

Peterborough Cathedral

Bishop's Gate and No. 25 Minster Precincts

A Report on a Programme of Archaeological Observation and Recording.

Planning Reference Numbers: 13/00520/FUL & 13/00521/LBC
Scheduled Monument Consent Ref: S00058886
Archaeological contractor's Site Code: PCKC



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for Peterborough Cathedral
July 2017

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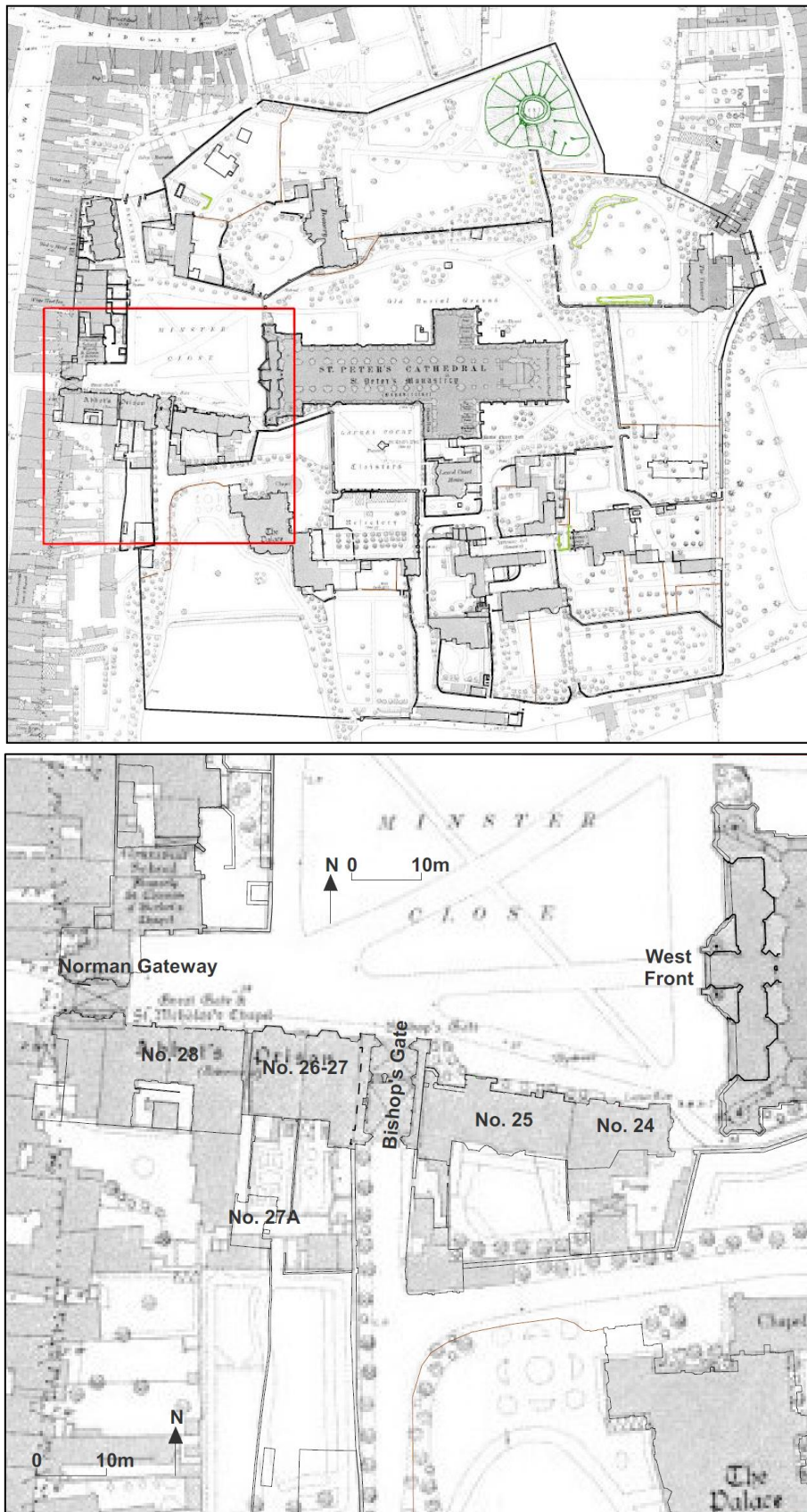


Figure 1
Site Location

Peterborough Cathedral

Bishop's Gate and No. 25 Minster Precincts

A Report on a Programme of Archaeological Observation and Recording.

1 Introduction

1.1 Summary

The programme of works which focused upon Bishop's Gate (Knights' Chamber) and the adjoining No. 25 Minster Precincts was supported by the Heritage Lottery Fund and aimed to provide a Heritage and Education Centre for visitors to the cathedral and to present previously inaccessible parts of the precinct buildings to the public. These aims have been achieved by refurbishing No. 25 and installing a lift to provide universal access to its upper floors, and by re-opening a doorway between the two buildings. These, and the associated repair and conservation works which largely focused upon the exterior of the Bishop's Gate, provided opportunities for archaeological investigation of parts of the two buildings, both above and below ground. Although the works programme made only limited areas available for archaeological investigation and recording, the collected evidence has greatly increased our understanding of the development of the eastern half of the range on the south side of Galilee Court.

1.2 Site Location and Description

The site is centered on National Grid Reference 519300 298625 and consists of two adjoining buildings, Bishop's Gate and No. 25 Minster Precincts, which stand on the south sides of Galilee Court, also known as Minster Court, the great court on the west side of Peterborough Cathedral (Figure 1).

1.3 Planning Background

In 2013, Planning Permission and Listed Buildings Consent (13/00520/FUL and 13/00521/LBC) were granted for the conversion of No. 25 Cathedral Precincts (also known as Minster Precincts) from residential dwelling to a combined heritage and education centre for Peterborough Cathedral, subject to conditions requiring the implementation of an approved written scheme of archaeological building recording and an archaeological watching brief (programme of observation and recording). Included in the granted application description were "new WC and access facilities and new office, library and meeting facilities for the cathedral. Addition of doorway between Nos 24 and 25 on the second floor. Reopening doorway and forming steps between No. 25 and Knights' Chamber. New suspended timber floor to Knights' Chamber and new storage cupboards. Fabric repairs to Knights' Chamber. Replacement of rear car park into garden area and landscaping to the rear of Nos. 24 and 25." The latter works, to the rear of Nos. 24 and 25 Minster Precincts, are the subject of a separate, forthcoming, report (Atkins and Hall, 2017).

The developer, Peterborough Cathedral, undertook to implement the required programme of archaeological work to the standard specified by the Peterborough City Council (PCC) Archaeologist, and as set out in the Archaeological Assessment prepared by the Cathedral Archaeologist (Hall 2013), and in the Mitigation Strategy (Hall 2014b).

Since the Knights' Chamber (Bishop's Gate) is also a Scheduled Ancient Monument, Scheduled Monument Consent was also applied for and granted by English Heritage (ref S00058886), in May 2013. As the project progressed, variations were made to stay compliant, as more of the historic fabric of the east wall of the Bishop's Gate was revealed inside No. 25, and a small excavation was required due to changing designs for the lift. Recording beyond that originally expected was also made on the exterior of the Bishop's Gate, as both works and scaffolding were more extensive than originally planned.

Final adjustments were made two years later, 30th August – 4th September 2017, also requiring archaeological recording: the new doorway in between the Knights' Chamber and No. 25 was enlarged to improve access, and the main door to the new Visitors' Centre in No. 25 was replaced with an automatic opener, requiring the replacement of the stone threshold and a small excavation.

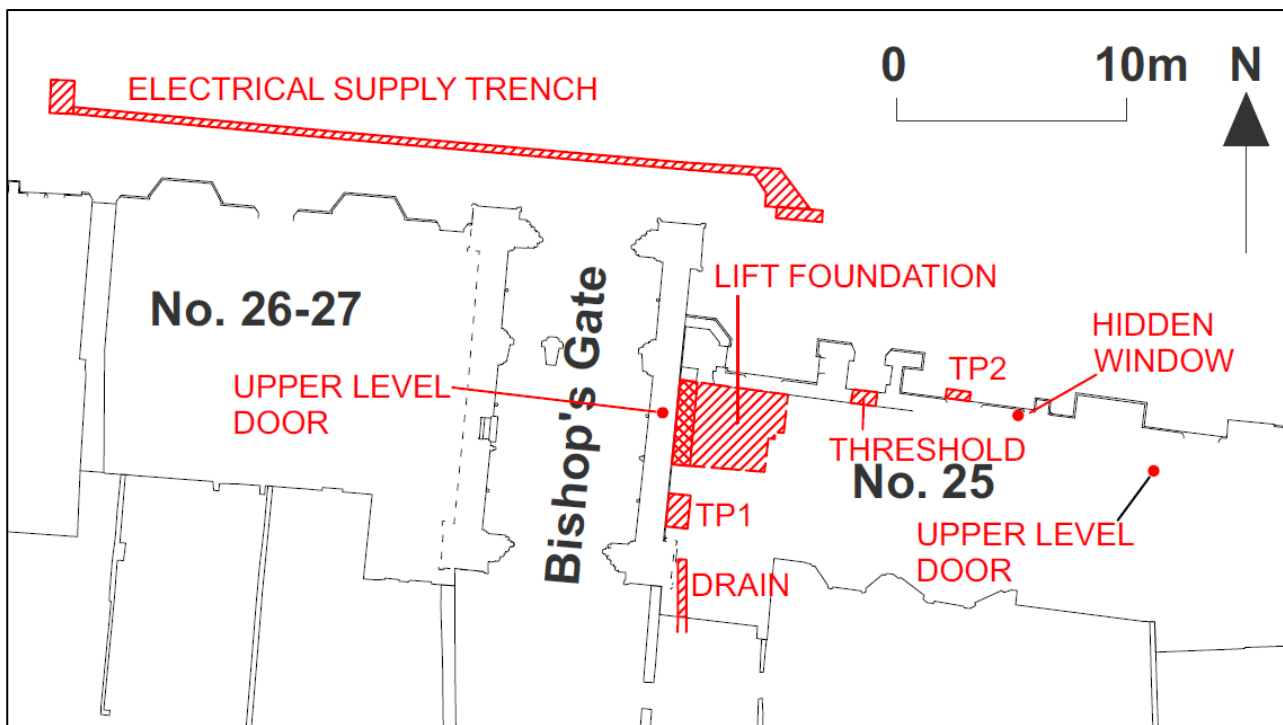


Figure 2
Bishop's Gate and No. 25 Minster Precincts works areas

1.4 Historical and Archaeological Background

The areas affected by the works (Figure 2) lie within the precincts of Peterborough Cathedral/ Abbey, within the Galilee Court. The following is based on the archaeological assessment (Hall 2012b).

Nothing certain is known of the pre-Conquest history of this particular area on the west side of the precincts. The precincts of the 10th-century abbey (Burgh) and the 7th-century abbey (Medeshamstede) are not believed to have extended as far west as the current precincts, while the late Anglo-Saxon town was probably to their east or north-east (Hall forthcoming). The western area first received historical attention in the 12th century, from which we learn that Martin de Bec (abbot 1132–55) ‘changed the gate of the minster and the market and the hithe and the town much for the better’. This has sometimes been assumed to be when the town was moved to the west side, and the precincts are also presumed to have been extended westwards, thus creating one side of the Galilee Court (see Hall forthcoming).

Based on archaeological investigations on the north and south sides of the precincts, Mackreth (1999) theorised that the western ditch of the 10th-century Burgh might have run close to the west front of the cathedral church, but this has yet to be proved or disproved.

In succeeding centuries the buildings around the Galilee Court gradually developed, and were successively replaced, leaving it bounded as it is now (Figure 1). Both Speed’s map of 1610 and the rather more useful 1721 map, by Eyre (Figure 3), clearly show the south range of the court, with its central gateway.

The earliest illustration of the south range is an engraving made by John Carter in 1796 (Fig 4), which shows the gateway flanked by a medieval range to the east (LHS), and a 17th-century house (built c.1638) and a medieval range to the west. Between 1822 and 1862 (Figs 5 and 6), the eastern part of the south range, now Nos 24–25, had been altered, with porches and bay windows; No. 25, immediately adjacent to the gateway was probably largely rebuilt at this time as well (PCCHER images 1158 and 1160). On the west of the gateway, Nos 26–27 were rebuilt for the Mr. John Gates who died in 1857 (HER 80053, 70012 and 80236).

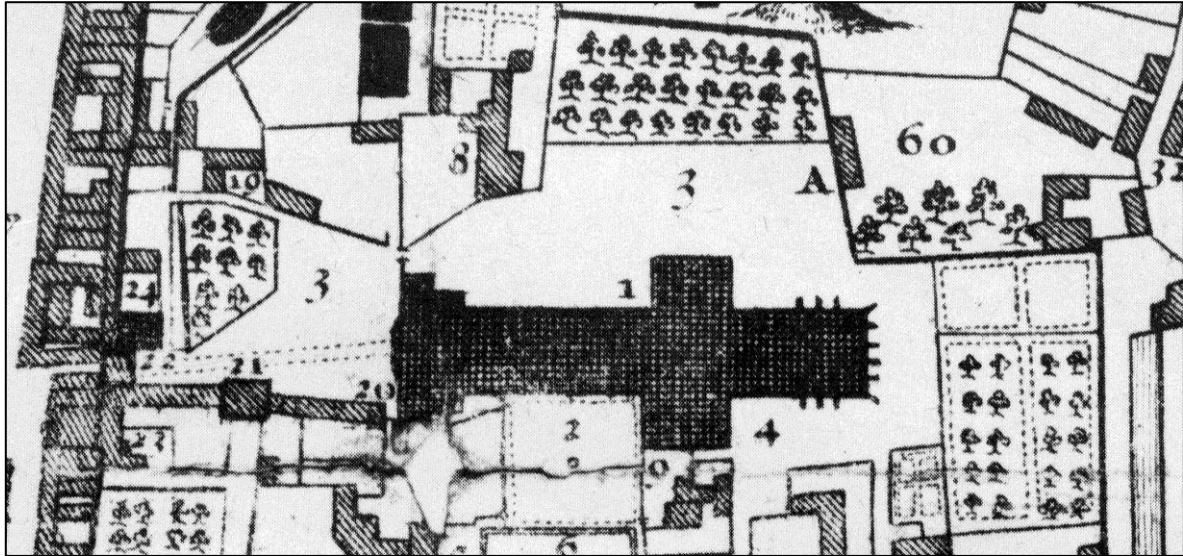


Figure 3
Part of Thomas Eyre's map of 1721

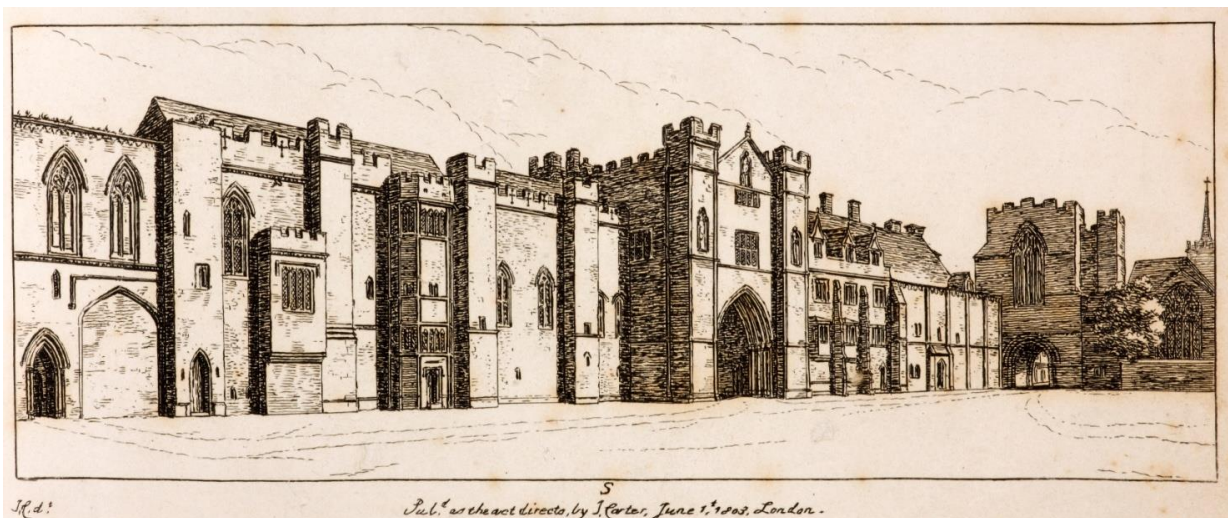


Figure 4
John Carter engraving from a drawing made in 1791
The buildings along the south side of Galilee Court (modern-day Nos. 24–28) and the Norman Gateway.

1.4.1 The Bishop's Gateway

The gateway itself has previously been dated to the early 13th century (Peers 1906, 455; O'Brien and Pevsner 2014, 615), although a recent suggestion has been made implying a much later date, based on its similarity to the great gate of the abbey of Bury St Edmunds (Goodall 2011, 275). Both of these may be true. A contemporary chronicle records that abbot Robert de Lindsey (1214–22) 'made a new inner gate and a new stable for the abbot's horses', which is highly likely to refer to this gateway (HER document 3023), and this also fits well with its architectural references to the west front of the abbey church. However, although the lower mouldings could certainly be of this date, within the passage the 'dying mouldings' of the vault ribs are unlikely to predate the late 13th century. In 1303, abbot Godfrey of Crowland started the 'new' gate to the abbacy, and had the foundations examined (HER document 3037). From this point the Latin is unclear and could be taken to mean either that the foundations were examined to a depth of 15ft (unlikely given the much lesser depth of the cathedral foundations) or from a height of 15ft, implying that this is how far work had progressed under Robert de Lindsey (Hall 2012a). Support for the latter interpretation comes in the form of a change in building materials, from small ashlar to larger ones, at the right height, bearing in mind that the

bases of the gateway arches are buried c.0.75m. Abbot Godfrey completed the gateway five years later in



Figure 5
Tracing of an 1822 map (possibly the Enclosure Map) by J. T. Irvine (PCCHER image 1158)
It shows the three-part division of what is now Nos 24–25, east of the Bishop's Gate



Figure 6
Part of George Smith's map of 1862 (PCCHER image 1160)

1308 (HER document 3039), when he also began the chambers next to the church. This end date also fits well with the architectural detailing of the upper storeys of the gateway, and the appearance of the range to the east, as shown in Carter's engraving (Figure 4).

The gateway was originally three storeys high, with crenellated turrets at each corner, and three statue-filled niches on each of the north (Plate 1) and south walls. The ground floor passage was vaulted in three bays with a cross wall, separating vehicular and pedestrian access, one bay south of the Galilee Court.

The first known documentary reference to the 'knights' chamber' occurs in 1404/5 when the guttering was repaired (PCCHER document 3063). Although the name has survived, the reason for it has not, although Gunton, writing in the 17th century, tells us that around the chamber *'were the Pictures of Knights upon the walls who held Lands of the Abby, and the very Rafters were adorned with Coats of Arms'* (1686, 40). The

gateway, then called the Knights' Chamber in its entirety, was granted to the bishopric upon the formation of the diocese of Peterborough on 4th September 1541, along with all the other buildings on the south side of the Galilee Court (PCCHER documents 3302 and 3303). The third bishop, Edmund Scambler, leased the Knight's Chamber to John Mounsteving on 10th January, 1570. The lease refers to '*several chambers or lodgings over the gate, called the Knyghte Chamber with the next chamber to the same adjoining*' (HER document 3396). It is just possible that this implies a doorway between the Knights' Chamber and an adjoining one.



Plate 1
Nos. 24–25 Minster Precincts and Bishop's Gate.
Photograph: Jackie Hall

Major changes took place in the first half of the 17th century, when the main chamber was divided horizontally; the whole building was re-fenestrated; and a Jacobean staircase was added in a new block towards the south end of the west wall. This accords well with Gunton's statement (writing in the mid-17th century) of '*the [Knights'] Chamber only being lately translated into another fashion*'. Since that time, the roof has been completely replaced, the intermediate floor removed, and the southern arch underpinned with brick in the early 20th century (HER 80009).

1.4.2 Nos 24–25 Minster Precincts

These lie on the eastern side of the Bishop's Gateway (PCCHER 80053 and 80078; Hall and Atkins 2016). In Figure 4 it is plain that in the late 18th century the entire half-range was still medieval, with a late medieval tower-porch placed centrally, attached to an earlier building with, to the west, a hall with traceried windows over cellarage and, to the east, a two-storey arrangement also with a first floor traceried window, and a late medieval oriel window. Four stair towers, or garderobes, or chimney towers, are evenly placed along its length. This range can almost certainly be identified with the '*chambers, [lying] towards the church, the cost of which was £140*', begun by Abbot Godfrey in 1308 (Halliday 2009; Sparke 1723, 164). In the same year, the abbot and convent were also licensed to crenellate '*the gate of the abbey and two chambers lying between the gate and their church*'. All of this fits well with the architecture, surviving and engraved.

