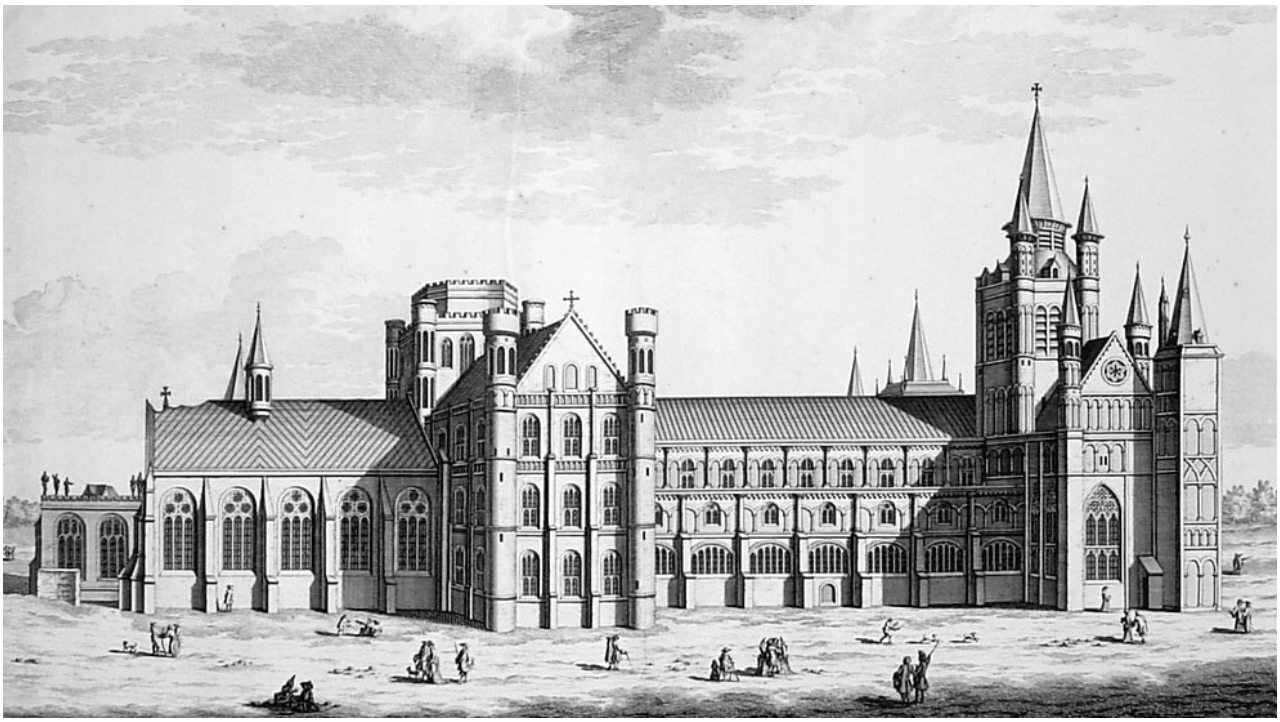
# PETERBOROUGH CATHEDRAL

*"Peterborough 900: Letting it Speak for Itself"*
Community Archaeology programme, Summer 2016



Richard Newman and Catherine Collins

PETERBOROUGH CATHEDRAL
CAMBRIDGE ARCHAEOLOGICAL UNIT
Access Cambridge Archaeology
UNIVERSITY OF CAMBRIDGE
heritage lottery fund
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## ‘Peterborough 900: Letting it Speak for Itself’

## Community Archaeology Programme, Summer 2016

**Richard Newman and Catherine Collins**

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Illustrations by Vicki Herring and studio photography by Dave Webb

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**University of Cambridge**

**Division of Archaeology**

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**Summary**

*A community excavation involving 302 volunteers and 201 primary school children was undertaken at Peterborough Cathedral in the summer of 2016. The investigation took place in the northwest corner of the historic precinct, within the grounds of Garden House. Here fourteen trenches were excavated and five phases of activity identified, the earliest of which was Roman in date. Although the environment of the site itself was determined to have been wet and inhospitable at this time, evidence of Late Roman occupation was identified in the immediate vicinity. The area subsequently remained wet and marginal until the 12th century, when it was incorporated into the expanding precinct of the Benedictine Abbey of St Peter. Localised reclamation works were undertaken at this time and a large fishpond (potentially one of several) established. Yet the overall level of activity remained minimal until the mid-17th century, when a second phase of reclamation commenced. Substantial quantities of domestic refuse were imported into the southwest portion of the site at this time, including detritus that was potentially generated during the parliamentary occupation of the cathedral precincts in 1643. Then, from the early 18th century onwards, the area became increasingly landscaped; the large pond was infilled in the early 19th century and a formal garden established, associated with the adjacent Deanery. Finally, a substantial clearance assemblage of early 20th-century household waste was recovered from a probable planting bed.*

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# Introduction

This report presents the results of a professionally-led community excavation that was conducted at Peterborough Cathedral between the 22nd of June and the 5th of July 2016. The area of investigation – centred on TL 1933 9875 – comprised the grounds of Garden House, situated in the northwest corner of the historic cathedral precinct (Figure 1). Bounded to the north and east by Wheel Yard and to the west and south by the Deanery gardens, the site is surrounded by a number of historic listed buildings but is not itself scheduled. Twelve trenches were excavated across the area, covering a combined total of 139.6 square metres; although as two of the trenches – numbers 2 and 3 – were subdivided into two due to the presence of a live service, the overall number of discrete excavations was fourteen (Figure 2). Due to the depth of the deposits that were encountered, stepped test pits were introduced into the base of most of the trenches; nevertheless, the underlying natural geology was not reached in any location (except via augering). A number of substantial finds assemblages were recovered during the course of the project, spanning the Roman period to the early 20th century in date.

The excavation was undertaken as part of the Cathedral's 'Peterborough 900: Letting it Speak for Itself' project, which has been awarded a Heritage Lottery Fund (HLF) grant. Anticipating the cathedral's 900th anniversary in 2018, the project's aim is twofold: firstly, to enhance visitors' experience by improving access to the site both physically and intellectually; secondly, to ensure that the cathedral plays an increasing role in the life of the city and Diocese (Hall 2016). To this end a series of works are being undertaken, including improved access via the cathedral's west front, the development of a new Heritage, Visitor and Education Centre as well as a reception area for school and community groups. New interpretation materials and enhanced facilities for people with disabilities will also be provided. Partnership with individuals and communities is central to the project, and activities and events – such as the community excavation, associated lectures and a subsequent exhibition based upon its results – are a key element in achieving this aim.

Historically, activity is known to have taken place within the precinct over a considerable period, commencing significantly before the construction of the extant cathedral church. A detailed review of the archaeological and historical background of the area has been presented in a previous desk-based assessment (Hall 2015; see also Hall 2009). In addition, there have been several broader archaeological, historical and topographical considerations of the development of the Anglo-Saxon and medieval monastery and associated town (King 1980; Hart 1981; Higham 1999; Mackreth 1999; Mackreth and Rollo *nd*; Hall forthcoming), as well as architectural and historical reviews of the abbey (Gunton 1686; Sparke 1723; Britton 1828; Sweeting 1926; Mellows 1939; Mellows 1941; Mellows 1947; Mellows 1949; Clark 1958; Halliday 2009; Kelly 2009; Briston 2015) and its estate (King 1973; Biddick 1989). Consequently, this information will not be reiterated in depth here. Further details concerning sites and discoveries of particular pertinence to the current project will be presented in the discussion, where the results are placed into their wider context.

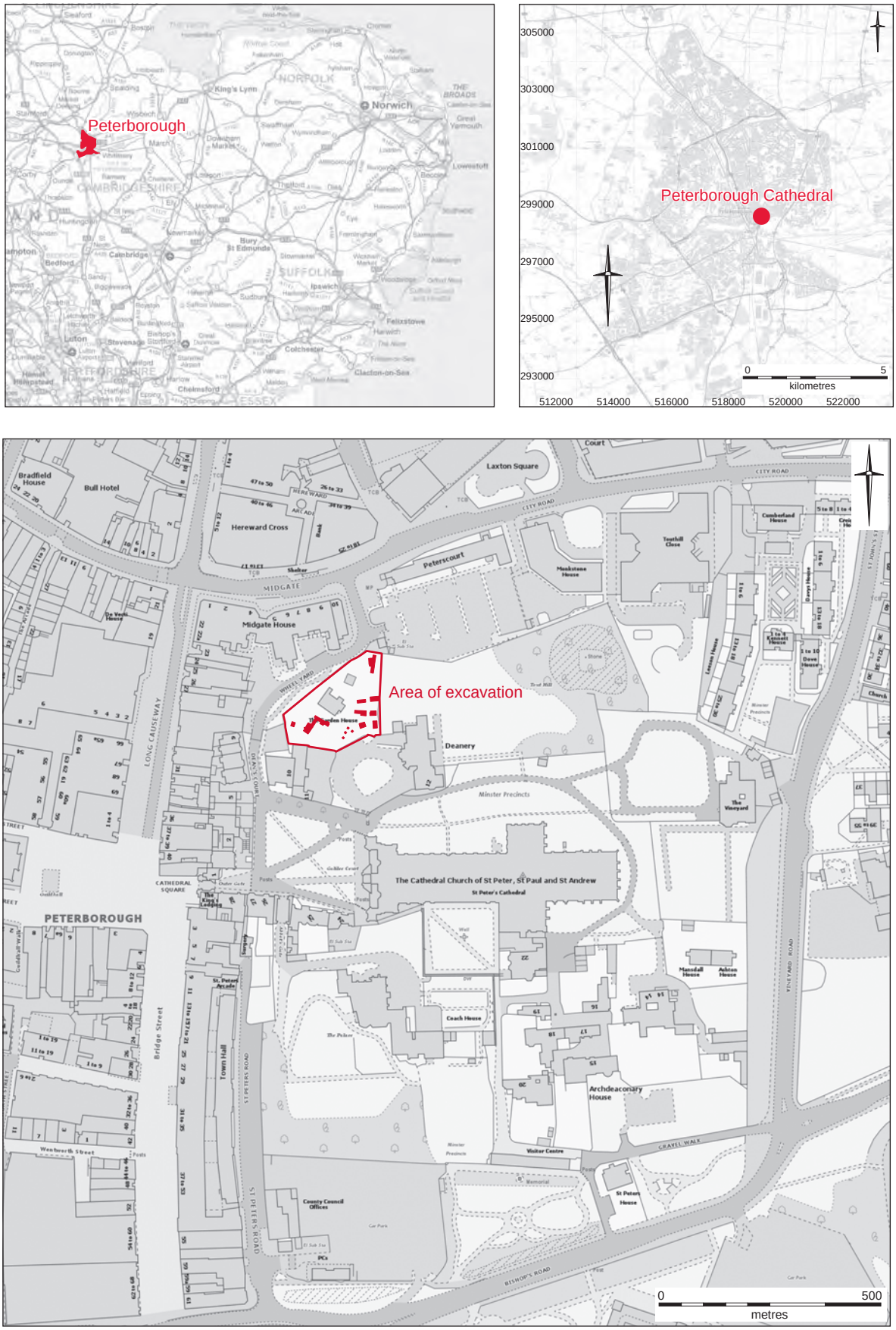


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Figure 1. Site Location

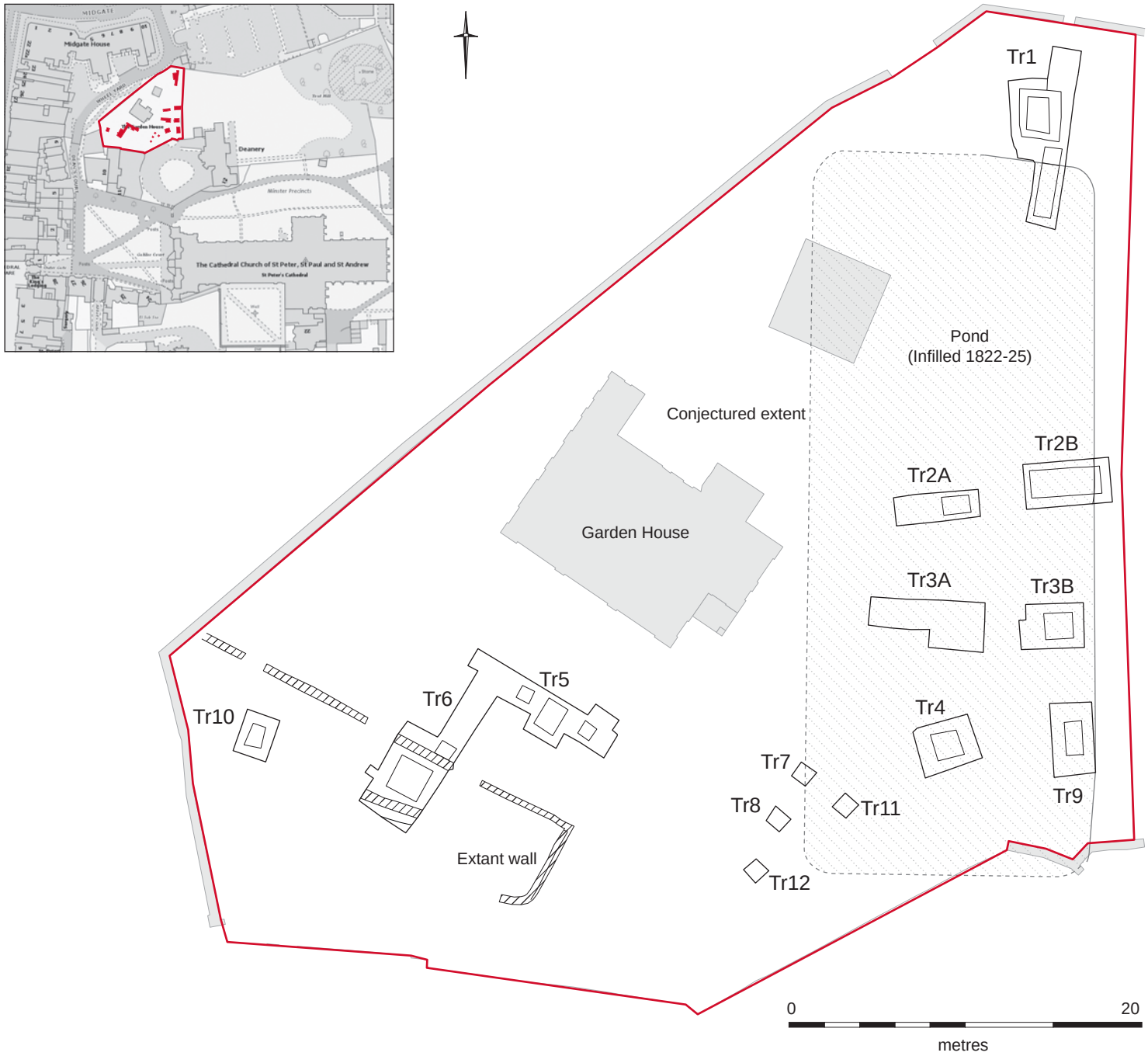



Figure 2. Trench Plan

Although the environmental history of the area is not yet understood in detail, it is known that in Prehistoric times the area to the south and east of Peterborough comprised a broad floodplain dotted with a myriad of small riverine islands (Hall 1987, 2-4). Due to their abundance of natural resources, such landscapes were frequently the focus of significant Late Prehistoric and Roman activity (Brown 2003); a pattern that is also likely to have been replicated here. Moreover, Peterborough lies on the boundary between rich silt farmland of the lower Nene Valley to the west and deep peat fenland to the east. Both landscapes are known to have been extensively utilised, especially during the Roman period (Upex 2008). Currently, Roman activity is circumstantially attested at the site itself, with discoveries of Roman inscriptions and sculptural fragments reported from beneath the cathedral (Coombe *et al.* forthcoming) as well as stray finds of Late Roman ceramics and coins from the surrounding precincts (Irvine 1894a; Irvine 1894b; Haverfield 1892, 187; RCHM(E) 1969, 3).

In the mid-7th century, a monastery known as *Medeshamstede* was established. This house was very successful, establishing numerous satellite monasteries, but it declined following raids by Danish Vikings in the 870s (Kelly 2009, 20-40). Around 970, however, the monastery was refounded by Bishop Æthelwold of Winchester as the Benedictine Abbey of St Peter. Its establishment formed part of a much wider patter pattern of monastic foundation that occurred all across England during the late 10th century (Pestell 2004,103). Initially encircled by a substantial masonry wall (Mackreth 1999), the medieval abbey was a great success. An associated lay settlement developed, which was eventually focused – as now – on the west side of the precincts, with a second focus to the northeast around Boongate (Hall *in prep*.). The abbey remained affluent until its eventual dissolution in 1539; unusually, it survived this process comparatively unscathed due to the former monastic church being elevated to the status of a cathedral in 1541. Subsequently, a number of significant buildings were lost during the mid-late 17th century and a process of piecemeal demolition and alteration continued into the 18th and 19th centuries. Nevertheless, Peterborough cathedral and its precincts remain amongst the best-preserved monastic sites in England.

A number of small-scale investigations have previously been undertaken in the general vicinity of Garden House, although in many instances their limited depth has precluded a detailed understanding of the sequence in the area. Perhaps the most significant excavation occurred in 1981 a short distance to the northeast, in the Peterscourt carpark (Mackreth 1999; Mackreth and Rollo *nd*). Here, evidence of the late 10th-century burgh wall was identified (further details of this discovery are presented in the discussion section). Subsequently, in 2001 seven trial holes were excavated in the Deanery garden to a depth of 0.5m but only 19th and 20th-century garden and path deposits were observed (Mackreth 2001a). Then, in 2007, a watching brief was undertaken during the excavation of a new drainage sump within the grounds of Garden House, immediately north of Deanery Mews (Brown 2007). Here a series of 19th-20th-century levelling layers extending over 1m in depth were observed. In 2008, a watching brief was undertaken during the laying of a new water main in Dean's Court (Leigh 2009). A total of ten test pits were excavated, but only disturbed

deposits were encountered. Finally, in 2015 a ground penetrating radar survey was conducted in the garden of Garden House and the adjacent portion of the Deanery garden (Utsi 2015). A number of anomalies were identified, but all were at relatively shallow depth.

Topographically, the grounds of Garden House fall into two relatively distinct zones. Across the eastern half of the area, in Trenches 1, 2, 3 and 4, the present ground surface varies between 4.55m and 4.82m AOD. In the western half of the site, meanwhile – to the front of Garden House, in Trenches 5, 6 and 10 – the ground height is somewhat higher, varying between 7.01m and 7.29m AOD. This disparity reflects a long-standing difference in usage, as both a pond and a drain are known to have been present in the former area. Their presence was first securely recorded in 1563 in a lease which cited the "course and passage of a common drain or sewer conveyed and running between the pond yard belonging to the deanery [the area of investigation] and the pond yard or orchard belonging to the said house and tenement" (Hall 2008; PCCHER 3321). Earlier references to ponds in the works of Abbot Robert of Lindsay (1214-22) (PCCHER 3023), as well as to a pond located in the 'prior's yard' in 1416/17 (PCCHER 3077), may also pertain to these same features, although this is less certain. Similarly, earlier references to sewers are known from 1457/8 and 1506 (Hall 2009 and PCCHER 3083 and 3089), but once again their precise location is unclear. Overall, the 'common drain or sewer' is likely to represent the remnants of a natural stream, as this was a common descriptive term for such a feature, while the location of the pond was recorded in numerous later historical and cartographic sources (Hall 2015; see also below). The latter was eventually infilled between 1822 and 1825 (PCCHER 3414).

Methodologically, the work followed the written scheme of investigation prepared by the Cambridge Archaeological Unit and Access Cambridge Archaeology (Dickens *et al*. 2016) in response to the brief issued by Jackie Hall, Peterborough Cathedral Archaeologist (Hall 2016). The trenches were primarily sited so as to target potential archaeological features identified by the recent geophysical survey (Utsi 2015), as well as to provide general coverage of the site. During the excavation itself modern deposits and overburden were removed by a 360° mechanical excavator using a 1.5m wide toothless bucket under constant archaeological supervision. All archaeological features and deposits were then excavated by hand and recorded using the CAU-modified version of the MoLAS system (Spence 1994). Deep strata were excavated via test pit and all deposits sieved in order to maximise finds recovery. All work was carried out with strict adherence to Health and Safety legislation and within the recommendations of FAME (Allen & Holt 2010). In terms of recording, base plans were drawn at a scale of 1:20 whilst sections were drawn at a scale of 1:10. Context numbers were assigned to all stratified deposits and these are indicated within the text by square brackets (*e.g.* [100]). A comprehensive digital photographic archive was also compiled. The site code for the project was PCGH16 and the event number was PCCHER 54080.

## **Community participation and public outreach** (Catherine Collins)

One of the main aims of the excavations at Peterborough Cathedral was to widen the participation of people in the heritage of the cathedral and the city itself as well as to also include those individuals who would not normally engage with the cathedral. To that end the call for volunteers to help excavate was publicised widely on social media, the cathedral and University of Cambridge websites and out to the local press, as well as specifically targeting a range of local societies, museums and faith groups from the city and the surrounding villages. To encourage a wider range of volunteers as possible there was no age restriction implemented, although any under-16's that did take part had to have a parent or guardian with them at all times. As the participation was also not restricted to just excavation, less able volunteers were also encouraged to be involved (Figure 3).

Also as part of this main aim, all the local primary and secondary schools within Peterborough were contacted, in particular to target Key Stage 2 pupils (Years 3-6) to experience archaeology by excavating their own test pits on site, sieving, finds washing and metal detecting, whilst also learning more about their local history; this complimented the curriculum that includes topics such as the Romans, Vikings and Anglo Saxons. This was also implemented by each school group also spending time learning and exploring the cathedral with cathedral staff and volunteers. Key Stage 5 pupils (Years 12 and 13) who were either wanting to study archaeology or history at university or those who had an interest in the cathedral and its development were also targeted, as well as those who were already studying archaeology or a similar subject at university or college. The university students (or recent graduates who were also in attendance) took on a more direct learning role and shadowed each professional archaeologist from the CAU who were supervising the individual trenches and learning techniques of excavation and recording first hand. After the dig one participant stated '*It was good for me to gain practical experience as I'm trying to begin a career in field archaeology. I was given a lot of help and advice from the archaeologists*' (KC).

In total, 181 primary school pupils took part in the excavations at Peterborough cathedral, from the St John Fisher School, Dogsthorpe Academy (Figure 3) and All Saints Primary. Twelve Junior Friends based at the cathedral also took part in the excavations, as did 8 members of the Young Archaeologists Club (YAC) based in Fenland, which means that just over 200 under-16's engaged with the heritage of the cathedral. Three sixth form students from Jack Hunt School attended for three days as part of the general excavations of the trenches. Due to the high demand for places on the excavation, volunteers were limited to three days on site at a time with a maximum number of 30 places per day available. One hundred and twenty-two volunteers initially signed up for the dig but in total 302 volunteers took part in the excavations in one way or another. The feedback accounted for only *c*. 29% of all participants, but from that information 100% of the participants rated the excavations as 'excellent' or 'good' with 78% saying they enjoyed the experience more or much more than they expected.

Figure 3. Community volunteers (top and middle) and pupils from Dogsthorpe Academy (bottom) engaged in archaeological excavation and finds processing

When asked to indicate which aspects of the excavation the participants had particularly enjoyed; 'finding things' was ranked top at 90%, followed by 'meeting new people' at 87%. 85% were pleased they were 'doing valuable archaeological research', 80% said they enjoyed 'working in a team', 74% said they 'enjoyed learning something new' and 72% said they 'enjoyed learning more about the cathedral' (Chart 1). Volunteers were also asked how strongly they agreed or disagreed with the following statements 'I will take more interest in the archaeology and heritage of the cathedral in the future'; and 69% either 'strongly agreed' or 'agreed' in this statement and when asked 'I know more about the archaeology and history of Peterborough Cathedral', 74% either 'strongly agreed' or 'agreed'.

