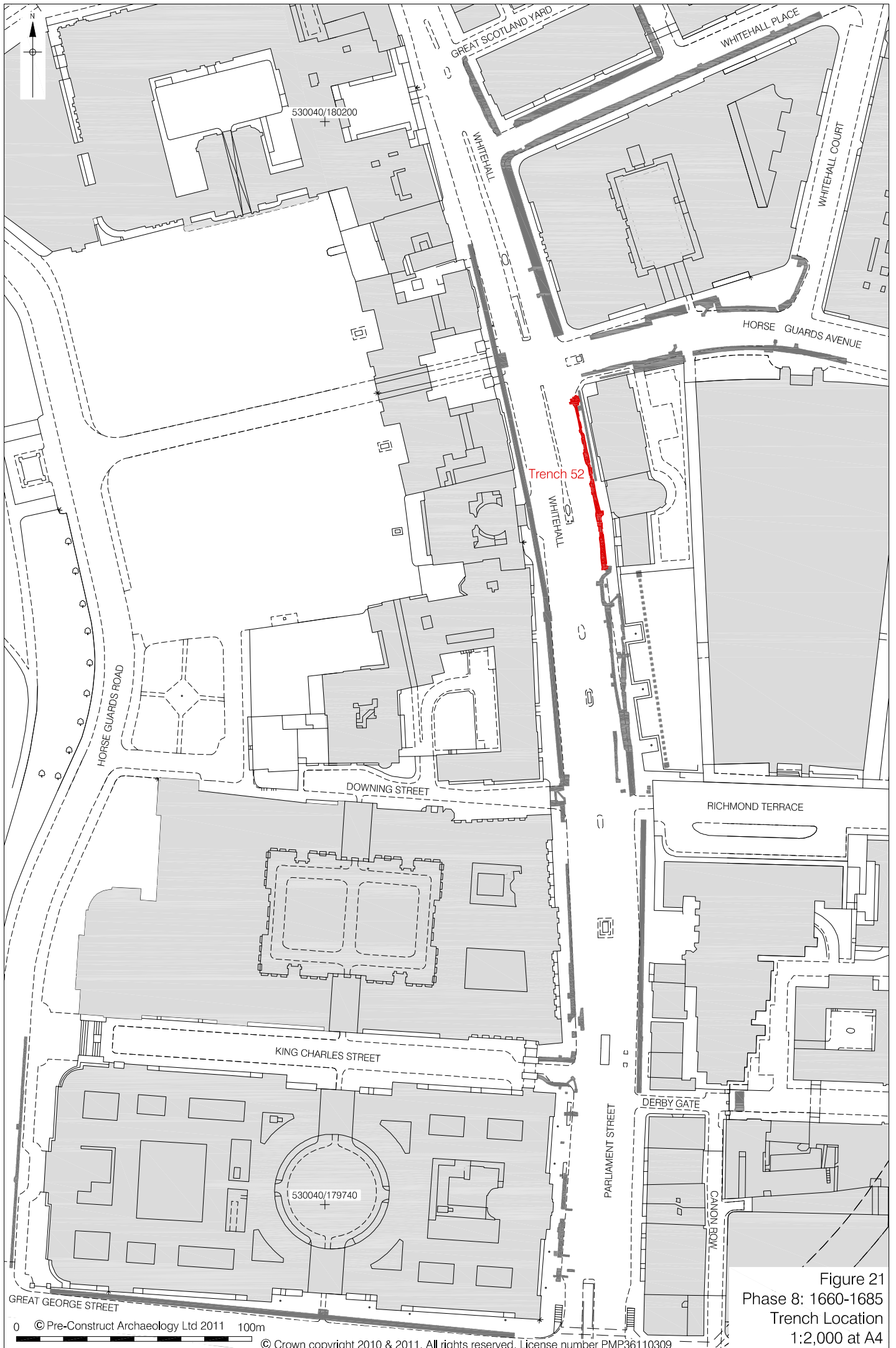
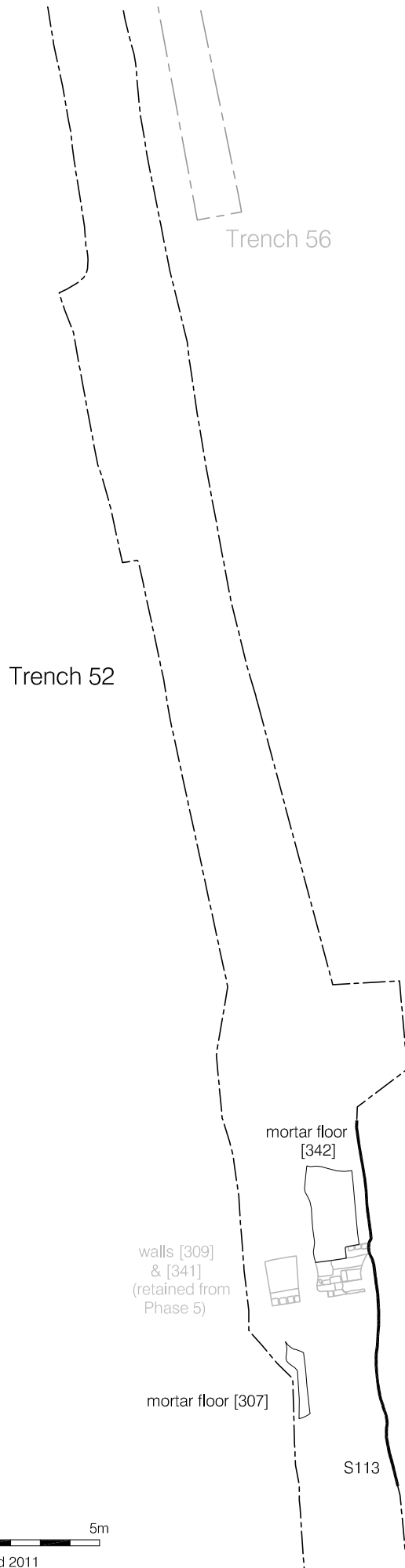


Figure 21  
 Phase 8: 1660-1685  
 Trench Location  
 1:2,000 at A4



© Pre-Construct Archaeology Ltd 2011

Figure 22  
Phase 8: 1660-1685  
Trench 52  
1:100 at A4

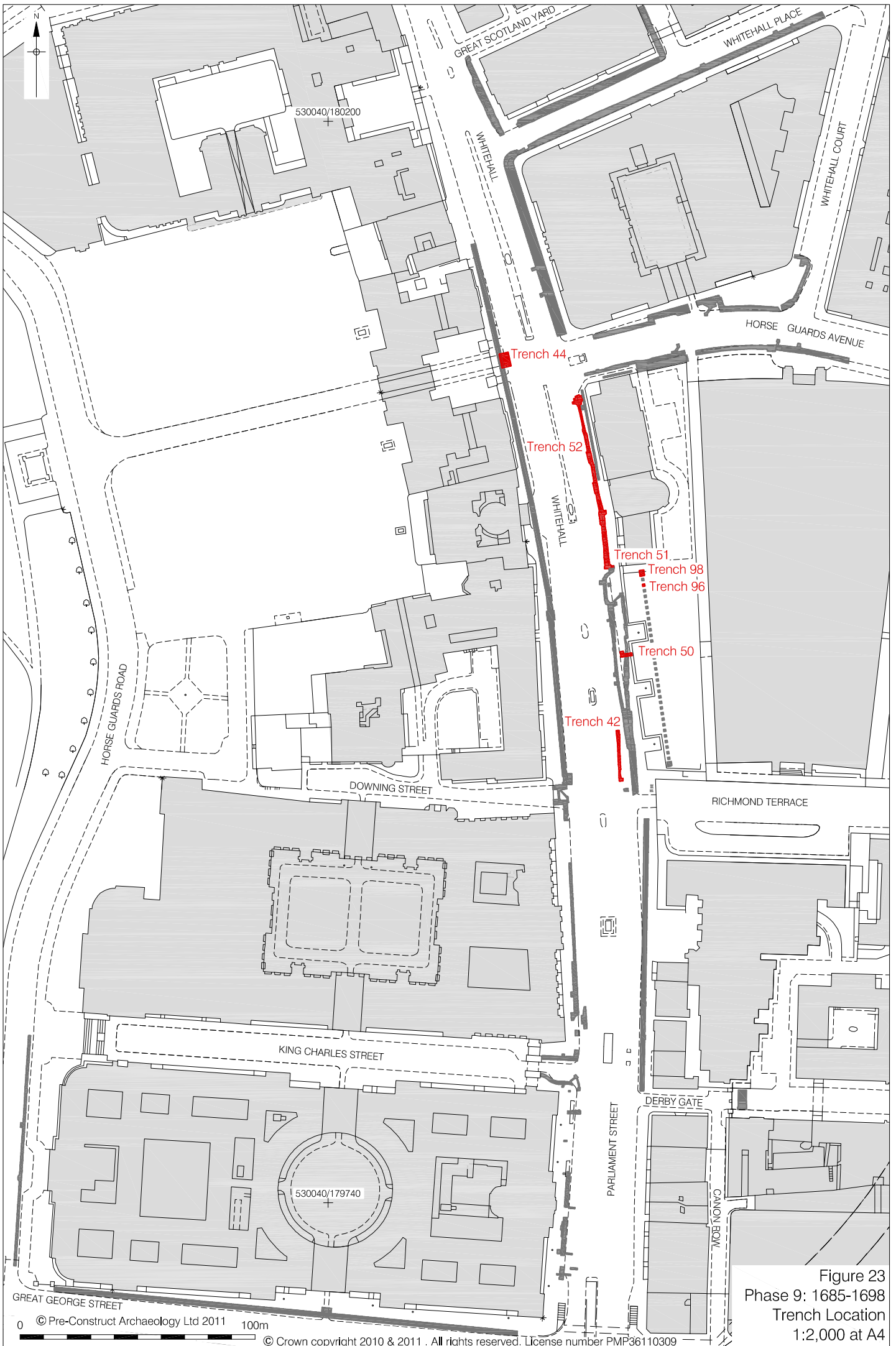
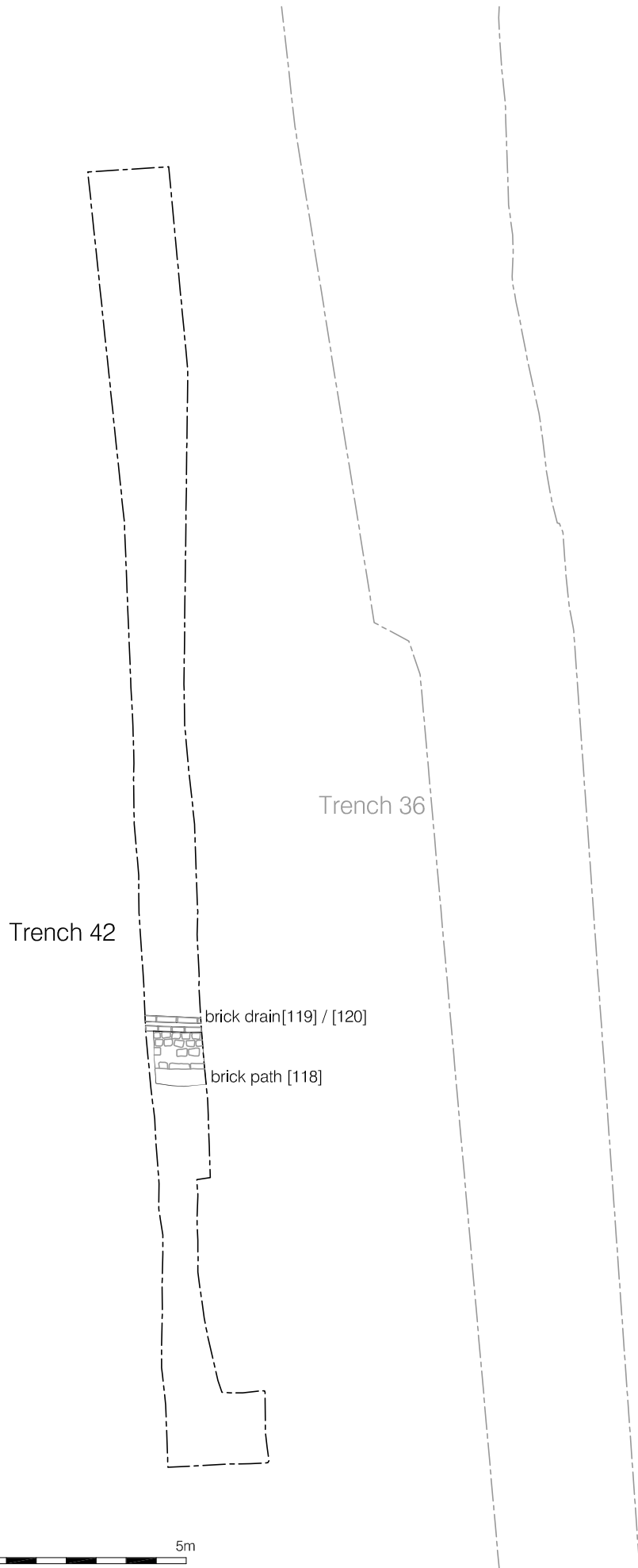


Figure 23  
 Phase 9: 1685-1698  
 Trench Location  
 1:2,000 at A4



© Pre-Construct Archaeology Ltd 2011

Figure 24  
Phase 9: 1685-1698  
Trench 42  
1:100 at A4

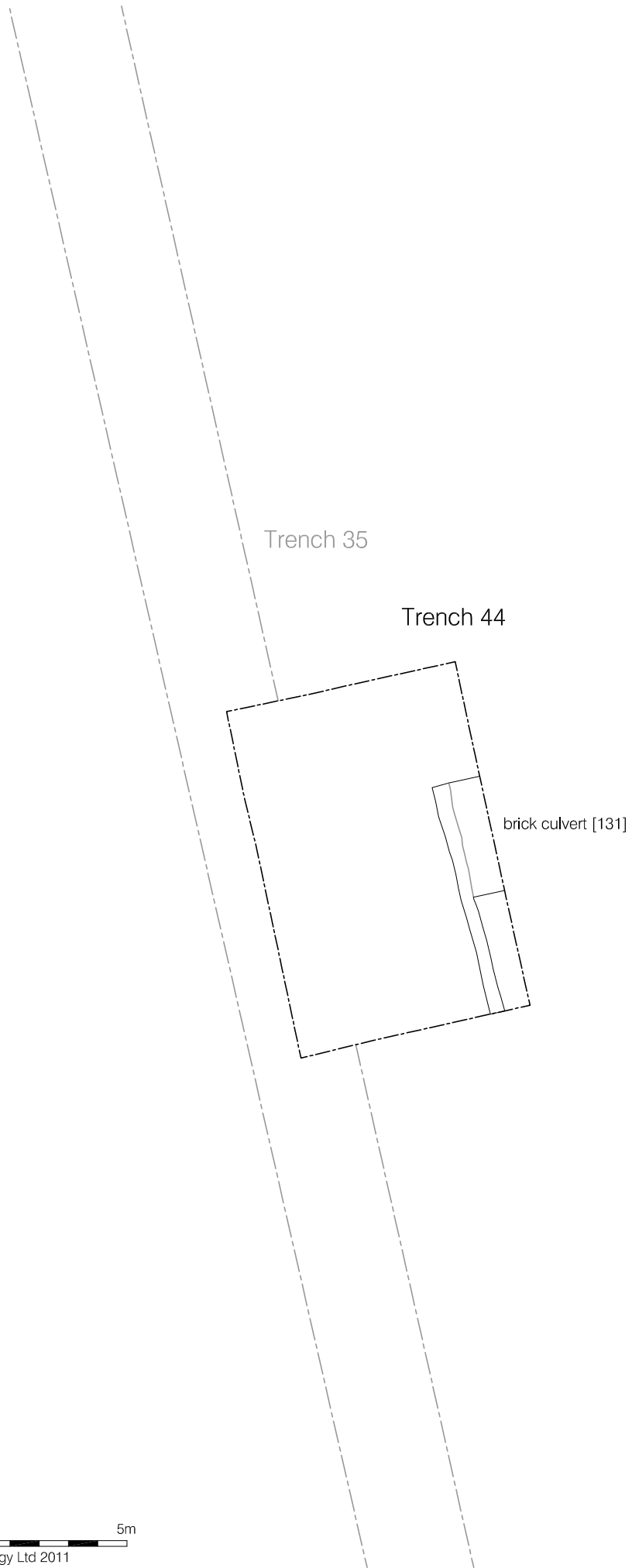


Figure 25  
Phase 9: 1685-1698  
Trench 44  
1:200 at A4

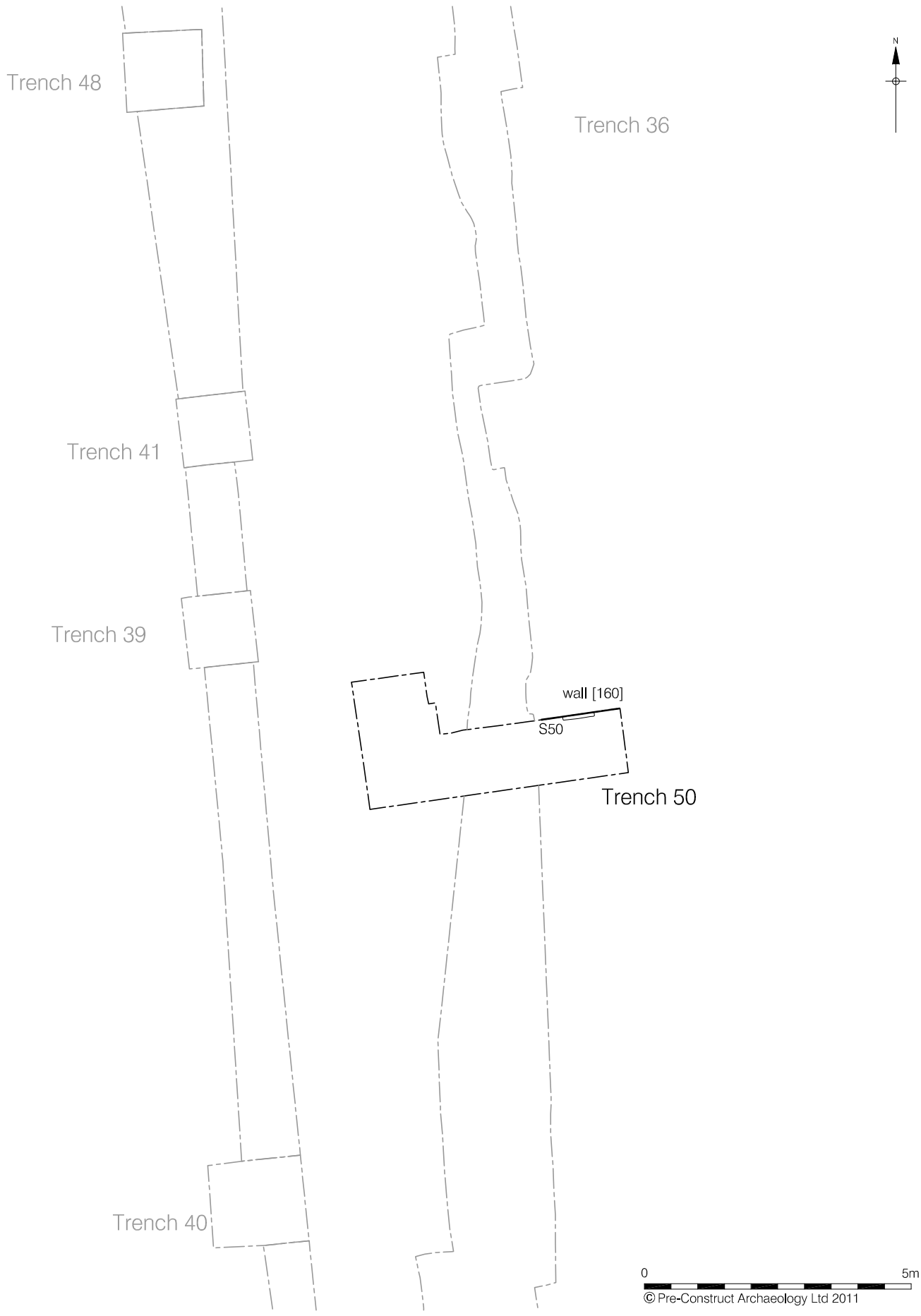


Figure 26  
 Phase 9: 1685-1698  
 Trench 50  
 1:100 at A4

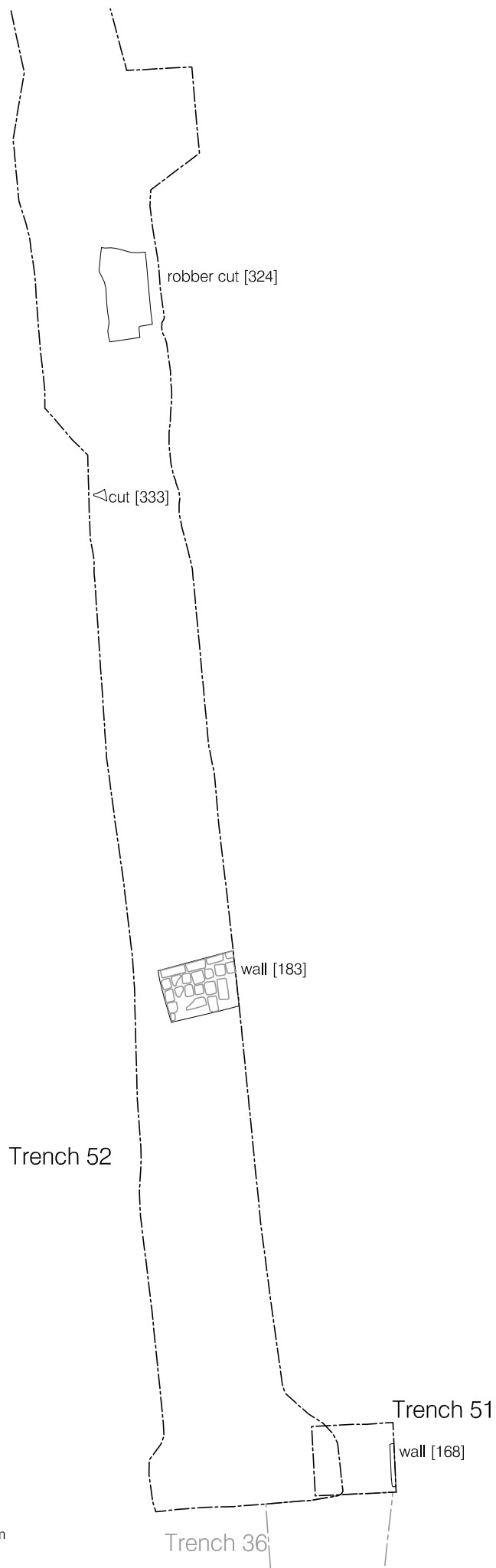
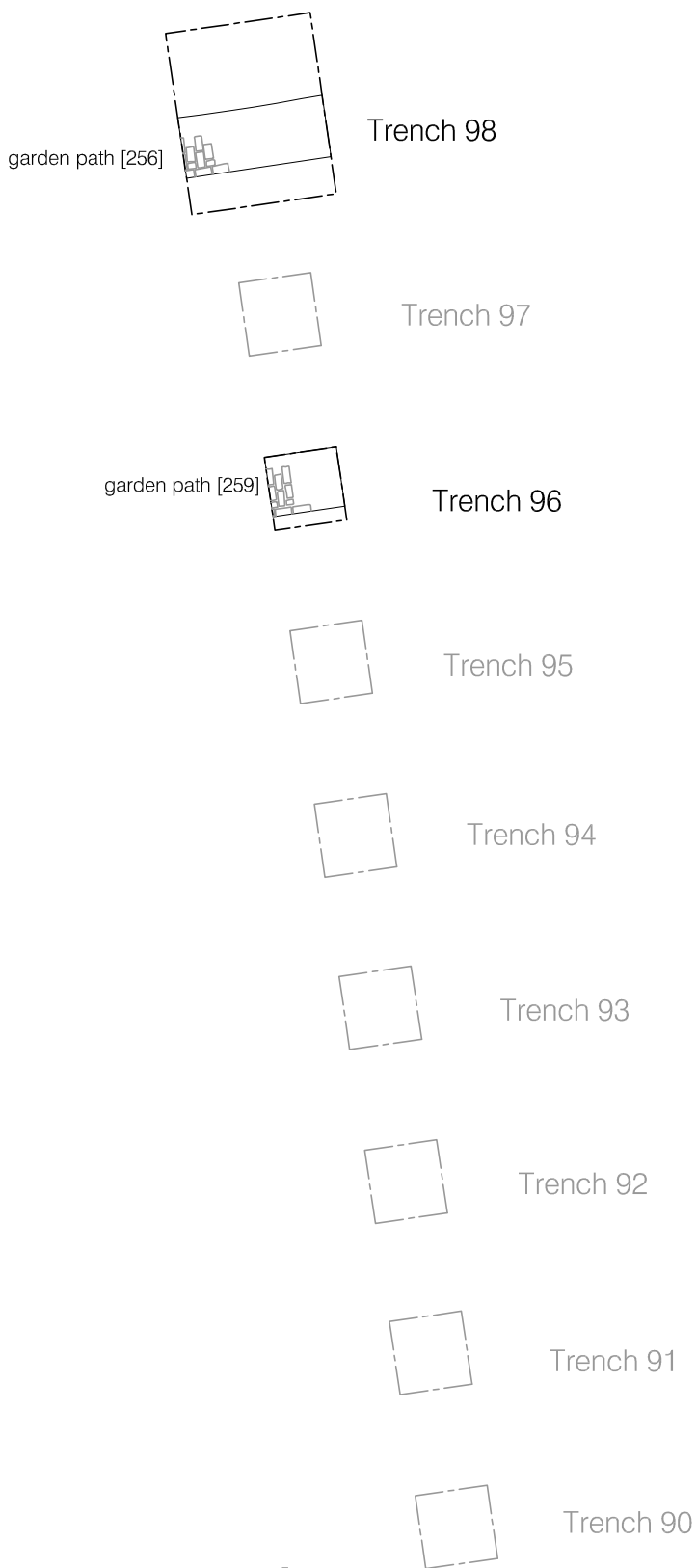


Figure 27  
Phase 9: 1685-1698  
Trenches 51 & 52  
1:100 at A4





0 5m

© Pre-Construct Archaeology Ltd 2011

Figure 28  
Phase 9: 1685-1698  
Trenches 96 & 98  
1:100 at A4

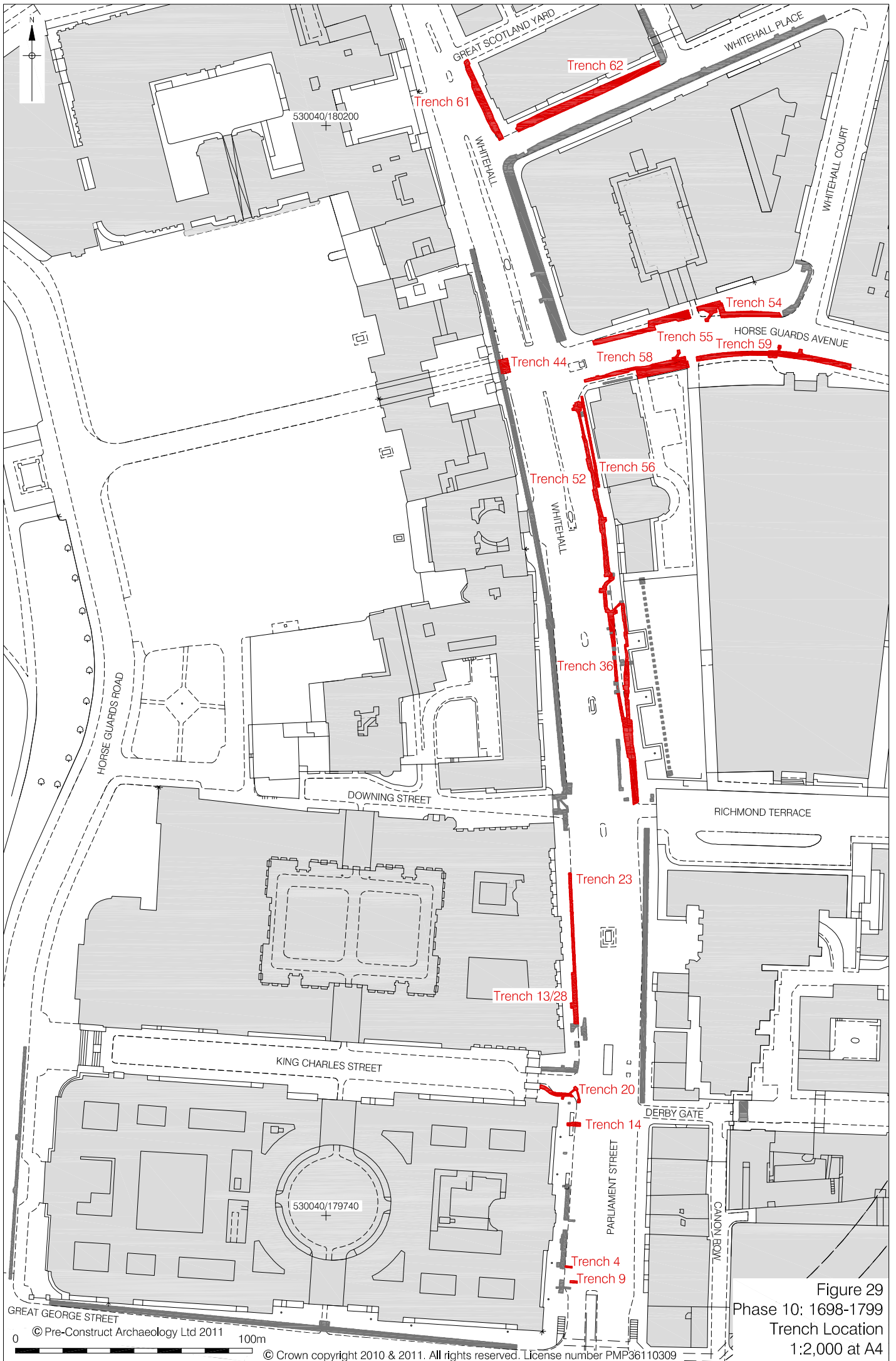


Figure 29  
 Phase 10: 1698-1799  
 Trench Location  
 1:2,000 at A4



Figure 30  
Phase 10: 1698-1799  
Trenches 4 & 9  
1:100 at A3

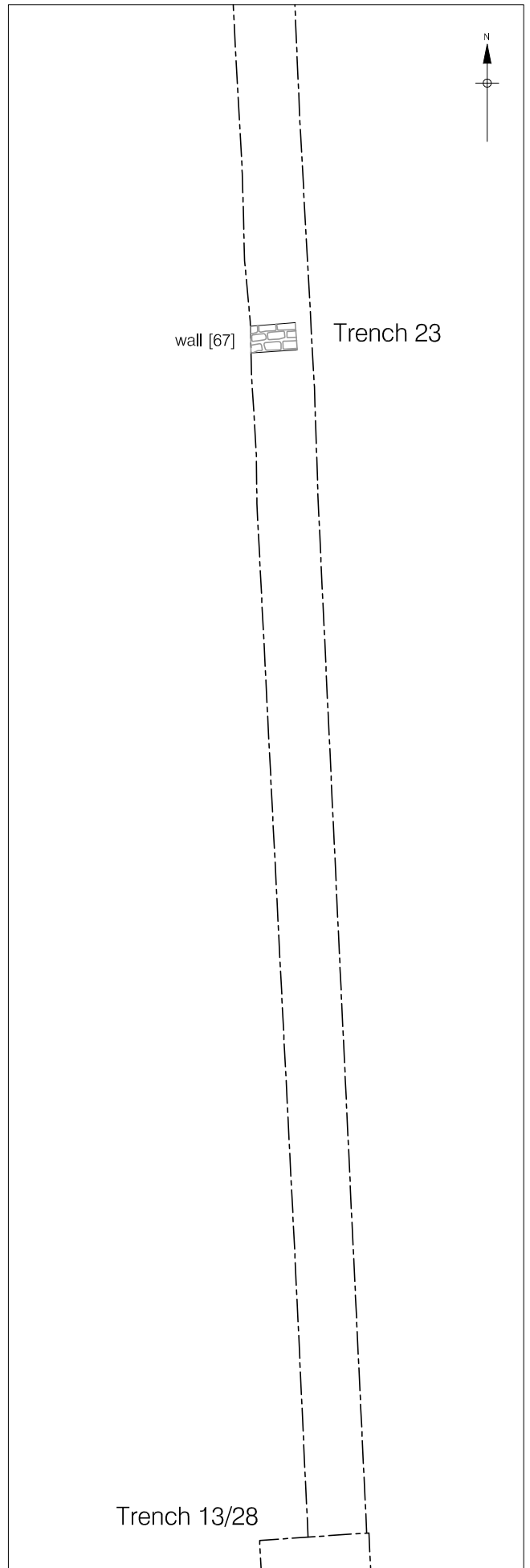
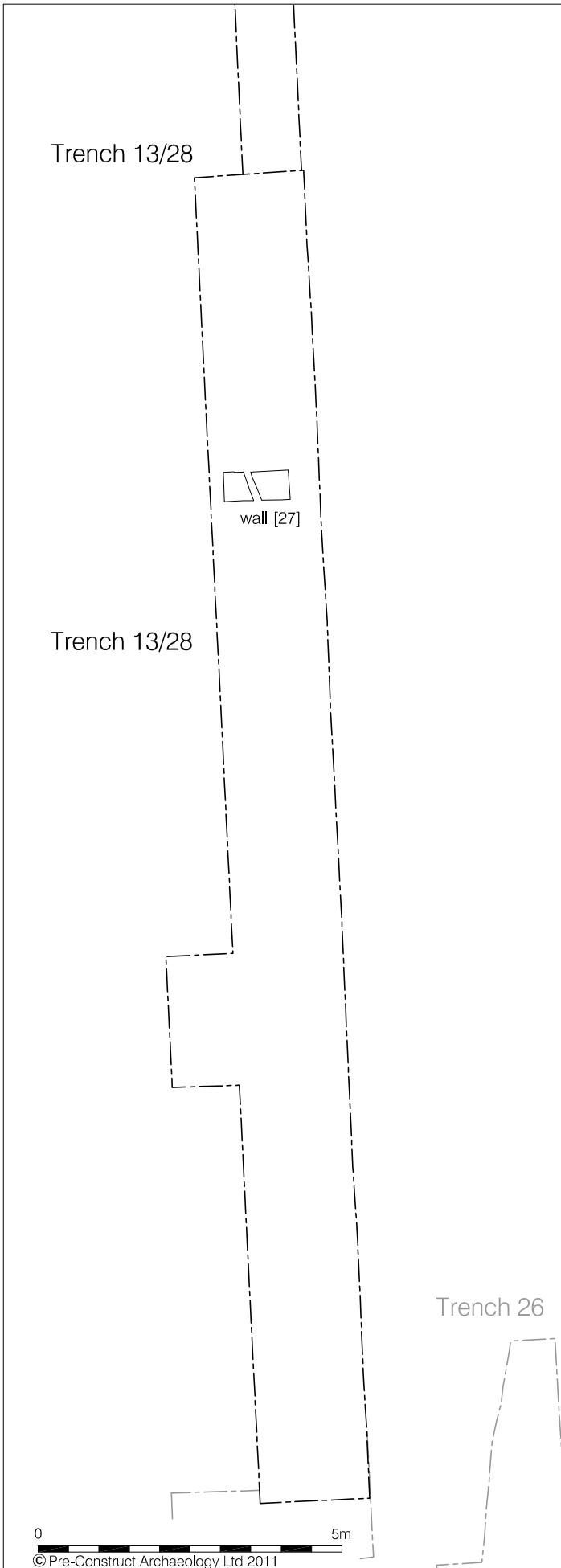
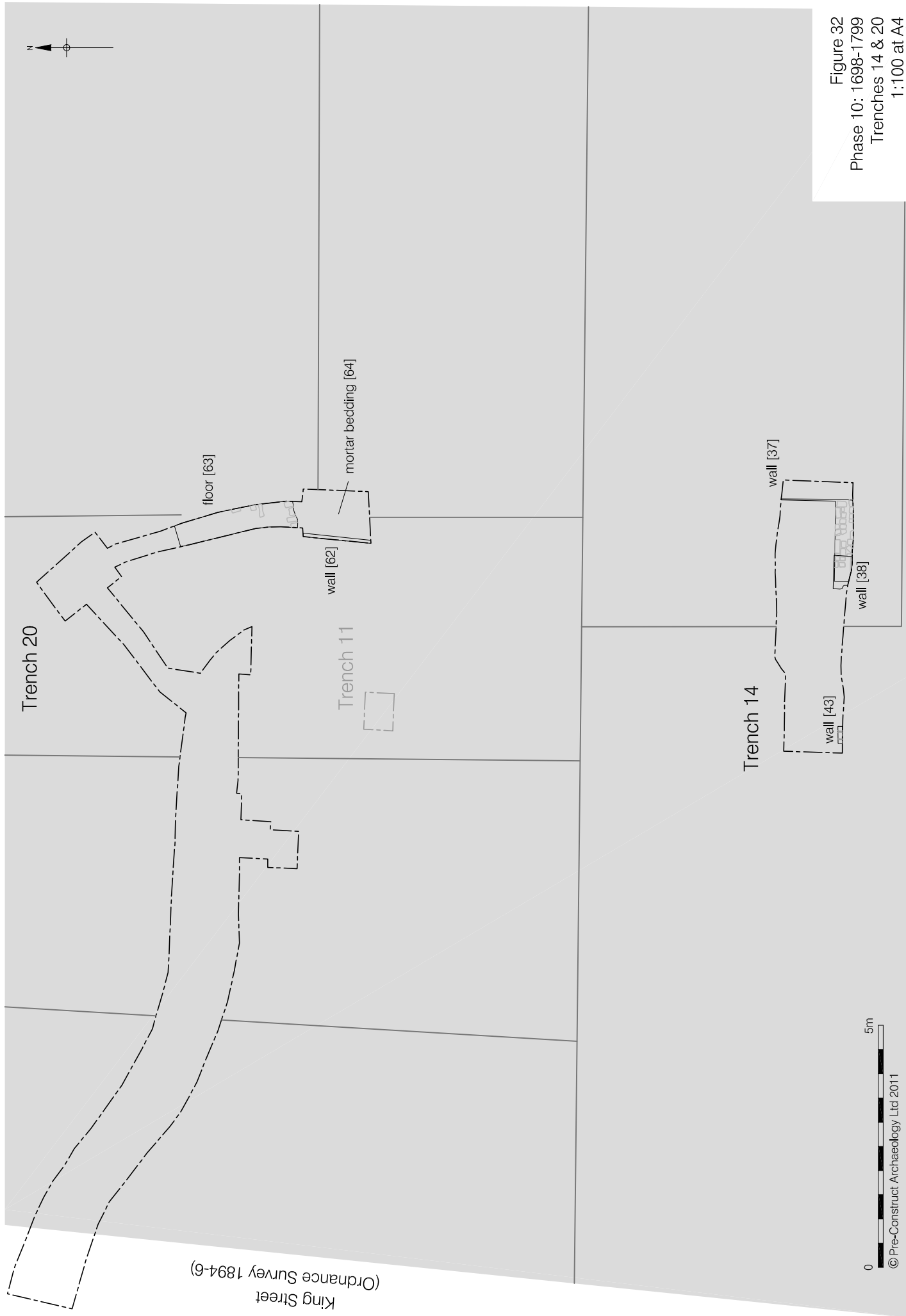