No. 24, at the east end, mostly retains its medieval fabric and appearance. No. 25, adjacent to the Bishop's Gate, has been comprehensively refaced and refenestrated; almost no medieval fabric remains visible. The ghost, at least, of the medieval building survives in its narrow (N–S) plan, in the drawing room window (medieval porch), and in the retention of the differing floor levels from east to west (Hall and Atkins 2016). There is the very real possibility that the foundations may still be medieval.

In the 19th century, the boundaries between the two properties were subject to change: in 1822 a map shows a division into three, while the 1862 map (Figure 6), shows the range divided into two, but with the drawing room belonging to No. 24 rather than to No. 25 as it does today.

1.5 Archaeological Methodology

The methodology outlined in the appended Archaeological Mitigation Strategy (Hall 2014b), submitted to, approved and monitored by the PCC Archaeologist, was adhered to throughout the project.

Wherever possible, supervision and periodic monitoring of the various tasks involved in the construction groundworks were organized to minimize delays to the works schedule and, throughout, the PCC Archaeologist was kept informed of progress.

1.6 Timing

The Bishop's Gate and No. 25 Project commenced on 6th January 2015 and archaeological involvement with the major part of the project was completed on 11th January 2016. The new Heritage and Education Centre, inside No. 25 Minster Precincts, was opened on 10th September 2016 and minor works to improve the facilities and the connecting doorway between No. 25 and the Knights' Chamber were completed 10th September 2017.

Archaeological work on the project began on 6th January 2015, with the excavation of two small test trenches located to test the size and condition of the footings beneath No. 25, and the bulk of the work requiring archaeological supervision, inside No.25 and on the exterior of the Bishop's Gate, was not undertaken until June, July and August 2015. Thereafter, refurbishment and installation works continued and only occasional archaeological monitoring was required.

2 Archaeological Observations: The Bishop's Gateway

2.1 Introduction to the Works

The aim of the scheduled works was to re-cover the roof, carry out minor but essential masonry repairs, especially at parapet level, and clean and shelter-coat the statues (Plates 2 and 3). On the interior, the poor quality 1970s fittings were removed, a new access made into No. 25, everything made good, and underfloor heating laid below a new floor (on top of the existing floor), in order to make the chamber fit for use as a function room again.

The presence of scaffolding around the upper levels of the exterior, the removal (then replacement) of the roof covering, and the removal of some areas of plaster on the interior gave the opportunity for many new observations and also the possibility of understanding visible features afresh. This was particularly true for the original, medieval, phase of the building.

Approximately 3.5 person days were available for recording (over 6th, 12th, 13th, 24th and 25th August 2015), no accurate surveys were available either in plan form or orthophotography/ photogrammetry. For speed, most of the record was made photographically, although a drawing was made of the roof, and 1:1 moulding profiles were taken wherever possible.



Plate 2
Bishop's Gate, north elevation.
Photograph: Jackie Hall



Plate 3
Bishop's Gate, south elevation.
Photograph: Jackie Hall

2.2 The Medieval Building

2.2.1 The Statues and Statue Niches

The statues were cleaned and shelter-coated, but not the subject of 'archaeological' observation, except to take the opportunity for close-up photographs (Plates 4 to 18 and many more in the archive). Historic England, however, undertook 3D photography, and created 3D pdfs, which are available in their archive (Project ref 15/132/5P). It is sufficient here to say that they give every appearance of being the same date as the bulk of the gateway (1303–08) and that the three statues on the south side are clearly SS Peter (top), Paul (LHS) and Andrew (RHS), the abbey's dedicatory saints. Those on the north elevation are a king (top), a bishop (LHS) and, probably, an abbot, holding a pastoral staff, although the figure is rather feminine (RHS; without a mitre, since the abbot of Peterborough was not mitred until 1402; VCH 2, 90). It is not certain whether these last three were intended as founders or contemporaries.



Plate 4
(Archive image PCKC 421)
Knights' Chamber. Upper statue, south elevation (St Peter)
Photograph: Jackie Hall

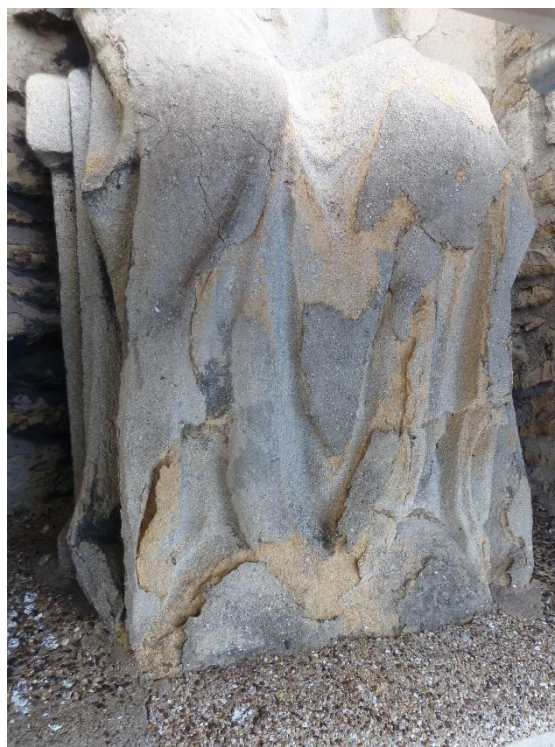


Plate 5
(Archive image PCKC 426)
Knights' Chamber. Upper statue, south elevation (St Peter)
Photograph: Jackie Hall

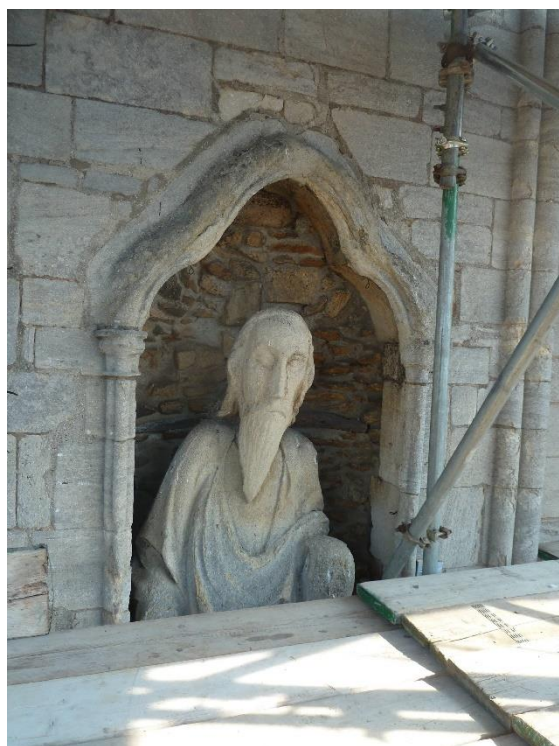


Plate 6
(Archive image PCKC 467)
Knights' Chamber. Left statue, south elevation (St Paul)
Photograph: Jackie Hall



Plate 7
(Archive image PCKC 477)
Knights' Chamber. Left statue, south elevation (St Paul)
Photograph: Jackie Hall

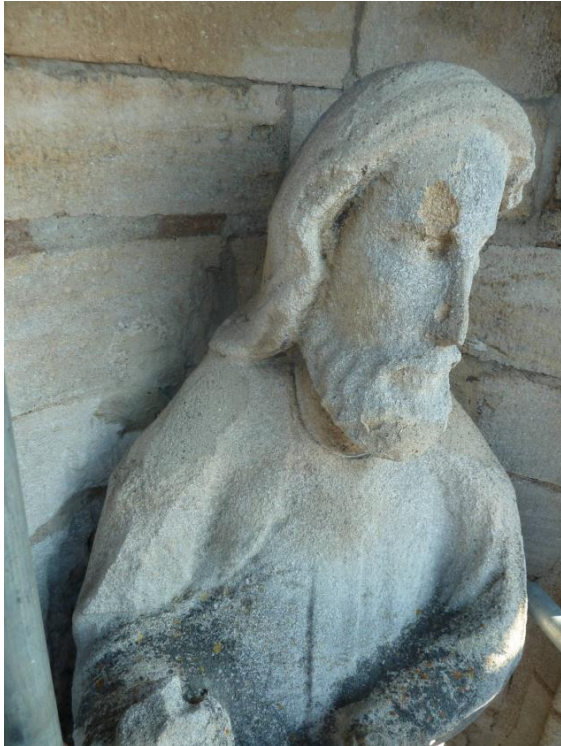


Plate 8
(Archive image PCKC 483)
Knights' Chamber. Right statue, south elevation
(St Andrew)
Photograph: Jackie Hall

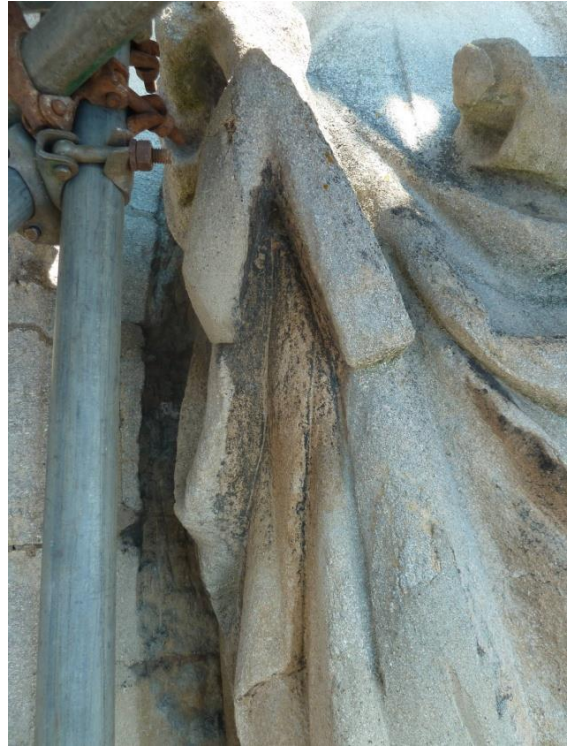


Plate 9
(Archive image PCKC 490)
Knights' Chamber. Right statue, south elevation
(St Andrew)
Photograph: Jackie Hall



Plate 10
(Archive image PCKC 494)
Knights' Chamber. Right statue, south elevation
(St Andrew)
Photograph: Jackie Hall



Plate 11
(Archive image PCKC 556)
Knights' Chamber. Upper statue, north elevation (king)
Photograph: Jackie Hall



Plate 12
(Archive image PCKC 565)
Knights' Chamber. Upper statue, north elevation (king)
Photograph: Jackie Hall



Plate 13
(Archive image PCKC 736)
Knights' Chamber. Right statue, north elevation (Bishop)
Photograph: Jackie Hall



Plate 14
(Archive image PCKC 747)
Knights' Chamber. Right statue, north elevation (Bishop)
Photograph: Jackie Hall



Plate 15
(Archive image PCKC 743)
Knights' Chamber. Right statue, north elevation
(Bishop)
Photograph: Jackie Hall

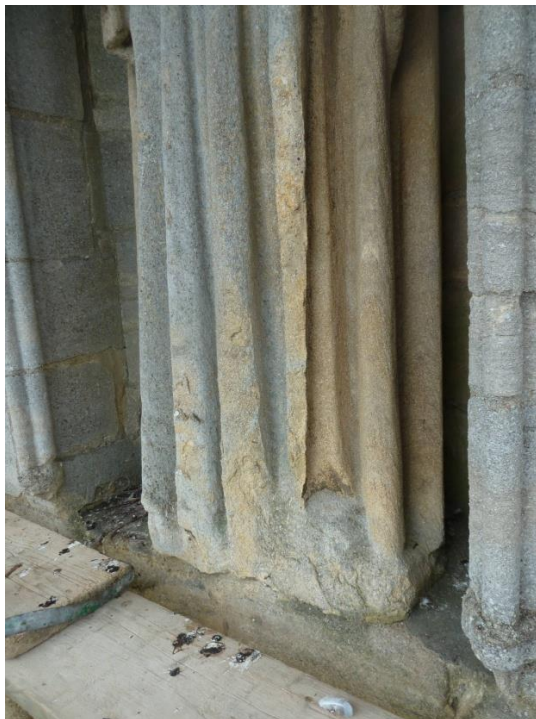


Plate 16
(Archive image PCKC 613)
Knights' Chamber. Right statue, north elevation
(?abbot)
Photograph: Jackie Hall

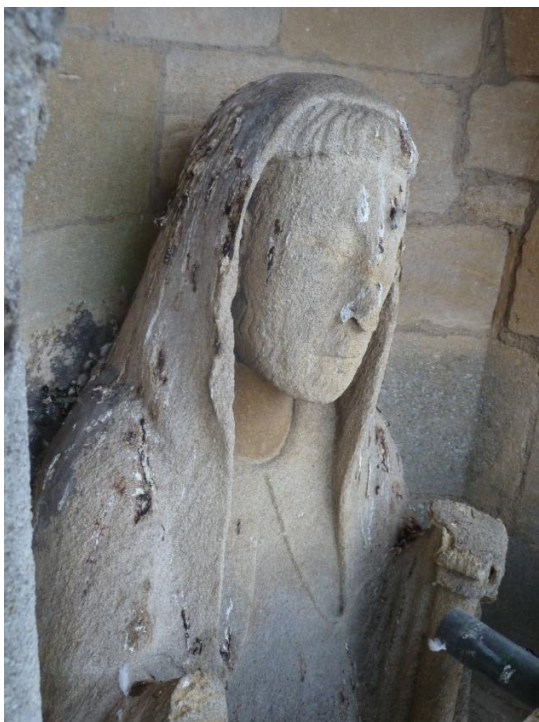


Plate 17
(Archive image PCKC 608)
Knights' Chamber. Right statue, north elevation
(?abbot)
Photograph: Jackie Hall

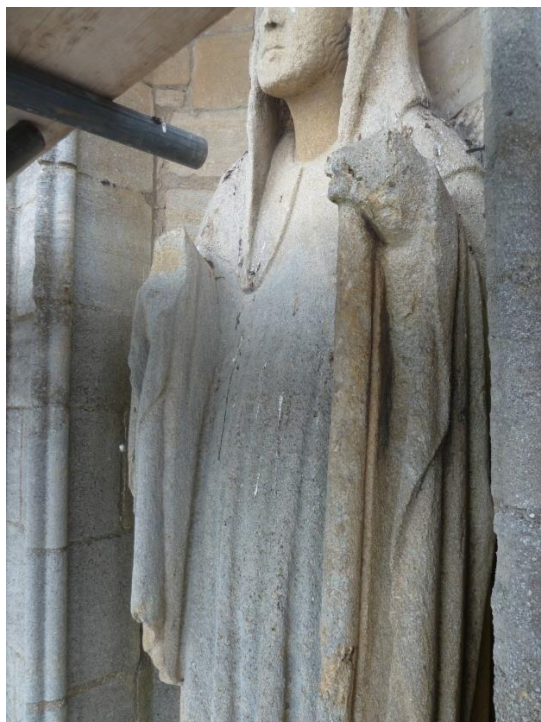


Plate 18
(Archive image PCKC 611)
Knights' Chamber. Right statue, north elevation
(?abbot)
Photograph: Jackie Hall

All the statue niches share the same mouldings, with small triple shafts to either side rising from equally dainty corbels; the capital above has a scroll, hollow and projecting upper moulding, while the arch has the most complex mouldings, with undercut roll as hoodmould (mostly lost), hollow, flattened double-roll, three-quarter hollow, and flattened roll-and-fillet on the soffit (see Appendix E). The size of the niches, allowing for differences in location, are also all commensurate with each other (Table 1).

Statue niche	Height to springing (mm)	Width (mm)	Depth at top (mm)	Depth at side (mm)	Back of niche
St Peter	1610	915	410	340 max	Mixture of messy weathered ashlar with thick joints, and coursed rubble; triple shafts at sides badly damaged
St Paul	2550	991	195	250	Roughly coursed rubble with some reused ashlar; horizontal timber at back at neck level
St Andrew	2530	990	200 max	250	Ashlar, carefully curved at back and chiselled out behind statue; messy pointing; statue pinned to niche at sinister shoulder
King	1730	955	455 max	195–295	Ashlar with brick repairs at top and some use of Kings' Cliffe stone; messy pointing
Bishop	2520	990	320	195	Ashlar
Abbot	>2380	990	285	240	Ashlar

Table 1

Statue niche measurements and characteristics (measurements taken behind mouldings)

The backs of the niches are not all the same. This appears to be a function of subsequent repairs, rather than original treatment. On the more sheltered north side, facing Galilee Court, all the niches have ashlar backs, with only some minor repair to the upper niche (for the king). On the more exposed south side, only the eastern niche still has an ashlar back, although the statue (St Andrew) has mortar repairs, and also a modern pin fixing it to the niche, from which it projects slightly. At some point, the back of the niche behind St Paul has been completely rebuilt, in roughly coursed rubble with occasional reused ashlar; a curved timber was placed in this new back at the neck level of the statue, either to help fix the statue, or just to provide a level course. Clearly, the statue must have been temporarily moved for this repair.

The niche of St Peter (top, south) is the most disorderly, with a mixture of poorly coursed weathered Barnack ashlar and coursed rubble. The statue is also very badly damaged with the top of the head and parts of the front replaced in mortar (as well as missing hands, something which afflicts all the statues). The triple shafts at the front are also badly damaged compared with the other niches, and the whole area around the niche is messy and badly coursed (also see section 2.2.2). Thus, not only was the back of the niche rebuilt, but it seems likely that the front of the niche with a large area of adjoining masonry was rebuilt at the same time.

2.2.2 Coursing and Quality of Building Work

Although close-up inspection highlighted areas of surprisingly poor coursing for such a high status building, most of the points can be made by careful examination of Plates 2 and 3. As noted (Section 1.4.1), the lower part of the gatehouse may belong to 1214–22, as documented by the abbey's chronicler. On the north elevation and part of the south elevation at least, this is characterised by fairly small ashlar blocks and shallow courses. The triple shafts on the turret corners were clearly carved separately and are rarely coursed either with the plain walling of the turrets, or with the main arches of the gateway.

We have also suggested that above the lower string-course level, the work is that belonging to Abbot Godfrey, 1303–08. Here, the courses and ashlar are generally larger, and much more effort is made to fit with the coursing of architectural detail. Above the third string-course, however, at the bottom of the gables and parapets, the stones are a little smaller (perhaps to make lifting easier) and the architectural detail – at the corners of the turrets, and the statue niches – are once again separately carved and do not course with their surroundings. Although this may indicate another pause in building, even if just for winter, it is also likely to reflect a using up of quarried stone, as the building project drew to a close. The north elevation, facing the Galilee Court, is reasonable, but on the south elevation, although the turrets are not worse than the north, the gable, around the statue of St Peter, is spectacularly badly coursed. Indeed, it looks as if the whole middle section has been rebuilt. Since this area appears to be continuous with the window blocking below the string-course (section 2.2.3), this raises the question of whether there was a single large medieval window (possible, given an open roof). However, the statue and statue niche are clearly coeval with the others and this whole area of poor coursing must instead represent either poor medieval work or, perhaps more likely, repairs undertaken at the same time as the later windows were inserted, along with the repairs to the niche.

The interior wall face and core, coursed rubble in clay-based mortar, was viewed in 2017 (section 4.2).

2.2.3 The Medieval Window

From the exterior, medieval windows either do not survive or are not visible. From the scaffolding, however, it was clear that a major window had been removed (Plate 19), judging by the mis-coursing and areas of refacing (seemingly reusing Barnack stone from elsewhere in the old abbey buildings). The window sill appears to have been four courses up from the string-course/ sill of the new (lower) window and finished just below the upper string-course. It must have been a major traceried window, perhaps like the windows in the Cathedral of a similar date (e.g. the south transept upper east windows).

2.2.4 The Medieval Roof and turret roofs

Three of the turrets (north-east, north-west, and south-west) were found to still have ancient oak timbers, propped to create lean-to roofs (Plates 20–23). They may well date from the construction period of the gateway but, in the absence of any carpentry joints or structure, this cannot be confirmed; they are unlikely to contain enough rings for tree-ring dating.

Although there is no trace of the original main roof, there are clues in the interior in the first floor chamber (Plate 24). Both the east and the west walls have five evenly spaced small corbels (Plate 25), top c.4.45m from the floor (note – this is the old floor; the new floor is higher). Although it was not possible to view them close up, or take a moulding profile, they do appear to be both medieval in origin, and of a suitable date for the documented date of Abbot Godfrey's gatehouse. They are not big enough to take joists for an intervening floor level, and are also rather too high for this function. They could, though, have taken the wall posts of an early hammer beam roof (the earliest known is 1290, in Winchester).