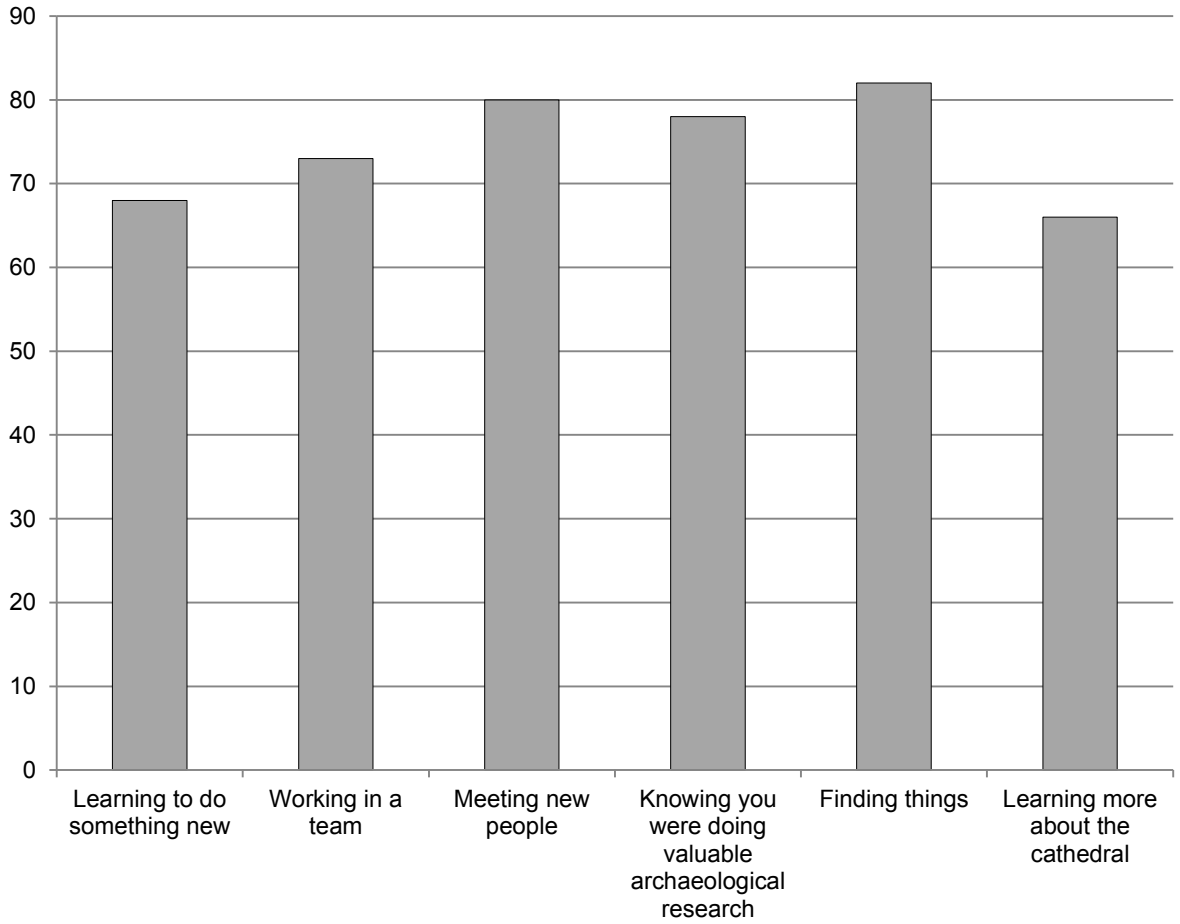



*Chart 1.* Responses to the question 'what aspects of the excavation did you enjoy?'

Positive feedback was received daily on the dig, as well as from follow up emails and written on the feedback forms. A small number of the quotes received are stated here: CH said '*I enjoyed learning a bit more about the history of the town I have been living in for the last 15 years'*; AB stated '*the satisfaction of working with like-minded people. I have learnt so much in such a short time'*, SH said *'…the atmosphere was relaxed and friendly'*, HR said '*I enjoyed seeing my 11 year old daughter getting stuck in and excited about it all*' , SO liked '*being able to relate finds to my knowledge about the cathedral and helping to build a picture of what is found'*.

Tours were given daily on site, with extra tours added on the first weekend; the second weekend was the Peterborough Heritage Festival so tours were running every 20 minutes or so with all visitors to site encouraged to sign the visitors book. Just over 400 visitors were recorded each day of the Heritage Festival weekend, a total of 809, and again the feedback was overwhelmingly positive. The majority of the visitors were from the Peterborough area but others were visiting from across the England as well as from Wales and Scotland. Over the course of the excavation, three evening lectures were also given on the archaeology of the cathedral and other important local sites and these were very well attended.

Some of the comments left in the visitor books include: '*interesting glimpse into the past lives and activities of the cathedral'* (NG), '*very informative and well put together, makes me want to find out more!'* (NC), '*great tour, brilliant to see these areas of Peterborough*' (RB), *'…good to see local people involved in archaeology'* (KH), '*really interesting, my two young boys were fascinated*' (JH), '*brilliant bringing the whole community together, keep it up'* (EB), '*lottery money very well spent, thank you'* (JN) and '*I love history so when I grow up I want to be an archaeologist!*' (HF – age 6).

## Archaeological results

Five phases of activity, spanning the Roman period to the early 20th century, have been identified. Because each of these phases represents events that occurred on a site-wide as opposed to trench-specific scale, the relevant information from each trench has been amalgamated and will be presented on a phase by phase basis. It should be noted that due to the presence of a large infilled pond that extended across the majority of the eastern half of the investigated area (see Figure 2), pre-19th-century deposits were only encountered in Trenches 1, 5, 6 and 10. Consequently, discussion of the earliest phases of activity is primarily restricted to these areas.

*Phase I: Early activity*

The earliest *in-situ* deposits encountered during the course of the investigation were Roman in date (although a residual worked flint of probable Late Neolithic date was recovered from a 20th-century topsoil deposit). In the northern portion of Trench 1, a series of alluvial silt deposits were identified – [135.04-07] (Figure 4) – which contained Roman pottery, ceramic building materials and plaster (Figure 5). Analysis of pollen samples recovered from these deposits indicates that the contemporary environment consisted of a patchwork landscape of meadows, pastures and arable fields bordering a perennially wet area. A similar pattern also appears to have predominated during the Anglo-Saxon period, although the only material culture of this date to be recovered was residual in nature (a single sherd of Maxey-type ware from a 19th-century garden soil layer). The presence of free threshing wheat grains in layers [135.05] and [135.06] is however characteristic of Anglo-Saxon agricultural practice, as free threshing wheat widely replaced spelt wheat as the principle cereal crop during this period; although this alone does not provide conclusive dating evidence.

> While the underlying natural geology was not reached in Trench 1 due to the depth of the sequence, it was determined to lie at 1.33m AOD via augering (Figure 4). Above this, a sequence of alluvial deposits had formed that were either associated with or else on the periphery of standing water. The lowest of these deposits to be investigated archaeologically was [135.07], a firm layer of pale grey fine silty clay. Above this lay [135.06], a firm greyish-brown silty clay deposit. This in turn was overlain by [135.05], a layer of dark grey-black silt. Finally, above this lay [135.04], a deposit of mid-grey silty clay with occasional to frequent stone inclusions. It should be noted that although only a small assemblage of Roman material was recovered from the *in-situ* deposits, a relatively sizable quantity was present in residual contexts. Given the marginal, waterlogged nature of the investigated area during this period, therefore, it appears highly likely that Roman occupation – potentially of some size and pretension – occurred in close proximity to Garden House.

*Phase II: Late Saxon to Medieval*

During the Late Saxon period, environmental conditions in Trench 1 appear to have remained much as they had been during Phase I; as exemplified by the presence of dark black silt layer [135.03], which contained a sherd of 10th-12th-century St Neots-type ware.

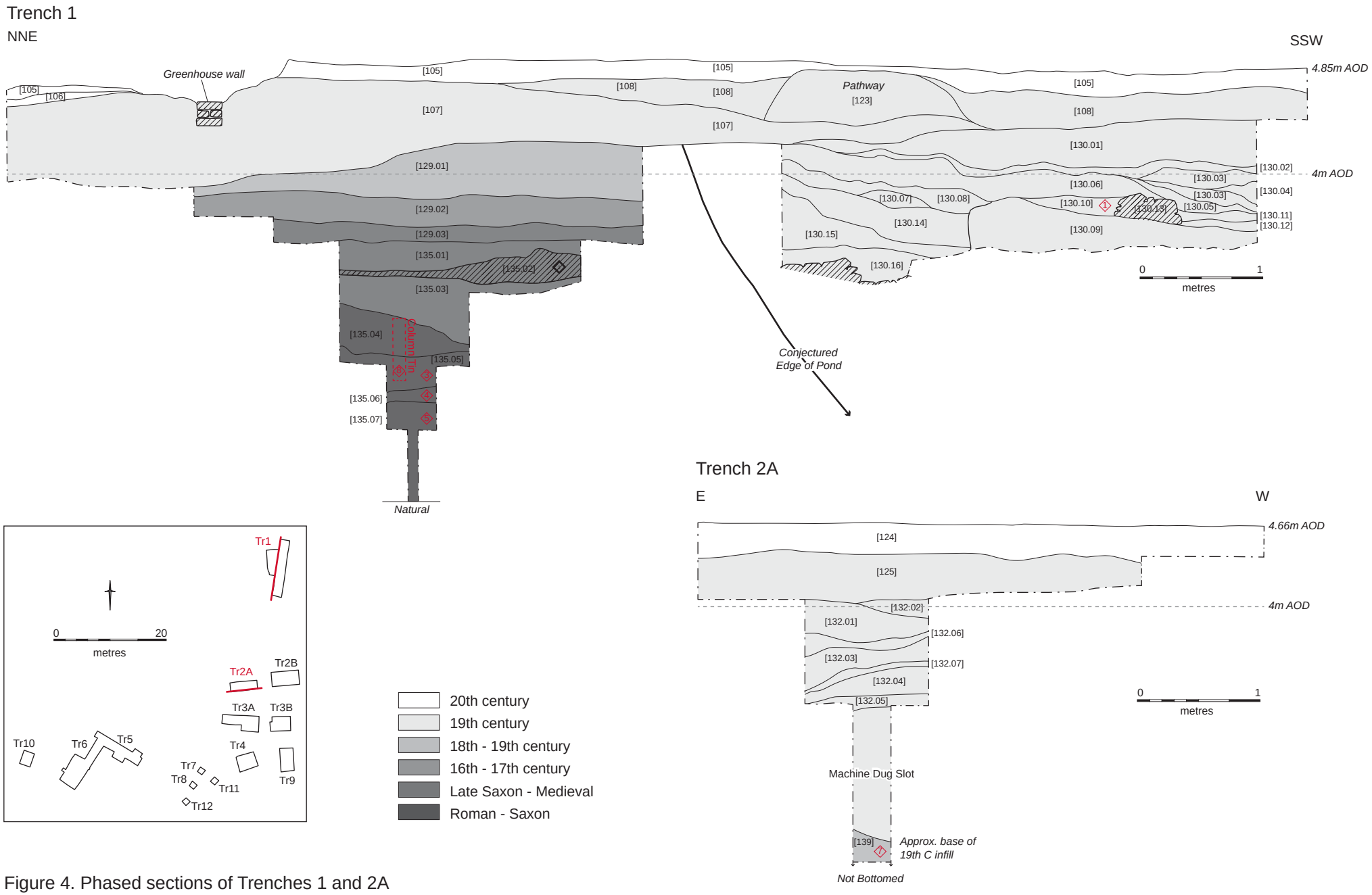



Figure 4. Phased sections of Trenches 1 and 2A

Figure 5. A selection of Roman finds, including: Pottery (top), tile and plaster (middle), and raw glass and a crucible fragment from possible glassworking (bottom)

Subsequently, masonry rubble deposit [135.02] was introduced into the area (Figure 6). The rubble itself was potentially derived from the demolition of an adjacent structure; possibly the burgh wall constructed by Abbot Coenwulf (992-1006), which was investigated a short-distance to the northeast in 1981 (Mackreth 1999; Mackreth and Rollo *nd*). Here, it was determined that this masonry structure had been demolished in the mid-12th century. Alternatively, the material may have been deposited as hardcore/reclamation material up to a century later. Regardless of its origin, its introduction marked the start of a transition from an open, damp environment to a more managed landscape (thus perhaps indicating that its deposition coincided with an expansion of the precinct area). By the time made-ground deposit [129.03] was introduced into Trench 1 in the 14th-15th century, this portion of the site had become substantially drier. Notably, alongside a small quantity of medieval pottery the latter layer also contained several fragments of human bone, one of which has been radiocarbon dated to the mid-late 10th century (Table 1). In addition, it is likely that the large pond in Trenches 1, 2, 3 and 4 was also established during the medieval period – most monasteries maintained fishponds, as well as sophisticated water management systems (Aston 1988; Bond 1989: Bond 2001) – although this could not be proved archaeologically.

Overlying dark black silty clay alluvial layer [135.03], deposit [135.02] consisted of a spread of unworked limestone rubble fragments, coarse sandy off-white lime mortar and a small quantity of fine white plaster, all of which were incorporated into a matrix of mid-grey silty clay with frequent gravel inclusions. Unfortunately, no associated dating evidence was recovered. Although the core of the rubble deposit appeared broadly linear in plan (Figure 6), this is most likely a result of its limited exposure since dumped material is often arranged into haphazard clusters rather than a uniform layer due to the piecemeal nature of its deposition. Overlying [135.02] was [135.01], a pale yellow silty clay deposit that contained occasional rubble inclusions. The nature of this deposit suggests that it may represent an attempt to continue the reclamation process begun with deposit [135.02]. The only datable material culture contained within this latter deposit consisted of residual Roman pottery; a small fragment of human bone was also present.

Subsequently, during the 14th-15th century made-ground deposit [129.03] was introduced. Whilst this may represent a direct continuation of the probable reclamation activity represented by the preceding deposits, it was notably different in composition, consisting of relatively loose pale yellowish grey sandy silt with frequent gravel inclusions as well as fragments of medieval pottery, animal bone and disarticulated human remains. The incorporation of the latter material, in particular – which consisted of five adult fragments (Table 16) – indicates that the deposit was probably imported from elsewhere in the precincts. A radiocarbon date obtained from one of the fragments produced a date of cal. AD 891-969 (68% probability; Table 1). This falls between the date of the Anglo-Saxon monastery's destruction by Vikings in *c*. 870 and its later refoundation by Bishop Æthelwold *c*. 970 (Kelly 2009), a period during which relatively little activity is thought to have occurred. Radiocarbon determinations on human remains of this period typically underestimate the age of the material by at least 30-50 years, however, due to a combination of bone turnover/remodelling processes allied with the transmission of old carbon from marine/freshwater fish in the diet (see Barret *et al.* 2004). These particular remains are therefore most likely to have been late 10th-century in date, and thus associated with the refounded Abbey of St Peter; although a parochial origin cannot be entirely discounted as churchyard burial became a universal practice in England during the 10th century (Blair 2005, 463-71).

Figure 6. Photograph of possible mid-12th century rubble deposit [135.02] in Trench 1, facing east

Figure 7. A selection of medieval finds, including: an early 13th century stiff leaf capital (top), glazed floor and roof tiles (bottom left), and a copper alloy book or box mount (bottom right)

| Lab. No. | Site | Context | Radiocarbon age (BP) | δ $^{13}$C relative to VPDB (‰) | δ $^{15}$N relative to air (‰) | C/N ratio (Molar) | Calibrated date range (68% confidence) | Calibrated date range (95% confidence) |
|---|---|---|---|---|---|---|---|---|
| *SUERC -71883* | *Garden House 2016* | *129.03* | *1125 ± 29* | *-20.0* | *11.1* | *3.2* | *Cal AD 891-969* | *Cal AD 863-991* |
| HAR-8580 | Cathedral Cloister 1982/7 | Cemetery | 1020 ± 80 | -22.1 | - | - | Cal AD 900–1150 | Cal AD 870–1210 |
| HAR-8581 | Cathedral Cloister 1982/7 | Cemetery | 1180 ± 70 | -19.7 | - | - | Cal AD 720–970 | Cal AD 670–1020 |
| Beta-188361 | Former Mason's Yard 2003 | Charnel pit | - | - | - | - | Cal AD 585-770 | - |
| Beta-188362 | Former Mason's Yard 2003 | Charnel pit | - | - | - | - | Cal AD 670-970 | - |
| Beta-188363 | Former Mason's Yard 2003 | Charnel pit | - | - | - | - | Cal AD 640-875 | - |

*Table 1*. Radiocarbon results on human remains recovered from Peterborough cathedral (data on previous discoveries derived from Bayliss *et al*. 2013 and Meadows 2004)

Human remains of broadly comparable date have previously been identified in much closer proximity to the cathedral at the Cathedral Cloisters site (Mackreth 1983), whilst earlier material has also been recovered from a charnel pit at the Former Mason's Yard site in 2003 (Meadows 2004). The present discovery adds to this corpus of pre-Conquest material while, in association with the fragment from [135.01], also demonstrating the extent to which human remains were dispersed around the precincts during the medieval period. Somewhat unexpectedly, the finds from [129.03] represent the only *in-situ* medieval material to have been recovered from the site; the remainder of the small assemblage of this date was residual in nature (Figure 7). This suggests that despite the evidence of ongoing reclamation works in Trench 1 during the Middle Ages, the Garden House area nevertheless remained peripheral to the main focus of contemporary activity.

### *Phase III: 16th-17th-century reclamation deposits*

During the 16th-17th centuries levelling/consolidation activity continued in Trench 1 with the introduction of layer [129.02]. In the western portion of the site, meanwhile, reclamation first commenced in Trenches 5 and 6 in the 17th century (during the preceding medieval period this area appears to have remained open, wet and marsh-like). In contrast to the made-ground deposits that were introduced into Trench 1, a significant quantity of refuse was incorporated into the 17th-century make-up layers in Trenches 5 and 6. Five test pits were excavated across the latter – [111], [112], [113], [116] and [133] (Figures 8 and 9) – covering a combined total of 8 square metres. From this small sample a substantial assemblage of material was recovered, including numerous ceramic and glass vessels as well as a large group of clay tobacco pipes and a sizable quantity of faunal remains (Figure 10). The composition of the assemblage is broken down in Chart 2, below.

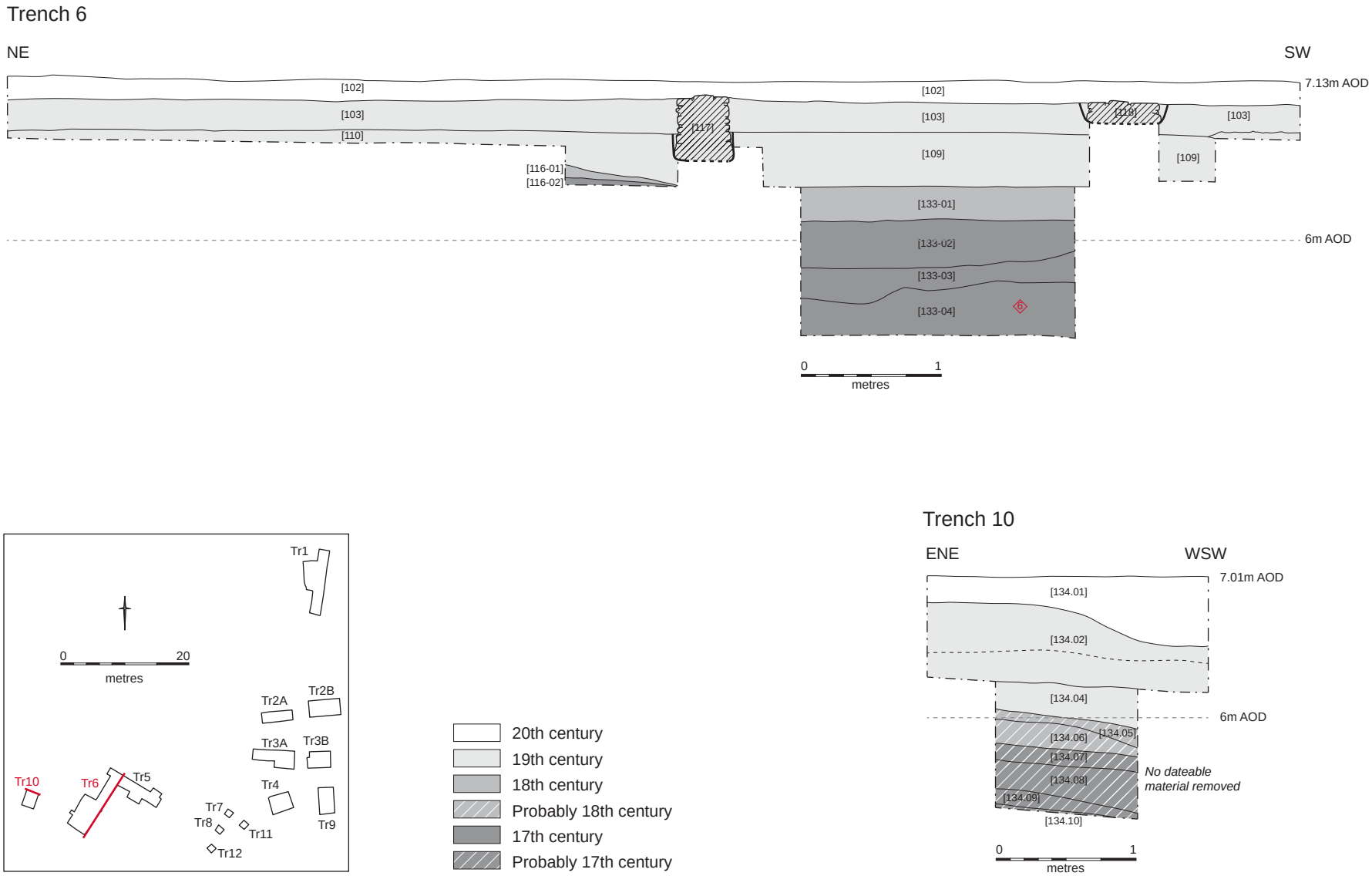



Figure 8. Phased sections of Trenches 6 and 10

Figure 9. Photograph of test pit [133] in Trench 6, facing southeast

Figure 10. A selection of mid-17th century finds from [133.02] in Trench 6; a sample of the material recovered from one layer in a single test pit

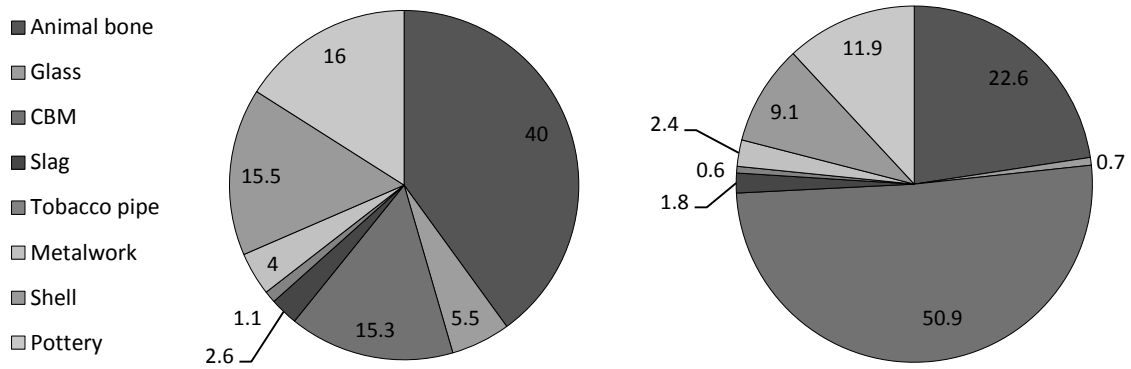



*Chart 2*. The combined *in-situ* 17th-century assemblage from Trenches 5 and 6 by count (left) and by weight (right); the sum total of the material is 3,000 artefacts weighing 47.9kg (minor categories such as coal, leather and human remains have been excluded)

Spreads of 17th-century refuse were identified across Trenches 5 and 6; material of this date was recovered from all five of the widely-dispersed test pits. A distinct spatial pattern was identifiable, however. In both Trench 5 and the north-eastern half of Trench 6, comparatively shallow deposits of refuse-rich material, not exceeding 0.3m in depth, were identified. Yet in the south-western portion of Trench 6, near-identical material extended in excess of 0.75m in depth, thereby indicating the presence of a potentially quite extensive natural dip or hollow in the south-western corner of the site. The disparity between test pits [116] and [133] is clearly visible in section (Figure 8). As no 17th-century material was recovered from nearby Trench 10 – which revealed a deep alluvial sequence that continued to accrue until the 18th-19th century (Figure 8) – it appears that deposition was primarily restricted to the periphery of the hollow.

Precise dating of the assemblage is rendered somewhat problematic by the nature of its constituent materials. Due to their predominately utilitarian fabrics and small fragment size, for example, both the ceramics and glass can only be broadly assigned to the 16th-17th centuries. The clay tobacco pipe bowls, in contrast, are much more closely datable. When these pieces are assessed on a decadal basis, a significant mid-17th century peak (*c*. 1640-60) can be discerned (Table 11); a much smaller quantity of late 17th-century material was also present (including a trade token dated 1668 and a coin dated 1699-1701; Table 3). It is thus entirely plausible that the bulk of the assemblage was deposited during a relatively brief but intensive episode of consolidation undertaken during the mid-17th century, with only occasional, ad hoc deposits being added subsequently. Alternatively, however, a much longer-lived process of piecemeal deposition extending over many decades – and commencing on a small scale as early as the late 16th century – may instead be represented.

The small fragment size of much of the material (the mean sherd weight of the pottery was 11.7g, of the glass only 2.6g) strongly suggests that the hollow was not a venue for primary deposition. Instead, the pattern corresponds much more closely to midden waste that was initially stored elsewhere before being transported here for disposal. This interpretation also accords with the nature of many of the other material-types that were recovered, including food waste (both faunal remains and shellfish) and structural materials (CBM, stone tiles, wall plaster and a relatively

substantial quantity of medieval window glass) as well as the relative dearth of refits in the assemblage. Alongside a leather shoe, three fragments of human bone were also recovered (Table 16). The latter may have been accidently caught up into the original midden and subsequently transported alongside the remainder of the refuse.

Throughout the majority of the 17th century, Trenches 5 and 6 appear to have remained at least seasonally wet and partially waterlogged. In the hollow itself, layer [133.04] consisted of firm brownish grey clay silt with occasional gravel inclusions (Figure 9). This was overlain by [133.03], a layer of firm dark grey clay silt, and subsequently in turn by [133.02], a layer of frim brownish grey silty clay. Numerous bands and tips were discernible, consistent with the repeated introduction of discrete dumps of material. All three layers also contained sizable dumps of refuse.