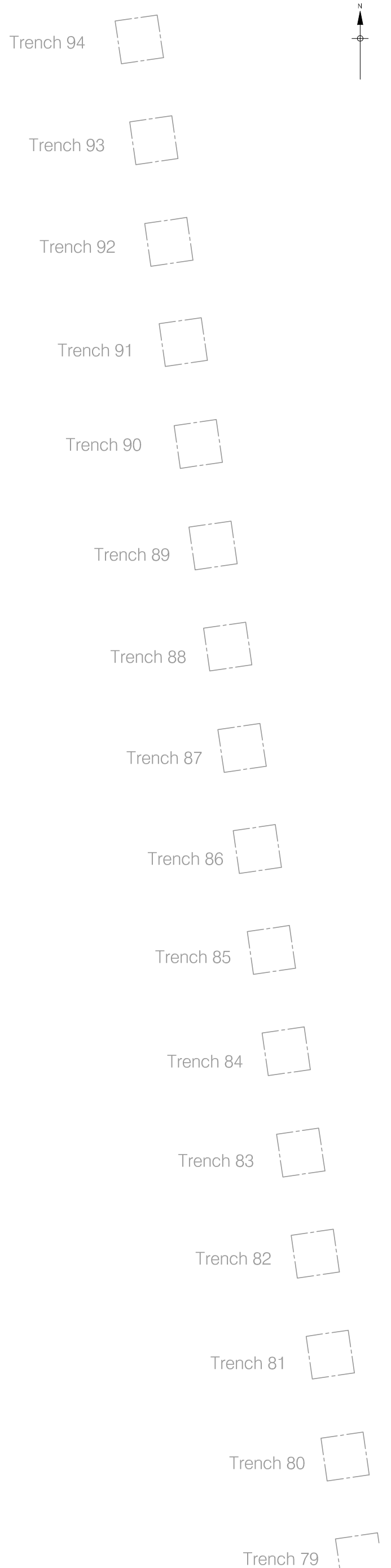
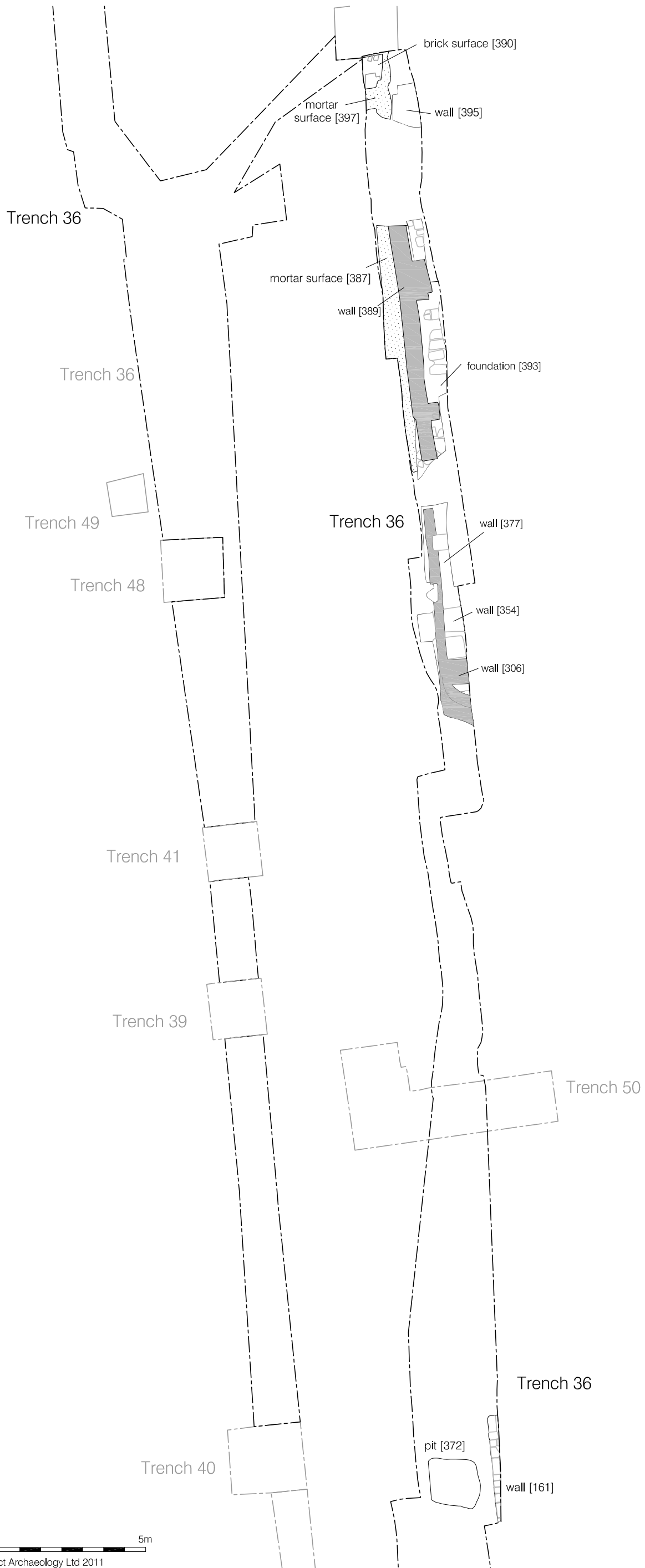
Figure 31  
 Phase 10: 1698-1799  
 Trenches 13/28 & 23  
 1:100 at A4



King Street  
(Ordnance Survey 1894-6)

Figure 32  
Phase 10: 1698-1799  
Trenches 14 & 20  
1:100 at A4

0 5m  
© Pre-Construct Archaeology Ltd 2011



0 5m  
© Pre-Construct Archaeology Ltd 2011

Figure 33  
Phase 10: 1698-1799  
Trench 36  
1:100 at A3

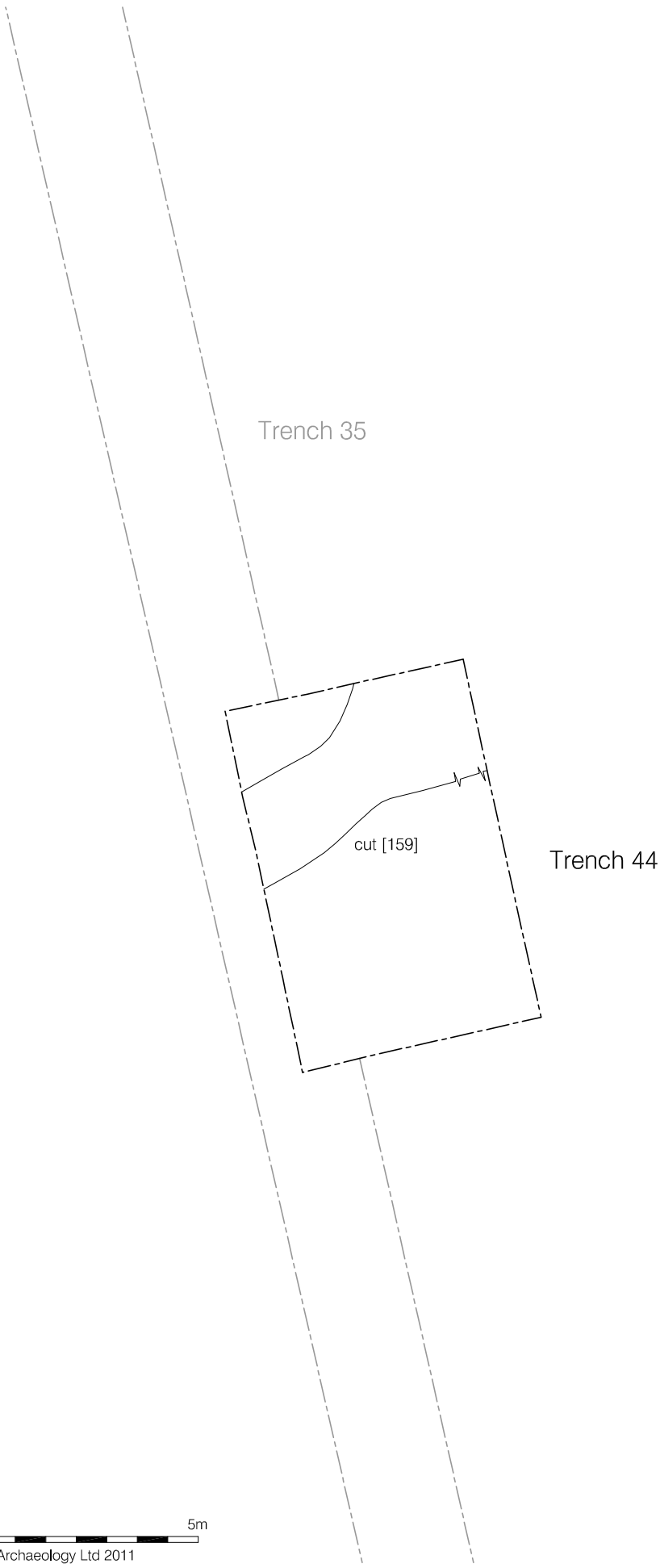


Figure 34  
Phase 10: 1698-1799  
Trench 44  
1:100 at A4

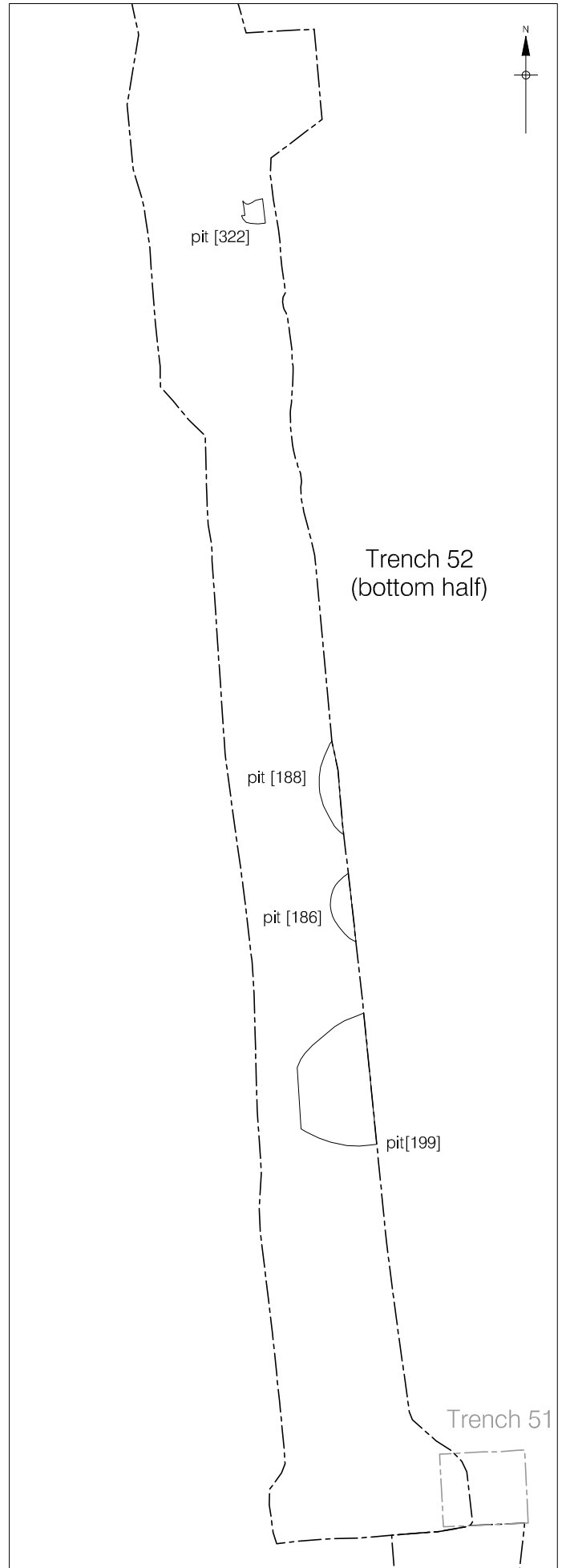
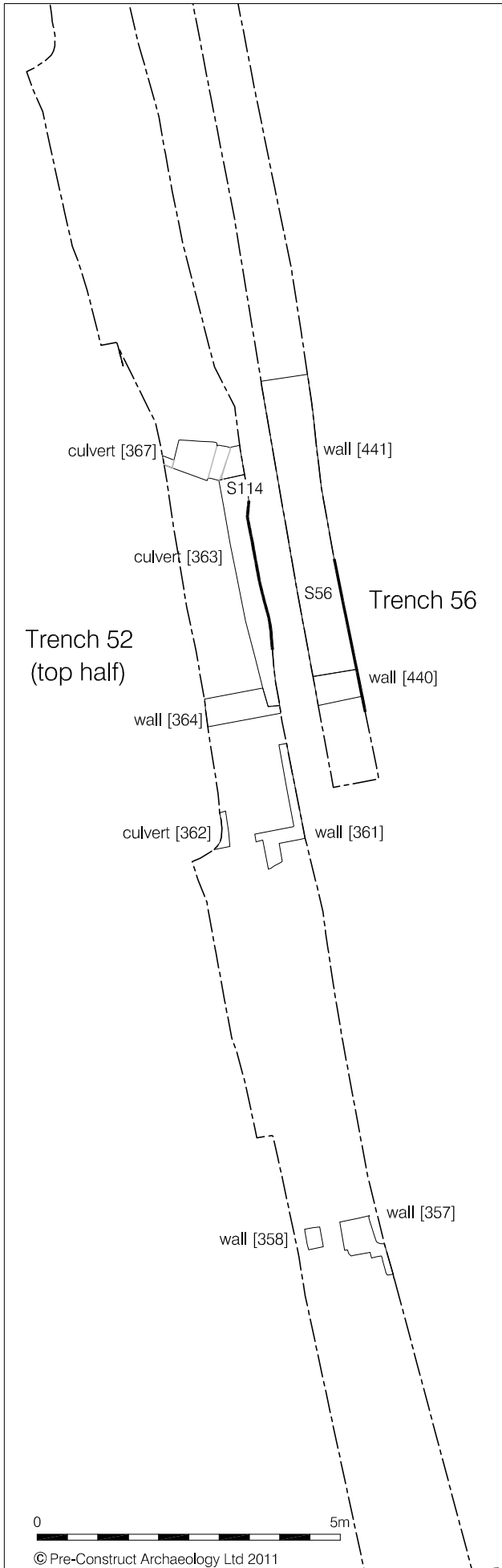


Figure 35  
 Phase 10:1698-1799  
 Trenches 52 & 56  
 1:100 at A4



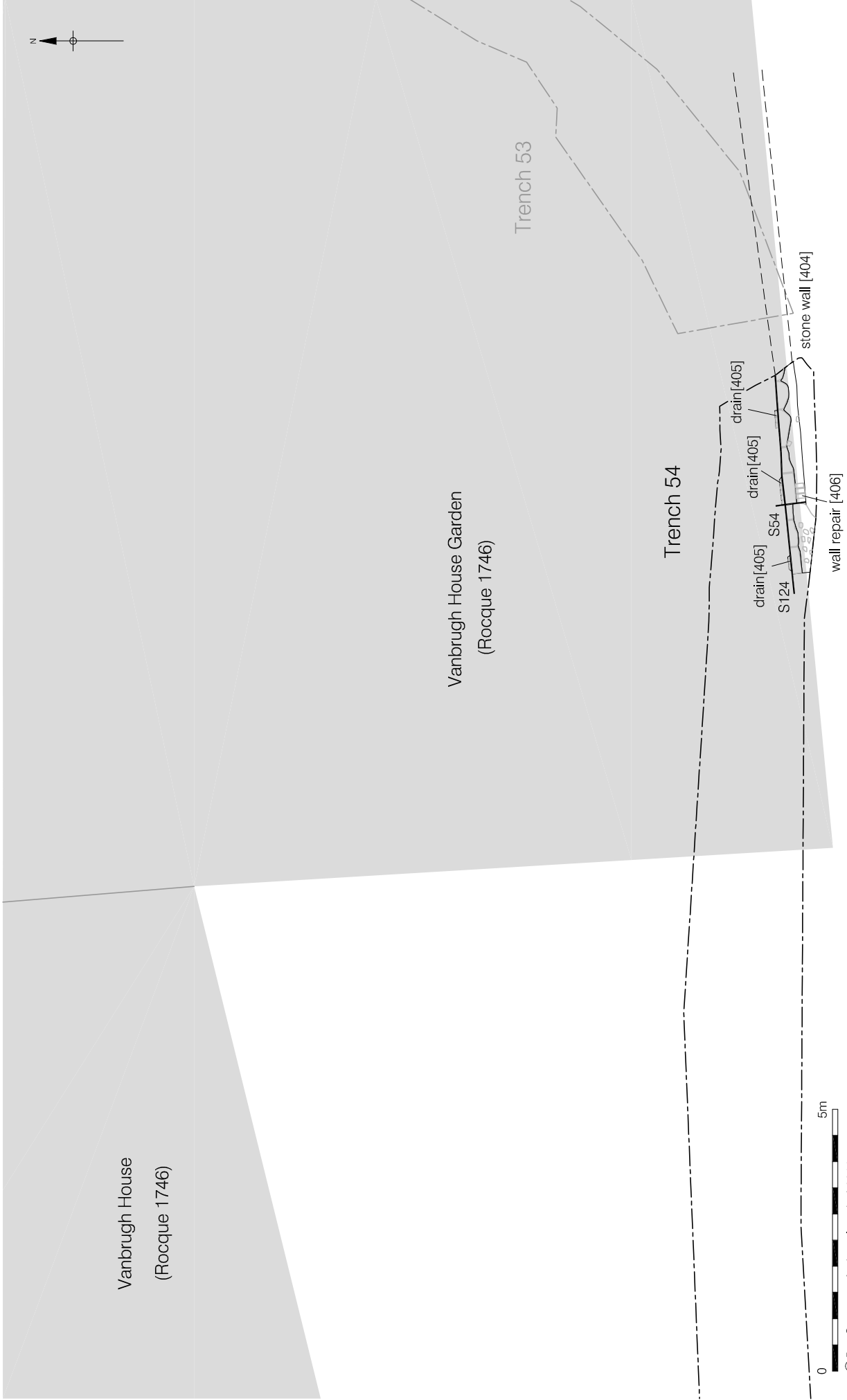
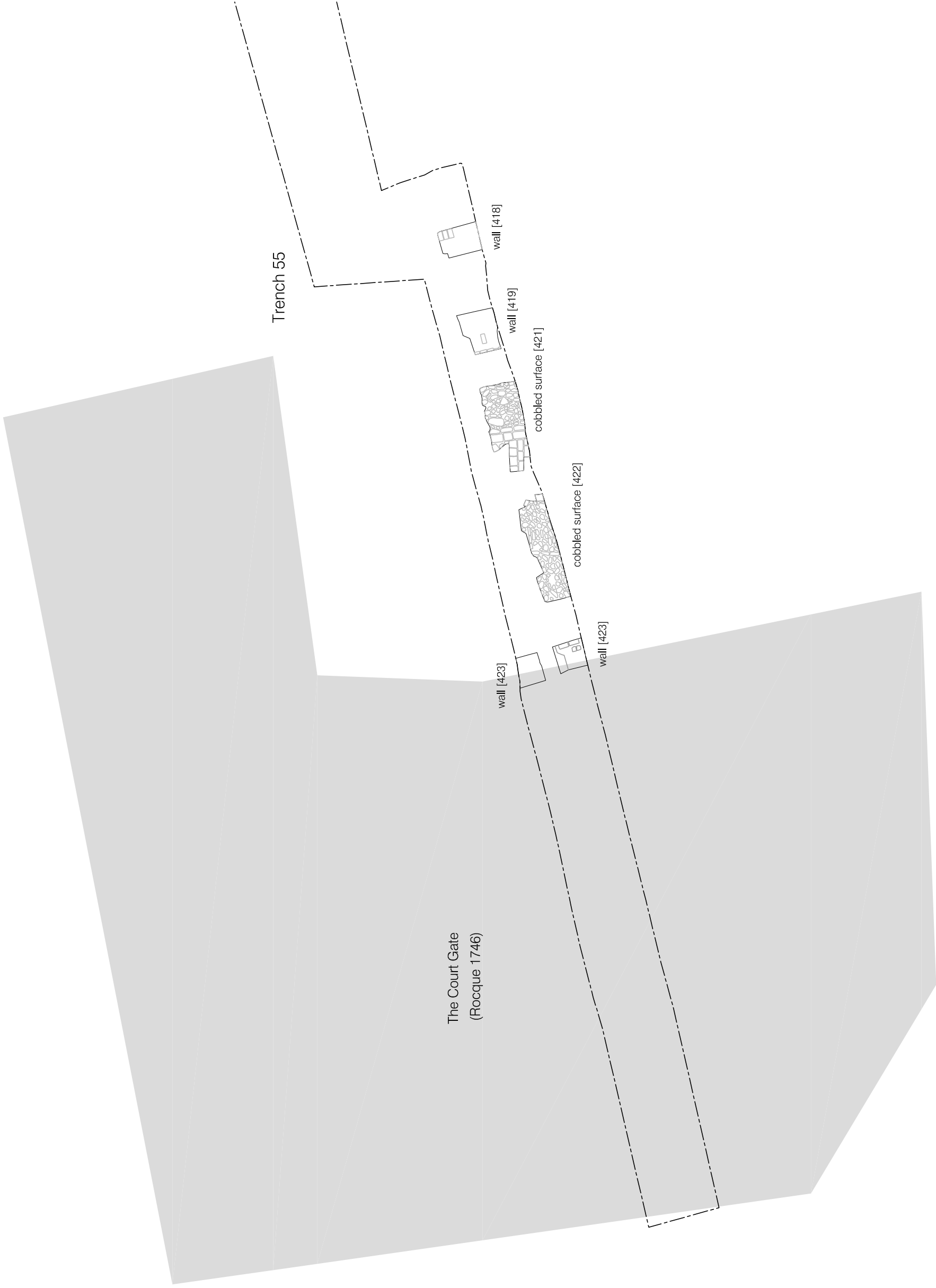


Figure 36  
Phase 10: 1698-1799  
Trench 54  
1:100 at A3



© Pre-Construct Archaeology Ltd 2011

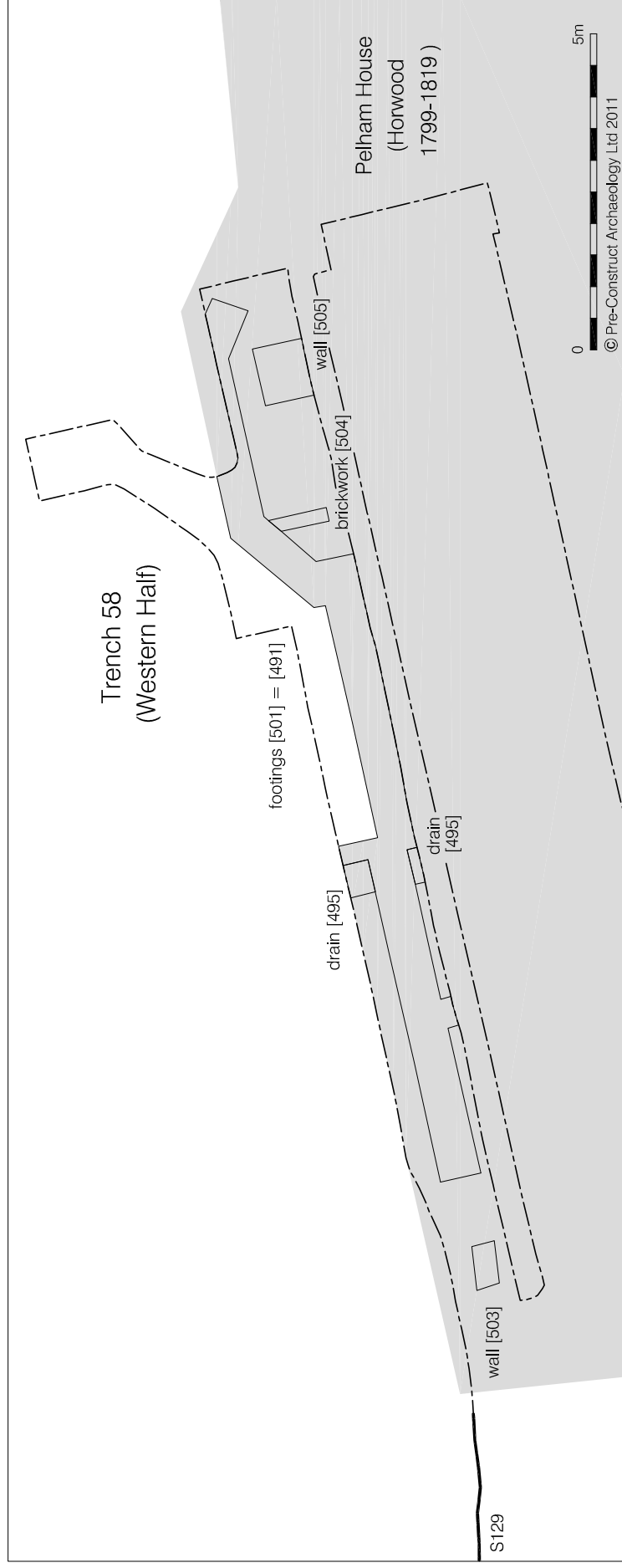
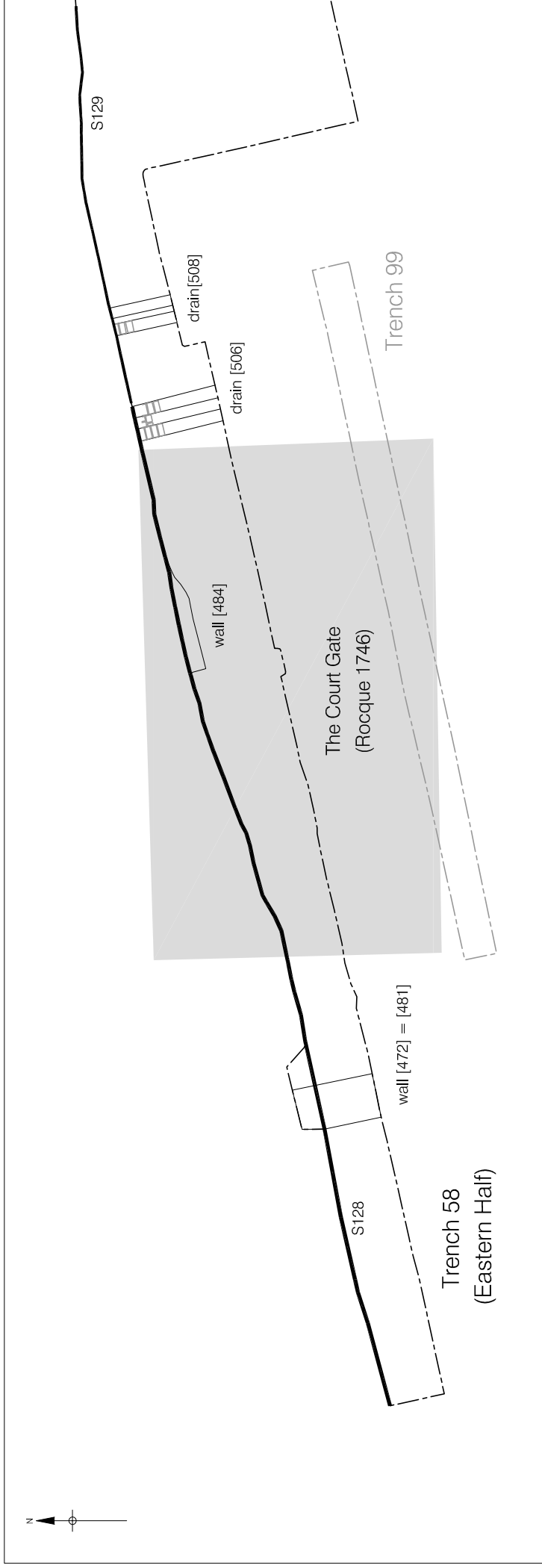
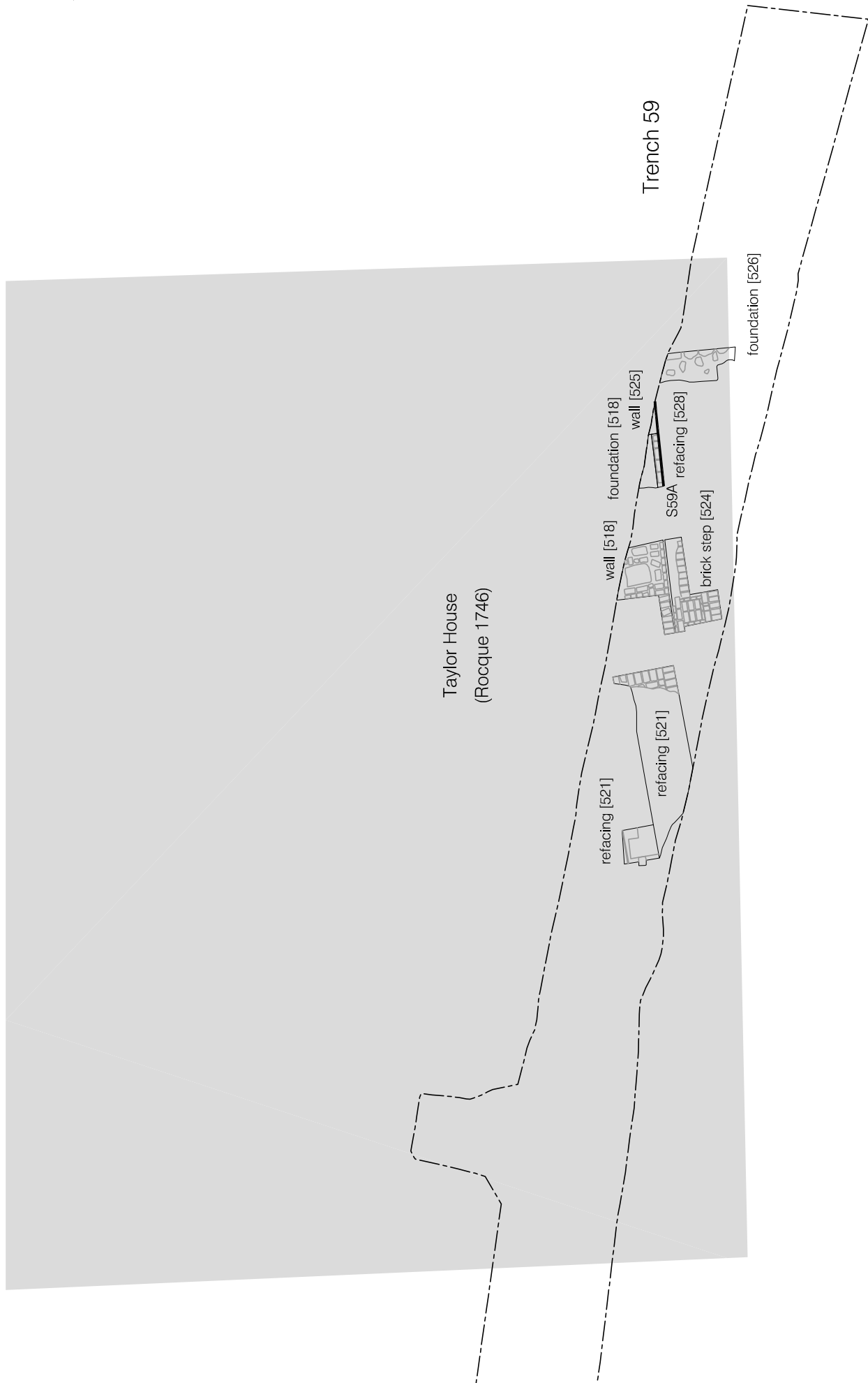
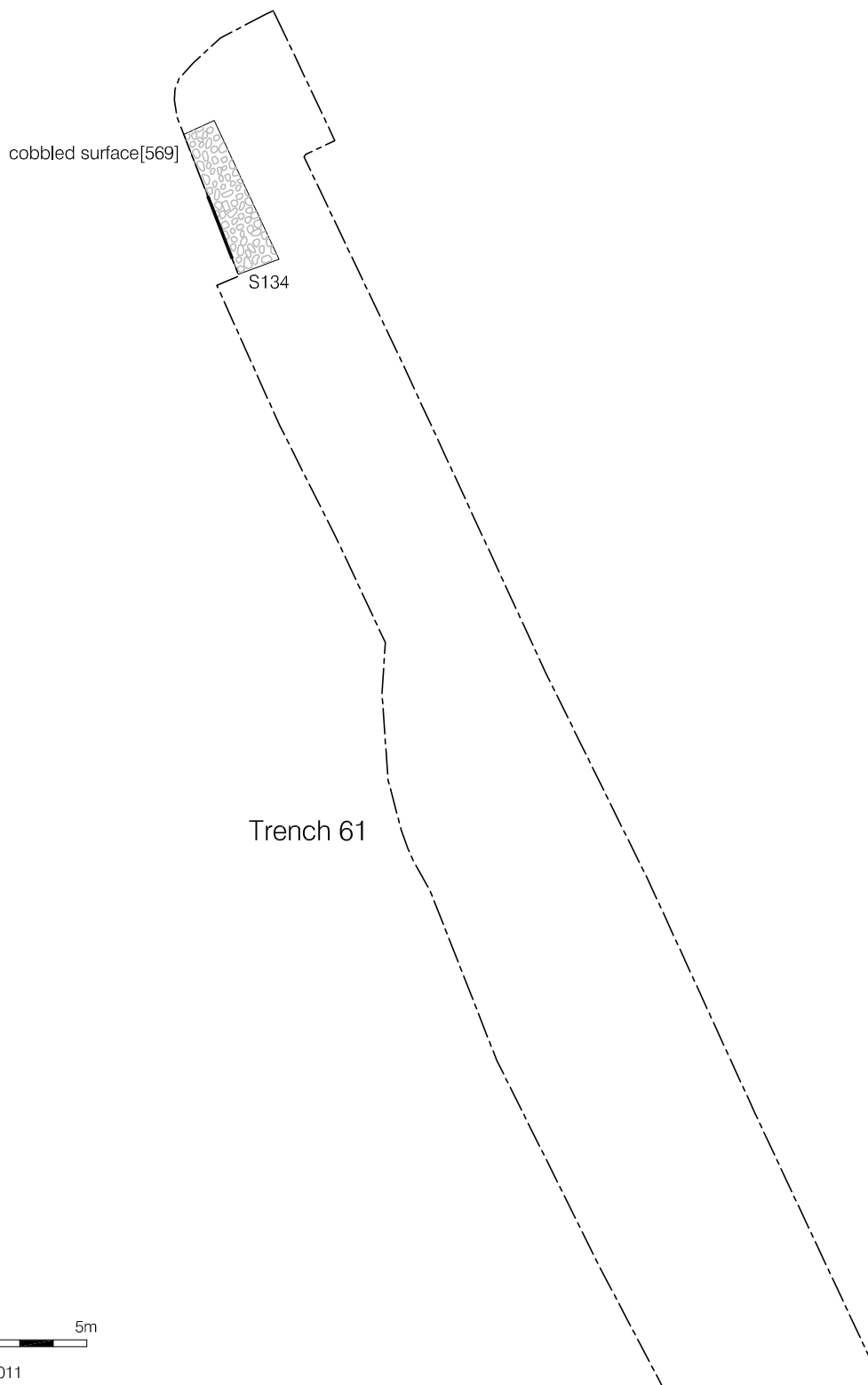