This solution has not been proposed before, almost certainly because of the deep, and deeply projecting, stone string-course/cornice at the top of the east and west walls (Plate 26), which would interrupt the junction of wall post and hammer beam. Again, close examination was not possible in the course of the project but, viewed from the floor and from zoomed in photographs, the moulding, with its large central keeled roll, is more reminiscent of a mid-13th-century moulding than a string-course or cornice of any date. This reuse (for more, see below) can explain the general unevenness of the cornice; although they might be jambs, they might also

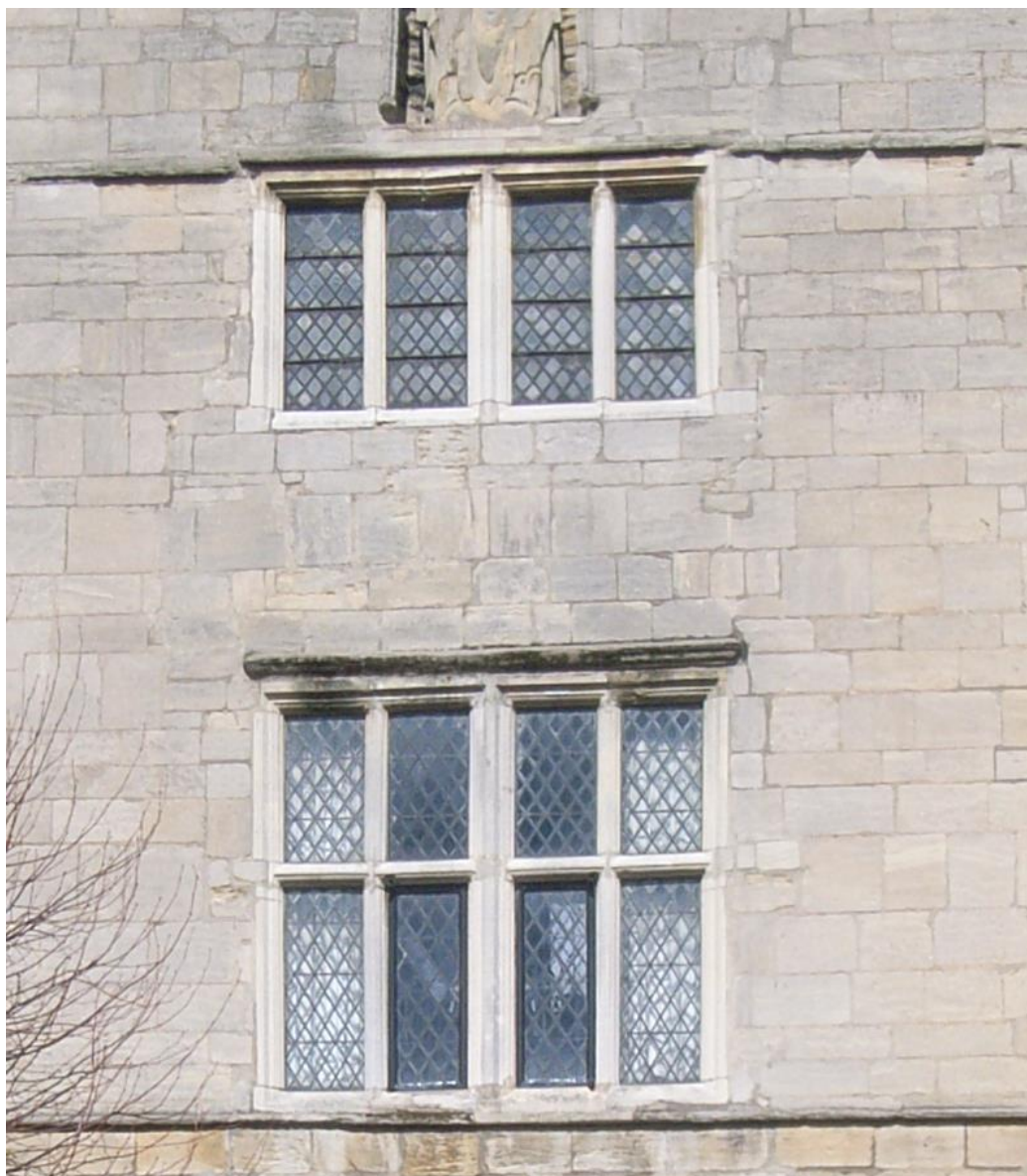


Plate 19
Knights' Chamber. Close up of windows in south elevation, showing the blocking of
the medieval window
Photograph: Jackie Hall

be voussoirs or ribs from a very large arch or vault. The moulding is certainly superficially similar to voussoirs reused in walls in the area of the infirmary, or perhaps to vault ribs from the precincts reused at Thorpe Hall (Hall 2014a) It demands closer inspection, along with the similar moulding used in the foundations of No. 25 (section 3.2.2).

So, if the upper string/cornice is disregarded, then the corbels are almost certainly the last remnant of a hammer beam roof. With the window, this contributes to making this chamber a very high status space indeed.



Plate 20
(Archive image PCKC178)
Knights' Chamber. North-west turret, with
old timbers
Photograph: Caroline Atkins



Plate 21
(Archive image PCKC 224)
Knights' Chamber. North-east turret, with old
and new timber
Photograph: Caroline Atkins



Plate 22
(Archive image PCKC 224)
Knights' Chamber. South-east turret, with exit for
stair
Photograph: Jackie Hall



Plate 23
(Archive image PCKC 177)
Knights' Chamber. South-west turret, with old
timbers
Photograph: Caroline Atkins



Plate 24
(Archive image PCKC 677)
Knights' Chamber. West wall, showing chimney, corbels and upper cornice
Photograph: Jackie Hall (2012)



Plate 25
(Archive image PCKC 689)
Knights' Chamber. Corbel from series on east side
Photograph: Jackie Hall



Plate 26
(Archive image PCKC 690)
Knights' Chamber. String/cornice on east side
Photograph: Jackie Hall

2.2.5 The Turrets from the Interior

The two northern turrets are not accessible from the interior; the walls are plastered over and we cannot currently know what the medieval arrangements were. In the south-west corner, a fine narrow medieval doorway survives with a pointed segmental arch, the arch and jambs having plain chamfers (Plate 27). The little chamber behind is ceiled with a shouldered arch (Plate 29). There is no evidence of steps, and it seems probable that this turret might have been a garderobe or cupboard.

One jamb and part of the arch of a very similar, or even identical, doorway can be found in the east wall, although not tight to the corner (Plate 28). This would have been angled through the wall, leading to a small spiral stair or vice, which is now only accessible from a higher level (see section 2.3.1).



Plate 27
(Archive image PCKC 191)
Knights' Chamber. Doorways at south end of west wall; medieval to left and modern to right
Photograph: Caroline Atkins



Plate 28
(Archive image PCKC 194)
Knights' Chamber. Remnant of blocked doorway at south end of east wall, once leading to a vice
Photograph: Caroline Atkins



Plate 29
(Archive image PCKC 205)
Knights' Chamber. Shouldered arch of chamber in south-west turret
Photograph: Caroline Atkins

2.2.6 The Chimneys and fireplace

The chimney (Plate 30) is a really splendid medieval survival, not easily seen from the ground (though it can be seen from nearby upper windows). With the possible exception of its cornice, it is clearly coeval with the early 14th-century gateway. It occupies the whole width of the west wall and, above a moulded string-course, are a double row of trefoiled and gabled vents, four on each side.

The external chimney is mirrored on the interior by the continuation of the flue for seven courses below the ceiling, and then by two courses that end in slightly sloping sides to the north and south. This must represent the very top of a sloping fireplace canopy, cut back for the insertion of a post-medieval fireplace, and with reused stone used for enclosing the flue below (Plate 31). A fireplace of similar date and arrangement once



Plate 30
(Archive image PCKC 627)
Knights' Chamber. The chimney at
parapet level, looking south-east
Photograph: Jackie Hall



Plate 31
(Archive image PCKC 048, detail)
Knights' Chamber. Detail of chimney
flue, showing cut-back top of fireplace
canopy with reused stones blocking
flue below
Photograph: Caroline Atkins

existed for instance, at the Old Deanery, Lincoln while a rather grand version may be seen more locally in the remnant of Prior Crauden's fireplace at Ely (Wood 1983, 261–76).

A much smaller chimney flue, with no surviving chimney, was discovered in the east wall of the gateway, and this is discussed in the section on No. 25 Minster Precincts (section 3.4). At the top of the gateway wall, it appears c.4.40m from the south-east turret, with a diameter of 0.56m.

2.2.7 Door between Knights' Chamber and No. 25

Despite the documentary reference (section 1.4.1), and the likelihood that the door existed from a very early period, no physical evidence was found for a medieval origin, but no proof against this either. For its post-medieval phases, see section 2.4.3.

2.2.8 The Ranges adjacent to the Knights' Chamber

On the west elevation of the gateway, between two roofs of No. 26, a sloping integral weathering course, for an adjacent roof, could be glimpsed from the scaffolding, showing that a range already existed here in the early 14th century (Plate 32). Given that the west end of the range (No. 28, next to the Norman Gateway, the principal entrance into the precincts) probably dates from the early 13th century, this is not a surprise (see PCCHER 80098 for No. 28). No roofline is visible externally on the east side of the gate, because the roofline of No. 25 has clearly been raised. It is not clear which roofline is medieval on the east side, but on both sides, there is ashlar at this high level, as opposed to the coursed rubble of the interior in the adjoining range to the east at ground floor level (section 3.4). It is possible that this is indicative of different choices in the 13th century, when the lower part was built, and in the 14th century, when it was completed.

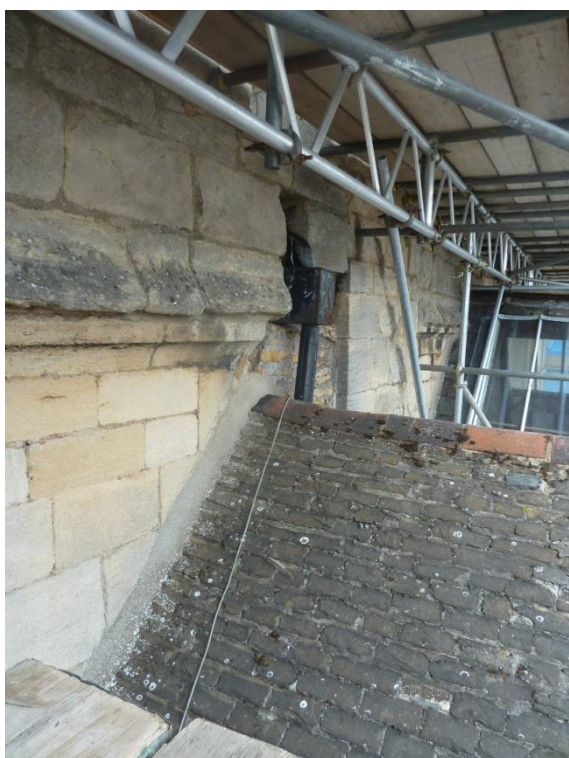


Plate 32
(Archive image PCKC 533)
Knights' Chamber. West side below parapet,
showing sloping projecting weathering course
integral with wall
Photograph: Jackie Hall

2.3 The Post-Medieval Building: the 17th Century

2.3.1 Windows and Inserted Floor

The most obvious intervention in the 17th century are the two tiers of inserted windows in the north and south walls (Plates 2 and 3). The lower windows are mullioned and transomed in two tiers of four lights, while the upper windows are four mullioned lights; in both cases there is a broad central mullion (for mouldings, see Appendix E). The insertion of these windows perhaps took place at the same time as repairing two niches in the south wall and a larger area around St Peter (section 2.2.1 above). On the basis of the fine staircase, these windows have been dated to the Jacobean period (section 2.3.3). They are extremely neatly set into the

medieval coursing, except where blocking has had to be added between the new windows and the line of the old traceried window in the south wall (Plate 19). The 17th-century upper window on the south side has been blocked on the interior, and further blocked windows of the same date were seen in the east wall (Plate 33).

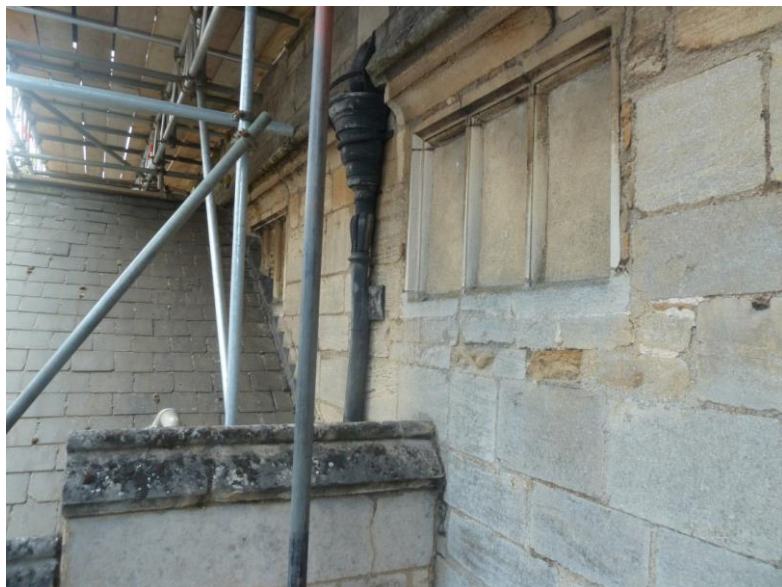


Plate 33
(Archive image PCKC 585)
Knights' Chamber. East side
below parapet on north side of No.
25, showing two blocked windows
Photograph: Jackie Hall



The double windows are the clearest sign that the chamber was horizontally divided into two floors. The joist positions are lost behind plaster, but cut-outs into the reused ashlar and cut-back chimney hood can be seen just above the level of the modern (and now removed) picture rail (Plate 31). Access between the two floors was presumably through the vice in the south-east turret, the lower half of which is now blocked. The doorway that serviced the new upper floor and the vice in the south-east turret, must belong to this period (Plate 34).

Plate 34
(Archive image PCKC 686)
Knights' Chamber. Interior, south-east corner, looking east, showing
inserted upper door for intermediate storey and jamb and springer of
medieval doorway below
Photograph: Jackie Hall

2.3.2 String-course/ Cornice and Roof

We have already suggested that the string-course/ cornice (Plate 26) may, in fact, be reused mid-13th-century jamb/voussoir/vault rib and that this string interrupts the medieval wall posts of a hammer beam roof. It thus indicates the replacement of that roof (section 2.2.4). This is likely to have happened at the same time as other major changes, such as the floor insertion; the removal of the hammer beams and arch braces would have increased the available walking space in the upper floor. It is not likely that this quantity of material would be available in the 19th century (the next period of major change), but it could have been available in the century

or so after the Dissolution of the abbey. Notable changes were made to the abbey buildings from 1541, when different accommodation was required (for secular clergy); and in the Commonwealth period: the infirmary and other buildings were sold in 1650, and then reused as building material (PCCHER documents 3301 and 3351). If the reused stones belongs to this latter period, this suggests that the roof replacement was a few decades later than the stairs. Note, however, that a similar moulding was reused in the new foundation for the north wall of No. 25 in the 19th century, and that use of this type of moulding does extend into the late 13th century (e.g. at St Mary's Abbey, York in the nave aisle), so later reuse from the medieval range to the east does remain a possibility.



Plate 35

(Archive image PCKC 418)

Knights' Chamber. West side below parapet, showing vertical refacing (blocked chimney stack) rising from roof of No. 26, below guttering

Photograph: Jackie Hall

2.3.3 Stair Tower and Stairs

The fine square turning staircase located on the west side of the building was not the focus of the project, so it is enough here to say that it has previously been recognised as Jacobean (O'Brien and Pevsner 2014, 615; also Mansell Duckett pers com). The doorway at the bottom of the stairs is clearly medieval, and (albeit with some replacements) appears to belong to the 13th-century phase of the building. However, the doorway at the top, with its relieving arch clearly belong to the later stair (Plate 24). Removal of a small area of plaster in the west wall of the stair tower revealed handmade bricks, rather than stonework, suggesting that the present, square, form of the tower is the same date as the stair. It is now completely enclosed within No. 26, so it is not possible to make further observations.

2.3.4 The Ranges adjacent to the Knights' Chamber

On the west side of the Knights' Chamber and projecting from the south side roof of No. 26, a small vertically-aligned area of coursed rubble with ashlar courses can be seen (Plate 35). This is probably indicative of a chimney stack. Given the location of the stack towards the rear of a deep Victorian house, and the location and width of the medieval range (known from the roof weathering, and from the N–S width of No. 28), this chimney must have belonged with the 17th-century house that preceded Nos 26–27, as illustrated by John Carter (Fig 4) and others, and where the famous Peterborough historian Simon Gunton lived (PCCHER 70012).

2.3.5 Evidence of Occupation of the Upper Floor

The contractors retrieved a substantial assemblage of finds from within the north-east turret, during the repairs (context 926; Appendix C; Plate 36). Thirteen fragments of glass were found, all from bottles or other vessels, including three from imported 18th-century mineral water bottle/s, and 8 from green bottles also all probably 18th-century; one of them may have been an alembic, used for small scale distillation, perhaps pharmacological. The pottery covers a similar range, with nine fragments of a single redware jar, only very broadly dated (mid-16th-century–1800); tin-glazed earthenware from a plate (six sherds) and a bowl (late-16th–mid-19th-century); and three sherds of Staffordshire white salt-glazed stoneware from a teapot and saucer, closely dated to 1720–80. Additionally, there were 19 bone fragments, mostly cattle, but also pig and sheep/goat, many with butchery marks (see Appendices).



Plate 36
(Archive image PCKC 135)
Knights' Chamber. Assemblage of finds
discovered in north-east turret
Photograph: Caroline Atkins

This does not seem to be an assemblage relating to building work – an alembic and a teapot and saucer in particular being odd things to bring to a building site; mineral water would also be a surprising choice for a builder of this period. This suggests instead that in the 18th century, there was some access from the upper floor into the roof of the turret (via the parapet, perhaps) or, alternatively, the builders of the next roof came across this odd collection of rubbish and deposited it there, rather than taking it to ground level. Either way, the assemblage is indicative of the occupation of the upper floor of the building, rather than any stage in its construction.

2.4 The Post-Medieval Building: Late 18th to 20th Centuries

2.4.1 Major Changes in Late 18th to 19th Century: Roof, Ceiling and Fireplace

The extant roof is a complete replacement (Plates 37–39). It is a standard kingpost roof with a shouldered kingpost; the sawn quality, the very modern appearance of the carpenter's marks and the use of oak and pine (Hugh Harrison, pers com, but based on photographs, not personal inspection), all suggest a date in the 19th century. At the same time as the roof was constructed, the inner face of the south gable wall was largely rebuilt in handmade pink-red bricks (c.215 x 105 x 61). These are very similar to the bricks found in every dividing wall that was revealed by the 2015 works in No. 25 (section 3.7). Tentatively, this may suggest that the roof was replaced at a similar time to major changes to No. 25, when it was being converted from a basically medieval building to a basically 19th-century one, perhaps between 1822 and 1862, when map evidence shows considerable change to the plan form and property boundaries (section 1.4).



Plate 37

(Archive image PCKC 221)

Knights' Chamber. View of the roof, looking south-west.

Photograph: Caroline Atkins



Plate 38
(Archive image PCKC 638)
Knights' Chamber. View of the roof, looking south-south-west.
Photograph: Jackie Hall

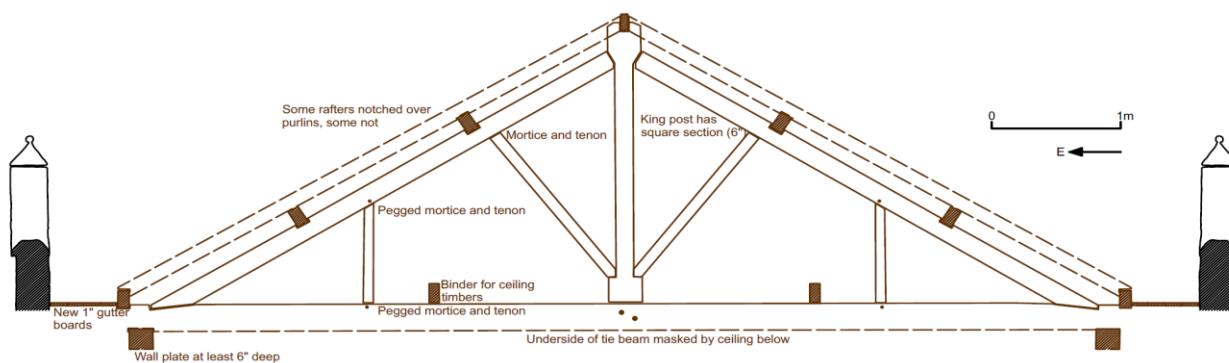


Figure 7
Knights' Chamber, diagrammatic drawing taken from east side of truss 3 (counting from north); RHS mirrored



Plate 39
(Archive image PCKC 637, 645, 646, 648)
Knights' Chamber roof: selection of carpenter's marks on trusses
Photographs: Jackie Hall

More random marks were also observed, and these may be cargo marks, or marks from a timber yard (Plate 40).