*Phase IV: 18th-19th-century landscaping*

By the early 18th century the reclamation works in Trenches 1, 5, and 6 were largely complete. Humic garden soil deposits were subsequently introduced across these areas as part of an ongoing process of landscape gardening. The large pond in the eastern half of the area remained open, although – as the historic cartographic sources suggest (Figure 11) – over the course of the succeeding century it appears to have expanded somewhat. Eventually, between 1822 and 1825, it was deliberately infilled (PCCHER 3414). A moderately-sized late 18th-early 19th-century assemblage, consisting primarily of ceramic and glass vessels, was incorporated into its backfilling, alongside a number of residual artefacts. Following on from this event, landscaping activity continued throughout the 19th century; archaeological evidence reveals the presence of a raised gravel pathway ([123]), a stone-built boundary wall ([117]) and greenhouse footings ([118]).

Much the most dominant feature in the western portion of the 18th-century Deanery garden was the large, long-lived pond. Cartographically, it was first depicted by Thomas Eayre in 1721 (Figure 11); although earlier documentary descriptions exist, potentially extending back to the early 13th century (PCCHER 3023). In Eayre's depiction the pond yard is shown as separate from the property's principal garden, and the pond itself is regularly laid-out. Additional, smaller and less formal ponds are also depicted a short distance to the north and west; remnants perhaps of an earlier medieval landscape. Yet in 1811, when an enclosure map of the area was compiled, the pond appears much less regular in outline as it had by then expanded to the southwest (Figure 11). The direction of its expansion suggests that it may have partially overflowed into the edge of the hollow previously identified above. By 1822, however, when a new map was produced, the pond was once again rectangular in shape, the overflow having been removed (Figure 11).

The cartographic sequence accords very closely with contemporary documentary accounts which record that the pond began to be infilled in 1822 (PCCHER 3414); a response perhaps to its earlier overflowing as well as a reflection of the desire to incorporate it into the increasingly formal landscape of the remainder of the Deanery garden. Archaeologically, evidence of this backfilling process, which occurred 'daily for 3½ years', was identified in Trenches 1, 2A, 2B, 3A, 3B, 4 and 9. In each instance extensive dumps of made-ground material were encountered, primarily consisting of interleaved lenses of clay silt, gravel and redeposited garden soil along with occasional patches of rubble. This pattern – which was most clearly evident on the northern edge of the feature in Trench 1 (Figures 4 and 12) – is consonant with a protracted, episodic process of infilling.

Figure 11. Historic maps showing pond location: Eyre's plan of 1721 (top), enclosure map of 1811 (middle), and a late 19th-century copy of a map from 1822 (bottom). (Images from PCCHER)

Figure 12. Photographs of pond infilling in Trench 1, facing east (top) and garden wall in Trench 6, facing northeast (bottom)

By the mid-19th century the former pond yard had been fully incorporated into the Deanery garden. A more formal garden layout was instituted, with raised gravel paths ([123]) circling around between vegetable beds, lawned areas and at least one greenhouse ([118]) (see Figure 19 for a depiction of the late 19th-century layout). Also present were a number of well-constructed masonry boundary walls, one of which – [117] (Figure 11) – was investigated archaeologically.

*Phase V: 20th-century gardens and pit/planting bed*

During the early 20th century, landscaping activity in the Deanery Garden remained ongoing. Horticultural deposits associated with formal planting beds as well as manicured lawns were encountered, suggesting that this was both a well-maintained and well-presented space. Then, in the late 1920s or early 1930s, pit/planting bed [104] was dug in Trench 6. Into this feature a large deposit of refuse was then deposited, perhaps to aid drainage. The assemblage probably represents a discrete 'clearance event' derived from a single household. Numerous complete and semi-complete ceramic and glass vessels were recovered (Figure 13), as well as a large faunal assemblage. The composition of this group is broken down in Chart 3. Finally, in 1935/36 the investigated area was annexed from the Deanery garden when Garden House and its associated grounds were established.

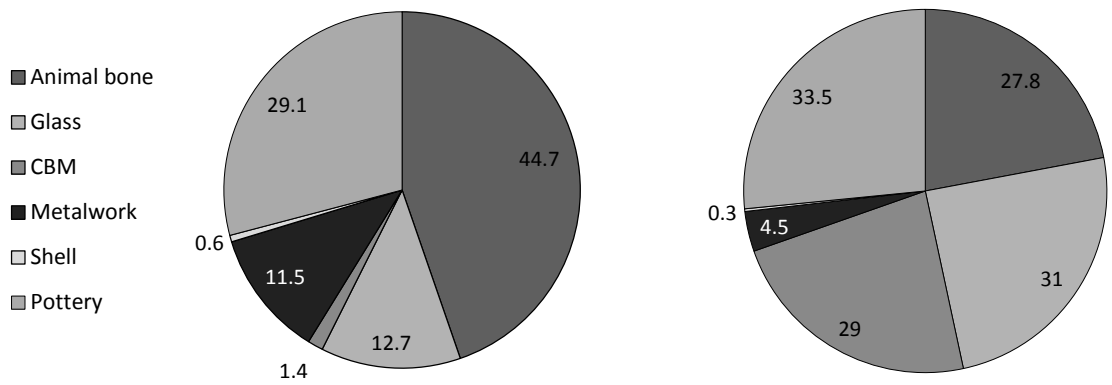



*Chart 3*. The early 20th-century assemblage from pit/planting bed [104] by count (left) and by weight (right); the sum total of the material is 2,289 artefacts weighing 48.2kg (minor categories such as coal, window glass and residual tobacco pipe have been excluded)

The most recent phase of landscaping activity at the site was represented by rich humic topsoil deposits ([100], [102], [105], [119], [121], [124], [134.01] and [137]) that were encountered in all twelve trenches. The bulk of this material probably pertains to alterations that were undertaken to the grounds following the construction of Garden House in 1935/36. Pit/planting bed [104], in contrast, almost certainly predated this transition. A linear feature measuring 0.5m wide by 0.4m deep, [104] was located against the northern face of 19th-century garden wall [123]. It contained a minimum of 81 glass vessels, 66 ceramic vessels and 13.4kg of butchered animal bone. Unlike the 17th-century assemblage, many of the vessels were substantially complete. The latest material in the group could be dated to 1925/26 and its deposition probably occurred soon after. Given the utilitarian nature of many of the constituent vessels, it is very likely that this group represents the clearance of items derived from a single household.

Figure 13. A selection of early 20th century finds from pit [104], showing a range of complete and near-complete glass and ceramic vessels

# Specialist analyses

A total of 14,351 items, weighing 229.3kg, were recovered during the course of the project. This represents a relatively substantial assemblage, especially when the limited footprint and restricted depth of many of the trenches is taken into account. Varying from Late Prehistoric to 20th century in date, the artefacts represent a broad range of types that reflect the differing activities that have taken place within this portion of the cathedral precincts, and surrounding area, over time. Overall, 9,108 items weighing 139kg have been retained in the site archive. The following analyses have been subdivided into two sections; the first pertains to material culture, the second to economic and environmental remains.

## MATERIAL CULTURE

A broad range of material-types were present within this assemblage, including metalwork, ceramics, clay tobacco pipe, glass, glassworking and metalworking debris, ceramic building materials, plaster, architectural stone, worked stone, flint, worked bone and leather. Each material-type is discussed separately below.

### **Metalwork** (Andrew Hall, Justin Wiles and Martin Allen)

A total of 1,073 metalwork items weighing 14.1kg were recovered; this includes artefacts of silver, iron, copper alloy and lead. The assemblage is broken down and discussed by material-type below.

#### *Silver*

A single silver item, weighing 2g, was recovered; this takes the form of a 17th-century bodkin or hairpin (Figure 14).

<481> TR6 (20th-century topsoil): A finely made silver bodkin/hairpin fragment dating to the 17th century. Originally this item would have taken the form of a tapering shaft, rectangular in section, with a long, rectangular slot at the broader end, above which would have been a decorative terminal. This example is incomplete, and represents just the terminal end and a section of the main shaft broken at the rectangular slot. The terminal takes the form of a round ear scoop with a perforated teardrop section below. The surviving length of the main body of the bodkin is decorated with incised or possibly punched dashes either side of a central line. There are two parallel incised lines just above the rectangular aperture; these are mirrored on the reverse. They appear to have had a multipurpose role, acting as both a bodkin for threading cord or ribbons into clothing or lacemaking. The ear scoop terminal may have been used to provide wax for lubricating fibres for this process. In addition, they were also used as hairpins. The perforation may have been for the suspension of a decorative pendant or jewel. Such bodkins in silver are believed to have been introduced from the Low Countries. A close parallel is recorded from Norfolk (Margeson 1993, 9). This is a fine item indicative of high status. Weight 2g, length 31mm.

*Iron*

The ironwork assemblage comprises 1009 items weighing 13,242g. This material is entirely composed of nails and undiagnostic lumps. The only items of note are a nail from Roman context [135.06] and the relatively substantial group from the 17th-century deposits in Trenches 5 and 6; selected elements of the latter may merit additional analysis via x-ray.

| Cat. No. | Context | Trench | Count | Wt (g) | Date of Deposition |
|---|---|---|---|---|---|
| 386 | 102 | 6 | 1 | 8 | 20th century |
| 402 | 131.03 | 2 | 16 | 204 | 19th/20th century |
| 403 | 131.04 | 2 | 2 | 13 | 19th/20th century |
| 404 | 131.06 | 2 | 35 | 555 | Early 19th century |
| 406 | 132.02 | 2 | 58 | 723 | Early 19th century |
| 408 | 132.03 | 2 | 8 | 29 | Early 19th century |
| 409 | 132.04 | 2 | 1 | 14 | Early 19th century |
| 410 | 133.01 | 6 | 45 | 440 | 18th century |
| 411 | 133.02 | 6 | 20 | 99 | 17th century |
| 412 | 133.03 | 6 | 21 | 200 | 17th century |
| 414 | 133.04 | 6 | 1 | 6 | 17th century |
| 418 | 134.03 | 10 | 26 | 380 | 19th century |
| 419 | 134.04 | 10 | 35 | 214 | 19th century |
| 420 | 135.06 | 1 | 1 | 11 | Roman |
| 421 | 138.01 | 9 | 6 | 86 | 19th century |
| 422 | 138.02 | 9 | 54 | 541 | 19th century |
| 424 | 138.03 | 9 | 11 | 224 | Early 19th century |
| 426 | 138.04 | 9 | 4 | 45 | Early 19th century |
| 428 | 138.06 | 9 | 4 | 74 | Early 19th century |
| 430 | 1 | 8 | 2 | 5 | 20th century |
| 433 | 3 | 8 | 3 | 19 | 20th century |
| 434 | 2 | 11 | 1 | 6 | 20th century |
| 434 | 6 | 8 | 1 | 6 | 20th century |
| 435 | 2 | 12 | 1 | 9 | 20th century |
| 436 | 100 | 3 | 2 | 80 | 20th century |
| 437 | 101 | 10 | 6 | 65 | 20th century |
| 438 | 101 | 10 | 2 | 105 | 20th century |
| 443 | 105 | 1 | 4 | 141 | 19th century |
| 444 | 107 | 1 | 11 | 137 | 19th century |
| 445 | 108 | 1 | 9 | 338 | 19th century |
| 447 | 109.01 | 6 | 14 | 350 | 19th century |
| 448 | 109.02 | 6 | 2 | 13 | 19th century |
| 450 | 110.01 | 6 | 24 | 142 | 19th century |
| 451 | 110.02 | 6 | 28 | 262 | 19th century |
| 452 | 111.01 | 5 | 1 | 11 | 17th century |
| 453 | 111.03 | 5 | 10 | 175 | 17th century |
| 454 | 112.01 | 5 | 7 | 60 | Early 18th century |
| 455 | 112.02 | 5 | 1 | 6 | 17th century |
| 456 | 112.03 | 5 | 25 | 188 | 17th century |
| 457 | 113.01 | 5 | 7 | 41 | Early 18th century |
| 458 | 113.02 | 5 | 5 | 19 | 17th century |
| 459 | 116.01 | 6 | 1 | 35 | Early 18th century |
| 460 | 116.02 | 6 | 1 | 7 | 17th century |
| 461 | 119 | 3 | 8 | 217 | Late 19th century |
| 462 | 123 | 1 | 1 | 16 | Late 19th century |
| 463 | 126 | 3 | 19 | 424 | Early 19th century |
| 464 | 126.04 | 3 | 3 | 7 | Early 19th century |
| 465 | 127 | 4 | 49 | 1161 | Early 19th century |
| 466 | 127.01 | 4 | 19 | 385 | Early 19th century |
| 467 | 127.02 | 4 | 15 | 334 | Early 19th century |
| 468 | 129.01 | 1 | 4 | 17 | 19th century |
| 470 | 130.01 | 1 | 10 | 326 | Early 19th century |
| 471 | 130.05 | 1 | 1 | 8 | Early 19th century |
| 472 | 130.03 | 1 | 7 | 219 | Early 19th century |
| 473 | 130.04 | 1 | 1 | 117 | Early 19th century |
| 474 | 130.06 | 1 | 1 | 4 | Early 19th century |
| 475 | 130.07 | 1 | 3 | 6 | Early 19th century |
| 476 | 130.08 | 1 | 8 | 90 | Early 19th century |
| 477 | 130.09 | 1 | 6 | 47 | Early 19th century |
| 478 | 130.10 | 1 | 3 | 64 | Early 19th century |
| 479 | 130.13 | 1 | 9 | 54 | Early 19th century |
| 480 | 131.01 | 2 | 52 | 621 | Early 19th century |
| 482 | 104 | 1 | 261 | 2150 | Early 20th century |
| 483 | 130.14 | 1 | 3 | 41 | Early 19th century |
| 485 | 126.02 | 3 | 2 | 9 | Early 19th century |
| 486 | 126.03 | 3 | 7 | 839 | Early 19th century |

*Table 2.* The ironwork assemblage by count and weight

Figure 14. A fine 17th-century silver bodkin or hairpin fragment recovered from the topsoil in Trench 6. This is likely to have been disturbed from the extensive 17th-century refuse deposits situated within the lower strata in this trench

*Copper Alloy*

A total of 28 copper alloy items, weighing 135g, were recovered. The assemblage includes five coins/jettons (Table 3), a 17th-century buckle, several 18th and 19th-century buttons and a late 19th to mid-20th-century tree label.

| Catalogue no. | Context no. | Trench | Date of deposition | Description |
|---|---|---|---|---|
| 490 | 112.01 | 5 | Late 17th century | Low Countries, copper alloy jetton, mid-16th century, obverse Charles V as Holy Roman Emperor (1519-56) on horse (Mitchiner 1988), 28 mm diameter, 3.98g |
| 487 | 125 | 2 | 19th century | Nuremberg, copper alloy jetton, Hans Schultes III (fl. 1608-12), Rose/Orb type, reverse GLICK KVMPT VON GO (Mitchiner 1988, 411, no. 1403), 25 mm diameter, 1.81g |
| 489 | 112.01 | 5 | Late 17th century | Peterborough, Richard Tompson, copper alloy token, halfpenny, 1668 (Williamson 1889-91, Northamptonshire no. 138), 1.96g |
| 491 | 133.01 | 6 | Early 18th century | William III (1694-1702), copper halfpenny, date illegible [1699-1701] (Spink 2016, 335, no. 3556), 9.41g |
| 488 | 119 | 3 | 19th century | George IV (1820-30), copper halfpenny, date illegible [1825-7] (Spink 2016, 444, no. 3824), 9.78g |

*Table 3*. Coins and jettons (identified by Martin Allen, Fitzwilliam Museum, Cambridge)

<385> [102] TR6 (20th-century topsoil): A white metal alloy, possibly zinc rectangular plant tag with a chamfered edge (Figure 19). Stamped with 'COE'S GOLDEN DROP LAXDON BROTHERS BEDFORD'. The Laxdon brothers are recorded horticultural suppliers operating from 1888 to 1957. This example is from a plum tree. The reverse is stamped 'ACME CAST LABEL'. Dimensions 48mm by 31mm. Weight 25g, late 19th-mid 20th century.

<385> [102] TR6 (20th-century topsoil): A white metal alloy spoon handle of the Queens pattern type dating to the 19th Century. Probably from a tea spoon, tracing of silver plating still present on the surface. Weight 10g, length 71mm.

<387> [107] TR1 (19th-century garden soil): A machine pressed thimble dating to the 19th century. Measuring 16mm in diameter and 24mm in height. Weight 5g.

<388> [109] TR6 (19th-century garden soil): A small white metal? strap guide with oval side projection. Possible military in origin. Dating to the late 19th or early 20th century. Measuring 27 x 20mm, weight 2g.

<389> [110.02] TR6 (19th-century garden soil): A small fine openwork stud or badge in copper alloy incorporating a capital letter E surrounded but a circular frame with a narrow break to one side, and with a circular stud attachment to the reverse. The upper surface of the frame and letter are decorated with blue enamel. Dating to the early 20th century. Measuring 20mm in diameter, weight 4g.

<395> [119] TR3 (20th-century topsoil): A short length of copper alloy strip, with possible traces of an iron rivet at one end. Measuring 26 x 10mm, weight 3g. Undated.

<396> [120], TR3 (19th-century garden soil): Two fragments of corner binding strip, possibly from a large book or casket. The surviving fragments form a right angle and the internal edge of the frame is serrated with a repeating chevron edge. The upper surface is incised crosshatching within repeating triangular fields, separated by pairs of incised lines. The reverse is plain with the exception of the short edge being folded over. Weight 11g, Length 91mm, width 35mm, frame width 12mm. 15th-16th century.

<397> [122] TR4 (19th-century garden soil): Two tombak-type plain circular buttons, both with loops intact. One measuring 24mm diameter, weight 5g, the second measuring 17mm diameter, weight 3g. Both dating to the 18th or 19th century.

<398> [126] TR3 (early-19th century pond infill): An irregular shaped fragment of heavily corroded copper alloy sheet, measuring 32 x 13mm, weight 1g. Undated.

<399> [127] TR4 (early-19th century pond infill): A circular pewter military uniform button from the “ROYAL SOUTH LINCOLN” militia. This infantry militia unit was formed in 1759, and this first pattern button dates from the later 18th century. Measuring 21mm in diameter and weighing 4g.

<401> [130.02] TR2 (early-19th century pond infill): A plain circular copper alloy button with loop missing. Diameter 13mm, weight 2g. Dating to the early 19th century.

<405> [130.01] TR2 (early-19th century pond infill): An incomplete buckle or clasp, with a “H shaped” frame and small clasp. The frame is pierced for the attachment of two thin bars at either end. Of 19th or early 20th-century date. Measuring 32 x 10mm, weight 2g.

<416> [134.02] TR10 (19th-century garden soil): A distorted loop formed from thin gauge copper alloy sheet. Measuring 50 x 20mm, weight 1g. Dating to the 19th or 20th century.

<423> [138.02] TR9 (19th-century garden soil): A fragment of a cast copper alloy buckle frame of sub-rectangular shape, with raised rectangular bossed decoration to the upper surface. Possible a fragment from a spur buckle. 17th century in date. The fragment measures 28 x 17mm, weight 4g.

<427> [138.05] TR9 (early 19th-century pond infill): A diamond shaped mount for attachment to leather, one complete and one partial tang. measuring 25mm x 16mm weight 2g. 16th-17th century in date.

<439> TR10 (unstratified): A flattened machine made thimble 21mm in height, weight 3g. Found in association with a copper alloy strip 35 x 13mm, weight 5g. Both 19th or early 20th century in date.

<446> [108] TR1 (19th-century garden soil): A copper alloy wire split-ring or single coil from a larger spring. Measuring 24mm in diameter, weight 2g. 20th century in date.

<431> TP8 (unstratified): A copper alloy machine part, consisting of a cylindrical bolt with screw thread to the exterior. This is capped with a slightly wider plat head surmounted by a thin handle projecting off to the side. There is a hemispherical aperture through the body of the bolt. This may be part of a valve mechanism of 20th-century date. The bolt measures 9mm in diameter and 17mm in height, weight 13g.

*Lead*

A total of 35 lead items, weighing 736g, were recovered. The group includes a musket ball and a late medieval grille, both deriving from 17th-century contexts.

<393> [113.02] TR5 (17th-century deposit): A lead musket ball. Diameter 13mm, weight 16g. 16th-18th century.

<407> [132.03] TR2 (early 19th-century pond infill): A fragment of rectangular lead sheet with score mark. Diameter 50mm, width 26mm, weight 17g.

<413> [133.03] TR6 (17th-century deposit): Three fragments of lead which possibly refit and may have been set into a wall for ventilation. A pattern of horizontal and vertical rectangular piercings in groups of three form the grille. The canes are triangular in section. Overall dimensions 111x56mm, weight 42g. Dimensions of piercings 22 x 6mm. Late medieval in date. A similar example has been noted on the PAS website, record number DENO-37B620. Two fragments of lead casting waste, total weight 65g, dimensions 70x23mm and 45x31mm, A lead strip length 51mm, width 11mm. A fragment of folded lead sheet, dimensions 51x24mm, weight 27g.

[415] [134.04] TR1 (19th-century garden soil): Two fragments of milled lead window cane, mortar is attached to the web. In poor condition and possibly heat affected. Total weight 34g. A lozenge shaped offcut. Dimensions 82mmx 14mm at widest point, weight 32g. Undated.

<429> TP7 (20th-century topsoil): A cast lead setting for a square section iron bar, probably from a window to fix it into a prepared hole in the masonry. Rusted iron adheres to the internal faces. Diameter 48mm, height 40mm, weight 134g, width of bar 22mm. A similar example is published from Nonsuch Palace. This example has a Post-Medieval date (Egan 2005, 347).

<432> TR8 (20th-century topsoil): A lead strip or offcut. Length 80mm, width 10mm, 6mm thick, weight 40g. Undated.

<440> TP10 (20th-century topsoil): An irregularly-shaped lump of lead, measuring 35 x 30 x 30mm, weight 77g. Probably 19th or 20th century in date.

**Ceramics** (Craig Cessford and David Hall)

The archaeological excavations produced a moderately-sized assemblage of pottery, totalling 5,818 sherds weighing *c*. 61.7kg. Although there is some overlap the material can be broadly divided into six periods: Late Iron Age/Romano-British (1st century BC–4th century AD), Anglo-Saxon (5th–9th century), Saxo-Norman (10th–12th century), medieval (13th–15th century), post-medieval (16th–17th century) and modern (18th–20th century) (Table 4). The vast bulk of the assemblage is post-medieval and modern (*c*. 96%). Of the earlier material, the Romano-British and medieval assemblages – whilst relatively small – are not insignificant given the nature of the investigations, as earlier deposits were only excavated on a relatively restricted scale.

| Period | No. | No.% | Weight (g) | Weight % | Mean sherd weight (g) |
|---|---|---|---|---|---|
| Romano-British, 1st–4th century | 129 | 2.2 | 1337 | 2.2 | 10.4 |
| Romano-British/Anglo-Saxon | 2 | <0.1 | 20 | <0.1 | 10.0 |
| Anglo-Saxon, 5th–9th century | 1 | <0.1 | 28 | <0.1 | 28.0 |
| Saxo-Norman, 10th–12th century | 10 | 0.2 | 70 | 0.1 | 7.0 |
| Medieval, 13th–15th century | 100 | 1.7 | 983 | 1.6 | 9.8 |
| Post-Medieval, 16th–17th century | 1080 | 18.6 | 12122 | 19.6 | 11.2 |
| Modern, 18th–20th century | 4495 | 77.3 | 47133 | 76.4 | 10.5 |
| Unknown | 1 | <0.1 | 14 | <0.1 | 14.0 |
| **Total** | **5818** | **100** | **61707** | **100** | **10.6** |

*Table 4*. Overall pottery assemblage by broad periods

*Late Iron Age/Romano-British*

The Romano-British assemblage (129 sherds, *c*. 1.3kg; Table 5 and Figure 5) derives almost entirely from later contexts, but is nonetheless relatively substantial given the nature of the investigations. This material has not been subject to full specialist analysis and a more detailed breakdown by fabric and form could be undertaken. The assemblage is dominated by a range of coarsewares and greywares (*c*. 71–77% of the Romano-British assemblage) and the only other significant component are local Nene Valley colour coats (*c*. 20–24% of the Romano-British assemblage). One notable absence is the total lack of Samian ware; this is extremely atypical and suggests that there may have been no 1st–2nd century occupation in the vicinity. Consequently, this may indicate that the single sherds of Terra Rubra and Terra Nigra pre-date the Roman Conquest and relate to potential Late Iron Age occupation.

