SHOREDITCH VILLAGE (WEST)
LONDON EC2

AN ARCHAEOLOGICAL ASSESSMENT

LOCAL PLANNING AUTHORITY:
LONDON BOROUGH OF HACKNEY

PCA REPORT NO: 12642

SITE CODE: HYL12

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PRE-CONSTRUCT ARCHAEOLOGY

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SHOREDITCH VILLAGE (WEST)
LONDON BOROUGH OF HACKNEY
ARCHAEOLOGICAL EXCAVATION

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Assessment of an Excavation at Shoreditch Village (West), London Borough of Hackney, EC2

Site Code: HLY 12

Report No.: R12642

Central National Grid Reference: TQ 33430 82320

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1 Abstract

1.1 This report details the results and working methods of the archaeological excavation carried out at Holywell Lane (142 Shoreditch Village), Shoreditch, London Borough of Hackney. The work was undertaken by Pre-Construct Archaeology Limited on behalf of Bouygues (UK) Limited. The project was supervised by the author and the work was monitored by John Gould of Historic England acting as archaeological planning advisor to London Borough of Hackney and Peter Mills of Mills Whipp Projects for the client. The open area excavation (Trench 1) was carried out between 7th April 2015 and 23rd July 2015 and this was followed by a watching brief on the installation of service runs between 11th May 2016 and the 13th June 2016. The archaeological investigation revealed a continuous stratified sequence of archaeological deposits, features, and structures that extended form the Roman period to the early 19th century.

1.2 The natural drift geology, Hackney Terrace Gravel was reached across Trench 1 at between 12.24m OD and 11.04m OD.

1.3 The earliest archaeological deposits dated to the Roman period. The principal feature was a natural stream probably a tributary of the Walbrook River, running north to south along the western margins of the site. To the east of the stream archaic soils 0.20m-0.25m thick were recorded truncated by Roman field ditches.

1.4 A post-Roman agricultural type soil *c.* 0.50m thick was recorded across the excavated area. Deposits and features that probably date to the early 12th century were recorded in the south of Trench 1 and may be associated with the precinct boundary and gateway to the Augustinian nunnery of the Virgin Mary and St John the Baptist (Hollywell Priory) founded in 1152.

1.5 The priory was reorganised at the end of the 12th century when the priory church was rebuilt, the conventual buildings and cloister were formalised and the boundary (curtain) wall was built along with the principal gatehouse. The excavations at HLY 12 unearthed part of the western end of the priory church including masonry remains defining the north and south aisle, and the southwest portico entrance to the church. A large spread of glazed and decorated Westminster tiles, made in the late 12th or early 13th century, formed part of the floor in the nave. To the north of the church, part of the west (cellarium) range of the cloisters was also identified. In the south of Trench 1, the western side of the principle gatehouse of the monastery was unearthed and revealed as a two cell masonry structure abutting the masonry built curtain wall. A compacted gravel avenue led from the gatehouse to the southwest entrance to the church.

1.6 The gatehouse was rebuilt in the later medieval period to project bastion like, beyond the curtain wall. The east side of the rebuilt gatehouse was unearthed in the watching brief

(Trench 2). A notable feature was a well/cistern sunk adjacent but external of the gatehouse presumably for use by the people of Shoreditch.

1.7 Some 45 medieval burials were exhumed, 30 of which were located inside the church and the others close and to the south of the church. The burials within the south aisle resulted in raising the floor with at least 3 phases of floor discernible. The assemblage of human remains included both adult and juvenile and men and women. One skeleton was thought to be that of priest as it was accompanied by a pewter vessel known as a mortuary chalice.

1.8 There were indications that at least parts of the church were rebuilt in the later medieval period. Part of the south wall of the church showed signs of rebuild and the west range may have been altered. Importantly the building material recovered from deposits associated with the demolition of the church included rare late medieval moulded vaulted brick suggesting that at least some of the church must have been re-roofed using expensive and innovative material.

1.9 Holywell priory was dissolved in 1539 and over a number of years the church and the conventual buildings were torn down. The priory precinct was broken up and taken over by aristocratic land owners chiefly the Earl of Rutland to the south of the church and Henry Webbe, gentlemen usher to Queen Katherine Parr. The south wall of the priory church and the portico-entrance survived incorporated into a large 16th-century court-yard house, part of which was exposed in Trench 1. The two columns that defined the south aisle of the church also survived (at least in part) because they were built into an internal wall. A notable feature associated with the 16th-century building was a large fireplace recorded in Bay 2, Trench 1. The base of the fireplace was formed of glazed tiles and a second phase of fireplace floor was formed with brick and tile laid in a herring bone pattern. The fireplace faced west suggesting that the building had at least two adjoining wings set at right angles, a south and a west wing. A second north facing fireplace built in the 17th century suggested that at least by then, a north wing was in existence.

1.10 The north and west wings of the 16th-century house were pulled down probably in the late 17th century and the space subsumed into backyards. Excavated features included domestic rubbish pits, wells, cess pits and small ancillary buildings. There was also some indication of industrial activity was a small assemblage of bone working waste. Evidence of metal working was discovered in the gatehouse which had survived the Dissolution almost intact

1.11 The south wing of the Tudor house and the gatehouse remained standing until the late 18th century when the site was redeveloped for terraced housing.

2 Introduction

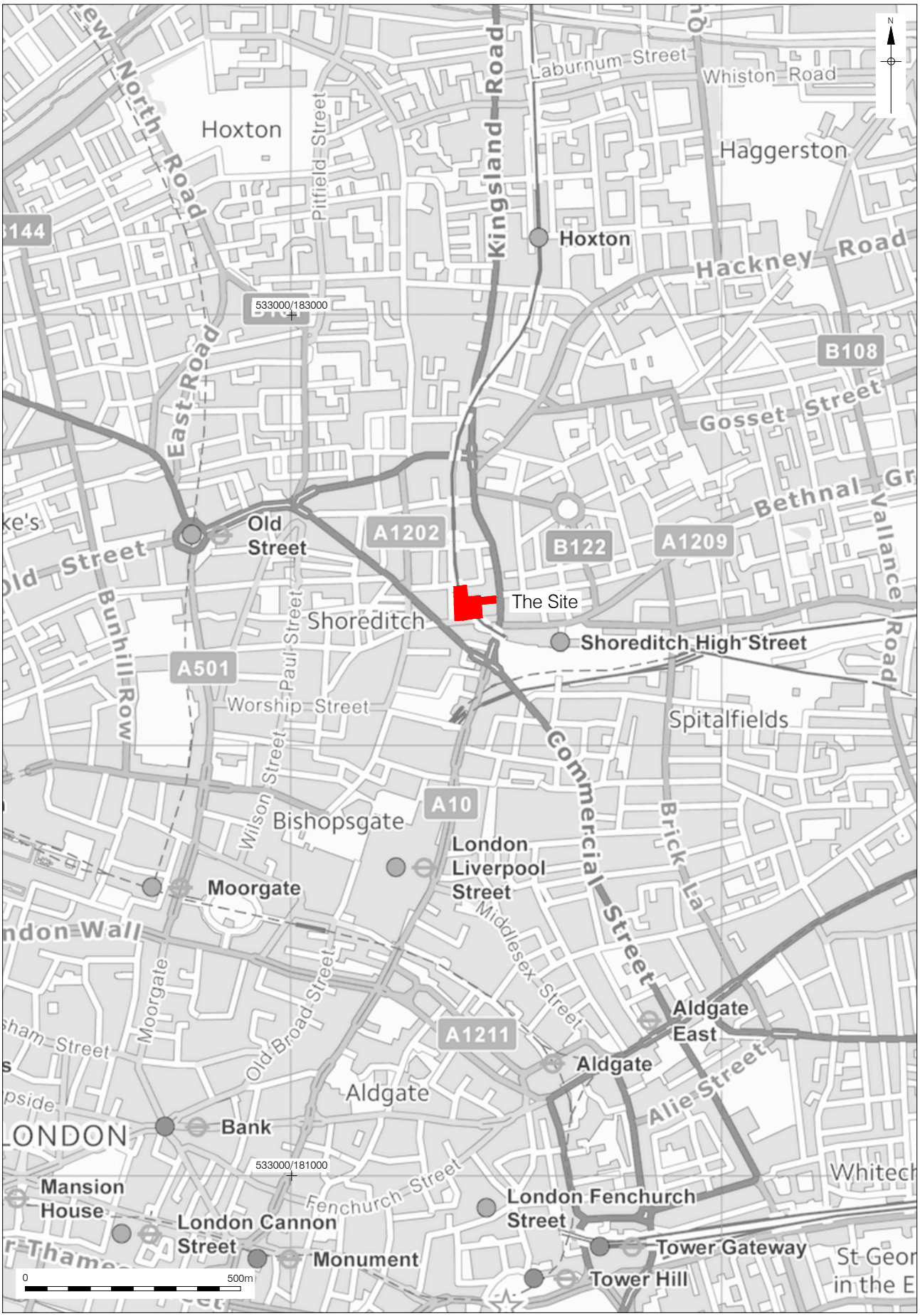
2.1 Pre-Construct Archaeology Limited (PCA) were commissioned by Bouygues (UK) Limited to undertake an archaeological excavation on land at Holywell Lane (142 Shoreditch Village), Shoreditch, London Borough of Hackney, EC2A 3ET. The site (Fig. 1) is bounded to the north by New Inn Yard and a property fronting Shoreditch High Street, bounded to the east by properties fronting Shoreditch High Street, bounded to the south by Holywell Lane and bounded to the west by King John Court. The site is dissected north to south by the London Overground railway viaduct. The site area is approximately 4622.78m². The site is located at central National Grid Reference TQ 33430 82320.

2.2 The current fieldwork followed a Written Scheme of Investigation prepared by Mills Whipp Projects (2014) which was approved by the Local Authority and a site specific health and safety method statement and risk assessment compiled by PCA (Bradley 2015).

2.3 The archaeological excavation was undertaken between 7th April 2015 and 23rd July 2015. The excavation trench (Trench 1) was to the west of the extant railway viaduct and covered an area of 791.46m² (see Fig. 2). The anticipated depth of the excavation 4.5m below current ground level required that the trench be secured by perimeter pilling and hydraulic propping. Following the open area excavation (Trench 1) a watching brief (Trench 2) was conducted to monitor the installation of attenuation tank, drainage runs and inspection chambers within the study site which had previously been undisturbed. The work was undertaken between 11th May 2016 and the 13th June 2016. The results of this watching brief have been integrated into this report.

2.4 The author supervised the archaeological excavation, and the site was project managed by Tim Bradley and the Post-excavation work was managed by Jon Butler. The archaeological works were inspected and monitored by Peter Mills of Mills Whipp Projects and John Gould of Historic England acting as archaeological planning advisor to London Borough of Hackney.

2.5 The excavation continued to use the unique site code HLY 12 assigned to the PCA 2012 evaluation (Douglas and Haslam 2012).



15/09/16 MR

Figure 1
Site Location
1:12,500 at A4

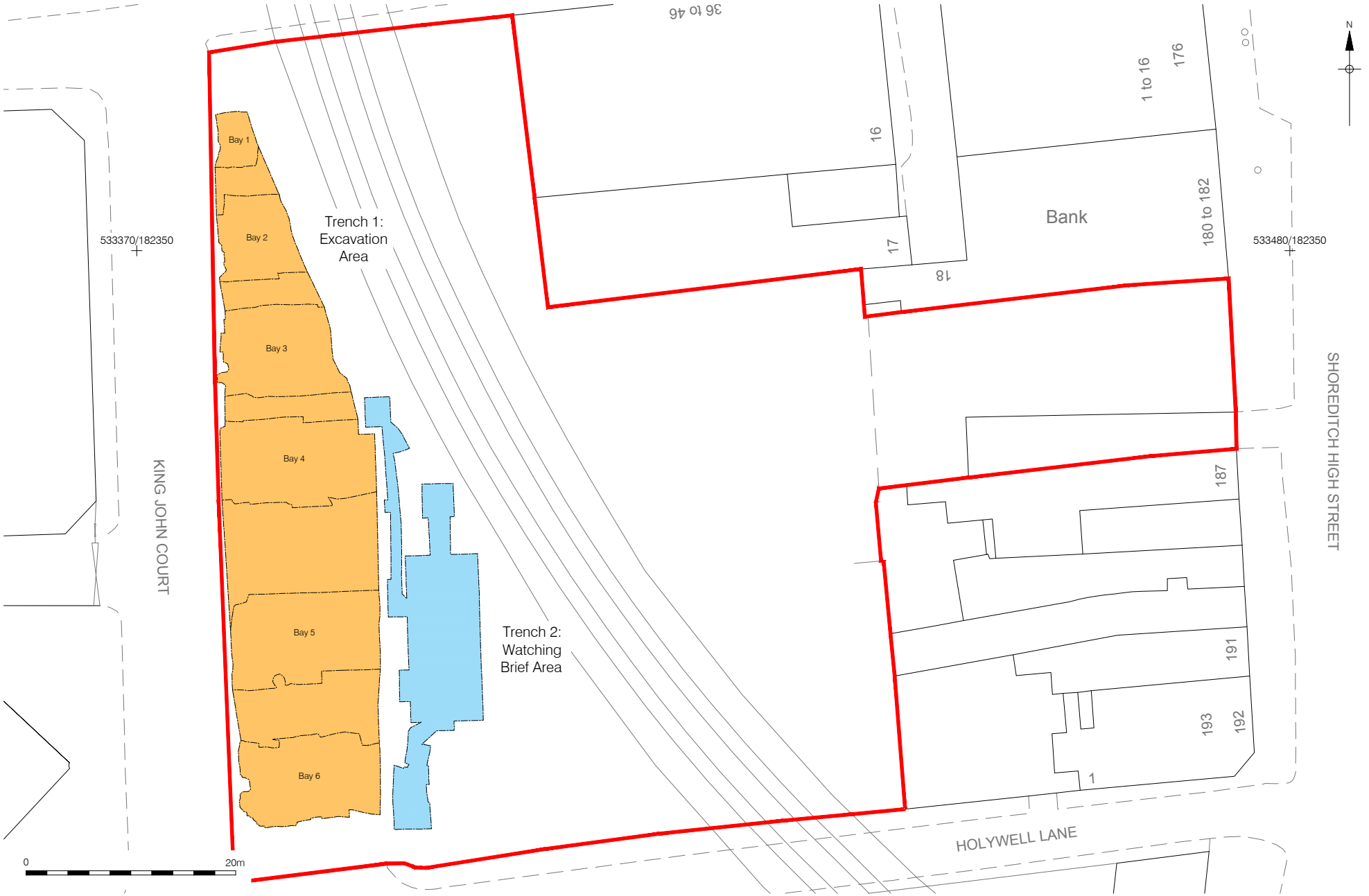


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Figure 2
Detailed Site Location
1:500 at A4

3 Site Background, Planning, and Development

3.1 The site has been the subject of previous archaeological investigations. In 1989 trial excavations was undertaken by the Museum of London, Department of Greater London Archaeology (Sloane 1989). This comprised a series of trenches (Trenches 1-15) across the site. At that time the 1860s railway viaduct occupied the western side of the site.