Plate 40
(Archive image PCKC 641, 643, detail)
Knights' Chamber roof: probable cargo marks
Photograph: Jackie Hall

2.4.2 Exterior: Masonry Repairs and Repointing; Alterations to the roof and North Gable

Regular replacement of weathered stone has clearly taken place, notably at parapet level (Plate 41). There appear to have been at least two phases, one using King's Cliffe (finely oolitic, slightly stripy), perhaps contemporary with the roof replacement (it was used in the west front in the 1820s) and one using Clipsham, very similar to the original Barnack. Due to the limited time, it was not possible to record the repairs in any detail.



Plate 41
(Archive image PCKC 495)
Knights' Chamber. Parapet level (north-west turret) with replaced stones clearly visible
Photograph: Jackie Hall

Three phases of repointing were observed: one using creamy-buff gritty lime mortar; one a fine cement mortar and one a gritty cement mortar, including the cement cappings on the statues and copings. The two cement types might belong to the same phase, while the lime and cement mortars probably belong with the principal two periods of masonry replacements.



Plate 42
(Archive image PCKC 631)
Knights' Chamber roof space, view of north gable with new brickwork
Photograph: Jackie Hall

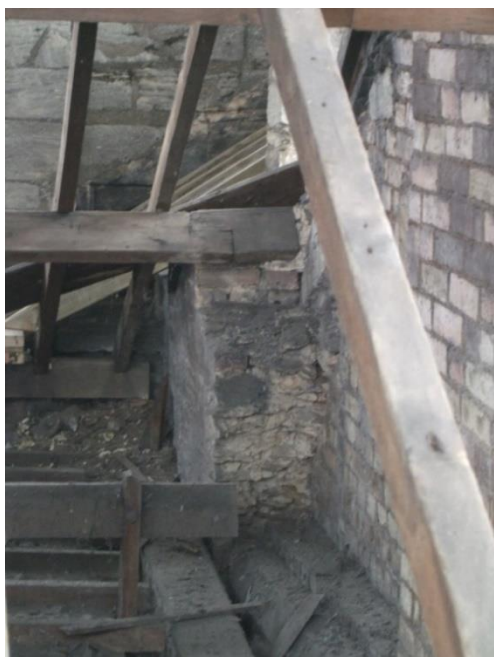


Plate 43
(Archive image PCKC 217)
Knights' Chamber roof space, detail
showing thinning of north gable and
extension of purlin
Photograph: Caroline Atkins

At some point in the 20th century, major repairs were made to the north gable wall. The inner (south) elevation was considerably thinned, then refaced with bricks; the purlins of the roof were extended to make up the space (Plates 42–43). The northernmost rafters were twisted at the bottom to make good the gap there. This narrowing of the gable wall implies that its coping has also been replaced, or recut.

2.4.3 20th-century Changes to the Interior

A plaque above the fireplace on the west side of the room commemorates the opening of the Knights' Chamber in April 1970 by the Bishop of Peterborough, following its restoration by the Guild of Centurions. At this time, or afterwards, the chamber was used as a youth club, with a kitchen area and toilet at the south end (Plate 44).



Plate 44
(Archive image PCKC 674)
View of Knights' Chamber in 2012, looking SSW, with kitchen unit/ toilet in SW corner and other
remains of its life as a youth club
Photograph: Jackie Hall

Next to the fine medieval doorway in the south-west corner (section 2.2.5 above), a plain doorway has been cut through the wall and given a concrete lintel (Plate 27). It was presumably to give access to the fire escape, and is possibly as modern as the kitchen and toilet arrangements, and the picture rail.

On 28th February 2012, investigations were made on the east side of the Knights' Chamber, just south of the window (Fig 2), where marks in the plaster suggested the earlier presence of a door (Plate 45). This confirmed the existence of the door, showing it to have brick jambs against the coursed rubble of the medieval wall.

On this basis, permission (SMC) was given to break through, which happened in June and July 2015 (Plates 46–47). The former opening was shown to be 1.00m wide and 2.31m high, with modern brick jambs, pale buff to pink. Oddly, the blocking was made of rather older, handmade, bricks (c. 215 x 103 x 64 mm), mostly buff but some pink, covered in a thick layer of lime mortar. Given the similarity of these bricks with those used in the partitions of No. 25, it is probable that the blocking took place during a rearrangement of the upper rooms (perhaps to update the bathrooms). The brick blocking was clearly laid from the east, in No. 25, where its appearance is much neater.



Plate 45
(Archive image PCKC 680)
Knights' Chamber. East wall,
investigation into earlier
doorway leading to No. 25
Photograph: Jackie Hall



Plate 46
(Archive image PCKC 665)
Knights' Chamber. East wall, blocked door
Photograph: Jackie Hall

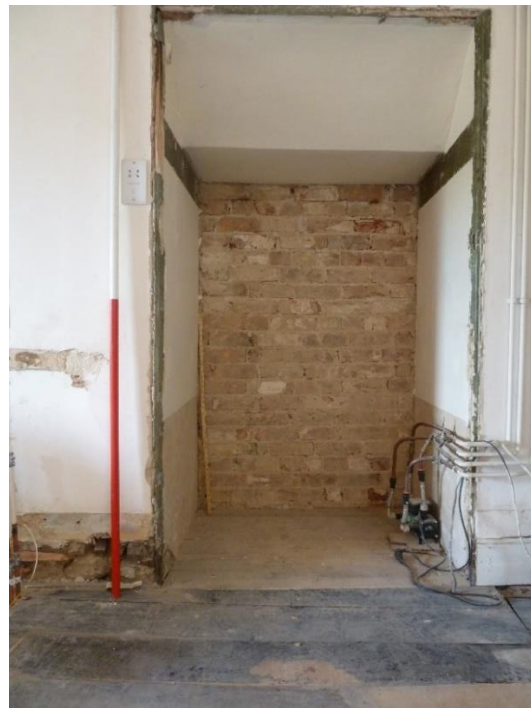


Plate 47
(Archive image PCKC 662)
No. 25. Blocked door to Knights' Chamber, from east
Photograph: Jackie Hall

When the blocking was removed, the four steps (total height 0.70m) leading upwards into the top floor of No. 25 were clearly visible, as was the timber lintel and metal bracing (Plate 48). The new (2015) door occupied the same space.



Plate 48
(Archive image PCKC 040)
Knights' Chamber. East wall, door after blocking removed, showing steps
Photograph: Jackie Hall

In August–September 2017, the opening was extended upwards, in order to accommodate a 'FlexStep' to make the Knights' Chamber wheelchair accessible; this revealed part of the medieval coursed rubble wall (section 4.1; Plates 18a, 18b, 48a).

2.4.4 The Ranges adjacent to the Knights' Chamber

On the east side of the Knights' Chamber, below the middle string-course on the south-east turret, four shallow, rough timber sockets were observed. Almost certainly, they were for some sort of extension to No. 25. There is no evidence of date, but a relatively recent date seems likely.

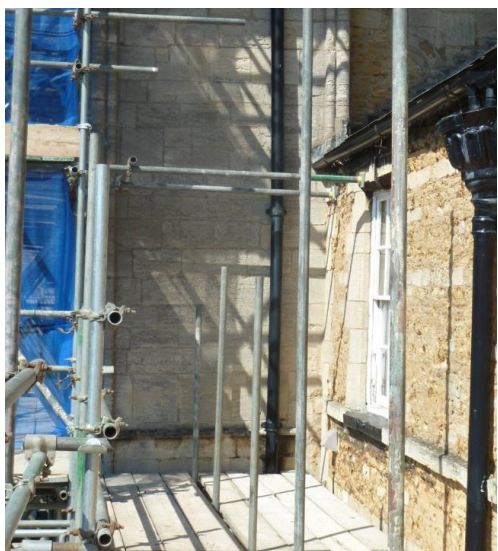


Plate 49
(Archive image PCKC 460, 463)
Knights' Chamber. East wall of south-east turret, showing rough sockets below string-course
Photographs: Jackie Hall

3 Archaeological Observations: No. 25 Minster Precincts

3.1 Introduction

The aim of the programme of work scheduled for No. 25 was to convert the previously domestic building into a Heritage and Education Centre. Prior to work commencing, trial pits were excavated to test the building's foundations to ensure that they could support the proposed alterations, and then during the early stages of the programme the interior of the building was cleared, floors were inspected and preparations were made for the installation of a lift in what had been the kitchen at the western end of the house.

In accordance with the conditions attached to the planning permission and scheduled monument consent, all of these works were carried out under archaeological supervision and detailed records were made of the exposed features and deposits, as described below.

3.2 Trial Pits

On the 6th and 7th of January 2015, two small trenches were excavated, at the request of the structural engineer, to expose the size and condition of the footings beneath No. 25 Minster Precincts (Figure 2). Both trenches were inspected and recorded by Caroline Atkins, acting for Jackie Hall the Cathedral Archaeologist, on Wednesday 7th January 2015.

3.2.1 Trial Pit 1 (TP1)

Trial Pit 1, which was 1.55m N/S by 0.90m E/W by a maximum of 1.80m deep, was located within the kitchen (Plate 50) at the west end of No. 25 against the east face of the east wall of the Bishop's Gate (Fig 2). The major part of this trench was excavated on the 6th January, by hand, by men working for John Lucas Ltd., then inspected, cleaned and recorded by the archaeologist on the 7th January, both before and after the wall's offset footing was exposed by deeper excavation.

Cleaning of the trench sides revealed a well-stratified sequence of deposits, all of which post-dated the east wall of the Bishop's Gate (Plate 51, right of frame), and the majority of which were represented in all three cut sides of the trench. The most informative section, ie. the north-facing one, and the wall elevation were recorded both photographically and in 1:20 drawings (Figure 8).

Plate 50 (below)
(Archive image PCKC 006)
Trial Pit 1 location in the SW corner of the kitchen.

Plate 51 (right)
(Archive image PCKC 010)
Trial Pit 1: N-facing section
Photographs: Caroline Atkins



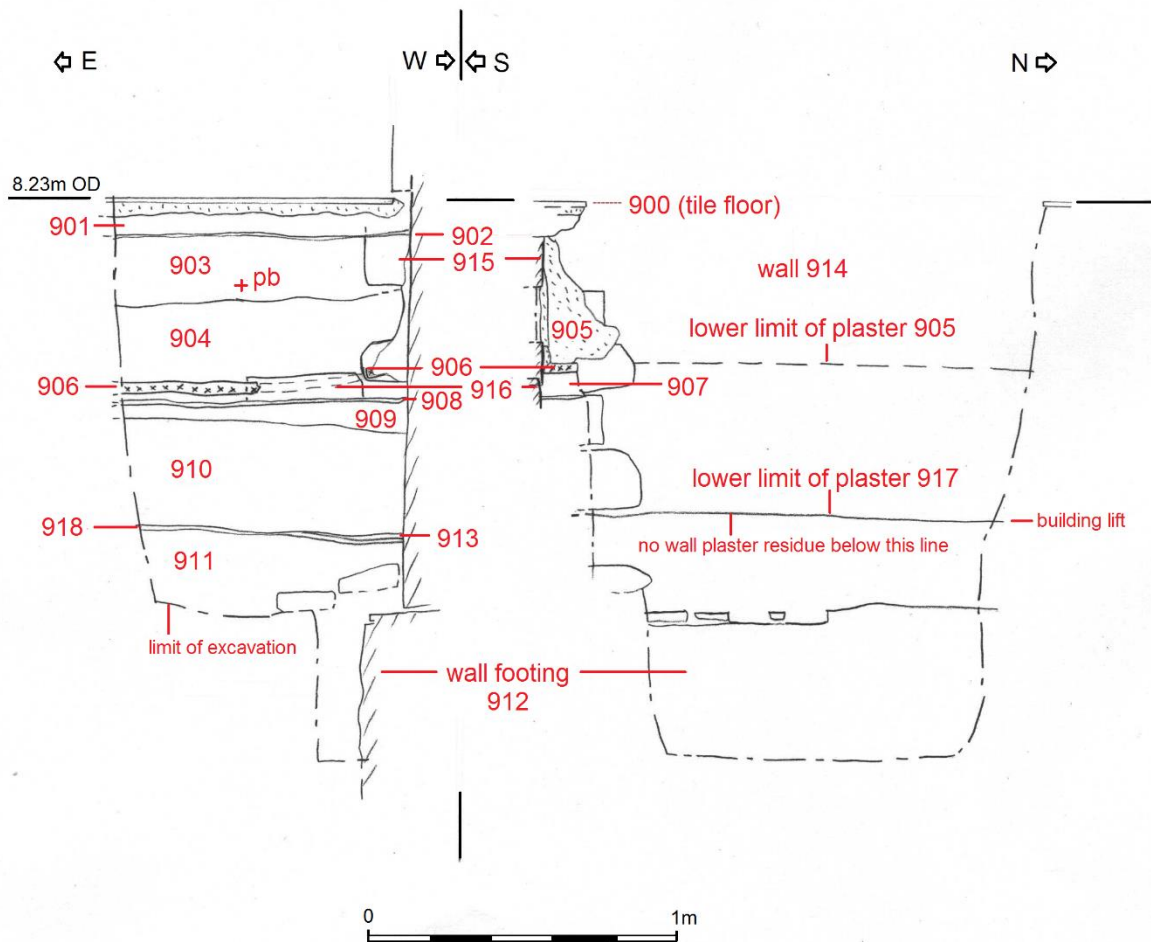


Figure 8
Trial Pit 1: North-facing section and east-facing elevation.

The earliest feature exposed in TP1 was the east elevation of the east wall of the Bishop's Gate (Figure 8, **912** and **914**; Plate 52) which, contrary to expectation, given the ashlar face visible above the roof of No. 25, was found to consist of very roughly cut stones, albeit neatly coursed.



Plate 52
(Archive image PCKC 015)
Trial Pit 1: Bishop's Gate E wall, E elevation.
Photograph: Caroline Atkins

A small collapse of the upper part of the south side of TP1 exposed (and was no doubt caused by the presence of) a right-angled projection from the gate's east wall. The projection itself (Figure 8, context **915**) had been truncated and was evidenced by only two stones (Plate 51), although more are likely to exist behind the trench section. Stones in the east elevation of the gate wall (**914**), each more than 16cm high (commonly 19cm), and equivalent to at least two courses in the adjacent wall face (Plates 52 and 53), increase the total evidenced

height of the internal quoin to 0.88m. All of the quoin stones in the east elevation were clearly put in place as the east wall was built, not inserted at a later date. Unfortunately, TP1 did not expose any evidence to suggest the intended purpose of the projection. Although a simple external buttress, to provide counter-thrust against the gate's internal vault, is a possibility, the combination of the roughly-cut stones of wall **914** with the substantial internal quoin make the possibility of an adjoining structure, built with the Bishop's Gate, far more compelling. This must mark the projecting south wall of the medieval range: this fits well with the 1822 map (Fig 5), which shows this wall north of the gateway's south-east turret, unlike today.



Plate 53

(Archive image PCKC 014)

Trial Pit 1, SW corner showing quoin stones in elevation **914**.

Photograph: Caroline Atkins



Plate 54

(Archive image PCKC 032)

Trial Pit 1, NW corner showing the top of the offset footing and part of the S-facing section.

Photograph: Caroline Atkins

The buried part of the Bishop's Gate east wall is a very substantial piece of masonry, whether measured from our modern ground surface or from the ground surface intended when it was built. The wall's footing (Plate 54) is offset by an average of 13cm and its depth is in excess of 50cm (the limit of excavation in TP1 was 6.43m OD, and the footing's lower limit was not exposed). Ordinarily, it might be reasonable to assume that the top of the footing was intended to lie immediately beneath the medieval ground surface but it appears more probable that bulk deposit **911** represents a final stage in the construction programme, and that the footing offset was intended to be an average of 23cm below the finished ground or floor level at this point.

Sealing deposit **911**, and coinciding with the top of the first building lift above the offset footing, was a thin layer of clean clay (**918**), present in all of the trench sides, which had all the characteristics of a well-worn floor surface. A mid-brown smudge of clay **918**, following the horizontal building lift, also coincided with the lower limit of the remnants of an off-white, lime wall plaster (Figure 8, **917** and Plate 52, the lower part of the elevation) which was present on all parts of the exposed elevation, underlying the remnants of wall plaster **905**. The coincidence of the clay floor and the lower limit of wall plaster strongly suggests association, but we cannot know whether they were early or late in life of the medieval building.

The levels recorded inside the SW corner of the Bishop's Gate and inside No.25 suggest that the Bishop's Gate was built on a footing with a horizontal top at 6.90m OD, regardless of the natural slope of its site (which ran downhill from north to south). The creation of a horizontal building platform, by negative or positive terracing, or a combination of the two, is a common feature of medieval monastic site development. However, it is possible that the natural slope was reflected in the floor of the gate passage to some extent.

The modern ground level to the north of the gate lies at 7.755m OD, which is 0.85m higher than the top of the Bishop's Gate footing. The mortar floor inside the undercroft of the south range had a level of 7.07m OD adjacent to the north wall of the range and the east wall of the Bishop's Gate.

What was clear, was that the space containing the clay floor and off-white wall plaster fell out of use and that a bulk deposit of banded materials, including dark brown loamy clay and lighter gritty clay-loams (**910** and **909**), was used to raise the internal floor level by an average of 0.40m. A layer of lime mortar (**908**) was then deposited over the area. These three layers are indicative of a major alteration (or replacement) of the existing structure, potentially including the excavation of construction trenches, which could have provided the material for layers **910** and **909**.

Overlying **908** was a shallow layer of limestone fragments (probable construction debris) sealed by a brown clay-loam (**907**), directly on top of which lay a poured lime-ash, or cinder-rich mortar, floor surface (**906**). A new surface coat (of render/plaster base-coat **905**), was then applied to both the east elevation of wall **914** and the north elevation of projection **915**. Wall plaster **905** lapped onto the clean surface of floor **906**. The E/W projection **915** was still a dividing feature at this point in time and deposits **907** and **906** lapped up against the face of the adjacent, only partly exposed, stone **916**. This rectangular stone might be either a primary part of, or secondary addition to, projection **915**.

Lime mortar layer **908** was somewhat irregular in section and therefore initially was thought to be no more than the remnant of a programme of alteration or demolition involving the removal of a wall plaster base-coat, preparatory to laying lime-ash floor **906**. However, part of a visually identical coat of lime mortar/render, with a surface on it, was present on the north face of stone **916**, and **908** was present, in section, extending up the face of **914**, behind **906** and **905**, which suggests that **908** represents a separate phase of floor and wall surfacing to that represented by **906** and **905**. A series of lenses of small coal fragments, dust and cinders lay between layers **908** and **907**, perhaps indicating use of the chamber as a coal store, or simply the proximity of a fireplace.

Although fractured and disturbed by subsequent activity, floor **906** did not appear to be heavily worn and had no surface adhesions or debris associated with use, suggesting that it was either a short-lived feature or one which was rarely used here, in the corner of the room. Its position (at 7.58m OD), only 0.60m below the modern tiled floor surface **900**, half way between the early (medieval) floor and the later (19th-century) floor is somewhat problematic as we have no other evidence of this phase, that here, raised the lower ground level. Both **908** and **906** could reflect the external ground level of the time, but must have restricted the overall height of the lower ground undercroft.

A third major change of floor level was evidenced by bulk deposits **904** and **903**, which were clearly dumped to raise the floor level and also to eradicate the division previously marked by projection **915** and adjacent stone **916**. Numerous voids and the absence of intervening deposits suggest that the truncation of **915** is likely to have been an immediate precursor to the dumping of deposit **904**. Lime deposit **902**, which is likely to be part of the product of wall plaster removal trampled into the top of **903**, was too insubstantial to have served as a floor, other than temporarily during alteration work. A levelling deposit of mid-brown, clay-loam mixed with fine gravel (**901**) sealed **902** and formed a bed for the mortar-bonded, quarry-tile floor (**900**) which served as the kitchen floor in No.25 until late 2014.