*Anglo-Saxon*

The only Anglo-Saxon pottery is a single sherd of Maxey-type ware (28g) and two sherds in a shelly fabric (20g), which could be of either Romano-British or Anglo-Saxon date. Although negligible pottery was recovered, Early and Middle Anglo-Saxon sites in the area typically produce relatively small ceramic assemblages. Given the nature of the investigations and the environment

in which they were located, this relative absence cannot be taken as definite evidence for a lack of occupation at this time.

| Fabric | No. | Weight (g) | Mean sherd weight (g) | Dating/comments |
|---|---|---|---|---|
| Coarsewares | 50 | 634 | 12.7 | A range of fabrics that could be more closely identified |
| Greywares | 42 | 411 | 9.8 | A range of fabrics that could be more closely identified |
| Nene Valley colour coat | 31 | 268 | 8.6 | Fine table wares in a pale fabric with darker colour coat. Produced in the Nene and widely distributed across Britain during the mid-2nd–late 4th centuries |
| Whitewares | 3 | 14 | 4.7 | Various wares with a white fabric, could be more closely identified |
| Terra Rubra | 2 | 6 | 3.0 | Fine red-slipped wares produced in northern Gaul and distributed across south-east Britain during the late 1st century BC–1st century AD. |
| Terra Nigra | 1 | 4 | 4.0 | Fine black slipped wares produced in northern Gaul, distributed across south-east Britain during the late 1st century BC–1st century AD |
| **Total** | **129** | **1337** | **10.4** | |

*Table 5.* Late Iron Age/Romano-British ceramics by fabric type, 1st century BC–4th century AD

| Fabric | No. | Weight (g) | Mean sherd weight (g) | Dating/comments |
|---|---|---|---|---|
| Misc. coarsewares | 20 | 221 | 11.0 | Late 12th–15th century, a range of fabrics present |
| Local shelly corseware | 12 | 148 | 12.3 | Local product with green glaze, 14th–15th century |
| Misc. glazed wares | 20 | 148 | 7.4 | 13th–15th century, a range of fabrics present |
| Bourne | 21 | 150 | 7.1 | 15th–16th century, where identifiable Bourne D and probably predominantly 15th century |
| Brill | 1 | 2 | 2.0 | 13th century |
| Developed Stamford | 5 | 102 | 20.4 | 13th–14th century |
| Ely-Grimston | 4 | 36 | 9.0 | 14th–15th century |
| Essex redware | 7 | 26 | 3.7 | 14th–15th century |
| Grimston | 1 | 6 | 6.0 | 14th–15th century |
| Hertfordshire fineware | 4 | 50 | 12.5 | 13th–14th century |
| Lyveden-type | 2 | 40 | 20.0 | 13th–14th century |
| Scarborough | 1 | 6 | 6.0 | 13th–14th century |
| Stanion-type | 2 | 48 | 24.0 | 14th–15th century |
| **Total** | **100** | **983** | **9.8** | |

*Table 6.* Medieval ceramics by fabric type, 13th–15th century

*Saxo-Norman*

The 10th–12th-century pottery from the site largely consists of the typical pottery of the period: St. Neots-type ware (2 sherds, 34g), Thetford-type ware (1 sherd, 12g) and Stamford ware (6 sherds, 14g). There was also a sherd of reduced shelly ware (1 sherd, 10g). Sites of this period in the area typically produce relatively substantial ceramic assemblages; the low quantity of pottery recovered suggests there was probably not occupation in the immediate vicinity at this time although it is impossible to be definitive due to the nature of the investigations.

*Medieval*

The relatively small assemblage of 13th–15th-century ceramics (100 sherds, 983g) broadly matches known patterns of pottery from the Soke and town of Peterborough (Spoerry 2016, 61–62, 82). Given the nature of the investigations it is impossible to be definitive; however, the size of the assemblage indicates that there was not intensive occupation and activity in the immediate vicinity suggesting that this was a relatively peripheral area.

| Fabric | No. | Weight (g) | Mean sherd weight (g) | Dating/comments |
|---|---|---|---|---|
| Cistercian ware | 193 | 971 | 5.0 | *c*. 1475–1700, variety of fabrics and sources apparent but some appears visually similar to Babylon ware produced at Broad Street in Ely |
| Glazed red earthenware | 650 | 7927 | 12.2 | 16th–late 19th century, material in assemblage appears predominantly 16th–17th century. Some appears visually similar to material produced at Broad Street in Ely but other sources may also be present |
| Glazed red earthenware bichrome | 33 | 256 | 7.8 | Mid-16th–early 17th century, all appears visually similar to material produced at Broad Street in Ely |
| Glazed red earthenware fineware | 12 | 28 | 2.3 | Mid-16th–early 17th century, all appears visually similar to material produced at Broad Street in Ely |
| Glazed red earthenware with slipped decoration | 22 | 497 | 22.6 | 17th century, all appears visually similar to material produced at Broad Street in Ely |
| Plain earthenwares | 57 | 805 | 14.1 | 16th–17th century; red, grey and buff fabrics present. Some may be unglazed portions of glazed red earthenware. It is likely that some residual 16th–17th century unglazed earthenware has been grouped with the similar Modern material |
| Frechen stoneware | 64 | 803 | 12.5 | Predominantly mid-16th–mid-17th century |
| Raeren stoneware | 26 | 458 | 17.6 | Predominantly mid-15th–mid-16th century |
| ?Harlow-type slipware | 10 | 217 | 21.7 | Broadly a Staffordshire-type slipware but distinct from the rest of the assemblage. Reddish-brown fabric with dark brown slip and yellow slip decoration depicting animals (leopards?) |
| Misc. glazed wares | 13 | 160 | 12.3 | 16th–17th century, variety of fabrics and glazes present |
| **Total** | **1080** | **12122** | **11.2** | |

*Table 7.* Post-medieval ceramics by fabric type, 16th–17th century

*Post-Medieval*

Although the majority of the 16th–17th-century pottery occurred residually in later contexts a significant proportion derives from contemporary deposits and it comprises just under a fifth of the overall assemblage. Some of the fabrics included in the post-medieval category continued into the 18th century or later (particularly glazed red earthenware), whilst other fabrics that began in the 17th century but appear to be predominantly later (particularity Staffordshire-type slipware) are discussed there. The pottery is largely of the common fabrics and forms of the period (Table 7), the only notable piece being an unusual Staffordshire-type slipware vessel, probably a posset pot, which may have been produced in Harlow in Essex (Davey & Walker 2008; see Figure 10).

*Modern*

18th–20th-century ceramics constitute just over three quarters of the overall assemblage; these are all common fabrics or forms of the period (Table 8). Only one significant assemblage was recovered from context [104] (Table 9 and Figure 13), which appears to be a 'clearance' deposit (Cessford forthcoming). Once obviously residual material is excluded there were 641 sherds weighing 16143g (mean sherd weight 25.1g), although this still probably slightly over represents the actual deposit as mean sherd weights etc. indicate that some vessels were probably not part of this specific depositional event. Whilst fragments from over a hundred vessels are represented in the overall assemblage, there are over sixty that are complete or have a significant proportion of the vessel present. All these vessels are of late 19th–early 20th-century (*c*. 1880–1940) date, the latest items are some complete cream jugs of 1925/26 or later (see below). Ceramic tableware of the period typically has a lifespan of 15–25 years, with some items surviving for 30 years (Adams 2003). Manufacturers marks indicate that some plates were manufactured in 1883–1913, 1903/04, 1906, 1907, 1900–10 and 1912–20 and it is noteworthy that none of the vessels are marked 'Made in England', which became common practice after 1921. Overall the depositional event probably dates to *c*. 1925–40. The vessels are predominantly linked to food storage and preparation (*c*. 20), tea/coffee drinking (*c*. 20) and dining (*c*. 16).

There are a number of distinctive elements to this assemblage, several of which indicate that most if not all of the material derives from a single household. There were eight lead-glazed cream/milk jugs, six of which were complete or near-complete, stamped WESTERN COUNTIES CREAMERIES / APLIN & BARRETT LTD / YEOVIL, MARSTON & WESTBURY (Figure 13). There are also four lead-glaze pots, three of which are complete, which are not stamped and whose glaze is slightly different. Nonetheless, these are probably cream pots from the same company. Aplin and Henry Barrett merged their wholesale dairy businesses in 1888 and the business was amalgamated with the Western Counties Creamery in 1891 (Crittal 1959; http://www.gracesguide.co.uk/Aplin_and_Barrett). Around the beginning of the 20th century the firm acquired premises near to the goods yard associated with Yeovil Town Railway Station, providing a national distribution system for their products. In 1925/26 the firm established a factory at Westbury, the presence of the place-name Westbury on the cream jugs indicates that these items date to 1925/26 or later. There were also eleven vessels from a Royal Worcester dining service with a brown transfer-printed geometric pattern and hand painted green band on the marly. Vessels included plates (6), saucers (2), a soup dish (1), an eggcup (1) and a handled lid for a large dish (1). A range of Royal Worcester marks are present, indicating that vessel for the service were acquired over time.

| Fabric | No. | Weight (g) | Mean sherd weight (g) | Dating |
|---|---|---|---|---|
| Late unglazed earthenware | 1329 | 9952 | 7.5 | Late 18th–20th century, a wide range of fabrics. Sankey's of Bulwell 1855–mid-20th century is present but also other manufacturers. |
| Late glazed red earthenware | 4 | 170 | 42.5 | 18th–19th century |
| Staffordshire-type slipware | 50 | 319 | 6.4 | 16th–18th century, predominantly 17th–mid-18th |
| Tin-glazed earthenware | 166 | 870 | 0.5 | 18th–early 19th century |
| Late iron glazed earthenware | 136 | 2362 | 17.4 | 18th–19th century |
| Late lead glazed earthenware | 179 | 6900 | 38.5 | 18th–19th century |
| Sunderland-type coarseware | 22 | 662 | 30.1 | Mid-18th–19th century |
| Creamware | 407 | 4058 | 10.0 | 1762–1820, predominantly light coloured so 1775–1820/30 |
| Creamware with Mocha decoration | 19 | 364 | 19.2 | 1790–1820/30 |
| Pearlware | 79 | 833 | 10.5 | 1775–1820/30 |
| Refined white earthenware | 1616 | 14546 | 9.0 | 1805 onwards, predominantly 1820+ |
| Refined white earthenware with Mocha decoration | 82 | 431 | 5.3 | 1805–1850 |
| Yellowware | 12 | 160 | 13.3 | 1830 onwards |
| Blue bodied earthenware | 2 | 6 | 3.0 | 19th–20th century |
| English stoneware | 21 | 232 | 1.1 | 18th century |
| Staffordshire-type white salt glazed stoneware | 58 | 222 | 3.8 | 1720–85 |
| Nottinghamshire/Derbyshire-type stoneware | 75 | 446 | 5.9 | 1700–1810 |
| Late Nottinghamshire/Derbyshire-type stoneware | 43 | 1792 | 41.7 | 19th–mid-20th century |
| Black basalt stoneware | 5 | 34 | 6.8 | 1750–1820 |
| Westerwald stoneware | 9 | 69 | 7.7 | 18th century |
| Utilitarian English stoneware | 47 | 1720 | 36.6 | 19th–20th century |
| White feldspathic stoneware | 2 | 57 | 28.5 | 19th–20th century |
| Misc. stoneware | 12 | 195 | 16.2 | 19th–20th century |
| Chinese export porcelain | 55 | 431 | 7.8 | 18th century |
| Bone china | 63 | 284 | 4.5 | 1794–20th century |
| Misc. | 2 | 18 | 9.0 | |
| **Total** | **4495** | **47133** | **10.5** | |

*Table 8.* Modern ceramics by fabric type, 18th–20th century

All of the Royal Worcester vessels date to 1891–1921 and those that can be more precisely dated were manufactured in 1903/04–07 (http://antique-marks.com/royal-worcester-marks.html). There are several other interesting items and services in the assemblage that could be commented upon and also evidence for an overall plain aesthetic characteristic of the period.

| Fabric | No. | Weight (g) | Mean sherd weight (g) | Approx. no. of complete/semi-complete vessels | Comments |
|---|---|---|---|---|---|
| Late unglazed earthenware | 146 | 835 | 5.7 | 0 | Flowerpots, some manufactured by Sankey's of Bulwell. Potentially all/largely not part of 'clearance' group, as none are even semi-complete and the fabric has a low mean sherd weight |
| Late lead glazed earthenware | 48 | 3083 | 64.2 | 15 | Cream/milk jugs, small jars and teapots. Quite a few complete/semi-complete vessels |
| Refined white earthenware | 392 | 9280 | 23.7 | 47 | Principally dining and tea/coffee drinking vessels. Numerous semi-complete vessels |
| Yellowware | 1 | 4 | 4.0 | 0 | Probably not part of 'clearance' group |
| Late Nottinghamshire/ Derbyshire-type stoneware | 43 | 1792 | 41.7 | 1 | Single large bowl, semi-complete |
| Utilitarian English stoneware | 7 | 1045 | 149.3 | 3 | Various, some probably part of 'clearance' group but others probably not |
| Misc. stoneware | 4 | 104 | 26.0 | 0 | Probably not part of 'clearance' group, as none semi-complete and low mean sherd weight |
| Residual, based upon date | 33 | 250 | 7.6 | 0 | Predominantly 18th–19th-century wares |
| **Total** | **674** | **16393** | **24.3** | **66** | |

*Table 9.* Late 19th–20th-century ceramics from [104] by fabric type

*Discussion and recommendations*

The ceramic assemblage consists largely of small fragments of locally common fabrics and forms and is principally of significance in terms of dating the archaeological deposits. The relatively small assemblages of Romano-British to medieval material are largely residual and are principally of significance in terms of indicating the existence of occupation at these times in the vicinity and indicating that there may be features and deposits of these periods underlying the upper sequences which were excavated. The post-medieval and modern assemblages show no obvious signs of a distinctive 'cathedral' signature, such as unusual vessel forms or of being discernibly of high status. This is perhaps unsurprising given that the investigations took place in what might be conceptualised as part of the 'domestic' sphere of the cathedral. The Romano-British to medieval pottery could be subject to further analysis to provide more precise fabric identifications. The posset pot that may have been produced in Harlow is not particularly unusual but is sufficiently

interesting to warrant illustration. The early 20th-century group had the capacity to provide considerable insights into a particular household within the cathedral at this time. This warrants detailed analysis and some form of integrated publication, incorporating any relevant documentary evidence and the other material types such as glassware and animal bone.

**Clay tobacco pipe** (Craig Cessford)

The archaeological excavations produced a moderately sized assemblage of clay tobacco pipe; totalling 843 pieces weighing 2935g. This probably represents one of the largest, if not the largest, assemblages recovered archaeologically from Peterborough, as previously published groups are significantly smaller (*e.g.* Cessford 1998). The material comprised 100 bowls or bowl fragments, 34 heels/spurs, 20 mouthpieces and 689 stem fragments. The bowls were classified according to Oswald's simplified general typology (1975, 37–41), modified slightly based upon the author's unpublished research on clay tobacco pipes from Cambridgeshire (Table 10). Stem bore dating has not been undertaken, as the size and nature of the assemblage does not warrant this form of analysis. The pipes are predominantly of local/regional manufacture. The presence of clay tobacco pipe fragments in a context indicates a date of the late 16th to early 20th centuries (*c.* 1580–1910), although clay tobacco pipe fragments are generally rare in deposits prior to 1620 and after 1890.

| Type | Dates | MNI | Type | Dates | MNI |
|---|---|---|---|---|---|
| 3 | *c.* 1580–1610 | 1 | 12 | *c.* 1730–80 | 3 |
| 5 | *c.* 1640–60 | 29 | 17 | *c.* 1640–70 | 3 |
| 6 | *c.* 1660–80 | 5 | 18 | *c.* 1660–80 | 4 |
| 7 | *c.* 1660–80 | 1 | 19 | *c.* 1690–1710 | 2 |
| 9 | *c.* 1680–1710 | 2 | 24 | *c.* 1810–40 | 1 |
| 10 | *c.* 1700–40 | 1 | **Total** | | **52** |

*Table 10.* Clay tobacco pipes dated based upon bowl typology, examples dated based upon pipemakers' marks not included as this would distort results

Historically, the Soke of Peterborough fell within Northamptonshire and the local industry has been studied by several authors (Flood 1976; Gilbert 1974; Moore 1980), but has not been the subject of recent research. The earliest documented Peterborough pipemaker was John Neville, who died in 1689, and it appears that production continued until 1890, indicating a likely span of *c.* 1660/80–1890. Late 16th–mid 17th-century pipes were probably imported from elsewhere, in all likelihood London. In total 52 bowls could be assigned to a typological group (Table 10), the earliest dates to *c.* 1580–1610 and the latest to *c.* 1810–40. There is a pronounced mid-17th century peak and a general paucity of 18th–19th-century material (Table 11). This profile is slightly misleading, as there are a considerable number of 19th-century bowl fragments that cannot be assigned to a typological group, but which can be identified on stylistic grounds.

| Decade | Adjusted decadal bowl count | Decade | Adjusted decadal bowl count |
|---|---|---|---|
| 1580s | 0.33 | 1710s | 0.25 |
| 1590s | 0.33 | 1720s | 0.25 |
| 1600s | 0.33 | 1730s | 0.85 |
| 1610s | – | 1740s | 0.6 |
| 1620s | – | 1750s | 0.6 |
| 1630s | – | 1760s | 0.6 |
| 1640s | 15.5 | 1770s | 0.6 |
| 1650s | 15.5 | 1780s | – |
| 1660s | 6 | 1790s | – |
| 1670s | 5 | 1800s | – |
| 1680s | 0.67 | 1810s | 0.33 |
| 1690s | 1.67 | 1820s | 0.33 |
| 1700s | 1.92 | 1830s | 0.33 |

*Table 11.* Quantities of clay tobacco pipes deposited per decade based upon bowl typology

*Pipemakers' marks*

In total there are 14 pipemakers' marks present, this includes four decorated stems associated with William Sefton of Nottingham and Samuel Wilkinson of Cambridge (see below) and one completely indecipherable example. The earliest example is an impressed sunburst or wheel pattern on the base of the heel of a type 5 (*c.* 1640–60). There is no evidence for pipes being manufactured in Peterborough at this time and this is almost certainly a London product. The other marks consist largely of initials on the side of the heel/spur, some of these are quite poorly executed leading to some ambiguity. Only two occur in conjunction with bowls that can be typologically dated, both are type 12 (*c.* 1730–80). These initials are IW, or less probably TW, and TD. There is no obvious pipemaker that can be associated with the first pipe, whilst the initials TD were used in some form of 'branding' by a wide range of pipemakers regardless of their own initials (Cessford 2014).

The other initials that are not associated with typologically dated bowls are: (1) AC (2) CL or GL (3) GD with rose-like symbols (4) DL, TL, DI, TI (5) JL or TL. None of these initials can be linked to Peterborough pipemakers, given the lack of dating evidence and the number of possible sources with good links to Peterborough, particularly in the mid/late 19th century, any attempt to suggest possible makers would be inadvisable. The final mark is O'BRIEN 61 within a circle on the rear of a bowl fragment. Although there was a Dublin based firm of this name it was also used by several English manufacturers in the 19th century, probably inspired by its Irish connotations. It is likely that this pipe is an English product, possibly from Manchester.

*Decorated pipes*

In total there are 17 decorated pipes from the assemblage. The earliest decorated pieces are four stems with elaborate roller-stamp impressed decoration. This style of decoration was most

common in Nottingham during the late 17th to late 18th century, where makers frequently elaborately decorated the stems of their pipes, incorporating the makers name and sometimes the town they worked in (Alvey 1972). This practice then spread to a number of other towns (Walker & Wells 1979, 5–12). The only fragment with a readable name is WM SEFTON, this can be identified as William Sefton of Nottingham who died in 1729 and was active by 1702, potentially working from the 1690s onwards (Alvey *et al* 1979, 232–33; Walker & Wells 1979, 5–7, 50). Sefton is also known for making a distinctive clay gravestone for his daughters (Hammond 1989). The example with the name is from [134.04] and instances with the same pattern were also found in [109] and [133.01]. The other stem from [125] has a different pattern, which is known to have been used by Samuel Wilkinson of Cambridge (active 1762, died 1787).

The most frequent form of decoration consists of 19th-century bowls with fluting on the sides of the bowl and in some instances stylised oak leaves on the front and rear of the bowl. There are 11 instances of this style, which is usually the most common form of 19th-century decoration in assemblages from Cambridgeshire. There is also one bowl with cross keys on the sides of the sides of a 19th-century bowl, although particularly appropriate in Peterborough this is a common form of decoration of the period. Finally, one fragment is too small for the decoration to be identifiable.

*Context assemblages of note*

Excluding topsoil and other mixed deposits, there were four assemblages of note. Three of these form a stratigraphic sequence:

[133.03]: earliest context, 5 pipes all type 5 (*c.* 1640–60).
[133.02]]: middle context, 23 pipes all mid-17th century and dominated by 19 pipes of type 5 (*c.* (1640–60).
[133.01]: latest context, 12 pipes, rather mixed of *c*. 1640–1710, one decorated stem probably manufactured by William Sefton.

The other group is:

[134.04]: 11 pipes, a somewhat mixed mid-17th–mid 18th-century group including a decorated stem definitely associated with William Sefton.

*Discussion and recommendations*

The assemblage has been fully studied and requires no further analysis. The main significance of the assemblage is to the dating of the archaeological sequence and to contribute towards the still nascent understanding of clay tobacco pipe usage in Peterborough. There is little if anything in the assemblage to indicate that it is of particular high status despite deriving from the cathedral grounds. The most distinctive elements are the three stems linked to William Sefton, the fragment with the name present could be illustrated and their presence should be noted in any publication.

## **Glass** (Vicki Herring)

Collected from four main features or phases of activity within the site, 615 individual glass objects were identified from an assemblage of over 900 fragments. The assemblage has

been recorded as individual vessels or objects, and is first broken down by feature and then by type. The main object types include: 'Flat' (in this case window glass only), 'Vessel', and 'Working' (glass-working elements). These categories are broken down further depending on their type and date. Vessels have been identified in accordance with the standard typologies (Allen 1998; Price and Cottam 1998; Lindsey 2016; Evison 2008; Tyson 2000; Wilmott 2002; Van den Bossche 2001; Hedges 2002).

*Modern deposits*

A total of 200 objects are represented in the modern deposits. The material is very mixed and fragmented and includes glass from a wide date range. A single block of raw glass is a possible remnant of glass-working on the site during the Roman period, while 10 fragments of painted window glass, in a very poor state of preservation, are medieval in date. These contexts are dominated by vessel glass, of which there are 183 individuals represented. The vessel glass is characterised by typical household receptacles, primarily for food and drink related products, and spans the 17th–20th centuries. These contexts are comprised of a mixed build-up of rubbish from all over the cathedral site, dug up and re-dumped over time.

| Number | Object | Type | Detail | Date |
|---|---|---|---|---|
| 10 | Flat | Window | painted | Medieval |
| 1 | | | | 19th century |
| 2 | | | Frosted | L.19th–E.20th century |
| 3 | | Unknown | | Unknown |
| 3 | Vessel | Utility bottle | Free-blown | 17th-18th century |
| 21 | | | | 18th-19th century |
| 16 | | | | 19th century |
| 53 | | | Free-blown and Moulded | L.19th-E.20th century |
| 43 | | | Very fragmented | Unknown |
| 3 | | Soda bottle | Moulded | L.19th-E.20th century |
| 2 | | Wine bottle | 1 moulded, 1 free-blown | Late 19th century |
| 1 | | Drinking glass | Pedestal beaker/goblet | L.16th-17th century |
| 2 | | | Wine | Late 19th century |
| 1 | | | Tumbler | |
| 1 | | | Unknown | |
| 1 | | Decanter or flask | Free-blown | 18th-19th century |
| 4 | | Food bottle/jar | Moulded | Late 19th century |
| 1 | | Sauce bottle | Moulded | L.19th-E.20th century |
| 5 | | Pharmaceutical bottle | Free-blown | 18th-19th century |
| 16 | | | Moulded | L.19th-E.20th century |
| 2 | | Pharmaceutical phial | Free-blown | 17th-18th century |
| 1 | | Ink | 2-piece mould, rectangular | Late 19th century |
| 7 | | Unknown | | Unknown |
| 1 | Working | Raw block | Black glass | Roman |
| **200** | | | | |

*Table 12.* Summary of glass from Modern deposits

*Early 20th-century clearance deposit [104]*

The discrete early 20th-century dump contained 81 vessels, of which 34 were complete or near complete (see Figure 13). All of the vessels were typical late 19th/early 20th-century household receptacles, representing middle class domestic wares for food, drink and medicines (see Hedges 2002; Lindsey 2016). No other glass types were present in the assemblage which would appear to represent a single clearance event, probably of a kitchen area from a single household.

| Number | Object | Type | Detail | Date |
|---|---|---|---|---|
| 8 | Vessel | Utility bottle | Moulded | L.19th-E.20th century |
| 2 | | Beer/ale bottle | | |
| 3 | | Wine bottle | | |
| 1 | | Spirit bottle | | Early 20th century |
| 1 | | Soda bottle | | L.19th-E.20th century |
| 7 | | Drinking glass | Pressed: Sherry/wine | 1920s-1930s |
| 5 | | | Pressed: Tumbler | |
| 1 | | | Pressed: ?champagne | |
| 1 | | | Pressed: Decorative mug | |
| 6 | | Food bottle | Moulded | L.19th-E.20th century |
| 2 | | Sauce bottle | | |
| 18 | | Food jar | | |
| 11 | | Pharmaceutical bottle | | |
| 6 | | Pharmaceutical jar | | Early 20th century |
| 6 | | Household | Pressed: ?bowl/dishes | Early 20th century |
| 1 | | | Cranberry jug | 19th century |
| 1 | | | Pressed: Serving dish | L.19th-E.20th century |
| 1 | | Ink | Moulded: Square | |
| **81** | | | | |

*Table 13.* Summary of glass from early 20th-century clearance deposit [104]