Figure 38  
Phase 10: 1698-1799  
Trench 58  
1:100 at A3



© Pre-Construct Archaeology Ltd 2011

Figure 39  
Phase 10: 1698-1799  
Trench 59  
1:100 at A4



© Pre-Construct Archaeology Ltd 2011

Figure 40  
Phase 10: 1698-1799  
Trench 61  
1:100 at A4

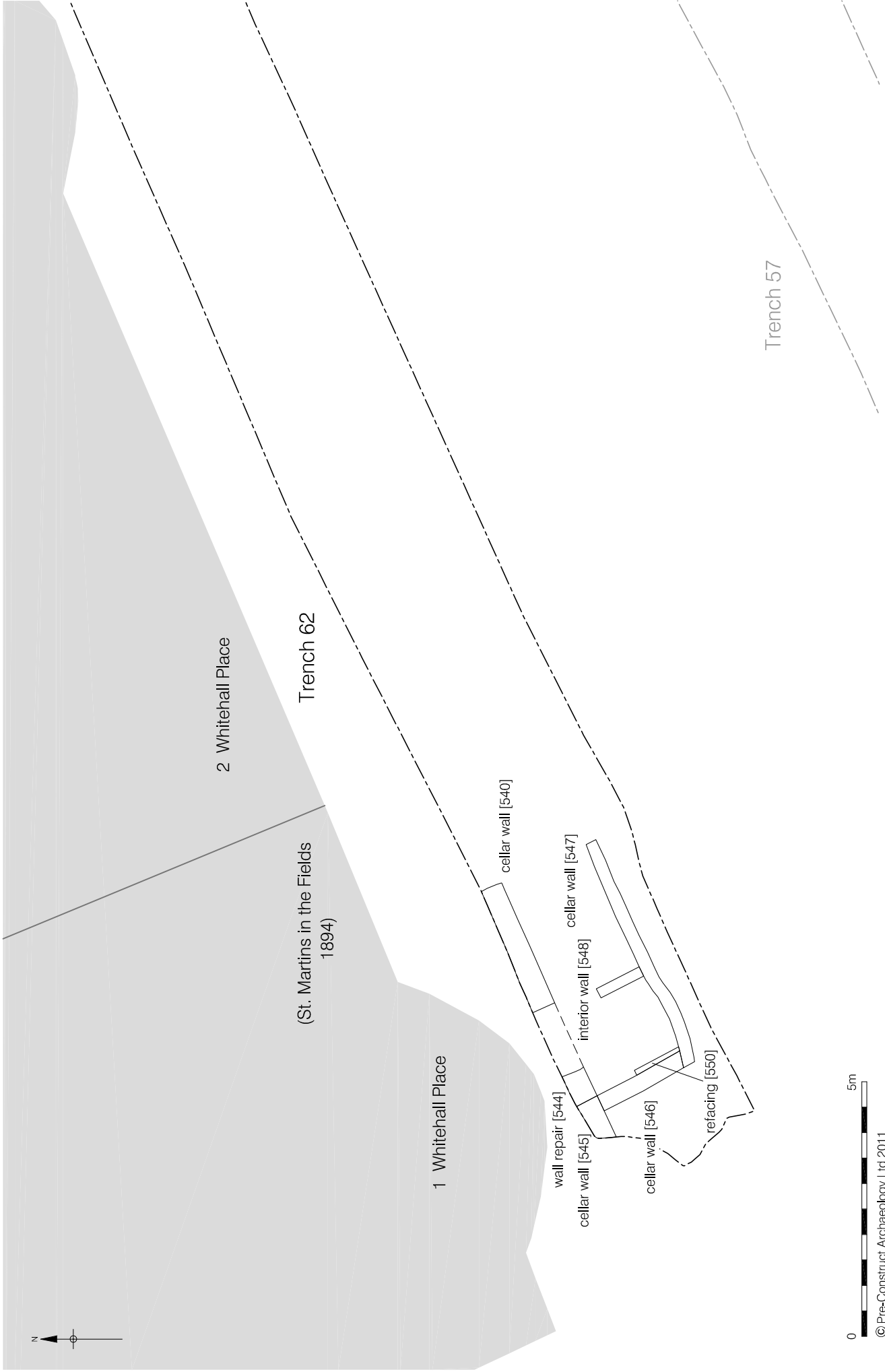


Figure 41  
 Phase 10: 1698-1799  
 Trench 62  
 1:100 at A4

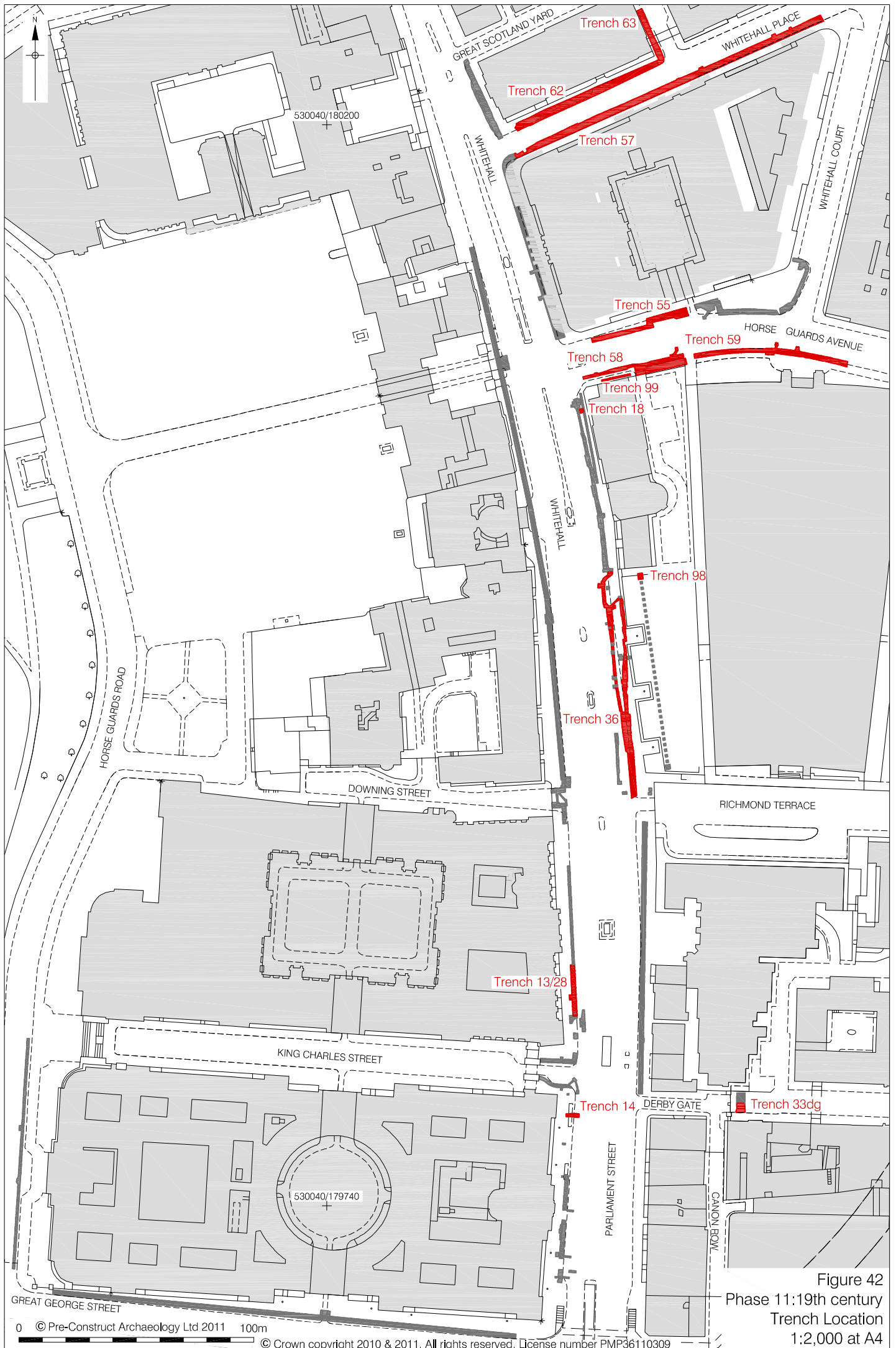


Figure 42  
 Phase 11:19th century  
 Trench Location  
 1:2,000 at A4

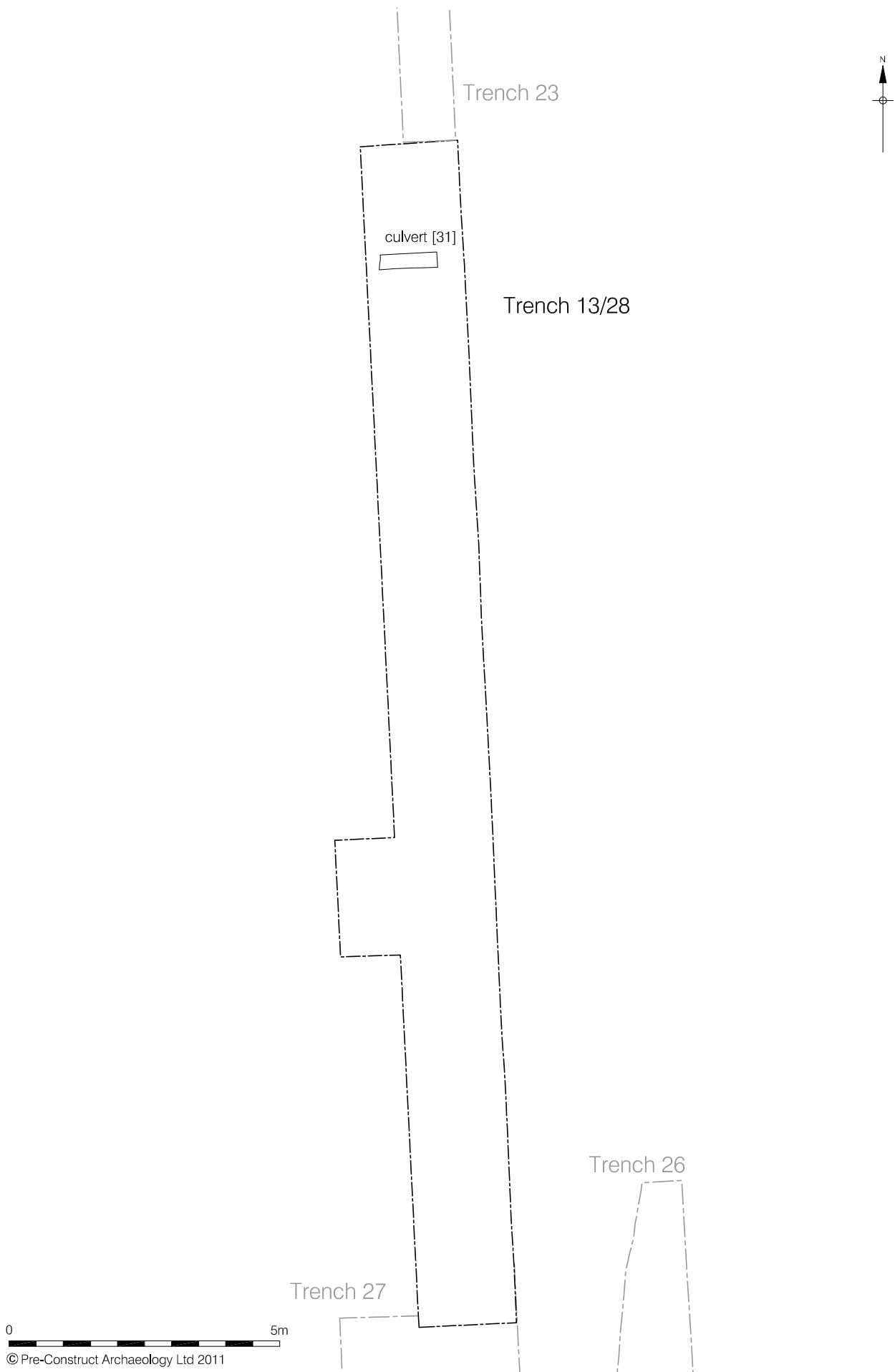
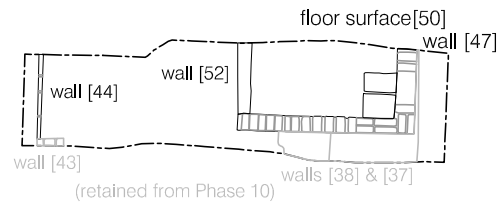


Figure 43  
Phase 11:19th century  
Trench 13/18  
1:100 at A4



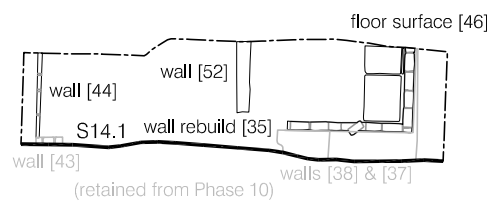


### Trench 14



Earlier

### Trench 14



Later



© Pre-Construct Archaeology Ltd 2011

Figure 44  
Phase 11: 19th century  
Trench 14  
1:100 at A4

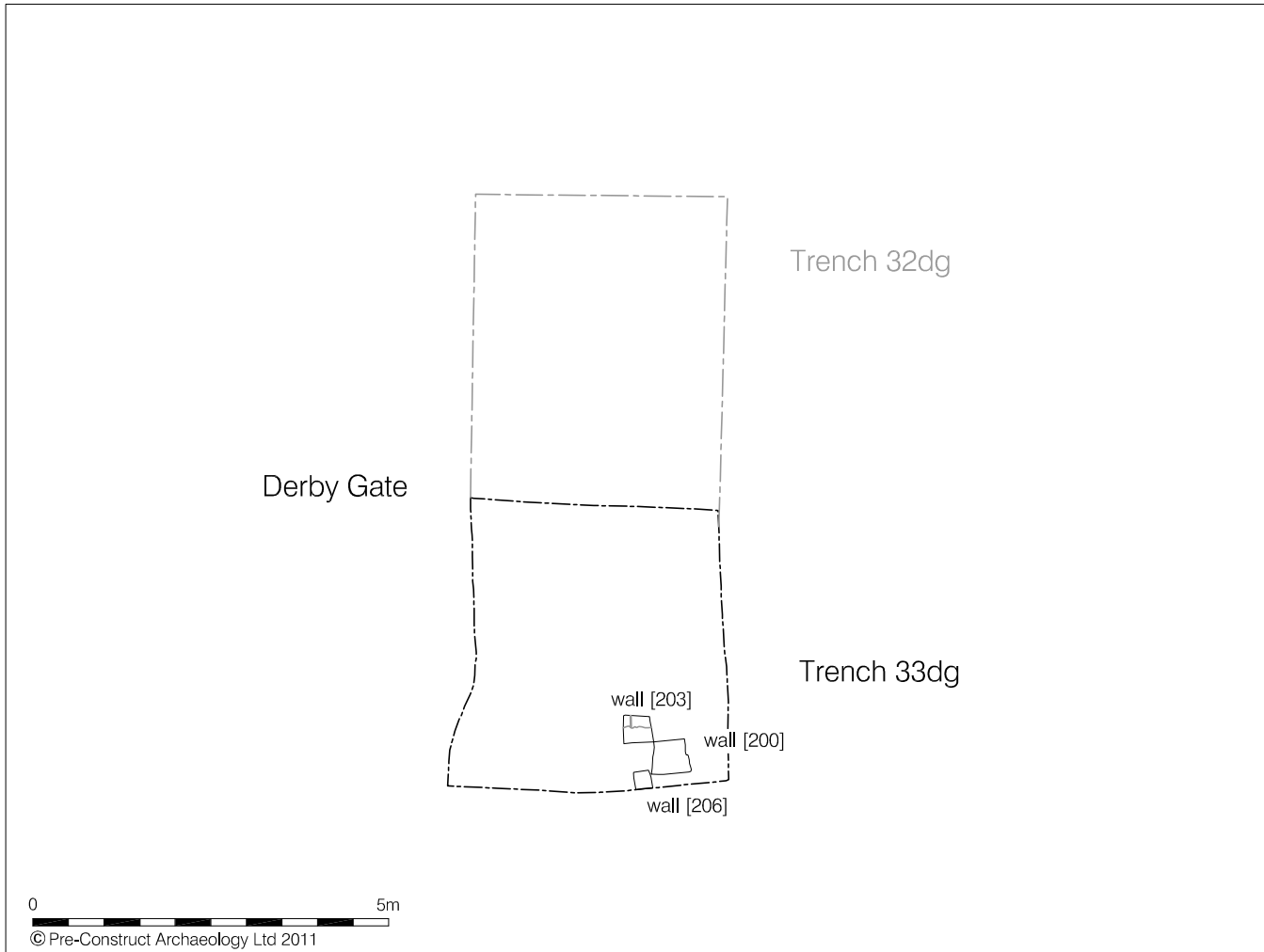
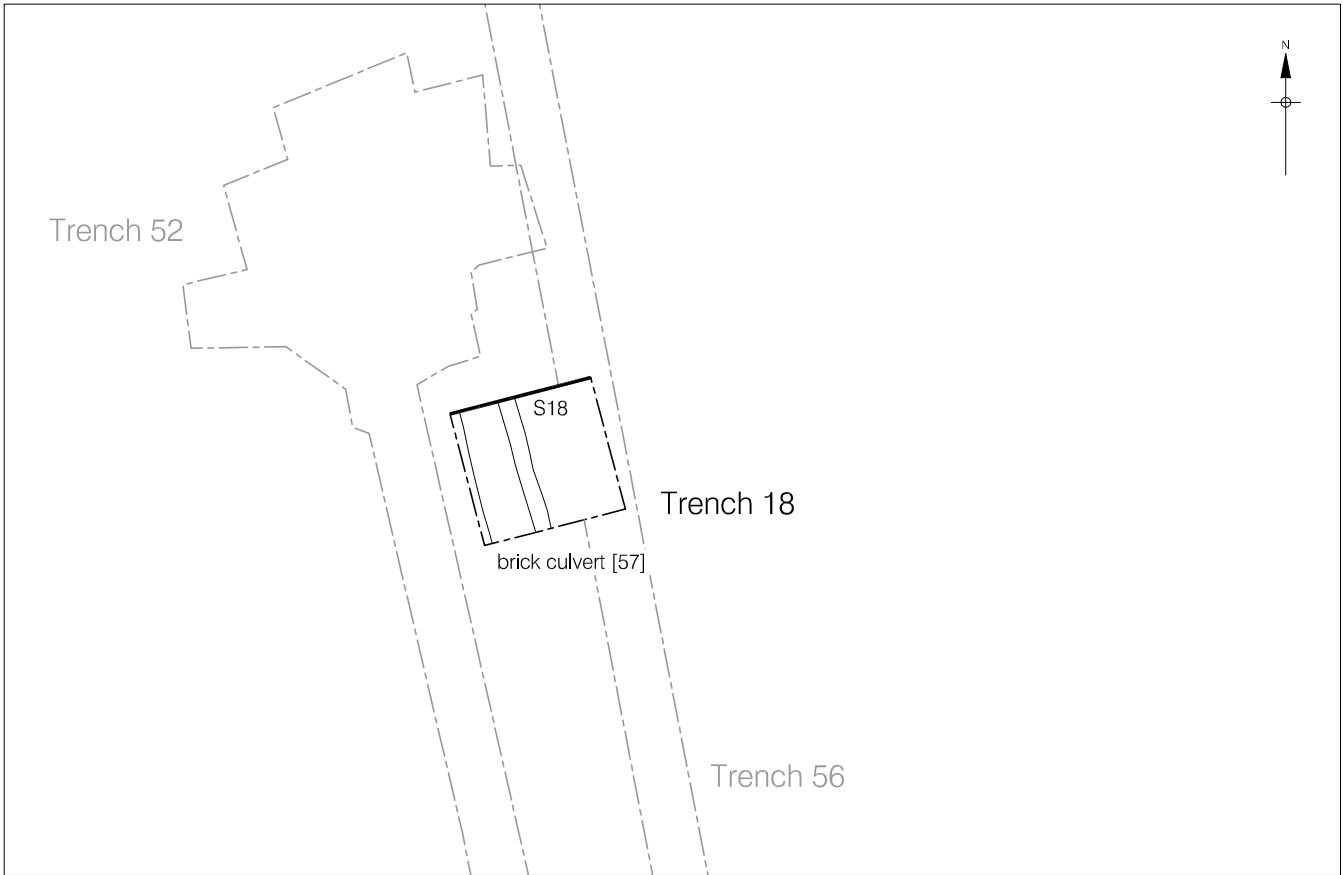


Figure 45  
 Phase 11: 19th century  
 Trenches 18 & 33dg  
 1:100 at A4

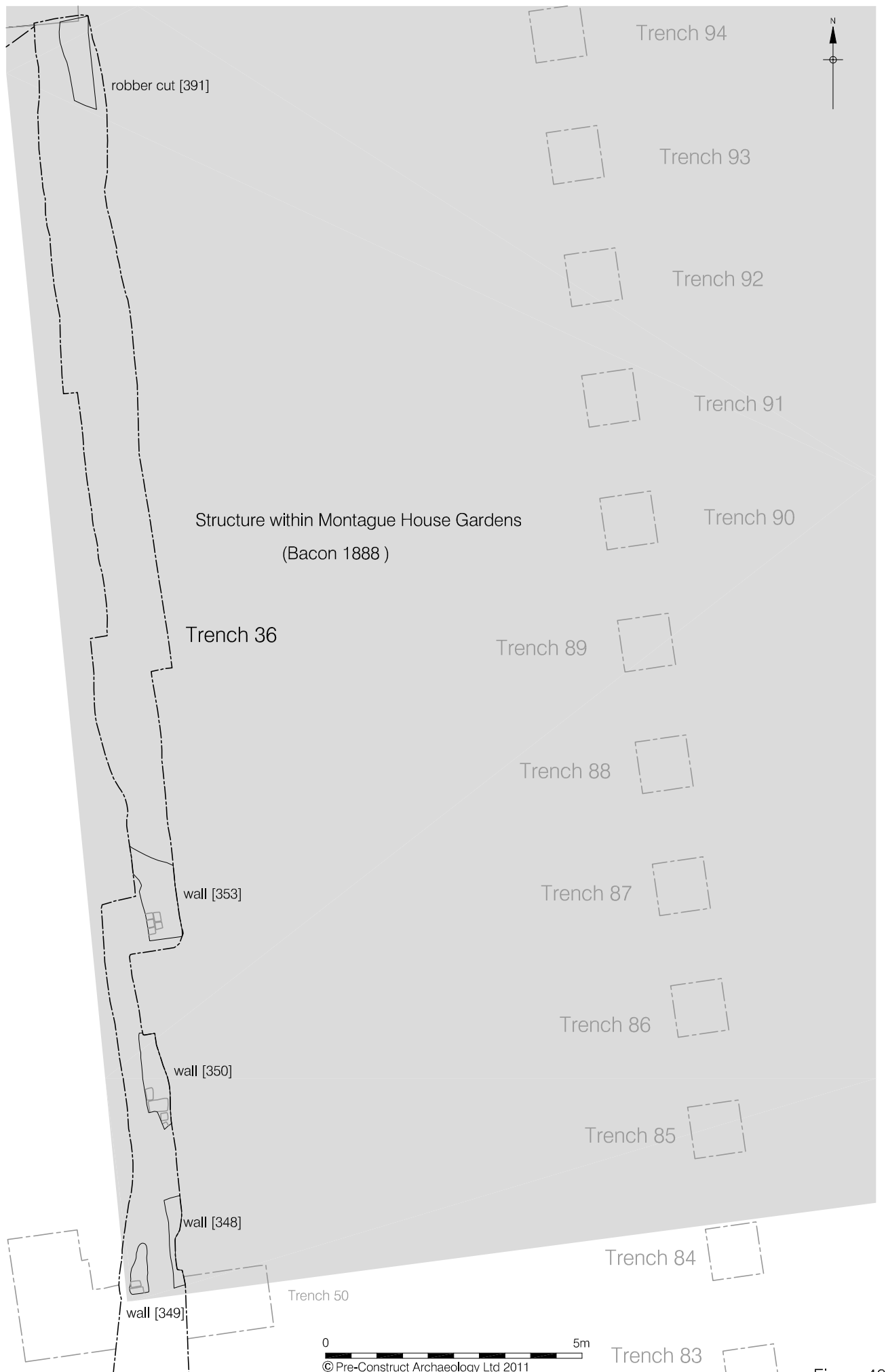
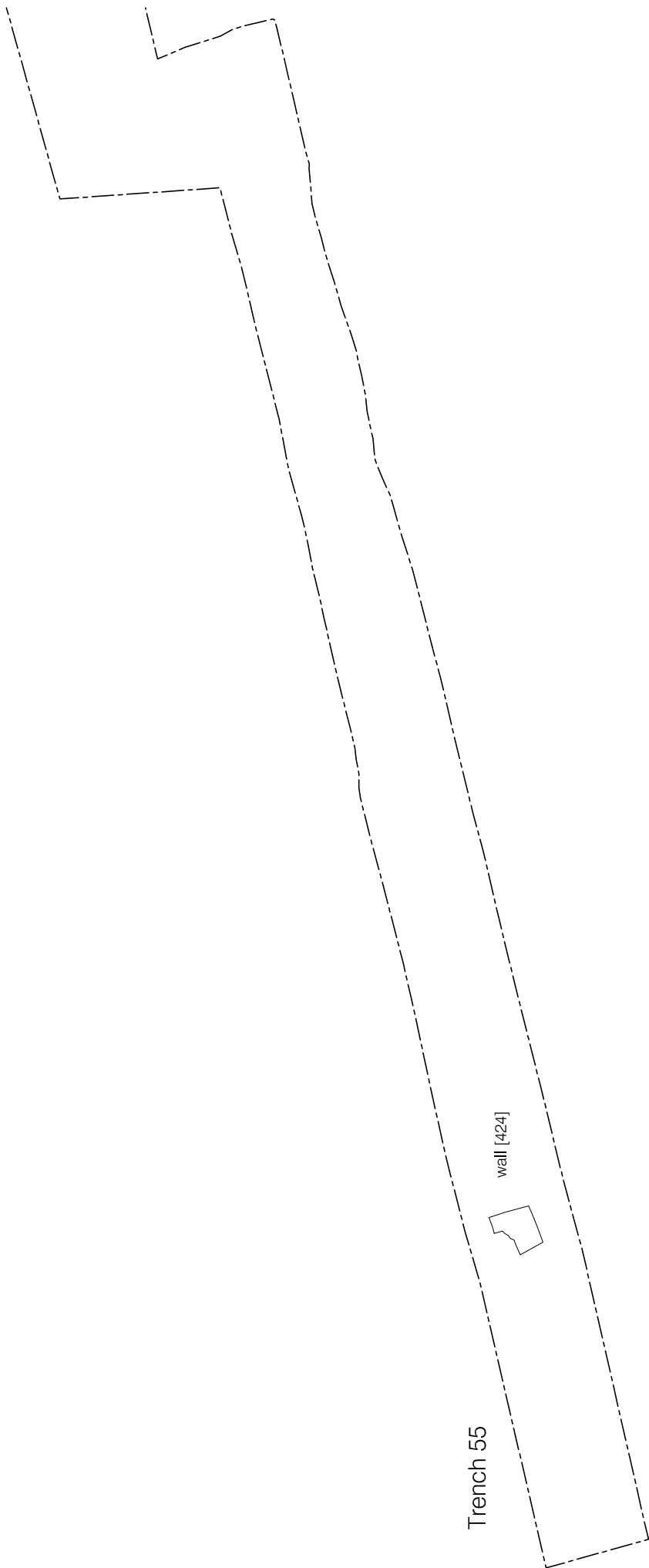
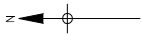


Figure 46  
Phase 11: 19th century  
Trench 36  
1:100 at A3



Trench 55

wall [424]