No finds, with the potential to supply dates for the recorded deposits, were found during archaeological inspection of TP1. The only artefacts available were a single piece of damaged lead came (Figure 8, 'pb') and a few fragments of clear glass, all of which were observed in (but not collected from) layer **903**. Other finds consisted of small pieces of animal bone, all of which were potentially mouse/rat or light lunch related.

3.2.2 Trial Pit 2 (TP2)

Trial Pit 2, 0.40m N/S by 1.05m E/W by a maximum of 0.95m deep, was located against the north face of the north wall of No. 25 (Figure 2 and Plates 55 and 56), with its west end 1.95m to the east of the external plinth of the east wall of the porch. The whole of this trench was excavated on the 7th January, by hand, by men working for John Lucas Ltd., and periodically inspected, cleaned and recorded by the archaeologist on the same day.



Plate 55
 (Archive image PCKC 029)
 Trial Pit 2: location to the east of the porch.
 Photograph: Caroline Atkins



Plate 56
 (Archive image PCKC 016)
 Trial Pit 2: the offset footing.
 Photograph: Caroline Atkins

This trench was severely limited in width by the presence of a plastic drain pipe (Plate 56) which ran roughly parallel to the north wall of No. 25, but it was nevertheless possible to expose the bottom of the rubble-stone wall footing, 0.65m below its top, which was offset from the face of the plinth by a maximum of 14cm. This footing, which was the earliest feature exposed in TP2, has a capping course of reclaimed mouldings (Plates 57 and 58). Only one length of moulded stone in this top course is in anything like a good condition, the remainder having been damaged during or following their reuse in the footing. The reused stones have a large central keeled roll (the keel mostly missing), which is strongly reminiscent of the mouldings reused as a cornice inside the Knights' Chamber (sections 2.2.4 and 2.3.2).



Plate 57
 (Archive image: PCKC 025)
 Trial Pit 2: top of offset footing.
 Photograph: Caroline Atkins



Plate 58
 (Archive image: PCKC 026)
 Trial Pit 2: keeled moulding capping offset footing.
 Photograph: Caroline Atkins

The material abutting the wall footing, and presumably contained by a construction trench, was a mixture of mid ginger-brown gritty clay-loam and mid dull brown clay-loam with small stones. Above that was a deposit of dull brown loam capped by the modern topsoil, which is a very dark, grey-brown clay-loam. The drain-pipe trench appeared to cut through all but the modern topsoil, and contained imported sand, stone dust & chippings. No context numbers have been allocated to the deposits abutting the wall and footing since all were clearly redeposited construction and pipe trench fills, and their exposure and access to them was so limited. No artefacts were collected or observed.

Due to the proximity of the plastic drain-pipe to the wall, very little useful evidence has been recorded. However, there is no doubt that the wall footing is all of one build and that it almost certainly dates from the 19th century period. Medieval features discovered further east in the wall (section 3.6) show that the new wall must rest on the medieval footings to some degree.

3.3 Lift Foundation Trench

Work on the foundation trench for the lift shaft, within the room previously used as a kitchen (Figure 2), commenced under archaeological supervision on the 22nd July 2015. Archaeological excavation and recording were completed on 13th August 2017.

Initially, the area excavated for the lift shaft foundation was 4.81m E/W by 3.78m N/S by 400mm deep (limit of excavation 7.88m OD). However, when it became apparent that the design of the cast concrete foundation depended upon steel beams set in large sockets cut into the west (Bishop's Gate east wall), north and east walls of the kitchen, the design of the foundation had to be revised, to exclude damage to the medieval fabric of the Bishop's Gate. The new design included a 200mm-wide strip footing parallel to, and founded upon the offset footing of, the east wall of the Bishop's Gate, which would take the limit of excavation down to approximately 6.91m OD. This additional strip trench was 3.20m long (N/S) and, to allow working space for construction of the reinforcement steel for the strip footing, 750mm wide (E/W), and a total of 1.34m deep.

3.3.1 Foundation Trench Design A

Within the initial 400mm-deep area, which was completely excavated before the lift foundation design was changed, only two features of interest were exposed. The first of these was a breather for the kitchen range (Plate 59), running from the existing range position roughly mid-way along the kitchen's east wall to the NW corner of kitchen and through the north wall (Plate 60). Standard rectangular bricks (230 x 115 x 63mm) had been used for the cap and the channel walls and purpose-made bricks (235 x 165 x 100mm) with a semi-circular channel moulded in their tops (below right) had been used for the channel base. The breather channel was full of soot.



Plate 59

(Archive image: PCKC 057)

Lift Foundation Trench: NW corner of the kitchen showing the intact range breather.

Photograph: Caroline Atkins



Plate 60

(Archive image: PCKC 153)

Lift Foundation Trench: NW corner of the kitchen showing the range breather in section.

Photograph: Caroline Atkins

The second feature was a large stone set at right-angles to the west wall of the kitchen (Plates 61 and 62), from which it appeared to project. Investigation showed that the stone was not attached to the east wall of the Bishop's Gate but was laid on loose bulk fills close to the wall face. Butting up to the north face of the stone was a floor brick (147 x 120 x 37mm), one of several laid as a floor which projected from a blocked opening in the kitchen's west wall. The edge-bedded bricks of the blocking wall, which sat on top of the floor bricks and the large stone, were associated with the most recent staircase. The large stone clearly served a purpose, potentially before and certainly after the laying of the brick floor, probably as a pad for a timber partition, perhaps at the back of a cupboard under the most recent staircase. No other large stones were found nearby but it is possible that any such were removed when the staircase was dismantled and the red and black tile floor was lifted prior to the commencement of work on the lift foundation trench. In the kitchen demolition, a medieval springer with a broken cusp was identified, which may have belonged to the medieval range preceding No. 25 (Appendix D).



Plate 61
(Archive image: PCKC 068)

Lift Foundation Trench: The stone set at right angles to the west wall of the kitchen.

Photograph: Caroline Atkins



Plate 62
(Archive image: PCKC 069)

Lift Foundation Trench: The stone from above.

Photograph: Caroline Atkins

3.3.2 Foundation Trench Design B

The major part of the deeper trench for the strip footing against the Bishop's Gate's east wall was excavated, by hand, under archaeological supervision, by men working for Messenger Construction, the Principal Contractor for the project. When all bulk deposits had been removed, the lower deposits were excavated and recorded by the supervising archaeologist.

The bulk deposits **910**, **904** and **903** described in Section 3.2 were present in the strip foundation trench (**925**, **923** and **922** respectively) but each layer of material was shallower in the northern half of the trench, where they overlay a very substantial bank of lime mortar debris mixed with small fragments of limestone and ceramic building materials (**930**). This material was banked up against the south face of truncated wall **931**, which now serves as the offset footing for the north wall of No. 25 (Plates 63 and 64).

When fully exposed, it was apparent that wall **931** was built with the east wall of the Bishop's Gate, the lowest stones of their internal quoin being founded upon offset footing **929** (**912** in TP1) and subsequently coated with the same lime wall plaster (**932**) at low level, indicating that it was the north wall of the medieval range. Fire-reddening of the truncated top of wall **931**, and the presence of so much demolition debris (**930**), suggests a period of demolition and site clearance, most probably associated with construction of the north wall of the existing building. It is also probable that wall **915**, which was exposed in TP1, was reduced during the same construction programme.

When built, walls **931** and **915**, respectively the north wall and probably the south wall of a range built with the east wall of the Bishop's Gate (**914**), enclosed a space 5.90m wide (N/S) (Figure 9). This footprint matches the outline of the south range shown in Eyre's map of 1721 (Figure 3) and depicted in Carter's engraving of

1796 (Figure 4). It also connects with the briefly exposed remnant of a medieval window exposed towards the east end of No. 25 (section 3.6).



Plate 63
(Archive image: PCKC 120)

Lift Foundation Trench: north end showing truncated wall **931** with fire-reddening.
Photograph: Caroline Atkins



Plate 64
(Archive image: PCKC 142)

Lift Foundation Trench: wall **931** viewed from above, with patchy lime mortar floor **927** to the left of it.
Photograph: Caroline Atkins

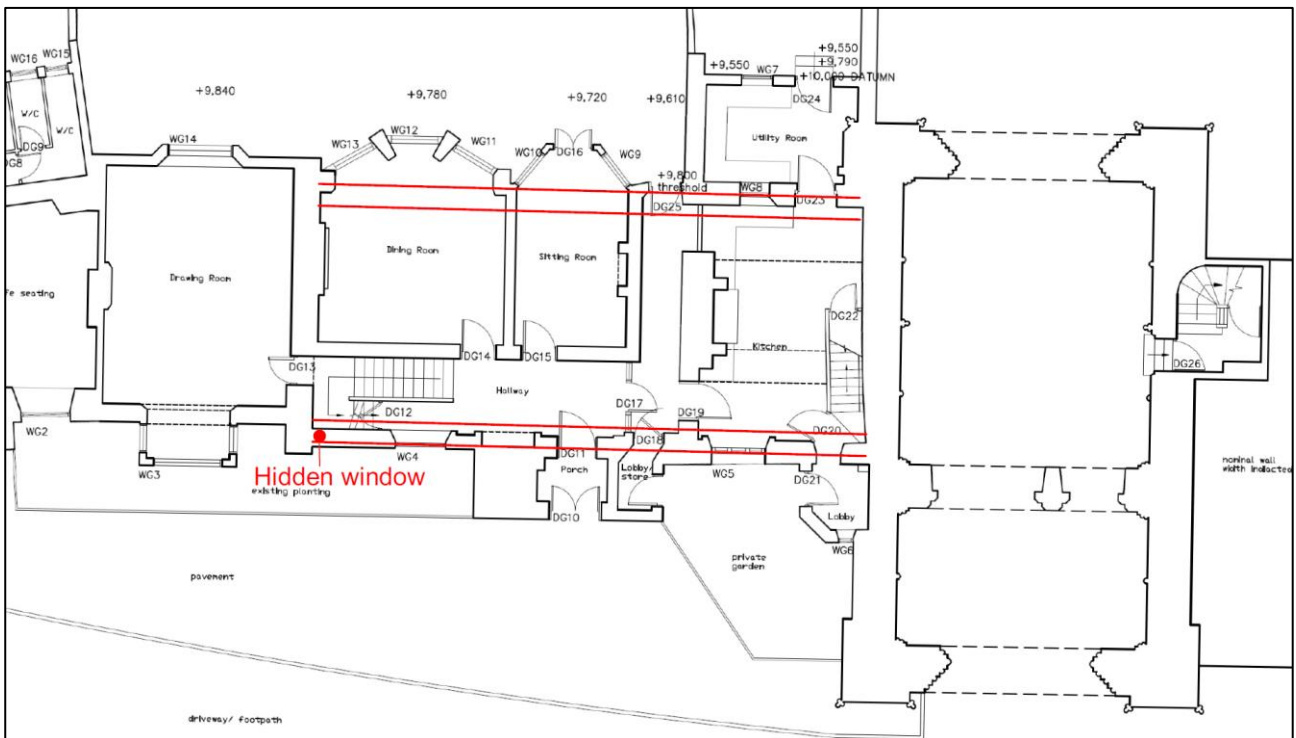


Figure 9
No. 25 Minster Precincts: Diagram showing approximate location of medieval range after The Whitworth Co-Partnership LLP

Abutting the internal elevations of the west and north walls (**914** and **931**) of the south range was a lime mortar floor (**927**) which was present in all parts of the strip trench. The mortar floor appeared to consist of a single layer of lime mortar, with a crust of fine, sandy silt, but much trampled and potentially a product of a sequence of floor surfaces, each laid when its predecessor had worn down to almost nothing. In the small area tested, the mortar was bedded on what appeared to be construction trample, including mortar lumps and grains, pressed into the top of the bulk backfill (**928**) of the Bishop's Gate construction trench. The floor was patchy at best, presumably due to a period of use followed by a period of exposure to a demolition crew, and marked by fire (Plates 63 and 64).

Floor **927** lay immediately beneath demolition debris **930**, which might help to explain why two artefacts collected from context **928**, immediately below floor **927**, have provided mixed dating evidence (see Appendix XX). A jetton, which is reported to need further conservation work to enhance identification, is thought to date from the period 1490 to c. 1585, and a small body sherd from a drinking vessel has been identified as post-medieval black glazed ware dating from the late 16th century to the end of the 17th century. It is probable that both artefacts are intrusive, the jetton easily might have been lost and trampled into the well-worn and damp lime floor during the period of use of the south range undercroft, and similarly, the small sherd might have been trodden into the floor of the range during the demolition work which produced deposit **930**.

In addition to the fire-reddened stonework mentioned above, two discrete patches of burning (Plate 65) were exposed at the limit of excavation, the northern one being a rectangular area (0.40m by 0.28m in plan) of fired clay (ie. part of the medieval construction backfill burnt *in situ*), and the southern one a more nearly circular patch (0.40m diameter) of soot and charcoal dust embedded in the medieval construction backfill, where the mortar floor was absent or very thin. Both patches are likely to represent vertical timbers burnt *in situ* during the programme of demolition and reconstruction of the south range. These timbers perhaps propped a sagging ceiling/ vault above.



Plate 65
(Archive image: PCKC 144)
Lift Foundation Trench:
the two patches of
burning near the
Bishop's Gate east wall
(**914**, top of frame).
Photograph: Caroline Atkins

The lime mortar floor (**927**), lay at 7.08m OD, an average of 0.17m above the offset footing seen in TP1, which the structural engineer required the strip footing for the lift foundation to sit upon. Alternatives to destroying the mortar floor were sought and a compromise was agreed. A 200mm-wide trench was excavated over the footing (Plate 66) and the latter, with the remainder of the mortar floor, were protected by a membrane with sand blinding before the steelwork was fitted to the trench and the concrete was poured.



Plate 66
(Archive image: PCKC 183)
Lift Foundation Trench:
the northern half of
footing **929** exposed at
the limit of excavation.
Photograph: Caroline Atkins

3.4 Bishop's Gate East Wall

Prior to the excavation of the lift foundation trench, removal of the existing staircase and some of the associated wall plaster from the west wall of the kitchen (Bishop's Gate east wall) exposed several interesting features. Most of these were, at first, only partially visible but subsequent removal of more of the wall plaster; the excavation of the deeper part of the foundation trench for the strip footing; and the unblocking of the timber-lintelled opening to enable assessment of its structural stability, exposed more evidence to increase the record and aid interpretation.



Plate 67

(Archive image: PCKC 358)

Bishop's Gate east wall exterior: after the removal of unstable wall plaster and brickwork.
The annotated lower photograph shows features referred to in the text.

Photograph: Jackie Hall

The major part of the elevation shown in Plate 67 consists of the medieval masonry of the east elevation of the east wall of the Bishop's Gate and the truncated north wall of the south range (areas labeled **A**). The cut back stones of the internal quoin are clearly visible above the intact lower courses of the north wall (**931**) where they rise 2.85m above their offset footing. It is probable that the full height of the north wall of the medieval south range is evidenced behind the wall plaster of the upper floors of No. 25 and certain that the sequence of roofs on the south range and No. 25 are evidenced in the stonework exposed in the roof-space of the present building (Plate 68). Unlike the coursed rubble of the lower wall, the high level is ashlar.



Plate 68
(Archive image: PCKC 190)
Bishop's Gate east wall exterior:
viewed through the trapdoor near
the re-opened doorway
between No. 25 and the Knights'
Chamber.
Photograph: Caroline Atkins

Setting aside the small sockets cut into the east face of the Bishop's Gate east wall (Plate 67), most of which relate to staircase and stud wall installation, there are only two significant areas of alteration. The largest of these is the area outlined in white in the right-hand half of the photograph, within which is the yellow-outlined opening labeled **B**. In its most recent form, feature **B** was a plaster-lined recess, fitted with at least two timber shelves (Plate 69). The floor of cupboard **B** was a flush continuation of the floor brick surface on the kitchen floor (see Section 3.3.1).



Plate 69
(Archive image: PCKC 082)
Bishop's Gate east wall: Brick &
plaster-lined recess with
impressions in the wall plaster left
by two timber shelves.
Photograph: Caroline Atkins

However, there was a larger opening, 1.60m wide, prior to the creation of the 1.18m-wide recess **B**. Both jambs of the earlier opening are of largely medieval stonework and above them is a scar left by the removal of a projecting canopy, indicating that the opening was originally built to serve as a fireplace, presumably that served by the flue recorded during work on the roof of the Knights' Chamber (Plates 70 and 71; Section 2.2.6). At roof level it was not possible to discern whether the flue was a primary or secondary feature of the wall, but primary is the most likely given the difficulty of creating a vertical hole within an existing wall.



Plate 70
(Archive image: PCKC 131)
Bishop's Gate roof east side:
showing the location of the flue.
Photograph: Caroline Atkins



Plate 71
(Archive image: PCKC 133)
Bishop's Gate roof east side: showing the location of the
flue.
Photograph: Caroline Atkins

When the fireplace canopy was dismantled, a set of four substantial timbers, each 110mm wide, was set across the base of the flue and the wall above was rebuilt, flush with the surrounding wall, directly on the timbers. Only very limited access was available for the inspection and recording of the opening and timbers by the project architect and archaeologist, but it was possible to record the 0.56m depth of the fireplace below the inserted lintel and the presence of a clay lining on the south side of the fireplace and lower part of its flue. Use of the wide opening beneath the inserted timber lintel, before the opening was made narrower for plaster-lined recess **B**, is probable but no clear evidence for its finish or purpose was accessible.

The narrowing of the opening to create recess **B** appears to have been prompted by the decision to construct a staircase (Plate 67, lime green parallel lines labeled **C**) rising towards the north. The second significant feature of the elevation, the large inserted stone labeled **D**, must either be associated with this period of work (as a fixing point for a structural support) or earlier than it, since the staircase ran across the stone and the wall plaster which lapped over and behind the stair timbers also covered the insertion cut for the large stone.

The large stone itself (Plate 67, **D**; worked stone record PCKC ST3) is described by Jackie Hall as a heavily cut-back engaged double springer, either from a blind arcade or a vault, with a large radius of curvature. Given the appearance of the medieval range, it is tempting to suppose that it originated in a vaulted undercroft below the upper ground hall. However, no evidence of vaulting could be seen in the uncovered areas of the wall, although it could, perhaps, have come from the north or south walls, if the range was vaulted in a single broad N-S bay.

When staircase **C** was replaced by stair **E** (Plate 67, pale blue outline), the staircase which was removed in 2015, recess **B** was first closed by the insertion of brickwork then plastered over.

3.5 Service Trenches

3.5.1 Drainage



Plate 72
(Archive image: PCKC 158)
Drain trench: inside the scullery,
adjacent to the SE turret of
Bishop's Gate.
Photograph: Caroline Atkins

The excavation of a new drain trench (Plates 72–74), across the scullery of No. 25 and to an existing inspection chamber in its back yard, was carried out by Messenger Construction and periodically inspected by the project archaeologist between 6th and 12th August 2015. Inside the scullery the trench had an average width of 0.37m wide and a maximum depth of 0.53m.



Plate 73
(Archive image: PCKC 162)
Drain trench: beneath the scullery's
outer door
Photograph: Caroline Atkins



Plate 74
(Archive image: PCKC 158)
Drain trench: across the back yard
of No. 25
Photograph: Caroline Atkins

Inside the scullery, the new drain trench ran alongside the east face of the SE turret of the Bishop's Gate but did not expose any of its medieval stonework. The trench was cut through the existing red quarry tile floor surface in the scullery, exposing the concrete slab and its plastic membrane overlying two substantial layers of building debris spread over the backfill of an existing drain trench associated with a rainwater downpipe which remains *in situ* in the NW corner of the scullery. The north side of a construction trench for the scullery's

south wall was clearly cut from above the two layers of building debris indicating that the ground to the rear of No. 25 was made up before the existing scullery was built.

The part of the trench which crossed the yard, between the south door of the scullery and the existing manhole adjacent to the yard shed (Plate 74, scullery door centre top), was excavated on the 12th August 2015 and inspected at intervals. This part of the trench was a maximum of 0.41m wide by 0.55m deep (the latter adjacent to the manhole) and exposed a mid-brown, gritty clay loam mixed with bits of building debris, and the construction trench for the existing manhole. Nothing of significance was exposed or destroyed.

3.5.2 Electricity

A new trench was excavated, by Morrison Utility Services (a local electricity board contractor), on 9th and 10th November 2015, between a previously opened connection point in front of No. 25 to a new connection box installed outside No. 27A (Figure 2).

Two features of interest were exposed by the new trenching. The most interesting was a small area of ovoid stone cobble surface near the Bishop's Gate passage because it lay an average of 0.40m below (at approximately 7.35m OD) the existing tarmac path and road surface. This provides further evidence in support of a major landscaping of the south side of the Galilee Court, possibly associated with the major Victorian programme of work on the cathedral's west front, or with the almost complete rebuilding of No. 25 earlier in the 19th century.