*Early 19th-century pond Infill*

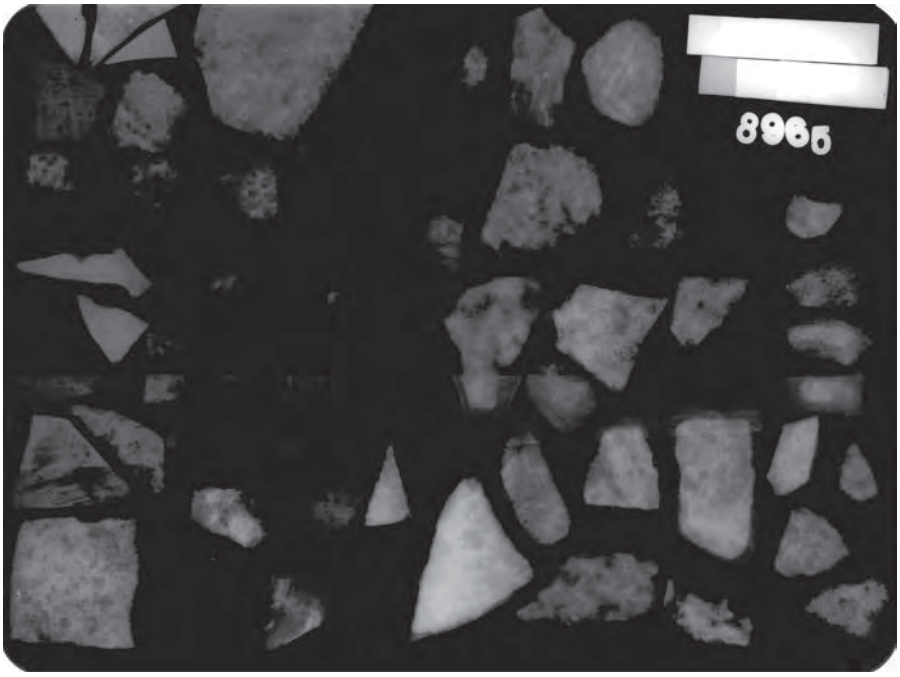
219 glass objects in total were collected from the early 19th-century infilling of the pond. The assemblage is very mixed and fragmented, but includes material from the medieval period through to the 19th century. Even the Roman period is represented in this group in a single piece of furnace waste (Jones 2011a). The context contains a relatively large amount of window glass (64 quarry fragments), dominated by 54 fragments of medieval, painted glass quarries. Based upon their high degree of patination, these are most likely remnants of the destruction and removal of the painted glass cathedral windows during the Civil War. Again, the feature is dominated by vessel glass, with 154 vessels spanning the 16th–19th centuries. Most are too fragmented to identify precise forms and dates, though nearly all are free-blown, and therefore pre-date the mid-19th century (Dungworth 2011). Two moulded fragments appear to post-date the infilling and are probably intrusive. The date range and fragmentary nature of the assemblage suggests that some of the glass was dumped from contemporary use, though much was taken from around the site and re-dumped to infill the pond. This would explain the presence and the poor condition of the earlier material.

| Number | Object | Type | Detail | Date |
|---|---|---|---|---|
| 54 | Flat | Window | Painted. Heavily degraded | Medieval |
| 5 | | | Thick patina | 17th-18th century |
| 4 | | | Pale green. Thin Patina | 18th-19th century |
| 1 | | | Colourless | L.19th-E.20th century |
| 27 | Vessel | Utility bottle | Free-blown. Unknown form | 16th-18th century |
| 67 | | | Free-blown. Squat Cylindrical | 18th-19th century |
| 1 | | | Free-blown. Onion | 1700-1750 |
| 2 | | | Free blown. Squat Cylindrical | 1750-1810 |
| 2 | | | Free-blown. Cylindrical | 19th century |
| 14 | | | Free-blown. Unknown form | Unknown |
| 2 | | | Mould-blown. Rectangular | 18th-19th century |
| 2 | | | Moulded. Unknown form | L.19th-E.20th century |
| 1 | | Drinking glass | Free-blown. Potash. Goblet | 16th-17th century |
| 1 | | | Heavy wine or Rummer. Soda glass | 18th-19th century |
| 5 | | | Wine. Soda glass | |
| 1 | | | Tumbler. Soda glass | |
| 2 | | | Unknown form. Soda glass | |
| 2 | | | Moulded. Wine | 19th century |
| 2 | | | Moulded. Tumbler | |
| 2 | | Food jar | Free-blown. Cylindrical | 18th-19th century |
| 2 | | Pharmaceutical bottle | Free-blown. Cylindrical | |
| 4 | | | Moulded. Rectangular | 19th century |
| 1 | | Pharmaceutical jar | Mould blown. Cylindrical | 18th-19th century |
| 3 | | Pharmaceutical Phial | Free-blown. Cylindrical | 18th-19th century |
| 11 | | Unknown | | Unknown |
| 1 | Working | Waste | Furnace waste | Possibly Roman |
| **219** | | | | |

*Table 14.* Summary of glass from early 19th-century pond infill deposits

*Post-Medieval layers (16th-18th century)*

The Post-Medieval layers produced a total of 114 glass objects, though the assemblage as a whole is very fragmented making precise forms and dates difficult to identify. There is a very obvious presence of medieval window glass (43 quarry fragments; see Figure 15), one fragment of which is still in a section of lead came. The came has flat to slightly rounded flange and is not milled. Five pieces of very pale to colourless quarries are of 18th-19th-century date and could be intrusive. The vessel glass, represented by 64 individuals, is less dominant in these layers compared to later features. It is characterised by free-blown domestic vessels for food, drink and medicines typical of the type of containers that the Parliamentarian soldiers would have used during their occupation of the precinct in 1643 (Wilmott 2002). A surprising presence in these layers, which mostly seem to represent the destruction and waste generated during the Civil War, are a crucible fragment and waste piece representing glass-working on the site; these probably date to the Roman period (see Price and Cool 1991).



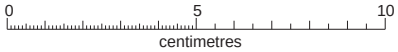



Figure 15. X-ray and photographs of selected fragments of painted glass; the degree of patination renders visibility poor

| Number | Object | Type | Detail | Date |
|---|---|---|---|---|
| 26 | Flat | Window | Painted. Heavily degraded | Medieval |
| 1 | | | In lead came. Non-milled | |
| 16 | | | Potash. Heavily patinated | Medieval- Early Post-medieval |
| 5 | | | Pale or colourless | 18th-19th century. Intrusive? |
| 1 | Vessel | Utility bottle | Free-blow. Shaft and globe/Onion | 1680-1725 |
| 4 | | | Free-blown. Onion | Late 17th century |
| 17 | | | Free-blown. Onion | 17th-18th century |
| 9 | | | Free-blown. Squat cylindrical | 1760-1800 |
| 1 | | | Colourless. Moulded. Cylindrical | L.19th-E.20th century. Intrusive |
| 2 | | Drinking glass | Wine. Soda glass | 17th century |
| 1 | | | Goblet/beaker. Thick patina | |
| 5 | | | Wine. Soda | 17th-18th century |
| 1 | | | Wine. Soda | 18th century |
| 1 | | Household | Bowl/dish. Enamelled | 16th century |
| 2 | | | Bowl/dish | 17th-18th century |
| 1 | | | Tazza | |
| 1 | | Pharmaceutical bottle | Free-blown | |
| 1 | | | Mould-blown. Rectangular, faceted | L.18th century |
| 1 | | Pharmaceutical phial | Free-blown. Cylindrical | 16th-17th century |
| 1 | | | Free-blown. Globular phial | L.17th century |
| 4 | | | Free-blown. Cylindrical | 17th-18th century |
| 11 | | Unknown | | Unknown (16th-18th century) |
| 1 | Working | Clinker | Coal-fired | Roman |
| 1 | | Crucible | | |
| **114** | | | | |

*Table 15.* Summary of glass from Post-Medieval layers

*Conclusions*

With the exception of the single early 20th-century clearance event, the collection as a whole is very fragmented and mixed. Precise forms and dates have, in many cases, proved difficult to identify due to this and the poor preservation of much of the early material such as the medieval painted window glass and 16th-17th-century vessel fragments. An attempt was made to X-ray some of the painted window glass to see if the decoration could be more easily identified; however, this proved unsuccessful, most likely due to the heavy degradation and the thickness of the patina (Figure 15). It is possible that further chemical analysis could be carried out, though there is relatively little extra information that could be provided in this case (*cf.* Dungworth 2011).

There is evidence of Roman glass-working on the site dispersed throughout the contexts in the form of a crucible fragment and furnace waste (Price and Cool 1991). The presence of 1 or 2 pieces in the Post-Medieval layers, the pond infill and the modern layers suggests that this material has been dug up and re-deposited many times. It is possible, from the material recovered from the Post-Medieval layers, to see the destruction and use by Parliamentarian soldiers during

the Civil War. The glass in these layers is dominated by discarded medieval window glass, as well as onion bottles, drinking glasses and serving dishes. The glass assemblages in all of the 19th to 20th-century contexts represent typical household items, with nothing standing out as being exceptional or unusual. The mixed and fragmented nature of the glass material from the site suggests a history of clearances and re-landscaping of the precinct.

A full catalogue of the material has been prepared and is held in the site archive. Selected elements of the assemblage warrant illustration if the site is published.

**Metalworking debris** (Richard Newman)

A total of 197 fragments of metalworking debris, weighing 4,814g, were recovered. A large portion of the assemblage – comprising 66 fragments (33.5%), weighing 1084g (22.5%) – was derived from the 17th-century reclamation deposits in Trenches 5 and 6. The remainder was recovered from 19th-century and later garden soil layers. In each instance, the material is consistent with waste produced during secondary iron smithing operations (see Bayley *et. al.* 2008). It primarily consists of slag -– including both fuel slag and vitrified slag deriving from a hearth lining, tuyere or crucible – although a few of the larger fragments may represent partial hearth or proto-hearth bases. The abraded nature of the fragments, and their relatively low quantity, indicates that they were probably redeposited in secondary or tertiary contexts, at some distance from the locus of their original production. Consequently, their date cannot be firmly established.

**Ceramic building materials** (Richard Newman and Andrew Hall)

A total of 771 ceramic building material fragments, weighing 51.8kg, were recovered. The assemblage includes 32 glazed tile fragments weighing 7,238g (10 of which, weighing 578g, were roof tiles, the remainder being floor tiles), 50 unglazed tile fragments weighing 10,646g, 157 brick/tile fragments weighing 2,560g and 532 brick fragments weighing 31,346g. In date, the material spans the Roman, medieval and post-medieval periods. Around a quarter of the assemblage – 201 pieces (26.1%), weighing 12,874g (24.8%) – were recovered from 17th-century contexts in Trenches 5 and 6. The most significant components of the CBM assemblage comprise:

Overall, 21 Roman CBM fragments, weighing 1,136g, were recovered, predominately from residual contexts. The majority of these pieces bore comb decoration (see Figure 5); they therefore most probably represent *tubulae* (box flue tiles) although some *tegulae* (flat lipped roof tiles) may also be present. One thicker fragment (36mm) possibly represents a *pilae* (used to raise the floor in a hypocaust system) or *lydion* (used in construction). No *imbrex* were identified. Overall, it is clear that these fragments were derived from a Roman building (or buildings) of some status. As such material is unlikely to have travelled far, this building is likely to have been situated in close proximity to the present cathedral.

<299> [126.02] (early 19th-century pond infill): Two well-worn medieval floor tile fragments (shown in Figure 7). The first is part of a square inlaid tile, into the dark red earthenware fabric of which a design has been impressed and then infilled with paler clay prior to it being coated in a lead-glaze. Its motif consists of a fleur-de-lis in a Gothic arched frame. The fragment measures 78mm by 55mm by 18mm thick and weighs 84g; traces of mortar on several of its broken sides indicate that it was reused in a secondary context prior to its disposal. The second fragment represents part of a hexagonal or diamond-shaped tile with a mottled yellow glaze. It has an incised or stamped design but no pale clay infill; the motif itself is too fragmentary to identify. The fragment measures 88mm by 71mm by 23mm thick and it weighs 176g. Both of these tiles are typical of the types that are found at ecclesiastical sites during the Middle Ages (Wight 1975; Eames 1980; Eames 1985).

<297> [126.01] (early 19th-century pond infill): A medieval encaustic tile fragment, weighing 18g (Figure 7). It measures 102mm by 90mm and 25mm thick. This piece is decorated with irregularly spaced strips of diagonally placed off-white clay (which have not been impressed into the surface of the hard, dark reddish purple fabric). The whole was then lead-glazed, resulting in stripped yellowish brown appearance.

<290> [109] and <309> [134.04] (19th-century garden soil layers): Two tin-glazed tile fragments, weighing 34g. The former represents a fragment of an English delftware tile. The hand-painted design depicts a pair of standing figures within a landscape. This is almost certainly a biblical scene, a common subject for both the English and Dutch manufacturers. The tile dates from the early to mid-18th century and was probably originally fixed within a fire place or surround. The latter represents a fragment of an English or possibly Dutch tile depicting a maritime or river scene, with sailboats. A proportion of the corner motif is present and this example appears to be of barred ox-head type. Dating to the 18th century, and again probably part of a decorative fire place surround.

**Plaster, mortar and daub** (Richard Newman)

A total of 109 plaster, mortar and daub fragments, weighing 1046g, were recovered. The assemblage is dominated by 93 fragments of white plaster, weighing 713g, which were incorporated into the 17th-century reclamation deposits in Trenches 5 and 6. This homogenous group, which appears most likely to have originally infilled timber stud walling, was probably derived from the demolition of a Late Medieval structure (or structures). In addition, fragments of Roman wall plaster and burnt clay daub, plus possible Late Saxon plaster, were also identified.

<364> [135.04] (Roman alluvial layer): A fragment of fine off-white lime plaster with small lime/chalk fleck inclusions. It has a smooth internal face, which has been painted or lime-washed (Figure 5). The fragment measures 90mm by 72mm by 20mm thick and weighs 144g. It would have originally have adorned the wall of a relatively high status Roman building.

<365> [135.04] (Roman alluvial layer): Ten fragments of burnt clay, weighing 171g. They are of dark reddish black fabric, with some bearing timber/wickerwork impressions, and are most likely to have originated from the destruction of a wattle-and-daub built structure.

<362> [135.01] (12th-14th-century layer): Five fragments of fine white lime plaster, weighing 18g. The pieces have a smooth internal face while the fabric contains occasional to rare chalk/lime fleck and pea grit inclusions. These fragments were found in association with an extensive rubble and mortar deposit that probably represents demolition debris that was subsequently utilised as hardcore. One possibility is that this material originated from the nearby Late Saxon burgh wall, which was demolished in the mid-12th century, or an associated building. Fine wall plaster would not have formed part of the burgh wall, indicating that some or all of the rubble originated from a different source.

**Architectural and monumental stone** (Jackie Hall)

Three stones were found during the course of the excavations, two in unstratified contexts (garden clearance) and one in a buried garden path. As such they have no meaning as an assemblage apart from their proximity to the cathedral (formerly, Benedictine Abbey) and thus their likely origin there. Only stone <376> is significant.

<376> (unstratified): This is a fine stiff-leaf capital, carved from Alwalton Marble (the local equivalent of the more widely known Purbeck Marble) for a shaft of diameter 97–100mm, and now in two jigsaw pieces (Figure 7). It had six projecting leaves, three at the top and three mid-level; only one of the upper leaves survives. In the cathedral and precincts, this combination of style and material only occurs in the west front *c.*1200–1220, and this must be the most likely origin for this piece. However, most of the *in-situ* capitals on the west front are not carved from Alwalton (though most of the shafts and abaci are) and all of them – with the single exception of the capital of the trumeau (the divider in the middle of the west door) – are attached to the front, as nook capitals or respond capitals. This example is carved all the way round, and a plausible origin for this piece is as part of the interior screen of a group of lancets in the west wall, as still visible for instance in the clerestory of St Hugh's choir at Lincoln Cathedral or the upper level of the Five Sisters window of York Minster. As with the majority of glazing at Peterborough, the west windows have been replaced by late medieval tracery. This capital is the biggest clue that the windows were Early Gothic lancets, rather than some of the earliest tracery in England, as at Binham and Lincoln.

<377> (unstratified): This is the upper part of a small crocketed pinnacle, with a drilled hole in the bottom for a metal dowel. The material (Ketton Stone) and style indicate a modern origin (19th- or 20th-century), probably from a memorial in the graveyard, although an origin in a garden ornament should not be ruled out.

<384> [123] (19th-century garden path): Fragment of a plain cushion capital, for a shaft of diameter 140–45mm. Probably first half 12th century, though could be earlier. Like all material from Peterborough of this date, it is carved from local Barnack stone. Given its find spot in a buried garden path, this piece could have been brought it, but an origin in one of the many abbey buildings still seems more likely.

**Stone artefacts** (Richard Newman)

A total of four worked stone artefacts, weighing 123g, were recovered. They comprise a worn whetstone (<372> [126.01], weighing 89g), a slate pencil (<378> [132.01], weighing

2g) and two marbles (<373> [132.02] and <379> [132.01], weighing 32g and 25g respectively). All four artefacts were recovered from the infilling of a large pond in the early 19th century. In addition, 328 split Collyweston stone tile fragments weighing 17,615g were also recovered. Of these, 171 fragments (52.1%) weighing 9,995g (56.7%) were derived from the 17th-century deposits in Trenches 5 and 6; the remainder were recovered from 19th-century and later deposits. The former group was most probably associated with the demolition of medieval structures elsewhere in the precincts during the Civil War.

<374> [133.03] (17th-century reclamation deposit): A complete split Collyweston stone tile fragment weighing 758g. It measures 212mm by 129mm by 18mm thick and has a single drilled nail hole. Traces of the mortar used to seal it to the row of tiles beneath were still present across the basal half. The recovery of a complete tile is unusual, as most would have been salvaged for reuse, with only the broken fragments being discarded. This example is unusually small, however, and may therefore have been rejected for reuse.

**Flint** (Emma Beadsmoore)

A single struck flint of probable Late Neolithic date was recovered from a residual context.

<371> [102] (20th-century topsoil): A fine retouched blade fragment, weighing 2g. It is very similar to pieces from known Late Neolithic contexts.

**Worked bone** (Richard Newman)

A single worked bone item was recovered. This consists of a mid-late 19th-century toothbrush from a contemporary garden deposit.

<209> [125] (19th-century garden soil): A machine-turned and polished bone toothbrush fragment (?whalebone). The remaining fragment measures 78mm+ long by 13mm wide and 5mm thick; it weighs 4g. Its long, narrow oval head had 51 holes drilled into its face, with five parallel slits to the obverse to facilitate the mounting of horsehair bristles (which were absent).

**Leather** (Quita Mould)

A single leather shoe fragment was recovered from mid-17th-century context [133.03] in Trench 6 (Figure 16). This represents the toe and tread area irregularly cut away from a midsole from a shoe of welted construction. The midsole comes from a left foot shoe of adult size and is heavily worn. It appears to be the result of casual rubbish disposal. The welted midsole dates to the post-medieval period but it lacks any features that would allow it to be more closely dated. The welted construction indicates that it dates to the post-medieval period. Its oval toe shape might suggest a date in the sixteenth or the first decade of the 17th century (Swann 1984, 7). While it is unlikely to date to the rest of the 17th century, it could be of 18th-century date, after *c.* 1740s (Swann 1984, 26) or later. It is composed of worn cattle hide, measuring 3.68mm thick by 165mm long. The tread width is 100mm. A full catalogue description can be found in the site archive.

Figure 16. A late 16th/early 17th-century leather shoe fragment from reclamation layer [133.03]. The shoe was old and well-worn when it was deposited, probably in the mid-17th century

*Conservation requirements*

The wet leather cannot be stored indefinitely. Without conservation the leather will deteriorate and is potentially hazardous to health being liable to fungal and bacterial infection. Wet leather presents difficulties with short-term storage, transportation, study and illustration (Edwards and Mould 1995, 6; Karsten *et al*. 2012). The eventual repository of the leather should be consulted regarding their discard and retention policy for wet organic material. It is usual for this to follow that recommended in the SMA Guidelines and unlikely that they will accept wet leather. If the leather is to be retained it is recommended that the wet leather is conserved. English Heritage Guidelines (Karsten *et al.* 2012) provides advice on the conservation options available. In this instance, it may be considered appropriate for the leather to be allowed to air dry under controlled conditions.

*Work required*

A basic record (as defined in RFG & FRG Guidelines 1993) has been completed, within the constraints of the condition of the material. A working drawing of the item has also been made and a photographic record compiled. No further work is required.

## ECONOMIC AND ENVIRONMENTAL REMAINS

In addition to the above artefacts, relatively small – but nevertheless significant – human bone, animal bone, shell and environmental assemblages were also recovered. In particular, the macrobotanical material – including both macroscopic plant remains and pollen – from Trench 1 is of some interest, representing the first scientific evidence of the Roman environment at the site.

### **Human remains** (Benjamin Neil)

A small assemblage of human remains, totalling 12 fragments weighing 111g, was recovered. Exclusively disarticulated in nature, the condition of the material was fragmentary, supporting evidence of repeated disturbance and reinterment; a typical pattern in intensively used cemeteries (Mays 2017). All of the fragments appear to have been imported from elsewhere within the precincts as part of made-ground/reclamation deposits.

| Context | Trench | Count | Date of deposition | Description | |
|---|---|---|---|---|---|
| | | | | ***Age*** | ***Element*** |
| 135.01 | 1 | 1 | 12th-14th century | Adult | A complete, left third metatarsal that has been taphonomically altered on the dorsal surface to include longitudinal cracking and exfoliation of the outer cortex. |
| 129.03 | 1 | 5 | 14th-15th century | Adult | Two right parietal fragments, a right radius (zone 5), a proximal metatarsal fragment and a thoracic (?) lamina fragment. The bone has been taphonomically altered to include animal gnawing over the parietal fragments and rare dark grey mottling. Radius radiocarbon dated to cal. AD 891-969 (1σ) |
| 112.03 | 5 | 1 | Mid-17th century | Adult | A proximal fragment of a right 5th metatarsal. The bone has been taphonomically altered to include mid grey mottling over the medial surface with slight light grey concretions superiorly |
| 133.03 | 6 | 1 | Mid-17th century | Adult | A left (?) proximal humerus fragment (zone 11). The bone has been taphonomically altered to include concretions over fragmentation points, and abrasions |
| 133.04 | 6 | 1 | Mid-17th century | Adult | A right mid shaft radius (zones 6, 7 & 8). Has a mild sheen over the bone surface and a dark patina |
| 130.13 | 1 | 1 | Early 19th century | Adult | A single, near complete cervical vertebrae with a broken left anterior tubercle with indications of a double transverse foramen and an upper thoracic vertebral body (zone 1). The cervical vertebrae was abraded around the anterior margin of the body to expose the trabecular bone. |
| 107 | 1 | 1 | 19th century | Young adult | A fragment of frontal bone to include the coronal suture. |
| 123 | 1 | 1 | 19th century | Middle adult | A left mandible fragment (zone 1, partial 3 & 6) to include the mental foramen, body and oblique line. $LPM_2$ $LM_1$ $LM_2$ and $LM_3$ are in full dental eruption: $LM_1$ and $LM_2$ are significantly worn. Has a mild sheen over the body and oblique line. |

*Table 16*. Disarticulated human remains by context

**Faunal remains** (Vida Rajkovača)

In total, 4,017 animal bone fragments weighing 37.96kg were recovered. Of this figure, some 1170 assessable fragments were recorded during the analysis, with 479 being assigned to family or species level. With the exception of a later dump, dated to the early 20th century ([104]), and an early wet marsh deposit (Roman/Saxon), the majority of bone came from post-medieval layers. Unlike the earlier material, bone from later contexts was abundant and heavily processed, with the majority displaying cut, chop and saw marks (Tables 17 and 18). The preservation of bone varied, though it was in general good.

*Identification, quantification and ageing*

The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Identification of the assemblage was undertaken with the aid of Schmid (1972), and reference material from the Cambridge Archaeological Unit. Most, but not all, caprine bones are difficult to identify to species however, it was possible to identify a selective set of elements as sheep or goat from the assemblage, using the criteria of Boessneck (1969) and Halstead (Halstead et al. 2002). Age at death was estimated for the main species using epiphyseal fusion (Silver 1969) and mandibular tooth wear (Grant 1982; Payne 1973). Where possible, the measurements have been taken (Von den Driesch 1976). Sexing was only undertaken for pig canines, based on the bases of their size, shape and root morphology (Schmid 1972, 80). Withers height calculations follow the conversion factors published by Von den Driesch and Boessneck 1974. Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering were also recorded when evident. The early deposit, with indications of Roman to Saxon date, contained 17 specimens. Of this figure, only three fragments were identified as cattle and pig (Table 17). Contexts dated to the medieval period contained similar quantity of animal bone, with two cattle specimens. Late medieval and post-medieval material was also sparse and characterised by domestic species.

| **Taxon** | **NISP** | | | | | **Total NISP** |
|---|---|---|---|---|---|---|
| | *Roman/ Saxon* | *Medieval* | *12th century* | *Late Medieval* | *Medieval/ Post-medieval* | |
| Cow | 2 | 2 | 1 | . | . | 5 |
| Sheep/ goat | . | . | 1 | 1 | . | 2 |
| Pig | 1 | . | 1 | 5 | . | 7 |
| Horse | . | . | 2 | . | . | 2 |
| Dog | . | . | . | . | . | |
| Cat | . | . | . | 1 | . | 1 |
| **Sub-total to species** | **3** | **2** | **5** | **7** | **.** | **17** |
| Cattle-sized | 12 | 6 | 4 | 2 | 1 | 25 |
| Sheep-sized | 2 | 5 | 4 | 4 | . | 15 |
| Mammal n.f.i. | . | 4 | . | . | . | 4 |
| Bird n.f.i. | . | 1 | . | . | . | 1 |
| **Total** | **17** | **18** | **13** | **13** | **1** | **62** |

*Table 17*. Number of Identified Specimens for all species from earlier contexts; the abbreviation n.f.i. denotes that the specimen could not be further identified.

The 16th century reclamation layer also contained a small quantity of animal bone, with ovicapra, cattle and a single corvid specimen amongst identified species. The first significant deposit came from layers dated to the late 16th and 17th century, amounting to just under half of the assemblage (by count). Of a relatively broad range of species (Table 18), ovicapra were the prevalent species, followed by cattle and pig. Horse, dog and cat complete the domestic range of species. Poultry, rabbit and wild bird species were also consumed, with fish being only occasionally eaten. Slightly later material (17th-18th century) reflected a very similar range of species, though quantities were significantly smaller.