© Pre-Construct Archaeology Ltd 2011

Figure 47  
Phase 11: 19th century  
Trench 55  
1:100 at A4

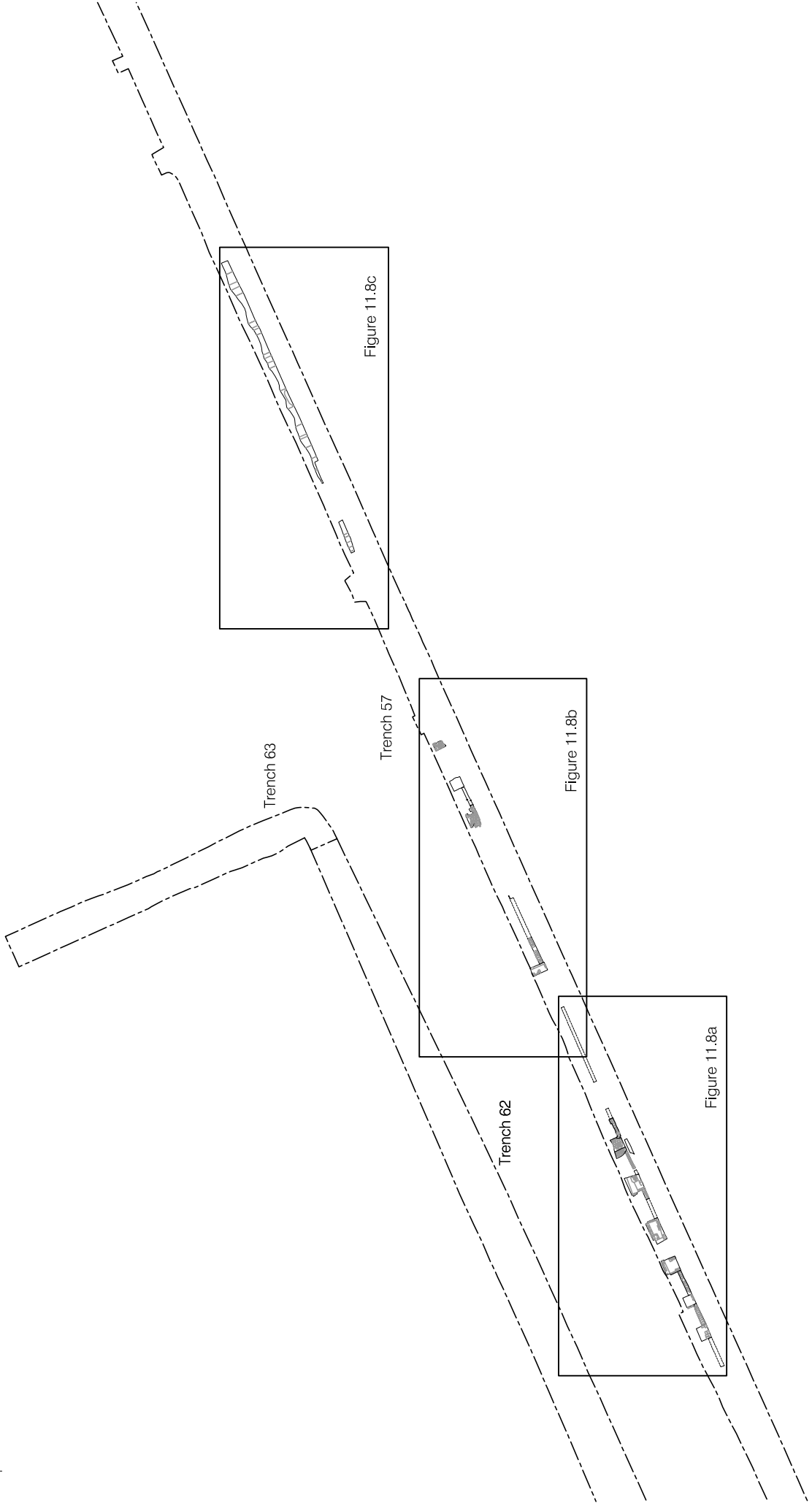


Figure 11.8c

Trench 57

Figure 11.8b

Trench 63

Figure 11.8a

Trench 62

0 20m

© Pre-Construct Archaeology Ltd 2011

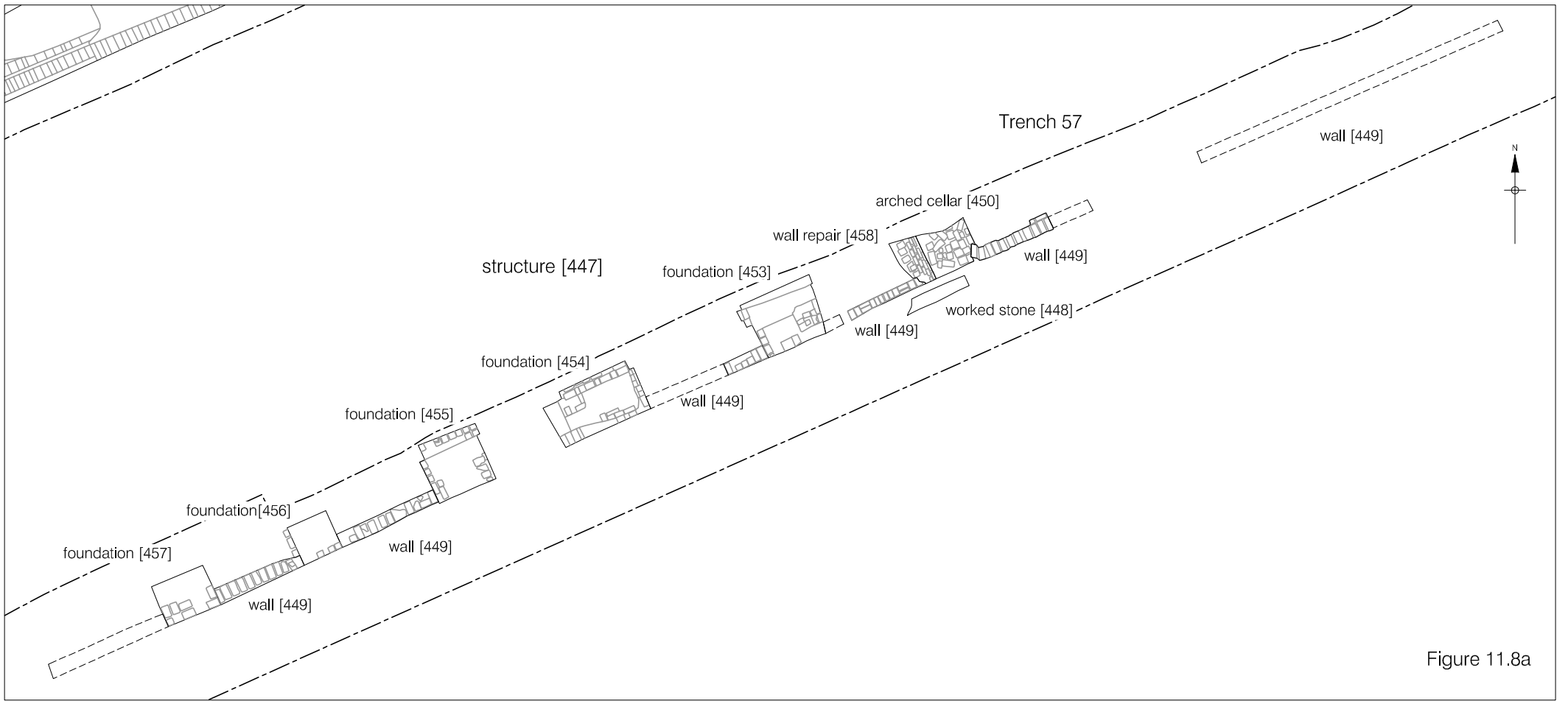


Figure 11.8a

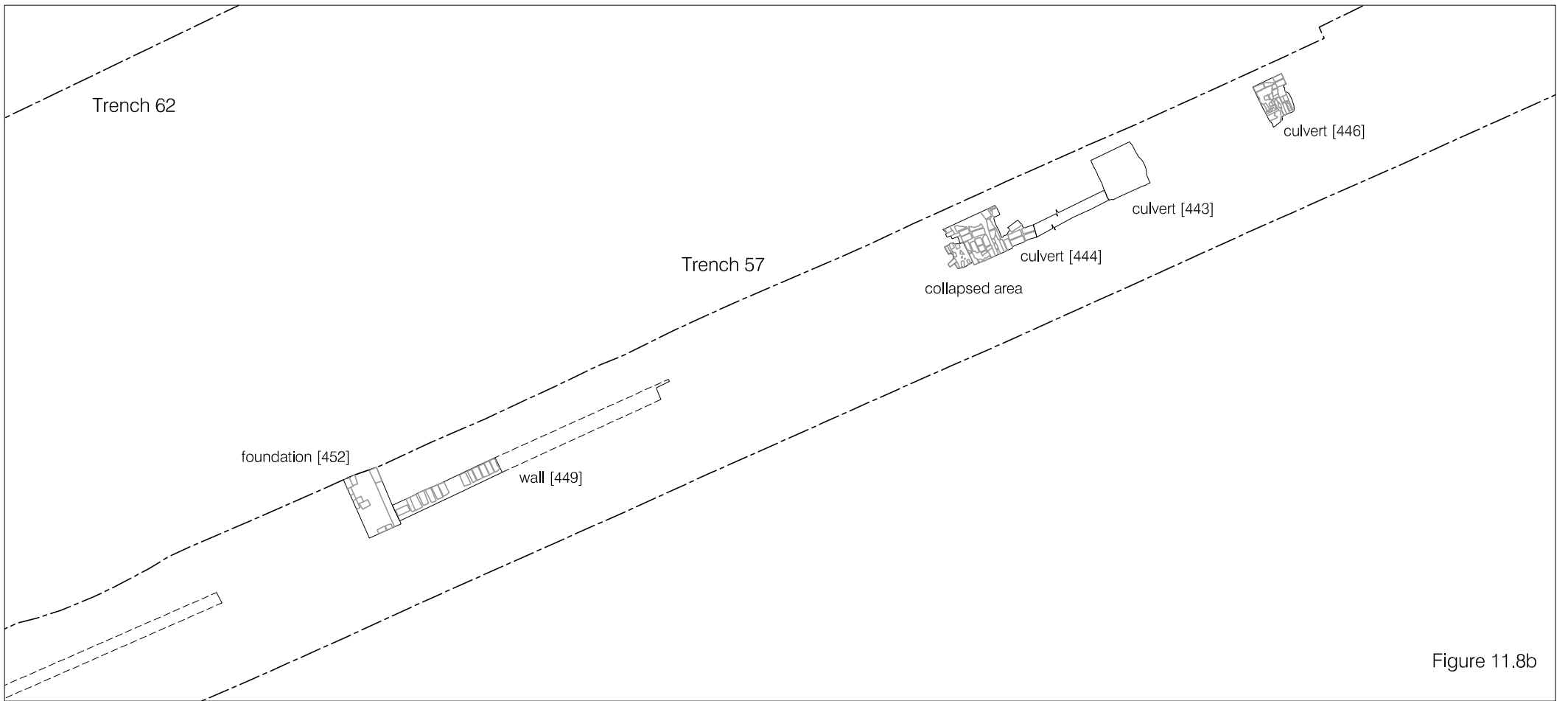


Figure 11.8b

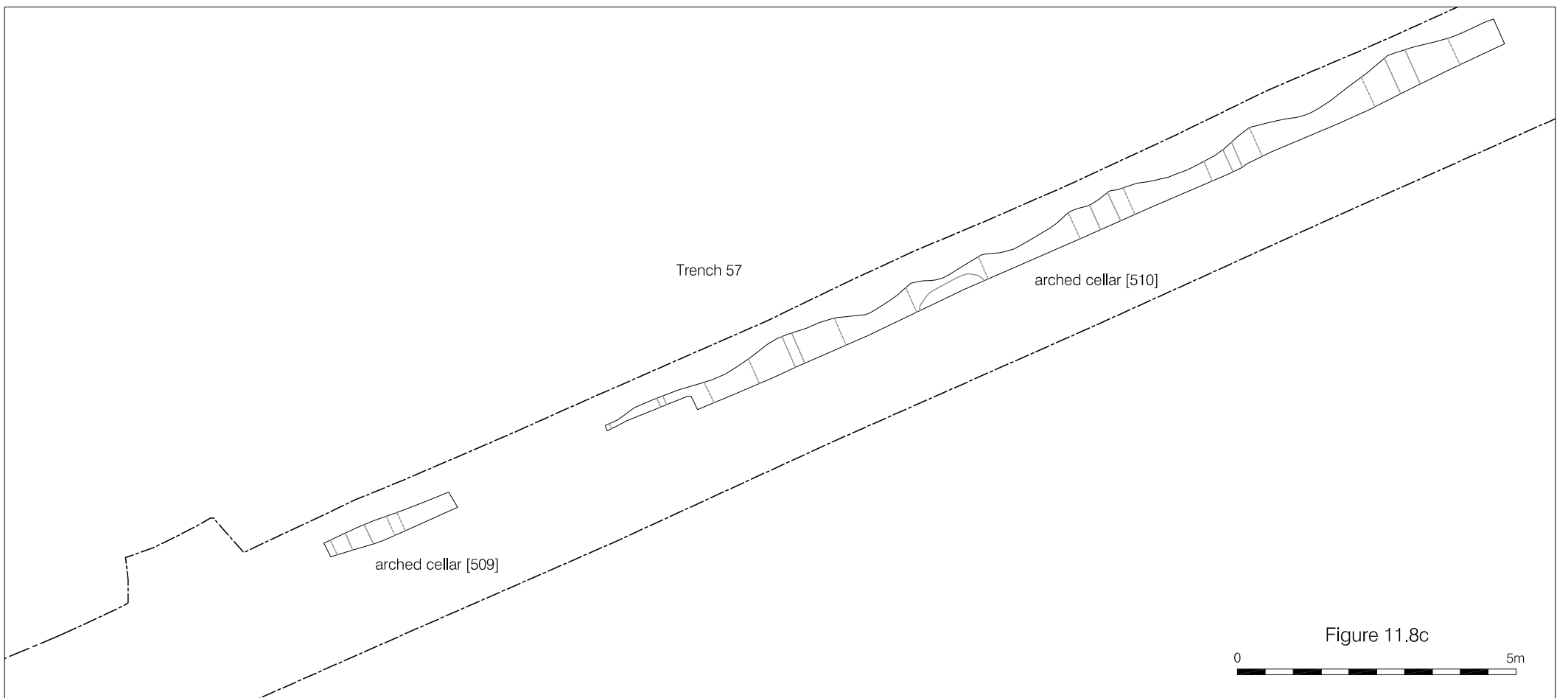


Figure 11.8c

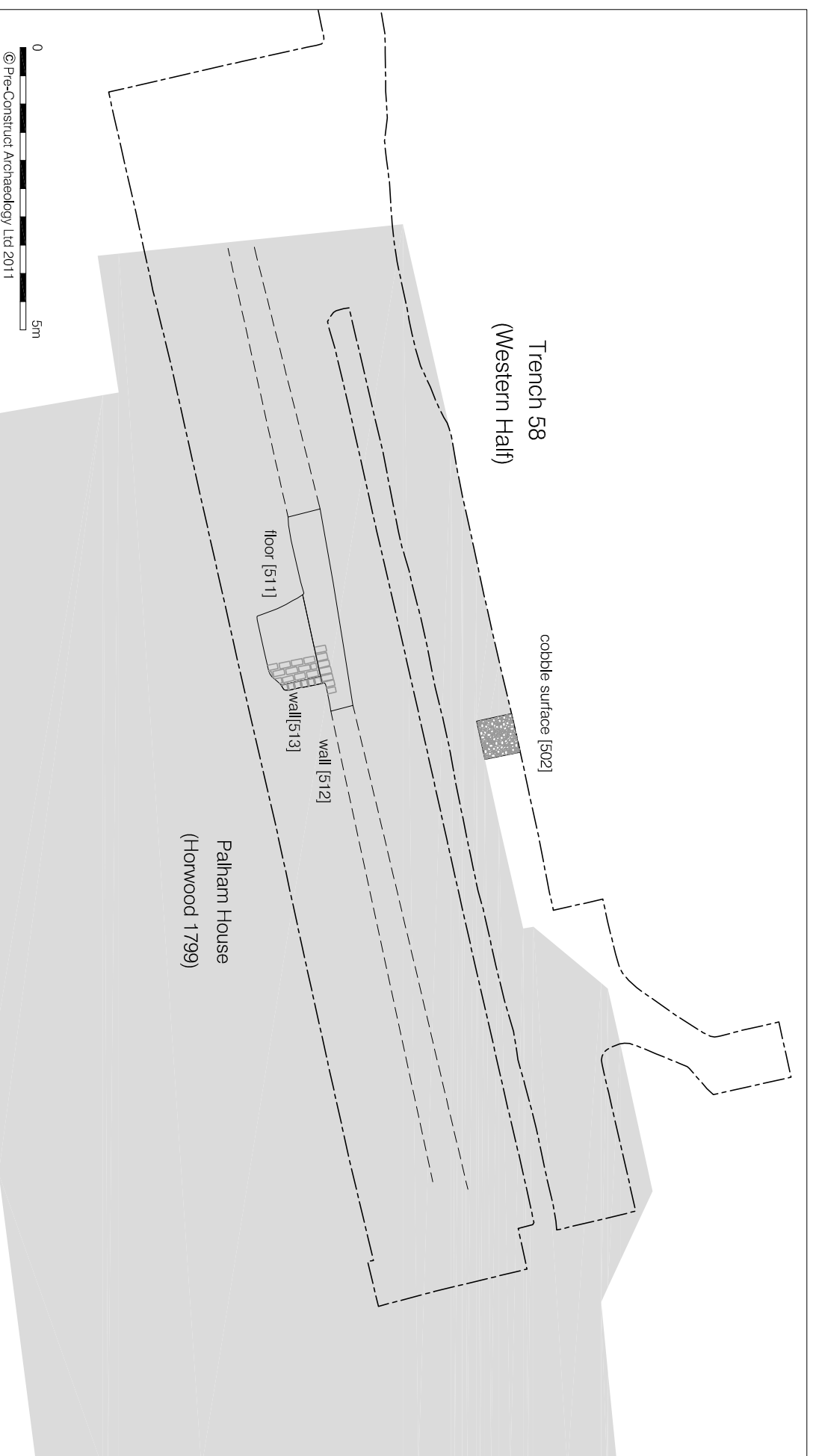
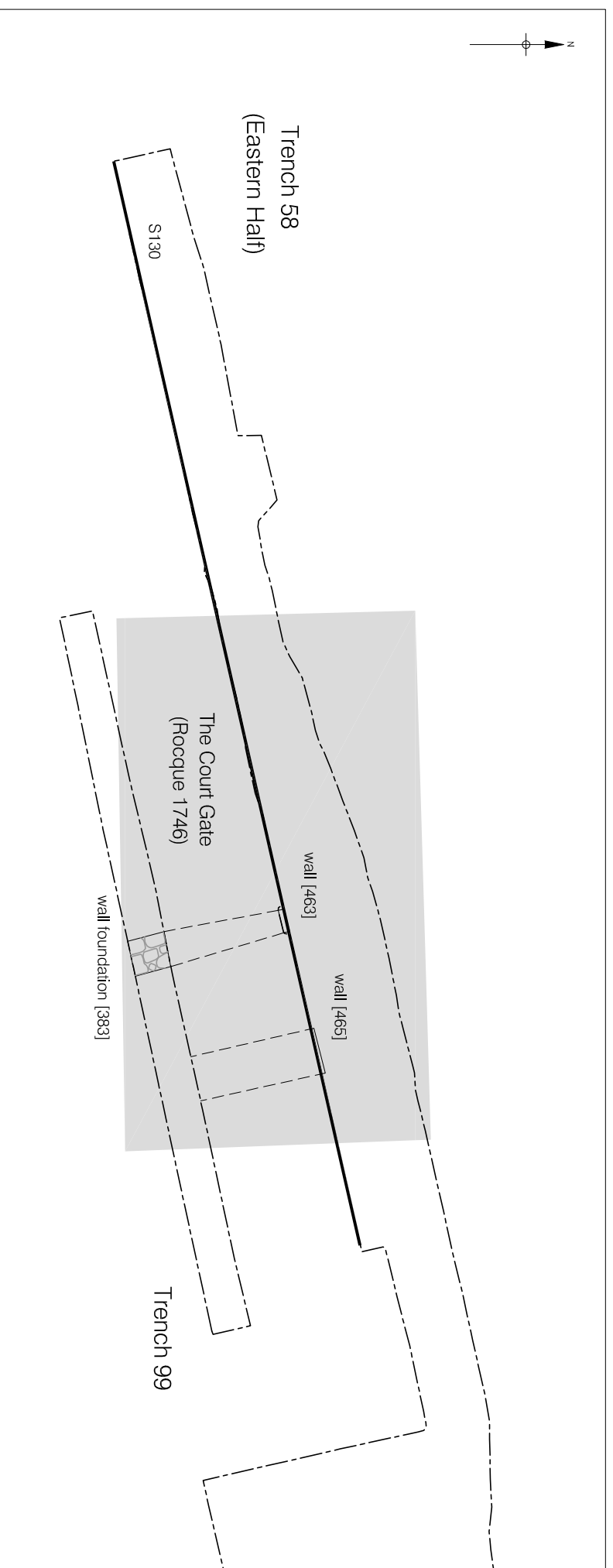


Figure 50  
Phase 11: 19th century  
Trenches 58 & 99  
1:100 at A3

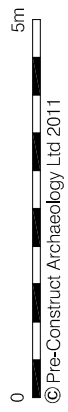
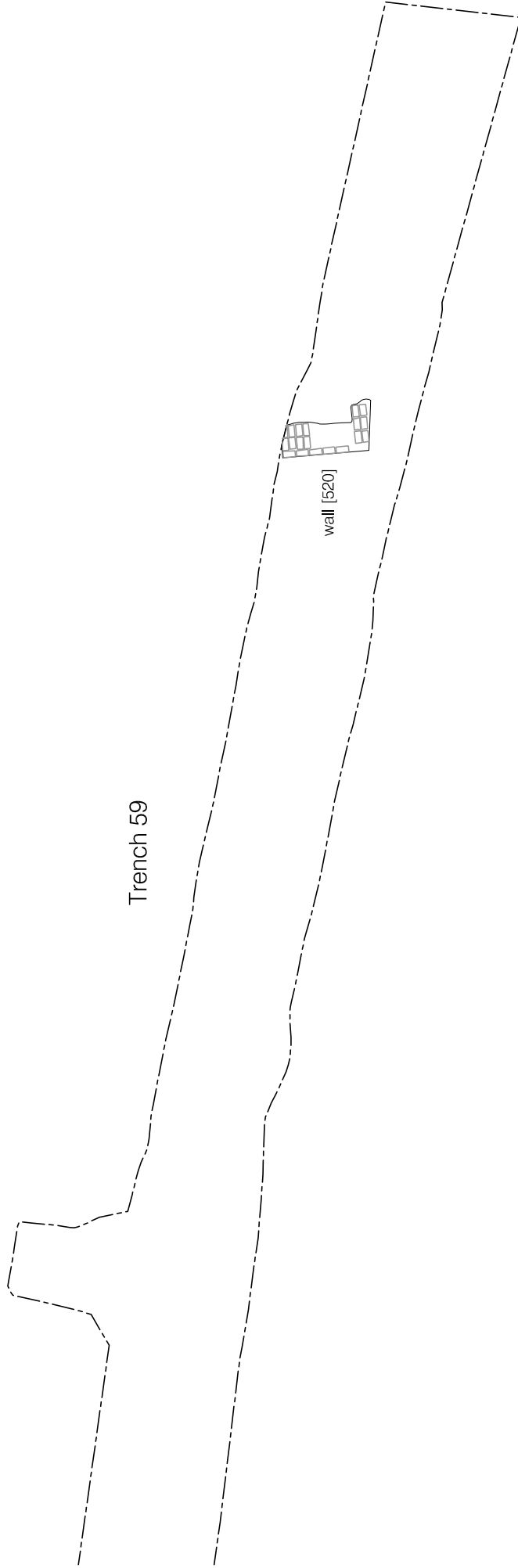


Figure 51  
Phase 11: 19th century  
Trench 59  
1:100 at A4



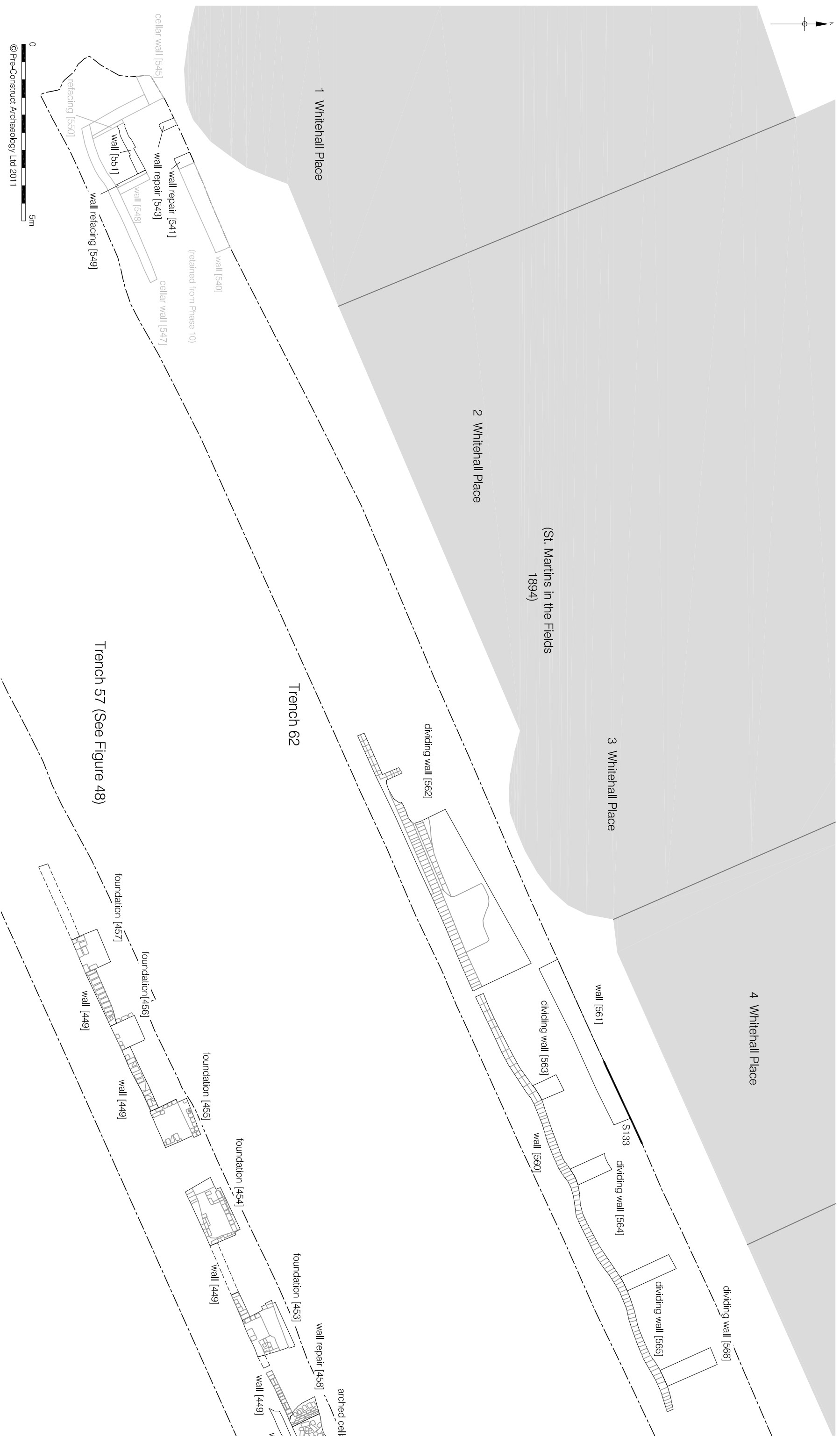
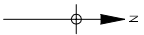


Figure 52  
Phase 11: 19th century  
Trench 62  
1:100 at A3

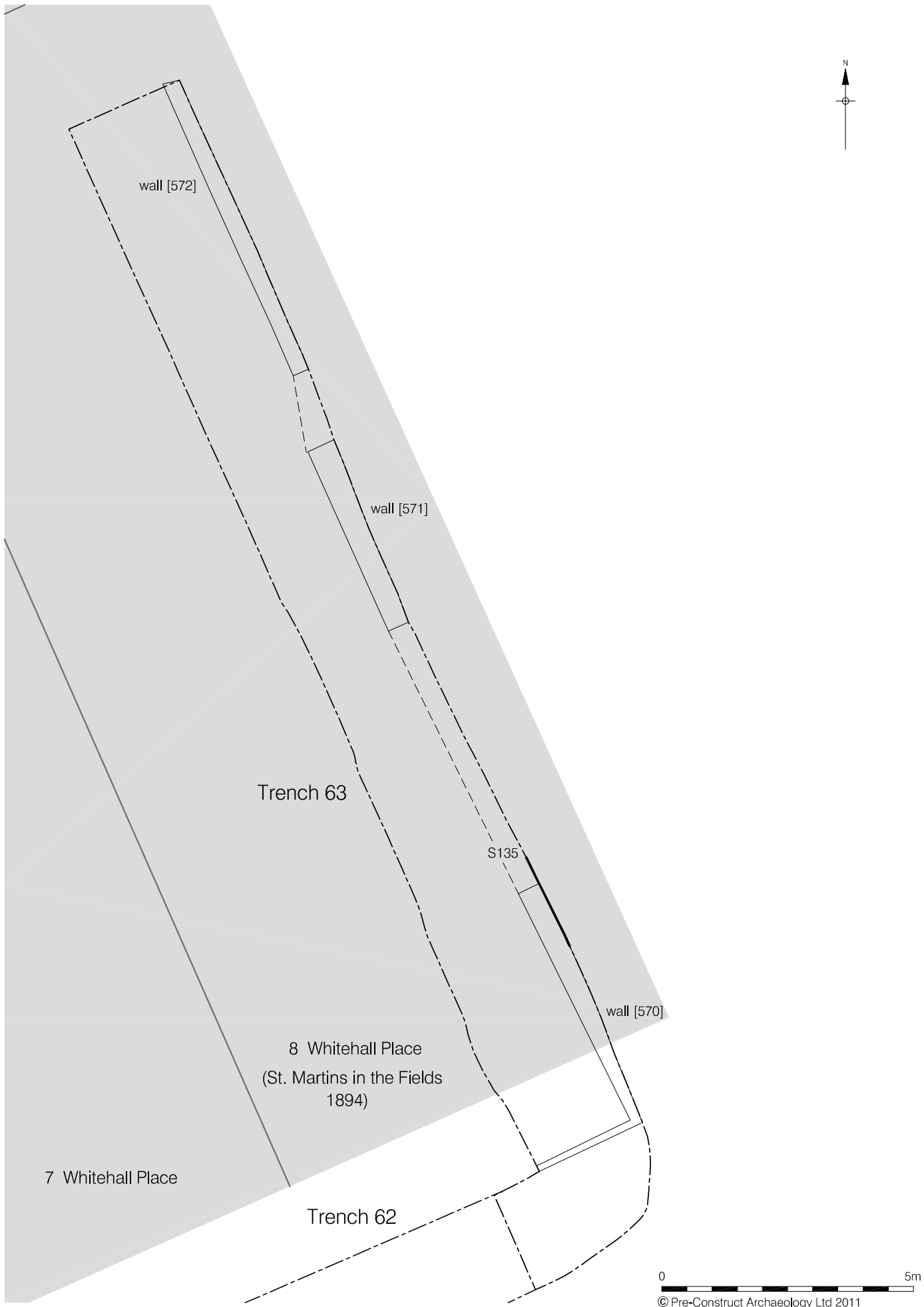
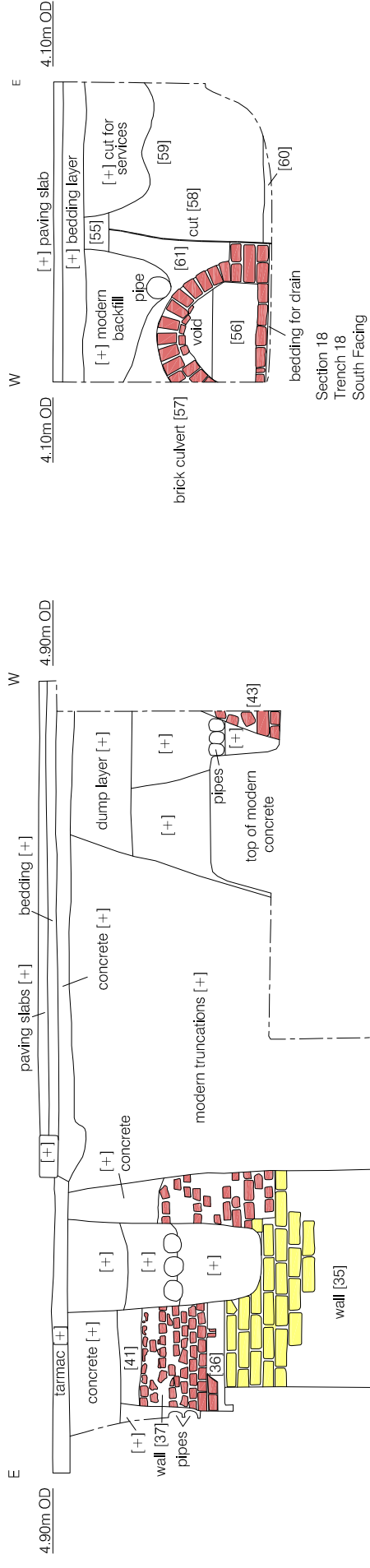
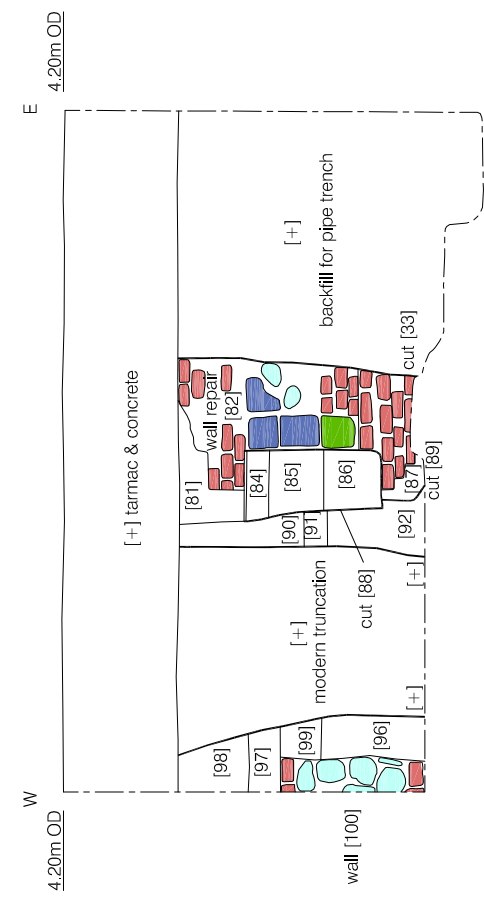


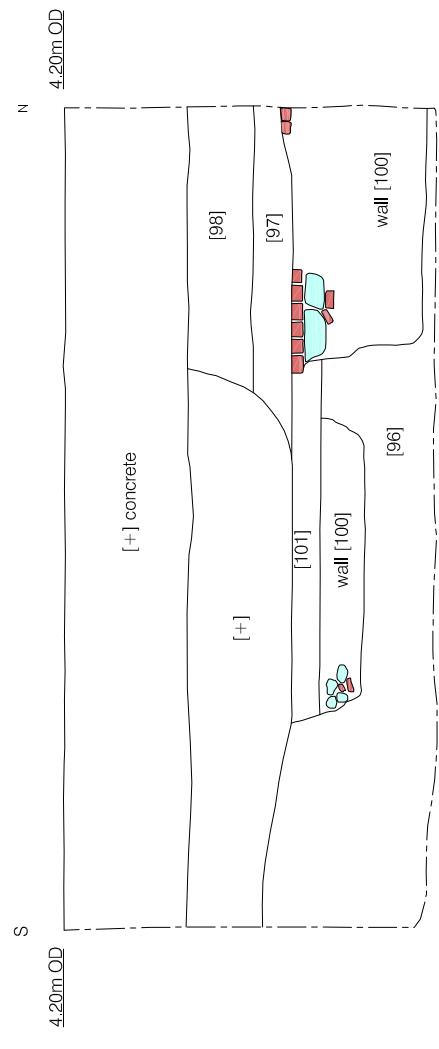
Figure 53  
 Phase 11: 19th century  
 Trench 63  
 1:100 at A4



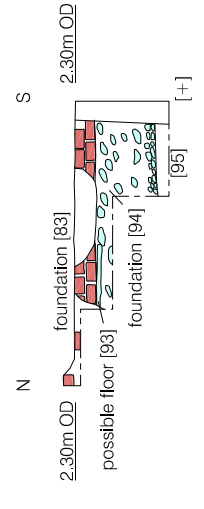
Section 14.1  
Trench 14  
North Facing



Section 32A  
Trench 32  
South Facing

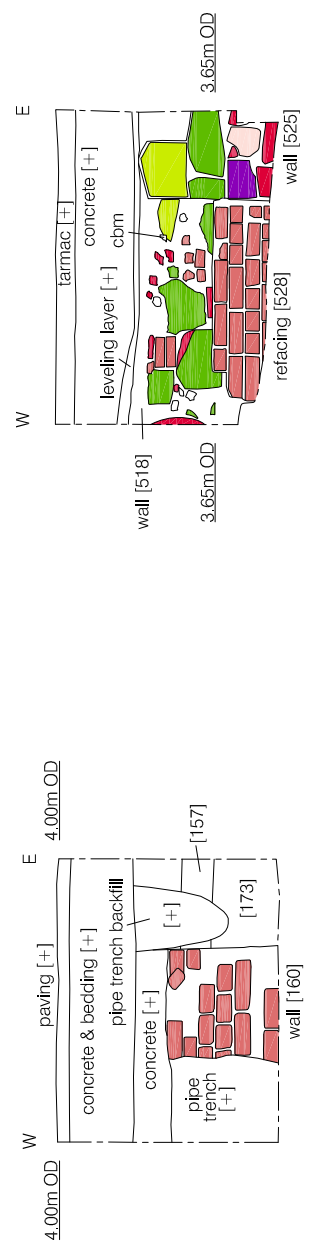


Section 32B  
Trench 32  
East Facing

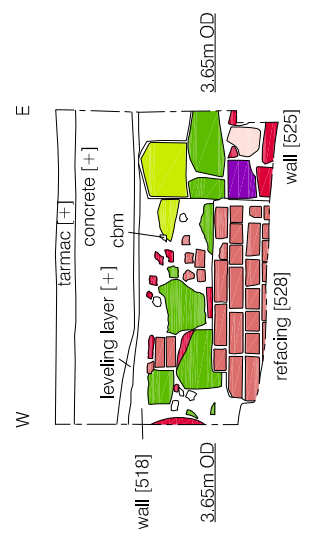


Section 32D  
Trench 32  
West Facing

Bricks	Stone
Red Brick	Chalk
Purple Brick	Green Sandstone
Yellow Brick	Yellow Sandstone
	Marble
	Portland Stone
	Limestone



Section 50  
Trench 50  
South Facing

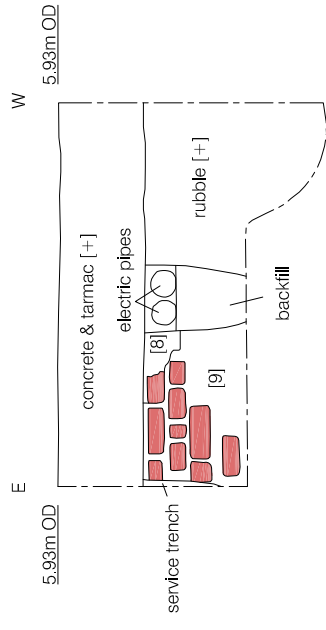


Section 59A  
Trench 59  
South Facing

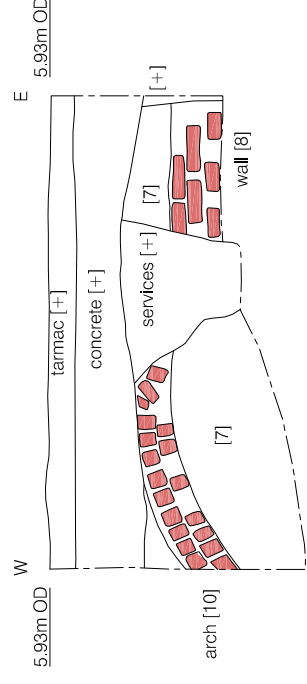


© Pre-Construct Archaeology Ltd 2011

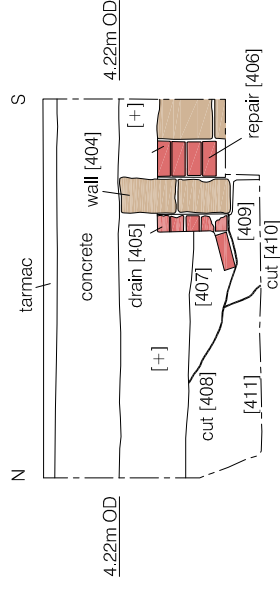
Figure 54  
Sections 1  
1:40 at A3



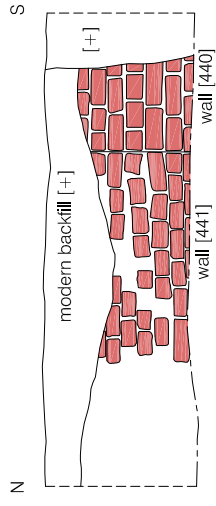
Section 4.1  
Trench 4  
North Facing



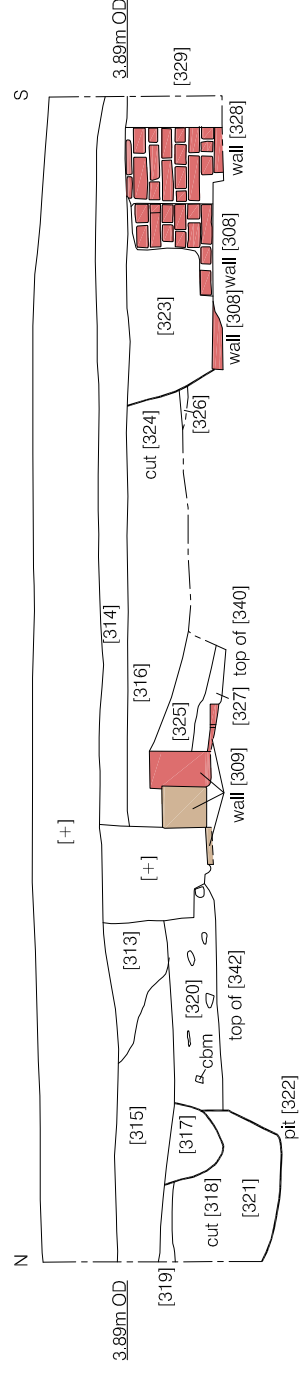
Section 4.2  
Trench 4  
South Facing



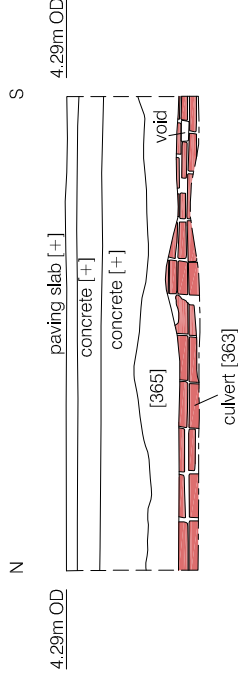
Section 54  
Trench 54  
West Facing



Section 56  
Trench 56  
West Facing

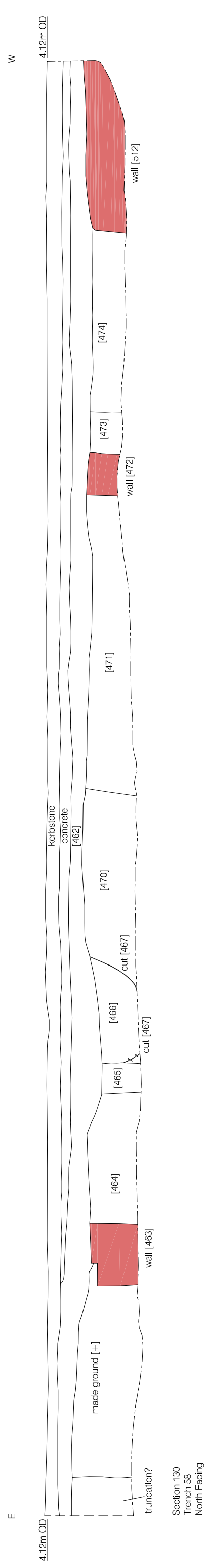
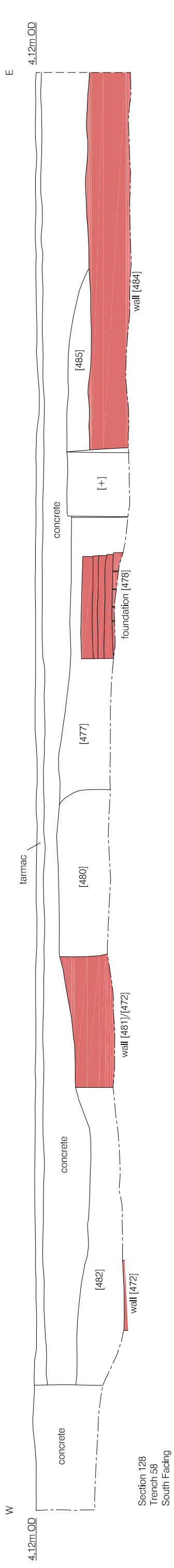


Section 113  
Trench 52  
West Facing



Section 114  
Trench 52  
West Facing





Brick



© Pre-Construct Archaeology Ltd 2011

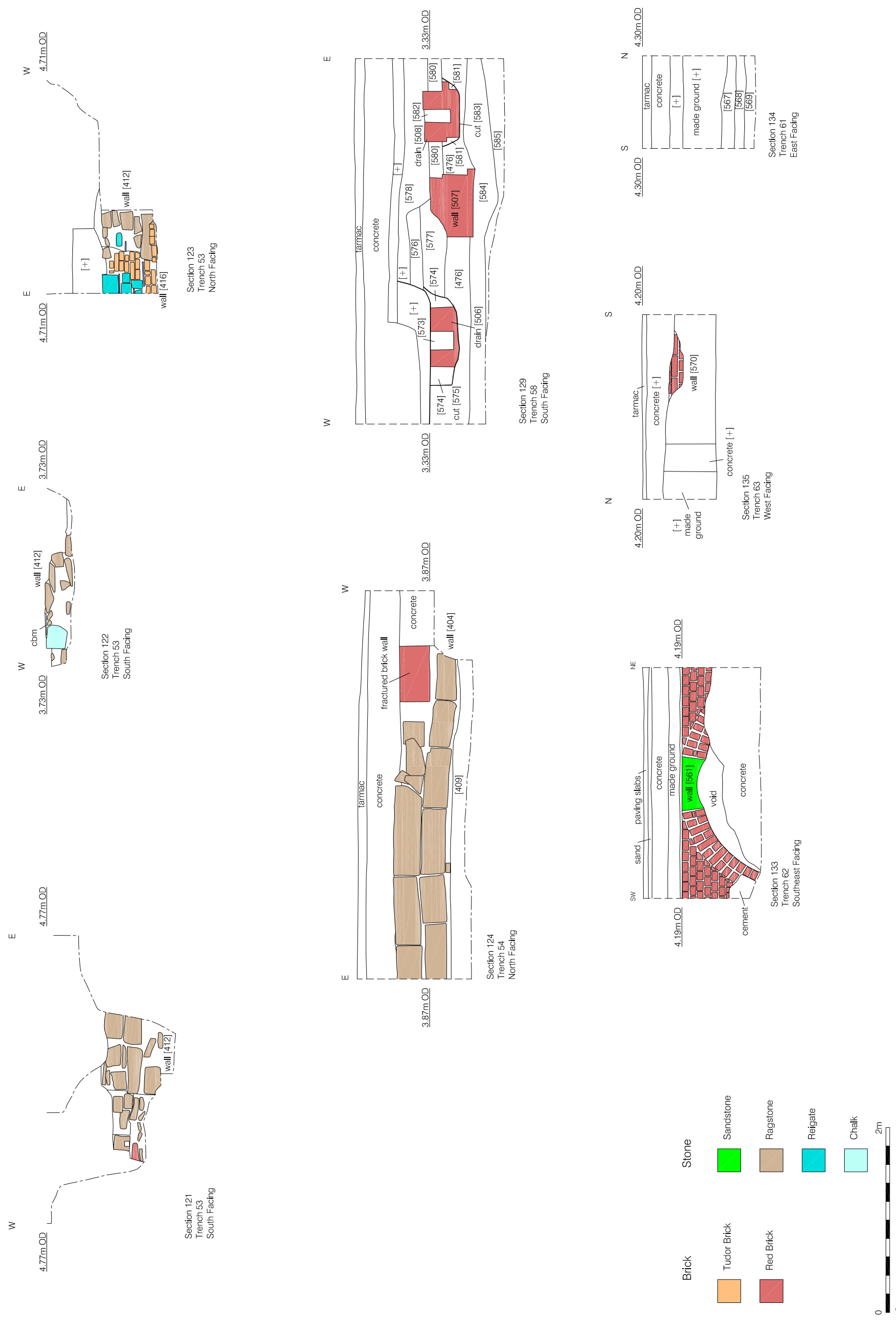


Figure 57  
Sections 4  
1:40 at A3



Plate 1: Working shot

Plate 2: Saxon pitting in Trench 44



Plate 3: Fireplace/oven [414] in Trench 53



Plate 4: Wall [412] in Trench 53





## **8 ARCHAEOLOGICAL PHASED DISCUSSION**

### **8.1 Phase 1: Natural**

8.1.1 Due to the limited depth of excavation in most trenches natural deposits were only observed in the Trenches 31, 32 and 44. Trenches 31 and 44 lay on the spur of land that in Saxon times extended into the River Tyburn's northern channel where it met the River Thames, whilst Trench 32 is postulated to lie just on the bank of the Tyburn's northern channel. A brickearth type deposit was observed in Trench 31 overlain by a layer described as fluvial sand. Similar alluvial sands and gravels were seen overlying the natural sand in Trench 44, which would suggest that the area was subject to periodic flooding.