The other feature of interest was a brick-sided channel capped by memorial stones laid face down (Plate 75). Two memorial stones were partly exposed by the trench excavation but neither could be lifted because they were wider than the trench. The corner of one stone was damaged by the machine, allowing limited recording (Plate 76).

The reuse of memorial stones is not uncommon, and indeed several far larger memorial stones were cut up and reused in the cathedral's west front portico steps (Atkins & Hall, 2017). Again it is possible that the two pieces of work were associated with the same landscaping of the Galilee Court. A reordering of the cemetery and court would release large numbers of memorial stones, of a variety of sizes, for which a new use would be sought.



Plate 75

(Archive image: PCKC 316)

Electricity trench: re-used memorial stones adjacent to the front door of No.27.

Photograph: Caroline Atkins

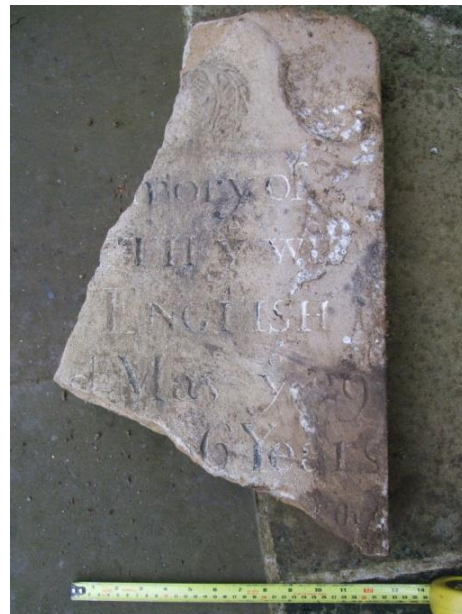


Plate 76

(Archive image: PCKC 315)

Electricity trench: the fragment of re-used memorial stone

Photograph: Caroline Atkins

3.6 The Hidden Window

On 11th January 2016, part of the internal elevation of the north wall of No. 25 was inspected by Jackie Hall. Work on the interior of the building, including the removal of dry-lining from the north wall adjacent to the main staircase, had exposed part of a window (Plates 77 and 78), which the principal contractor thought might be of archaeological interest.



Plate 77

(Archive image: PCKC 660)

No. 25 north wall internal elevation: showing the location of Plate 79 bottom left.

Photograph: Jackie Hall



Plate 78

(Archive image: PCKC 661)

No. 25 north wall internal elevation: the medieval window closed by later masonry.

Photograph: Jackie Hall

It proved to be the head of a narrow cusped window, with splays surviving each side, one original in stone and one later, in brick. Investigation showed it to be the top of the lower ground floor window just visible in Plate 1, west of the buttress next to the drawing room. Probably when the stairs were put in, and the front refaced, the window was horizontally divided with timber and the top half blocked. In Carter's engraving (Fig 4), this window is hidden either between the entrance porch and the small tower to the west, or it played some part in lighting that tower from the interior.

3.7 No. 25: the 19th-Century Building

Nineteenth-century changes to the building are multiple, complex, and documenting them was not part of the recording brief. Nonetheless, it is worth making a few remarks, especially on the exterior. Some of the changes have been mentioned in section 1.4.2, such as the changing boundaries between Nos 24 and 25, and some in relation to the kitchen, in the sections above. This is surely responsible for the different appearance of different parts of this range. The roof seems to have been replaced when the drawing room was part of No. 24, for instance (Fig 1) while the refacing in fine ashlar work at the front (north side) seems to have been done after the drawing room came into No. 25. These may have been paid for by the tenants, rather than the owner (the Bishop, and now the Chapter).

At the same time as the ashlar refacing of the front, the entirety of the south side (rear), between the Bishop's Gate and the drawing room, was rebuilt with coursed rubble, and rectangular windows with ashlar jambs and lintels, each with a keystone (Plate 79).



Plate 79
No. 25 from rear, with close up of window with keystone
Photograph: Stuart Orme

Remnants of these keystone windows can also be seen in the front (north side), usually with the lintels surviving immediately above the extant windows, thus proving this phase to belong with the ashlar refacing (Plates 80–81).



Plate 80
(Archive image: PCKC 262)
Window west of porch, with lintel
with keystone above
Photograph: Caroline Atkins



Plate 81
(Archive image: PCKC 262)
Window east of porch, with lintel
with keystone above
Photograph: Caroline Atkins

The division of the building into the rooms that can be seen today, also probably belongs with the rebuild of the south wall and the new facing of the north wall. All of the partitions that were partially exposed or destroyed by the 2015–16 works (kitchen passage west wall; top floor east wall to No. 24; top floor middle bedroom) comprised handmade bricks, pink or buff c.220 x 103 x 62.

The last major refenestration replaced the front windows with the still extant mullioned and transomed windows, with square hoodmoulds above (Plates 1, 80, 81); the keystone windows were never replaced on the rear elevation.

4 Archaeological Observations: 2017

Subsequent to the main works, two minor interventions were carried out under archaeological observation in late August and early September 2017, one relating to the Knights' Chamber and one relating to the development of No. 25 respectively.

4.1 The Knights' Chamber East Wall



Plate 82
(Archive image PCKC 707)
Knights' Chamber. East wall, extending door for
FlexStep
Photograph: Jackie Hall

In order to accommodate a wheelchair accessible FlexStep, the doorway between the Knights' Chamber and No. 25 was extended upwards (Plate 82, 83). As with the other side of the wall visible lower down inside No. 25 (section 3.4), this showed that the interior wall faces were constructed of coursed ragstone rubble c. 35–75mm high x 150–250mm wide, x 170–320mm deep, probably with occasional courses of ashlar (Plate 84). The mortar used was brown, very fine-grained and clay-based, apparently with no lime. This is similar to both late medieval mortars and post-Dissolution mortars seen elsewhere in the precincts, but different from the later 14th-century lime mortar seen in Hostry Passage (Hall 2010; Hall and Atkins 2017). Clay-based mortar may have been seen as acceptable in a context always intended to have been plastered.



Plate 83
(Archive image PCKC 701)
Knights' Chamber. East wall, above door in
2017
Photograph: Stephen Crane



Plate 84
(Archive image PCKC 704)
Knights' Chamber. Wall stone removed from
above door in east wall
Photograph: Jackie Hall

4.2 No. 25 Central Doorway, Threshold

The threshold of the main doorway to No. 25, within the central porch (Figure 2), was lifted and the west end excavated to a depth of 230/255mm (south/north depth; 7.95m OD). The stone threshold was of Ketton stone, and rather thin at 38mm; it lay between two fine sets of probable Minton tiles, within the porch and within the hall of the house (Plate 85).



Plate 85
(Archive image PCKC 715)
No. 25. Threshold, looking north into porch
Photograph: Jackie Hall

Within the mini-excavation, the earliest deposit seen was a bedding layer of clay-based mortar. Immediately on top of this, a brick floor (or step) was set, with handmade buff or pink bricks c. 105 x 230 x 110mm, similar to those seen elsewhere in No. 25, and perhaps contemporary with the brick floor **919**, seen in the kitchen (Appendix B). The bricks ran underneath a step on the porch side constructed of coursed rubble and brown, clay-based mortar (Plates 86, 87). This showed no wear, and was almost certainly the base for a stone surface (there being no impressions of tiles).

The bricks projected 85-90mm under the step, which was 110mm high. They appear to be contemporary and must indicate a difference of levels between the interior and exterior, perhaps related to the major 19th-century changes in this range, after the medieval undercroft was partially filled in (section 3.2.1 and 3.3.3).

Above both the bricks and the steps, there were a series of levelling layers, preparatory to laying both the Minton tiles and the threshold stone. To help level up the interior floor, a timber, with no structural function, was laid against the step; unsurprisingly, it had mostly decayed, although the very bottom was in better condition (Fig 88). Above this and above the step, there was concrete with occasional brick rubble (50-60mm; thicker in section on the house side), then a thin layer of bedding cement for the tiles (35mm for both tiles and cement).



Plate 86
(Archive image PCKC 715)
No. 25. Threshold, brick floor, before removal.
This was set on a brown clay-based bedding
layer
Photograph: Jackie Hall



Plate 87

(Archive image PCKC 725)

No. 25. Threshold, showing brick floor and clay-and-stone step. On the left (west), the step has been partially excavated to show the coursed rubble construction. On the right (east), the brick floor has not been revealed, as that side did not require excavation to fit the new door mechanism.

Photograph: Jackie Hall



Plate 88

(Archive image PCKC 719)

No. 25. Threshold, showing brick floor and clay-and-stone step, with decayed wood in foreground (south). The decayed wood only filled the space visible, and did not go under the jambs, nor under the Minton tiles.

Photograph: Jackie Hall

5 Conclusions

The Bishop's Gate and No. 25 project succeeded in creating a new Education and Heritage Centre, and providing public, universal, access to a previously closed medieval building of major importance. Despite relatively limited access for archaeological recording, significant advances were made in our knowledge of these buildings. In particular, it has been possible to further characterise the medieval appearance of the Knights' Chamber, establishing the presence of a large window in the south wall and, in probability, an early hammer beam roof, along with a major hooded fireplace and other early-14th-century features. Although medieval, it is suggested that the cornice is a re-use of material probably made available in the Commonwealth period, when many old abbey buildings were being dismantled.

It was also possible to further characterise the 17th- to 18th-century period, both in the building, and with the somewhat surprising discovery of a finds and faunal assemblage in one of the turrets belonging to the use of the building in the 18th-century.

In No. 25, the various trial pits and excavations, including for the new lift shaft located the north and south walls of the medieval range, and a series of floors within the building, showing how the floor level has risen not gradually, but in two major episodes. This, and the discovery of a window in the thickness of the wall, proved that, on the north side, the ghost of the 14th-century range, last seen in the early 19th century, still survives.

The excavation of the medieval south wall, by contrast, proved that the whole of this wall had been reconstructed as far as the drawing room, with coursed rubble and ashlar. Judging by the windows (horizontal lintels with keystones) this took place at the same time as the refacing of the north side in ashlar, facing Galilee Court. This may have happened at the same time as the Knights' Chamber roof was replaced with a kingpost roof, probably in the second quarter of the 19th century.

Much of this work deserves further study and publication, notably on the medieval and 17th-century Knights' Chamber, with artist's reconstructions of the interior, and including the findings concerning the adjacent medieval range.

6 Acknowledgements

Thanks to Messenger Construction, in particular Jonathan Leftley their site manager, for granting access to the works areas and facilitating our archaeological work; to the various staff of Peterborough Cathedral involved in the project for enabling the watching briefs; and to the project architect (The Whitworth Co-Partnership) for providing drawings and other information. Thanks also to Henry Mansell Duckett for discussing the various phases of the Bishop's Gateway with Jackie Hall, and helping her form some of her ideas; to Nicola Coldstream for confirming the date of the statues and pointing out the rather feminine appearance of the 'abbot'; and to Hugh Harrison for kindly attempting to identify the wood of the roof from photographs. The 2017 works were aided by the contractor at that time, John Lucas' Ltd.

7 Project Archive

The project archive, paper and electronic, including drawn, written and photographic records will be deposited with Peterborough City Museum under the project code PCKC. The finds will also be deposited with Peterborough City Museum; mortar samples will be retained by the Cathedral Archaeologist (for as long as they are useful).

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Appendices

Appendix A: Archaeological Mitigation Strategy

A Mitigation Strategy detailing a Programme of Archaeological Observation and Recording at Peterborough Cathedral Precincts, associated with changes to 24, 25 The Precincts, and the Knights' Chamber, and with landscaping behind Nos 24–25

Planning Reference Number: 13/00520/FUL

Prepared by Jackie Hall for Peterborough Cathedral

1 Summary

This written scheme details an archaeological mitigation strategy which, if approved, will be implemented during changes to 24–25 The Precincts to create a new combined Heritage and Education Centre, including a new garden area.

2 Site Location and Description

The buildings are centred on National Grid Reference 519300 298625 and are located on the south side of 'Galilee Court' – the great court on the west side of Peterborough Cathedral. The Bishop's Gateway – also known as the Knights' Chamber – is in the centre of this south range and Nos 24–25 lie directly to its east.

The whole area has been part of the cathedral/abbey precincts since the mid-12th century and it is possible that the eastern part was in the Anglo-Saxon abbey precincts.

3 Planning Background

Planning permission (13/00520/FUL) has been granted to open doorways between the Knights' Chamber and No. 25 and between Nos 24 and 25, both at second floor level. A new lift and toilets will also be installed to make the buildings available to the public as a new Heritage and Education Centre. At the rear, behind No. 24, tarmac and sub-base will be removed to create a new garden. Scheduled Monument Consent (SMC) has been granted for the works to the Knights' Chamber.

The developer, Peterborough Cathedral, has undertaken to implement the required programme of archaeological work, to the standard specified by the Peterborough City Council (PCC) Archaeologist, as set out in the Archaeological Assessments (Hall 2012; Hall 2013) and in accordance with the methodology proposed in this document.

If the proposed archaeological programme is acceptable to the PCC Archaeologist, it is hoped that construction groundworks and building works will commence in the near future. The Archaeologist will be notified of the precise start date and works programme when these have been agreed.

4 Historical and Archaeological Background

The site of the proposed works lies within the precincts of Peterborough Cathedral/ Abbey, within the Galilee Court (or Minster Court). The following is taken from the archaeological assessment (Hall 2013) and from the Knights' Chamber assessment (Hall 2012):

Nothing certain is known of the pre-Conquest history of this particular area on the west side of the precincts. The precincts of the 10th-century abbey (Burgh) and the 7th-century abbey (Medehamstede) are not believed to have extended as far west as the current precincts, while the Anglo-Saxon town was probably to their east or north-east. This area first receives historical attention in the 12th century, when we learn that Martin de Bec (abbot 1132–55) 'changed the gate of the minster and the market and the hithe and the town much for the better'. This has always been assumed to be when the town was moved to the west side, and

the precincts are also presumed to have been extended westwards, thus creating one side of the Galilee Court. Based on archaeological investigations on the north and south sides of the precincts, it has been suggested that the western ditch of 10th-century Burgh might have run close to the west front of the cathedral church.

In succeeding centuries the buildings around the Galilee Court gradually developed, and were successively replaced leaving it bounded as it is now. Most relevant to this application is, on the south side, the 13th/14th-century Bishop's Gateway near the middle and also has medieval remnants at each end (in numbers 24 and 28). The gateway itself has previously been dated to the early 13th century, although a recent suggestion has been made implying a much later date. Both of these may be true. A contemporary chronicle records that abbot Robert de Lindsey (r. 1214–22) 'made a new inner gate and a new stable for the abbot's horses', which is highly likely to refer to this gateway, and this also fits well with its architectural references to the west front of the abbey church. However, although the lower mouldings could certainly be of this date, within the passage the 'dying mouldings' of the vault ribs are unlikely to predate the late-13th century. In 1303, abbot Godfrey of Crowland started the 'new' gate to the abbacy, and had the foundations examined. From this point the Latin is unclear and could be taken to mean either that the foundations were examined to a depth of 15ft (unlikely given the much lesser depth of the cathedral foundations) or from a height of 15ft, implying that this is how far work had progressed under Robert de Lindsey. Support for the latter interpretation comes in the form of a change in building materials, from small ashlar to larger ones, at the right height, bearing in mind that the bases of the gateway arches are buried c.0.75m. Abbot Godfrey completed the gateway five years later in 1308 (HER document 3039), when he also began the chambers next to the church. This end date also fits well with the architectural detailing of the upper storeys of the gateway.

Major changes took place in the first half of the 17th century, when the two upper floors were thrown into one (corbels for the intermediate floor level still survive, though they appear too insubstantial to have supported a floor); the whole building was re-fenestrated; and a Jacobean staircase was added in a new block towards the south end of the west wall. Since that time, no further major work has taken place, although the roof was repaired and the southern arch underpinned with brick in the early 20th century.

The first known documentary reference to the Knights' Chamber occurs in 1404x5 when the guttering was repaired. The gateway, then called the Knights' Chamber in its entirety, was granted to the bishopric upon formation of the diocese of Peterborough on 4th September 1541, along with all the other buildings on the south side of the Galilee Court. The third bishop, Edmund Scambler, leased the Knight's Chamber to John Mounsteving on 10th January, 1570. The lease refers to 'several chambers or lodgings over the gate, called the Knyghte Chamber with the next chamber to the same adjoining'. It is possible that this implies a doorway between the Knights' Chamber and an adjoining one, and possible that this is the doorway the current project hopes to reopen. Marks in the plaster suggest that there may be a blocked doorway just south of the east window.

In the same year that Abbot Godfrey of Crowland completed the gateway, he began attached chambers lying towards the church, parts of which can still be seen in the frontage and interior of No. 24, notably the tower at the east end, with the remnant of another gateway attached to this, and a vault at ground floor level. The upper storey of No. 24 also still retains two two-light windows and a cornice with ballflowers also of 14th century date. Additionally the rear elevation is of possible 16th century, although much of the front elevation may have been refaced in the 19th century.

By contrast, the entirety of No.25 appears to be 19th-century. In 1822, the current Nos 24–25 are shown as three properties; in 1862, they are two but with the division further west (where the change in roof can still be seen); by 1886 the division is as today.

A building was once located at the rear of No. 24 Minster Precincts. It can be seen clearly in the 1st edition OS map of 1886, and also in aerial photographs. These show a structure which appears to have been crenellated and similar in plan to the Bishop's and Deanery Stables. It is not recorded on the earlier map of 1862 suggesting that it may be a late Victorian addition, and it is last seen on the 1967–78 OS.

One relevant observation has been made on the Knights' Chamber, as part of gaining SMC:

4.1 Removal of small area of plaster to investigate possible blocked door in Knights' Chamber

On 28th February 2012, two small areas of plaster were removed on the north and south sides of the probable door blocking. This confirmed the existence of a door, with the embrasures finished in modern 'Cambridgeshire' bricks, with plain wooden jambs.

5 Aims of the Archaeological Project

For the building works, particularly the creation of new doors, the aim of the project is

To confirm the modern date of the blocked door in the Knights' Chamber, and to further characterise it, and the surrounding wall – is it a modern opening inside an older doorway?

To determine whether any of the stones in the blocking/ original wall have been re-used and if so from what period of the abbey's/ cathedral's history, and to record them appropriately.

To characterise the wall between Nos 24 and 25.

To create a photographic record of the works and any features observed.

For the groundworks behind No. 24, the aim of the project is to investigate and interpret the exposed archaeological evidence for previous use of the site and to record that evidence, which would otherwise be destroyed by the proposed groundworks, to further aid understanding of the archaeology and architecture of the cathedral/abbey. The specific objectives of the project are:

To identify and record all archaeological features and artefacts exposed during construction groundworks.

To determine the form, function, and sequence of the archaeological features encountered.

To recover dating evidence from the archaeological features.

To interpret the archaeological features and finds within the context of the known archaeology of the site and surrounding area, especially the probable Victorian stables shown by map evidence.

6 Methodology

6.1 Site Work

6.1.1 All groundworks and building works associated with the site preparation will be undertaken under archaeological supervision, after notifying the PCC Archaeologist of the start date. She will be kept informed of the observations made during the development in order that the need for continued supervision or suspension of the watching brief may be determined.

6.1.2 The Cathedral will allow adequate time and access for the archaeological contractor, who for this project is Jackie Hall, or her appointed replacement, Caroline Atkins, to make a full and detailed record of any archaeological deposits or architectural features which are uncovered within the limits of the development. The archaeological work will be carried out in accordance with the development timetable and will cause no delay to the development unless otherwise agreed if, for example, human remains or other major archaeological finds are encountered (see below).

6.1.3 All archaeological features encountered will be located on a copy of the developer's plan, at a scale of 1:100 or 1:50, with levels relative to Ordnance Datum, and details of each feature or deposit will be recorded to enable the determination of their form and function and stratigraphic sequence. Any significant features will also be recorded at a scale of 1:20 or 1:10, as appropriate, and in sectional drawings.

6.1.4 A digital photographic record, will be made of archaeological and architectural features, where appropriate, and general views of the site will be taken to record the context.

6.1.5 All finds made during the works will be collected, located and assessed for later analysis. In the event that ceramics are encountered, specialist Dr Paul Sperry, who is familiar with ceramics from these

periods and the local area, will be consulted. If necessary, other specialists from Oxford Archaeology East will be consulted on all other find types.