The single largest deposit from the site came from context [104], dated to the 1920s. With a total weight of 13412g, this deposit contained more animal bone (by weight) than all other contexts collectively. Bone recovered from this dump showed better preservation, though butchery and heavy processing affected the sub-set to a degree. The range of species was restricted to the most common livestock species such as sheep/ goat, cattle and pig, as well as rabbit and poultry. Three cat and a single mallard specimens were also identified.

| **Taxon** | **NISP** | | | | | **Total NISP** |
|---|---|---|---|---|---|---|
| | *16th century* | *16-17th century* | *17th century* | *17th-18th century* | *Early 20th century* | |
| Cow | 1 | 21 | 19 | 7 | 68 | 116 |
| Sheep/ goat | 2 | 33 | 54 | 10 | 89 | 188 |
| Sheep | . | 1 | 1 | 1 | 1 | 4 |
| Pig | . | 10 | 10 | 1 | 6 | 27 |
| Horse | . | 1 | 4 | 2 | . | 7 |
| Dog | . | 2 | . | . | . | 2 |
| Cat | . | 4 | . | . | 3 | 7 |
| Red deer | . | 1 | . | . | . | 1 |
| Roe deer | . | . | 1 | 1 | . | 2 |
| Rabbit | . | 6 | 2 | 1 | 15 | 24 |
| Chicken | . | 22 | 3 | . | 20 | 45 |
| *Galliformes* | . | 3 | . | . | 15 | 18 |
| Goose | . | . | 1 | . | . | 1 |
| Mallard | . | 8 | 1 | 1 | 1 | 11 |
| Teal | . | 2 | . | . | . | 2 |
| *Corvid* | 1 | 1 | . | . | . | 2 |
| *Wader* | . | 2 | . | . | . | 2 |
| ?Wood pigeon | . | 1 | . | . | . | 1 |
| Pike | . | 1 | . | . | . | 1 |
| Frog/ toad | . | . | 1 | . | . | 1 |
| **Sub-total to species** | **4** | **119** | **97** | **24** | **218** | **462** |
| Cattle-sized | 3 | 44 | 50 | 8 | 64 | 169 |
| Sheep-sized | 23 | 48 | 79 | 16 | 178 | 344 |
| Mammal n.f.i. | . | 24 | 5 | . | 13 | 42 |
| Bird n.f.i. | 2 | 28 | 20 | 1 | 31 | 82 |
| Fish n.f.i. | . | 4 | 3 | . | 2 | 9 |
| **Total** | **32** | **267** | **254** | **49** | **506** | **1108** |

*Table 18*. Number of Identified Specimens for all species from later contexts; the abbreviation n.f.i. denotes that the specimen could not be further identified.

Pre-16th-century material was sparse and poorly preserved, without a single specimen available for ageing or measuring. Animal bone recovered from reclamation layers dated to the 16th-18th century was abundant and well preserved. Heavy processing and fragmentation, however, significantly affected these sub-sets. Only one pig mandible was available to assess tooth wear, giving the age at death of 2 to 7 months. A small number of epiphyses were also recorded, though insufficient for building kill-off profiles. Beyond stating the range of species, it is difficult to discuss the assemblage any further. Butchery actions were important as something that clearly differentiated two major phases. Bone from post-medieval layers was mainly chopped and split; whilst that recorded from the early 20th-century deposit was characterised by sawing. Almost a third of the bone from this deposit was recorded as butchered (163 specimens), with 96% of butchered bone showing signs of sawing. In some instances, saw was used as a default tool, even when it was not the most appropriate tool for the task. It is also possible that butchers were not equipped with a broad range of tools. All characteristics point to a domestic assemblage, probably from a single household, based on the uniformity of butchery actions. Though skeletal element count showed all parts of carcass were represented, joints of high meat value were somewhat more prevalent.

**Macroscopic plant remains and wood charcoal** (Ellen Simmons)

Five general biological analysis (GBA) samples were taken from a series of waterlogged deposits. The sampled contexts were dated to the Roman, Saxon, 16th-17th-century and probable post-medieval periods. The samples were processed for the recovery of macroscopic plant remains and wood charcoal and assessed in order to determine the concentration, diversity, state of preservation and suitability for use in radiocarbon dating, of any palaeoenvironmental material present. A further aim of this assessment was to evaluate the potential of any palaeoenvironmental material present to provide evidence for the function of the contexts, the economy of the site or for the nature of the local environment.

*Methodology*

One litre sub-samples were processed by wash over for the recovery of plant remains preserved by anoxic waterlogging, broadly following the techniques outlined in Kenward *et al* (1980). The samples were disaggregated in water, before being processed by gently washing material through a stack of sieves of mesh sizes 1mm, 500µm and 250µm. Material from each size sieve fraction was stored distilled water in airtight glass jars and kept refrigerated, in accordance with English Heritage guidelines for the curation of waterlogged macroscopic and invertebrate remains (Robinson, 2008). Ethanol was not added at this stage in order to avoid contamination of material potentially required for radiocarbon dating, but will be added should the material be put into storage. The samples were assessed in accordance with English Heritage guidelines for environmental archaeology assessments (Jones 2011). A preliminary assessment of the samples was made by scanning using a stereo-binocular microscope (x10 - x65) and recording the abundance of the main classes of material present. Palaeoenvironmental material was quantified using a scale of abundance (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items). Identification of plant material was carried out using modern reference material in the Department of Archaeology, University of Sheffield and various reference works (e.g. Cappers *et al* 2006). Cereal identifications and nomenclature follow Jacomet (2006).

Other plant nomenclature follows Stace (2010). The composition of the samples is recorded below in Table 19. The seed, in the broadest sense, of the plant is always referred to in the table unless stated otherwise. The abbreviation *cf.* means 'compares with' and denotes that a specimen most closely resembles that particular taxa more than any other.

*Table 19.* GBA sample assessment (key - = < 10, + = 11 – 50, ++ = 51 – 100, +++ = 101 – 200, ++++ = 201 – 500, +++++ = > 500 items, c = charred)

| **Context number** | | **135.05** | **135.06** | **135.07** | **133.04** | **139** |
|---|---|---|---|---|---|---|
| **Sample number** | | **003** | **004** | **005** | **006** | **007** |
| **Feature type** | | **Water logged deposit** | **Water logged deposit** | **Water logged deposit** | **Water logged deposit** | **Slot dug into fishpond** |
| **Archaeological period** | | **Roman / Saxon** | **Roman** | **Roman** | **16th -17th century** | **Post-Medieval?** |
| **Total volume of soil processed (litres)** | | **1** | **1** | **1** | **1** | **1** |
| **Cereals and other economic plants** | | | | | | |
| *Triticum nudum* grain | free threshing wheat | 1 (c) | | | | |
| *Triticum aestivum* s.l. rachis node | bread wheat | | 1 (c) | | | |
| *Triticum* indet. grain | indeterminate wheat | | | | | 1 (c) |
| **Wild / weed plant seeds** | | | | | | |
| *Ranunculus flammula* L. | lesser spearwort | +++ | | + | | - |
| *Ranunculus* subgen. *Batrachium* agg.(DC.) A.Gray. | water crowfoot | ++ | ++ | ++++ | | |
| *Ranunculus bulbosus/acris/repe ns* | bulbous/meado w/creeping buttercup | + | | | | |
| *Rubus fruticosus* L. agg. | bramble | | - | | | |
| *Potentilla anserina* L. | silverweed | - | | | | |
| *Urtica dioica* L. | common nettle | +++++ | +++ | +++ | | ++ |
| *Betula* sp. | birch | - | - | | | |
| *Chenopodium* sp. | goosefoot | - | + | + | | |
| *Atriplex prostrata / patula* | spear- leaved / common orache | - | | | | |
| *Stellaria media* L. | chickweed | + | | | | |
| *Persicaria lapathifolia / maculosa* | pale persicaria / redshank | ++ | | - | | |
| *Fallopia convolvulus* (L.) Á Löve | black bindweed | - | | | | |
| *Rumex palustris* Sm. | marsh dock | - | | | | |
| *Rumex crispus/ conglomeratus / obtusifolius* | curled / clustered / broad-leaved dock | ++ | | - | - | |

| Context number | | 135.05 | 135.06 | 135.07 | 133.04 | 139 |
|---|---|---|---|---|---|---|
| **Sample number** | | **003** | **004** | **005** | **006** | **007** |
| **Feature type** | | **Water logged deposit** | **Water logged deposit** | **Water logged deposit** | **Water logged deposit** | **Slot dug into fishpond** |
| **Archaeological period** | | **Roman / Saxon** | **Roman** | **Roman** | **16th -17th century** | **Post-Medieval?** |
| **Total volume of soil processed (litres)** | | **1** | **1** | **1** | **1** | **1** |
| *Solanum nigrum* L. | black nightshade | - | | | | |
| Lamiaceae | dead nettle family | | | + | | |
| Asteraceae | daisy family | - | | | | |
| *Cardus / Cirsium* spp. | thistles | - | | | | |
| *Sonchus asper* (L.) Hill | prickly sow-thistle | - | | - | | |
| *Anthemis cotula* L. | stinking mayweed | | | | - (c) | |
| *Sambucus nigra* L. | elder | ++ | - | - | | - |
| *Aethusa cynapium* L. | fools parsley | - | | - | | |
| *Apium repens* (Jacq.) Lag. | creeping marshwort | +++ | | - | | |
| *Conium maculatum* L. | hemlock | | | | | - |
| *Alisma plantago-aquatica* L. | water plantain | | - | + | | |
| *Glyceria* sp. | sweet grass | - | | | | |
| *Eleocharis* spp. | spike rushes | - | - | - | | |
| *Carex* spp. | sedges | ++ | | + | | |
| Unidentified seeds | | - | | | | |
| **Non-seed plant material** | | | | | | |
| Bryophyta | mosses | - | | - | | |
| Herbaceous plant roots/stems | | - | | - | | +++ |
| Round wood (> 2mm) | | | | - | | |
| Round wood (< 2mm) | | ++ | | - | | |
| Other wood fragments (> 2mm) | | ++++ | | - | | - |
| Other wood fragments (< 2mm) | | +++++ | | ++++ | | |
| Wood charcoal (> 2mm) | | ++ | - | | | + |
| Wood charcoal (< 2mm) | | +++ | ++++ | | | +++++ |
| Charcoal (DP = predominantly diffuse porous, RP = predominantly ring porous) | | DP | DP | | | DP |
| *Daphnia* spp. egg cases | water flea | +++ | + | | - | |
| Mollusca | snail shells | ++ | +++ | +++ | - | ++ |

| Context number | 135.05 | 135.06 | 135.07 | 133.04 | 139 |
|---|---|---|---|---|---|
| **Sample number** | **003** | **004** | **005** | **006** | **007** |
| **Feature type** | **Water logged deposit** | **Water logged deposit** | **Water logged deposit** | **Water logged deposit** | **Slot dug into fishpond** |
| **Archaeological period** | **Roman / Saxon** | **Roman** | **Roman** | **16th -17th century** | **Post-Medieval?** |
| **Total volume of soil processed (litres)** | **1** | **1** | **1** | **1** | **1** |
| Invertebrate macrofossils | +++++ | +++ | +++ | | |
| Fish scale | - | | | | |

*Preservation conditions*

Waterlogged plant macrofossils in sample 3 [135.05], sample 4 [135.06] and sample 5 [135.07] were well preserved. Waterlogged plant macrofossils present in sample 6 [133.04] and sample 7 [139] were relatively poorly preserved. Wood charcoal fragments were well preserved with no evidence of mineralisation or vitrification.

*Macroscopic plant remains*

*Sample 3 [135.05], sample 4 [135.06] and sample 5 [135.07]*: The rich assemblage of waterlogged plant macrofossils present in three samples recovered from an extensive sequence of waterlogged deposits in Trench 1 included seeds from a relatively diverse range of wild or weed plant taxa, wood fragments, mosses and herbaceous plant roots / stems. A small assemblage of charred crop material was present in sample 3 [135.05] and sample 4 [135.06] which consisted of a free threshing wheat grain (*Triticum nudum*) and a bread wheat (*Triticum aestivum* s.l.) rachis node. A significant proportion of the seeds of plant taxa noted as present are commonly associated with segetal or ruderal habitats, which include cultivated fields, but also nutrient rich disturbed soils such as would be present in the vicinity of human habitation. These taxa include goosefoots (*Chenopodium* spp.), oraches (*Atriplex* spp.), chickweed (*Stellaria media*) and black bindweed (*Fallopia convolvulus*). Common nettle (*Urtica dioica*), black nightshade (*Solanum nigrum*) and elder (*Sambucus nigra*) are particularly associated with nutrient enriched soils. The other main group of plant taxa represented by seeds are commonly associated with wet or damp soils such as lesser spearwort (*Ranunculus flammula*), water crowfoot (*Ranunculus* subgen. *Batrachium* agg.), marsh dock (*Rumex palustris*), creeping marshwort (*Apium repens*), sweet grasses (*Glyceria* spp.), spike rushes (*Eleocharis* spp) and sedges (*Carex* spp.). Aquatic plant taxa included water plantain (*Alisma plantago-aquatica*). The presence of water flea (*Daphnia* spp.) egg cases also indicates the presence of standing water. In addition to the presence of wood fragments, a small proportion of the seeds of plant taxa present were consistent with the presence of scrub or woodland including bramble (*Rubus fruticosus* agg.), birch (*Betula* sp.) and elder (*Sambucus nigra*).

*Sample 6 [133.04]*: A sample recovered from the upper horizon of a sequence of waterlogged deposits in Trench 6 was found to contain very little material preserved by anoxic waterlogging. A seed of curled/clustered/broad-leaved dock (*Rumex crispus/ conglomeratus / obtusifolius*) was present, along with a charred seed of stinking mayweed (*Anthemis cotula*), a water flea (*Daphnia* spp.) egg case and less than five snail shells (Mollusca).

*Sample 7 [139]*: A sample recovered from a slot dug into a medieval fishpond in Trench 2 was found to contain a low concentration of material preserved by anoxic waterlogging. Wood charcoal and herbaceous plant roots / stems were abundant, along with a small quantity of wood fragments. A charred indeterminate wheat grain (*Triticum* sp.) was present, along with waterlogged seeds of taxa commonly associated with nutrient rich soils such as common nettle (*Urtica dioica*), elder (*Sambucus nigra*) and hemlock (*Conium maculatum*). Damp or wet soils were indicated by the presence of lesser spearwort (*Ranunclulus flammula*).

*Wood charcoal*

A moderately rich assemblage of wood charcoal fragments were present in sample 3 [135.05] from the upper layer of the sequence of waterlogged deposits in Trench 1 as well as in sample 7 [139] from the slot dug into the Medieval fishpond in Trench 2. Preliminary examination of the wood charcoal fragments using low power microscopy indicated that primarily diffuse porous taxa were present.

*Mollusca*

A moderately rich assemblage of between thirty and fifty snail shells (Mollusca) was present in sample 3 [135.05], sample 4 [135.06] and sample 5 [135.07]. Between ten and thirty shells were present in sample 7 [139] and less than five shells were present in sample 6 [135.01].

*Invertebrate macrofossils*

A relatively rich assemblage of invertebrate macrofossils were present in sample 3 [135.05], sample 4 [135.06] and sample 5 [135.07] from the sequence of waterlogged deposits in Trench 1.

*Discussion*

The rich assemblage of waterlogged plant macrofossils present in sample 3 [135.05], sample 4 [135.06] and sample 5 [135.07], indicates that the environment in the vicinity of the sequence of waterlogged deposits in Trench 1 during the Roman and Saxon periods, was primarily one of damp nutrient rich disturbed soils, with some standing water and scrub type vegetation. The charred free threshing wheat grain (*Triticum nudum*) and bread wheat rachis node (*Triticum aestivum*) present in sample 3 [135.05] and sample 4 [135.06] from Trench 1, are likely to represent domestic hearth waste from nearby occupation. Free threshing wheat grain and bread wheat rachis nodes were present in Roman period contexts at Maxey near Peterborough (Green 1985), although free threshing wheat is more typical of the Anglo- Saxon period when it replaces spelt wheat as the principle wheat crop.

Palynological evidence indicates that woodland clearance, which began during the Bronze Age, continued through the Roman period in Eastern England (Murphy 1997, 42). The predominance of diffuse porous taxa in the wood charcoal assemblage indicates the likely presence of common British diffuse porous wood species such as alder / hazel / birch (*Alnus / Corylus / Betula*), poplar / willow (*Populus / Salix*), hawthorn group (Pomoideae) and cherry / blackthorn (*Prunus* spp.) which would be consistent with woodland margins, woodland clearings and scrub. Identification of the wood charcoal assemblage using high power microscopy would however be necessary in order to confirm the full range of taxa represented as well as potentially providing evidence for wood

diameter and whether the wood was dead / decaying or freshly cut / well-seasoned prior to burning.

*Recommendations*

It would be recommended that, depending on the availability of material, an additional four litres of sediment from sample 3 [135.05], sample 4 [135.06] and sample 5 [135.07] be processed for the recovery of plant macrofossils preserved by anoxic waterlogging and the samples be fully sorted and analysed. It is likely that additional wild or weed plant seed taxa would be recovered. It would also be possible to identify to species wild or weed seed taxa that could only be identified to genera during preliminary assessment. This analysis would be expected to provide additional detail regarding the nature of the environment in the vicinity of the site during the deposition of the sequence of waterlogged deposits in Trench 1. It would be recommended that a representative sample of wood charcoal from sample 3 [135.05] be identified using high power microscopy. Full analysis of the wood charcoal assemblage would be expected to provide evidence for the nature of the environment local to the site, as well as the utilisation of available woodland and scrub resources for use as fuel. It would be recommended that, depending on the availability of material, at least five litres of sediment from sample 3 [135.05], sample 4 [135.06] and sample 5 [135.07] be processed for the recovery of invertebrate macrofossils and assessed by an invertebrate macrofossil specialist. It would be recommended that the molluscan assemblage present in sample 3 [135.05], sample 4 [135.06] and sample 5 [135.07] be assessed by a molluscan specialist.

**Shell** (Richard Newman)

A total of 698 shells, weighing 7,094g, were recovered. With the exception of a single oyster from probable Roman layer [135.05], this material was exclusively derived from post-medieval and modern deposits.

As is typical on inland sites of this date the assemblage predominately consisted of oyster (668 shells, weighing 7,010g), with lesser quantities of mussel (24 shells, weighing 56g), whelk (2 shells, weighing 12g) and cockle (4 shells, weighing 16g) also being identified. Notably, the bulk of the material (433 shells, weighing 4,102g and representing 64.8% of the total by count and 57.8% by weight) was recovered from the 17th-century reclamation deposits encountered in Trenches 5 and 6. This group – which was derived from multiple contexts across five test pits – comprised 409 oyster shells weighing 4,040g, plus 23 mussel shells weighing 54g and one whelk, weighing 8g.

**Pollen** (Steve Boreham)

This short report presents the results of assessment pollen analyses of three sub-samples of sediment taken from a sequence of silty clay exposed in a community excavation at Peterborough Cathedral (PCGH16), Cambridgeshire. The 50cm monolith tin (Sample <8>) was taken from a deep sondage to the north of a large in-filled pond, and comprises waterlogged deposits of probable Roman/Saxon age. The grey silt and silty clay sediments in the monolith tin appeared to have a moderate to high preservation potential, with little sign

of oxidation. The base of the monolith appeared to capture context [135.05]. A boundary suggested in the section drawing at *c*. 20 cm into context [135.04] was not evident in the monolith tin, but there was a transition into sandy silt with gravel at 35 cm. Pollen sub-samples were taken from the basal silty context [135.05] at 5 cm, from the middle silty context [135.04] at 25 cm, and from the upper sandy silt at 45 cm.

The three sub-samples were prepared using the standard hydrofluoric acid technique, and counted for pollen using a high-power stereo microscope at x400 magnification. The percentage pollen data from these 3 samples is presented in Table 20.

*Pollen Analyses*

Unfortunately, two pollen sub-samples (25 cm and 45cm – both from context [135.04]) had no surviving palynomorphs and were effectively barren. This may be because the sediment had suffered past oxidation above the water table, although this was not evident from the monolith. These sub-samples were found to contain a large amount of micro-charcoal. The remaining pollen sub-sample (5cm – context 135.05) had a pollen concentrations of 110,429 grains per ml. Pollen preservation was somewhat variable and there was a lot of finely divided organic material that hampered pollen counting to some extent. An assessment pollen count was made from a single slide for this sub-sample. The pollen sum was 105 grains, which is less than the statistically desirable total of 300 pollen grains main sum for a full pollen count. As a consequence caution must be employed during the interpretation of these results.

*5cm – [135.05] – grey silty clay*

This sub-sample was dominated by grass pollen (Poaceae) (43.8%), with undifferentiated fern spores (together 11.5%). There were also a range of herbs including sedges (Cyperaceae) (2.9%), knapweed (*Centaurea nigra*), meadowsweet (*Filipendula*), wood sorrel (*Oxyria*), dock (*Rumex*) and members of the cow-parsley family (Apiaceae) (all 1.9%). The herb assemblage suggests the presence of open grassland with tall-herb meadows and riparian (bank-side) communities. Cereal pollen (4.8%) and the soil disturbance indicator ribwort plantain (*Plantago lanceolata*) (1.9%) were both present indicating arable activity close by. Arboreal taxa were represented by oak (*Quercus*) (6.7%), willow (*Salix*) (5.7%), juniper (*Juniperus*) (2.9%) and ivy (*Hedera*) (1.9%). Although the proportion of oak and willow pollen was relatively low, there is some evidence, supported by the presence of the epiphytic polypody fern (*Polypodium*) (2.9%), for large mature trees in this open landscape. Indeed, the association of oak, juniper scrub and wood sorrel hints at small areas of woodland in the countryside. The presence of the obligate aquatic bur-reed (*Sparganium*) (1.9%) together with willow, suggests some wetter areas, perhaps near pools or along field drains.

*Discussion & Conclusions*

The pollen assemblage at Peterborough Cathedral (PCGH16) is evidently from a post-clearance deposit. It is interpreted to represent a patchwork landscape of meadows, pastures and arable fields, with fragments of oak-juniper woodland and willow carr (wet woodland) spinneys associated with perennially wet ditches or ponds. This description is compatible with the Roman/Saxon date attributed to the sediments, but does not help determine the exact age of the feature. It is also

entirely compatible with the position of the Cathedral on river terrace gravels overlying Jurassic bedrock clay at the fen edge. Whilst the utility of pollen analysis in determining past environments is rewarding, as always care must be taken not to over-interpret assessment pollen counts.

| **Context** | **135.05** | **135.04** | **135.04** |
|---|---|---|---|
| **Pollen sub-sample** | **5cm** | **25cm** | **45cm** |
| **Trees & Shrubs** | | | |
| *Quercus* | 6.7 | Barren | Barren |
| *Salix* | 5.7 | | |
| *Juniperus* | 2.9 | | |
| *Hedera* | 1.9 | | |
| **Herbs** | | | |
| Poaceae | 43.8 | Barren | Barren |
| Cereals | 4.8 | | |
| Cyperaceae | 2.9 | | |
| Asteraceae (Lactuceae) undif. | 1.0 | | |
| *Centaurea nigra* type | 1.9 | | |
| Chenopodiaceae | 1.0 | | |
| Brassicaceae | 1.0 | | |
| *Filipendula* | 1.9 | | |
| *Oxyria* type | 1.9 | | |
| *Plantago lanceolata* | 1.9 | | |
| *Ranunculus* type | 1.0 | | |
| *Rumex* | 1.9 | | |
| *Thalictrum* | 1.0 | | |
| Apiaceae | 1.9 | | |
| *Symphytum* type | 1.0 | | |
| **Lower plants** | | | |
| *Polypodium* | 2.9 | Barren | Barren |
| Pteropsida (monolete) undif. | 8.6 | | |
| Pteropsida (trilete) undif. | 2.9 | | |
| **Aquatics** | | | |
| *Sparganium* type | 1.9 | Barren | Barren |
| **Sum trees** | **6.7** | | |
| **Sum shrubs** | **10.5** | | |
| **Sum herbs** | **68.6** | | |
| **Sum spores** | **14.3** | | |
| **Main Sum** | **105** | | |
| **Concentration (grains per ml)** | **110429** | | |

*Table 20.* Percentage pollen data from monolith tin in Trench 1 (<Sample 8>)

# Discussion

Despite the limited scale of the project, a number of important results were nevertheless obtained. The wider context of these discoveries will now be explored.

*Roman Peterborough*

A notable facet of the recent excavation was the relatively substantial amount of Roman material that was recovered, albeit a large proportion of it from residual contexts. This is not the first time that finds of this date have been identified at the cathedral; a number of discoveries were made during the late 19th and early 20th centuries, prompting the suggestion that a Roman settlement is present at the site (RCHM(E) 1969, 3).

Previous stray finds from the cathedral precincts include 4th-century coins and Nene Valley pottery (RCHM(E) 1969, 3) along with residual pottery from the adjacent Tout Hill Close and Peterscourt carpark excavations (Mackreth 1973; Mackreth and Rollo *nd*), while beneath the cathedral itself more substantial items have been identified. Firstly, between 1884 and 1889 during the restoration of the Central Tower a range of material including monumental inscriptions, sculptural fragments and Roman bricks was found. Amongst the inscriptions were two rejoining fragments with red painted letters (Coombe *et al.* forthcoming); these are likely to have been derived from a temple (Upex 2008, 221). In addition, the lower part of a column with a fine oak leaf carving was found within the foundations of the north-east pier of the crossing (Irvine 1894a, 51). Subsequently, in 1889 during the underpinning of the north transept, Roman pottery, burnt clay and wedge-shaped tiles were discovered along with an *in-situ* footstone from the end of an Anglo-Saxon gravecover; it has recently been recognised that the latter represents a reused Roman *tabula ansata* (Coombe *et al.* forthcoming). Thirdly, during underpinning works below the West Front in 1896 a square well was discovered. Incorporating reused Roman bricks, the well's form is consistent with similar features encountered elsewhere in the Nene Valley (Mackreth 1984).