3.2 Subsequently excavations (site code HLW 06) were undertaken in 2007 on the site prior to the construction of a new railway viaduct. The results of these excavations were detailed in a Museum of London Archaeology monograph (Bull *et al.* 2011).

3.3 More recently in March 2012 two geotechnical pits were monitored by PCA (2012) on the western side of the site. These works revealed recent post-medieval deposits.

3.4 To further establish the archaeological potential of the site Mills Whipp Projects prepared a desk top report (2012a). This was followed by a supplementary archaeological report prepared by Mills Whipp Projects (2012b) to support the desk top submitted to English Heritage.

3.5 In order to better understand the surviving archaeological deposits on the western side of the site a further archaeological evaluation was undertaken by PCA in October-November 2012 (Douglas and Haslam 2012). The archaeological evaluation consisted of three stepped trenches (Trenches 1-3). The results of the evaluation broadly supported the findings of previous archaeological inventions undertaken across the study site. These excavations all demonstrated that islands of untruncated stratigraphy ranging from the Roman period to the 19th century, including significant medieval monastic remains survived across the site.

3.6 The archaeological excavation reported here was carried out in response to an Archaeological Written Scheme of Investigation (WSI) (Mills Whipp Projects 2015). Planning permission has been granted for the western part of the site and attached were conditions relating to archaeology:

A) No development shall take place until the applicant has secured the implementation of a programme of archaeological works in accordance with the Written Scheme of Investigation which has been submitted by the applicant and approved by the local planning authority.

B) No development or demolition shall take place other than in accordance with the Written Scheme of Investigation approved under part (A).

C) The development shall not be occupied until the site investigation and post excavation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation approved under Part (A), and the provision made for

analysis, publication and dissemination of the results and archive deposition has been secured.

Reason: Heritage assets of archaeological interest survive on the site. The planning authority wishes to secure the provision of archaeological investigation and the subsequent recording of the remains prior to development, in accordance with recommendations given by the borough and the NPPF.

Scope and Arrangements of Archaeological works;

No development shall take place within the proposed development site until the applicant, or their agents or their successors in title, has produced a detailed scheme showing the complete scope and arrangements of the proposed foundation design and ground works, which have been submitted to and approved by the local planning authority.

Reason: Heritage assets of archaeological interest survive on the site. The planning authority wishes to ensure that significant remains survive are not disturbed or damaged by foundation works, but are, where appropriate, preserved in situ.

3.7 The proposed development will include a new basement excavated across most of the land west of the railway viaduct. The underside of the slab will be *c.* 5m below current ground level. The basement will be of contiguous pile wall construction and cast slab. The basement will be a single structure but the northern third (Block E) will be residential development and the southern two thirds (Block F) will be a hotel.

4 Archaeological Methodology

4.1 The proposed new basement had a perimeter piled wall. In order to insert this it was necessary to excavate by machine a guide trench to remove obstructions. This enabling work will be monitored by PCA conducting a watching brief in 2015. The aim of the watching brief was to determine, as far as reasonably possible, the location, extent, date, character, significance and quality of any surviving archaeological remains and record the findings as appropriate.

4.2 The depth of the excavation at *c.* 5m below ground level required that the archaeological trench was secured by the perimeter piling and hydraulic propping.

4.3 The site was crossed by 19th-century viaduct foundations consisting of brick piers on concrete and rubble footings. Following the insertion of the hydraulic props the obstructions were removed by 360° machine excavator and breaker working under archaeological supervision. The viaduct foundations had removed all earlier ground and truncated the natural gravel but significant archaeological deposits survived between the viaduct footings (Bays 1 -6, Trench 1; Fig. 2).

4.4 The site had a modern overburden of *c.* 1-1.5m which was removed by 360° machine excavator under archaeological supervision. The machining was undertaken in successive 100mm spits using a wide blade ditching (toothless) bucket.

4.5 After the removal of the modern overburden PCA staff hand cleaned the underlying archaeological deposits. Low grade archaeological deposits were recorded by strip and map, and only after consultation and agreement with Historic England were they removed by machine under archaeological supervision. Otherwise the archaeological deposits were excavated by PCA staff using hand tools, i.e. trowels, shovels and mattocks and recorded using single context recording method on *pro forma* context and planning sheets. Plans and sections were drawn at a scale of 1:20 or 1:10 as appropriate. Black and white, and digital photographs were taken.

4.6 The excavation at HLY 12 unearthed remains that Historic England considered to be of national significance.This included:

- The N/S portico wall
- The E/W south wall of the church
- The two southern column bases
- The Westminster tile floor

These elements of the church were to be lifted and stored for possible reconstruction.

4.7 Following discussion with Jane Siddell and John Gould of Historic England, the structural elements listed above were hand drawn in plan at 1:20 and elevation on all sides to a

scale of 1:10. This information was supplemented by fully geo-referenced three dimensional scale photography of the structures. These plans and elevations were then digitised to form the base drawings from which the facing stones were marked up on site.

4.8 For the walls and columns, each facing stone was assigned a number, which was annotated on the drawn record detailed above. The stone was then removed by hand, and film-wrapped with labels indicating the stone number, the top and bottom of the stone and the direction of face.

4.9 For the Westminster tile floor the tiles were assigned a number and letter prefix which corresponded to their position on the floor, which was annotated on the drawn record detailed above. The tiles were removed by hand and film-wrapped with a label of the corresponding number prefix.

4.10 For the rubble core of the medieval walls and the foundation of the medieval walls and column bases, these elements were mass-lifted and stored as units for incorporation into the structures from which they had been removed, but individual masonry elements were not recorded unless they are reused moulded stone elements.

4.11 In this report context numbers are set within squared brackets [ ], small finds are enclosed by chevrons < > and environmental samples are bracketed with curly brackets { }.

4.12 The entire site archive including the site records and the finds will be deposited with the London Archaeological Archive and Research Centre (LAARC).

5 Geology and Topography

5.1 The study site was situated in antiquity in the upper reaches of the Walbrook within a braided network of streams. The main channels are thought to have risen either side of the study site (Bull *et al.* 2011, fig. 8) with the spring apparently within Holywell Priory.

5.2 The drift geology on the study site consists of banded orange sand and gravel (Hackney Terrace gravel) The boundary between the Hackney and Taplow gravel terraces to the south of the study site runs roughly along Holywell Lane (Bull *et al*. 2011, fig. 5, 12).

5.3 Previous geological and archaeological interventions have demonstrated that Langley Silt (brickearth) does not cap the terrace gravel within the site boundaries although it is present immediately to the south.

5.4 In the HLW 06 excavations natural gravel deposits were recorded at between 12.28m OD and *c*. 11.76m OD in the north of the site and 11.44m OD-10.73m OD in the south. These Pleistocene deposits were overlain in the south of the site by silty clays formed by over bank flooding probably emanating from a tributary of the Walbrook suspected to run north/south to the west of Shoreditch High Street. The height on the clay deposits was at *c.* 11.50m OD.

6 Archaeological and Historical Background

6.1 The archaeological and historical background it mainly taken from the Desk Based Assessment (Mills Whipp Projects 2012a) and the MoLA Monograph of the site (Bull *et al.* 20110.

6.2 Prehistoric

6.2.1 Little prehistoric material has been found in the vicinity of the study site. A water buffalo horn found to the east may be Palaeolithic in date and a Mesolithic axe found in Great Eastern Street to the west (Mills and Whipp Projects 2012).

6.2.2 It has been suggested that Old Street follows the line of an Iron Age track way, but this has not been corroborated by archaeology.

6.2.3 On the study site evidence of prehistoric activity was found in the excavations of 2007 (site code HLW 06) and included a few shallow and ephemeral pits, a possible fire pit, and a few flint blades and scrapers. However, the majority of lithics were residual and on the whole the evidence is thought to be indicative of only transient activity (Bull *et al.* 2011, 14).

6.2.4 Prehistoric ground level was recorded at HLW 06 at between 12.04m OS and 12.21m OD (Bull *et al.* 2011).

6.3 Roman

6.3.1 *Londinium* located approximately 1km to the south of the study site was established at the lowest bridging point across the Thames probably within the first decade after the Roman conquest in AD 43. The city soon became a focus for a radiating network of roads that connected to the interior and an important logistical base for the military as well as a thriving mercantile centre for an expanding Roman population.

6.3.2 Ermine Street, a major Roman road connecting *Londinium* with *Lindum* (Lincoln) and then *Eboracum* (York) ran close to the eastern boundary of the study site following more or less the line of the modern day Shoreditch High Street.

6.3.3 In the period up to AD 250 the area of the study site appears to have open ground with much of the southern part waterlogged or marshy and activity limited to some quarrying and short-lived attempts to drain the landscape (Bull *et al.* 2011, 18). Nevertheless finds of early Roman pottery and tile do suggest that the site lies in close proximity to early Roman buildings or settlement (Bull *et al.* 2011, 25).

6.3.4 The excavation of HLW 06 exhumed four late Roman burials located close to and east of a boundary ditch running north/south. Roman law prohibited the burial of the dead within the city and the cemeteries were laid out alongside the roads just beyond the settlements boundaries. The site lies approximately 400m to the north of the core of *Londinium's* northern cemetery (Bull *et al.* 2011, 17). However, there was no evidence that the burials were part of *Londinium's* northern cemetery, though they may represent a gradual thinning of funerary activity away from the urban centre (Bull *et al.* 2011, 24). Alternatively these burials may be associated with a rural settlement, as it was not uncommon for Roman burials to be placed by field or property boundaries or near Roman roads (Bull *et al.* 2011, 23).

6.3.5 Earlier excavation of the study site have demonstrated that Roman ground level sloped downwards from 12.20m OD in the north to 10.90m OD in the south (Douglas and Haslam 2012).

6.4 Saxon

6.4.1 The name of Shoreditch is thought to have an Anglo-Saxon derivation and by the 11th century probably formed part of the Stepney manor (Bull *et al.* 2011, 27).

6.4.2 The village of Shoreditch probably developed in the late 11th / early 12th century and focussed on the church of St Leonard at the junction of the Roman road of Ermine Street and Old Street.

6.4.3 During the Saxon period, the site appears to have been little used marginal land. The only Saxon find unearthed on the site was a bone pin found in a residual context on the HLW 06 excavations.

6.5 Early Medieval pre-1152

6.5.1 A large swathe of the land to the north of London was granted to the bishopric of London in the 7th century but by the 11th century the manor of Holywell or Finsbury was separated from the main estate to form a prebend, an estate for the support of one of the canons of St Paul's Cathedral (Bull *et al.* 2011, 27).

6.5.2 On the site there is very little evidence of activity before the foundation of Holywell priory in the middle of the 12th century. Excavated features in HLW 06 consisted of a solitary pit and a pond located in the in the southeast of the site. Furthermore only 7 sherds of residual early medieval pottery were recovered.

6.5.3 The land particularly in the south of the area appears to have been prone to repeated flooding of a channel of the Walbrook. This repeated process of water-logging, drying,

colonisation of plants and inundation (Bull *et al.* 2011, 32) raised the ground level to *c.* 12.90m OD in the north, sloping to 12.30m OD in the south.

6.6 Medieval

6.6.1 The priory of the Virgin Mary and St John the Baptist (Holywell Priory) was founded in 1152-58 by Robert FitzGelran, prebendary of Holywell or Finsbury and canon of St Paul's Cathedral to house the canonesses of the Augustinian Order. The foundation was confirmed by the Bishop of London, Richard de Belmeis and was definitely in existence by Michaelmas (29th September) 1158, when it received a grant from the King's chamberlain (Bull *et al*. 2011, 36).

6.6.2 The first monastic house to adopt Augustinian Rule was Colchester in *c*. 1104, and there were more than 200 houses by 1350. Initially the patrons were kings, courtiers and bishops but gradually by the late 12th century the patrons were increasingly local gentry (Douglas and Haslam 2012).

6.6.3 The number of nuns resident in the convent was quite small, 11 to 13 at any one time. A population that appears to have remained quite stable throughout the medieval period for the number of pensions granted at the Dissolution (1539) was 14 including the prioress (Bull *et al*. 2011, 48). In addition there would have been novices, pensioners, servants and priests to say mass.

6.6.4 At the time of the Dissolution the priory had an annual income of around £300 making it the ninth wealthiest monastery in the country. Two-thirds of the annual income derived from rents in the City (Mills and Whipp Projects 2012a).

6.6.5 The site of the priory lay on the west side of the main north road out of London (present day Shoreditch High Street). The initial land grants were a little piecemeal; the first was Robert FitzGelran who gave 3 acres of moor, a strip of land from Shoreditch High Street back along Holywell Lane. This was supplemented by land given by Richard de Belmeis, which would form the central part of the precinct. The northern part of the precinct was granted by Walter FitzWalter in 1189 (Douglas and Haslam 2012).

6.6.6 The site of Holywell Priory contained a spring called Haliwelle (Holywell) renowned for miraculous cures. It is not certain where the spring rose but later tradition puts it in the northwest of the precinct in an area of orchard. There was also another well in the 'great court' or service yard of the priory. Both wells are shown on the conjectural plan of Holywell Priory (LCC 1922, pl. 83 reproduced in Bull *et al.* 2011, fig. 20).

6.6.7 The priory precinct was a rectangular area covering approximately 8 acres between Shoreditch High Street to the east, Holywell Lane to the south, Curtain Road to the east and the line of Bateman's Road to the north. The principle gatehouse opened onto

Holywell Lane and there was a subsidiary gatehouse on the west side, leading from the service yard to open fields (Bull *et al.* 2011, 36).

6.6.8 At Holywell Priory the main claustral range lay to the north of the church. The Augustinian houses with cloisters set to the north included the Augustinian of St Mary, Clerkenwell and Holy Trinity Priory at Aldgate (Bull *et al.* 2011, 109). It seems likely that the chapter house would have been located in the usual position, opening off the centre of the east side of the cloisters. The east cloister range would have also have housed the dorter (dormitory) and the sacristy, the frater (refectory) formed the north cloister range, and in the west range stood the cellarium and offices. Further to the west extending north from an inner gateway was a range of buildings including nun's hall, chambers and kitchens. Beyond this range lay the 'Great Court', a service yard flanked by ancillary buildings including a Granary, a Mill house, a Bake house, a Brew House and a Wash house. Also on the west lay the Great Barn. To the north of the cloisters was located the Infirmary with its own chapel. Beyond the claustral buildings lay orchards and gardens (LCC 1922, pl. 83 reproduced in Bull *et al.* 2011, fig. 20).