- 6.1.6 In the unlikely event that deposits relating to industrial activity are encountered, samples and/or assemblages of slags and residues will be submitted to the appropriate specialists for analysis. Even a small sample of any of these materials may have the potential to provide information on the industrial processes concerned.
- 6.1.7 In the event that any human skeletal remains are discovered, the PCC Archaeologist, the Cathedral and their architect will be informed. All efforts will be made for preservation *in situ*, but a detailed record will be made by specialist Zoe Ui Choileain. Only if no other option is possible will an exhumation licence be applied for from the Ministry of Justice, in which case then a detailed record will be made before the remains are removed from site for scientific study and before any further work is permitted on the development. If the skeletal remains are of particular archaeological or scientific interest, and the current interpretation of the existing legislation permits it, the remains will be prepared for analysis and long-term storage with an appropriate museum but otherwise reburial will be the preferred option.
- 6.1.8 In the event that a major archaeological find is identified, the archaeological contractor will immediately inform the PCC Archaeologist and a site meeting will be convened with the Cathedral, their architect, the archaeological contractor and relevant specialists at the earliest opportunity, and a representative of English Heritage will be invited to attend the meeting. A decision regarding the treatment of the remains to ensure their preservation will be made in agreement with the developer. The preferred mitigation option will be to secure the *in situ* preservation of the remains, beneath the development. Completion of the groundworks in the relevant part of the site will not be permitted until a mitigation strategy has been agreed and implemented.
- 6.1.9 All relevant Health and Safety Legislation will be complied with throughout the period of the watching brief.
- 6.1.10 The supervising archaeologist will be covered by current Public Liability Insurance.

6.2 Analysis and Report

- 6.2.1 All saved finds will be recorded and reported upon by appropriately skilled archaeologists, as identified in Section 6.1. The finds will also be assessed for their suitability for inclusion in the site archive.
- 6.2.2 Within six months of the completion of the watching brief a written description and analysis of the methods and results of the watching brief will be produced, incorporating specialist artefact and environmental reports where necessary and/or available.
- 6.2.3 Copies of the report will be supplied to the PCC Historic Environment Record Office and to the Cathedral.
- 6.2.5 Jackie Hall and/or Caroline Atkins will retain copyright of the report relating to the programme of archaeological investigation associated with the development of Peterborough Cathedral Precincts but agrees that the Peterborough City Council Historic Environment Record has licence to reproduce any or all material contained in the report and archive for reference purposes on the understanding that this licence does not cover commercial use of the material by the PCC or any third party. In all cases Jackie Hall and/or Caroline Atkins retains the right to be identified as the originator of the work.

6.3 Archive Deposition

- 6.3.1 A paper and electronic archive, ordered to MoRPHE PPN3 standards, and containing all primary and secondary written and photographic material will be prepared and lodged with the Peterborough Museum and Art Gallery.
- 6.3.2 The Cathedral has agreed that the paper archive should be deposited with the Peterborough Museums Service but reserves the right to decide on the general artefact archive at a later date.

The finds judged suitable for inclusion in the site archive will be appropriately packaged, in accordance with the guidelines laid down by the Peterborough Museum and Art Gallery.

6.3.3 A copy of the archive index, including the location of archive materials, will be supplied to the PCCHER.

Jackie Hall

20 August 2014

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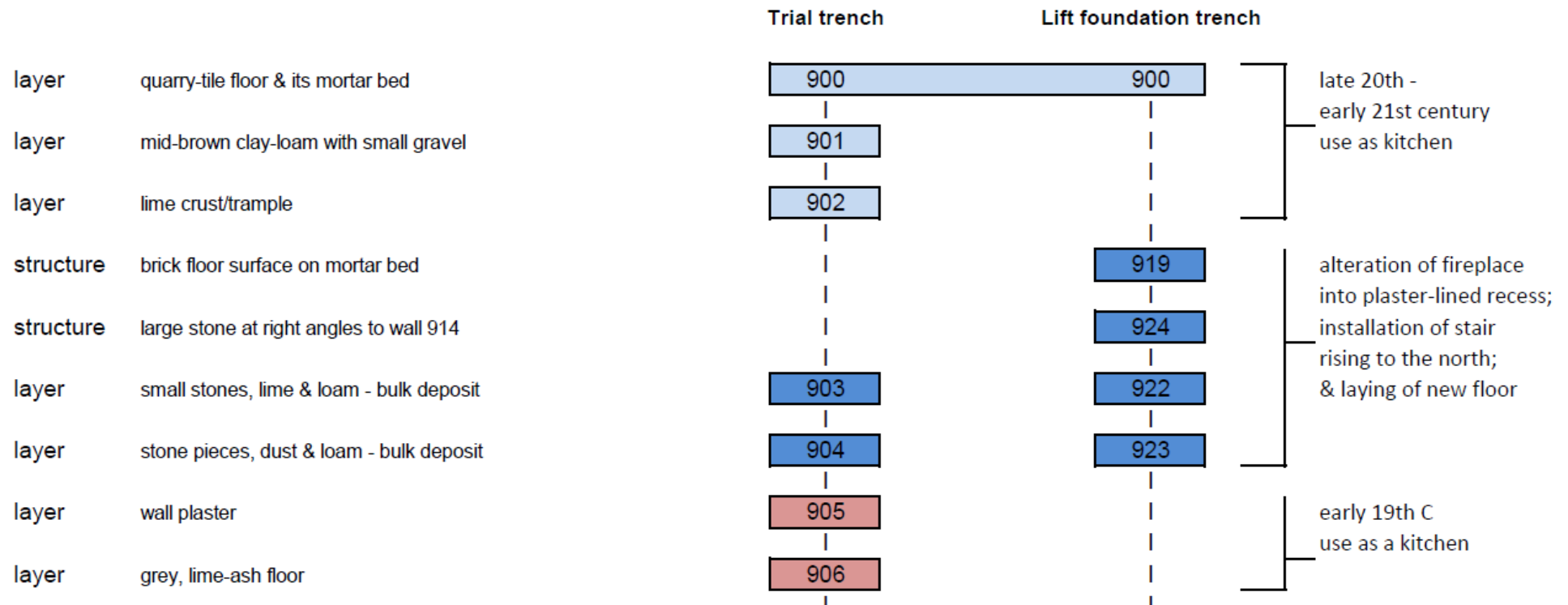
Hall, J, 2013, Peterborough Cathedral archaeological assessment for proposed works related to projects developed as part of the HLF application 'letting it speak for itself', unpublished report for Peterborough Cathedral

Appendix B: No. 25 Excavations Context Register and Matrix

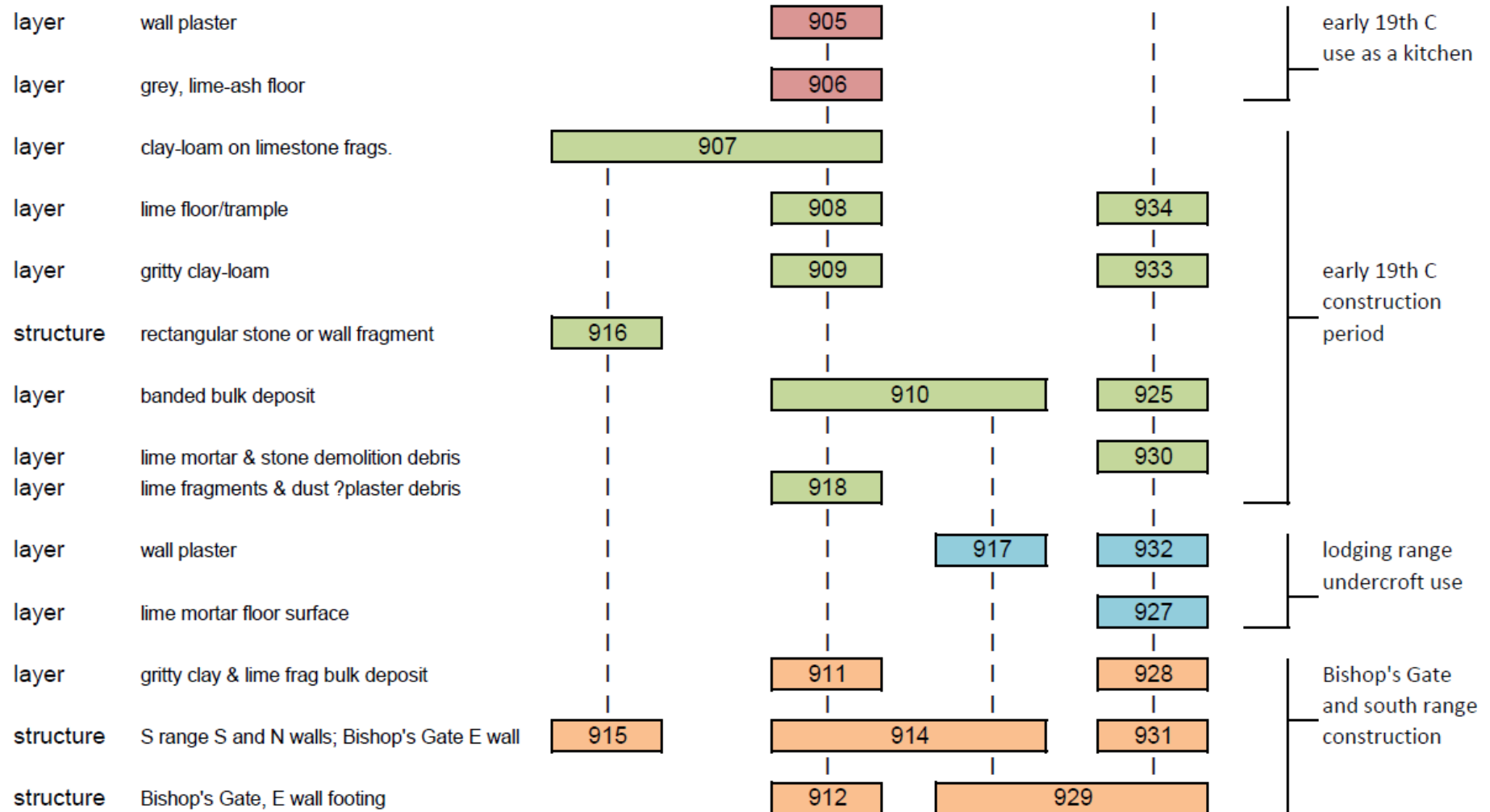
Context No.	Type	Brief Description	Area	Trench	Below	Above	Part of
900	layer	modern tile floor	No. 25 kitchen	Trial Pit 1	u/s	901	
901	layer	levelling layer for 900	No. 25 kitchen	Trial Pit 1	900	902	
902	layer	lime dust	No. 25 kitchen	Trial Pit 1	901	903	
903	layer	bulk deposit - clay-loam & stone frags.	No. 25 kitchen	Trial Pit 1	902	904	
904	layer	bulk deposit - clay-loam & stone frags.	No. 25 kitchen	Trial Pit 1	903	906	
905	layer	wall render/plaster base	No. 25 kitchen	Trial Pit 1	904	906	
906	layer	lime-ash floor	No. 25 kitchen	Trial Pit 1	904	907	
907	layer	levelling layer for 906	No. 25 kitchen	Trial Pit 1	906	908	
908	layer	lime mortar lumps & dust	No. 25 kitchen	Trial Pit 1	907	909	
909	layer	bulk deposit - gritty clay & lime frags.	No. 25 kitchen	Trial Pit 1	908	910	
910	layer	bulk deposit - silty loam & dk grey clay	No. 25 kitchen	Trial Pit 1	909	911	
911	layer	bulk deposit - loamy clay	No. 25 kitchen	Trial Pit 1	910	912	
912	structure	offset footing for wall 914	No. 25 kitchen	Trial Pit 1	914		
913	layer	lime ?plaster fragments	No. 25 kitchen	Trial Pit 1	910	911	
914	structure	Bishop's Gate E wall	No. 25 kitchen	Trial Pit 1	911	912	
915	structure	E/W projection from wall 914	No. 25 kitchen	Trial Pit 1			914
916	structure	stone butting 915	No. 25 kitchen	Trial Pit 1	904		
917	layer	lime wall plaster	No. 25 kitchen	Trial Pit 1	910	914	
918	layer	putative clay floor	No. 25 kitchen	Trial Pit 1	913	911	
919	layer	brick floor surface	No. 25 kitchen	lift fdn trench	900	920	
920	layer	brown grit/cinders	No. 25 kitchen	lift fdn trench	919	921	
921	cut	cupboard recess in W wall	No. 25 kitchen	lift fdn trench	920	914	
922	layer	bulk deposit - clay-loam & stone frags.	No. 25 kitchen	lift fdn trench	919	922	903
923	layer	bulk deposit - clay-loam & stone frags.	No. 25 kitchen	lift fdn trench	922	925	904
924	structure	large stone at rt.angles to 914	No. 25 kitchen	lift fdn trench	919	922	
925	layer	bulk deposit - silty loam & dk grey clay	No. 25 kitchen	lift fdn trench	923	933	910
926	u/s	finds collected by workmen	Bishop's Gate	NE turret roof	na	na	
927	layer	mortar floor	No. 25 kitchen	lift fdn trench	930	928	
928	layer	bulk deposit - gritty clay & lime frags.	No. 25 kitchen	lift fdn trench	927	929	911

Context No.	Type	Brief Description	Area	Trench	Below	Above	Part of
929	structure	offset footing for wall 914	No. 25 kitchen	lift fdn trench	930		912
930	layer	bulk deposit- demolition debris	No. 25 kitchen	lift fdn trench	925	927	918
931	structure	north wall of south range	No. 25 kitchen	lift fdn trench	933	929	914
932	layer	lime wall plaster	No. 25 kitchen	lift fdn trench			917
933	layer	bulk deposit - gritty clay & lime frags.	No. 25 kitchen	lift fdn trench	934	925	909
934	layer	lime mortar lumps & dust	No. 25 kitchen	lift fdn trench	923	933	908

Kitchens Excavation Matrix



Kitchens Excavation Matrix continued



Appendix C: Finds Reports

Produced for Peterborough Cathedral by Oxford Archaeology East

A.1 Jetton

by James Fairbairn

A.1.1 Archaeological monitoring works produced a heavily corroded and slightly bent copper alloy jetton of Nuremberg. Identification would likely be further enhanced if the jetton undergoes conservation and the catalogue amended in the light of any new information.

A.1.2 Catalogue

Layer 928, lift foundation trench. Nuremberg Jetton Group: Rose/orb. Type: Unknown. Probable date :1490 - c.1585. Obverse description: Orb in tressure. Obverse inscription: Illegible. Reverse description: Probably roses and crowns. Reverse inscription: Illegible. Diameter: 26mm. Weight: 2.1gms.

A.2 Glass

by Carole Fletcher

A.2.1 Archaeological monitoring works produced a small-moderate assemblage consisting of 18 shards, mostly from glass bottles, and also a clear glass fragment of alembic. Only three small shards of window glass were recovered.. The total weight of the glass assemblage is 2.055kg.

Methodology

A.2.2 The glass was scanned, recorded catalogued, and the material was weighed as individual vessels where possible. The glass is catalogued in Table 1.

Assemblage

A.2.3 Most of the shards, including all the bottles, were recovered from what is described as the space beneath the roof on the north east turret of the Bishops Gate, assigned to context 926. Layer 923, in the lift foundation trench, produced a single fragment of vessel glass which is not closely datable. Three small fragments of windows glass from layer 928 in the lift foundation trench may be medieval, although it is possibly residual in a post-medieval context.

A.2.4 Amongst the shards from the turret assemblage 926, are three that come from at least one Piermont Water bottle, Piermont mineral water that was exported from Germany from the end of the 17th century, although the bottle recovered from the north east turret of the Bishops Gate is most likely 18th century. One of these three shards features a clear applied glass seal featuring the lettering 'Piermont Water' around a star. The second and third shards represent the rim and partial neck, and the base respectively.

A.2.5 The other bottle bases from 926 are from post-medieval, mid olive green or natural black glass bottles, the forms suggesting the vessels are broadly late 17th to 18th century. Unlike the Piermont Water bottle(s), these would probably have held wine or spirits and are most probably English glass.

A.2.6 Also found within layer 926 was a small clear glass vessel with a tube attached just above the base, which has been identified as an alembic, used in distillation. Unfortunately it has not been possible to date the alembic, however it is likely to be of a similar date to the remainder of the glass and to the pottery recovered from this context and is most likely 18th century.

Discussion

A.2.7 The glass represents a collection of mostly 18th century material, mostly related to the consumption of beverages. Commonly, glass bottles of this period found on rural and many 18th century urban sites are mainly of English origin, however imported examples such as the Piermont Water bottle(s) would be in keeping with the location within the precinct of the Bishops Palace; mineral water would not be a common component of a working class household. The alembic indicates that some form

of distillation was taking place nearby, possibly for creating perfume or pharmacological products. Archaeological investigations within the Bishops Garden recovered numerous fragments of natural black glass bottles, predominantly of 19th century date or later. That evaluation also found medieval window glass in seven contexts (Fletcher 2015a in Atkins). Unfortunately the assemblages are not directly comparable due to the date difference. If further work is undertaken, the vessel shards from the north east turret and layer 928 should be looked at in relation to any other glass recovered. If no further work is undertaken, the following catalogue acts as a full record and the glass may be deselected prior to archival deposition.

A.2.8 Glass Catalogue

Context	Form	Count	Weight (kg)	Description	Overall Date
923	Vessel	2	0.003	Irregular slightly curved fragment of vessel glass. The glass was originally clear, possibly with a slight green tint that can be seen when held to a strong light. The surface has become partially opaque and is pitted on what is presumed to be the exterior surface. More recent break shows the glass to be in reasonable condition, however it is not closely datable.	Not closely datable
926	Vessel: bottle	1	0.016	Irregular shard of pale to mid olive green glass, part of a bottle, onto which has been applied a glass seal, in the centre of which is a star and around which reads PIERMONT WATER. This indicates the contents of the bottle, in this case mineral water. The bottle and contents came from the German province of Waldeck, and were fashionable in the period c.1720-70. Hume writes that those with the words Piermont Water around a star belong predominantly to the early years of this period (Hume 1969, p.61) yet van den Bossche suggests water was exported between 1690 and 1720 using this seal (van den Bossche 2001, p.248) The form of the bottle to which this seal would have been attached is similar to an English mallet-type bottle.	c.1690-1770
	Vessel: bottle	1	0.025	Complete rim and partial neck from an olive green bottle. The shape of the neck does not wholly match those of the English types of the period, but does closely match that illustrated for the PIERMONT WATER bottle by van den Bossche 2001, page 248 plate 197. Most likely, this neck comes from a PIERMONT WATER bottle. An example of this type bottle can be seen on the Museum of London website (http://archive.museumoflondon.org.uk/cera	c.1690-1770

Context	Form	Count	Weight (kg)	Description	Overall Date
				mics/pages/object.asp?obj_id=529828), although the neck type matches the slightly later version illustrated by van den Bossche. This neck may be from the same bottle as the body sherd with the star in the previous record.	
	Vessel: bottle	1	0.462	Near complete base from an olive-green bottle. Part of the resting point and heel have been lost, but the push up or kick is complete. The bottle is of cylindrical type with a slightly flaring base, the kick is moderately tall at approximately 60 mm. It is unclear exactly what type of pontil mark it had. These features, combined with the shape of base, suggests this may not be an English bottle. Although this can be only a tentative identification, it is possible that this bottle relates to the 'Piermont Water' seal also recovered from this context.	c.18th-century
	Vessel: bottle	3	0.353	Complete base from mid olive green cylindrical glass bottle with shallow push-up or kick. The shape of the base suggest the bottle is 18th century, most likely made between 1750 and 1780. Some patination of the surface of the glass has occurred although it is otherwise in reasonable condition. Probably a squat cylindrical or mallet-type bottle.	c.1750-1780
	Vessel: bottle	1	0.478	Complete base of what appears to be a dark olive green, natural black glass bottle. English, slightly tapering body, but still basically cylindrical in form. It dates from some time after 1725 through to approximately 1780. Glass is covered in a light iridescence internally. The resting point and push up or kick survive intact and the pontil scar is really rough and coarse, most likely a glass-tipped pontil type. The kick up is somewhat lopsided but relatively shallow, again fitting with an 18th century bottle probably no later than 1760. Possibly a squat cylindrical or mallet-type bottle.	18th-century
	Vessel: bottle	4	0.550	Complete base from a squat cylindrical or possibly a mallet-type bottle. Light patination on the glass, which is in reasonable condition and from a mid olive green bottle with the shallow kick. Pontil mark may well be a sand pontil mark of an 18th century	c.1750-1780

Context	Form	Count	Weight (kg)	Description	Overall Date
				vessel; the resting point survives near complete. Three additional body shards appear to be from the same bottle. One shard appears to come from close to the base of a bottle, the others appears to be possibly from the shoulder.	
	Vessel: bottle	1	0.106	Complete short neck in dark olive green glass with attached string rim, flared or tapering. This shortness of the neck suggests it came from either an onion bottle or possibly a mallet-type bottle; the short neck suggests some time after 1680 and probably pre-1735. The glass is in good condition, the lip has been fire-polished and is slightly bevelled, the string rim appears to be V-tooled.	Late 17th-mid 18th century
	Vessel: bottle	1	0.059	Base of a glass vessel with a ?plain glass tipped pontil scar. What appears to be the resting point survives complete and a tube is attached just above the base. It is most likely part of an alembic used in distillation. A small vessel like this may well have been used for the distillation of oils for perfumes or some other pharmacological purpose. The sides of the vessel are missing and it is feasible that this might have been a perfume bottle, but it seems unlikely that the unfinished pontil would have been left on display, hence it is most likely part of an alembic. The glass is clear and near colourless with slight white opaque patination across all surfaces.	18th-century
928	Window	3	0.003	Sub-rectangular fragment of completely opaque glass, recent breaks reveal the glass to have originally been clear. The breaks reveal that the glass is degrading, being somewhat granular in nature. There is no iridescent patination on the glass and the surfaces are slightly uneven. The majority of the broken edges are old breaks and there is no evidence of grozing, painting, silver stain or leading. Although not closely datable, the condition of the glass indicates some age and it is possibly medieval.	?Medieval

Table 1: Glass

A.3 Pottery by Carole Fletcher

Introduction

A.3.1 The work produced a pottery assemblage of 19 sherds, weighing 1.630kg, recovered from 2 contexts. The condition of the overall assemblage is unabraded to moderately abraded. The average sherd weight from individual contexts is relatively high at approximately 86g.