Such discoveries are consonant with a high degree of Roman activity. Although the inscribed and sculptural fragments may have been transported for some distance prior to their reuse, a relatively common pattern (known as *spolia*), more ephemeral items such as brick, tile and pottery were almost certainly derived from the site itself. This interpretation is further corroborated by the recent discoveries. Fragments of Roman plaster, roof tile and pottery were recovered from *in-situ* deposits as well as residual contexts. The environmental evidence, moreover, is compelling. Whilst precise dating of the deposits is difficult – an unknown proportion of the sequence must pertain to the succeeding Anglo-Saxon period, for example – there can be little doubt that by the later Roman period, settlement activity at the site was well-established. Preliminary analysis of the macrobotanical remains indicates the presence of damp, nutrient-rich disturbed soils with some standing water and scrub-type vegetation, into which occasional deposits of domestic hearth waste were incorporated

(Simmons, above) while pollen evidence suggests a patchwork landscape of meadows, pastures and arable fields bordering a perennially wet area (Boreham, above).

Peterborough lies within a richly occupied and intensively studied Roman landscape (Upex 2008). To the west, for example, amongst the plethora of investigated sites are the town of Durobrivae (Fincham 2004), the palace at Castor (Upex 2011) and numerous smaller settlements, farms and villas (*e.g.* Mackreth 1996; Mackreth 2001b). In closer proximity to Peterborough fewer discoveries have been made, though this may in part reflect differences in the level of investigation/survival as opposed to a genuine absence. The closest known Roman settlement to the cathedral lies at Westwood, around a kilometre to the northwest. Here, a substantial Iron Age and Romano-British complex has been identified (Walker 1899). Predominantly investigated during the latter half of the 19th century, this settlement appears to cover an area of approximately 8ha. The excavations encountered stone-lined wells, building masonry and an inhumation cemetery containing around forty burials. Further elements of this settlement have also been investigated at Westfield Road and Mayor's Walk, where in each instance high-status Roman building materials were encountered (Palmer 1998; Hatton 2003).

Ongoing research into patterns of Roman settlement in England, synthesising the large body of unpublished commercial excavation data, suggests that the density of occupation during this period was greater than has previously been estimated (Smith *et al*. 2016). At Cambridge, for instance, extensive excavation of the western hinterland of the small town has revealed the presence of numerous satellite settlements spaced around 500m apart (Evans *in prep*.); it is likely that much of the Nene Valley was equally intensively occupied. It is also notable that Peterborough Cathedral sits upon a raised terrace beside the river, in a location that became the focus of significant monastic and urban activity from the Anglo-Saxon period onwards. It is thus highly plausible that this was previously the site of a Roman settlement, potentially one of some size and significance.

*The Anglo-Saxon and medieval abbey*

In contrast to the preceding phase of Roman activity, for which a relatively substantial body of material evidence was present, comparatively few finds pertaining to the Anglo-Saxon and medieval periods were recovered, even from residual contexts. This absence is particularly noteworthy given the investigated area's close proximity to significant centres of contemporary monastic and urban activity.

A monastery known as *Medeshamstede* was first established at Peterborough *c*. 655 (Kelly 2009). Established by Sexwulf, its first abbot, the house soon developed into an important Mercian religious centre with numerous colonies (Stenton 1933); an associated lay settlement may also have developed. According to the 12th-century Peterborough Chronicle (Mellows 1949) Medeshamstede was sacked by Danish Vikings *c*. 870, although some presence may still have been maintained at the site subsequently (Kelly 2009, 20-40). The

monastery was subsequently refounded *c*. 970 by Bishop Æthelwold of Winchester as the Benedictine Abbey of St Peter. By 1006 a substantial masonry wall had been constructed, encircling the abbey. This fortification, or burgh, combined with the dedication of the refounded monastery, led to the development of the name *Peterburgh*. The extent to which the burgh wall represents the perimeter of a formal defended settlement, however – a proto-urban predecessor of the medieval borough – as opposed to simply forming the boundary of the monastic precinct, remains unclear (Mackreth and Rollo *nd*; Hall *in prep*.). Peterborough was not included in the 10th-century *Burghal Hidage* (Hill 1996) and no evidence of Late Saxon domestic occupation has been yet identified within the precinct, though the degree of investigation has been very limited.

Peterborough subsequently developed into a moderately successful, albeit small, medieval town. During the 11th century occupation appears to have been primarily concentrated to the northeast, in the Boongate area, although no market had been chartered by Doomsday (King 1980; Kelly 2009, 258-69). St Peter's Abbey, in contrast, continued to expand both spatially and financially; in 1535 it was ranked the 8th richest male Benedictine house in England (Knowles and Hadcock 1971, 53-58). Work commenced upon the impressive monastic church – now cathedral – in 1118. Around the middle of the 12th century, under the aegis of Abbot Martin de Bec, the precincts appear to have been expanded and a new planted development was established to the west of the abbey gate (Mackreth 1999; Hall *in prep*.). Archaeological evidence recovered from this part of Peterborough supports a 12th-century date for its establishment (Spoerry and Hinman 1998; Morris and Yates 2012; Jones 2013), although small-scale activity may have occurred previously. The creation of a new settlement in this fashion represents part of a widespread pattern of contemporary monastic town plantation (Slater 1987; Aston 2000, 149-52). Other East Anglian examples of planted monastic towns include Bury St. Edmunds (Statham 1988), St. Ives (Spoerry 2005), St. Neots (Tebutt 1978), Ramsey (DeWint and DeWint 2012) and Royston (Plowman 2008).

Aside from investigations conducted beneath the cathedral itself, which have identified significant remains including the footings of the 10th-century church (Irvine 1894a; Irvine 1894b; Mackreth 1984), previous excavations undertaken within the precincts have primarily focused upon tracing the location and extent of the Late Saxon burgh wall. The most successful such attempt occurred in 1981 a short distance to the northeast, in the Peterscourt carpark (Mackreth 1999; Mackreth and Rollo *nd*). Here the earliest feature to be encountered was an earthen bank of Late Saxon date, which overlay a sequence of probable Roman deposits. Subsequently, the bank appears to have been partially reduced to allow its replacement by a substantial masonry wall, exceeding 2m in width, which was constructed of rag stone set in hard bright yellowish-brown mortar. The excavators proposed that the bank was associated with the Abbey refounded by Bishop Æthelwold, while the wall was that built by Abbot Coenwulf (992-1006) to encircle the burgh. Based upon this and a number of other small-scale investigations conducted elsewhere in the precincts, Mackreth produced a speculative model of the burgh wall's likely extent (Figure 17).

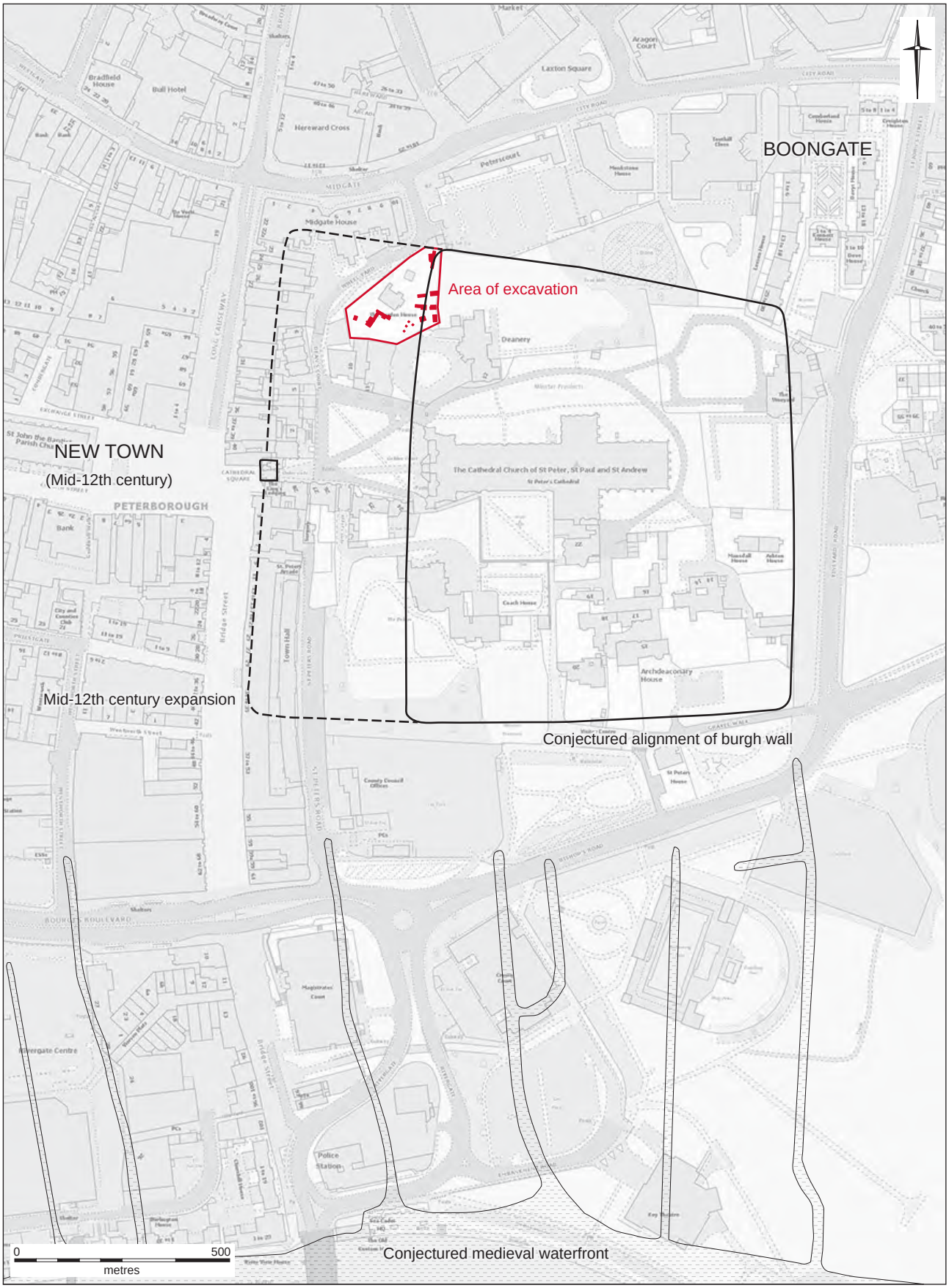



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Figure 17. Mackreth's proposed plan of the late 10th-century burgh wall and subsequent mid-12th century expansion, overlying the modern OS map (data from Mackreth 1999)

The model proposes that the wall enclosed an area of approximately 5.6 hectares, with its western boundary extending a short distance into the investigated area. Although Trenches 2A, 3A, 9 and the southern portion of Trench 1 all coincide almost directly with its projected course, any potential evidence of its existence in these locations had been destroyed by the later pond. All of the surviving *in-situ* deposits lay outside its conjectured circuit. Given the evidence for a damp, marsh-like environment that these deposits revealed, allied with the paucity of contemporary material culture, an external location does indeed appear highly likely. The criteria used to select the defended area were most probably topographical/ geological, with the focus being the higher, drier ground where the cathedral still stands. The low-lying area of investigation was associated instead with a natural stream that survived in diminished form – as a 'common sewer' – until at least the 19th century (Mackreth and Rollo *nd*) and may still remain partially extant today. Indeed, the subsequent addition of the pond in this location may have been stimulated as much by the need for water management as by the desire for an additional source of fish (see Bond 2001).

The second element of the conjectured model is the expansion of the monastic precinct by Abbot Martin de Bec in the mid-12th century. Mackreth proposes that an additional *c*. 2.3 hectares was appended at this time, representing an increase of around 40%. The streambed was thus transferred from *outside* to *inside* and the burgh wall was dismantled and replaced by a new, less substantially-constructed circuit. Some material evidence of this transition was potentially identified. Overlying a waterlogged silt layer in Trench 1 that contained a sherd of 10th-12th-century pottery was a deposit primarily composed of limestone rubble and mortar fragments ([135.02]). It is possible that this material represents detritus generated by the demolition of the burgh wall in the mid-12th century. Alternatively, the rubble may have been introduced somewhat later – between the mid-12th and early 14th centuries – as part of an episode of consolidation/reclamation, perhaps when the nearby fishpond was established (*i.e.* at any time from the 12th century onwards). The presence of wall plaster within the assemblage suggests that, regardless of its date, material derived from more than one source was incorporated into the deposit.

During the 14th-15th century additional made-ground deposits were introduced into Trench 1 that contained disarticulated human remains, one fragment of which was radiocarbon dated to the Late Saxon period (Table 1). These deposits may potentially have been associated with the consolidation of the fishpond's perimeter. To the west, meanwhile, in Trenches 5 and 6, the environment remained open, wet and marsh-like until the 17th century; no evidence of medieval activity reclamation was identified here. Overall, the results obtained during the present investigation accord well with Mackreth's proposed model. Whilst a number of details – such as exact course of the burgh wall, and the presence/absence of Late Saxon domestic occupation within its interior – still require significant investigation, the general pattern appears broadly sound. Overall, aside from probable pond-related activity the site seems to have remained largely unreclaimed and relatively little used throughout the Middle Ages.

*17th-century reclamation*

Somewhat unexpectedly, one of the most significant archaeological discoveries made during the project is 17th century in date. Probably beginning in the 1640s, a series of refuse deposits were introduced into Trenches 5 and 6 as part of a process of reclamation that remained ongoing until the early 18th century. The date of this material coincides with a particularly interesting period in the cathedral's history. On the 18th of April 1643, during the first year of the First Civil War, Royalist Peterborough was captured by parliamentary forces commanded by Oliver Cromwell (in his capacity as a cavalry officer, prior to his later ascendancy) in conjunction with Colonel Hobart's regiment of infantry. Following their victory the troops were quartered in the cathedral precinct while Cromwell himself was housed in the Vineyard, on the eastern perimeter of the grounds. During their occupation the cathedral was subjected to an extensive iconoclastic purge. This was reported in the Royalist newsbook *Mercurius Aulicus* on the 28th of April 1643:

> "It was advertised this day from Peterburgh, that Colonell Cromwell had bestowed a visit on that little City, and put them to the charge of his entertainment, plundering a great part thereof to discharge the reckoning, and further that in pursuance of the thorow Reformation, he did most miserably deface the Cathedrall Church, breake downe the Organs, and destroy the glasse windowes, committing many other outrages on the house of God which were not acted by the Gothes in the sack of Rome, and are most commonly forborn by the Turks when they possesse themselves by force of a Christian city."

More detailed accounts of the destruction were published in *Mercurius Rusticus* – in a section upon 'The Cathedral Church of *Peterborough* Robbed, defac'd and spoil'd by *Cromwel* and his Schismatical adherents, &c' (Ryves 1685, 211-216) – and *The History of the Church of Peterburgh* (Gunton 1686, 333-40), with the latter in particular containing a valuable appendix by Francis Standish entitled 'A Short and True NARRATIVE of the Rifling and Defacing of the Cathedral Church of PETERBURGH in the Year 1643'. Here, the destruction of the windows was described in detail:

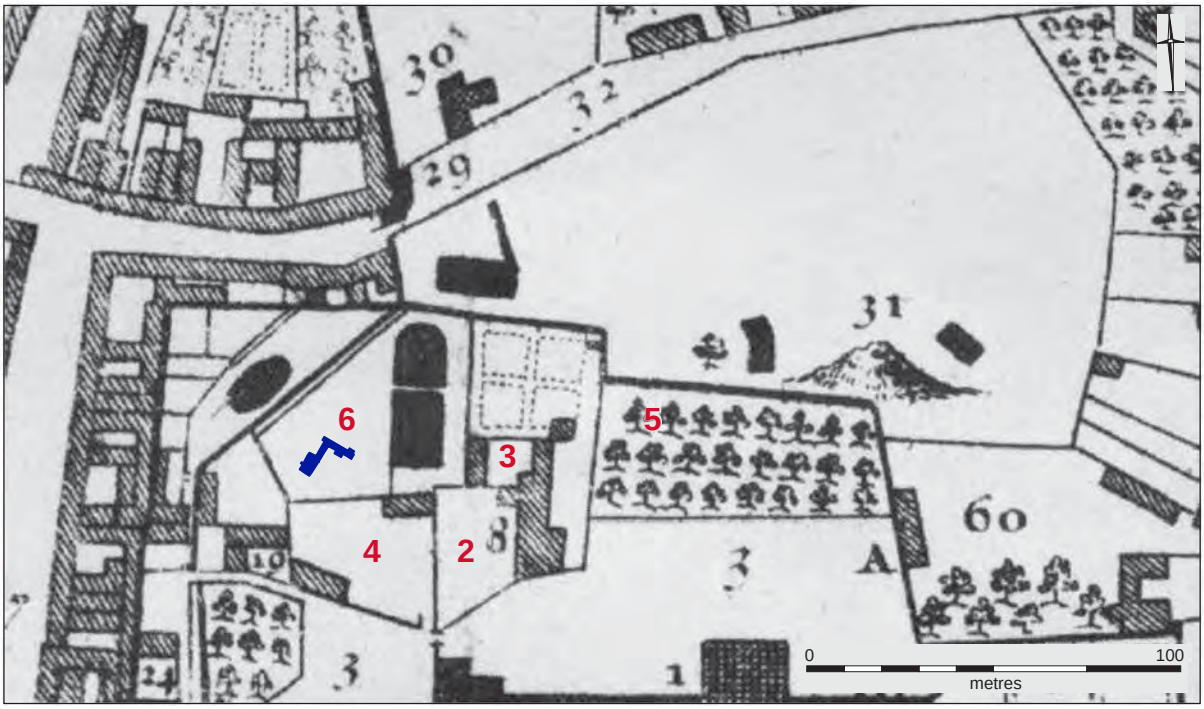
> "…notwithstanding all the Art and curiosity of workmanship these Windows did afford, yet nothing of all this could oblige the Reforming Rabble, but they deface and break them all in pieces, in the Church and in the Cloyster, and left nothing undemolisht, where either any Picture or Painted Glass did appear; excepting only part of the great West window in the Body of the Church, which still remains entire, being too high for them, and out of their reach" (Gunton 1686, 337).

Significantly, the 17th-century deposits were notable for their inclusion of a large quantity of painted window glass shards and fragments of window lead (see Herring, above). Furthermore, based upon their high degree of patination it is probable that many of the window glass fragments incorporated into backfilling of the pond in the early 19th century were also disturbed from 17th-century contexts; thereby indicating that the original assemblage was potentially substantial.

The military occupation of the precincts was brief, lasting six weeks at most. In May the parliamentary forces moved on to take nearby Crowland; they may also have commenced work upon the pentagonal artillery fort at Horsey Hill, a short distance to the south of Peterborough, at this time (Osbourne 1990, 32). The latter is similar to the Civil War bulwark at Earith, which, unlike Horsey Hill, has been subject to several phases of archaeological investigation (Keynes and White 1908; Taylor 1999; Brittain 2016). Royalist attempts to retake Peterborough in July 1643, October 1644 and again during the Second Civil War in 1648 were all unsuccessful. During the 1650s – the Commonwealth period – repairs were made to the fabric of the cathedral using materials salvaged from the Lady Chapel, while the remains of the "Cloysters, the old Chapterhouse, the Library, the Bishops Hall and Chapel at the end of it" were demolished and sold by public auction (Gunton 1686, 338-39). Much of the latter material was purchased by Oliver St John (whose second wife, Elizabeth, was Oliver Crowell's cousin) and used in the construction of his manor house, Thorpe Hall.

Additional context for the location of the 17th-century reclamation works can be found in the incomplete parliamentary survey of the precincts, as the portion pertaining to the Deanery, compiled in 1649, has survived (PCCHER 3332; see also Hall 2008). Closely complementing the archaeological evidence, this document reveals that the recovered refuse was dumped in a peripheral area that was then known as the *Pond Yard* (Figure 18). Based upon the small fragment size and low number of refits in the assemblage, the material itself is most likely to represent the secondary deposition of midden waste. Unfortunately, due to the chronological imprecision of archaeological dating, it is difficult to determine whether this predominately derives from a large-scale but relatively brief depositional event – equivalent to only a few weeks, months or years of activity (such as the unusual conditions that prevailed during the Commonwealth period) – or to a prolonged series of small-scale events spread over many decades (such as long-term refuse disposal undertaken by members of Peterborough's ecclesiastical community).

Usefully, some further indication is provided by the composition of the assemblage (although it must be noted that the recovered sample probably represents only a small proportion of the total). The earliest, mid-17th-century material was dominated by drinking vessels, both tyggs and glasses, and bottles, including stoneware flagons and onion bottles, along with a substantial quantity of clay tobacco pipes, a relatively large faunal component and numerous fragments of window glass. This group is both large and distinctive, and could well pertain to a discrete episode of deposition. By way of contrast, the later 17th-century deposits contained smaller quantities of material that are likely to represent a more ad hoc, episodic pattern of disposal. Whilst there is no clear-cut diagnostic evidence to connect to the mid-17th-century group to the parliamentary occupation, given its date, size and composition this must be considered a strong possibility.




| No. | Description from the Parliamentary Survey of 1649 | 17th-century area (estimated) | Present-day area (estimated) |
|---|---|---|---|
| 1 | *One orchard well planted and fenced with a stone wall containing about ½ acre, in which is a small house formerly used as a still house, 15 feet long and 12 feet wide, roofed with slate, with a small summer house* | 0.5 acres | - |
| 2 | *One court yard with a small garden plot adjoining, together containing about 1 rood; at the entrance to the said court is a great gate roofed with lead, 18 feet long and 6 feet wide* | 1 rood (0.25a) | 0.85 roods |
| 3 | *One small yard called the kitchen yard containing about 6 poles, near to which stands a brewhouse, roofed with slate and 42 feet long and 45 feet wide* | 6 poles (0.0375a) | - |
| 4 | *One stable yard containing about 52 poles, in which stands one stable with a hay barn, 42 feet long and 15 feet wide, with a gate house and a chamber over it and a long hovel roofed with slate. The said yard is enclosed on the south with a high stone wall being 54 feet long and 18 feet high* | 52 poles (0.325a) | 52 poles |
| 5 | *One small close of pasture adjoining the said house known as the Dean's Close contains by estimation 3 roods and is bounded on the south by the Churchyard, on the north by the close called the Vineyard and on the west by the Dean's house* | 3 roods (0.75a) | 3.17 roods |
| 6 | *Another small close of pasture adjoining the Dean's house known as the Pond Yard contains by estimation 3 roods and is bounded on the west by the close of Mr. Gilbert and on the east and south by the above mentioned ground and yard* | 3 roods (0.75a) | 2.5 roods |

Figure 18. The plots held by the Deanery as recorded in the Parliamentary Survey of 1649, with their locations marked on an extract of Eyre's plan of 1721 (after Hall 2008). Trenches 5 and 6, where the 17th century refuse deposits were encountered, are shown in blue

Although there is a large body of literature pertaining to the archaeology of the English Civil Wars, this is predominately military in focus (*eg.* Atkin and Howes 1993; Foard 2012; Harrington 2003; Harrington 2004; Harrington 2005; Porter 1994). To date, material culture has played a relatively limited role in the discussion, despite its much more central importance in the broader field of historical archaeology generally (see Ferguson 1977; Schablitsky and Leone 2012). This dearth is primarily attributable to the difficulties inherent in identifying temporally discrete socio-political events within the archaeological record. A number of Civil War-associated assemblages have been identified, however; significant examples include those from Basing House, Hampshire (Moorhouse 1970; Moorhouse 1971; Allen and Anderson 1999), Pontefract Castle, West Yorkshire (Roberts 2002), Sandal Castle, West Yorkshire (Askew 2016) and Beeston Castle, Cheshire (Eaves 1989; Ellis 1993). More locally, a number of artefacts pertaining to a period of Revolutionary occupation have also been recovered from beneath the choir stalls in King's College Chapel, Cambridge (Dickens 2001). Notably, in all these groups drinking vessels, bottles and clay tobacco pipes were particularly prominent, alongside relatively substantial faunal assemblages.

*The Deanery garden*

Following the conclusion of the aforementioned reclamation works, from the early 18th century the pond yard area was gradually incorporated into the Deanery's landscaped gardens. In Trenches 1, 5 and 6, for example – the only areas that lay outside the footprint of the contemporary pond – 18th-century horticultural deposits were identified, indicating that a degree of landscaping activity occurred. This process escalated in the 1820s when an extensive programme of landscaping and improvement was undertaken under the auspices of Dean James Henry Monk (1822-30). As a result of Monk's work, it was noted that "every approach to the Cathedral, as well as the cemetery and courts around it, are laid out with the greatest attention to personal comforts and to pleasing effects" (Britton 1828, 59-60). In the Deanery gardens themselves, a number of improvements were implemented. Of particular note is an entry in the 'Memoranda of the principal transactions of the Dean and Chapter':

> **1825** *In this year the work of filling up a large pond extending from the middle of the front court nearly to the north wall of the garden and 8 feet in depth was completed. It has been going on daily for 3½ years. The plantation facing the entrance of the front court grows upon the site of the Pond* (PCCHER 3414).