6.6.9 The priory's cemetery lay to the south of the church enclosed by a wall to the east. A 1532 a Holywell Priory lease of three houses (formerly four) fronting Holywell Street (now Shoreditch High Street) and their garden states that the cemetery wall lay 6½ rods (32.69m) back from the street frontage and was at least 7 rods and 2 feet (35.81m) in length (Bull *et al.* 2011, 110). A robber trench excavated in HLP 89 may delineate the cemetery wall.

6.6.10 The 1989 excavation also unearthed a disarticulated skull and a wooden coffin containing an undisturbed skeleton from within the cemetery area. The excavation HLW 06 found a further 2 burials located in the cemetery (Bull *et al.* 2011, 42). A further 29 burials were exhumed in HLW 06 but all of these were from within the priory church.

6.6.11 The excavation of HLW 06 unearthed floor makeup deposits, fragmentary foundations and robber pits that have been identified as associated with the first phase of priory church. These remains were interpreted as forming part of a simple rectangular building with a north aisle (Bull *et al.* 2011, fig. 22). Cited comparable examples were the surviving nunnery (Benedictine) church at Nun Monkton, Harrogate, Yorkshire, Burnham Abbey, Buckinghamshire (Augustinian) founded 1266, Lacock Abbey (Augustinian), Wiltshire (13th century) and St Helen, Bishopsgate, London (Benedictine). The dimensions for the early priory church were put at a width of the central vessel at *c.* 13.8m, a south nave of a width of 7.5-8.0m and a north aisle of 4.2-4.5m. The length of the church was conjectured at least 30m but the east end was left open (Bull *et al.* 2011, 44, fig. 22).

6.6.12 However, Bull *et al*.'s interpretation of the early church has been questioned. The foundations described are mixed and the putative west wall is not set at right angles to the east/west aligned walls, and is clearly too close to the westernmost pier base (Mills and Whipp Projects 2012a).

6.6.13 The later phase of the priory church excavated at HLW 06 was marked by the construction of a narrower central nave with a north and a south aisle (Bull *et al.* 2011, fig. 32). The northern arcade was defined by two robbed out pier bases and the fragmentary remains of a third. The south arcade was demarcated by two columns and the plinth of a third. Of the two columns, one was round and the other quatrefoil compound pier. The columns were made of Caen stone, from Normandy with a rubble and mortar core. The plinths were all of a square uniform pattern. The alternating arcade design of pier-column-pier and the use of the compound pier were innovative features (Bull *et al*. 2011, 50).

6.6.14 Based on the architectural elements of the *in situ* columns at HLW 06 the later church was constructed between *c.* 1170-1190, after the original church had only stood for 30 or 40 years (Bull *et al.* 2011, 49).

6.6.15 Internal features to the church included two north/south aligned robber cuts appear to define the position rood screen and the pulpitum and a retrochoir (Bull *et al*. 2011, fig. 32).

6.6.16 The remains of four separate fragmentary tile floor surfaces that may have formed one floor (Bull *et al.* 2011, 61) within the later church were also recorded in the HLW 06 excavations. The tiles plain glazed 'Westminster' tiles located in the nave and in the vicinity of the circular column in the south aisle, several green and yellow glazed Low Countries tiles in Bay 2 and plain glazed Low Countries tiles in close proximity to the north/south aligned wall of the pulpitum screen (Bull *et al.* 2011, 61). In addition discarded and residual medieval floor tiles were of three main types decorated and plain glazed 'Westminster' floor tiles dated *c*. 1250-1310, plain glazed Low Countries floor tiles dated *c.* 1300-1480 and Penn tiles dated *c*. 1350-90.

6.6.17 Nevertheless the majority of the floor tiles from the priory church recovered in HLW 06 were of the 'Westminster' type and these would have been laid in the second half of the 13th century or early years of the 14th century, i.e. post 1250 (Bull *et al.* 2011, 150).

6.6.18 *In situ* decorated 'Westminster' floor tiles were uncovered in the HLP 89 excavations to the southeast of the south wall of the nave in the possible location (in the elbow of the south transept and the wall of the south aisle) of Lovell's chapel (Bull *et al.* 2011, 50 see fig. 32). Oddly these 'Westminster' tiles have been dated to the 15th century. Odder still Lovell's chapel is not supposed to have been added until 'sometime in the 16th century' (Bull *et al.* 201. 59) (of course the tile could have been reused).

6.6.19 It has been possible from the features exposed in the HLW 06 excavations to accurately measure the east-west bay dimensions of the later church at 4.467m (Bull *et al.* 2011, fig. 96). The width of the central vessel was 6.4m and the external width of the nave *c*. 15.05m (Bull *et al.* 2011, 113-114). The number of bays of the church is estimated by Bull *et al.* at 6 or 7 based on view of Wyngaerde's panorama (reproduced in Bull *et al*. 2011, fig. 88).

6.6.20 The church conjectured by Bull *et al.* (2011, fig. 32) has been made to conform to the more usual cruciform model although the choir, crossing tower and presbytery lay outside of the

area of excavation. Also conjectured are the documentary attested Lady's chapel and a chapel dedicated to St Thomas the Martyr.

6.6.21 In the evaluation of 2012 what was thought to be a possible mortar bedding layer for the church floor was identified in Trench 1 (Douglas and Haslam 2012).

6.6.22 By the end of the 12th century it seems that the Holywell Priory had accumulated enough wealth to rebuild the priory church. Two charters of Henry III issued in 1235 confirmed a charter of Richard I of 1189 and other grants received by the priory since that time. The Priory estate included the church at Dunton (Bedfordshire) and manor of Camberwell (Surrey). There was also revenue derived from estates and rents in Norfolk, Suffolk, Essex, Surrey and the City (Mills Whipp Projects 2012a).

6.6.23 Surviving documents demonstrate that in the 13th and early 14th century Londoners were leaving bequests to the Priory. In 1276 Richard de Tottenham left money for clothing for the nuns. In 1296 Ralph le Blund also left money for nun's clothing. In 1312 Thomas Romayn left money for clothing and shoes. The Priory also owned property in the parish of St Leonard's and was accumulating property in Shoreditch, Stepney and Enfield in 1282. Stow noted that Stephen Gravesend, Bishop of London, was the principal benefactor to the Priory in 1318. In that same year Edward II gave the convent 6 oak trees, presumably as part of a rebuilding programme (Mills Whipp Projects 2012a).

6.6.24 Relations with the secular local population could sometimes be strained. In 1314 Katherine de Crettingge claimed the Prioress and others had seized her goods and important financial document (the outcome of the dispute is not known) (Mills Whipp Projects 2012a).

6.6.25 Sir Thomas Lovell (died 1524) established in *c.* 1510 a chapel in the priory church and built a house in the precinct.

6.6.26 Lovell's men Lawrence Foxley and John Thomson also had houses located within the gates. William Berners was another gentleman whose house was within the precinct and abutted Lawrence Foxley's.

6.6.27 Two priests may have served Lovell's chapel and the 'priest's chambers lay to the south of the chapel, on the west side of Lawrance Foxley's house and probably formed a single storey (Bull *et al.* 2011, 113).

6.6.28 After the death of Sir Thomas Lovell in 1524, Thomas Manners, Earl of Rutland and chief steward of Holywell Priory established a residence within the south part of the precinct. The Earl's residential demesne was a complicated mix of buildings comprising multiple phases of construction and preceding structures including Lovell's mansion (Bull *et al.* 2011, 134).

6.6.29 All of the rented tenements at Hollywell Priory were in the southern part of the precinct grouped around the outer court and within part of the former burial ground and included

rooms over the outer gate (Bull *et al*. 2011, 134). By the end of the medieval period the outer court must have been a crowded place!

6.7 Dissolution

6.7.1 Holywell Priory was surrendered to the crown on 10th October 1539. The composite buildings of the Earl of Rutland, assembled before the Dissolution occupied a broad band across the southern third of the former priory precinct, to the south of the church and west of houses fronting Haliwellstrete (now Shoreditch High Street) (Bull *et al*. 2011, 49). The Earl held not only Lovell's mansion and gardens, but also the tenement and gardens formerly leased to Laurence Foxley, another tenement and garden previously leased to William Berners, a tenement called le Porter's Lodge (the main gate house) and four chambers with an adjacent piece of land called the cemetery (Bull *et al*. 2011, 49). A further building (formerly leased to John Thomson) was occupied by John Carleton. The dimensions of these buildings are not known but the approximate sequence from east to west was Lovell, Foxley, Berners, and Carleton's with the porter's lodge and the chambers lying to the south of them (Bull *et al.* 2011, fig. 67).

6.7.2 The bulk of the lands on the northern area of the former priory precinct was granted to Henry Webbe, gentleman usher of Queen Katherine Parr's priory chamber, initially under a lease of December 1539 (Bull *et al.* 2011, 85). At its greatest extent Webbe's property extended from the line of Curtain Road in the west to Shoreditch High Street in the east, and from the south wall of the church northwards to the line of Bateman's Row. It included the site of the church, the conventual buildings, ancillary and agricultural buildings, gardens and orchards.

6.7.3 The earliest picture of the Priory was Wyngaerde illustration drawn in 1544. It shows the priory church complete with a tall spire still standing. Buildings appear to be grouped around the church and the whole precinct surrounded by a wall.

6.7.4 Over the preceding decades the terms of the various sales and mortgages suggest that a considerable number of buildings had been erected in the northern part of the former precinct between 1544 and 1555. Giles Allen claimed to have greatly improved the property by building houses between 1555 and 1562. In 1577 Giles Allen would lease a number of buildings on the west side of the 'great court' to James Burbage who established 'The Theatre' the following year.

6.7.5 The Priory is shown again on Agas map of 1562, when the church had been demolished. The walled precinct is visible with the main gate in the Holywell Lane frontage. Behind the gate lies the Earl of Rutland's mansion.

6.8 Post-Medieval 1600-1900

6.8.1 The evaluation of 2012 revealed a sequence of walls, brick floors dumped deposits, and cut features related to the 17th-, 18th- and 19th-century development of the site (Douglas and Haslam 2012).

6..8.2 Faithorne and Newcourt map of 1658 shows a cluster of buildings in the southeast part of the study site with further buildings to the north fronting Shoreditch High Street. Morgan's map of 1682 shows the former priory occupied by building ranges grouped around yards with the priory gatehouse of Holywell Lane still standing.

6.8.3 Rocque's map of 1746 shows the study site occupied by buildings grouped around Holywell Court and the gate house remains. Interestingly a building with the possible church porch is depicted and to the east a garden wall may represent the outline of the south transept or possibly Lovell's chapel.

6.8.4 It was reported that the archway of the gatehouse was demolished in 1785 (Mills and Whipp Projects 2012a). By the late 18th century (Horwood 1799) the study site was occupied by terraced housing and back yards. The houses fronted Shoreditch High Street to the east, Holywell Lane to the south, Inn Yard to the north with Fosters Building fronting onto an east/west aligned alley in the centre of the site.

6.8.5 The site remained largely the same until the 1860s when a railway line was constructed running into Broad Street Station. A railway viaduct was built on the western side of the study site. The Ordnance Survey 1875 show the viaduct with most of the centre occupied by a timber yard (Holywell Court). Long thin plots occupied the frontage to Shoreditch High Street, while smaller properties fronted onto Holywell Lane and larger possible commercial properties were to the north. A similar pattern of occupation remained on the site until well into the 20th century.

7 Archaeological Sequence

7.1 Introduction

7.1.1 The stratigraphic sequence has been divided into eleven phases, they are as follows:

Phase 1	Natural
Phase 2	Roman
Phase 3.1	Early Medieval
Phase 3.2	*c.* 1190-1240
Phase 3.3	*c.* 1200-1350
Phase 3.4	*c.* 1350-1540
Phase 4	1540-1600
Phase 5	1600-*c.* 1670
Phase 6	*c.* 1670-1710
Phase 7	1710-1780
Phase 8	1780-*c.* 1850

7.2 **Phase 1: Natural (not illustrated)**

7.2.1 Phase 1 represents the natural drift geology across the site and was formed of banded orange sand and gravel (Hackney Terrace gravel). Untruncated natural deposits were encountered between 12.24m OD and 11.05m OD in Trench1 and were not exposed in Trench 2. The findings are consistent with the topographic model formulate by previous archaeological investigations (see Geology and Topography).

7.3 **Phase 2: Roman (Fig. 3)**

7.3.1 Phase 2 represents the earliest archaeological deposits and features identified on the site. The dominant feature was a natural watercourse running south along the west side of the Trench 1; this stream was probably a tributary of the River Walbrook. A few features of anthropogenic origin were also excavated including field ditches and postholes. The ceramic evidence does suggest that field boundaries and postholes were of Roman origin and that the stream was active during this period.

Water-course

7.3.2 On the west side of Bay 3, a deposit of silty clay [913] was recorded that measured 2.0m E/W by 1.78m N/S by 0.44m deep but was truncated to the north and south and continued beyond the edge of the trench to the west. Roman pottery dated AD 120-400 was found in this deposit.

7.3.3 In Bay 4, 2.50m to the south of context [913] deposits of sandy silt [520] partially overlain by silty sand [525] were recorded. In plan these deposits measured 7.10m N/S by 3m E/W and in section was seen that they filled a channel *c.* 0.66m deep (see section 33, Fig. 13). Roman pottery was recovered from both of these deposits.

7.3.4 Approximately 9m to the south in Bay 5 a probable continuation of the channel was recorded as context [771] (fills [770] and [748]). The channel measured 9m N/S at least 2.20m E/W and had a maximum depth of 0.92m. The basal fill [770] of the channel was silty gravel and this was capped by a greenish brown silt deposit [748].

7.3.5 What was probably the same channel [875] (fill [874], [873], [872]) was recorded in section in Bay 6 (see section 42, Fig. 13). The profile of the cut [875] was characterised by asymmetrical steeply sloping sides falling to break of slope and then a more gradual convex slope. The feature was at least 1.85m wide and 0.67m deep. A sequence of sand, silty clay and silty sand filled the feature.

7.3.6 The cut [875] was truncated by a probable re-cut to the channel [857] (fill [856]). The cut measured 0.85m wide and 0.26m deep and was characterised by sloping sides falling to a slightly concave base. The fill was silty sandy clay with occasional flecks of charcoal and occasional sherds of pottery dated AD 250-400. The highest level of fill [856] was at 11.89m OD.

7.3.7 Sandy silty clay deposits [1343], [1384] and [1348] were at least 0.60m thick and were recorded in Bay 6, in the southwest of Trench 1. The highest level on these deposits was at 11.94m OD. Late Roman ceramics were recovered from contexts [1343] and [1348].

7.3.8 Approximately 1m to the south of the deposits described above and truncated by a later feature, was a silty clay [1304] overlain by sandy clay [1272]. These clay deposits approximately 0.88m thick overlay natural gravel. The highest level on context [1272] was at 11.34m OD. Roman pottery dated AD 240-400 was found in context [1272]. The composition of these soils and their levels suggests that they could have been deposited by fluvial action. These deposits suggest a channel at least 4.70m wide.