### **8.2 Phase 2: Saxon**

8.2.1 The only direct evidence for Middle Saxon (700-850) activity within the area was contained within Trench 44. A lack of evidence for activity elsewhere on the site during this period is perhaps due to the limited depth of the vast majority of the trenches. Only a few extended below 1m from the current ground surface. In those that did exceed this depth, with the exception of Trench 44, later activity had severely truncated the earlier deposits.

#### **Pitting**

8.2.2 A number of pits dating to the Saxon period were recorded in Trench 44. Whilst one of them contained a sherd of late Saxon pottery dated 900-1050, a sherd of Middle Saxon Ipswich ware and a sherd of Middle Saxon glass were recovered from another. This would suggest that at least some of these pits might date to the Middle Saxon period. Further residual sherds of Ipswich ware were found within garden soil deposits in Trenches 36 and 52, which might suggest that Middle Saxon activity was focused in an area between Downing Street to the south and Horse Guards Avenue to the north. This activity was probably associated with the Middle Saxon buildings, including a possible royal annexed hall, found beneath the Old Treasury Buildings during excavations in the 1960s (Green and Cowie 2008).

#### **Palaeochannel**

8.2.3 An east-west aligned palaeochannel, [301], was recorded in Trench 44. Artefactual evidence recovered from the fill of the channel suggests that it silted up sometime before the end of the late Saxon period with a sherd of pottery dating to 1050-1200 recovered from the top of the fill. The recovery of a single shard of glass, which dated

to the Middle Saxon period, was recovered from the fill of the channel which might suggest it was open at that time.

### **8.3 Phase 3: Medieval**

#### **Ground Raising**

8.3.1 Relatively little material dating to this period was recovered during the watching brief. This may however reflect the limited depth of most of the trenches rather than be an indication of the presence or level of survival of features from this period.

8.3.2 Evidence of ground raising was seen in the area of the Banqueting House in form of a dumped deposit measuring at least 0.10m in thickness. It is possible that this was done in preparation for construction in this area although no structural remains were encountered to support this.

#### **Palace Kitchen**

8.3.3 By projecting Fisher's 1670 plan of Whitehall Palace onto a modern map it can be seen that the archaeological remains in the south end of Trench 53 fall within the kitchen block of the palace. The rectangular layer of burnt material sealing part of [414] along with the shape of the surface could suggest that this represents a fireplace or more likely an oven. The fireplace/oven that was keyed into the stone wall was constructed using Tudor bricks. It is probable that the stone wall formed part of the kitchens and predated Whitehall Palace and was part of York Place. The brick oven/fireplace was added in the late 15th or 16th century and may have been part of either the York Place kitchens or those of Whitehall Palace.

### **8.4 Phase 4: 1515-1529**

#### **Chapel Royal**

8.4.1 Two walls, one aligned east-west ([587]) and one north-south ([586]), were recorded in Trench 59 north of the entrance to the Ministry of Defence Main Building. It is possible that these remains formed part of the foundations for Cardinal Wolsey's Chapel Royal built between 1528 and 1529. Excavations in the 1930s for the foundations for the MoD building recorded walls associated with the ante-chapel, which would have adjoined the south end of the chapel proper. While these walls were constructed of brick and the ones uncovered during the current study were of stone it is possible that the latter form the stone foundations of the chapel or may represent an earlier medieval build of the chapel.

8.4.2 The chapel was built in 1528-29 as a replacement for the older chapel. Unlike its predecessor the new chapel was constructed on a north-south axis adjacent to the great hall. When the old chapel was demolished at least two of the walls were retained to form a division between the ante-chapel and chapel proper. The new structure survived until 1698 when it was succumbed to the fire that destroyed most of the eastern part of the palace (Thurley 1999).

## **8.5 Phase 5: 1530-1558**

### **Privy Gallery Range**

8.5.1 In Trench 52 two parallel east-west aligned walls were uncovered. These were similar in construction although a combination of ragstone and brick had been used in the northernmost wall, [309]/[341], while the exposed section of the southern wall, [308]/[335], was constructed entirely of brick. Based on their location and alignment it is likely that they represent the remains of the foundations of Henry VIII's privy gallery constructed in 1531.

8.5.2 The gallery was evidently constructed from material reclaimed from Cardinal Wolsey's gallery at Esher Place. It was a timber framed building resting on a brick foundation. The gallery survived, although heavily modified, until 1685 when it was demolished to make room for more modern privy apartments for the queen (Thurley 1999).

8.5.3 Abutting the north side of the northern wall was a layer of garden soil. Patches of similar soil were observed sporadically throughout the northern portion of the trench. These may represent the physical remains of the area known as The Green, a grassed area to the west of where the Banqueting House stands today. Following the death of Queen Elizabeth I in 1603 it was here that James VI of Scotland was proclaimed King of England (Giuseppi 1930).

### **The Court Gate (Whitehall Gate)**

8.5.4 The 1560 Agas map shows a gatehouse leading from Whitehall into the area labelled "The Court", which later became Whitehall Court. Between 1531 and 1539 a number of references were made to the "new gate". The building accounts for 1531-32 contain the item "The wagies of Bricklayers and Roughlayers to the noubre of IV working by alle the tyme of this paye upon a walle by the highway side leeding from the news Gatehouse towards Charing Crosse". This suggests that it was constructed just prior to, or just after Henry VIII's takeover of York Place (Cox and Norman 1930).

8.5.5 A gatehouse already existed in this location as early as the 15th century although it is uncertain to what extent it had been altered by the time of Cardinal Wolsey. However, during his tenure this gatehouse was extensively repaired and the room over the porter's lodge was glazed (Thurley 1999). It is possible that it, by the end of Wolsey's tenure, had been so extensively remodelled that it became referred to as the "new gatehouse", although there is no evidence directly supporting this. It is also possible that the "news Gatehouse" referred to in the building accounts of 1531-32 is the Holbein gate rather than the Court gate, but again there is no evidence to support or discredit this theory.

8.5.6 It is likely that the north-south aligned ragstone foundation, [436], in Trench 55 represents the remains of the eastern foundation wall of the gatehouse, or at least the foundation of a building adjoining it. This gatehouse continues to appear on maps of the area until at least 1746; documentary evidence shows that it survived until 1765 (Cox and Norman 1930).

#### **The Privy Garden**

8.5.7 Prior to c.1558 the palace privy garden was located just south of the Great Court. It occupied a square space roughly defined by present day Horse Guards Avenue to the north, Whitehall Court to the east, the Banqueting House to the west and the Royal United Services Institute to the south.

8.5.8 By 1540 there existed a structure called the 'open gallery in the privy garden'. This was an open cloister with roofed walks on all four sides. The supporting pillars would have stood on bases (Thurley 1999). It is possible that the brick plinth, [515], recorded in Trench 58 represents one of these support bases.

#### **The King Street Gate**

8.5.9 Little is known about the King Street Gate as few records of it have survived. While the exact construction date for the gate is not known it must postdate 1542 and the closure of Lamb Alley. Certainly it was nearing completion in 1548 as a payment was made for the furnishing of the new gate. It is possible that the work on the gate, like other buildings, came to a halt shortly after Henry's death in 1547 and that it was not completed until the building programme at Whitehall was restarted by Elizabeth I in 1559 or 1560 (Thurley 1999). The gate would have stood roughly where Downing Street intersects with Whitehall today. It is likely that the masonry recorded in Trench 32 represent the remains of the King Street gate.

### **8.6 Phase 6: 1558-1603**

### **Privy Garden**

- 8.6.1 During the reign of Elizabeth I the privy garden was relocated to the south of the privy gallery; the location of the former orchard (later the great garden). A wall had been built around the orchard when it was enlarged by the acquisition of land to the south by Henry VIII.
- 8.6.2 Excavation of Trench 43 showed evidence of this earlier Phase 5 wall, [129] and [130]. The north side of the wall appears to have repaired or refaced ([127] and [128]) when Elizabeth's garden was laid out, presumably in the 1560s.

## **8.7 Phase 7: 1604-1659**

### **Chapel Royal**

- 8.7.1 The earlier western wall of the chapel royal [463] appears to have been at least partially rebuilt during the first half of the 17th century. This included replacing the earlier western wall, which was of stone construction, with a new brick wall, [519]/[532], and installing a new brick floor, [533].

### **Lodgings of the Surveyor**

- 8.7.2 Two brick walls, [558] and [559], dating to the 17th century were recorded in Trench 62 near the northeast corner of the intersection of Whitehall Place and Whitehall. One of the copies of the 1670 plan of the Palace of Whitehall shows the area between the entrance to Middle Scotland Yard and "Sr John Denhams New Building" occupied by the residence and office of the surveyor of works. These buildings were likely to have been built by Simon Basil, Surveyor of the King's Works from 1605-1615, who also resided there. The ratebook for 1615 shows the property occupied by Simon Basil and Inigo Jones while by 1616 Inigo Jones appears to be the only occupant (Gater and Wheeler 1935).

### **Well**

- 8.7.3 In Trench 13, along the west side of Whitehall the remains of a well were observed. Only half the well was observed, as it continued beyond the western limit of excavation. It had also been partially truncated by a modern service, which ran parallel with the western edge of the trench. The well may have sat in an external courtyard, bound to the south by wall [27].

### **Gun Platform**

8.7.4 Two wall segments, [359] and [360], uncovered in Trench 52, are likely associated with the north wall of a gun platform built against the north side of the privy gallery and the southwest corner of the Banqueting House.

8.7.5 It has been suggested that the platform was constructed initially installed in 1643 in anticipation of a Royalist attack on London. However, the first reference to it is an order for “setting a new roofe over the Gunns at the banquetting house and makeing a roome to put powder and shott in” dated 1660-61 (Cox and Norman 1930). As the order is for construction a new roof over the platform it can be assumed that it was constructed some years prior to this; perhaps during or shortly after the Civil War.

8.7.6 It is possible that the gun sheds and the powder room are the buildings shown along the range of buildings adjoining the east side of the Holbein gate in the 1669 view of Whitehall from King Street made for Cosimo de’ Medici during his visit to London that year. The shape of the buildings shown on the aforementioned view correspond to those shown in this location on copies of Ralph Greatorex’s 1670 survey of the palace buildings. On one copy entitled “A Survey or Ground-Plot of His Majestyes Pallace of White-hall. C.R.2.” these buildings are shown with the annotation “The Platform”; it is probable that this is a reference to the gun platform.

### **8.8 Phase 8: 1660-1685**

8.8.1 With exception of two mortar floors laid against earlier wall [309]/[341] little activity was assigned to this phase.

### **8.9 Phase 9: 1685-1698**

#### **Privy Garden**

8.9.1 In Trench 42 a narrow brick surface was recorded, [118]; this was bordered to the north by a brick drain, [119]/[120]. These features likely represent a garden path and drain associated with the Privy Garden.

#### **Gun Battery**

8.9.2 Brick walls [357], [358] and [361] in Trench 52 to the west of the southwest corner of the Banqueting House are likely associated with the south and north walls of the gun battery built in 1688 by James II. The old gun platform was evidently demolished some years prior to facilitate the reconstruction of the privy gallery.

8.9.3 Additional work was carried out in 1689. At that time the roof was replaced and raised by six feet creating a “Shed with standers and boards over the Guns 90 foot long, 18 foot wide.” In 1699 the roof of the new battery was once more raised, this time by William III, in order to give the gunners greater height.

8.9.4 The building was demolished in 1723 as part of a programme to open up King Street to ease congestion. Even so, it does appear on Vertue’s engraving of the Holbein Gate in 1724. Terrason’s engraving of the Banqueting House shows the gun battery as it looked in 1713, ten years prior to its demolition.

## **8.10 Phase 10: 18th century**

### **House of Van Huls**

8.10.1 William Van Huls, Clerk of the Queen’s Robes and Wardrobe, had been granted lodgings over the Holbein Gate and certain rooms to the east of the gate. These had evidently been appointed first to Van Huls’ brother and shortly thereafter to Van Huls himself by William III upon his first arrival at Whitehall Palace in 1689. A petition by Van Huls dated 1712 mentioned that the greater parts of the rooms to the east of the gate were destroyed by the fire of 1698. Because of this he asked for a lease for a portion of the land between the Holbein Gate and the Banqueting House in order to erect new offices (Cox and Forrest 1931).

8.10.2 The north face of the new building erected by Van Huls is shown in a painting by Smith in 1740 and the south face in a painting by Canaletto in 1747. In 1719, only seven years after the construction of the building, a proposal to widen the road by demolishing the Holbein Gate (and presumably Van Huls’ house also) had been submitted. However, due to public opposition both were spared (Cox and Forrest 1931).

8.10.3 Because the gate was seen by many as “one of the greatest curiosities there is in London” it was decided instead “to open the wall of the Privy garden near Lord Rochester’s and turn the passage thorough a slip of that wast ground, coming out into the street again between M. Vanhulsse’s and the Banqueting House.” In 1723 it was once again proposed that Van Huls house be demolished, this time it was proposed that “the Platform where the Guns now stand, as also the House now Inhabited by M’. Vanhuls, and all the Walls and Buildings between the Banqueting House or the Building adjoining thereto” should be taken down. While the gun platform and old privy garden wall demolished, Van Huls’ house once more survived demolition and remained standing until 1759 when both it and the Holbein Gate were demolished

(Cox and Forrest 1931). It is likely that wall [328] in Trench 52 was associated with the Van Huls house.

- 8.10.4 North of these remains there was another east-west aligned brick wall, [364], which extended into Trench 56 to the east. In this trench it was recorded as wall [440]. Here the wall adjoined a north-south aligned wall, [411], forming the corner of a building measuring at least 5.50m by 2.60m. It is unknown what the function of this structure was as it does not appear to correspond to any of the buildings recorded on contemporary maps.
- 8.10.5 To the south of the possible remains the Van Huls house a number of pits were excavated during this phase ([186], [188], [199] and [322]). It is likely that these are associated with the clearing of the burnt out ruins of the buildings in the northwest corner of the privy garden in preparation for the widening of the road and the construction of the “new” privy garden.

#### **The “New” Privy Garden**

- 8.10.6 When the stretch of road between the Holbein and King Street gates was widened in 1723 the western boundary of the Privy Garden was shifted east. The old boundary wall was pulled down and a new was constructed “stretching in a line from the corner of the building adjoining to the Banqueting House to the narrow passage leading to Channell Row” (Cox and Norman 1930).
- 8.10.7 Evidence of this wall was seen in Trench 36 as [393] and [395]. The foundation of the new boundary wall appeared to have been built from reused material. It is possible that this material was reclaimed when the old wall was torn down. Atop the foundation sat a red brick wall, [306]/[389].
- 8.10.8 Prior to the construction of the new boundary wall the ground level appears to have been raised as is suggested by the presence of two layers of dumped material, [369]/[401] and [400]. After these were deposited a layer of burnt material, [368]/[398], was laid down. The burnt material may be evidence of the fire that destroyed much of the palace in 1698 although this cannot be known for certain. This effectively raised the ground level in the area of the new wall to 3.15m OD, or approximately 0.75-0.95m below the 2010 ground level.
- 8.10.9 Once the ground had been raised and the new wall built it would seem that the area to the west of the wall was paved with a mixture of clay and gravel, which was then compacted down to form a usable road surface. At least along the northern part of the



wall the ground was once more raised by the deposition of demolition debris, [396], to a height of 3.61m OD. A brick replacement, [390], for the gravel and clay paving was laid down.

### **Vanbrugh House**

8.10.10 Following the fire of 1698 Sir John Vanbrugh obtained a small parcel of land and was granted liberty to “build himself a lodging in Whitehall, upon ye Ground where Mr. Chamberlain’s Lodgings stood before the fire”. This house became commonly known as the “Goose Pye” house following a poem by Jonathan Swift ridiculing the building. Stanford’s 1862 map shows that this area was occupied by the United Services Institute who had purchased the lease of the land from Sir Charles Stuart, Baron Stuart de Rothesay. The Stuart family had acquired the property in 1793 from Vanbrugh’s family (Gater and Wheeler 1935).

8.10.11 A painting dating to 1828 by T. Chawner shows the Vanbrugh House having a perimeter wall around the frontage of the building. The same wall can be seen in a photograph of the Royal United Services Institute in George Birch’s “The Descriptive Album of London” published c.1898, shortly before the building was demolished to give way to the Old War Office Building.

8.10.12 The wall, [404], observed in Trench 54 did not appear to be substantial enough to have been to support a building. It is likely that wall represents the remains of the perimeter wall shown both in the painting dated 1828 and the photograph taken c 1898.

### **Pelham House**

8.10.13 Pelham House was constructed sometime after the 1698 fire but before 1746. Canaletto’s painting “Whitehall and the Privy Garden from Richmond House” shows the back of what is believed to be the “old building” for which Lady Catherine Pelham applied for a lease in 1755. This is thought to have formed the basis of the Pelham house. Until the lease was granted the eastern part of the building was occupied by the pages of the Removing Wardrobe while the eastern portion served as a kitchen to the Cofferer. By 1759 the old kitchens had been demolished in order to create an alternate entrance to the Privy Garden from Whitehall Yard (now Horseguards Avenue) at which time Lady Pelham applied for a new lease to include the ground under the gateway shown in Canaletto’s view (Cox and Norman 1930).

8.10.14 The lease was granted and Lady Pelham extended her premises with the construction of a bay window on the north and south side of the building in the space

previously occupied by the gateway. This converted the shape of the building from that shown on Rocque's 1746 map to that depicted on Horwood's 1792 map. The shape of wall [501] in Trench 58 is consistent with the shape of the central part of the northern wall of the building shown on the latter map (Cox and Norman 1930).

### **The Court Gate**

8.10.15 Sometime between 1746 and 1792 the north side of the gatehouse appears to have been extended to east. It is possible that the arch spanning the road was removed at this time, although it is more likely that the arch was removed when Wyatt expanded the Banqueting House to the north in 1809 (Cox and Norman 1930).

8.10.16 It is possible that brick wall [423] seen in Trench 55 represents the remains this expansion or rebuilding of the building. The cobbled surfaces to the east of [423] possibly represent a road surface leading from Whitehall Court (now Horseguards Avenue) into Inner Scotland Yard (Cox and Norman 1930).

8.10.17 Maps as early as 1670 show an entrance into Inner Scotland Yard near the northeast corner of Whitehall Court and this seems to change little until sometime prior to 1792 when the entrance seems to have been abandoned and built over. Wall [419] probably forms part of the western wall of the building shown to east of the entrance to Inner Scotland Yard on Rocque's 1746 map.

### **Taylor House**

8.10.18 The excavation of Trench 59 along the south side of Horseguards Avenue revealed the remains of what would become known as the Taylor House (structure [522]) in the later part of the 18th century. In 1718 the 3rd Earl of Holderness, Robert Darcy, applied for a lease of part of the land now occupied by the MoD. At the time of the lease the site was described as "parts of the ruins of said [Whitehall] palace" and "almost covered with heaps of rubbish." An architectural survey of the property in the 1920s shows photographs of the building indicating that in places older stonework had been incorporated into the design of the house. It is likely that the foundations were constructed using material recycled from the burnt out ruins of Whitehall Palace, which were evidently still visible by the time of the 1718 lease (Cox and Norman 1930).

8.10.19 In 1793 the property was sold to Michael Angelo Taylor and at that time described as being in "so decayed a state as to be scarcely habitable." Over the next ten years the property underwent extensive renovation work during which the northern wall was entirely rebuilt in a more substantial manner and the other parts were stripped to the

walls. The building remained in existence until at least the early 1920s (Cox and Norman 1930).

#### **No. 1-2 Whitehall Place**

8.10.20 The west end of Trench 62 contained the remains of the cellars of a late 18th century brick building, presumably that of No. 1-2 Whitehall Place. These remains consisted of brick walls [540], [545]-[550].

8.10.21 These buildings were erected in 1796 following the relocation of the Office of Works the previous year. The new buildings were occupied by the Surveyor General of the Land Revenue. Number 1 Whitehall Place acted as his house while Number 2 served as his offices. This arrangement continued until 1830 after which both buildings were used as offices by H. M. Commissioners of Crown Lands. This department continued to occupy the buildings until their demolition in 1909 (Gater and Wheeler 1935).

#### **King Street**

8.10.22 In Trench 14 a portion of a basement dating to the 18th century (wall [37] / [38] / [43]) was uncovered. It is likely that it was associated with one of the houses along the west side of King Street. The island of buildings between Parliament Street and King Street was a result of the creation of Parliament Street in the mid 18th century in order to facilitate access to Westminster Bridge, which had recently been constructed (Cox 1926). Other remains pertaining to these buildings were recovered from Trench 4 (walls [8]-[10]), Trench 9 (wall [15]), Trench 13 (wall [27]), Trench 20 (wall [62] and floor [63]) and Trench 23 (wall [67]).

#### **Great George Street**

8.10.23 Three brick wall segments, two aligned east-west and one aligned north-south, were recorded in Trench 34 along the north side of Great George Street. The bricks used in their construction were consistent with a mid 18th to mid 19th century date of manufacture. This corresponds with the formation of and development along Great George Street in the mid to late 1750s. The buildings along the north side survived until 1910 when the site was cleared to make room for government offices (now HM Treasury) (Cox 1926). The excavation of Trench 1 also revealed evidence of the buildings along Great George Street (wall [4]).

## **8.11 Phase 11: 19th century**

### **King Street**

8.11.1 Excavations in Trench 14 revealed evidence of alterations and/or repairs made to the earlier building along the east side of King Street. In the 19th century the basement of the building appears to have been divided into different compartments by the installation of a partition wall ([52]). Around the same time the south, east and west walls were repaired (walls [35], [44], [47]) and a new floor installed ([46] and [50]).

### **Grounds of Montagu House**

8.11.2 In Trench 36 a number of wall segments dating to the 19th century were recorded ([348]-[350] and [353]). With the exception of [349] these were all aligned north-south and probably formed part of the same wall. Wall [349] adjoined the west side of the south end of this wall. It is probable that these wall segments represent the remains of the western wall around the Montagu house, which was constructed between 1859 and 1862.

### **Whitehall Place**

8.11.3 The structural remains (structure [447]) encountered in Trench 57 likely represent the remains of coal or storage cellars belonging to the early 19th century range of buildings along the south side of Whitehall Place. Photographs taken prior to the demolition of these buildings in the late 19th or early 20th century show a range of terraced buildings with a "moated" frontage extending from Whitehall to Whitehall Court. The cellars must have been arranged along the north side of this "moat" and been accessible from it. In the late 19th or early 20th century the buildings were demolished in order to make way for the Old War Office Building.

### **Scotland Yard**

8.11.4 Brick walls ([541], [543], [544], [549], [550], [560]-[566]) were recorded along the entire length of Trench 62 and the east side of Trench 63 ([570]-[572]). These formed the remains of cellars associated with a range of buildings constructed along the north side of Whitehall Place during the first quarter of the 19th century.

8.11.5 This range of building included what in 1829 became the first headquarters of the Metropolitan Police Office which was established in number 4 Whitehall Place. By 1887, three years prior to the headquarters being removed to New Scotland Yard, the office included numbers 3, 4, 5, 21 and 22 Whitehall Place. The whole range from Whitehall to Scotland Place was demolished in 1909 to clear the land for new government offices (Gater and Wheeler 1935).

### **Pelham House**

8.11.6 Walls [512], [513] and brick surface [511] were constructed within the Pelham House sometime during the 19th century. It is likely that these represent the construction of a new room, or the alteration of an existing space within the basement of the building. A number of other repairs/alterations were also carried out to other areas of the house including resurfacing the ground to the north using cobbles ([502]).

### **The Court Gate**

8.11.7 The remains of an early 19th century north-south aligned wall were uncovered in the western part of Trench 58 ([465]) and eastern part of Trench 99 ([383]). These likely represent repairs to the gate spanning the west end of Horse Guards Avenue (formerly The Court). It is likely that the wall was demolished in or around 1809 during Wyatt's expansion of the Banqueting House.

## **8.12 Phase 12: 20th century**

8.12.1 Throughout the first decades of the 20th century many of the post-palace buildings discussed in the earlier phases were demolished to make way for new government offices. Evidence of this was seen across the entire site in form of demolition layers and levelling of the site in preparation for the new developments.



## **9 ORIGINAL RESEARCH QUESTIONS AND REVISED RESEARCH QUESTIONS**

### **9.1 Original Research Questions**

9.1.1 The original research questions were outlined in the Archaeological Method Statement (Mayo 2007). These consisted of two general research aims and five specific research objectives:

#### **Aims**

**9.1.2 To record the nature, extent, date, character, quality, significance and state of preservation of any archaeological remains affected by the groundworks.**

#### **Response**

Despite the limited depth of the excavations on the whole several phases of archaeological remains dating from the Middle Saxon period to the 20th century were uncovered during the archaeological investigations. These related to Middle Saxon activity probably associated with a possible royal hall, and a series of structures associated with York Place, Whitehall Palace and buildings constructed on the site following the destruction of the palace in 1698.

**9.1.3 To assess where appropriate the ecofactual and palaeo-environmental potential of archaeological deposits and features from within the site.**

#### **Response**

The limited depth of many of the trenches precluded many features and deposits being exposed from which environmental samples could be taken. However, nine samples were taken from pits and other features. The assessment of the samples showed that the results were poor with poor preservation and a high degree of possible post-depositional disturbances (see Appendix 8).

#### **Objectives**

**9.1.4 Are any palaeoenvironmental deposits present on site that can inform on the prehistoric topography of the site?**

#### **Response**

No prehistoric deposits on site were observed from which palaeoenvironmental samples could be taken. A palaeochannel probably dating to the Saxon period was revealed; however only poor results were obtained from the samples taken (see Appendix 8).

**9.1.5 Are any remains present that predate the medieval period?**

**Response**

In Trench 44 a series of pits and a palaeochannel dating to the Middle Saxon and possibly the late Saxon periods. These features were probably associated with the Middle Saxon remains found in the Old Treasury Buildings in the 1960s which included a possible royal annexed hall. Residual sherds of Middle Saxon Ipswich ware were also found in garden soil deposits in Trenches 36 and 52.

**9.1.6 Are any remains present that can be associated with the medieval buildings and palaces which occupied the area of the site?**

**Response**

In Trench 53 a stone foundation may have formed part of the medieval kitchens of York Place. Sometime during the late 15th century or during the 16th century a brick fireplace or oven was attached to the wall. This may have occurred during Wolsey's remodeling of York Place or possibly earlier. A number of other stone foundations were observed across the site which may possibly be medieval in origin.

**9.1.7 Are any remains present that can be associated with the post-medieval buildings and palaces which occupied the area of the site?**

**Response**

Most of the archaeological remains observed on the site related to the several phases of post-medieval buildings that have occupied the area since the 16th century. These are covered in detail in Section 8 above, Phases 4-12.

**9.1.8 What has been the impact upon archaeological remains by historic and modern development? What level of truncation, if any, have they caused?**

**Response**

Most of the archaeological remains were observed in shallow trenches within the pavement areas of modern streets. At this shallow level a great deal of truncation was recorded especially by post-medieval and modern services but also by several



phases of buildings on the site. Despite the widespread truncation a number of significant walls from buildings dating back to the medieval period had survived at high levels; for example the possible medieval remains in Trench 53 were found within 0.5m of modern street level.

## **9.2 Revised Research Questions**

- 9.2.1 The results of the archaeological investigation have led to the following revised research questions being posed.
- 9.2.2 Can analysis of the Middle Saxon glass help to determine the status of the inhabitants of the area?
- 9.2.3 Can analysis of the stone and ceramic building materials help to determine the appearance and status of the buildings uncovered on the site?
- 9.2.4 Are there any artefacts which are likely to be associated with York Place or Whitehall Palace?
- 9.2.5 Can these artefacts be compared to other assemblages from royal palaces?
- 9.2.6 Can the phasing of the many walls and foundations be refined by using cartographic and documentary sources?
- 9.2.7 Can comparisons be made between the remains of Whitehall palace found in earlier excavations and those found during the present investigation?

## 10 CONTENTS OF THE ARCHIVE

### 10.1 Paper Records

- Contexts 525 sheets
- Plans 248 sheets
- Sections 68 sheets
- Environmental Sheets 9 sheets

### 10.2 The Finds

- Pottery 3 boxes
- Clay Tobacco Pipe 3 boxes
- Glass 1 box
- Animal Bone 2 boxes
- Human Bone 1 box
- Ceramic Building Material 18 boxes
- Stone 2 crates

### 10.3 Photographs

- 35mm Colour slide 360 shots
- 35mm Black and white 326 shots
- Medium format colour 43 shots
- Medium format black and white 38 shots
- Digital 281 shots

## **11 IMPORTANCE OF THE RESULTS, FURTHER WORK AND PUBLICATION OUTLINE**

### **11.1 Importance of the Results**

- 11.1.1 Evidence of Middle Saxon activity was uncovered in Trench 44. These remains are of local and regional significance as they add to the remains of Middle Saxon sunken buildings and a possible royal annexed hall found in the early 1960s on the site of the Old Treasury Building to the south and show that the settlement covered an area measuring at least 180m north-south. As Saxon remains have previously only be found on the Old Treasury Building site the features found during the present investigation make an important contribution to our knowledge of the Saxon settlement in the area.
- 11.1.2 Previous archaeological work targeting the remains of Whitehall Palace has been carried out in several areas along Whitehall. Most notable were the excavations of the 1920s, 1930s, and 1950s, prior to and during the construction of the Ministry of Defense Main Building. However, little work has taken place north of Horse Guards Avenue. The Whitehall Streetscape Improvement Project allowed for an opportunity to explore areas which had not previously been investigated archaeologically.
- 11.1.3 Although the vast majority of the trenches excavated showed the area to have been heavily disturbed by modern activity to a depth of approximately 1-1.5m below the current ground level, archaeological deposits and structural remains survive *in situ* below this point.
- 11.1.4 During the current work a number of structural remains related to York Place and Whitehall Palace were uncovered and recorded. These remains are of great significance as they provide important information on the Archbishop of York's residence and later royal palace. This has the potential to add to the documentary, cartographic and previous archaeological evidence of a major residence of the Archbishop of York and one of the principal royal palaces for centuries during the early post-medieval period.
- 11.1.5 In addition a number of walls and foundations of buildings that occupied the area following the demolition of Whitehall Palace after the devastating fire of 1698 were recorded. These remains are of less significance that those relating to York Place and

Whitehall Palace but still have the potential to contribute to the post-palace history of the site culminating in its present use as an area of government offices.

## 11.2 Further Work

11.2.1 A refining of the phasing of many of the structures may be possible by studying cartographic and documentary sources, together with further analysis of construction methods and the building materials that were utilised.

11.2.2 A documentary study of the development of the area, with a particular focus on the Palace of Whitehall, may provide information about the activity taking place within the confines of the site and help to more accurately identify the function of the buildings associated with the structural remains identified during the works.

11.2.3 Listed below are the recommendations for future work identified in the specialist assessments (see appendices):

- **Pottery assessment**

*A short pottery report in the publication should cover the ceramic profile and the significance of the pottery types in each period.*

- **Clay Tobacco Pipe assessment**

*It is recommended that a short publication report is produced and three bowls are illustrated.*

- **Glass assessment**

*A glass publication focusing on the Middle Saxon glass with supplemental illustrations is recommended for further work.*

- **Animal bone assessment**

*No further work should be undertaken on the later collections, the Saxon bones may provide some useful information.*

- **Human bone assessment**

*No further work is recommended on the skeletal assemblage as it currently stands.*

- **Building material assessment**

*Illustrations are required of the key pieces of monumental stone. Some possible analytical work and research into fresh consignments of building material (brick and stone) used in Elizabethan/ Jacobean palatial properties. E.g. comparative thin-section and or geochemical analysis needs to be taken on the yellow micaceous sandstone so prevalent in the ashlar and mouldings of the privy garden wall to determine whether this is a Yorkshire sandstone or if it comes from another source. Identify the type of Penn Tile. A publication report would focus on the different types of building materials utilised on the site.*

- **Environmental assessment**

*The assemblage of charred macrobotanical remains is too small and poorly preserved to warrant any further analysis.*

### **11.3 Publication outline**

11.3.1 The recommendation is for the archaeological results to be published in the *Transactions of the London and Middlesex Archaeological Society*. An outline for the publication is detailed below:

Archaeological Investigations in Whitehall.

- Introduction to the Project & Circumstances of the Archaeological Investigation
- Historical and Archaeological Background
- Archaeological findings:
  - Saxon remains
  - York Place remains
  - Whitehall Palace remains
  - Post-Whitehall Palace structures after 1698
- Discussion
- Acknowledgements
- Bibliography
- Accompanying illustrations

## 12 ACKNOWLEDGEMENTS

- 12.1 Pre-Construct Archaeology Limited would like to thank Atkins Heritage for commissioning this project, and particularly Tom Wilson, Tony Lee, Andrew Holmes, Andrea Bradley and Ken Sabel for their assistance. Atkins commissioned the project on behalf of the Westminster City Council who funded the archaeological investigation, and we thank Tim Lloyd and Peter Bennett of WCC.
- 12.2 Additional thanks go to Diane Walls, English Heritage GLAAS, for monitoring the works on behalf of the City of Westminster.
- 12.3 Pre-Construct Archaeology Ltd. would particularly like to thank the staff of Murphy for their assistance during the investigations, and particularly Ciaran Ward.
- 12.4 The author would like to thank the many Pre-Construct Archaeology staff members who worked on the site between 2007 and 2010. Special thanks to Rebecca Haslam for supervising the first half of the project. The author would also like to thank Kevin Rielly for the assessment of the animal bone, Chris Jarrett for assessment of the pottery, glass and clay tobacco pipe, Kevin Haywood for the CBM analysis, James Langthorne for assessment of the human bone, Dave Hodson for processing and environmental samples and QUEST for reporting on the findings. Thanks also to Robert Nicholson the finds processing, Aidan Turner and Nathalie Barrett for surveying, Jennifer Simonson for illustrations, Lisa Lonsdale for logistical support, Chris Mayo for project management and Jon Butler for post-excavation management and editing of this report.