Methodology

A.3.2 The Medieval Pottery Research Group (MPRG) A guide to the classification of medieval ceramic forms (MPRG, 1998) and Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics (MPRG, 2001) act as a standard.

A.3.3 Dating was carried out using OA East's in-house system based on that previously used at the Museum of London. Fabric classification has been carried out for all previously described medieval and post-medieval types. All sherds have been counted, classified and weighed. All the pottery has been recorded and dated on a context-by-context basis in an Access 2003 database and the summary catalogue is recorded in Table 1. The archives are curated by Oxford Archaeology East until formal deposition.

Assemblage

A.3.4 The pottery recovered is post-medieval, including a group of sherds collected from the roof space of the Bishops Gate North-East tower, context 926, from where were recovered fragments of a Post-medieval redware jar, sherds from a decorated Tin-glazed Earthenware plate which may be of Anglo-Netherlandish origin and a decorated Tin-glazed Earthenware bowl, the origins of which are uncertain. Also present are fragments of a Staffordshire white salt-glazed saucer and teapot suggesting the consumption of tea and indicating that beverages other than wine and water (see glass report) were consumed.

A.3.5 Layer 928, described as being associated with the Bishops Gate and lodging range construction, produced a single sherd of Post-medieval Black-glazed ware drinking vessel dating from the late 16th to the 17th century. The Bishops Gate was constructed during the tenure of Abbot Robert de Lindsey (1214-22), therefore this sherd is probably intrusive, dating from post-medieval investigations of the foundations (Peterborough HER).

Discussion

A.3.6 Domestic in origin, the post-medieval sherds appear to represent casual loss or deliberate abandonment. The single sherd of a black-glazed ware drinking vessel recovered from layer 928 in the lift foundation trench is likely to be a late 16th or 17th century intrusion into a 13th century deposit. Although the number of fabrics is limited, it reflects the broader range of supply, including imports, found in the post-17th century assemblage recovered from the Bishops Garden investigations (Fletcher 2015b in Atkins). The pottery has little significance beyond dating the contexts and it may be deselected prior to archive deposition.

A.3.7 Pottery Catalogue

Context	Fabric	Basic Form	Sherd Count	Sherd Weight (kg)	Pottery Date
926	Post-medieval redware	Jar	9	1.285	Mid 16th-end of 18th century
	Tin-glazed earthenware	Plate, rim sherd	5	0.210	Late 16th-mid 19th
	Tin-glazed earthenware	Bowl, base sherd	1	0.072	Late 16th-mid 19th

Context	Fabric	Basic Form	Sherd Count	Sherd Weight (kg)	Pottery Date
	Staffordshire white salt-glazed stoneware	Saucer, rim sherd	2	0.047	1720-1780
	Staffordshire white salt-glazed stoneware	Teapot, body sherd	1	0.013	1720-1780
928	Post-medieval black-glazed ware	Drinking vessel, body sherd	1	0.002	Late 16th-end 17th century

Table 1: Post-Roman Pottery Dating Summary Catalogue

A.4 Clay Tobacco Pipe by Carole Fletcher

Introduction and methodology

A.4.1 During the archaeological works a single fragment of white ball clay tobacco pipe stem, weighing 0.006kg, was recovered from the space beneath the roof on the north east turret of the Bishop's Gate, assigned to context 926. Terminology used in this assessment is taken from Oswald's simplified general typology (Oswald 1975, 37–41) and Crummy and Hind (Crummy 1988, 47-66). A quantification table for the clay pipes can be found at the end of this report, based on the recording methods recommended by the Society for Clay Pipe Research (<http://scpr.co/PDFs/Resources/White%20BAR%20Appendix%204.pdf>). Stem bore hole diameter recording has not been undertaken on this assemblage due to its limited size, and the pipe fragment cannot be dated beyond the broadest date of c.1580-1910. The assemblage is catalogued in Table 1.

Assemblage

A.4.2 The single stem fragment is unmarked and undecorated, and thus can only be broadly dated, although the post-medieval material with which they were recovered suggests they may be 18th century.

Discussion

A.4.3 The fragment of clay tobacco pipe recovered represents what is most likely a casually discarded pipe, although no other fragments were found in the same context. The pipe fragment does little other than to indicate the consumption of tobacco on or in the vicinity of the site, by one or more individuals, some time after c.1580. The plain and fragmentary nature of the assemblage means it is of little significance. Two clay tobacco pipe fragments recovered from the Bishops Garden were dated to c.1660-1710, however the majority were undated (Atkins 2015 in Atkins). If no further work on the site is undertaken the following catalogue acts as a full record and the clay tobacco pipe may be deselected prior to archival deposition.

A.4.4 Clay Tobacco Pipe Catalogue

Context	Form	Weight (kg)	No of pipe stem fragments	Description	Date
926	Fragment of pipe stem	0.006	1	Length 25.5mm, slightly oval stem, approx. 8mm diameter	Not closely datable, c.1580-1910

Table 1: Clay Tobacco Pipe

A.5 Ceramic Building Material by Carole Fletcher

Introduction and methodology

A.5.1 Two fragments of ceramic building material (CBM), weighing 0.730kg, were recovered from layer 923 in the lift foundation trench. Due to the limited size of the CBM assemblage, the fabric descriptions are included in the catalogue rather than tabulated separately.

Assemblage

A.5.2 A single fragment of reused, glazed but undecorated floor tile was recovered and is probably late medieval, while the fragment of roof tile is most likely early post-medieval.

Discussion

A.5.3 The fragment of roof tile is typical of CBM found on urban and some rural sites of the medieval and post-medieval periods. However the glazed floor tile suggests a building of higher status as befits the buildings within the cathedral precinct. The likely overall date for layer 923 is early post-medieval. If no further work on the site is undertaken the following catalogue acts as a full record and the CBM may be deselected prior to archival deposition.

floor tile and

A.5.4 Ceramic Building Material Catalogue

Context	Form	Weight (kg)	Count	Description	Date
923	Floor tile	0.574	1	<p>Large fragment, of a hand made, (originally) glazed medieval or, more likely, late medieval floor tile. Slightly tapered edges, occasional patches of green glaze in depressions on the upper surface. The tile appears worn, the lower surface of the tile is slightly warped.</p> <p>Fabric is sandy, dull brick red with mottled creamy yellow swirls and the occasional lump of grog. Quite a lot of mortar is still attached and is between 13 and 20 mm thick.</p> <p>The tile is slightly tapered, the maximum thickness is 24mm and the minimum is 22mm. It measures 119mm x 118mm and was therefore square.</p>	Late medieval
	Roof tile	0.156	1	<p>Fragment of what appears to be roof tile that may well have been reused. It is only a partial tile, possibly one corner and two partial original edges survive.</p> <p>Dull pink fabric, with red and some yellow swirls, occasional calcareous inclusions, and occasional grog. It is covered in whitewash or mortar and likely to be early post-medieval. The maximum dimensions of the surviving fragment are 96mm x 67mm and 15mm thick.</p>	Early post-medieval

Table 1: Ceramic Building Material

pendix B. ENVIRONMENTAL REPORTS

B.1 Faunal Remains By Angelos Hadjikoumis

Introduction

B.1.1 The faunal assemblage recovered through hand collection at Peterborough Cathedral (Bishops Gate) derives from a single context (926), which dates to the Medieval period. The assemblage is quite small and consists of only nineteen identified specimens. The main aim of this assessment is to comment on the, rather limited, interpretative potential of the assemblage in terms of human-animal interactions and the types of activities it may represent.

Methodology

B.1.2 The faunal material has been processed at the facilities of Oxford Archaeology East in Bar Hill. All fragments were identified with the aid of published osteological atlases (e.g. Barone 1976; Pales and Garcia 1981; Schmid 1972). The most generic level of taxonomic identification employed was a three-size scheme; large (e.g. cattle, equids, red deer), medium (e.g. sheep/goat, pig, fallow deer) and small (e.g. cat or smaller) mammal. Age-at-death based on epiphyseal fusion follows Silver (1969) for sheep, goat, cattle and pig. The only dental remains recorded belonged to cattle and were assigned an age-at-death following Grigson (1982) and Halstead's (1985) adaptation for cattle. Each specimen has also been recorded in terms of its potential to yield information related to sex, biometry, pathology, butchery and fragmentation. Taphonomic information (e.g. carnivore/rodent gnawing, burning and copper staining) was also recorded in order to gain a better understanding of the agents that affected the faunal assemblage before its excavation and study.

Quantification

B.1.3 All identifiable specimens contributed to the Number of Identified Specimens (NISP), which is the main quantification unit for species frequencies. Minimum Number of Individuals (MNI) was calculated, only for fragments identified to a taxonomic category more specific than the three broad size categories (i.e. large, medium, small), based on the most abundant anatomical element and taking into account the side of the body.

Results and Discussion

B.1.4 The overall preservation condition of the material is near-perfect, with the exception of some weathering on a cattle mandible and restricted degree of erosion on few specimens. This has contributed to the high identification rate. The sample is dominated by cattle, with a presence of sheep/goat (more likely sheep) and pig (Table 1). In addition to specimens attributable to species, few were assigned to the generic taxonomic categories 'large mammal' and 'medium mammal'. These remains are mostly ribs and vertebrae and are compatible with the species positively identified by other, more diagnostic, anatomical elements. In addition to the species identified, the presence of gnawing marks on a 'medium mammal' vertebra suggests that a carnivore species (possibly dog, although cat cannot be excluded) had access to that bone, presumably at or the vicinity of Peterborough Cathedral, before its deposition.

Taxon			
	NISP	%NISP	MNI
Cattle	9	69.2	1
Sheep/goat	2	15.4	1
Pig	2	15.4	2
Total	13	100	4

Taxon		
Large mammal	1	
Medium mammal	5	

Table 1: Taxonomic composition of the Medieval faunal sample from Peterborough Cathedral.

- B.1.5 As far as the age-at-death of cattle is concerned, the dental wear of a mandible indicates either a young adult or adult animal (could not be estimated more precisely due to a broken third molar). Moreover, an unfused calcaneus epiphysis indicates an animal younger than 3 years old. A sheep/goat unfused distal femur indicates an animal younger than 3 years old, while a pig unfused scapula indicates an age-at-death earlier than 12 months of age, although a considerably younger age is more probable as it is a very small and porous specimen compatible with an immature piglet of 1-2 months old. No information on the sex of any of the recorded remains was available.
- B.1.6 Overall, the fact that the material has been recovered through hand collection may have slightly favoured larger and older animals but by far the dominant bias of this assemblage is its small size.
- B.1.7 The only other information worth mentioning is the extensive presence of butchery marks on most of the recorded specimens (eight out of nineteen). Most of these marks mainly involved chopping vertebrae through their longitudinal axis, ribs into smaller portions and long bones near articulations. These marks suggest an effort to dismember and divide the carcass into smaller parcels and eventually portions suitable to feed an individual. Concerning cattle, dismembering marks suggesting the separation of the mandible from the skull, filleting marks on the meatiest elements (e.g. scapula), as well as skinning marks on the skull have also been recorded. Moreover, a chopping mark suggesting the separation of the sheep/goat hind-leg just below the proximal articulation of the femur, as well as finer cuts for further dismembering of the leg have been recorded, while both pig remains did not yield any butchery marks.
- B.1.8 In conclusion, the potential of the assemblage for archaeological inferences is quite restricted due to its small size. Unless areas with significantly more faunal remains are located and excavated, the interpretative potential of the assemblage will remain low.

B.2 Shell by Carole Fletcher

B.2.1 Archaeological works produced a small assemblage of shell consisting of seven complete or near complete oyster shells (*Ostrea edulis*), representing a minimum of four individuals. All the fragments of shell were recovered from context 928 within the lift shaft trench. The shells represents rubbish deposition, potentially from the 13th century construction of the Bishops (formerly Abbots) Gate (Peterborough HER) onwards or when the post-medieval sherd found alongside them was deposited. Oyster shells were recovered from 12th century layers in the nearby Bishops Garden (Fosberry 2015 in Atkins). If no further work on the site is undertaken the following catalogue acts as a full record and the shell may be deselected prior to archival deposition.

B.2.2 Shell catalogue

Species	Common name	Habitat	Weight (kg)
<i>Ostrea edulis</i>	Oyster	Estuarine and shallow coastal water	0.092

Table 1: Shell

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ELECTRONIC SOURCES CONSULTED

Peterborough Historic Environment Record online, record number 80009

<http://her.peterborough.gov.uk> Accessed 15/04/2016

Appendix D: Architectural Stone

Peterborough Cathedral Precincts

Knights' Chamber and No. 25

Note on Architectural Stone

Jackie Hall, June 2017

Four stones were found during the course of the works, one reused and in situ in the west wall of No. 25 (east wall of Bishop's Gate), one in context 904, and one in context 91, both modern bulk deposits; one stone remains in situ (reused) in the west wall (east wall of Bishop's Gateway) and the last was recovered from the kitchen demolition.

Stone <1> (context 923)

A small fragment of moulded voussoir, with a flattened roll-and-fillet on the front face; nothing further survives; it has a large radius of curvature. This is very similar to the mouldings of the statue niches on the Bishop's Gate, and strongly suggests that it originated either in that building or in the contemporary range to the east (now Nos 24–25 Minster Precincts)

Stone <2> (context 925)

Also a small fragment of moulded voussoir, this time with a keeled roll, the keel pointing towards the front; it also has a large radius of curvature. Although this could be earlier (13th-century), this moulding could also belong to same range of medieval buildings (Nos 24–25), of which so little medieval survives.

Stone <3> (in situ)

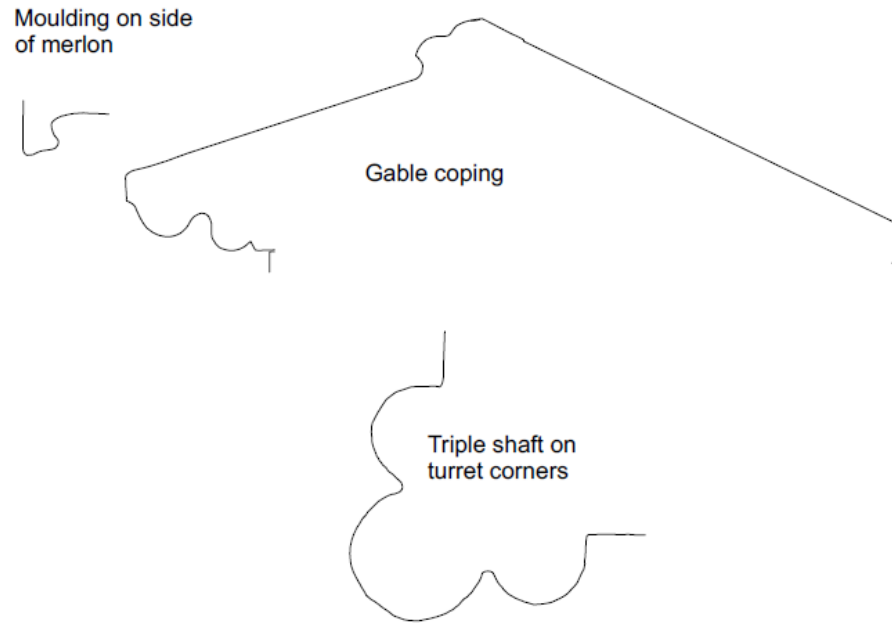
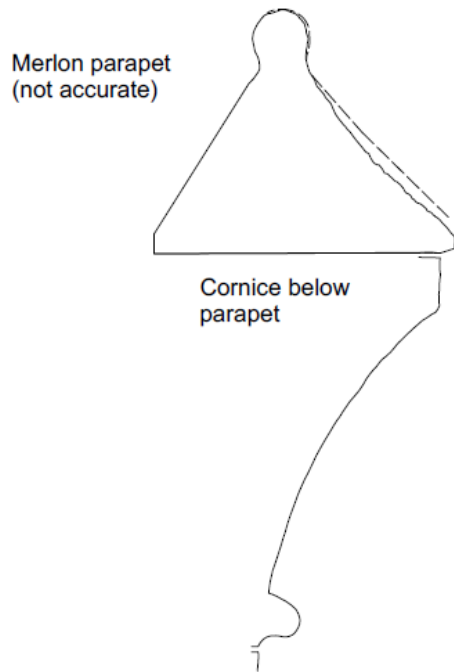
This is a heavily cut-back engaged double springer, either from a blind arcade or a vault, with a large radius of curvature. Given the appearance of the medieval range, it is tempting to suppose that it originated in a vaulted undercroft below the upper ground hall. However, no evidence of vaulting could be seen in the uncovered areas of the wall, although it could, perhaps, have come from the north or south walls, if the range was vaulted in a single broad N–S bay. As reused, a timber socket was cut into it, to support a post-medieval staircase at the west end of the building.

Stone <4> (unstratified)

This is a tracery springer, with a broken cusp, and cut for reuse through its glazing groove, and again to create a channel for modern cabling. It has a plain chamfer on the surviving side. It could, conceivably, have originate in the medieval range running south of the Bishop's Gate, where No. 25 now stands

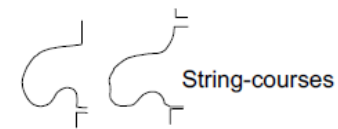
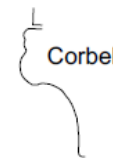
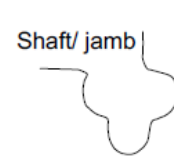
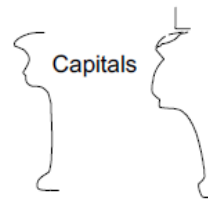
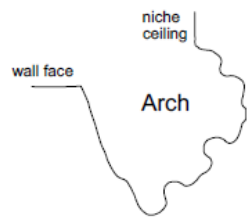
Appendix E: Architectural Mouldings Recorded on Abbot's Gate

1. Medieval Mouldings



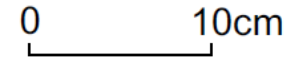
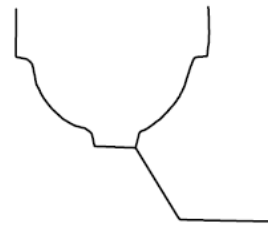
0 10cm

Statue Niche Mouldings



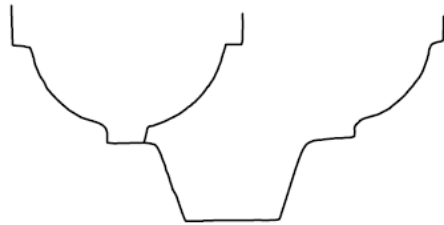
1. 17th-Century Mouldings

Mullion and jamb

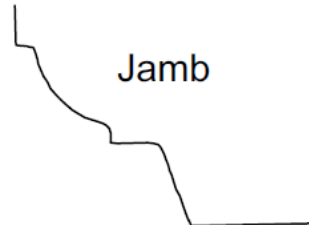


Lower Window (exterior of glass only)

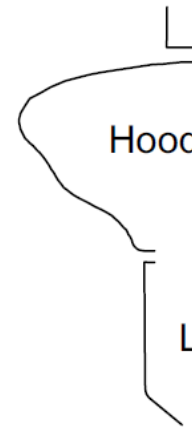
Minor and major mullions



Jamb



Hoodmould



Lintel