7.3.9 The deposits of silts and clays described above appear to fill a natural channel running north to south. The channel was at least 43.5m long and in the south of the trench at least 4.70m wide.

Field boundary ditches

7.3.10 In Bay 1, a N/S aligned ditch [513] (fill [511]) was excavated. The ditch, which truncated natural terrace gravel, was at least 2.12m long by 0.75m wide and 0.23m deep. The feature continued north beyond the limits of the excavation and was truncated to the south by the 19th-century railway viaduct. The ditch was characterised by sloping sides falling to

a concave base. Filling the ditch was dark brown clayey silt that contained fragments of Roman ceramic building material (cbm) and pottery dated to AD 270-400.

7.3.11 Immediately to the east of ditch [513] a probable posthole [516] (fill [515]) was recorded. The circular cut measured 0.13m in diameter and 0.16m deep. Unfortunately no dating evidence was recovered from the silty clay fill of the posthole. However, the location of the posthole and its stratigraphic position strongly suggest that it was associated with the ditch and that both features may represent a field or property boundary.

7.3.12 A linear feature possibly a drainage ditch or gully [537] (fill [522]) was also recorded in Bay 4 to the south. The feature measured 7.50m N/S by 2.30m E/W and 0.27m deep and was truncated to the north and south. The cut was characterised by steeply sloping sides falling to a flattish base. The fill was sandy silt with occasional fragments of charcoal and animal bone.

Isolated postholes

7.3.13 The only other anthropogenic features recorded in Phase 2 were two isolated probable postholes. Context [1360] (fill [1359]) recorded *c.* 13m to the southeast of the ditch [513]. The cut measured 0.10m in diameter and at least 0.20m deep and was characterised by near vertical sides. Degraded wood filled the feature. Although no dating evidence was found the feature was assigned to Phase 2 on the basis of its stratigraphic position.

7.3.14 Another possible posthole [1330] (fill [1331]) was located in the very south of Trench 1 in Bay 6. The feature which truncated Roman layer [1335] (see below para. 7.3.19) measured 0.36m by 0.26m by 0.19m deep and was characterised by steeply sloping sides falling to a rounded base. The fill was a clayey sand. Unfortunately no dating evidence was retrieved and the feature is assigned to the Roman period based on its stratigrpahic position.

Archaic soils

7.3.15 In Bay 1 the ditch and posthole described above were covered by a sequence of gravelly silts and silty clays ([422], [473], [478] [527], [530] and [529]) which were 0.60m thick. Roman pottery dating to AD 270-300 was found in layer [422] and late Roman ceramics dated AD 250-400 were also retrieved from context [478]. The level on the top of this soil horizon was at 12.12m OD.

7.3.16 In Bay 2 a similar sequence of soils (contexts [1398], [1399] [1400] and [1403]) was recorded in the south facing section 62 (not illustrated). The top of this soil horizon sloped over a distance of *c*. 6m from a high of 12.0m OD in the east to 11.80m OD in the west.

7.3.17 Approximately 10m further to the south in Bay 3 a sequence of sandy silts *c*. 0.15m thick (context [854], [853], [758]) was recorded. The uppermost deposit was at 11.94m OD. Roman pottery dated AD 250-400 was retrieved from context [758]

7.3.18 In Bay 4 the fluvial deposits [520] and [525] and the gully [537] were overlain by a layer of greenish brown sandy silty clay [428] approximately 0.35m thick. Roman pottery dated AD 250-400 and ceramic building material (cbm) dated to the second century were recovered from layer [428]. Two 4th-century coins SF <62> and SF <63> (see Appendix 3) were also retrieved from the deposit. The highest level was at 12.02m OD.

7.3.18 In Bay 5 a sandy silt [1408] was recorded at 12.03m OD and the same ground horizon [772] immediately to the east of the water-course was at 11.76m OD.

7.3.19 In Bay 6, a sequence of clayey silts and sandy silt (context [1371], [1335] and [1317]) at least 0.78m thick was recorded in plan. The highest level on [1317] was at 12.35m OD. Roman pottery retrieved from layer [1317] is dated to AD 50-300 and pottery dating to AD 270-400 was recovered from the basal layer [1371].

7.3.20 In the southwest of Bay 6 overlying deposits that were thought to represent the fill of an ancient water-course were layers of greenish/brown silty sandy clay (contexts [1340], [850] and [1296]). The level on the top of this ground horizon was between 12.05m OD and 12.14m OD. Late Roman ceramics were recovered from context [1340]. These deposits could represent overbank flooding from a stream that had migrated further to the west.

7.4 Phase 3.1: Early Medieval (Fig. 4)

7.4.1 Phase 3 represents the post-Roman era up until the late 11th /early 12th century. For at least 6 centuries the site appears to have been open ground marginal to settlement. In the late 11th/early 12th century activity represented by a possible drainage ditch, metalled surfaces and a possible boundary ditch was concentrated in the south of Trench 1.

Archaic soils

7.4.2 In the north of Trench, in Bay 1, covering the earlier Roman soil horizon was a sequence of gravelly silt (contexts [528] and [532]) overlain by clayey silt deposits ([447], [464], [526] and [465]). These deposits covered an area measuring 5.30m N/S by 2.80m with a maximum thickness of *c*. 0.50m. The top of this soil horizon was between 12.63m OD and 12.31m OD. The stratigraphic position of these deposits suggests that they were formed after the Roman period but pre-date the construction of the conventual buildings in this part of the site. Pottery found in layer [465] is dated 1080-1500 whilst the ceramics ascribed to context [447] and dated 1240-1350 are thought to be intrusive.

7.4.3 In Bay 2, the putative Roman layers were overlain by sandy silt deposits ([1397], [1401], [1402], [1385] and [1390]). These post-Roman layers appear to predate the construction of the priory church. The level on the top of this soil horizon was between 12.20m OD and 12.31m OD.

7.4.4 Further to the south, in Bay 3, a layer of greyish brown silty clay [1097] was recorded. The deposit measured 9.50m E/W by 2.50m N/S and the highest level was at 12.49m OD. The level and the stratigraphic position of the deposit suggest a post-Roman but pre-construction of the priory church for the formation of this layer.

7.4.5 Similar silty sandy clays ([442], [406] and [258]) overlying putative Roman deposits, were recorded in Bay 4 between 12.20m OD and 12.23m OD. Pottery dated 1100-1200 was retrieved from layer [258]. These layers also appear to predate the monastic phase of the site.

7.4.6 In Bay 6, truncating earlier Roman channel fill a linear feature [1334] (fill [1333) was excavated. The cut was orientated NW/SE and measured 0.45m long, 0.10m wide and only 0.07m deep and was truncated to the south. The fill was a mid-brown silt. Whilst the function of this ephemeral feature is uncertain its formation does suggest that that the earlier channel was now no longer open. The feature [1334] was covered by sandy clay [1318] 0.19m thick, recorded at 12.16m OD. Pottery found in the layer [1318] dated 1000-1150 and the cbm 1135-1300.

7.4.7 To the east of layer [1318] (see above), a silty clay deposit [1332] with occasional fragments of cbm, pottery, metal and animal bone was recorded that measured 1.72m N/S by 1.26m by 0.10m thick. The deposit truncated on all sides and from above by later intrusions was at 11.84m OD. The layer [1332] overlay the putative Roman channel fill and may represent deliberate filling in of the channel or consolidation of soft ground. Pottery found in the layer dated to 1080-1350 and fragments of cbm also retrieved from the deposit dated 1180-1450.

Drainage ditch

7.4.8 The layer [1318] (see above) was truncated by an E/W aligned feature [1223] (fill [1222]). The feature measured at least 1.36m long and 0.62m wide and 0.15m deep but it was truncated to the east, west and south. The cut was characterised by steeply sloping sides falling to a flat base. The regularity of the linear feature does suggest an anthropogenic origin. Furthermore the gravel fill may indicate that the feature represents a drainage ditch.

Dumped deposits

7.4.9 The ditch [1223] was covered by a layer of clayey silt [1221] 0.21m thick. The level was at 12.37m OD. Although no dating evidence was found in the layer [1221] or the underlying feature [1223] their stratigraphic position does suggest a post-Roman date.

7.4.10 In the south-central part of Bay 6 overlying an archaic soil horizon thought to be of Roman origin was a sequence of sandy silt [1316] and silty sand [1306]. The highest level was at 12.33m OD.

Boundary ditch

7.4.11 In the south of Bay 6, a stretch of an E/W orientated feature [1320] (fill [1319]) that truncated natural terrace gravel was excavated. The cut measured 1.46m long by at least 0.66m wide and 0.66m deep and was truncated to the east and west and continued beyond the edge of the excavation to the south. The cut was characterised by a steeply sloping convex side falling to a break of slope 0.45m below the top of the cut before falling away to a base that was beyond the area of excavation. The fill was a grey brown clay. The profile and orientation of the feature suggest that it may have been a ditch and it may be that it represents an early medieval boundary.

Surface?

7.4.12 In the southeast of Bay 6, gravelly silty clay [1278] overlain by a compacted mix of clay and gravel [1264] was recorded in plan at 12.48m OD. Just to the north and separated from these deposits by the later foundations for the monastic curtain (sleeper) wall (see Phase 3.2, para 7.5.48) was probably the same gravel surface recorded as [1370]. These deposits appear to have been deliberately laid down to form a metalled surface perhaps a road. Medieval tile was found in layer [1370] and dated to 1180-1450.

7.4.13 Another spread of metalling was recorded a further *c.* 2.50m to the west where a sandy silt layer [1307] was overlain by a patch of compacted gravel [1300] recorded at 12.46m OD. Although very speculative the surface [1300] may represent the footprint of a building.

7.5 Phase 3.2: *c.* 1190-1240 (Fig. 5)

7.5.1 This phase represents deposits and features associated with the construction of the priory church, the curtain wall and the main gatehouse on Holywell Lane and the laying out of an avenue from the gatehouse to the church. These remains included; in Bay 3 a stretch of the south wall, part of the portico entrance and the remains of two columns that define the south aisle. In Bay 2, foundations for two columns and a stretch of the north wall of the church delineate the nave and the north aisle. In Bay 1 and 2 masonry foundations are thought to be the partial remains of the west range of the cloister and the west cloister

alley. In Bay 6 the remains of a two cell building were unearthed thought to represent the priory gatehouse. A stretch of the metalled way that connected the gatehouse and the church was unearthed in Bays 4 and 5.

Priory Church

7.5.2 In Bay 2, dumped deposits of crushed greensand and Caen stone and silty clays with lenses of stone chippings capped by compacted gravel (contexts [1366], [1372], [1363], [1166], [1325] and [1262]) raised ground level to *c.* 12.44m OD.

7.5.3 In Bay 3, across an area measuring 10m by 6m a sequence of dumped deposits clayey silt layers, stone chippings and mortar layers (contexts [1085], [1375], [1374] [1367], [1357]/[1201]) were excavated. These deposits raised ground level to *c.* 12.47m OD. Pottery recovered from layer [1201] dated 1050-1150. The ground horizon in Bay 2 and 3 is thought to represent the ground level at the time of the construction of the priory church.

The north wall

7.5.4 In Bay 2, the alignment of the north wall of the church was defined by chalk rubble foundations [1323]. The foundations measured 5.60m E/W by *c*. 0.80m E/W and they continued beyond the limits of the excavation to the east and west. The highest level on these foundations was at 12.41m OD.

North aisle

7.5.5 Exposed in Bay 2, located 2.50m to the south of the north wall of the church were the remains of two columns that defined the north aisle. Of the western column [1145] only the foundations and part of the Caen stone chamfered edging in the southeast corner of plinth survived. The foundation to the column was formed of mortared stone rubble [1235] that measured 1.40m N/S by 1.27m E/W and approximately 1.0m deep. The highest level on the foundation was at 12.46m OD. The plinth measured 1.18m x 1.16m and the highest level was at 12.54m OD.

7.5.6 The eastern column [1237] was represented only by a rectangular foundation of mortared stone rubble that measured 1.50m E/W by 1.30m N/S and *c*. 1.0m deep. The columns [1145] and [1237] set 4.25m apart (centre to centre) would also have supported an arcaded arch.

South wall of the church

7.5.7 In Bay 3, layer [1085] (see above, para 7.5.3) was truncated by the construction cut [1080] for the south wall of the priory church. The construction cut measured 9.60m long 0.75m wide and 0.65m deep and it continued to the west and east beyond the limits of the trench. The cut was characterised by vertical sides falling to a flat base. Roughly squared chalk blocks bonded with sandy gravel [1041] formed the lower 0.50m of the foundation. Above [1041] was two courses of ragstone [901] roughly hewn and bonded with a coarse yellow sand. The level on the ragstone foundation was at 12.43m OD.

7.5.8 Standing elements of the south wall survived at the west and east ends of Bay 3. To the east wall [947] measured 2.10m long, 0.70m wide and 0.34m high. The wall was built with a facing of predominately roughly hewn ragstone and with some Reigate stone and chalk randomly coursed and bonded with a coarse sand lime mortar and a rubble mortared core.

7.5.9 To the west, wall [1011] was 3.70m long and stood to a maximum height of 0.97m. The highest level on the wall was at 13.45m OD. The bottom *c.* 0.30m of wall [1011] was built in similar fashion to [947]. However, the north facing elevation 49 (see Fig. 14) of the wall shows that a lacing course of tile separated an upper section built utilising 2 courses of much larger (up to 225mm across) squared or roughly squared Reigate stone blocks and then two courses of small flatter stones acting almost as another lacing course with larger stones on top. The elevation also shows the eastern side of a projecting masonry element (a respond) built with 3 courses of Reigate stone ashlar blocks with a chamfered edge. An arch, would have sprung off this respond and connected the column [902] to the south (see para 7.5.15, below). The western side of this projecting masonry incorporated the portico portal jamb which was at least in part replaced in the post-Dissolution period.

7.5.10 An off white grey mortar render [959], 80mm thick, survived in patches on the north facing (internal) elevation of the wall [1011]. The render was probably part of the original walling scheme although it may have been re-applied on many later occasions.

7.5.11 The remains of the north and south walls give an internal width of the church of *c.* 13.80m.

Portico entrance

7.5.12 At the west end of wall [1011], at right angles to it was a wall projecting south that formed the east side of a portico entrance to the church. The construction cut was contiguous to the construction cut for the south wall of the church and the chalk [745] and stone [744] foundations were constructed in a similar fashion to the south wall, suggesting that the portico was an original feature of the church. The east wall [743] of the portico measured 2.51m long by 0.75m wide and survived to a height of 0.35m. The wall and foundations were truncated to the south. The highest level was at 12.91m OD. Wall [743] survived to the height of what appears to be the first tile lacing course and was built with roughly hewn ragstone and occasional flint and tile facing and a rubble mortared core.