## 13 BIBLIOGRAPHY

- Atkins, 2006. *Whitehall Streetscape Improvement Project: Archaeological Desk-Based Assessment*. Atkins unpublished report
- Atkins, 2007. *Whitehall Streetscape Improvement Project: Written Scheme of Investigation for a Programme of Archaeological Work*. Atkins unpublished report
- City of Westminster, 2003. *Whitehall Conservation Area Audit*. City of Westminster, London
- Cowie, R., 2004. The Evidence for Royal Sites in Middle Anglo-Saxon London, *Medieval Archaeology* 48, 201-209
- Cowie, R. & Blackmore, L., 2008. *Early and Middle Saxon rural settlement in the London region*. MoLAS Monograph 41
- Cox, M. H. (ed.), 1926. *Survey of London: volume 10: St. Margaret, Westminster, part I: Queen Anne's Gate Area*
- Cox, M. H. and Forrest, G. T. (eds.), 1931. *Survey of London: volume 14: St. Margaret, Westminster, part III: Whitehall II*
- Cox, M. H. and Norman, P. (eds.), 1930. *Survey of London: volume 13: St. Margaret, Westminster, part II: Whitehall I*
- Gater, G. H. and Wheeler, E. P. (eds.), 1935. *Survey of London: volume 16: St. Martins-in-the-Fields, part I: Charing Cross*
- Giuseppi, M. S. (ed.), 1930. *Calendar of the Cecil Papers in Hatfield House, Volume 15 – 1603*. His Majesty's Stationary Office, London
- Green, H. J. M. with Cowie, R., 2008. Site U: Whitehall (Middlesex), in: R. Cowie and L. Blackmore, *Early and Middle Saxon settlement in the London region*. MoLAS Monograph 41, 90-100
- Green, H. J. M. and Thurley, S. J., 1987. *Excavations on the West Side of Whitehall 1960-2 Part I: From the Building of the Tudor Palace to the Construction of the Modern*

Offices of State, *Transactions of the London & Middlesex Archaeological Society* 38,  
59-130

Mayo, C., 2007. *Method Statement for an Archaeological Watching Brief During the Whitehall  
Streetscape Improvement Project, City of Westminster*. PCA unpublished document

Rosser, G. and Thurley, S., 1990. Whitehall Palace and King Street, Westminster: The Urban  
Cost of Princely Magnificence, *London Topographical Record* 24, 57-77

Sidell, J., Wilkinson, K., Scaife, R. & Cameron, N., 2000. *The Holocene Evolution of the  
London Thames: Archaeological Excavations (1991-1998) for the London  
Underground Limited Jubilee Line Extension Project*. MoLAS Monograph 5

Sullivan, D., 1994. *The Westminster Corridor: The Anglo-Saxon Story of Westminster Abbey  
and its Lands in Middlesex*. Historical Publications Ltd., London

Thomas, C., Cowie, R. and Sidell, J., 2005. *The Royal Palace, Abbey and Town of  
Westminster on Thorney Island*. MoLAS Monograph 22

Thurley, S., 1999. *Whitehall Palace: An Architectural History of the Royal Apartments, 1240-  
1690*. Yale University Press, New Haven and London

Thurley, S., 2008. *Whitehall Palace: The Official Illustrated History*. Merrell Publishers  
Limited, London

Weinreb, B. & Hibbert, C., 1983. *The London Encyclopaedia*. Macmillan, London



## APPENDIX 1: CONTEXT INDEX

Context No.	Trench	Type	Description	Date	Phase
1	1	Deposit	Dump layer	20th century	12
2	1	Masonry	Southern Wall of Treasury Vault	20th century	12
3	1	Masonry	Brick rebuilt to [4]	Late 19th/Early 20th century	12
4	1	Masonry	Vaulted cellar	18th century	10
5	2	Deposit	Brick rubble - Made ground	20th century	12
6	3	Deposit	Brick rubble - Made ground	20th century	12
7	4	Deposit	Brick rubble - Made ground	18th century	10
8	4	Masonry	Brick wall	18th century	10
9	4	Masonry	Brick wall	18th century	10
10	4	Masonry	Brick arch	18th century	10
11	5	Deposit	Brick rubble - Made ground	19th/20th century	12
12	6	Deposit	Brick rubble - Made ground	19th/20th century	12
13	6	Masonry	Brick wall	19th/20th century	12
14	8	Deposit	Brick rubble - Made ground	19th century	11
15	9	Masonry	Brick wall	18th century	10
16	9	Deposit	Fill of [17]	18th century	10
17	9	Cut	Construction cut for [15]	18th century	10
18	9	Deposit	Dump layer	18th century	10
19	10	Deposit	Dump layer	Post-med	
20	12	Deposit	Dump layer	19th century	11
21	13	Deposit	Dump layer	19th century	11
22	13	Deposit	Backfill of [25]	17th century	7
23	13	Deposit	Internal fill of [24]	19th century	11
24	13	Masonry	Brick well	17th century	7
25	13	Cut	Construction cut for [24]	17th century	7
26	13	Deposit	Backfill of [28]	18th century	10
27	13	Masonry	Wall foundation	18th century	10
28	13	Cut	Construction cut for [27]	18th century	10
29	13	Deposit	Dump layer	17th century	7
30	13	Deposit	Backfill of [32]	19th century	11
31	13	Masonry	Brick culvert	19th century	11
32	13	Cut	Construction cut for [31]	19th century	11
33	13	Deposit	Bedding layer	19th century	11
34	13	Deposit	Dump layer	18th century	10
35	14	Masonry	Yellow fabric brick wall	19th century	11
36	14	Masonry	Render	19th century	11
37	14	Masonry	Red fabric brick wall	18th century	10
38	14	Masonry	Red fabric brick wall	18th century	X10
39	14	Deposit	Backfill between [35] and [37]	19th century	11
40	14	Deposit	backfill between [35] and [38]	19th century	11
41	14	Deposit	Dump layer	19th century	11
42	14	Deposit	Compact mortar deposit	19th century	11
43	14	Masonry	Red fabric brick wall	18th century	10

Context No.	Trench	Type	Description	Date	Phase
44	14	Masonry	Interior wall	19th century	11
45	14	Deposit	Trample layer	19th century	11
46	14	Masonry	Sandstone slabs - Floor of basement	19th century	11
47	14	Masonry	Purple fabric brick wall	19th century	11
48	15	Deposit	Levelling layer	20th century	12
49	14	Deposit	Backfill inside basement	19th century	11
50	14	Masonry	Limestone floor surface	19th century	11
51	14	Deposit	Bedding layer for [50]	19th century	11
52	14	Masonry	Interior wall	19th century	11
53	16	Deposit	Dump layer	20th century	12
54	17	Deposit	Dump layer	20th century	12
55	18	Deposit	Dump layer	20th century	12
56	18	Deposit	Fill of [57]	19th century	11
57	18	Masonry	Brick culvert	19th century	11
58	18	Cut	Construction cut for [57]	19th century	11
59	18	Deposit	Humic rich soil - Possible garden soil	17th century	8
60	18	Deposit	Dump layer	Medieval	3
61	18	Deposit	Backfill of [58]	19th century	11
62	20	Masonry	Brick wall foundation	18th/19th century	10
63	20	Masonry	Brick floor	18th/19th century	10
64	20	Deposit	Bedding layer for [63]	18th century	10
65	14	Cut	Construction cut for [52]	19th century	11
66	23	Deposit	Dump layer	19th century	11
67	23	Masonry	Wall foundation	18th century	10
68	24	Deposit	Dump layer	19th century	11
69	30	Deposit	Dump layer	Post-med	
70	30	Deposit	Dump layer	Post-med	
71	30	Deposit	Dump layer	Post-med	
72	31	Deposit	Backfill of [73]	Post-med	
73	31	Cut	Construction cut for (74)	Post-med	
74	31	Masonry	Brick culvert	Post-med	
75	31	Deposit	Dump layer	Post-med	
76	31	Deposit	Dump layer	Post-med	
77	31	Deposit	Fill of [78]	Post-med	
78	31	Cut	Cut of unknown function	Post-med	
79	31	Deposit	Sand	Natural	1
80	31	Deposit	Brickearth	Natural	1
81	32	Deposit	Backfill of [88]	16th century	6
82	32	Masonry	Brick rebuilt/repair to wall [83]	16th century	6
83	32	Masonry	Brick wall foundation	16th century	6
84	32	Deposit	Backfill of [88]	16th century	6
85	32	Deposit	Backfill of [88]	16th century	6
86	32	Deposit	Backfill of [88]	16th century	6
87	32	Deposit	Backfill of [89]	16th century	6

Context No.	Trench	Type	Description	Date	Phase
88	32	Cut	Construction cut of [82]	16th century	6
89	32	Cut	Construction cut of [83]	16th century	6
90	32	Deposit	Dump layer	Medieval	3
91	32	Deposit	Dump layer	Medieval	3
92	32	Deposit	Dump layer	Natural	1
93	32	Deposit	Possible chalk floor	16th century	6
94	32	Masonry	Chalk foundation of wall [83]	16th century	6
95	32	Deposit	Natural gravel	Natural	1
96	32	Deposit	Dump layer	Natural	1
97	32	Deposit	Dump layer	18th century	10
98	32	Deposit	Dump layer	18th century	10
99	32	Deposit	Dump layer	Medieval	3
100	32	Masonry	Brick wall	16th century	6
101	32	Deposit	Sandy mortar layer above [100]	16th century	6
102	34	Masonry	Brick wall	18th century	10
103	34	Masonry	Brick wall	18th century	10
104	34	Masonry	Brick wall	18th century	10
105	34	Masonry	York stone slab	20th century	12
106	34	Masonry	White gloss tiled wall	20th century	12
107	36	Deposit	Fill of [108]	17th century	7
108	36	Cut	Linear cut	17th century	7
109	36	Deposit	Garden soil	17th century	6
110	37	Deposit	Dump layer	20th century	12
111	37	Deposit	Dump layer	20th century	12
112	38	Deposit	Demolition layer	18th century	10
113			VOID		
114	38	Deposit	Humic rich soil - Possible garden soil	17th century	7-9
115	39	Deposit	Demolition layer	18th century	10
116	39	Deposit	Demolition layer	18th century	10
117	41	Deposit	Demolition layer	19th century	11
118	42	Masonry	Floor surface	17th century	9
119	42	Masonry	Drain? - Same as [120]	17th century	9
120	42	Masonry	Drain? - Same as [119]	17th century	9
121	42	Deposit	Fill of drain [119]/[120]	17th century	9
122	42	Deposit	Demolition layer	20th century	12
123	42	Deposit	Dump layer	20th century	12
124	42	Deposit	Demolition layer	20th century	12
125	43	Deposit	Demolition layer	18th century	10
126	43	Deposit	Demolition layer	18th century	10
127	43	Masonry	Rebuild of wall [129]	16th/17th century	6
128	43	Masonry	Rebuild of wall [129]	16th/17th century	6
129	43	Masonry	Brick wall foundation - Same as [130]	16th century	5
130	43	Masonry	Brick wall foundation - Same as	16th century	5

Context No.	Trench	Type	Description	Date	Phase
			[129]		
131	44	Masonry	Brick drain	17th century	9
132	44	Deposit	Fill of [140]	17th century	9
133	44	Deposit	Fill of drain [131]	17th century	9
134			VOID		
135	44	Deposit	Dump layer	19th century	11
136	44	Deposit	Fill of [140]	17th century	9
137	44	Deposit	Fill of [140]	17th century	9
138	44	Deposit	Fill of [140]	17th century	9
139	44	Deposit	Fill of [140]	17th century	9
140	44	Cut	Construction cut for [131]	17th century	9
141	44	Deposit	Possible subsoil - Same as [146]	19th century	11
142	44	Deposit	Dump layer - Same as [147] and [148]	19th century	11
143	44	Deposit	Dump layer - Same as [145]	19th century	11
144	44	Deposit	Sand	Natural	1
145	44	Deposit	Dump layer - Same as [143]	19th century	11
146	44	Deposit	Possible subsoil - Same as [141]	19th century	11
147	44	Deposit	Dump layer - Same as [142] and [148]	19th century	11
148	44	Deposit	Dump layer - Same as [142] and [147]	19th century	11
149	44	Deposit	Dump layer - Same as [150]	19th century	11
150	44	Deposit	Dump layer - Same as [149]	19th century	11
151	44	Deposit	Mortar spread - Same as [152]	19th century	11
152	44	Deposit	Mortar spread - Same as [151]	19th century	11
153	44	Deposit	Fill of [154]	Medieval	3
154	44	Cut	Pit	Medieval	3
155	44	Deposit	Fill of [156]	Saxon	2
156	44	Cut	Pit	Saxon	2
157	50	Deposit	Demolition layer	17th century	9
158	44	Deposit	Fill of [159]	18th century	10
159	44	Cut	Linear cut	18th century	10
160	50	Masonry	Brick wall	17th century	9
161	36	Masonry	Green sandstone wall	18th century	10
162	36	Deposit	Metalled surface - Same as [174] and [399]	18th century	10
163	36	Deposit	Demolition layer	18th century	10
164	44	Deposit	Fill of [165]	Medieval	3
165	44	Cut	Pit	Medieval	3
166	44	Deposit	Fill of [167]	Saxon	2
167	44	Cut	Pit	Saxon	2
168	51	Masonry	Limestone and green sandstone wall	17th century	9
169			VOID		
170	51	Deposit	Burnt debris	17th century	9
171	51	Deposit	Gravel surface	17th century	9
172	51	Deposit	Made ground	17th century	10

Context No.	Trench	Type	Description	Date	Phase
173	50	Deposit	Humic rich soil - Possible garden soil	17th century	9
174	36	Deposit	Metalled surface - Same as [162] and [399]	18th century	10
175	36	Deposit	Fill of [176]	18th century	10
176	36	Cut	Linear cut	18th century	10
177	52	Deposit	Demolition layer	17th century	9
178	52	Deposit	Demolition layer	17th century	9
179	52	Deposit	Burnt debris	17th century	9
180	52	Deposit	Mortar layer	17th century	9
181			VOID		
182	52	Deposit	Humic rich soil - Possible garden soil	17th century	9
183	52	Masonry	Brick wall	17th century	9
184	52	Deposit	Humic rich soil - Possible garden soil	17th century	9
185	52	Deposit	Fill of [186]	18th century	10
186	52	Cut	Pit	18th century	10
187	52	Deposit	Fill of [188]	18th century	10
188	52	Cut	Pit	18th century	10
189			VOID		
190	44	Deposit	Alluvial layer?	Natural	1
191	44	Deposit	Alluvial layer?	Natural	1
192	44	Deposit	Alluvial layer?	Natural	1
193	44	Deposit	Alluvial layer?	Natural	1
194	44	Deposit	Alluvial layer?	Natural	1
195	44	Deposit	Natural sand	Natural	1
196	44	Deposit	Fill of [197]	Saxon	2
197	44	Cut	Pit	Saxon	2
198	52	Deposit	Fill of [199]	18th century	10
199	52	Cut	Pit	18th century	10
200	32/33S	Masonry	Brick wall	19th century	11
201	32/33S	Masonry	Brick wall	17th century	
202	32/33S	Masonry	Brick wall	16th/17th century	
203	32/33S	Masonry	Brick wall	19th century	11
204	32/33S	Masonry	Brick floor - Same as [205]	Post-med	
205	32/33S	Masonry	Brick floor - Same as [204]	Post-med	
206	32/33S	Masonry	Brick wall	19th century	11
207	32/33S	Masonry	Cobble surface	20th century	12
208	32/33S	Cut	Construction cut for [207]	20th century	12
209	32/33S	Deposit	Tarmac surface	20th century	12
210	32/33S	Deposit	Made ground	20th century	12
211	32/33S	Deposit	Made ground	20th century	12
212	32/33S	Cable	Armoured cable	20th century	12
213	32/33S	Deposit	Made ground	20th century	12
214	32/33S	Masonry	Manhole	20th century	12
215	32/33S	Cable	Cable encased in plastic pipe	20th century	12
216	32/33S	Deposit	Fill of [219]	20th century	12

Context No.	Trench	Type	Description	Date	Phase
217	32/33S	Deposit	Fill of [220]	20th century	12
218	32/33S	Deposit	Fill of [220]	20th century	12
219	32/33S	Cut	Construction cut for [216]	20th century	12
220	32/33S	Cut	Construction cut for [215]	20th century	12
221	32/33S	Cable	Cable encased in concrete	20th century	12
222	32/33S	Deposit	Fill of [223]	20th century	12
223	32/33S	Cut	Construction cut for [221]	20th century	12
224	32/33S	Pipe	Water main	20th century	12
225	32/33S	Deposit	Fill of [226]	20th century	12
226	32/33S	Cut	Construction cut for [224]	20th century	12
227	32/33S	Cable	BT cable	20th century	12
228	32/33S	Pipe	Cast iron water main	20th century	12
229	32/33S	Deposit	Fill of [230]	20th century	12
230	32/33S	Cut	Construction cut for [228]	20th century	12
231	32/33S	Deposit	Fill of [233]	Post-med	
232	32/33S	Masonry	Vaulted brick drain	Post-med	
233	32/33S	Cut	Construction cut for [232]	Post-med	
234	32/33S	Deposit	Internal fill of [232]	Post-med	
235	32/33S	Deposit	Fill of [236]	19th century	11
236	32/33S	Cut	Robber cut	19th century	11
237	32/33S	Deposit	Demolition layer	Post-med	
238	32/33S	Deposit	Backfill of basement?	Post-med	
239	32/33S	Deposit	Fill of [240]	19th century	11
240	32/33S	Cut	Construction cut for [203]	19th century	11
241	32/33S	Deposit	Fill of [242]	19th century	11
242	32/33S	Cut	Construction cut for [201]	19th century	11
243	32/33S	Timber	Barrel	Post-med	
244	32/33S	Deposit	Fill of [245]	Post-med	
245	32/33S	Cut	Cut containing timber barrel [243]	Post-med	
246	32/33S	Deposit	Made ground	17th/18th century	
247	TH 1	Deposit	Tarmac surface	20th century	12
248	TH 1	Deposit	Bedding layer for [247]	20th century	12
249	TH 1	Deposit	Made ground	20th century	12
250	TH 1	Deposit	Dump layer	20th century	12
251	TH 1	Deposit	Concrete surface	20th century	12
252	TH 1	Deposit	Made ground	Post-med	
253	98	Masonry	Boundary wall of later Privy Garden	19th century	11
254	98	Deposit	Fill of [255]	19th century	11
255	98	Cut	Construction cut for [253]	19th century	11
256	99	Masonry	Garden path	17th century	
257	99	Deposit	Humic rich soil - Possible garden soil	17th century	
258	99	Deposit	Made ground	17th century	
259	96	Masonry	Garden path	17th century	
260-299			NOT USED		
300	44	Deposit	Fill of [301]	Saxon	2
301	44	Cut	Palaeochannel	Saxon	2

Context No.	Trench	Type	Description	Date	Phase
302	44	Deposit	Fill of [303]	20th century	12
303	44	Cut	Cut of unknown function	20th century	12
304	44	Deposit	Natural sand	Natural	1
305	44	Deposit	Fill of [140]	17th century	9
306	36	Masonry	Brick wall	18th century	10
307	52	Deposit	Plaster/Mortar floor	17th century	8
308	52	Masonry	Brick wall - Same as [335]	16th century	5
309	52	Masonry	Brick wall - Same as [341]	16th century	5
310-312			VOID		
313	52	Deposit	Demolition layer	19th century	11
314	52	Deposit	Dump layer	19th century	11
315	52	Deposit	Dump layer	19th century	11
316	52	Deposit	Dump layer	17th century	9
317	52	Deposit	Fill of [318]	18th century	10
318	52	Cut	Pit	18th century	10
319	52	Deposit	Demolition layer	18th century	10
320	52	Deposit	Demolition layer	18th century	10
321	52	Deposit	Fill of [322]	18th century	10
322	52	Cut	Pit	18th century	10
323	52	Deposit	Fill of [324]	17th century	9
324	52	Cut	Robber cut	17th century	9
325	52	Deposit	Demolition layer	17th century	9
326	52	Deposit	Demolition layer	17th century	7
327	52	Deposit	Dump layer	17th century	7
328	52	Masonry	Brick wall	18th century	10
329	52	Deposit	Humic rich soil - Possible garden soil	18th century	10
330-331			VOID		
332	52	Deposit	Fill of [333]	17th century	9
333	52	Cut	Possible robber cut	17th century	9
334	52	Deposit	Humic rich soil - Possible garden soil	16th century	5
335	52	Masonry	Brick wall - Same as [308]	16th century	5
336-339			VOID		
340	52	Deposit	Humic rich soil - Possible garden soil	17th century	6
341	52	Masonry	Brick wall - Same as [309]	16th century	5
342	52	Deposit	Possible mortar surface	17th century	9
343	52	Deposit	Humic rich soil - Possible garden soil	16th century	5
344	52	Masonry	Brick feature	16th century	5
345	52	Deposit	Humic rich soil - Possible garden soil	16th century	5
346	36	Deposit	Humic rich soil - Possible garden soil	19th century	11
347			VOID		
348	36	Masonry	Heavily truncated brick wall	19th century	11
349	36	Masonry	Brick floor	19th century	11

Context No.	Trench	Type	Description	Date	Phase
350	36	Masonry	Brick wall foundation	19th century	11
351	36	Deposit	Dump layer - Same as [352] and [355]	19th century	11
352	36	Deposit	Dump layer - Same as [351] and [355]	19th century	11
353	36	Masonry	Brick wall	19th century	11
354	36	Masonry	Rag stone - Same as [377]	18th century	10
355	36	Deposit	Dump layer - Same as [351] and [352]	19th century	11
356	36	Deposit	Dump layer	18th century	10
357	52	Masonry	Brick wall - Same as [358]	18th century	10
358	52	Masonry	Brick wall - Same as [357]	18th century	10
359	52	Masonry	Brick wall - Same as [360]	16th century	6
360	52	Masonry	Brick wall - Same as [359]	16th century	6
361	52	Masonry	Brick wall	18th century	10
362	52	Masonry	Brick culvert	18th century	10
363	52	Masonry	Brick culvert	18th century	10
364	52	Masonry	Brick wall	18th century	10
365	52	Deposit	Dump layer	18th century	10
366	52	Deposit	Dump layer	18th century	10
367	52	Masonry	Brick culvert	18th century	10
368	36	Deposit	Burnt debris	18th century	10
369	36	Deposit	Made ground	18th century	10
370	36	Deposit	Humic rich soil - Possible garden soil	Medieval	3
371	36	Deposit	Fill of [372]	18th century	10
372	36	Cut	Pit	18th century	10
373	36	Deposit	Fill of [374]	18th century	10
374	36	Cut	Construction cut for [161]	18th century	10
375	36	Deposit	Humic rich soil - Possible garden soil	19th century	11
376	36	Deposit	Demolition layer	18th century	10
377	36	Masonry	Sandstone and brick wall	18th century	10
378	36	Deposit	Humic rich soil - Possible garden soil	18th century	10
379	36	Deposit	Fill of [380]	18th century	10
380	36	Cut	Construction cut for [389]	18th century	10
381	36	Deposit	Brick rubble - Made ground	18th century	10
382			VOID		
383	53	Masonry	Chalk and Reigate wall foundation	15th-17th century	
384	53	Deposit	Humic rich soil - Possible garden soil	Post-med	
385	53	Deposit	Humic rich soil - Possible garden soil	Post-med	
386	53	Deposit	Humic rich soil - Possible garden soil	Post-med	
387	36	Deposit	Plaster/Mortar floor - Same as [397] - Possibly bedding for a	18th century	10



Context No.	Trench	Type	Description	Date	Phase
			robbed wall		
388	36	Deposit	Humic rich soil - Possible garden soil	Post-med	
389	36	Masonry	Brick wall	18th century	10
390	36	Masonry	Brick surface	18th century	10
391	36	Cut	Robber cut	19th century	11
392	36	Deposit	Fill of [391]	19th century	11
393	36	Masonry	Stone wall - Same as [395]	18th century	10
394	36	Deposit	Mortar bedding layer - Same as [403]	18th century	10
395	36	Masonry	Stone wall - Same as [393]	18th century	10
396	36	Deposit	Demolition layer	18th century	10
397	36	Deposit	Mortar surface Possibly bedding for an extinct wall	18th century	10
398	36	Deposit	Charcoal rich layer	18th century	10
399	36	Deposit	Metalled surface - Same as [162] and [174]	18th century	10
400	36	Deposit	Levelling layer	18th century	10
401	36	Deposit	Levelling layer	18th century	10
402	36	Deposit	Garden soil	16th century	6
403	36	Deposit	Mortar bedding layer - Same as (394)	18th century	10
404	54	Masonry	East-west aligned stone wall	18th century	10
405	54	Masonry	Possible brick drain abutting [404]	18th century	10
406	54	Masonry	Brick repair work to wall [404]	18th century	10
407	54	Deposit	Fill of [408]	18th century	10
408	54	Cut	Construction cut for [405]	18th century	10
409	54	Deposit	Fill of [410]	18th century	10
410	54	Cut	Construction cut for [404]	18th century	10
411	54	Layer	Dump layer	18th century	10
412	53	Masonry	East-west aligned stone wall	16th century	3
413			VOID - Same as [416]		
414	53	Masonry	Brick surface	16th century	3
415	53	Structure	Brick fireplace	16th century	3
416	53	Masonry	Brick wall keyed into [412]	16th century	3
417	55	Layer	Demolition layer	20th century	12
418	55	Masonry	North-south aligned brick wall	18th century	10
419	55	Masonry	North-south aligned brick wall	18th century	10
420	55	Layer	Bedding layer	18th century	10
421	55	Layer	Cobble surface	18th century	10
422	55	Layer	Cobble surface	18th century	10
423	55	Masonry	North-south aligned brick wall	18th century	10
424	55	Masonry	North-south aligned brick wall	19th century	11
425	55	Deposit	Fill of [426]	18th century	10
426	55	Cut	Construction cut for [423]	18th century	10
427-428			VOID		
429	55	Deposit	Fill of [430]	20th century	12

Context No.	Trench	Type	Description	Date	Phase
430	55	Cut	Cut of unknown function	20th century	12
431	55	Deposit	Fill of [432]	19th century	11
432	55	Cut	Construction cut for (424)	19th century	11
433	55	Layer	Demolition layer	19th century	11
434	55	Layer	Bedding layer	16th century	5
435	55	Layer	Layer of dark brown sandy silt	16th century	5
436	55	Masonry	North-south aligned stone wall	16th century	5
437	55	Cut	Construction cut for [436]	16th century	5
438	55	Layer	Bedding layer for [421] and [422]	18th century	10
439	53	Layer	Demolition layer	18th century	10
440	56	Masonry	East-west aligned wall	18th century	10
441	56	Masonry	North-south aligned wall	18th century	10
442	56	Layer	Dump layer	18th century	10
443	57	Masonry	Brick culvert	19th century	11
444	57	Masonry	Brick culvert	19th century	11
445	57	Layer	Demolition layer	20th century	12
446	57	Masonry	Brick culvert	19th century	11
447	57	Structure	Brick foundation. Includes: (443), (444), and (446)	19th century	11
448	57	Masonry	Block of worked stone	19th century	11
449	57	Masonry	Brick wall	19th century	11
450	57	Masonry	Arched brick cellar	19th century	11
451	57	Group	Group number for foundation base	19th century	11
452	57	Masonry	Brick foundation	19th century	11
453	57	Masonry	Brick foundation	19th century	11
454	57	Masonry	Brick foundation	19th century	11
455	57	Masonry	Brick foundation	19th century	11
456	57	Masonry	Brick foundation	19th century	11
457	57	Masonry	Brick foundation	19th century	11
458	57	Masonry	Brick repair work to foundation	19th century	11
459	57	Cut	Modern service cut	20th century	12
460	57	Deposit	Fill of [459]	20th century	12
461	57	Masonry	Brick culvert	19th century	11
462	58	Layer	Made ground	20th century	12
463	58	Masonry	Brick wall	19th century	11
464	58	Layer	Dump layer	19th century	11
465	58	Masonry	Brick wall in cut [467]	19th century	11
466	58	Deposit	Fill of [467]	19th century	11
467	58	Cut	Construction cut for [465]	19th century	11
468	57	Masonry	Truncated brick culvert	19th century	11
469	57	Iron Pipe	Iron pipe	20th century	12
470	58	Layer	Made ground	18th century	10
471	58	Layer	Dump layer	18th century	10
472	58	Masonry	Brick wall - Same as [481]	18th century	10
473	58	Layer	Made ground	20th century	12
474	58	Layer	Made ground	20th century	12

Context No.	Trench	Type	Description	Date	Phase
475	58	Masonry	Brick surface	17th century	7
476	58	Layer	Dump layer	18th century	10
477	58	Layer	Fill of [479]	20th century	12
478	58	Masonry	Brick wall foundation	20th century	12
479	58	Cut	Construction cut for [478]	20th century	12
480	58	Layer	Dump layer	20th century	12
481	58	Masonry	Brick wall - Same as [472]	18th century	10
482	58	Layer	Dump layer	20th century	12
483	58	Masonry	Brick wall sitting on surface [475]	17th century	7
484	58	Masonry	Brick wall	18th century	10
485	58	Layer	Dump layer	18th century	10
486	58	Deposit	Fill of [487]	19th century	11
487	58	Cut	Possible robber cut	19th century	11
488	58	Masonry	Brick wall foundation	18th century	10
489	58	Layer	Layer of dark greyish brown clayey silt below [487]	17th century	10
490	58	Deposit	Deposit at the base of wall [491]	18th century	10
491	58	Masonry	Brick wall - Same as [501]	18th century	10
492	58	Deposit	Mortar spread	16th century	5
493	58	Deposit	Layer below [492]	16th century	5
494	58	Deposit	Fill of [497]	18th century	10
495	58	Masonry	Brick drain	18th century	10
496	58	Deposit	Bedding layer for drain [495]	18th century	10
497	58	Cut	Construction cut for drain [495]	18th century	10
498	58	Deposit	Dump layer	20th century	12
499	58	Masonry	Wall foundation - Part of [501]	18th century	10
500	58	Layer	Deposit at the base of wall	17th century	10
501	58	Masonry	Brick wall - Same as [491]	18th century	10
502	58	Layer	Cobble surface	19th century	11
503	58	Masonry	Wall truncated by modern pipe	18th century	10
504	58	Masonry	Brickwork abutting [501]	18th century	10
505	58	Masonry	Brick wall in far east end of the trench	18th century	10
506	58	Masonry	Brick drain	18th century	10
507	58	Masonry	Brick wall	18th century	10
508	58	Masonry	Brick drain	18th century	10
509	57	Masonry	Arched brick cellar	19th century	11
510	57	Masonry	Arched brick cellar	19th century	11
511	58	Masonry	Brick floor	19th century	11
512	58	Masonry	East-west aligned brick wall	19th century	11
513	58	Masonry	North-south aligned brick wall	19th century	11
514	58	Structure	Consists of [511]-[513]	18th century	10
515	58	Masonry	Brick plinth	16th century	5
516	58	Deposit	Made ground	20th century	12
517	58	Layer	Clay and rubble layer	Post-med	
518	59	Masonry	East-west aligned wall	18th century	10
519	59	Masonry	Brick wall segment	17th century	7

Context No.	Trench	Type	Description	Date	Phase
520	59	Masonry	Brick rebuilt on top of [526]	19th century	11
521	59	Masonry	Refacing of [518]	18th century	10
522	59	Structure	Building comprising [518]-[521], [524], [527], [529]	18th century	10
523	59	Deposit	Backfill of interior of building	20th century	12
524	59	Masonry	Brick "step" part of [518]	18th century	10
525	59	Masonry	Stone wall abutting east end of [518]	18th century	10
526	59	Masonry	North-south aligned stone wall	18th century	10
527			VOID		
528	59	Masonry	Brick refacing of [518]	18th century	10
529	59	Masonry	Brick and stone built wall over [518]	18th century	10
530	59	Masonry	Refacing of [518]	18th century	10
531	59	Masonry	East-west aligned brick wall	late 17th-early 18th century	9/10
532	59	Masonry	East-west aligned brick wall	17th century	7
533	59	Masonry	Brick surface	17th century	7
534	59	Masonry	Stone capped brick drain	17th century	7
535-539			NOT USED		
540	62	Masonry	Brick wall - Same as [545]	18th century	10
541	62	Masonry	Repair to [540] - Same as [543]	19th century	11
542	62	Masonry	Brick infill of entrance in [540]	19th century	11
543	62	Masonry	Repair to [540] - Same as [541]	19th century	11
544	62	Masonry	Repair to [545]	18th century	11
545	62	Masonry	Brick wall - Same as [540]	18th century	10
546	62	Masonry	Cellar wall	18th century	10
547	62	Masonry	South wall of cellar	18th century	10
548	62	Masonry	Interior wall of cellar	18th century	10
549	62	Masonry	Refacing of [548]	19th century	11
550	62	Masonry	Refacing of [549]	18th century	11
551	62	Masonry	Infill of cellar entrance	19th century	11
552	62	Deposit	Backfill of cellar	20th century	12
553	62	Deposit	Backfill of cellar	20th century	12
554	62	Deposit	Rubble deposit	20th century	12
555	62	Deposit	Fill of [556]	18th century	11
556	62	Cut	Construction cut for [547]	18th century	11
557	62	Deposit	Redeposited garden soil	17th century	7
558	62	Masonry	Brick wall - Same as [559]	17th century	7
559	62	Masonry	Brick wall - Same as [558]	17th century	7
560	62	Masonry	Brick wall - Same as [547]	19th century	11
561	62	Masonry	Brick wall - Same as [540]	19th century	11
562	62	Masonry	Roof of cellar	19th century	11
563	62	Masonry	Dividing wall	19th century	11
564	62	Masonry	Dividing wall	19th century	11
565	62	Masonry	Dividing wall	19th century	11
566	62	Masonry	Dividing wall	19th century	11

Context No.	Trench	Type	Description	Date	Phase
567	61	Deposit	Demolition layer	19th century	11
568	61	Deposit	Gravel road surface	18th century	10
569	61	Deposit	Cobbled road surface	18th century	10
570	63	Masonry	Brick wall	19th century	11
571	63	Masonry	Brick wall	19th century	11
572	63	Masonry	Brick wall	19th century	11
573	58	Deposit	Fill within drain [506]	18th century	10
574	58	Deposit	Backfill of cut [575]	18th century	10
575	58	Cut	Construction cut for drain [506]	18th century	10
576	58	Deposit	Mortar spread	18th century	10
577	58	Deposit	Dump layer/made ground - Same as [580]	18th century	10
578	58	Deposit	Fill of [579]	19th century	11
579	58	Cut	Cut of unknown function	19th century	11
580	58	Deposit	Dump layer/made ground - Same as [577]	18th century	10
581	58	Deposit	Fill of [583]	18th century	10
582	58	Deposit	Fill within drain [508]	18th century	10
583	58	Cut	Construction cut for drain [508]	18th century	10
584	58	Deposit	Dump layer/Made ground	18th century	10
585	58	Deposit	Dump layer/Made ground	Post-med	
586	59	Masonry	N-S aligned stone wall	16th century	4
587	59	Masonry	Wall abutting [586]	16th century	4

## **APPENDIX 2: POTTERY ASSESSMENT**

Chris Jarrett

### **Introduction**

A small sized assemblage of pottery was recovered from the site (3 boxes). The pottery dates from the Middle Saxon, Late Saxon, early medieval and post-medieval periods. Very few sherds show evidence for abrasion and were probably deposited fairly rapidly after breakage. The fragmentation of the pottery ranges from sherd material to identifiable forms but one post-medieval vessel has a complete profile and another is intact. Pottery was recovered from 28 contexts and individual deposits produced small groups of pottery (fewer than 30 sherds).

All the pottery (123 sherds and twenty are unstratified) was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an ACCESS database, by fabric, form, decoration, sherd count and estimated number of vessels. The classification of the pottery types is according to the Museum of London Archaeological Service. The pottery is discussed by types and its distribution.

### **THE POTTERY TYPES**

#### **Middle Saxon**

Ipswich-type ware, fine (IPSF), 730-850/70, two sherds, forms: closed.

Ipswich-type ware, medium (IPSM), 730-850/70, two sherds, forms: closed.

#### **Late Saxon**

Late Saxon shelly ware (LSS), 900-1050, one sherd, form: jar.

#### **Early Medieval**

Early medieval sandy ware (EMS), 970-1100, one sherd, form: unidentified.

Early medieval sand- and shell-tempered ware (EMSS), 1000-1150, two sherds, form: unidentified.

Early south Hertfordshire-type coarseware (ESHER), 1050-1200, one sherd, form: jar; rounded.

South Hertfordshire-type greyware (SHER), 1170-1350, one sherd, form: unidentified.

## Medieval

### Wheel thrown coarse wares

Shelly-sandy ware (SSW), 1140-1220 five sherds, form: jar; rounded.

### Glazed wares

Coarse London-type ware (LCOAR), 1080-1200, nine sherds, form: jug; rounded.

London-type ware (LOND), 1080-1350, one sherd, form: unidentified.

Earlswood-type ware (EARL), 1200-1400, one sherd, form: jug.

### Unidentified

A single flat base sherd of a vessel occurs in a hard fabric with a fine texture. It has grey surfaces and a light brownish yellow core. Inclusions consist of abundant, ill-sorted, sub-rounded fine rose and grey quartz and sparse, ill-sorted, fine iron ores.

## Post-medieval

### Surrey-Hampshire border wares

Surrey-Hampshire border whiteware with green glaze (BORDG), 1550-1700, three sherds, forms: bowl; rounded, dish

Surrey-Hampshire border whiteware with yellow glaze (BORDY), 1550-1700, two sherds, form: jar; rounded.

Surrey-Hampshire border redware (RBOR), 1550-1900, three sherds, forms: dish, rounded.

### Local post-medieval redwares

London-area post-medieval redware (PMR), 1580-1900, 29 sherds, forms: bowl: rounded; deep, flower pot, jar; rounded; small, jug; rounded.

London-area early post-medieval redware (PMRE), 1480-1600, four sherds, form: cauldron, jug.

London-area post-medieval slipped redware with clear (yellow) glaze (PMSRY), 1480-1650 one sherd, form: open.

### Essex redwares

Post-medieval Essex black-glazed redware (PMBL), 1580-1700, two sherds, form: unidentified.

Post-medieval fine redware (PMFR), 1580-1700, one sherd, form: unidentified.

#### Tin-glazed ware

English tin-glazed ware (TGW), 1570-1846, two sherds, form: unidentified.

Tin-glazed ware with plain white glaze (Orton style C: TGW C), 1630-1846, nine sherds, form: plate, Frank Britton type G.

Tin-glazed ware with external lead glaze/polychrome painted (Orton style D: TGW D), 1630-1680, one sherd, form: unidentified.

Tin-glazed ware with pale blue glaze and dark blue decoration (Orton and Pearce style H) (TGW H), 1680-1800, three sherds, form: plate.

#### Non-local wares

Cistercian ware (CSTN), 1480-1600, one sherd, form: unidentified.

Staffordshire-type mottled brown-glazed ware (STMO), 1650-1800, one sherd, form: bowl' rounded.

Combed slipware (STSL), 1660-1870, one sherd, form: dish.

#### Industrial finewares

Creamware (CREA), 1740-1830, one sherd, form: plate; dinner.

Creamware with developed pale glaze (CREA DEV), 1760-1830, one sherd, form: unidentified.

Creamware with polychrome painted decoration (CREA PNTD), 1760-1800, three sherds, form: jar; cylindrical, medium.

Transfer-printed refined whiteware (TPW), 1780-1900, three sherds, form: dish, rectangular, plate; large.

Transfer-printed refined whiteware with new colour decoration (type 4: TPW4), 1825-1900, one sherd, form: plate; dinner.