The material culture assemblage recovered from the pond's infilling directly relates to this event and probably consists of refuse generated by numerous different residents of the cathedral precinct. Other works that were undertaken during this period include repairs to the fabric of the Deanery itself, its outbuildings and the rebuilding of the perimeter garden wall (PCCHER 3414). Over the course of the following decades work upon the Deanery garden continued. Between 1855 and 1869, for instance, Touthill Close – including the motte of Touthill itself – was incorporated into the Deanery grounds (PCCHER 3415). By the late 19th century the extensive and well-ordered gardens contained numerous features such as greenhouses, espaliered fruit trees and vegetable beds (Figure 19).

Figure 19. The late 19th and early 20th century Deanery Garden, showing: 1878 drain plan, with 2016 trench locations (top), postcard view of northwest corner of precinct, c.1917 (bottom left), and plum tree tag (bottom right)

A final point of interest concerns the early 20th-century refuse that was dumped into pit/planting bed [104] in Trench 6. Containing numerous complete and semi-complete glass and ceramic vessels as well as a substantial faunal assemblage, this deposit most probably represents a 'household clearance event' (that is, a collection of multiple material-types derived from the same source and deposited in a single episode). In contrast to the 17th and early 19th-century assemblages discussed above, therefore, which were formed via the accumulation of numerous episodic dumps of material derived from various sources over a protracted period, this group instead represents a discrete temporal event associated with a single household (see Pearce 2000 for a detailed definition of clearance assemblages). This material was probably utilised as hardcore to provide a percolation fill at the base of a planting bed. Given the feature's location, abutting masonry wall footing [117], it is possible that this was a tree/shrub (perhaps a fruit tree).

Preliminary research suggests that the assemblage is most likely related to the transition between Deans Page and Simpson in 1928. At this time, the nearby Deanery was temporarily transformed into a hostel, thus requiring its thorough clearance, and the new Dean was subsequently housed elsewhere. As the latest *terminus post quem* of a vessel in the assemblage is 1925/6 and much of the material appears to date to the first two decades of the 20th century, the dating evidence certainly appears to fit. Furthermore, as a *terminus ante quem* the group was almost certainly deposited before Garden House and its grounds were annexed from the Deanery garden in *c*. 1936-37 (PCCHER 80213). Overall, therefore, the assemblage appears most likely to be composed of material associated with the household of Dean Arnold Page (1851-1943), who held the deanship between 1908 and 1928. The 1911 census records Page residing at the Deanery with his wife and four domestic servants; a housemaid, a cook, a parlour maid and a kitchen maid (Figure 20).

To date, relatively few early 20th-century clearance groups have been published from Britain (although there are exceptions: local Cambridgeshire examples include Cessford 2012; Cessford and Dickens 2013, 100–07; Cessford forthcoming). This assemblage therefore warrants additional research, particularly of associated documentary and/or cartographic sources, and publication.

# CENSUS OF ENGLAND AND WALES, 1911.

Number of Schedule 306 (To be filled up by the Enumerator after collection.)

*Before writing on this Schedule please read the Examples and the Instructions given on the other side of the paper, as well as the headings of the Columns. The entries should be written in Ink.*

*The contents of the Schedule will be treated as confidential. Strict care will be taken that no information is disclosed with regard to individual persons. The returns are not to be used for proof of age, as in connection with Old Age Pensions, or for any other purpose than the preparation of Statistical Tables.*

| | NAME AND SURNAME of every Person, whether Member of Family, Visitor, Boarder, or Servant, who (1) passed the night of Sunday, April 2nd, 1911, in this dwelling and was alive at midnight, or (2) arrived in this dwelling on the morning of Monday, April 3rd, not having been enumerated elsewhere. No one else must be included. (For order of entering names see Examples on back of Schedule.) | RELATIONSHIP to Head of Family. State whether "Head," or "Wife," "Son," "Daughter," or other Relative, "Visitor," "Boarder," or "Servant." | AGE (last Birthday) and SEX. For Infants under one year state the age in months as "under one month," "one month," etc. Ages of Males. | Ages of Females. | PARTICULARS as to MARRIAGE. Write "Single," "Married," "Widower," or "Widow," opposite the names of all persons aged 15 years and upwards. | State, for each Married Woman entered on this Schedule, the number of:— Completed years the present Marriage has lasted. (If less than one year write "under one.") | Children born alive to present Marriage. (If no children born alive write "None" in Column 7). Total Children Born Alive. | Children still Living | Children who have Died. | PROFESSION or OCCUPATION of Persons aged ten years and upwards. Personal Occupation. The reply should show the precise branch of Profession, Trade, Manufacture, &c. If engaged in any Trade or Manufacture, the particular kind of work done, and the Article made or Material worked or dealt in should be clearly indicated. (See Instructions 1 to 8 and Examples on back of Schedule.) | Industry or Service with which worker is connected. This question should generally be answered by stating the business carried on by the employer. If this is clearly shown in Col. 10 the question need not be answered here. No entry needed for Domestic Servants in private employment. If employed by a public body (Government, Municipal, etc.) state what body. (See Instruction 9 and Examples on back of Schedule.) | Whether Employer, Worker, or Working on Own Account. Write opposite the name of each person engaged in any Trade or Industry. (1) "Employer" (that is employing persons other than domestic servants), or (2) "Worker" (that is working for an employer), or (3) "Own Account" (that is neither employing others nor working for a trade employer). | Whether Working at Home. Write the words "At Home" opposite the name of each person carrying on Trade or Industry at home. | BIRTHPLACE of every person. (1) If born in the United Kingdom, write the name of the County, and Town or Parish. (2) If born in any other part of the British Empire, write the name of the Dependency, Colony, etc., and of the Province or State. (3) If born in a Foreign Country, write the name of the Country. (4) If born at sea, write "At Sea." NOTE.—In the case of persons born elsewhere than in England or Wales, state whether "Resident" or "Visitor" in this Country. | NATIONALITY of every Person born in a Foreign Country. State whether:— (1) "British subject by parentage," (2) "Naturalised British subject," giving year of naturalisation. Or (3) If of foreign nationality, state whether "French," "German," "Russian," etc. | INFIRMITY. If any person included in this Schedule is:— (1) "Totally Deaf," or "Deaf and Dumb," (2) "Totally Blind," (3) "Lunatic," (4) "Imbecile," or "Feeble-minded," state the infirmity opposite that person's name, and the age at which he or she became afflicted. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. | |
| 1 | Arnold Henry Page | Head | 60 | | married | | | | | Clerk in Holy Orders (Cert. Ch.) | 421 | 0 | | Carlisle Cumberland | 390 | | |
| 2 | Blanche Cecilia Page | wife | | 47 | married | 21 | none | | | | | | | Limerick Ireland | 633 | | |
| 3 | Annie Elizabeth Lewis | servant | | 30 | single | | | | | Housemaid | 010 | 0 | | Yelling Huntingdonshire | 420 | | |
| 4 | Emily Florence Cattle | servant | | 27 | single | | | | | Cook | | | | Wellaston Northants | | | |
| 5 | Gertrude Luff | servant | | 26 | single | | | | | Parlourmaid | domestic | | | Wembley Middlesex | 200 | | |
| 6 | Gertrude Mirthe Sears | servant | | 16 | single | | | | | Kitchenmaid | | | | Neath Glamorgan | 080 | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | |

(To be filled up by the Enumerator.)

I certify that:—
(1.) All the ages on this Schedule are entered in the proper sex columns.
(2.) I have counted the males and females in Columns 3 and 4 separately, and have compared their sum with the total number of persons.
(3.) After making the necessary enquiries I have completed all entries on the Schedule which appeared to be defective, and have corrected such as appeared to be erroneous.

Initials of Enumerator HGS

| Total. Males. | Females. | Persons. |
|---|---|---|
| 1 | 5 | 6 |

(To be filled up by, or on behalf of, the Head of Family or other person in occupation, or in charge, of this dwelling.)

Write below the Number of Rooms in this Dwelling (House, Tenement, or Apartment). Count the kitchen as a room but do not count scullery, landing, lobby, closet, bathroom; nor warehouse, office, shop.

Number 22

I declare that this Schedule is correctly filled up to the best of my knowledge and belief.

Signature Arnold H. Page

Postal Address Deanery Peterborough

Figure 20. 1911 census return for the Deanery, detailing the household of Dean Arnold Page

# Conclusion

This project had two principal aims. The first was community-based; to enhance visitors' experience by improving access to the cathedral both physically and intellectually whilst also ensuring ensure that it plays an increasing role in the life of the city and Diocese. This was achieved by involving 302 volunteers and 201 primary school children in the community excavation, as well as providing a series of public lectures and mounting an exhibition to further disseminate awareness of the discoveries that were made. The second aim was archaeological; to characterise and assess any deposits that were encountered during the course of the project. In effect, the excavation functioned as a trench-based evaluation, investigating the extent, depth and nature of the remains in this previously little-explored corner of the precincts. As the above results attest, this second objective was also comprehensively achieved.

Firstly, evidence of Roman activity was recovered, indicating probable occupation at the site during the Late Roman period. Evidence of the succeeding Anglo-Saxon and medieval abbey was less apparent, but the identified pattern is broadly consistent with the proposed model of the precinct's development (although at present this remains unconfirmed). Somewhat unexpected, but of particular importance, is the assemblage of 17th-century refuse from Trenches 5 and 6. There is a strong possibility that this group incorporates material generated during the parliamentary occupation of the precincts in 1643, alongside smaller quantities of material spanning the remainder of the 17th century. Its location is rendered particularly significant because cathedral cities such as Peterborough have been identified as pivotal locations in which to examine the charged relationship between the sacred and the secular during the tumultuous Revolutionary period (Estabrook 2002; see also Lehmberg 1996 on the turbulent history of cathedrals in the 17th century). If a larger sample of this material were to be recovered, it would potentially be of national significance. Finally, the early 20th-century clearance group from the Deanery garden is also of importance, and merits further analysis.

*Acknowledgements*

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## Appendix 1: comparative dating evidence

The following table provides a summary of the most reliable dating evidence recovered from each excavated context. Different types of material can be dated with differing levels of precision, dependent upon issues such as form, longevity, decoration, etc., and may also have been retained for varying lengths of time prior to their disposal – short-lived items such as clay tobacco pipes are likely to have been discarded relatively rapidly, whereas a drinking vessel could potentially have remained in use for several decades (see Adams 2003). A comparative approach, incorporating multiple strands of evidence, is therefore the most reliable. The dates cited below represent the latest for that particular group, excluding items that are clearly intrusive. Residual material has not been included.

| Context No. | Type | Trench | Description | Tobacco pipe date | Ceramic date | Glass date | Other |
|---|---|---|---|---|---|---|---|
| 100 | L | 5 | Horticultural/garden soil deposit | | 19th century | | |
| 101 | L | 5 | Horticultural/garden soil deposit | | 19th century | Late 19th/early 20th century | |
| 102 | L | 6 | Horticultural/garden soil deposit | Stem | 1891+ | | |
| 103 | L | 6 | Horticultural/garden soil deposit | Mid/late 19th century | 19th century | 18th-19th century | |
| 104 | L | 6 | Discrete refuse deposit | Stem | Early 20th century | Early 20th century | |
| 105 | L | 1 | Horticultural/garden soil deposit | | 19th century | Late 19th/early 20th century | |
| 106 | L | 1 | Horticultural/garden soil deposit | | | | |
| 107 | L | 1 | Horticultural/garden soil deposit | Stem | 19th century | Late 19th/early 20th century | |
| 108 | L | 1 | Horticultural/garden soil deposit | | 19th century | Late 19th/early 20th century | |
| 109 | L | 6 | Horticultural/garden soil deposit | 1730-80 | 19th century | Late 19th/early 20th century | |
| 110 | L | 6 | Horticultural/garden soil deposit | Stem | 19th century | Late 19th/early 20th century | |
| 111.01 | L | 5 | Horticultural/garden soil deposit | 1640-60 | 17th century | 17th-18th century | |
| 111.02 | L | 5 | Reclamation deposit | Stem | 17th century | 16th-18th century | |
| 111.03 | L | 5 | Reclamation deposit | | 16th-17th century | Early post-medieval | |
| 112.01 | L | 5 | Horticultural/garden soil deposit | Stem | 16th-17th century | 16th-18th century | Jetton, 16th century<br>Token, 1668 |
| 112.02 | L | 5 | Reclamation deposit | 1660-80 | 16th-17th century | 17th-18th century | |
| 112.03 | L | 5 | Reclamation deposit | Stem | 16th-17th century | 16th-18th century | |
| 112.04 | L | 5 | Reclamation deposit | | | | |
| 112.05 | L | 5 | Reclamation deposit | | | | |
| 113.01 | L | 5 | Horticultural/garden soil deposit | Stem | 16th-17th century | 16th-18th century | Halfpenny, 1699-1701 |
| 113.02 | L | 5 | Reclamation deposit | | ?Medieval | 16th-18th century | |

| Context No. | Type | Trench | Description | Tobacco pipe date | Ceramic date | Glass date | Other |
|---|---|---|---|---|---|---|---|
| 116.01 | L | 6 | Horticultural/garden soil deposit | | 18th century | Late 19th/early 20th century | |
| 116.02 | L | 6 | Reclamation deposit | 1640-60 | 17th century | 16th-18th century | |
| 117 | S | 6 | 19th century garden wall | | | | |
| 118 | S | 6 | 19th century greenhouse wall | | | | |
| 119 | L | 3 | Horticultural/garden soil deposit | | | Late 19th century | Halfpenny, 1825-27 |
| 120 | L | 3 | Horticultural/garden soil deposit | | 19th century | 19th century | |
| 121 | L | 4 | Horticultural/garden soil deposit | | | | |
| 122 | L | 4 | Horticultural/garden soil deposit | | 19th century | | |
| 123 | L | 1 | Garden path | Stem | 1855+ | Late 19th/early 20th century | |
| 124 | L | 2 | Horticultural/garden soil deposit | | 18th-19th century | | |
| 125 | L | 2 | Horticultural/garden soil deposit | 19th century | 19th century | | Jetton, 1608-12 |
| 126.0 | L | 3 | Pond infill | | | Late 18th-19th century | |
| 126.01 | L | 3 | Pond infill | Stem | Late 18th century | Late 18th-19th century | |
| 126.02 | L | 3 | Pond infill | Stem | Late 18th century | Late 18th-19th century | |
| 126.03 | L | 3 | Pond infill | Mid/late 19th century | 19th century | Late 18th-19th century | |
| 126.04 | L | 3 | Pond infill | Stem | Late 18th century | Late 18th-19th century | |
| 126.05 | L | 3 | Pond infill | | 18th/19th century | | |
| 126.06 | L | 3 | Pond infill | | | | |
| 127.0 | L | 4 | Pond infill | | | 19th century | |
| 127.01 | L | 4 | Pond infill | Stem | 19th century | 18th-19th century | |
| 127.02 | L | 4 | Pond infill | Stem | 19th century | 18th-19th century | |
| 127.03 | L | 4 | Pond infill | | | | |
| 128.01 | F | 2 | Pipe trench fill | Stem | 19th century | 19th-20th century | |
| 128.02 | C | 2 | Pipe trench cut | | | | |
| 129.01 | L | 1 | Horticultural/garden soil deposit | Stem | 18th-19th century | 18th-19th century | |
| 129.02 | L | 1 | Reclamation/landscaping deposit | | 16th-17th century | | |
| 129.03 | L | 1 | Reclamation/landscaping deposit | | 14th-15th century | Medieval | |
| 130.01 | L | 1 | Pond infill | | 19th century | 18th-19th century | |
| 130.02 | L | 1 | Pond infill | Mid/late 19th century | 19th century | 19th century | |
| 130.03 | L | 1 | Pond infill | Stem | 18th century | 18th-19th century | |
| 130.04 | L | 1 | Pond infill | Stem | 19th century | 18th-19th century | |
| 130.05 | L | 1 | Pond infill | Stem | Late 18th century | | |
| 130.06 | L | 1 | Pond infill | Stem | Late 18th century | 17th-19th century | |

| Context No. | Type | Trench | Description | Tobacco pipe date | Ceramic date | Glass date | Other |
|---|---|---|---|---|---|---|---|
| 130.07 | L | 1 | Pond infill | 1580-1610 | Late 18th century | | |
| 130.08 | L | 1 | Pond infill | | | *c.* 1750-1810 | |
| 130.09 | L | 1 | Pond infill | Mid/late 19th century | Late 18th century | 19th century? | |
| 130.10 | L | 1 | Pond infill | | Late 18th century | 18th-19th century | |
| 130.11 | L | 1 | Pond infill | | Late 18th century | | |
| 130.12 | L | 1 | Pond infill | | Late 18th century | | |
| 130.13 | L | 1 | Pond infill | Stem | | 18th-19th century | |
| 130.14 | L | 1 | Pond infill | | Late 18th century | 18th-19th century | |
| 130.15 | L | 1 | Pond infill | | | | |
| 130.16 | L | 1 | Pond infill | | | | |
| 131.01 | L | 2 | Horticultural/garden soil deposit | Stem | 1864+ | 18th-19th century | |
| 131.02 | L | 2 | Horticultural/garden soil deposit | | | 18th-19th century | |
| 131.03 | L | 2 | Fill of small pit | Stem | 1855+ | Late 19th-early 20th century | |
| 131.04 | L | 2 | Fill of small pit | Stem | 19th century | Late 19th-early 20th century | |
| 131.05 | L | 2 | Cut of small pit | | | | |
| 131.06 | L | 2 | Pond infill | | Late 18th century | 18th-19th century | |
| 132.01 | L | 2 | Pond infill | Stem | 19th century | 17th-18th century | |
| 132.02 | L | 2 | Pond infill | Mid/late 19th century | 19th century | 19th century | |
| 132.03 | L | 2 | Pond infill | | | 17th-18th century | |
| 132.04 | L | 2 | Pond infill | | | | |
| 132.05 | L | 2 | Pond infill | | | | |
| 132.06 | L | 2 | Pond infill | | | | |
| 132.07 | L | 2 | Pond infill | | | | |
| 133.01 | L | 6 | Horticultural/garden soil deposit | Early 18th century | 18th century | Late 17th-early 18th century | |
| 133.02 | L | 6 | Reclamation deposit | 1640-60 | 17th century | 17th-18th century | |
| 133.03 | L | 6 | Reclamation deposit | 1640-60 | 17th century | 17th-18th century | Leather shoe, early 17th century |
| 133.04 | L | 6 | Reclamation deposit | | 16th-17th century | 17th-18th century | |
| 134.01 | L | 10 | Horticultural/garden soil deposit | Stem | 1855+ | | |
| 134.02 | L | 10 | Horticultural/garden soil deposit | | 19th century | 17th-18th century | |
| 134.03 | L | 10 | Possible path or surface | 1660-80 | 19th century | 18th-19th century | |
| 134.04 | L | 10 | Horticultural/garden soil deposit | 19th century | 19th century | 17th-18th century | |
| 134.05 | L | 10 | Reclamation deposit | | | | |

| Context No. | Type | Trench | Description | Tobacco pipe date | Ceramic date | Glass date | Other |
|---|---|---|---|---|---|---|---|
| 134.06 | L | 10 | Reclamation deposit | | | | |
| 134.07 | L | 10 | Reclamation deposit | | | | |
| 134.08 | L | 10 | Reclamation deposit | Stem | | | |
| 134.09 | L | 10 | Reclamation deposit | | | | |
| 134.10 | L | 10 | Reclamation deposit | | | | |
| 135.01 | L | 1 | Reclamation/landscaping deposit | | Roman | | |
| 135.02 | L | 1 | Reclamation/landscaping deposit | | | | |
| 135.03 | L | 1 | Reclamation/landscaping deposit | | 10th-12th century | | |
| 135.04 | L | 1 | Marshy layer | | Roman | | |
| 135.05 | L | 1 | Marshy layer | | Roman | | |
| 135.06 | L | 1 | Marshy layer | | Roman | | |
| 135.07 | L | 1 | Marshy layer | | Roman | | |
| 136 | L | 3 | Pond infill | | | | |
| 137 | L | 9 | Horticultural/garden soil deposit | | 19th-20th century | | |
| 138.01 | L | 9 | Horticultural/garden soil deposit | Mid/late 19th century | 19th century | 19th century | |
| 138.02 | L | 9 | Horticultural/garden soil deposit | Stem | 19th century | 17th-19th century | |
| 138.03 | L | 9 | Pond infill | Mid/late 19th century | 19th century | 19th-20th century | |
| 138.04 | L | 9 | Pond infill | | Late 18th century | 18th-19th century | |
| 138.05 | L | 9 | Pond infill | 1660-80 | 18th century | 18th-19th century | |
| 138.06 | L | 9 | Pond infill | Stem | | 18th-19th century | |
| 139 | L | 2 | Pond deposit | | Medieval | | |

## Appendix 2: Oasis form

| OASIS ID: cambridg3-283517 | |
|---|---|
| **Project details** | |
| Project name | Peterborough Cathedral Community Excavation 2016 |
| Short description of the project | A community excavation involving 302 volunteers and 201 primary school children was undertaken at Peterborough Cathedral in the summer of 2016. The investigation took place in the northwest corner of the historic precinct, within the grounds of Garden House. Here fourteen trenches were excavated and five phases of activity identified, the earliest of which was Roman in date. Although the environment of the site itself was determined to have been wet and inhospitable at this time, evidence of Late Roman occupation was identified in the immediate vicinity. The area subsequently remained wet and marginal until the 12th century, when it was incorporated into the expanding precinct of the Benedictine Abbey of St Peter. Localised reclamation works were undertaken at this time and a large fishpond (potentially one of several) established. Yet the overall level of activity remained minimal until the mid-17th century, when a second phase of reclamation commenced. Substantial quantities of domestic refuse were imported into the southwest portion of the site at this time, including detritus that was potentially generated during the parliamentary occupation of the cathedral precincts in 1643. Then, from the early 18th century onwards, the area became increasingly landscaped; the large pond was infilled in the early 19th century and a formal garden established, associated with the adjacent Deanery. Finally, a substantial clearance assemblage of early 20th-century household waste was recovered from a probable planting bed. |
| Project dates | Start: 22-06-2016 End: 05-07-2016 |
| Previous/future work | Yes / Yes |
| Any associated project reference codes | PCCHER 54080 - HER event no. |
| Any associated project reference codes | PCGH16 - Sitecode |
| Type of project | Field evaluation |
| Site status | None |
| Current Land use | Other 5 - Garden |
| Monument type | POND Medieval |
| Monument type | MADE-GROUND Medieval |
| Monument type | MADE-GROUND Post Medieval |
| Significant Finds | POTTERY Roman |
| Significant Finds | TILE Roman |
| Significant Finds | HUMAN REMAINS Early Medieval |
| Significant Finds | PAINTED WINDOW GLASS Medieval |
| Significant Finds | POTTERY Medieval |
| Significant Finds | CLAY TOBACCO PIPE Post Medieval |
| Significant Finds | POTTERY Post Medieval |

| | |
|---|---|
| Significant Finds | GLASS Post Medieval |
| Significant Finds | POTTERY Modern |
| Significant Finds | GLASS Modern |
| Significant Finds | GLASS WORKING DEBRIS Roman |
| Methods & techniques | "Sample Trenches","Targeted Trenches","Test Pits" |
| Development type | Public building (e.g. school, church, hospital, medical centre, law courts etc.) |
| Prompt | Voluntary/self-interest |
| Position in the planning process | Not known / Not recorded |
| **Project location** | |
| Country | England |
| Site location | CAMBRIDGESHIRE PETERBOROUGH PETERBOROUGH Peterborough Cathedral |
| Postcode | PE1 1XS |
| Study area | 139.6 Square metres |
| Site coordinates | TL 1933 9875 52.573091668242 -0.238960215182 52 34 23 N 000 14 20 W Point |
| Height OD / Depth | Min: 1.33m Max: 1.33m |
| **Project creators** | |
| Name of Organisation | Cambridge Archaeological Unit |
| Project brief originator | Cathedral Archaeologist |
| Project design originator | Alison Dickens |
| Project director/manager | Alison Dickens |
| Project supervisor | Catherine Collins |
| Project supervisor | Matthew Collins |
| Type of sponsor/funding body | Dean and Chapter |
| Name of sponsor/funding body | Peterborough Cathedral |
| **Project archives** | |
| Physical Archive recipient | Cambridgeshire County Archaeology Store |
| Physical Archive ID | PCGH16 |
| Physical Contents | "Animal Bones","Ceramics","Environmental","Glass","Human Bones","Industrial","Leather","Metal","Worked bone","Worked stone/lithics" |
| Digital Archive recipient | Cambridgeshire County Archaeology Store |
| Digital Archive ID | PCGH16 |
| Digital Contents | "Animal Bones","Ceramics","Environmental","Glass","Human Bones","Industrial","Leather","Metal","Survey","Worked bone","Worked stone/lithics" |
| Digital Media available | "Spreadsheets","Survey","Text" |

| | |
|---|---|
| Paper Archive recipient | Cambridgeshire County Archaeology Store |
| Paper Archive ID | PCGH16 |
| Paper Contents | "Animal Bones","Ceramics","Environmental","Glass","Human Bones","Industrial","Leather","Metal","Survey","Worked bone","Worked stone/lithics" |
| Paper Media available | "Context sheet","Photograph","Plan","Section","Survey " |
| **Project bibliography** | |
| Publication type | Grey literature (unpublished document/manuscript) |
| Title | PETERBOROUGH CATHEDRAL 'Peterborough 900: Letting it Speak for Itself' Community Archaeology Programme, Summer 2016 |
| Author(s)/Editor(s) | Newman, R and Collins, C. |
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