7.5.13 The east side of the portico portal was embellished externally with a segmented Reigate stone pier. The surviving stone segments were individually recorded (contexts [1016], [992], [993], [1005], [1046], [1056], [1057], [1060], [1061], [1064] and [1063]). (Plate 1). The pier would have supported the portal arch.

7.5.14 A layer of compacted clayey silt [1073] with frequent fragments of mortar and fragments of Reigate stone may represent the floor makeup on the threshold to the portico portal. The level on this deposit was at 12.42m OD.

South aisle

7.5.15 Set *c.* 2.50m to the north of the respond noted in the south wall of church was the location for a surviving compound column set on a 0.70m square plinth [902]. A second plain column [903] was set 4.25m (centre to centre) to the east. These two columns would have supported an arcade arch and define a 2.40m wide south aisle. The columns were built of segmented Caen stone blocks. The highest level on [902] was at 13.13m OD and the highest level on [903] was at 13.21m OD.

7.5.16 A layer of firmly compacted light grey brown clayey silt with patches of crushed Reigate, Caen stone and chalk as well as patches of mortar [1081] may represent floor makeup in the south aisle. The level on the floor makeup was at between 12.53m OD and 12.48m OD. Cbm recovered from this layer dated to 1135-1300.

7.5.17 At the west end of the south aisle opposite the portico entrance floor make up layers may have been represented by a firmly compacted sandy silt [1052] overlain by a mortar bedding layer [1040]. The highest level on the mortar was at 12.58m OD.

Nave

7.5.18 The two columns [902] and [903] in Bay 3 are set opposite columns [1145] and [1237] in Bay 2 and they define the central vessel of the church. The columns would have supported vaulted ceiling above the nave. The distance between the columns of the north and south aisle was 7.5m (centre to centre), the width of the nave.

7.5.19 In Bay 2, a posthole [1249] (fill [1248]) within the nave may represent a structural support, part of the necessary construction enabling works perhaps scaffolding or other temporary timber structure. The circular cut measured 0.40m by 0.35m by 0.25m deep and was characterised by near vertical sides falling to a concave base. The fill of the posthole was sandy silt with frequent flint stone nodules used as post packing.

Cloisters

7.5.20 In Bay 1, contexts [435] and [436] represent the clayey silt deposits 0.18m thick and ground level between 12.51m OD and 12.49m OD on the west side of the trench. On the east side of Bay 1, contemporary ground level represented by silty clay [446] and was recorded slightly higher at a maximum of 12.72m OD. Pottery found in context [436] is dated to 1170-1200 and ceramics from [446] date to 1080-1200.

The West Range

7.5.21 The medieval ground in Bay 1 (described above) was truncated by the construction cut [295] for a N/S aligned masonry foundation. The cut characterised by vertical sides falling to a flat base, measured 4.85m long 1.34m wide and 1.26m deep but was truncated to the south and continued beyond the limits of the excavation to the north. The cut [295] held a foundation [256] formed of large chalk blocks and occasional Reigate stone layered with gravelly sand. The highest level on this partially robbed foundation was at 12.56m OD.

7.5.22 In Bay 2, on the same alignment as the foundation [256] unearthed in Bay 1 and probably a continuation of it was a chalk rubble foundation [1322]. The foundation [1322] measured 1.0m N/S and 1.0m wide but was truncated to the north and abutted the north wall of the priory church to the south. The foundations [256] and [1322] probably represent the eastern wall of a building that measured at least 10m N/S by 3.0m E/W that formed the west range of the cloisters.

West range Room 1 and 2

7.5.23 In Bay 1, context [372] represents an E/W aligned foundation to the west and at right angles to the foundation [256]. The foundation [372] was built in similar fashion to context [256], furthermore the foundation [372] was set in a trench contiguous with the construction cut for [256] suggesting that both foundations were built as a single event. The foundation [372] supported a surviving single course of standing wall [366]. The wall was built with mortared ragstone and Reigate stone and occasional flint nodules in the rubble core. The wall measured 1.50m E/W by 0.53m wide and continued to the west beyond the limits of the excavation. The highest level on the wall was at 12.80m OD.

7.5.24 The wall [366] divided the west range into two rooms. Room 1 to the north which measured at least 3.20m by 1.20m and Room 2 to the south which measured *c.* 5m N/S by at least 1.20m E/W.

7.5.25 In Room 1, abutting wall [366] was a compacted floor make up deposit of clayey silt [362]. This deposit measured 2.10m N/S by 0.70m E/W but was truncated to the north and continued beyond the limits of the trench to the west. The level was at 12.54m OD. Pottery found in the layer dated to 1170-1350 and the cbm dated to 1080-1350.

7.5.26 Two pits [368] (fill [369]) and [370] (fill [371]) truncated the layer [366]. The larger of the cuts was irregularly shaped and measured 0.65m across and 0.23m deep. No dating evidence was recovered from these features which may represent localised repair to the floor. The pits [368] and [370] were covered by deposits of compacted silty sands [358] and [347] which may have been bedding layers for a floor since removed. Pottery found in layer [358] dated to 1080-1350.

7.5.27 In Room 2 a compacted silty sand [378] was recorded. The layer [378] measured 1.40m E/W by 1.30m N/S but was truncated to the south and continued beyond the edge of the trench to the west. The level was at 12.60m OD.

Cloister alley

7.5.28 In Bay 2, approximately 2.30m to the east of the wall alignment [256]/[1322] a parallel wall foundation [1324] was recorded. The chalk and flint foundations measured 0.90m wide and 0.80m long but were truncated to the north and abutted the north wall of the priory church to the south. The foundation [1324] probably represents the inner wall of the 2.20m wide cloister alley.

7.5.29 In Bay 2 a sequence of moderately compacted silty clay and clayey sandy silt layers ([933], [912] and [892]) set between the two wall alignments [1322] and [1324] are thought to represent floor makeup within the cloister alley. The highest level was 12.63m OD. Pottery found in layer [912] is dated to 1200-1500.

7.5.30 In the cloister alley, truncating the floor makeup deposit [933] was a possible posthole [925] (fill [924]). The circular cut measured 0.35m in diameter and 0.29m deep and was characterised by steeply sloping sides falling to a flat base. The fill was clayey silt. The posthole may represent scaffolding used in the construction of the cloister buildings.

7.5.31 Also truncating layer [933] was a linear feature [923] (fill [922]). The feature was orientated N/S and measured 0.75m long by 0.28m wide and 0.17m deep. The cut was characterised by near vertical sides falling to a flat base. The fill was reddish brown clayey silt. The feature may represent a decayed timber, either the detritus of construction or deliberately laid down perhaps to level the ground.

Curtain wall

7.5.32 In the south of the Trench 1, in Bay 6, an E/W orientated wall [1280] ([1376], 1031] [958]) ran the full width of the trench some 11.50m. The construction cut [1280] was 0.80m wide and 0.87m deep and characterised by vertical sides falling to a flat base. The foundation was formed of roughly mortared chalk rubble and cbm recovered from the rubble dated to 1240-1450. The highest level on the foundation was at 12.47m OD. For most of the length of the wall no standing wall survived, only at the west end did the wall [958] remain

partially intact. Recorded in the east facing section 50 (see Fig. 14) the standing wall [958] was recorded surviving to a height of 12.61m OD (4 courses). The wall was built with a randomly course face of roughly hewn ragstone up to 200mm across, with a rubble core. Tile used in the wall is dated to 1180-1450. The wall is thought to represent the curtain (boundary) wall to the monastery.

Deposits to the south of the curtain wall

7.5.33 To the south of the curtain wall a sequence of medieval made ground was excavated. The basal layer was a silty clay [1257] that measured 1.46m E/W by 0.72m N/S which was partially overlain by a compacted sandy gravel [1250] at a level of 12.47m OD. It may be that the gravel represented a prepared surface. Covering the gravel was a sandy silt [1245] 0.08m thick that could represent trample. The only dating evidence found in these deposits were fragments of peg tile dated 1240-1450.

Buttress(?) against the curtain wall

7.5.34 Truncating layer [1245] and abutting the south face of the curtain wall was a masonry foundation [1251]. The construction cut measured 1.10m N/S by 0.60m and 0.19m deep but truncated to the south. The foundation was built with mortared Reigate stone and chalk rubble. Although this feature is a bit of an enigma it is possible that it is a buttress supporting the curtain wall.

Gatehouse

7.5.35 Abutting the north face of the curtain wall were the remains of the western part of a gatehouse. The west wing of the gatehouse was a two cell structure (Rooms 1 and 2). A layer of compacted gravel [1363] recorded at 12.47m OD probably represents ground level at the time of the construction of the gatehouse.

Room 1

7.5.36 The construction cut [1266] for the east wall of the gatehouse truncated layer [1363]. Cut [1266] held a foundation [1377] of mortared stone rubble. Only a single course of the standing wall [1184] survived but it appeared to have been built in a similar fashion to the curtain wall [958]. The wall measured 3.50m long by 0.60m wide. Medieval tile recovered from the wall [1184] is dated 1180-1450.

7.5.37 At the south end of the foundation [1377] recorded in the west facing section 61 (Fig. 14), was peg tile laid on edge [1373], measuring 1.05m N/S and set on a bed of yellow sandy mortar [1378]. Built on the top of the foundation [1377] it seems probable that this tile

coursing represents a threshold and the position of a doorway. The tile used in the construction of [1373] is dated to 1180-1450.

7.5.38 Abutting the north end of wall [1184] was an E/W orientated foundation [1265] that represented the alignment of the north wall of Room 1. The foundation measured 2.50m long 0.70m wide and was built with mortared chalk and ragstone rubble. The foundation [1265], truncated by a later cellar, was found between 12.20m OD and 12.12m OD.

7.5.39 The N/S aligned west wall of Room 1 was an internal dividing wall between the east and west cells, i.e. between Rooms 1 and 2. The wall [1185] was built with roughly squared chalk blocks with some flint nodules and pieces of tile randomly uncoursed. The wall measured 3.20m long and 0.50m wide. The highest level on the wall was at 13.07m OD. The internal dimensions of Room 1 measured 2.80m by 2.20m.

7.5.40 Contexts [1226] and [1163] represent compacted clayey silt that comprised the floor make-up in Room 1. The highest level on the floor makeup was at 12.53m OD. What may have been part of the original floor was represented by a patch of stone cobbles [1081] that measured 0.65m by 0.55m. The level on the floor was at 12.50m OD.

Room 2

7.5.41 To the west and adjacent to Room 1, was Room 2. The west wall [1119]/[971] of Room 2 abutted the curtain wall [958] to the south. The construction cut [1125] was 0.60m wide and was characterised by vertical sides falling to a flat base. The highest level on the construction trench was at 12.40m OD to the west (the external side), on the east side the construction cut was lower at 12.20m OD, an indication that Room 2 was sunken. The wall was faced with ragstone and chalk blocks randomly uncoursed with a rubble core. The wall measured 3.40m long by 0.50m wide. The highest level on the wall was at 12.99m OD.

7.5.42 The rear E/W aligned (north) wall [741] was built with mortared chalk, and ragstone stone blocks randomly coursed. The internal face of the wall was predominantly chalk. Cbm found in the wall dated to 1480-1700 but this is thought to have been introduced later perhaps as a repair. The wall measured 3.50m long and 0.40m wide but the wall was truncated at its east end by a later drain and the wall was re-built in later phases. The highest level on the wall was at 13.43m OD. The internal measurements of Room 2 were 3.20m by 3.20m.

7.5.43 On the eastern side of Room 2, context [1209] represents a layer firmly compacted silty clay. The deposit which measured 3.20m by 1.40m was truncated by a drain to the west. The layer may have represented the remnants of a beaten earth floor or floor make-up. The level was at 12.09m OD. Pottery found in the layer dated to 1240-1350 and the cbm dated 1180-1450.

7.5.44 The layer [1209] was truncated to the west by the construction cut [1170] for a drain [1169]. The cut measured 3.14m long, 0.46m wide and 0.14m deep and continued underneath the north wall [741] of Room 2. The cut was characterised by vertical sides falling to a flat base that inclined to the north. The sides and the part of the base of the drain were lined with peg tile dated 1240-1450. The drain was filled with a silty clay [1154] and pottery found in this deposit dated to 1280-1350.

7.5.45 Partially overlying the drain [1169] was a layer of silty clay [1099] that measured 3.20m N/S by 2.72m E/W. Interpreted as floor make-up, context [1099] was overlain by the remnants of a tile floor [1098] that measured 2.08m N/S by 0.89m E/W. The level on the floor was at 12.36m OD. Pottery recovered from the layer [1099] dated to 1280-1350 while the peg tile used in the construction of the floor dated 1240-1450.

7.5.46 A similar sequence of floor deposits was recorded on the east side of Room 2, overlying layer [1209] were the silty clay deposits [1103] and [1093]. Pottery found in layer [1103] dated to 1240-1350 and the cbm dated 1180-1450. Ceramics retrieved from layer [1093] dated to 1270-1300 while the cbm is dated 1480-1600 but this material is thought to be intrusive. The highest level on these floor make-up deposits was at 12.35m OD.

7.5.47 The silty clay deposits described above were capped by the remnants of a tile floor [1053]. The floor measured 2.08m N/S by 1.40m E/W and the highest level was at 12.47m OD. The peg tile used for the floor is dated 1240-1450 and pottery associated with the floor is dated 1200-1350.

The gateway

7.5.48 To the east of the gatehouse was the actual gateway. Across the gateway (see below) the curtain wall was a sleeper wall and would never have stood beyond ground level.The compacted gravel layers [1365] and [1199] represent the surface of the gateway at an original level of between 12.51m OD and 12.53m OD. Three ragstone blocks laid flat appear to be the actual gate stop (see Plate 2). The level was at 12.57m OD. If the door stop marks the centre of the gateway then a *c.* 6m wide entrance can be conjectured.

The avenue

7.5.49 The gatehouse and the southwest portico-entrance to the church (a distance of approximately 36m) was connected by a roadway. This roadway survived and was recorded in plan, in Bays 4 and 5. The road makeup was *c.* 0.50m thick and was composed of layers of compacted silty sandy gravel and gravelly clay and crushed stone and chalk. The cambered surface of the road (contexts [376], [377] and [701]) was *c.* 6m wide. The level on the road was between 12.54m OD and 12.47m OD. Pottery dated 1240-1400 and cbm dated 1240-1450 was recovered from the road surface layer [376]

and ceramics dated 1320-1400 and tile fragments dated 1250-1350 were found in the surface [377].

The outer court

7.5.50 The medieval ground to the north of the gateway, south of the church and east of the avenue was open ground and part of an outer court to the priory. In Bay 4 the ground horizon [409] to the east of the avenue was at between 12.52m OD and 12.49m OD. Pottery found in the layer [409] dated 1270-1350 and the cbm dated to 1480-1550 but this is likely to be intrusive.