#### Stone wares

Black basalt stoneware (BBAS), 1770-1900, one sherd, form: teapot.

English stoneware (ENGS), 1700-1900, one sherd, form: drain.



English stoneware with Bristol glaze (ENGS BRST), 1830-1900, one sherd, form: ink bottle; spouted.

London stoneware (LONS), 1670-1926, six sherds, form: jar; cylindrical, tankard.

Nottingham stoneware (NOTS), 1700-1800, one sherd, form: unidentified.

White salt-glazed stoneware (SWSG), 1720-1780, four sherds, form: unidentified.

#### Imported wares

Chinese blue and white porcelain (CHPO BW), 1590-1900, six sherds, forms: plate: dinner, tea bowl.

Dutch red earthenware (DUTR), 1300-1650, one sherd, form: unidentified.

Raeren stoneware (RAER), 1480-1610, one sherd, form: unidentified.

Westerwald stoneware (WEST), 1590-1900, two sherds, form: bottle; seltzer.

## DISTRIBUTION

Table 1 shows the contexts containing pottery, the number of sherds, the date range of the pottery types in the deposit and a spot date for the group.

Context	Trench	Phase	Sherd count	Date range of pottery types	Date range of the latest pottery	Pottery types	Spot Date
1	1	7	4	1080-1900	1830-1900	ENGS BRST, LOND, PMR	Late 19th- early 20th century
21	13	11	5	1580-1900	1780-1900	PMR, SWSG, TPW,	Late 19th- early 20th century
22	13	7	2	1480-1600	1480-1600	PMRE, unidentified	1480-1600
29	13	78	1	970-1100	970-1100	EMS	970-1100
41	14	11	2	1580-1900	1825-1900	PMR, TPW4	1825-1900
49	14	11	6	1550-1926	1700-1926	ENGS, LONS ,PMR, RBOR	19th C
66	23	11	2	1550-1846	1630-1846	BORDG, TGW	1630-1700
107	36	7	3	1550-1900	1630-1900	PMR, RBOR, TGW D	1630-1680
109	36	7	4	730-850/70	1580-850/70	IPSF,PMR, PMRE, SHER	1580-1600
124	42	124	1	1480-1650	1480-1650	PMSRY	1480-1650
139	44	9	13	1000-1220	1140-1220	EMSS, LCOAR, SSW	*1140-1150
153	44	3	1	1080-1200	1080-1200	LCOAR	1080-1200
158	44	10	1	1200-1400	1200-1400	EARL	1200-1400
163	36	9	4	1480-1900	1630-1900	BORDG, PMR, PMRE, TGW C	Late 17th-18th century
166	44	2	1	900-1050	900-1050	LSS	900-1150
184	52	9	1	730-850/70	730-850/70	IPSM	730-850/70
185	52	10	1	1740-1830	1740-1830	CREA	1740-1830
196	44	2	1	730850/70	730-850/70	IPSM	730-850/70
300	44	2	1	1050-1200	1050-1200	ESHER	?1140-1300
316	52	9	5	1080-1900	1580-1900	BORDY, LCOAR, PMBL, PMR	1580-1700
346	36	11	8	1580-1900	1720-1900	PMR, SWSG	1720-1780

Context	Trench	Phase	Sherd count	Date range of pottery types	Date range of the latest pottery	Pottery types	Spot Date
370	36	3	1	1000-1150	1000-1150	EMSS	1000-1150
375	36	11	3	1570-1900	1770-1900	BBAS, CREA DEV, TGW	1770-1800
378	36	10	16	730-1900	1760-1900	CHPO BW, CREA PNTD, DUTR, IPSF, LONS, PMR, TGW C, WEST	1760-1800
379	36	10	2	1580-1900	1650-1900	PMR, STMO	1650-1800
392	36	11	9	1480-1926	1720-1926	CHPO BW, CSTN ,LONS, PMR, SWSG, TGW C	1720-1780
396	36	10	4	1580-1900	1680-1900	CHPO BW, PMFR, TGW C, TGW H	1680-1800
400	36	6	1	1580-1700	1580-1700	PMBL	1580-1700

Table 1. WQH07: Distribution of pottery types showing individual contexts containing pottery, what phase and trench the context occurs in, the number of sherds, date range of the pottery and a suggested deposition date.

## SIGNIFICANCE OF THE COLLECTION

The pottery has some significance at a local level as the assemblage contains a small number of Middle Saxon Ipswich-type ware sherds. On the whole, the ceramic profile of the site is typical for London and its immediate environs and only a single unidentified medieval fabric occurs.

### Saxon

The presence of Middle Saxon Ipswich-type ware probably relates to activity close by, either on Thorney Island, or more likely the Whitehall site excavated between 1961-63, interpreted as a late 8th or early 9th-century hall site of high or possible royal status (Green and Cowie 2008, 100). The Middle Saxon pottery from that site has a wide range of fabrics, such as chaff and shell-tempered wares, besides imported wares: Badorf and Tating-type ware, but Ipswich type ware was the most frequently occurring (Green and Cowie 2008, 96). The presence of a sherd of Late Saxon shelly ware on the site is difficult to interpret as the Middle Saxon Whitehall site was abandoned in the mid 9th century as a result of the Viking incursions. This sherd may possibly relate to activity associated with the late Saxon minster at Westminster.

### Medieval

The early medieval pottery largely occurs as single small sherds in contexts. Mid to late 12th century pottery types occur more frequently in context [139]. There are no pottery types indicative of activity between the 13th and 15th century.

## Post-medieval

The 16th-century pottery from the site is in small quantities and not very meaningful. The pottery from the successive centuries is more frequent, but occurs in small groups of pottery and it is not easy to relate to activities. A small number of ceramic vessels may hint at high status items, such as the painted Creamware cylindrical jar and the Westerwald stoneware seltzer bottle recovered from deposit [378], dated to the late 18th century. German stoneware seltzer bottles are rare finds in the late 18th century and reflect the fashion for spas and drinking mineral waters at this time.

## POTENTIAL

The pottery has the potential to date the features in which it was found and to provide a sequence for them. No vessels merit illustration or photographing. The assemblage is fairly predictable for London but the small groups of pottery are on the whole difficult to assign to activities other than normal domestic ones.

## Saxon

The presence of Middle Saxon pottery increases the extent of the known activity in the Whitehall area for this period.

## Medieval

The late 12th-century dated pottery is of interest if it can be related to documented activity on the site.

## Post-medieval

The post-medieval pottery has very little potential for further research, but a small number of vessels deserve comment.

## Research aims

No research aims are suggested for the pottery.

## Recommendations for further work

Should a publication be required for the site then a short pottery report should cover the ceramic profile and the significance of the pottery types in each period.

### **Bibliography**

Green, H. J. M. with Cowie, R., 2008. Site U: Whitehall (Middlesex), in R. Cowie and L. Blackmore *Early and Middle Saxon settlement in the London region*. MoLAS Monograph 41, 90-100.

## **APPENDIX 3: CLAY TOBACCO PIPE ASSESSMENT**

Chris Jarrett

### **INTRODUCTION**

A small sized assemblage of clay tobacco pipes was recovered from the site (3 boxes). Most fragments are in a fairly good condition, indicating that they had not been subject to much redeposition or were deposited soon after breakage. Clay tobacco pipes occur in nine contexts as small groups (under 30 fragments) in nineteen contexts.

All the clay tobacco pipes (83 fragments, of which 16 are unstratified) were recorded in an ACCESS 2007 database and classified by Atkinson and Oswald's (1969) typology (AO) and 18th-century examples by Oswald's (1975) typology and prefixed OS. The pipes are further coded by decoration and quantified by fragment count. The degree of milling has been noted and recorded in quarters, besides the quality of finish. The tobacco pipes are discussed by their types and distribution.

### **THE CLAY TOBACCO PIPE TYPES**

The clay tobacco pipe assemblage from the site consists of eighteen bowls and 65 stems. The clay tobacco pipe bowl types range in date between 1610 and 1910.

1610-40

AO8: one small spurred bowl with full milling and a fair finish.

1660-80

AO18: a single straight-sided, heeled bowl with three quarters milling and of a fair finish.

1680-1710

AO22: two bowls, a complete example has a quarter milling and is of a fair finish.

1700-1740

OS10: six heeled, upright bowls and two are marked:

I I: Possibly John Jarman, 1732-49. Westminster Polls.

R R: POSSIBLY R. Rideout, 1760-66, 79 Peter St. Westminster

(<http://www.kieron.heard.ukonline.co.uk/pipes/westminster/listofpipemakers.htm>) but other R R makers are known (see Oswald 1975, 144).

1730-1780

OS12: one heeled bowl with a narrow stem, marked I W but these are common initials for London 18th-century pipe makers, but none are contemporary and living in Westminster at this time (see <http://www.kieron.heard.ukonline.co.uk/pipes/westminster/listofpipemakers.htm>).

1760-1800

OS23:

Two spurred bowls and both have Hanoverian coats of arms with a pointed petal tulip on the front. One has its spur missing and the other has the family name P surviving. Similar bowls have been found in Westminster initialled I P and can probably be ascribed to John Powell I, 1746, St Margaret's, Westminster or John Powell II, Pye Street, 1749-58

(<http://www.kieron.heard.ukonline.co.uk/pipes/westminster/listofpipemakers.htm>).

1820-1860

AO28: a single bowl decorated with even sized fluting below a tassel and drape border around the rim. Only the family name L is legible and three local Westminster pipe makers are known: William Lee, 22 Blue Anchor Yard, 1851, Mary Isabella Longstaff, 4 Old Rochester Row, 1841-51, wife of Thomas Longstaff, 1841-51

(<http://www.kieron.heard.ukonline.co.uk/pipes/westminster/listofpipemakers.htm>).

This style of decorated pipe appears to be more common in West London.

1840-1910

AO30: two heelless bowls, one is decorated with ribs (with point definition) on the front and back of the bowl, the other is more elaborate with a rib in the form of a leaf on the back of the bowl and a spear like emblem on the front. The base has a small rod (creating a stand) while scroll motifs continue on to the stem.

Undetermined types

Two bowls are present but are fragmentary and dated to the 18th or early 19th century.

## DISTRIBUTION

Table 1 shows the distribution of the clay tobacco pipes, showing the number of fragments, the date range of the types and the latest bowl, the types of bowls present, together with a spot date for each context tobacco pipes occur in. The clay tobacco pipes are all found in Phase 7 deposits.

Context	Trench	Phase	No. of fragments	Date range of bowl types	Latest dated bowl type	Bowl types (and makers)	Spot date
34	13	11	1			Stem	1580-1910
41	14	11	1	1700-1740	1700-1740	OS10	1700-1740
49	14	11	5	1660-1800	1760-1800	AO18, OS10 (R R), OS23 (? P)	1760-1800
59	18	8	6			Stems	1580-1910
107	36	7	1	1610-1640	1610-1640	AO8	1610-1640
109	36	6	6			Stems	1580-1910
124	42	12	3			Stems	1580-1910
127	43	6	1			Stem	1580-1910
162	36	8	1			Stem	1580-1910
163	36	9	12			Stems	1580-1910
185	52	10	1	1680-1710	1680-1710	AO22	1680-1710
320	52	10	2	1700-1740	1700-1740	OS10 (I I)	1700-1740
321	52	10	3	1700-1740	1700-1740	OS10	1700-1740
346	36	11	3	1820-1910	1840-1910	AO28 (? L), AO30	1840-1860
356	36	10	2	1730-1780	1730-1780	OS12 (I W)	1730-1780
375	36	11	5			Late 18th-19th-century bowl fragment	L18th-19th C
378	36	10	3			Stem	1580-1910
379	36	10	1			Stem	1580-1910
392	36	11	10			Stems	1580-1910

Table 1. WQH07. Distribution of clay tobacco pipes. A spot date of 1580-1910 indicates that only stems were present in the context

## SIGNIFICANCE OF THE COLLECTION

The clay tobacco pipes have some significance at a local level and possible local Westminster pipe makers are represented in the assemblage. The assemblage follows the typology and clay tobacco pipe profile as found for the London area and particularly the local environs and West London. The quality of the pipes on the whole does not allude to the high status activities associated with Whitehall. The assemblage does not contain any evidence of clay tobacco pipe production.

## POTENTIAL

The clay tobacco pipes have the potential to date the contexts they were found in and three bowls should be illustrated.

## RESEARCH AIMS

No research aims are suggested as a further avenue of research.

## RECOMMENDATIONS FOR FURTHER WORK

It is recommended that a short publication report is produced and three bowls are illustrated.

## BIBLIOGRAPHY

Atkinson, D. and Oswald. A., 1969. London clay tobacco pipes. *Journal of British Archaeology Association*, 3rd series, Vol. 32, 171-227.

Heard, K., 2009. London clay pipe studies: The clay tobacco pipe industry in the parishes of St Margaret and St John the Evangelist, Westminster. <http://www.kieron.heard.ukonline.co.uk/pipes/westminster/contents.htm>

Oswald, A., 1975. *Clay pipes for the Archaeologist*, British Archaeological Reports, British series, No.14.



## **APPENDIX 4: GLASS ASSESSMENT**

Chris Jarrett

### **Introduction**

A small sized assemblage of glass (61 fragments and one is unstratified) was recovered from the excavation. The assemblage contains unabraded, fragmentary and intact items and probably represents secondary but also primary deposition conditions. Forms and decorative styles can be identified and date to the Middle Saxon and the mid 17th to 19th/20th centuries. The information was entered on to an ACCESS database.

### **Vessel types**

#### **Saxon**

Context [300], sample <6>. ?palm cup, small fragment, aquamarine glass with rib/rim.

Vessel fragment

Context [196] sample <7>. Small fragment of aquamarine glass with a trail of white and clear glass strands applied to the vessel as two back to back loops, possibly representing arcading.

#### **Post-medieval**

Bottles

Hamilton bottles

Context [48]. Three intact, plain, aquamarine coloured late type Hamilton bottles with rounded blob rims and pointed rounded base. Late 19th-early 20th century.

Seltzer bottle

Context 48. An intact bottle in amber glass with a rounded blob rim, short neck, rounded shoulder, squat cylindrical body and recessed base. Embossed decoration consists of on the shoulder 'SELTZER WATER BOTTLE BRIGHTON' above a probable phoenix and 'TRADE MARK' in a rectangular surround. Mould made, late 19th century.

Wine bottles

### Cylindrical

Context [49]. One rim shard with a string-rim construction dated c.1720-40 in olive green glass.

Context [378]. Forty-one shards of wine bottles came from some eleven wine bottles, calculated from the number of rims. All the rims have a string-rim construction dated c.1780-1830, while the base have rounded kicks and are waisted just above the basal angle. at least two sizes of wine bottle are represented amongst the bases. The glass colours range from olive green, dark olive green to black.

### Mallet

Context [49]. Probable mallet-type wine bottle with a high rounded kicked base dated c.1710.

### Miscellaneous wine bottle fragments

Unstratified. Wine bottle rim in black glass with a French ring construction dated c.1850.

Context [23]. Wine bottle rim in black glass with

Context [49]. Dark olive glass, base, high rounded kick, pontil scar, inturned wall, mid to late 18th century.

Context [49]. Dark olive glass, inturned wall shard with the start of the base, mid to late 18th century.

Context [378]. Dark olive green wine bottle rim with a string construction of late 17th century date.

### Unidentified vessel glass

Context [323]. One shard of very decomposed ?brown glass. Undated.

Context [127]. One dark olive shard of glass. Post-medieval.

Context [127]. One dark olive shard of curved glass. Post-medieval.

Context [166]. One small shard of clear glass. Undated.

Context [378]. One shard of clear curved glass. Post-medieval

### Distribution

Table 1 shows the contexts the glass was found in, the number of fragments and a spot date for the deposit.

Context	Trench	Phase	No. of Fragments	Spot date
[48]	15	12	4	Late 19th early 20th century
[49]	15	11	4	Mid to late 18th century
[127]	43	6	3	Post-medieval
[166]	44	2	1	Undated
[196]	44	2	1	Middle Saxon
[300]	44	2	1	Middle Saxon
[323]	52	9	4	Undated
[375]	36	9	1	Mid to late 18th century
[378]	36	10	43	Late 18th-early 20th century

Table 1: WQH07. Glass spot dating index.

### **Significance, potential, research questions and recommendations for further work**

The glass has some significance at a local level. The Middle Saxon glass adds to the knowledge of this activity in the area and may relate to the occupation near by at the Whitehall site, excavated between 1961-63 and interpreted as a late 8th- or early 9th-century hall site of high or possible royal status (Green and Cowie 2008, 100). The group of late 18th-early 19th-century dated wine bottles from Trench 52, context [378] are a fairly consistent group and may relate to documented activity in that area. This may also apply to the seltzer bottle and three late Hamilton bottles found in Trench 15, context [48]. The glass has the potential to date the features it was found in. The Middle Saxon glass requires illustration. There are no research questions. A glass publication with supplemental illustrations is recommended for further work.

### **References**

Green, H. J. M. with Cowie, R., 2008. Site U: Whitehall (Middlesex), in R. Cowie and L. Blackmore *Early and Middle Saxon settlement in the London region*. MoLAS Monograph 41, 90-100.

## **APPENDIX 5: ANIMAL BONE ASSESSMENT**

Kevin Rielly

### **Introduction**

The watching brief followed a number of trenches mainly excavated along the western side of Whitehall and Parliament Street between the Horse Guards and Parliament Square. They provided dating evidence from the Middle Saxon period to the Modern era, with a general concentration of 17th- to 19th-century stratigraphy. Animal bones were found in 5 out of the total of 63 trenches excavated in this Improvement Project. The majority of this assemblage was derived from a small number of samples taken from two of the later trenches, the remainder hand collected from three of the earlier incursions. All of the bones were moderately well preserved and, from the samples, highly fragmented.

### **Methodology**

The bone was recorded to species/taxonomic category where possible and to size class in the case of unidentifiable bones such as ribs, fragments of longbone shaft and the majority of vertebra fragments. Recording follows the established techniques whereby details of the element, species, bone portion, state of fusion, wear of the dentition, anatomical measurements and taphonomic including natural and anthropogenic modifications to the bone were registered.

### **Description of faunal assemblage by phase**

There was a grand total of 209 bones recovered from this Project, 203 from 4 samples and the remaining 6 hand collected from 3 other deposits. The stratigraphy has been divided into 9 phases, as follows:- 1: Natural, 2: Saxon, 3: Medieval, 4-6: 16th century, 7-9: 17th century, 10: 18th century, 11: 19th century and 12: 20th century. As can be seen in Table 1, the bones essentially arise from deposits dating to the Saxon and post-medieval phases.

#### **Phase 2**

The 3 samples providing the Saxon assemblage were all taken from Trench 44, including the fill [300] of palaeochannel [301]; and the fills [166] and 196] of pits [167] and [197] respectively, these cutting into the channel. Dating for these features is based on a rather small quantity of finds and this no doubt explains the Middle Saxon date for [196], the Late Saxon date for [166] and the 12th/13th-century date for the fill of the palaeochannel.

There were relatively few identifiable bones in these collections, these representing the major domesticates, cattle, sheep/goat and pig, as well as a single fragment of chicken and a few fish bones. Cattle is entirely represented by head and foot parts (6 skull pieces, a mandible, a metapodial and 2 phalanges). This could represent a minor concentration of butchers waste. The sheep/goat and pig skeletal distributions include most parts of the carcass. All three species include juvenile (1<sup>st</sup> year)

individuals, with a possible concentration of juvenile pigs. However, most of the cattle and sheep appear to be adult.

<b>Phase:</b>	<b>2</b>	<b>3</b>	<b>9</b>	<b>10</b>	<b>12</b>
<b>Recovery:</b>	<b>S</b>	<b>HC</b>	<b>S</b>	<b>HC</b>	<b>HC</b>
Species					
Cattle	10				1
Chicken	1				
Chicken-size	1				
Cattle-size	62	1			
Sheep/Goat	7			2	
Sheep-size	107		1	2	
Pig	5				
Fish	7				
Amphibian	2				
<b>Grand Total</b>	<b>202</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>1</b>

Table 1: Counts of hand collected (HC) and sieved (S) animal bone in each occupation phase.

### Phase 3

There was a single hand collected cattle-size vertebra from a medieval dump layer in Trench 18.

### Phase 9

This collection amounted to just one sheep-size vertebra, this provided by the remaining sample, taken from a deposit described as 'burnt debris' in Trench 52 and dated to the 17th century. This fragment was not burnt.

### Phase 10

An 18th-century dump layer in Trench 13 produced one of the larger hand collected assemblages. This included 2 sheep-size ribs as well as a sheep/goat mandible and radius. The latter bone is clearly from an adult individual, the fused distal epiphysis providing a minimum age of 3.5 years (after Schmid 1972, 75). This bone has a length of 146mm and thus an approximate shoulder height of 586.9mm (using von den Driesch and Boessneck 1974).

### Phase 12

The latest hand collected assemblage, a single cattle humerus (proximal end fragment), was recovered from a 20th-century levelling layer in Trench 15. This epiphysis was unfused suggesting an age no later than 3.5 to 4 years.

## Conclusion and recommendations for further work

The minimal quantities of bones in the later phases clearly preclude these collections from any further study. While the dating is relatively good, there is little to be gleaned from the bones apart from the fact that they are obviously food waste and that the local population were partial to beef and mutton.

There is a greater potential regarding the Saxon assemblage, which is reasonably sized and, taken from samples, likely to represent the full range of food species exploited by the inhabitants of this area. However, the identified Saxon collection is rather small and the dating evidence suggests a measure of redeposition. The evidence appears to be weighted against any further study of the Saxon bones, yet there is another factor to be considered. This is the relative paucity of Middle Saxon bone assemblages from this area, essentially limited to the late 1960s excavation at The Treasury, Whitehall (Cowie and Blackmore 2008, 96) The bone assemblage from this site provided notable concentrations of cattle and sheep/goat primary waste, from which it was suggested that it may have represented a provisioning centre for the nearby settlement at *Lundenwic* (Rielly 2008, 212). The Treasury collection was much larger than that produced by the pits from Trench 44, however, there is nonetheless a similarity concerning the representation of primary waste.

In conclusion, while no further work should be undertaken on the later collections, the Saxon bones may provide some useful information. This could depend on a refinement of the dating evidence, allowing for a comparison with the larger assemblage recovered at Whitehall (Rielly 2008).

#### References

- Cowie, R. and Blackmore, L., 2008. *Early and Middle Saxon rural settlement in the London region*. MOLAS Monograph 41.
- Driesch, A, von den and Boessneck, J. A., 1974. Kritische Anmerkungen zur Widerristhöhenberechnung aus Längenmaßen vor- und frühgeschichtlicher Tierknochen. *Saugetierkundliche Mitteilungen* 22, 325-348.
- Rielly, K., 2008. The animal bones, in R, Cowie and L, Blackmore, *Early and Middle Saxon rural settlement in the London region*. MOLAS Monograph 41, 211-12.
- Schmid, E., 1972. *Atlas of Animal Bones*.

## APPENDIX 6: HUMAN BONE ASSESSMENT

James Langthorne

### Introduction

Ten fragments of human bone were recovered from fill [155] of pit [156] during the archaeological watching brief of Trench 44 at the Whitehall Streetscape Improvement Project. Other finds from features with similar fills in the vicinity of pit [156] indicated that this assemblage dated to the Saxon period.

The assemblage consisted of a single cranium, principally parts of the left and right parietals and the occipital, and was treated as disarticulated material that had either been deliberately or otherwise deposited in order to extract the maximum amount of data from it:

### Results

Context	Skeletal Element	No. of fragments	Condition	MNI for each context	Sex	Age	Phase
155	Cranium (principally consisting of occipital and parietals)	10	Moderate-Poor	1	?	Adult	2

### Pathology

No visible pathology is evident on any of the fragments. However, the surfaces of all ten fragments are heavily degraded due to soil conditions on site and this may have resulted in the obliteration of pathological traces.

### Potential

Due to there being no diagnostic elements extant within the assemblage there was no potential for precise aging, sexing or extracting any metric data (such as stature) from any part of the skeletal material.

### Recommendations

No further work is recommended on the skeletal assemblage as it currently stands.

## **APPENDIX 7: BUILDING MATERIAL ASSESSMENT**

Kevin Hayward

### **Introduction and Aims**

Nineteen shoe boxes of Roman, late medieval and post-medieval ceramic building material and stone and an additional two crates of brick and individual pieces of moulded stone were retained from a series of excavations conducted along Whitehall.

This large sized assemblage (290 examples 476kg) dominated by large blocks of moulded stone (46 examples 357kg) but with also an appreciable spread of ceramic building material (224 examples 119kg) was assessed in order to:

- Identify (under binocular microscope) the fabric and forms of the ceramic building material and mortar in order to identify discrete phases of walling
- Identify the possible function, geological character and source of the (mainly) reused moulded stone not only to identify the types of building to which they originally belonged and where and how far the material had been supplied but to help with the discrete phases of construction.
- Make recommendations for further work and retention policy.

### **Methodology**

In-situ recording of the fabric and form of the walls (Trenches 27 and 28) occurred on a number of separate visits during 2009. This was done in order to provide provisional spot-dates during excavation.

The retained building material came from just 19 of the 80+ trenches (Trenches 1, 4, 9, 13, 14, 18, 20b, 23, 32/33, 36, 41, 42, 44, 50, 51, 52 and 53) that were excavated from Parliament Square through to Whitehall Place. Trenches 13, 14 36 and 52 had the most material. Each example was examined using the London system of classification with a fabric number allocated to each object. The application of a 1kg mason's hammer and sharp chisel to each example ensured that a small fresh fabric surface was exposed. The fabric was examined at x20 magnification using a long arm stereomicroscope or hand lens (Gowland x10).

### **Ceramic Building Material**

Given that the development of Whitehall is associated mainly with post-medieval construction it is not surprising that a large majority by weight and by number consist of brick, peg and pan tile. There are, however, examples of Roman brick and late medieval building material.



## Roman

Quantities of Roman ceramic building material are restricted to just two contexts [166] and [196] which are possible Saxon pits cutting into the palaeochannel of Trench 44.

### Brick 3 fragments 627g

#### *Late London Sandy Fabric 2459c* (AD 140-AD 250)

Three fragments of thick (42mm) Roman brick are made out of a chaff-tempered red sandy London fabric 2459c that typifies mid 2nd- to mid 3rd-century occupation from the fill of a possible Saxon pit [166]. Attached is the same type of *opus-signinum* cement as [196] see below.

#### *Opus signinum 3104* (AD 100-400)

Two small chunks of *opus signinum* from an adjoining Saxon pit [196] 202g and some adhered to some pale limestone [168] in a 17th-century wall foundation, had an identical character to the material adhered to the bricks from [166]. They contain large angular inclusions of Kentish ragstone, chalk and Roman ceramic building material, the latter giving the concrete a slightly pinkish tinge.

## Comments

This tiny concentration of Roman material in pits immediately above the palaeochannel might suggest some sort of local masonry structure or a timber framed building with a brick hearth and concrete surround. However, it seems likely, given the presence of Saxon pottery that these are reused building materials. As the site lies close to a kilometre from Thorney Island where huge consignments of building material were brought in for land reclaim for the Saxon Church at Westminster, then these lumps could conceivably be from this phase of alteration.

## Medieval

### Roofing Tile

2587 (1240-1450) 4 examples 115g

Only tiny quantities of the red iron oxide late medieval peg tile fabric 2587 (1240-1450) represent the sum total of definite<sup>1</sup> medieval roofing material from the excavations. This is verified by the total absence of glazed roofing tile from these excavations as well as early medieval bat tiles (1135-1220) so prevalent at Westminster Abbey (Hayward 2010). These are found in a post-medieval demolition layer [157] from Trench 50.

### Floor Tile

---

<sup>1</sup> Although it is possible some of the poorer quality 2271 peg tile fragments (1180-1800) may also be from this phase

2320 Local sandy fabric (1300-1500) 1 example 208g

Given the large quantity of medieval patterned glaze and plain glaze Westminster, Penn, and calcareous Flemish tiles used in the vicinity (e.g. Westminster Abbey) it is surprising that only one example of medieval tile from some 17th-century garden soil, [109], in Trench 36 was recovered.

Although there is no patterning on this small (110mmx110mmx21mm) complete floor tile, the local sandy fabric 2320 is typical of a medieval production.

### **Unstratified Medieval Tile from Derby Gate**

Glazed Flemish Calcareous Tile 1678 (1350-1550)

Penn Tile 3076 (1350-1390)

From unstratified contexts at Derby Gate (Trenches 32 and 33) come complete examples of a small (111mmx111mmx25mm) plain glazed calcareous Flemish Tile 1678 and a decorated Penn Tile (Eames 1980), the very silty 3076. The origin of these fragments is not clear but one possibility must be the south range or Great Hall, Cloister and Chapel of the medieval York Place, as glazed floor tiles were uncovered in those locations (Thurley 1999, 7).

### **Tudor - Early Post-Medieval**

An upsurge in ceramic building material recovered from the excavations that date from 1450 to 1600 is of particular note and may well reflect the very close proximity of Whitehall Palace to the excavated areas. The Tudor peg tile have been considered together with the later post-medieval peg tile in the next section as there is little change in fabric over this period..

### **Brick**

3033; 3 whole brick examples 5.5kg

As with the floor tile (see below) all the Tudor brick retained or observed at excavation comes from the trenches on the east side of Whitehall close to the site of the former Whitehall Palace (Trenches 36, 54 and 58).

Shallow, wide red bricks of condensed sandy fabric 3033, typical of Tudor construction, were present only in a small number of structures from the excavations. These bricks, average size 215mmx109mmx51mm, which may either have been Wolsey (1528) or Henry VIII type (1532) (Thurley1999, xv) from Whitehall Palace were recovered from 17th-century demolition debris from Trench 36 [163] and Trench 54 [177], and from 17th-century Trench 32 Derby Gate [202]. These were mainly bonded in a soft white mortar (T1) (see mortar section).

Other than the above there were a number of 3033 bricks observed in Trench 58, one context [515] may relate to a plinth that was observed in the 1670 Fisher Plan that could have formed part of a

Tudor out building. Other bricks were seen reused in adjoining structures including [491] [498] and [501] which are probably 18th century in date.

### **Floor Tile**

[+] (Derby Gate) [184] [316] Flemish Silty Floor Tile Glazed 4 Examples 1.3kg  
*1977*

Scattered, broken up plain (brown) glazed very silty *1977* Flemish floor tiles attest to the presence of Tudor flooring in the vicinity. Glazed Flemish Tiles have a date restricted range of 1450-1600, Examples come from a possible 17th-century soil [184] and dump layer [316] in Trench 52 and unstratified material from Derby Gate (Trench 32)

### **Post-Medieval (1600-1825)**

A vast majority of the ceramic building material retained and observed on site consists of brick fabrics and forms that may relate to the later 17th century construction phases of Whitehall Palace and certainly later 18th century terraced housing along Parliament Street and Whitehall Place.

**Brick** 118 examples 80.5kg

Red orange sandy fabric *3046* (1600)-1700) 51 examples 32.4kg

Post-Great Fire *3032 and 3034* (1666-1900) and red variant *3032R* (1666-1900) 60 examples 44.2kg

Transitional *3032nr3033* (1660-1725) 7 examples 3892g

Four very common types of post-medieval brick were found in the demolition dumps and structures from the trenches surrounding the old Whitehall Palace as well as those on the western side of Whitehall itself. Their abundance reflects the upsurge in building activity in this part of London at this time. Just two mortar types, T1 and T3, relate to these bricks (see mortar below)

*3032 and 3034*

The most common fabric these purple clinker bricks manufactured only after 1660 were found in structures from most of the trenches that yielded building material. Nearly all are poorly made, unfrogged, thick and narrow examples (225mmx98mmx70mm). Machine made frogged bricks in this fabric are covered in the 19th-century section. They are characterised by the use of a harder light grey clinker, shell mortar (type 3) with small brick inclusions that typify mid 18th to early 19th-century constructions.

A large cluster of these fabrics are associated with the cellar walls of 18th century terraced housing fronting Parliament Square particularly in Trench 4 [8], Trench 9 [15], Trench 13 [27], Trench 14 [37] and [38] (which use earlier *3032red* or *3032R* bricks) and Trench 20 [63]. Culverts emanating from these structures [31] also used these fabrics. Across from Parliament Square at Derby Gate [201] and further up on the right hand side along Whitehall after Richmond Terrace are further wall

groupings characterised by these fabrics. Unlike the earlier 3046 bricks they are rarely associated with the stone walls; rather they form brick walls e.g. [160] from Trench 50 and wall [389] from Trench 36 which may represent the rebuilt boundary wall of the Privy Garden of the Palace. Two culverts in this area, [363] and [367], both in Trench 52 are also made from this fabric.

The next grouping observed in-situ in Trench 57 represent the remains of coal or storage cellars [443], [444] and [446] belonging to mid to late 18th-century range along the south side of Whitehall Palace with Type 3 mortar. Finally structures associated with Pelham House [503] and [504] also have this same fabric type.

### *3046*

The next most common, an earthy, sandy red 3046 (51 examples 32kg) has chaff fragments and resembles Tudor bricks only in their colour. Here, the sandy content is augmented with small, very scattered clinker inclusions. They are of a compact standard size, much thicker (60-62mm) and narrower (95-102mm) than the Tudor type with occasional sunken margins and crinkly texture which may be earlier versions, [41]. These bricks, which were manufactured between 1600 and 1700, cluster in three areas. First in Trenches 4, 13 and 20 at the corner of King Charles Street and Whitehall, these bricks are mainly reused in 19th-century cellar walls [43], [44] and [47] or 17th- to 19th-century dumps [29] with a T3 mortar (see below). Then a group of trenches on the west side of Whitehall in the area of Whitehall Palace - Trench 36 (as well as Trenches 41-44 and 50-52) including their use in 17th-century stone walls [168], [377] and [395]. They turn up in 17th-century drain culverts [119] and [131] and a 17th-century floor surface [118] which may have formed part of Whitehall Palace

### *3032nr3033*

Transitional between the red 3046 and 3032 is the hard maroon 3032nr3033 (1664-1725) found associated with 3046 bricks and 3032R especially in 17th- and 18th-century walls, dumps and culverts [38], [131] and [157].

## **Roofing**

All the post-medieval roofing material recovered was ceramic building material, either peg or the later curved pan tiles. Quantities are small (10kg) as against the brick (80kg) from this phase perhaps reflecting the preference for building material retention from the numerous cellar structures rather than demolition layers and pit fills.

### **Peg Tiles 54 examples 6.5kg (1450-1800)**

2271 (1180-1800); 2276 (1480-1900); 2586 (1180-1800); 3090 (1180-1800)

A sizeable part of the roofing assemblage consists of later post-medieval unglazed peg tile (1480-1900). However, it is possible given the long date ranges of certain fabric types especially 2271, 2586

(both 1180-1800) and 2276 (1480-1900) that some of the assemblage could be earlier medieval or Tudor. There is a group of 17th-century demolition deposits from Trenches 36; 50 and 52 on the western side of Whitehall close to the boundary wall [157] [316] [396] which account for a majority of the assemblage. These may relate to the destruction of Whitehall Palace or an earlier 17th-century phase of renovation

Dominant amongst them is the common sandy 2276 which in 17th-century contexts e.g. [124] and [127] has coarse moulded sand and a ridge, which may be diagnostic of earlier Tudor roofing of Whitehall Palace. In these layers are earlier 2271 and iron oxide rich 2586 and 3090. One object of interest is the diamond shaped antefix tile from a 17th-century dump from Trench 36 [396] which requires illustration.

### **Pan Tile 11 examples 3.3kg**

Sandy Fabric 2279 (1630-1850)

A small assemblage of fresh later pan tile (1630-1850) was identified in Trenches 36 [163] and 52 [316] and [322] in 17th-century demolition layers and pits on the west side of Whitehall between Richmond Terrace and Whitehall Place. These may have been used to roof the 17th-century St James Palace.

### **19th-20th century bricks**

Machine frogged (post-1850) construction and kiln bricks concentrate in small quantities in 19th-century culvert and cellar rebuilds of the terraced housing along the east side of Parliament Street and Whitehall Court. These were the latest changes to these properties prior to their demolition for the construction of the government buildings of Whitehall and the Ministry of Defence.

3035 (1850-1940) 3 examples 4755g [3] [15] [363]

3034nr3035 (1850-1900) 2 examples 4410g [7] [67]

3261 (1805-1950) 2 examples 5490g [3] [35]

3035

Frogged, yellow London stock was used in the 19th-century rebuilds of vaulted cellars [3] from Trench 1 and brick wall [15] in Trench 9. In addition, they were observed in-situ in foundation wall repairs from Trench 57 [458] part of the late 19th- or early 20th-century terraced housing front Whitehall Court. Type 2 mortar is characteristic of this brick type. Although an example of a coarse Roman cement (patented after 1800) (Type 4) is present in [363].

3034nr3035 (1850-1900)

Machine frogged post-Great Fire bricks 3034 with 3035 yellow streaks appear in small quantities along the east side of Parliament Street and Whitehall in Trench 1 [3] and Trench 23 [67]. They have

a narrow date range of 1850-1900 which fits in with their use in the latest cellar constructions and rebuilds prior to the construction of the Government buildings.

3261

Kiln bricks which were manufactured from high aluminum clays of the Coal Measures are highly refractive and have been suitable for kilns, fireplaces and furnaces since the mid 19<sup>th</sup> century. Two stamped examples were identified. One example, from [3], is glazed and stamped *FARNLEY IRON COMPANY LEEDS*. This Yorkshire company started producing bricks from 1846 and continued through to 1945. The example from the brick rebuild to a vaulted cellar in Trench 1 would have been no later than 1910 prior to the building of the Whitehall Government Building Complex.

A second kiln brick from Trench 13 [35] was stamped *RUFFORD STOURBRIDGE*, which would have been manufactured from Coal Measure clays of the South Staffordshire Coal field. The company which begun manufacturing kiln bricks during the 19th century ceased production in 1933. Given the fresh lettering and little evidence of use a date of between 1890 and 1933 would seem reasonable.

Both bricks are bonded using a hard Portland cement (Type 2) which was patented only after 1840

### Mortar Review

A review of the mortar type, description and distribution are summarised below. The dominant mortar type (T3) and its association with 3032 and 3046 bricks reflects the post-medieval expansion of this part of Whitehall. Type 3a is very difficult to distinguish from Type 3, due to weathering but it is possible that the latter are associated with 3046 while the slightly harder mortar is typical of mid 18th- to 19th-century construction.

Mortar/Concrete Type	Description	Use at WQH07
Early Lime Mortar T1	Soft white – light brown mortar with chalk fragments	16th- and 17th-century bricks. Primary lime mortar often repointed with T3 in reused bricks. [163] [177]
Portland T2 Patented 1840s	Hard dark grey concrete type clinker inclusions	Adhered to Kiln bricks and yellow London bricks both 19th century from [3] [15] [35]
Grey Shelly Clinker Mortar T3 White Shelly brick Mortar T3a	Slightly harder light grey shelly mortar with flecks of charcoal (clinker) and red/purple brick. Large complete bivalves and gastropods estuarine origin	Possibly in 17th-century wall but certainly associated with mid 18th to early/mid 19th-century cellar walls of housing along Whitehall (1750-1850) prior to construction of the Government Offices at Whitehall. Intonaco Back of plaster [307]  A sub-type (3a) cream-white brick

		mortar with large quantity of shell was produced from a similar recipe but without clinker. Very subtle difference in colour to T3 and only evident in two 3046 bricks [163]
Roman fine and coarse patented 1800  T4	Coarse very homogeneous brown sandy mortar	Associated with Machine London Stock [363] 19th century
Gravel cement T5	Hard concretionary brown gravel cement with inclusions of 3032 and 3033 brick, coal, glass typical	Gravel cement (1880) onwards [392]
Brown sandy mortar T6	Medieval type mortar adhered	Associated with a single brick 3046 [29]

## Stone

The stone assemblage contains some very large reused ashlar and moulded stone blocks especially the post-medieval stone Privy walls from Trench 36 [354] and [393] adjoining Whitehall Palace.

Sandstone, calcareous sandstone, silicified rocks

3105 Kentish ragstone – Lower Cretaceous (Lower Greensand) Maidstone Kent

3107 Reigate stone – Lower Cretaceous (Upper Greensand) Mertsam-Reigate Surrey

3129 Laminated Sandstone – probably Wealden source

3117 Flint – Upper Cretaceous (Chalk) Thames Basin

3120 York stone – Upper Carboniferous Yorkshire

3120 Fine grained yellow micaceous sandstone – source unknown one possibility Permian sandstone from Yorkshire

Limestone

3109 Fine Bath Combe Down Oolite – Middle Jurassic (Bathonian) Bath/Box/Corsham Avon

3109 Taynton stone – Middle Jurassic (Bathonian) West Oxfordshire

3110 Portland Whit Bed, Portlandian Upper Jurassic, Isle of Portland Dorset

3132 Purbeck limestone– Purbeckian (Lower Cretaceous) Isle of Purbeck, Dorset

3116 Chalk – Upper Cretaceous Thames Basin

Other sedimentary

3120 Kimmeridge Oil Shale – Upper Jurassic (Kimmeridgian) Dorset

Igneous and Metamorphic

3120 Westmoreland Slate Silurian Lake District

3114PM Carrara Marble, Tuscany, Italy

### Geological summary

This suite of rocks is not typical of the medieval grouping seen elsewhere in Westminster e.g. Deans Yard (Hayward 2010). There are important components of the medieval suite that are missing especially Caen stone and Purbeck marble. The preference for using golden yellow Bath stones (Combe Down oolite and Taynton stone) alongside white Portland stone is a post-medieval phenomena, certainly in ecclesiastical structures (e.g. Wren's St Pauls; Campbell 2007, 91) where the two-tone contrast was important. Certainly this would have been a feature in the Jacobean alterations of the palace. Furthermore, there is a yellow micaceous sandstone [354] that resembles Caen stone but only in hand specimen. These sandstones are used in ashlar blocks and cornice mouldings and are certainly a post-medieval material. One geological source could be the Permian sandstones of Yorkshire/Nottinghamshire e.g. Tadcaster used in Wren's St Paul's (Campbell 2007, 91) and the source of most of the rock from the 19th-century House of Commons. Purbeck limestone paving [354] [392] used in the Privy Walls may have been an important flooring material at Whitehall. This was extracted from the cliffs around Seacombe and St Alban's Head on the Isle of Purbeck (Stanier 2000) and shipped into London probably with vast quantities of Portland stone, from further along the Dorset from the Isle of Portland.

Rocks quarried locally, (also a feature of medieval assemblages e.g. Dean's Yard (Hayward 2010)) such as chalk, flint, Kentish ragstone and Reigate stone<sup>2</sup> are not particularly abundant, and indeed chunks of Kentish ragstone turn up in Saxon pit [196]. Also of interest in this feature is a laminated "Wealden" sandstone used for roofing in London after AD 250 and an unusual yellow-cream limestone or calcareous sandstone adhered to some *opus signinum* and reused in a post-medieval feature [168]. Please refer to the recommendations section for further analysis of these materials.

Post-medieval materials are represented by Kimmeridge Oil shale [316], Westmorland Slate [392] and sawn York stone paving [46]

Completing the range of material types is an ornate Carrara marble fresh moulding from [316]. The moulding, probably a cornice, may well have been used to embellish Whitehall Palace. White marble is another stone type to become popular during the 17th century.

### Function

In terms of stone use there are two key features of this assemblage

- a) The dominance of architectural material of high quality
- b) The absence of ecclesiastical elements but the dominance of fresh ashlar and cornice material associated with secular palace building in the 16th and 17th century.

---

<sup>2</sup> Although a large reused block (bonded with 19th-century Portland cement) of Reigate stone was identified in supporting the collapsed cellar of a 19th-century terraced house [448]. Reigate stone production for architectural purposes slumped after 1538.



Combined with the material types it is clear that a large majority of the architectural stone from the 17th-18th-century Privy Garden Wall and reused along the perimeter derives from Whitehall Palace presumably much of it being reused after the catastrophic fire of the 1690s.

The following pieces merit special attention especially with regard to their architectural style

- Taynton stone and Yellow Micaceous sandstone cornices [354] and a large Portland stone element [377].
- Fresh Combe Down oolite and Taynton stone ashlar from [354]
- Carrara marble fresh cornice element [316].

## Phase Summary

### Saxon

Small quantities (4.5kg) of Roman brick, opus signinum, roofing stone and rubble were recovered from Saxon pits [166], [168] and [196] in Trench 44. The presence of stone roofing tile (introduced after AD 250), mid Roman fabrics (AD 120-250) and opus signinum (used after AD100) would all indicate a later Roman group perhaps recycled from Roman dumps used to consolidate/reclaim land on Thorney Island (Hayward 2010).

### Medieval

Medieval material is also rare, with small quantities of the peg tile fabric 2587 (1240-1450) [157] and a glazed sandy floor tile 2320 [109] Trench 36 and some unstratified Penn tile 3076 (1350-1390) from Derby Gate (Trench 32/33). Stone types that typify medieval buildings in the vicinity e.g. Dean's Yard (Hayward 2010) are also poorly represented. Some degraded Reigate and Kentish rag ashlar is present in early post-medieval contexts but this may represent material from a later Tudor phase of building. Nothing was recorded from medieval contexts around Whitehall.

### Tudor/Jacobean

An upsurge in ceramic building material recovered from the excavations that date from 1450 to 1600 is of particular note and may well reflect the very close proximity of Whitehall Palace to the excavated areas. Large Tudor bricks are however, rare with examples from Trench 36 [163], and 54 [177]. More common are smaller sandier 17th-century red bricks 3046 (1600-1700) present in trenches on the west side of Whitehall in the area of Whitehall Palace - Trench 36 (including Trenches 41-44; 50-52) including their use in 17th-century stone walls [168], [377] and [395]. They turn up in 17th-century drain culverts [119] [131] and a 17th-century floor surface [118] which may have formed part of Whitehall Palace. Mortar Type 1, the soft white group, are associated with these bricks. The reuse of fresh architectural stone including materials such as Portland Whit Bed, Taynton stone, Bath stone and white marble, typical of Tudor/Jacobean constructions, with these 17th-century bricks in stone

walls would indicate that all these materials originate from 17th-century repairs to Whitehall Palace or a contemporary structure nearby.

### 18th/19th-century terraced housing

This phase is marked by fresh consignments of post-Great Fire brick bonded in a dark-grey mortar in the area of Parliament Street and Whitehall Place. The cellar walls of 18th-century terraced housing fronting Parliament Square particularly in Trench 4 [8], Trench 9 [15], Trench 13 [27] and Trench 14 [37] and [38]. The next grouping observed in-situ from Trench 57 represent the remains of coal or storage cellars [443], [444] and [446] belonging to mid to late 18th-century range along south side of Whitehall Palace. Later modifications in frogged yellow London bricks 3035 and Kiln bricks indicate continued habitation of these structures right up to their clearance to make way for the government buildings in 1910.

### Distribution (bold italics in-situ recording only)

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date
3	3261 3035 3101 T2	Machined, frogged glazed kiln brick Farnley Iron Co. Leeds Portland cement	3	1780	1940	1850	1950	1880-1920
7	3109 3034 3032 3101 T3	Taynton stone medieval, post great fire bricks one machine frogged T3 mortar	3	1050	1900	1750	1900	1850-1900
8	3032 3101 T3	Unfrogged post great fire brick T3 mortar	1	1664	1900	1664	1900	1750-1850
9	3032 3101 T3	Unfrogged post great fire brick T3 mortar	1	1664	1900	1664	1900	1750-1850
15	3032 3035 3101 T3	Unfrogged post great fire bricks and yellow London stock brick T3 mortar	3	1664	1940	1780	1940	1780-1850
21	3032 3035 3046 3101 T3	Unfrogged post great fire, 17th century and yellow London stock T3 mortar	3	1600	1940	1780	1940	1780-1850
22	2586	Peg Tile fine moulded sand	1	1180	1800	1180	1800	1600-1800
27	3032 3101 T3	Unfrogged post-Great Fire brick	1	1664	1900	1664	190	1750-1850
29	3046 3101 T6	Early post-medieval brick early sandy mortar	1	1600	1700	1600	1700	1600-1700
31	3033	Reused Tudor	2	1450	1900	1664	1900	1750-1850

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date
	3032 3101 T1 3101 T3	brick and fresh post-Great Fire brick 2 mortars						
34	2276	Post-medieval peg tile fine mould sand	2	1480	1900	1480	1900	1700-1900
35	3261	Kiln brick stamped Rufford tourbridge	1	1850	1950	1850	1950	1850-1920
37	3032 3101 T1 3101 T3	Post-Great Fire brick reused 2 mortars	1	1664	1900	1664	1900	1750-1850
38	3032R 3032nr3033 3101 T1 3101 T3	Early post-Great Fire brick and intermediate fabric reused 2 mortars	2	1664	1900	1664	1900	1750-1850
41	3046 3101 T1 3101 T3	17th century reused 2 mortars	1	1600	1700	1600	1700	1750-1850
43	3046 3101 T3	17th century reused only T3 visible	1	1600	1700	1600	1700	1750-1850
44	3046 3032 3101 T1	17th century and post-Great Fire only T1 visible	2	1600	1900	1664	1900	1664-1750+
46	3120	York Stone Paving no mortar	1	1700	1900	1700	1900	1800-1900
47	3032 3046 3101 T1 3101 T3	17th century and post-Great Fire reused 2 mortars	2	1600	1900	1664	1900	1750-1850
49	2276	Early ridged Peg Tile	3	1480	1900	1480	1900	1480-1700
51	2276	Reused Peg Tile in Type 5 gravel cement	3	1480	1900	1480	1900	1880-1900
52	3032nr3033	Reused Transitory maroon brick in Type 3 mortar	1	1664	1725	1664	1725	1750-1850
57	3032	Frogged post-Great Fire brick in a coarse Roman quartz like cement	1	1750	1900	1750	1900	1800-1900
59	2276	Early Peg Tile	2	1480	1900	1480	1900	1480-1700
60	2271	Peg tile glazed medieval	1	1180	1450	1180	1450	1180-1450
62	3046 3101 T3	17th-century brick Reused	1	1600	1700	1600	1700	1750-1850
63	3034R 3101 T3	Red post-Great Fire brick	1	1664	1900	1664	1900	1750-1850
67	3034 3101 T4	Frogged post-Great Fire brick Roman cement	1	1850	1900	1850	1900	1850-1900
109	3090	Med to early	5	1180	1900	1480	1700	1600-1700

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date
	2320 3046 2276 3101T1	post-med peg tile; Medieval Floor Tile, 17th-century brick						
115	3046 2276 3101 T1	Reused 17th-century brick; peg tile Type 1 mort	4	1480	1900	1480	1900	1600-1700+
117	3046 3032 3110 3101 T3	17th century and post great fire Portland cornice type 3 reused	5	1450	1900	1664	1900	1750-1850
118	3046 T3A	17th century brick	1	1600	1700	1600	1700	1600-1700+
119	3046 3101 T3A	17th century brick	2	1600	1700	1600	1700	1600-1700+
124	2276 3046 3101 T3	17th century brick and peg tile reused T3	4	1480	1900	1480	1900	1750-1850
125	3032 3034 3046 3101 T3	Post-Great Fire and 17th century Type 3 mortar	5	1600	1900	1664	1900	1750-1850
127	3032 2276 3046 3101 T3	Peg tile and post-Great Fire brick	5	1480	1900	1664	1900	1750-1850
129	3046 3101 T3a	17th century brick	1	1600	1700	1600	1700	1600-1700+
130	3107 3101 T1	Reigate stone white mortar	4	1050	1660	1060	1660	1500-1700+
131	3032nr3033 3046 3032R	Intermediate, early post-Great Fire and 17th century	7	1600	1900	1664	1900	1664-1750+
157	3032NR3033 3046 3032r 2271 2276 2587 3090	Intermediate, early post-Great Fire and 17th century early post-medieval peg tile and medieval peg tile	15	1180	1900	1664	1900	1600-1700
158	3034 3046 3101 T1 3101 T3	Early post med and 17th century brick reused	3	1600	1900	1664	1900	1750-1850
160	3032 3101 T3	Reused Post-Great Fire brick	1	1664	1900	1664	1900	1750-1850
161	3120	Fine yellow micaceous sandstone ashlar could be Permian	1	1500	1900	1500	1900	1600-1900
162	3032 2586 3101t1	Early post-Great Fire brick and peg tile	4	1180	1900	1664	1900	1664-1800+
163	3033 2279 2276	Reigate stone pan tile, Tudor brick and 17th	5	1050	1900	1630	1850	1750-1850

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date
	3046 3107 3101 T1 3101 T3	century brick peg tile some reuse T3						
166	2459C 3104 3105	Mid Roman brick and opus signinum Part worked Kentish ragstone ashlar	2	50	1666	100	1666	120-400
168	3046 3120 3107 3104	17th century brick; Yellow Limestone and Reigate stone former has op. sig. Attached	3	100	1700	1600	1700	1600- 1700+
177	3033 3101 T1	Tudor brick	2	1450	1700	1450	1700	1450-1700
179	2276 3120 3046 3032nr3033 3101 T3	Reused peg tile, 17th century and intermediate brick Kimmeridge Oil shale	6	1480	1900	1480	1900	1750-1850
183	3046 3101 T3	Reused 17th century brick	1	1664	1725	1664	1725	1750-1850
184	1977	Flemish Floor Tile Glazed	1	1450	1600	1450	1600	1450- 1600+
185	2276	Early chaff tempered early post-med peg tile	1	1480	1900	1480	1900	1480- 1700+
196	3104 3129	Fine laminated sandstone possibly roofing <i>opus signinum</i>	2	100	400	250	400	250-400
201	3034 3101T3	Post-Great Fire Brick	1	1664	1900	1664	1900	1750-1850
202	3033 3046 3101T3	Reused Tudor and 17th century brick	2	1450	1700	1600	1700	1750- 1850+
275	2587	Medieval peg tile	1	1240	1450	1240	1450	1240-1450
302	3034nr3035	Frogged post- Great Fire brick	1	1664	1900	1664	1900	1850-1900
307	3100 Type 3 mortar 3120	Plaster Attached Mag Ist	1	1400	1900	1400	1900	1750-1850
316	2276 2271 1977 2279 3120 3101 T1 3110 3112PM	Early post med peg tile and pan tile, Glazed Flemish Tile, Kimmeridge shale Very fine Carrara Marble cornice high quality, block of Portland masonry	28	1180	1900	1480	1900	1630-1750
321	3110	Portland Cornice	1	1630	1900	1630	1900	1630-1700
322	2279	Pan Tile	1	1630	1850	1630	1850	1630-1850

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date
323	3100 3033 3101T1	Painted wall plaster and Tudor Brick	2	1450	1700	1450	1700	1450-1700
346	3032nr3033 2276 3101t1	Intermediate peg tile White mortar	5	1480	1900	1480	1900	1664-1750
354	3132 3109X3 Combe Down Oolite 3109x 2 Taynton Stone 3120X2 3107x1 3105 3101 T3	Purbeck Limestone Paving Reused KR rubble, Fine yellow micaceous sandstone Bath stone (Combe Down Oolite) and Taynton stone in a soft white grey clinker inclusion mortar	9	1450	1900	1450	1900	1750--1850
363	3035 3032 3101t4	Frogged Yellow brick and post-Great Fire brick Roman cement	3	1664	1940	1780	1940	1850-1940
367	3032 3120 3101 T3	Post-Great Fire brick York stone paving	4	1664	1900	1700	1900	1750-1850
369	2276 3101 T1	Peg tile	1	1480	1900	1480	1900	1480-1700
376	3032	Post-Great Fire brick	2	1664	1900	1664	1900	1664-1850
377	3110	Portland whit bed cornice	1	1600	1900	1600	1900	1600-1800
378	3063	Tin Glaze wall Tile	1	1600	1800	1600	1800	1600-1800
381	2276	Early post-med Peg Tile	2	1480	1900	1480	1900	1480-1700
383	3116	Chalk Rubble prob Ashlar	1	50	1900	50	1900	1400-1800
389	3032 3101 T3	Post-Great Fire Brick T3 mortar	4	1664	1900	1664	1900	1664-1850
390	3032 3101 T3	Reused post-Great Fire Brick	2	1664	1900	1664	1900	1664-1850
392	3032 3120 3132 3101 T5	Post-Great Fire, Westmorland Slate Roofing and Purbeck limestone paving reused Gravel mortar	4	1664	1900	164	1900	1870-1900
393	3105 3107 3120 3101 T3 3110	Reused masonry blocks of Fine yellow micaceous stone; Reigate stone and Kentish Ragstone; large Portland cornice in shelly brick	6	50	1900	1050	1900	1750-1850

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date
		mortar						
395	3046 3101 T3	Reused 17th century brick	1	1600	1700	1600	1700	1750-1850
396	2850	Unglazed Flemish Tile Antefix Peg Tile	3	1600	1850	1600	1850	1600-1850
397	3100 3101 T1 3117 3032	Tiny fragments of plaster Post-Great Fire Brick Flint Type 1 Mortar	32	50	1900	1664	1900	1664-1850
443	3032 3034 3101 T4	Frogged Post-Great Fire Roman Cement	1	1664	1900	1664	1900	1800-1900
444	3032 3034 3101 T4	Frogged Post-Great Fire Roman Cement	1	1664	1900	1664	1900	1800-1900
446	3032 3034 3101 T4	Frogged Post-Great Fire Roman Cement	1	1664	1900	1664	1900	1800-1900
448	3107 T2	Reigate stone reused in Portland cement	1	1050	1660	1050	1660	1840-1900
458	3035 3101 T5	Yellow London Stock brick Gravel cement	1	1780	1940	1780	1940	1880-1940
491	3033 3032 T3 3101	Tudor and post-Great Fire reused in T3	2	1450	1900	1664	1900	1750-1850
498	3032 3033 T3 3101	Tudor and post-Great Fire reused in T3	2	1450	1900	1664	1900	1750-1850
500	3032 3034 T3 3101	Post-Great Fire brick reused in T3	2	1664	1900	1664	1900	1750-1850
501	3033 3032 T3 3101	Tudor and post great fire reused in T3	2	1450	1900	1664	1900	1750-1850
503	3046 3032	17th C and post-Great Fire reused in T3	2	1600	1900	1664	1900	1750-1850
504	3046 3032	17th C and post-Great Fire reused in T3	2	1600	1900	1664	1900	1750-1850
515	3033	Tudor brick	1	1450	1700	1450	1700	1450-1700

## Summary

- The character of the building material assemblage recovered along Whitehall, Whitehall Place and Parliament Street from the 19 excavated trenches revealed that cbm and stone is dominated by post-medieval types and forms. This is not surprising given the proximity of Whitehall Palace but also the substantial 18th- and 19th-century housing along Parliament Street and Whitehall Place.

- Important too are the varieties of stone types (14) showing the draw on stone resources that a major Elizabethan and Jacobean palatial residence would have required (including subsequent repairs, alterations and extensions). Material as diverse as marble from Carrara, varieties of Bath stone from the Cotswolds and limestone from the Dorset Coast (Portland Whit Bed; Purbeck Limestone) and a possible sandstone from Nottinghamshire have all being used to embellish this important structure. Tudor red brick and later a narrower sandy red brick would have been in its embellishment
- Notable is the dearth of medieval ecclesiastical building material especially Caen stone and Purbeck marble perhaps indicating that fresh consignments of stone were being brought in. Ceramic floor tiles and roofing are also conspicuous by their absence.
- The mouldings and ashlar are also diagnostic of a secular rather than an ecclesiastical building.
- Following the destruction of Whitehall Palace in the 1690s, recycling of the above material types became important especially along the Privy boundary wall and associated structures bordering the old Palace. The Palace would have been one large quarry of high status material.
- The character of the building material assemblage used for 18th- and 19th-century terraced housing along Parliament Street and Whitehall Place consisted of some recycled Tudor/Jacobean material but the rest is an unremarkable group of post-Great Fire bricks and roofing tile bonded in 18th- to 19th-century cements. The presence of very late 19th/early 20th-century kiln bricks from Stourbridge and Leeds in the cellars of these buildings suggests that occupation continued right up to their demolition to make way for the government buildings of the Ministry of Defence and Whitehall.

## Recommendations

### a) Retention

The following recommendations proposed:

- Keep all glazed patterned tile (Penn; Flemish Floor Tile)
- Keep all Roman material
- Keep selected examples of moulded stone for inclusion as illustrations at the publication stage
- Keep the antefix roofing element and other ceramic building material with diagnostic markings e.g. Kiln brick stamps.

Discard the remainder (c.60%) as there is a lot of reused poorly made very common post-Great Fire brick, broken up Jacobean brick and later peg tile and pan tile used in the 18th/19th century. Thick



mortar (15mm) covers much of the degraded ashlar and mouldings making stylistic interpretation impossible. Only the better examples need to be retained.

#### **b) Significance**

This assemblage contains a number of items of interest that may require further research and comparison.

- The moulded stone assemblage provides a good example of the type and form of architectural stone used in an important Tudor and Jacobean secular palace in London.
- Illustrations are required of the key pieces of monumental stone
- Some possible analytical work and research into fresh consignments of building material (brick and stone) used in Elizabethan/ Jacobean palatial properties, e.g. comparative thin-section and or geochemical analysis needs to be taken on the yellow micaceous sandstone so prevalent in the ashlar and mouldings of the privy garden wall to determine whether this is a Yorkshire sandstone or if it comes from another source.
- Identify the type of Penn Tile

A section on building materials should be included in a forthcoming publication incorporating the results of the analytical work.

#### **Bibliography**

Campbell, J.W.P., 2007. *Building St Paul's*. Thames & Hudson.

Eames, E., 1980. *Catalogue of medieval lead-glazed earthenware tiles in the Department of Medieval and Later Antiquities* British Museum, London.

Hayward, K.M.J., 2010. Building Material assessment in P. Jorgensen *Assessment of an Archaeological Excavation in the Northwest Corner of Dean's Yard, Westminster Abbey, City of Westminster*. PCA unpublished report.

Stanier, P., 2000 *Stone Quarrying Landscapes*. Tempus Publishing

Thurley, S., 1999. *Whitehall Palace: an architectural history of the Royal Apartments, 1240-1698*. Yale University Press, New Haven and London.

## APPENDIX 8: ENVIRONMENTAL SAMPLE ASSESSMENT

### K. Le Hégarat & L. Allott

*Quaternary Scientific (QUEST), School of Human and Environmental Sciences, University of Reading, Whiteknights, PO Box 227, Reading, RG6 6AB, UK*

### INTRODUCTION

This report summarises the findings arising out of the detailed environmental archaeological assessment undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development at Whitehall, Streetscape. During an archaeological excavation at the site, undertaken by Pre-Construct Archaeology Ltd (PCA), bulk soil samples of 10 to 20 litres were collected to establish the presence of environmental indicators as well as artefact remains and assess their potential to provide information relating to the exact nature and date of the features and deposit sampled, as well as information that could help clarify their post-depositional and sedimentary history. Flots from seven bulk samples as well as charred plant remains (principally charcoal) from the residues from six samples were submitted for assessment. Samples originated from six distinct contexts, four of which were fills of pits. The other two contexts consisted of layer [179] and the fill [300] of a palaeochannel.

### METHODS

Contents of the residues were weighed and recorded (Table 1). Flots were scanned under a stereozoom microscope at x7-45 magnification and an overview of their contents recorded (Table 2). Abundance and preservation of the macrobotanicals have been recorded to establish their potential for further analysis. Charcoal fragments from four samples were fractured following standardised procedure (Gale and Cutler 2000) and viewed under a stereozoom microscope for initial sorting and an incident light microscope (at 50, 100, 200 and 500x magnification) to enable identification. Preliminary identifications of macrobotanical remains and charcoal have been made using modern comparative material in reference texts (Cappers et al 2006, Hather 2000; Schoch et al 2004; Schweingruber 1990; NIAB 2004) and nomenclature used follows Stace (1997).

### RESULTS AND INTERPRETATION OF THE MACROSCOPIC PLANT REMAINS ASSESSMENT

With the exception of sample <5>, the flots contained high proportions of uncharred material including sediment, uncharred woody debris comprising highly comminuted bark and twig fragments, fibrous plant matter, fruiting structures (birch (*Betula* sp.) and maple (*Acer* sp.)), fine modern roots as well as infrequent uncharred seeds such as knotgrass/dock (*Polygonum/Rumex* sp.), probable stitchworts (cf. *Stellaria* sp.), redshank (cf. *Persicaria maculosa*), cinquefoil (cf. *Potentilla* sp.) and seeds from the goosefoot and pink (Chenopodiaceae and Caryophyllaceae) families. Sufficiently moist conditions at the time of burial combined with an anoxic burial environment, such as sealed deposits or a high water table, can ensure the survival of uncharred vegetation. The palaeochannel, from which sample <8> was extracted, could have been favourable to such preservation; however, the small flot (<2ml) was devoid of uncharred seeds and fruits. Samples <1>, <2>, <3>, <4> and <7> from pit fill contexts

[164], [155], [166] and [196] were taken from loose silty sand and coarse sandy silt deposits recorded as moist and not waterlogged. The absence of anoxic and waterlogged conditions suggests some post-depositional disturbances within the deposits, which in turn suggests that the uncharred seeds and fruits are most likely modern or relatively recent contaminants.

Small quantities of charcoal were recovered from the residues of six samples with slightly richer assemblages evident in samples <3>, <4>, <5> and <7> and with the exception of sample <5> very few additional fragments were recorded in the flots. Small quantities of oak (*Quercus* sp.), hazel/alder (*Corylus/Alnus* sp.) and ash (*Fraxinus excelsior*) were present in samples <3> and <4> from the fill [166] of pit [167]. Sample <5> from burnt debris deposit [179] produced a moderate assemblage of pine (*Pinus* sp.), oak (*Quercus* sp.) and hazel/alder (*Corylus/Alnus* sp.) while oak was the only taxon recorded in charcoal from the fill [196] of pit [197].

Although the samples contained a moderate assemblage of wood charcoal fragments, charred macroplants were confined to a small quantity of highly fragmented shell pieces suggestive of hazelnut (cf. *Corylus avellana*) recovered from the residue from sample <7>. With the exception of a small amount of land snail shells in the flot from sample <5> no other biological remains were recorded.

**Table 1: Residue quantification (\* = 1-10, \*\* = 11-50, \*\*\* = 51-250, \*\*\*\* = >250) and weights in grams, Whitehall, Streetscape, London (site code: WHQ07)**

Sample Number	Context	Context / deposit type	Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)
1	164	Fill of pit [165]	20						
2	155	Fill of pit [156]	20	*	<2	**	<2		
3	166	Fill of pit [167]	10	**	<2	**	<2		
4	166	Basal fill of pit [167]	20	**	2	**	<2		
5	179	Layer/deposit [179]	20	***	66	***	<2		
7	196	Fill of pit [197]	20	***	14	**	2	cf. <i>Corylus avellana</i>	< 2
8	300	Palaeochannel	10			*	<2		

**Table 2: Flot and charcoal quantification (\* = 1-10, \*\* = 11-50, \*\*\* = 51-250, \*\*\*\* = >250) and preservation (+ = poor, ++ = moderate, +++ = good), Whitehall, Streetscape, London (site code: WHQ07)**

Sample Number	Context	Weight g	Flot volume ml	Uncharred %	Sediment %	seeds/fruits Uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Land Snail Shells
1	164	4	4	90	10	** <i>Polygonum/Rumex</i> sp., cf. <i>Stellaria</i> sp., cf. <i>Potentilla</i> sp., <i>Acer</i> sp., unid. seeds				
2	155	10	4	39	60	* <i>Polygonum/Rumex</i> sp., unid. seed			*	
3	166	5	5	60	30	* unid. fruiting structure		*	**	
4	166	6	4	75	25	* Chenopodiaceae, Caryophyllaceae, cf. <i>Persicaria maculosa</i> , unid. seed				
5	179	16	48	49	8	* <i>Acer</i> sp.	**	**	***	** 8% 3 types
7	196	9	7	30	40	* <i>Betula pubescens</i> , unid. seed	*	*	***	
8	300	4	<2	55	38			*	*	

## **SIGNIFICANCE AND POTENTIAL**

The assessment has confirmed the presence of limited charred plant remains including a moderate assemblage of wood charcoal fragments, scarce charred macrobotanicals and infrequent land Mollusca. However, there was a general paucity of charred macrobotanical remains consisting only of infrequent fragmentary nutshell pieces and the assemblage is too limited to provide significant information about either the local vegetation or to enable interpretations regarding the functions of the pits or site formation process.

Assessment of charcoal was specifically aimed at identifying material suitable for dating (from contexts [166] and [196] in particular). Much of the charcoal assemblage consists of oak wood which is not considered ideal for dating due to its potential longevity, however hazel/alder fragments in sample <3> could be used to provide a date for charcoal within pit feature [167]. Many of the pine, oak and hazel/alder fragments present in burnt deposit [179] originate from fairly slow grown mature wood specimens although some may equally be from moderately sized branches or stems. During sampling it was postulated that this layer may have formed when Whitehall Palace was burnt and it is entirely possible that some of these charcoal fragments are from timbers used in construction. In the absence of other evidence to date this deposit hazel/alder charcoal could be submitted particularly if the deposit was well sealed. Prior to submission it would be necessary to locate smaller, short lived roundwood within the assemblage as so far only wood from larger, possibly mature timbers that should be avoided has been identified. It should also be noted that significant quantities of uncharred vegetation within the majority of samples may indicate post-depositional disturbances and movement which may in turn negate the suitability of charcoal for dating.

## **RECOMMENDATIONS**

The assemblage of charred macrobotanical remains is too small and poorly preserved to warrant any further analysis. Charcoal in sample <5>, [179] is sufficiently well preserved for further analysis to examine the full composition of the assemblage to assist in interpreting the likely origin of this deposit and its association with the palace.

## **REFERENCES**

- Cappers, R.T.J., Bekker R.M. & Jans J.E.A.. 2006. *Digital Seed Atlas of the Netherlands*. Groningen Archaeological Series 4. Barkhuis, Netherlands.
- Gale, R. & Cutler, D., 2000. *Plants in Archaeology*. Otley/London:Westbury/Royal Botanic Gardens, Kew.

NIAB, 2004. *Seed Identification Handbook: Agriculture, Horticulture and Weeds*. 2<sup>nd</sup> ed. NIAB, Cambridge.

Schoch, W., Heller, I., Schweingruber, F. H., and Kienast, F., 2004. *Wood anatomy of central European Species*. Online version: [www.woodanatomy.ch](http://www.woodanatomy.ch).

Schweingruber, F.H., 1990. *Anatomy of European woods*. Eidgenössische Forschungsanstalt für Wald, Schnee und Landschaft, Birmensdorf (Hrsg.). Haupt, Bern und Stuttgart.

Stace, C., 1997. *New Flora of the British Isles*. Cambridge University Press, Cambridge.

## APPENDIX 9: OASIS FORM

OASIS ID: preconst1-95561

### Project details

Project name Whitehall Streetscape Improvement Project

Short description of the project An archaeological watching brief undertaken by Pre-Construct Archaeology Ltd along Whitehall and adjoining streets in the City of Westminster between 2007 and 2010. The work was carried out as part of the Whitehall Streetscape Improvement Project commissioned by the City of Westminster. The investigation revealed Middle Saxon and possible Late Saxon pitting and a number of late medieval and post-medieval foundations. The walls that were revealed formed part of the kitchen and Chapel Royal of York Place and several parts of Whitehall Palace including parts of the Privy Gallery range, the Court Gate, the Privy Garden, King Street Gate and parts of a Gun Platform and Gun Battery. Following the destruction of the palace by fire in 1698 the area was rebuilt and several structures were recorded including parts of Pelham House Taylor House and Vanbrugh House. Other buildings were recorded which were built during the 19th century.

Project dates Start: 01-05-2007 End: 30-10-2010

Previous/future work No / Not known

Any associated project reference codes WQH 07 - Sitecode

Type of project Recording project

Site status (other) Area of Special Archaeological Priority

Current Land use Transport and Utilities 2 - Other transport infrastructure

Monument type PITS Early Medieval

Monument type PALAEOCHANNEL Early Medieval

Monument type PITS Medieval

Monument type WALL Medieval

Monument type WALL Post Medieval

Monument type PITS Post Medieval

Monument type CULVERTS Post Medieval

Significant Finds GLASS Early Medieval

Significant Finds POTTERY Early Medieval

Significant Finds CBM Roman

Significant Finds POTTERY Medieval  
Significant Finds CBM Medieval  
Significant Finds POTTERY Post Medieval  
Significant Finds GLASS Post Medieval  
Significant Finds CBM Post Medieval  
Investigation type 'Watching Brief'  
Prompt Direction from Local Planning Authority - PPG16

---

### Project location

Country England  
Site location GREATER LONDON CITY OF WESTMINSTER CITY OF  
WESTMINSTER Whitehall Streetscape Improvement Project  
Site coordinates TQ 3015 7996 51.5030712496 -0.124601710350 51 30 11 N 000 07  
28 W Point  
Height OD / Depth Min: 1.78m Max: 2.85m

---

### Project creators

Name of PCA  
Organisation  
Project brief Atkins Heritage  
originator  
Project design Atkins Heritage  
originator  
Project director/manager Chris Mayo  
Project supervisor Paw Jorgensen  
Project supervisor Rebecca Haslam  
Type of Local Authority  
sponsor/funding  
body  
Name of City of Westminster  
sponsor/funding  
body

---

### Project archives

Physical Archive LAARC  
recipient  
Physical Contents 'Animal Bones','Ceramics','Environmental','Glass','Human



Bones', 'Worked stone/lithics'

Digital Archive LAARC  
recipient

Digital Contents 'Animal Bones', 'Ceramics', 'Environmental', 'Glass', 'Human  
Bones', 'Worked stone/lithics'

Digital Media 'Images raster / digital photography', 'Spreadsheets', 'Survey', 'Text'  
available

Paper Archive LAARC  
recipient

Paper Contents 'Animal Bones', 'Ceramics', 'Environmental', 'Glass', 'Human  
Bones', 'Stratigraphic', 'Survey', 'Worked stone/lithics'

Paper Media 'Context  
available sheet', 'Drawing', 'Matrices', 'Photograph', 'Plan', 'Report', 'Unpublished  
Text'

---

**Project  
bibliography 1**

Publication type Grey literature (unpublished document/manuscript)

Title Assessment of an Archaeological Watching Brief During the  
Whitehall Streetscape Improvement Project, City of Westminster

Author(s)/Editor(s) Jorgensen, P.

Date 2011

Issuer or publisher Pre-Construct Archaeology

Place of issue or Brockley, London  
publication

Description Unpublished Report

---

Entered by Jon Butler (jbutler@pre-construct.com)

Entered on 1 April 2011

# PCA

PCA SOUTHERN

UNIT 54

BROCKLEY CROSS BUSINESS CENTRE

96 ENDWELL ROAD

BROCKLEY

LONDON SE4 2PD

TEL: 020 7732 3925 / 020 7639 9091

FAX: 020 7639 9588

EMAIL: [info@pre-construct.com](mailto:info@pre-construct.com)

PCA NORTHERN

UNIT 19A

TURSDALE BUSINESS PARK

DURHAM DH6 5PG

TEL: 0191 377 1111

FAX: 0191 377 0101

EMAIL: [info.north@pre-construct.com](mailto:info.north@pre-construct.com)

PCA CENTRAL

7 GRANTA TERRACE

STAPLEFORD

CAMBRIDGESHIRE CB22 5DL

TEL: 01223 845 522

FAX: 01223 845 522

EMAIL: [mhinman@pre-construct.com](mailto:mhinman@pre-construct.com)