7.6 Phase 3.3: *c.* 1200-1350 (Fig. 6)

7.6.1 This phase represents the use of the monastery in the 13th and first half of the 14th century. This included the remains of 27 human skeletons unearthed in Bays 2, 3 and 4. All the monastic buildings were retained in this phase. There was evidence of occupation in the west range and renewal of the floor in the portico. In the gatehouse, in Room 1 post pits may be evidence of repair. In Room 2 at least part of the floor appears to have been re-laid. In Bay 4, there was evidence that the avenue was in part at least resurfaced.

Burials

7.6.2 All the inhumations were all laid out E/W with the head to the west. Eleven of the inhumations were interred within a timber coffin. Evidence for a coffin was either coffin nails found within the grave and/or traces of the timber coffin itself. Unfortunately the timber was in a very poor condition and none of the coffins survived lifting. One of the coffin burials, grave [909] was in the portico and this was the only coffin burial to be identified outside the church.

7.6.3 Eighteen of the burials were located within the church and of these 8 were interred in the south aisle, 6 were located in the nave, 2 were buried in the north aisle and 2 the location is uncertain. Of the 9 inhumations located outside of the church; 3 were buried in the approach road to the church, 2 were interred in the portico and 4 were next to the south wall of the church.

7.6.4 It was possible to sex 12 of the skeletons in this assemblage; 8 were male or probably male and 4 were female or probably female (see Appendix 12). Four of the males were buried in the south aisle, 3 were young adults [1035], [1078] and [1050] and one was thought to be mid-old adult [1001]. The skeleton [1035] was interred in a coffin. Another male [1291], a mid-old adult was buried in a coffin in the north aisle.

7.6.5 Two males [485] and [480] both old adults were unearthed under the approach road to the church. An old adult male [706] was identified buried outside the church close to the south wall.

7.6.6 Two of the skeletons identified as female were interred within the church. A mid-old adult [1379] interred in a coffin was located in the nave. The second [1075] a mid-old adult also laid in a coffin was buried in the south aisle

7.6.7 Two adult females [709] and [885] were located outside the church and close to the south wall.

7.6.8 Three of the skeletons are identified as possible juveniles. All were buried inside the church; two [1344] and [1241] were interred in the nave and [1344] was also placed in a coffin. A third skeleton [998] was also interred in a coffin and located in the south aisle.

7.6.9 All the inhumations are collated in Table 1 below indicating grave, coffin, skeleton, age, sex, grave fill and dating.

Tabe 1: Burials

Grave	Coffin	Skeleton	Age	Sex	Grave fill	Dating
1387	1386	1379	Mid-adult	Female?	1388	Pot 1100-1500 Cbm 1135-1220
1225	1292	1291	Mid-old adult	Male?	1224	Pot 1350-1400 Cbm 1240-1450
1314	1309	1313	Adult?		1312	
765		764	Old adult		763	Pot 1080-1200 Cbm 1180-1800
707		706	Old adult	Male?	705	Cbm 1180-1450
710		709	Adult	Female?	708	Pot 1240-1400 Cbm 1180-1450
713		712	Mid-adult		711	Cbm 1180-1450
1287	1286	1285	Adult		1284	Pot 150-400
1349		1350	Adult		1351	Pot 270-400
1327		1328	Adult?		1329	Pot 1270-1350 Cbm 1240-1450
1342	1345	1344	Juvenile		1341	Pot 350-400 Cbm 1250-1450
1111	1144	1110	Mid-old adult		1109	Pot 1270-1500 Cbm 1250-1310
1084	1096	1083	Mid-old adult		1082	Pot 350-400 Cbm 1250-1310
1076	1079	1075	Mid-old adult	Female	1074	Pot 1270-1350
1036	1045	1035	Young adult	Male	1034	Pot 250-400 Cbm 1350-1500
999	1030	998	Juvenile/adolescent		997	Pot 150-400
1002		1001	Mid-old adult	Male?	1000	
1240		1241	Infant-juvenile (skull only)		1242	
983		1078	Young adult	Male?	1077	Cbm 1135-1300
1049		1050	Young adult	Male	1051	Pot 270-400 Cbm 140-230
886		885	Adult	Female?	879 876	Pot 1350-1500 Cbm 1080-1350

909	907	908	Adult		906 904	Pot 250-400
		1409	Young adult			
		1410	Mid-adult?	Female?		
487		486	Adult		470	Pot 1170-1350 Cbm 1240-1450
488		480	Old adult	Male		
488		485	Old adult	Male		

7.6.10 All the burials are collated by location in Table 2 below.

Table 2: Burial Location

Grave	**Coffin**	**Skeleton**	**Outside**			**Inside**			
			Road	**Portico**	**Next to the south wall**	**South aisle**	**Nave**	**North aisle**	**Uncertain**
1387	1386	1379					√		
1225	1292	1291						√	
1314	1309	1313						√	
765		764			√				
707		706			√				
710		709			√				
713		712			√				
1287	1286	1285					√		
1349		1350					√		
1327		1328					√		
1342	1345	1344					√		
1111	1144	1110				√			
1084	1096	1083				√			
1076	1079	1075				√			
1036	1045	1035				√			
999	1030	998				√			
1002		1001				√			
1240		1241					√		
983		1078				√			
1049		1050				√			
886		885		√					
909	907	908		√					
487		486	√						
488		485	√						
488		480	√						
		1409							√
		1410							√

Nave

7.6.11 Between Bay 2 and 3 in ground that would have been within the nave a heavily truncated grave was excavated [1326] (fill [1321], [1358]). The cut measured 0.78m E/W x 0.50m N/S x 0.18m deep but was truncated to the east. Degraded timber probably represented the remains of a coffin. A greenish clay filled the cut and the highest level was at 11.29m OD. It is likely that the skeleton had been removed by later activity.

7.6.12 In Bay 2, within the nave, truncating the grave fill [1388] a sub-circular pit [1230] (fill [1229]) was recorded. The cut measured 0.75m by 0.45m by 0.15m thick and was characterised by sloping sides falling to a concave base. The fill was a silty clay with occasional flecks of charcoal. Cbm found in the pit is dated 1250-1310.

7.6.13 Also truncating the grave fill [1388] was a possible posthole [1355] (fill [1356]). The sub-circular cut measured 0.22m by 0.16m by 0.08m deep. The cut was characterised by steeply sloping sides falling to a concave base. A sandy silt with frequent crushed Reigate stone and chalk filled the feature. It is uncertain as to the purpose of the posthole or the pit described above.

Portico

7.6.14 In the portico and adjacent to grave [909] another possible grave [910] (fills [898], [897] and [896]) was excavated but no evidence for a skeleton was found. The cut measured 2.16m E/W by 0.60m N/S and a sequence of clay pea gravel silty clay filled the feature. The only dating evidence found was some residual Roman pottery retrieved from context [896]. It may be that this feature represented a grave that was never used or that the inhumation was removed at a later date.

7.6.15 Covering the pit [910] and the graves [909] and [886] was a sequence of sandy clayey silts [893] and [787] interpreted as floor makeup. Capping these deposits was a layer of whiteish/yellow mortar [750] thought to be the bedding for a tile floor (later removed). The mortar measured 2.07m N/S by 1.65m E/W and only 0.01m thick. The highest level on the mortar was at 12.50m OD.

West range

7.6.16 In Bay 1, overlying the bedding layer [358] assigned to Phase 3.2 was a layer [361] a small patch of silty sandy clay with frequent fragments of bone. The layer measure 0.72m by 0.32m by 0.04m thick and was at 12.57m OD. The layer may represent occupation of the west range (Room 1) during this phase. Cbm recovered from the layer dated 1080-1350+.

Cemetery soil

7.6.17 The four burials outside and next to the south wall of the church exhumed in Bay 3 were covered by a cemetery soil [628], a yellowish brown sandy silt with frequent fragments of cbm, and mortar and charcoal flecks. The highest level was at 12.30m OD. Pottery recovered from this layer is dated 1170-1350 and the cbm dated 1240-1450.

Avenue

7.6.18 In Bay 4, the graves [487] and [488] were covered by deposits of compacted silty sandy clay with frequent gravel (contexts [441] and [440]). The layers [441] and [440], appear to represent a reconstruction of the road-way. The highest level on these deposits was at 12.45m OD.

7.6.19 Further to the south there was also evidence of resurfacing of the road with layers of compacted silty sandy clay [367] and [363] recorded in plan. Ceramics retrieved from layer [363] dated to 1270-1500. Cbm dated 1450-1600 found in context [363] is thought to be intrusive. The highest level on these deposits was at 12.58m OD.

7.6.20 In Bay 6, the gateway also appears at least in part to have been re-laid. Overlying the original surface [1365] (see Phase 3.2) was compacted silty clay [1364] covered by a layer of compacted gravel [1339]. Cbm dated to 1240-1450 was recovered from the gravel. The highest level on the metalled surface [1339] was at 12.67m OD.

Gatehouse

7.6.21 In Room 1 of the gatehouse truncating earlier floor deposits (see Phase 3.2) were a cluster of four post pits [1180], [1197], [1158] and [1161]. The post pits ranged in size from 0.90m by 0.82m by 0.57m deep to 0.65m by 0.52m by 0.35m deep. All the cuts had steeply sloping or near vertical sides falling to a flat base and two of the features [1180] and [1197] were characterised by post-pipes. Pottery dated to 1270-1500 was found in three of the post pits [1161], [1158] and [1197]. Slightly later dated pottery 1350-1500 was recovered from the upper fill [1193] of pit [[1180]. The purpose of the post pits is uncertain but temporary support to the ceiling is a possibility.

7.6.22 In Room 2 of the gatehouse the floor in the west side of the room may have been resurfaced. Overlying what is interpreted as the original tile floor [1098] (see Phase 3.2) was a layer of silty clay [1059] 0.10m thick which was in turn overlain by remnants of what might be a tile surface [1055]. The tiles are dated 1240-1450 and pottery found in the floor make up layer [1059] is dated 1270-1350. The level on the floor was at 12.42m OD. It may have been necessary to relay the floor on the west side of Room 2 because of subsidence

7.6.23 On the east side of Room 2 the original floor surface [1053] was truncated by a probable posthole [1092] (fill [1091]). The posthole measured 0.40m by 0.22m by 0.25m deep and the cut was characterised by steeply sloping sides falling to flat base. The fill was a mix of clay and crushed mortar. The purpose of the posthole is uncertain.

7.7 Phase 3.4: *c.* 1350-1540 (Fig. 7)

7.7.1 This phase represents the monastery in the later medieval period 1350-1540. The floor in the church was raised and re-laid on several occasions and in the portico the floor was re-laid at least twice. Burials continued to be placed in the nave, south and north aisles,

between the arches, in the portico and outside the church close to the south wall. There was some evidence that the south wall of the church was rebuilt. The west range of the cloister also underwent some modification with a possible passage separating Room 1 from Room 2. In Bay 6, the west side of the gatehouse was enlarged to four rooms (Rooms 1-4) with Rooms 3 and 4 adjacent and to the north of Rooms 1 and 2. Room 1 was also enlarged to extend to the east and south projecting beyond the alignment of the curtain wall. To the south of Room 2 and external to it a well/cistern was built. In Trench 2 evidence was unearthed for the east side of the gatehouse.

Floor deposits in the church

7.7.2 In Bay 2, covering the earlier burials [1387] and [1225] of Phase 3.3 was a layer of compacted sandy silt [1211]. The deposit measured 7.60m E/W by 6.20m N/S by *c.* 0.10m thick. Pottery found in this layer dated 1350-1500. Interpreted as floor make up [1211] was overlain by a patch of light brown-yellow sandy mortar [1094] that is thought to be the remains of a bedding layer for a tile floor. The highest level on [1094] was at 12.52m OD

7.7.3 Truncating the layer [1211] was an E/W orientated line of 4 postholes [1133], [1131], [1129] and [1127], set regularly *c.* 0.50m apart the line extended over 2.0m. All the features were circular in shape and characterised by steeply sloping sides falling to a concave base. The cuts were all of a similar size of approximately 0.30m in diameter and between 0.10m and 0.15m deep. All were filled by similar clayey silt with yellow mortar inclusions.

7.7.4 A fifth possible post pit [1037] (fill [1033]) truncated the bedding layer [1094] and was located approximately 2.0m to the west and a metre to the north of the line of postholes described above. The circular shaped feature measured 0.58m by 0.40m by 0.11m deep and was characterised by sloping irregular sides falling to a flat base. The fill was yellow-brown sand with frequent gravel and fragments of cbm and chalk. The postholes (described above) and the post pit may represent scaffolding necessary for rebuilding or repair to the church.

7.7.5 The layer [1211] was also truncated by a sub-rectangular pit [1232] (fill [1231]). The pit measured 0.65m N/S by 0.25m E/W by 0.30m deep but it continued beyond the edge of the trench to the east. The cut was characterised by near vertical sides falling to a slightly concave base. The fill was a clayey silt with inclusions of crushed mortar and flecks of charcoal. Broken tile found in the pit dated 1250-1310. The pit may also be related to a phase of repair or rebuild.

Westminster tile floor

7.7.6 Covering the features [1232], [1037] and [1067] described above were the deposits of sandy mortar [1095] and silty clay [1032] that appear to have been deliberately laid down as floor makeup. Pottery recovered from the layer [1032] dated to 1240-1400 and the cbm dated 1480-1600 is thought to be intrusive.

7.7.7 Partially covering the floor makeup [1032] was a layer of white chalky mortar or plaster [888] bedding for a Westminster tile floor [567]/[987]. The tiles covered an area 4.24m E/W by 3.72m N/S. The highest level was at 12.58m OD. The tiles are dated 1250-1450.

7.7.8 A small patch of Westminster tile floor [1282] measuring 0.50m by 0.25m survived between Bays 2 and 3. Again the tiles were laid on a bed of chalk or plaster [1283]. The level on the tiles here was at 12.63m OD.

7.7.9 Recorded in Bay 3, across the area of the south aisle were a series of floor makeup deposits ([984], [1027], [1029], [1171] and [1173]) recorded across the south aisle. Pottery dated 1270-1500 and cbm dated 1480-1700 was found in layer [984], while ceramics dating to 1350-1500 were retrieved from layer [1029]. These floor makeup deposits were capped by mortar bedding layers ([1150], [1149], [975], [957] and [1017]). The level on the mortar was between 12.54m OD and 12.65m OD. Pottery retrieved from layer [975] is dated 1380-1450.

7.7.10 The mortar layer [957] was overlain by the remnants of a tile floor [951] grouped around the column [902]. The tiles were dated to 1480-1550 and the level on the floor was at 12.77m OD.

7.7.11 Truncating the mortar bedding layer [975] was an irregular linear feature [966] (fill [965] running N/S and at right angles to the portico portal. The cut measured 3.4m long by 0.60m wide (maximum) and 0.12m deep and was characterised by sloping sides falling to flatish base. Sandy silt and degraded lime mortar with frequent fragments of cbm and stone filled the feature. Pottery found in the fill is dated 1270-1400 and the cbm dated 1450-1500. The purpose of the feature is uncertain but perhaps represents repair to the floor at the entrance to the church. Covering the feature [966] was a spread of whitish mortar [956] thought to be the bedding layer for a floor. The level on the mortar was at 12.65m OD. Cbm recovered from the layer [956] dated to 1480-1500.

7.7.12 The mortar layer [956] (see above) was truncated by a possible post pit [955] (fill [954]). The feature measured 0.40m N/S by 0.26m E/W and 0.16m deep and it continued west beyond the limits of the excavation. The cut was characterised by steeply sloping sides falling to a concave base. Crushed mortar and silt filled the hole. Pottery retrieved from the post pit dated to 1480-1600.

7.7.13 The function of the post pit [955] is uncertain but it does appear to be a precursor to the establishing of a second floor horizon across the south aisle. The post pit [955] was covered by a floor makeup layer of compacted sandy silt [934]. Across the south aisle deposits ([867], [937], [950], [960], [1155] and [1168] interpreted as floor makeup were

recorded overlying the earlier mortar bedding layers described above (see para 7.7.9). This new ground horizon was between 12.70m OD and 12.73m OD. Pottery dating to 1480-1500 was found in layer [934], while ceramics dated 1550-1610 were recovered from context [937] but these are thought to be intrusive.

7.7.14 Floor makeup layer [937] was truncated by 3 shallow pit features ([929], [936] and [932]) that ranged in size between 0.88m by 0.44m and 0.16m by 14m and 0.10m to 0.19m deep. Medieval pottery dated 1270-1500 was recovered from pit [932] along with cbm dated 1480-1600. While the function of these pits is uncertain they do appear to precede a final medieval floor horizon. The pits were covered by a firmly compacted dark grey silty sand [899] interpreted as the bedding layer for a floor. The extensive layer [899], measured 8.15m E/W by 2.90m N/S and the highest level was at 12.74m OD. Pottery dated 1580-1600 was recovered from the layer [899] but this is thought to be intrusive. Remnants of the actual tile floor survived and were recorded as contexts [877] and [878]. The level on the tiles was at *c.* 12.70m OD. The tiles are dated 1480-1550.

Portico

7.7.15 In the portico, floor makeup deposits [738] and [1068] covered grave [752] (see below). These deposits were capped by mortar bedding layers [1065] and [723]. The highest level on the mortar was at 12.54m OD.

7.7.16 The mortar layer [723] (see above), was truncated by grave [726] (see below). Grave [726] was covered a sequence of floor makeup deposits [704] and [645] capped by a mortar bedding layer [703]. Remnants of the actual tile floor survived recorded as contexts [702] and [985]. The level on the floor was at 12.75m OD. The tiles in context [702] were dated 1250-1310 suggesting that they were reused in this context. However, the tile of context [985] dated 1480-1550.

Rebuilding of the church

7.7.17 Excavated in the south aisle (Bay 3), truncating an earlier grave [1076] (see Phase 3.3) was a posthole [1072] (fill [1071]). The circular cut measured 0.18m by 0.15m by 0.11m deep and was characterised by steeply sloping sides falling to a concave base. A sandy silt filled the posthole

7.7.18 Posthole [1072] was truncated by a pit [1070] (fill [1069]. The cut measured 0.60m by 0.54m by 0.37m deep and was characterised by steeply sloping sides falling to a slightly concave base. A sandy silt filled the pit. Cbm recovered from the pit dated to 1350-1390. Both the pit and the posthole may be associated with the postholes and pitting recorded in the nave (Bay 2) and represented temporary structures necessary for rebuilding or repair.

7.7.19 There was some evidence that at least part the south wall of the church had been rebuilt. A stretch of the south wall on the eastern side of the trench was recorded as context [456]. The wall [456] rested on the earlier build [947] (see Phase 3.2) but was slightly off-set from the outside south face of [947]. The wall [456] measured 1.98m E/W by 0.70m N/S and was 0.38m in height (2 courses). The wall [947] was faced with roughly squared ragstone blocks up to 300mm by 250mm by 200mm and bonded with a yellow sandy mortar.

7.7.20 Context [921] represented surviving wall plaster that rendered the inside north face of wall [456]. The greyish-yellow plaster was 0.01m thick and spread over a surface 0.84m wide and 0.30m deep.

7.7.21 In Bay 3, there was evidence that the threshold [1073] (see Phase 3.2) to the portico portal had been rebuilt. Overlying the original level of the threshold were chalk blocks [1089] overlain with mortar and tile [1062]. The level on the tile was at 12.63m OD. The tile is dated 1480-1600.

Burials

7.7.22 Nineteen of the excavated skeletons were assigned to Phase 3.4. All the burials were standard inhumations with the body orientated E/W with the head to the west and laid out in the supine position.

7.7.23 There was evidence for 6 of burials being interred within a coffin all of these were located inside the church; 4 in the south aisle and 2 in the nave. One of the graves [1254] excavated in the south aisle contained traces of a coffin but no articulated skeleton and it may be that the grave had been disturbed by later grave [1115].

7.7.24 Seven of the burials were located outside the church, 5 alongside the south wall of the church and the other 2 in the portico. The other 12 burials were inside the church; 7 in the nave and 5 in the south aisle.

7.7.25 It was possible to identify 5 of the skeletons as male or probably male. Of these 3 were buried in the south aisle, 1 was interred in the nave and the other in a grave outside the church. One of the males [1023] a young adult buried in the south aisle was also interred in a coffin.

7.7.26 Interestingly grave [606] held the skeleton of a young adult [605] that although the sex was indeterminate, was almost certainly a male as the body was accompanied with a lead/pewter mortuary chalice SF <77>, an object that usually denoted a priest.

7.7.27 Two of the skeletons were identified as female; one a young adult [1116] was interred in a coffin and placed in the south aisle. The other female was an old adult and buried in the portico.

7.7.28 Two skeletons from this assemblage were classed as juveniles [1299] and [986] and both were buried in the nave.

7.7.29 All the inhumations assigned to this phase are collated in Table 3 below indicating grave, coffin, skeleton, age, sex, grave fill and dating.

Table 3: Burials

Grave	Coffin	Skeleton	Age	Sex	Grave fill	Dating
1298		1299	Juvenile		1297	Pot 1080-1200 Cbm 1250-1450
1274	1276	1275	Mid-old adult		1273	Pot 1480-1610 Cbm 1240-1450
1148		1147	Adult		1146	
1039		986	Juvenile		1038	Cbm 1350-1550
1311	1389	1308	Mid-old adult		1310	
1010		1009	Old adult	Male	1008	Cbm 1480-1550
569		570	Young adult		568	Cbm 1300-1600
585		586	Old adult		584	Pot 1080-1200 Cbm 1180-1450
588		589	Old adult	Male	587	Pot 1240-1300 Cbm 1135-1300
606		605	Young adult		604	
603		602	Adult		601	
1290		1289	Adult	Male?	1288	Pot 1340-1400 Cbm 1250-1450
1394	1396	1395	Adult		1393	Pot 270-400 Cbm 1350-1550
995	1004	1023	Young adult	Male	994 1003	Pot 1480-1600 Cbm 1250-1310
1254	1258	_			1254	Cbm 1250-1310
1115	1252	1116	Young-mid adult	Female	1117 1175	Cbm 1480-1600
981		1124	Mid-old adult	Male	1123	Pot 1350-1450 Cbm 1350-1450
752		846 880	Old adult Adult	Female	751	Pot 1350-1500 Cbm 1480-1550
726		845	Adult?		725	Pot 1220-1350 Cbm 1240-1450

7.7.30 All the burials are collated by location in Table 4 below.

Table 4: Burial Location

Grave	Coffin	Skeleton	Outside			Inside			
			Road	Portico	Next to the south wall	South aisle	Nave	North aisle	Uncertain
1298		1299					√		
1274	1276	1275					√		
1148		1147					√		
1039		986					√		
1311	1389	1308				√			
1010		1009					√		

569		570			√				
585		586			√				
588		589			√				
606		605			√				
603		602			√				
1290		1289					√		
1394	1396	1395					√		
995	1004	1023				√			
1254	1258					√			
1115	1252	1116				√			
981		1124				√			
752		846 880		√					
726		845		√					

7.7.31 In Bay 2, the mortar layer [1094] (see para 7.7.2) was truncated by the cut feature [1067] (fill [1066]). The rectangular cut measured 1.50m E/W by 0.50m N/S and 0.90m deep but was truncated to the west and was characterised by vertical sides falling to a flat base. The fill was a silty clay. Pottery found in the feature dated 1240-1400 and the cbm dated 1450-1500. It is thought that the feature may have been a grave but if so was either unused or the body had already been exhumed in antiquity.

7.7.32 In Bay 3, the external graves next to the south wall of the church were masked by deposits of silty sandy gravel [510], overlain by sandy silt [481] and sandy silt [463]. Ceramics dating to 1270-1350 were recovered from the layers [481] and [463]. These deposits raised ground level to the south of the church to 12.72m OD.

West Range of the Cloisters

7.7.33 In Bay 1, in Room 1 of the west range, a series of thin clayey layers [337] and [335] were recorded. Pottery recovered from context [337] is dated 1050-1200 and the cbm was dated 1135-1500. Fragments of medieval tile were also recovered from the upper layer [335] dating to 1180-1450. These deposits may represent trample. The highest level was at 12.74m OD.

7.7.34 The trample layers described above were truncated by a construction cut for a foundation. The cut was characterised by vertical sides falling to a flat base and measured at least 1.40m E/W by 0.94m N/S and 0.32m deep. The foundations were a mix of sandy gravel and silty sand but also included a dump of broken tile and fragments of slate (context [326]). The tile in the foundation was dated 1240-1450. Pottery found in the foundation deposit [326] dated 1200-1400. Some later pottery dated 1480-1600 was found in the foundation deposit [359]. The foundations were overlain by what were probably the remains of the first course of stone walling [317]. The stone was blocks of roughly squared ragstone and Reigate stone bonded with a yellow-brown sandy mortar. The highest level

on the walling was at 12.73m OD. The E/W orientated wall [317] shortened Room 1 and created a 1.20m wide passage between Room 1 and 2.

The Avenue

7.7.35 To the south of the church and recorded in Bay 4 were deposits that are thought to represent the resurfacing of the road and its use in the later medieval period. The road surface [440] (see Phase 3.3) was covered by a silty sandy clay [439] *c.* 0.30m thick which was in turn covered by a compacted silty sand and gravel [438] that probably represents a road surface. The level on the road was between 12.88m OD and 12.75m OD. Covering the surface [438] was a layer of sandy silt clay [437] up to 0.20m thick that probably represents accumulated soil formed when the avenue was in use.

Gatehouse (west)

7.7.36 In Bay 6, there was evidence that the gatehouse (west) may have been at least in part rebuilt.

Room 1

7.7.37 Room 1 was enlarged with the east wall [778]/[1234] rebuilt 0.80m further to the east and south projecting beyond the alignment of the curtain wall. The wall [778]/[1234] was built with a facing of roughly squared stone blocks built in courses, bonded with a coarse sand mortar with a rubble core. The surviving wall measured 5.20m long, 0.60m wide and 0.80m in height. The highest level on the wall was at 13.26m OD.

7.7.38 The west wall of Room 1 was also extended south beyond the alignment of the curtain wall. Here a trench built foundation of mortared chalk blocks (up to 330mm by 300mm by 150mm) with occasional ragstone was recorded. The foundation measured 1.10m N/S by 1.06m E/W but was truncated to the south. The level on the foundation was at 12.34m OD. The foundation supported the remains of a wall [1293]. The wall was built with roughly hewn chalk and ragstone blocks bonded with a yellow coarse sandy mortar with inclusions of fragments of chalk and small rounded pebbles. The wall measured 0.67m N/S by 0.45m E/W and 0.80m in height. The highest level on the wall was at 13.14m OD

7.7.39 Internal to Room 1 was a succession of compacted sandy silt and silty clay deposits interpreted as floor makeup (contexts [1186], [1178], [1177], [1176], [1162], [1134], [1122], [1121], [1118], [1102] and [1101]). The highest level on these deposits was at 12.93m OD. However, it is uncertain if the floor level in Room 1 was raised to this height in one action or whether it was a series of successive floors. Pottery dated to 1270-1500 was found in contexts [1102], [1134] and [1162] while cbm dated 1480-1700 was recovered from [1134].

7.7.40 The floor makeup deposit [1121] physically overlay part of the foundations for the curtain wall (previously also the south wall of Room 1), further evidence that the south wall of Room 1 had been demolished and that Room 1 projected beyond the line of the curtain wall. The internal dimension of the modified Room 1 was at least 4.50m N/S by *c.* 3.70m E/W.

Room 2

7.7.41 The west wall of Room 2 may have been rebuilt in the later medieval period. Overlying masonry [971] (the original build of west wall in Room 2, see Phase 3.2, para 7.5.41) was the stone wall [962]/ [914]/[970] 0.56m (6 courses) high.

7.7.42 The wall [962]/[914]/[970] was constructed with a facing of roughly hewn blocks of ragstone with occasional chalk, and a mortared rubble core bonded with yellow-brown sandy mortar. Cbm fragments found in the core of wall [962] dated 1350-1450. The highest level was at 13.24m OD.

7.7.43 The north wall of Room 2 also appears to have been at least in part rebuilt/repaired. The stretches of rebuild (contexts [961] and [1006]) were distinguished by a mix of ragstone and chalk with occasional Reigate stone and tile uncoursed and bonded with a distinctive light yellow-brown sandy mortar with occasional very small pebbles.

7.7.44 In Room 2 there was evidence that the floor had been raised. On the east side of Room 2 a sequence of dumped deposits ([1054], [1058], [991] and [1047]) was recorded that raised floor level to at least 12.67m OD. Pottery dated to 1350-1500 was found in the basal layer [1054] and cbm dated 1350-1500 was recovered from the uppermost deposit [1047].

7.7.45 Similar sequences of floor make up layers ([1024], [1042] and [1022]) were recorded on the west side of Room 2. The uppermost deposit context [1022] was a compacted silty clay that measured 3m E/W by 2.4m N/S. Pottery dated 1340-1400 was found in [1022]. The highest level was at 12.68m OD.

7.7.46 Layer [1022] was truncated by a sub-rectangular cut [1026] (fill [1025]) that measured 1.10m by 0.60m by 0.35m deep but was truncated to the east. The cut was characterised by vertical sides falling to flat base. The cut was filled with roughly hewn stone up to 230mm across and bonded with silty sandy mortar. The level on this masonry was at 12.71m OD. It is thought that the masonry represented a stanchion base or post pad for an upright that may have supported the ceiling.

7.7.47 On the east side of Room 2 the layer [1047] was truncated by ovoid cut [1012] (fill [1013], [996]) that measured 1.25m by 0.70m by at least 0.88m deep and was characterised by near vertical sides. The silty clays filled the cut. The feature is interpreted as a well possibly a barrel well although any evidence of the actual barrel did not survive. Pottery

from the basal fill which included a near complete pot dated to 1340-1500 and the ceramics from the upper fill are dated to 1270-1500.

7.7.48 The well [1012] (described above) was overlain by a layer of compacted reddish brown silty clay [976]. The layer measured 2.50m N/S by 1.90m E/W by 0.30m thick. Pottery found in the layer dated 1340-1500. On the west side of the Room 2 the stanchion base was covered by a sequence of compacted silty clay and clayey silt deposits ([1007], [990], [938]). Pottery found in context [1007] dated 1340-1550, pot from [990] dated 1270-1500 and the pottery recovered from context [938] dated 1350-1500. These deposits are thought to represent a new floor horizon at *c.* 12.75m OD

Buttress

7.7.49 Abutting the external face of west wall of Room 2 and running parallel with it was masonry context [949]. The masonry measured 2.40m N/S by 0.20m E/W and *c*. 0.30m high. Context [949] was constructed with three courses of tile supporting a course of chalk blocks and bonded with a pale orange-yellow coarse sandy mortar. The highest level was at 12.76m OD. Adjacent and immediately to the west of [949] was a spread of mortared stone and chalk [946] that measured 2.40m N/S by 0.94m x 0.30m deep. The highest level was at 12.67m OD. Covering both [949] and [946] was a spread of mortared chalk rubble with some ragstone and tile [900]. Context [900] measured 1.80m N/S by 1m E/W but it was truncated to the north and south. The highest level was 12.99m OD. While it is uncertain as to what the contexts [949], [946] and [900] actually represent they do appear to buttress the external face of the west wall of Room 2 and the gatehouse and consolidate the ground to the west of the gatehouse.

Well/Cistern

7.7.50 To the south of Room 2 on the external side of the gatehouse a sunken chalk-lined well/cistern was built. The north wall of the well/cistern was formed by the foundations for the curtain wall. The west wall of the well/cistern [1411] abutted the south wall of Room 2 and was built with squared chalk blocks (550-370mm x 230-200mm x 200-180mm) with a fair face and bonded with sandy mortar (see Fig. 14, section 50). The wall [1411] measured 1.0m N/S by 0.80m E/W by 1.73m high. The highest level was at 13.0m OD.

7.7.51 Built in similar fashion to wall [1411], the east wall [1354] of the well/cistern rested partially on foundation [1294]. The wall [1354] measured 1.14m long by 0.30m wide and *c.* 1.52m high. The highest level was at 12.84m OD.

7.7.52 A remnant of the south wall [1295] of the cistern survived abutting the east wall [1354]. The wall [1295] rested on a foundation of mortared chalk rubble and in plan measured

2.62m by 0.25m but it was truncated to the south and west. The highest level was at 11.79m OD.

7.7.53 The cistern/well had a deliberately laid base of sandy silt and crushed chalk [1239] the level on the base was at 11.37m OD. Cbm retrieved from this base layer was dated to 1480-1700. The internal dimensions of the cistern/well were 2.90m E/W by 1.0m N/S by 1.62m deep.

7.7.54 The cistern/well was filled by sandy silt [1233] 0.10m thick which was in turn covered by a sandy clay [1220] 0.16m thick. Cbm dated to 1480-1700 was recovered from context [1233] and some medieval tile fragments were also found in context [1220].

Room 3

7.7.55 To the north of Room 1, a layer of compacted silty clay [815] with frequent fragments of cbm, oyster shell and charcoal was recorded. The deposit measured 3.0m E/W by 2.52m N/S and the highest level was at 12.08m OD. Pottery found in this deposit dated to 1350-1500 and the cbm dated 1480-1600. To the east and partially covering the layer [815] was a light yellow sandy mortar [801] with frequent fragments of charcoal, oyster shell and moderate amounts of fragmentary medieval tile. Pottery retrieved from [801] dated 1270-1500. The level on the mortar was at *c.* 12.15m OD. The level on the layers [815] and [801] do suggest that a partially sunken room now lay adjacent and to the north of Room 1 although the walls of this sub-basement have not survived.

7.7.56 The layer [815] was truncated by a N/S aligned drain [729] (fill [728], [732], [727]). The construction cut measured 1.86m long by 0.83m wide (max) and 0.14m deep but was truncated to the north and south. The cut was characterised by vertical sides falling to a flat base. The east side of the drain was formed of broken brick and tile dated 1450-1700 and the west side of lumps of chalk. The fill of the drain was a silty clay [727] and pottery found in this deposit dated 1270-1500.

Room 4

7.7.57 Abutting the northwest corner of the gatehouse a N/S aligned wall [790] was recorded. The wall was built with roughly hewn ragstone blocks (165mm x 1800mm x 120mm) and occasional tile fragments mortared in courses. The wall survived to a height of *c.* 0.42m (4 courses). The wall measured 3.02m long by 0.36m wide and the highest level was at 12.84m OD.

7.7.58 To the east of wall [790] a sequence of compacted silty clay deposits were recorded ([814], [811], [810], [806], [792]) interpreted as floor make up. The highest level was at 12.75m OD. The floor make up deposits suggest that Room 4 must have extend at least

2.30m E/W. The latest dated pottery recovered from these deposits was dated 1350-1500 found in layer [811].

Yard

7.7.59 To the west and abutting wall [790] a sequence of deliberately laid down deposits were recorded. Context [812] a compacted gravelly silt measuring 2.40m N/S by 0.72m E/W but the layer continued west beyond the limits of the excavation. The layer [812] was overlain by a small patch of cobbles [830] interpreted as the remnants of a surface. The level on the cobbles was at 12.68m OD. The cobbles were in turn covered by a compacted gravel surface [793]. The level on the gravel resurfacing was at 12.79m OD. It is thought that these deposits represent the remains of an external yard surface to the west of the gatehouse.

Gatehouse (east)

7.7.60 The eastern side of the gatehouse was partially unearthed in the post-excavation watching brief, Trench 2. Context [1523] represented the E/W aligned south wall of the gatehouse. The wall built with roughly hewn stone blocks and a rubble core of flint, chalk and stone bonded with a yellow sandy mortar. The wall was 3.50m long, 0.80m wide and *c.* 0.70m high and continued to the east and west beyond the limits of the excavation. The highest level on the wall was at 13.90m OD.

7.7.61 Approximately 5m to the north of [1523] a parallel wall [1505] was recorded. The wall [1505] was only 1m long, 0.44m wide and *c*. 1m high but it was truncated to the east and continued beyond the edge of the excavation to the west. The highest level was at 13.43m OD. Built in a similar fashion to wall [1523] wall [1505] is thought to represent the north wall of the east gatehouse. It is possible to conjecture the ground floor of the east gatehouse as measuring internally 7.40m E/W by 4.80m N/S.

The gateway

7.7.62 The rebuilding of the gatehouse appears to have narrowed the gateway to *c.* 4.0m. The surface of the gateway was also raised by a series of silty clay deposits ([1338], [1337], [1336] and [1361]) to *c.* 13.15m OD. Pottery found in context [1361] dated to 1340-1450.

7.8 Phase 4: 1540-1600 (Fig. 8)

7.8.1 This phase represents the dissolution of the monastery, the demolition of the church and the subsequent building of a large Tudor house that incorporated the south wall of the church. The gatehouse and the avenue was retained and the space between remained

open ground (Open Area 1). A timber-lined drain and a pit were features within Open Area 1.

Demolition of the west range of the cloisters

7.8.2 In Bay 1 were recorded dumped deposits [280] and [296] that may relate to the demolition of the west range of the cloisters. The deposits were a mix of fine sand, frequent fragments of stone, charcoal and cbm. The level was between 12.84m OD and 12.82m OD.

7.8.3 A large sub-circular pit [278] (fill [291], [290], [289], [287], [285], [284] [279]) truncated layer [280]. The feature measured 1.86m N/S by 0.85m E/W and 0.50m deep and continued beyond the limits of the excavation to the east. The cut was characterised by steeply sloping slightly concave sides falling to a flat base. A sequence of silts and sands filled the pit. Residual medieval pottery dating to 1000-1200 as well as cbm dated to 1135-1300 was found in context [285]. This pit was also thought to be associated with the demolition process of the west range.

Demolition of the church

7.8.4 In Bay 2 truncating part of the foundation [1323] (see Phase 3.2) was a probable robber cut [1212] (fill 1203]. The cut measured 0.95m N/S by 0.70m E/W and was 0.28m deep and was characterised by vertical sides falling to a flat base. An orange-grey sandy silt with very frequent fragments chalk, cbm and mortar filled the feature. It seems likely that the robber cut was the archaeologically visible evidence for the reduction of the north wall of the church.

7.8.5 In Bay 2, dump layers a mix of sandy silts and silty clay with frequent fragments of cbm, chalk, oyster shell and charcoal (contexts [462], [460], [461] and [484]) were recorded overlying the Westminster floor tiles (see Phase 3.4). These layers were probably associated with the demolition of the church. Pottery dated 1570-1600 as well as cbm dated 1480-1600 was recovered from the layer [460], pot dated 1349-1450 and cbm dated 1359-1699 was found in layer [462] and although later pottery dated 1770-1840 was assigned to context [461] this is considered to be intrusive. The highest level was at 12.75m OD.

7.8.6 Further deposits and features were recorded in Bay 3 that probably represented the demolition of the church. Within the former south aisle, truncating the floor makeup [899] (see Phase 3.4) was pit [735] (fill [736]). The oval shaped cut measured 0.57m by 0.28m by 0.16m deep. The cut was characterised by near vertical sides falling to a flat base. The fill was a clayey sandy silt with frequent fragments of mortar, cbm, stone chips, and chalk.

Pottery found in the pit dated to 1580-1650. The feature may represent a post pit perhaps to support part of the temporary structural work required in the demolition process.

7.8.7 Covering the post pit [735] was context [479] a mix of demolition debris including crushed mortar, lumps of chalk, stone chunks and chips, and large fragments of cbm. Across the south aisle further deposits were recorded that are thought to represent pulling down of the church and the levelling of the ground (contexts [472], [798], [839], [891], [786], [890], [642], [747], [757], [788] and [838]). Pottery found in these deposits is consistent with a date of the mid 16th century. The cbm which almost certainly originated from the church predominantly dated to the period 1480-1600. Over what had been the former south aisle of the priory church these deposits created a new ground horizon at *c.* 13.00m OD.

7.8.8 In Bay 3, features and deposits probably associated with the demolition of the church were also recorded to the south of the church. Context [432] (fill [431]) represented a large sub-rectangular pit measuring 2.20m E/W by 1.76m N/S by 0.45m deep but it was truncated to the west. The cut was characterised by vertical sides falling to a flat base. The fill was dark grey-brown silty sand with occasional fragments of mortar, cbm, pottery, metal and animal bone. The pottery is dated 1270-1400 and is thought to be residual. The purpose of the pit is uncertain but a cess pit is a possibility.

7.8.9 Covering the pit [432] was a sequence of dumped sandy silt deposits [414], [323] and [329] that raised ground level to *c.* 13.0m OD.

A Tudor house

7.8.10 A mid 16th-century courtyard house appears to have been built partly over the demolished priory church and the conventual buildings.

South wing

7.8.11 Although the priory church was pulled down, the south wall of the church at least in part survived, to be incorporated into the new build. At the west end of the south wall of the church there was evidence of rebuild/repair represented by context [410]. The masonry measured 1.80m E/W by 0.70m N/S by 0.30m high and was constructed with reused blocks of Reigate stone, ragstone and occasional Caen stone to face the wall with a core of stone rubble that included moulded pieces of stone. The bonding material was a pale yellow coarse sand and lime mortar. The highest level was at 13.62m OD.

7.8.12 The medieval columns [902] and [903] also survived incorporated into a post-medieval wall. The masonry to the west of column [902] was recorded as context [599] and the wall remains between the two columns was recorded as [600]. Both stretches of walling *c.* 0.40m wide were built in similar fashion; with a foundation layer of compacted sandy silt and mortar forming a stable base for a free-standing wall built with mostly chalk but also

reused Reigate and Caen stone as well as pieces of tile. The cbm is date 1480-1550. The highest level on [599] was at 13.18m OD and on context [600] it was at 13.11m OD. The wall [599]/[600] was probably an internal wall within the south wing of large building. The external E/W aligned north wall of the south wing was not encountered in the excavation as it probably lay in the area between Bays 2 and 3 and was completely destroyed by the foundations of the 19th-century railway viaduct.

7.8.13 Another freestanding wall [514] was recorded in Bay 3. Orientated N/S, the wall abutted the internal face of the south wall of the south wing (formerly the south wall of the church) and column [902] to the north. The wall [514] was built with Reigate and Caen stone roughly squared blocks, brick and tile fragments irregularly coursed. The masonry measured 2.68m long by 0.48m wide and 0.21m high (2 courses). The wall is thought to be an internal wall defining rooms to the east and west (Rooms 1 and 2).

7.8.14 In Room 1 patches of a brick floor survived contexts [322], [321], [319] and [318]. The floor was built with early post-medieval unfrogged orange fabric brick dated to 1450-1700. The level on the floor was between 13.12m OD and 13.06m OD.

7.8.15 The portico itself also survived but perhaps was no longer used as an entrance and it may have been converted into a stair-tower. The stair-tower/portico door jamb was altered (context [974]). The masonry re-used ragstone blocks that were capped with tile (Fig. 14, section 49). There was evidence that the portico portal continued to be used as an entrance to the new building erected to the north.

7.8.16 The east wall of the stair-tower/portico appears to have been rebuilt [762]. The masonry measured 1.0m long by 0.35m wide and 0.39m high. Ragstone roughly squared and randomly coursed and bonded with a coarse yellow sandy mortar with inclusions of very frequent small pebbles and small fragments of cbm and chalk. The highest level was at 13.38m OD.

7.8.17 Within the stair-tower/portico a new floor that incorporated re-used Westminster tiles but was predominately composed of Flemish tiles dated 1480-1550 (context [539]) was laid. The surviving floor measured 2.66m E/W by 1.90m N/S and the level was at 12.89m OD.

West wing

7.8.18 Unearthed in Bay 2, were the remains of a large fireplace [507] (fill [508], [495], [506], [402], [394], [393]). The construction cut measured 3.64m N/S by 2.25m E/W by 0.52m deep. The cut was characterised by vertical sides falling to a flat base. Some of the masonry that would have supported the chimney survived and were recorded as contexts [508] and [495]. These foundations were built with lumps of ragstone bonded with a yellow mortar with frequent chalk inclusions and occasional fragments of Reigate stone. The base of the fireplace was clayey sand [402] 0.30m thick that was covered by a mortar bedding layer for a tile floor [393]. The tile base of the fireplace measured 2.48m N/S by 1.14m E/W

and was at a level of 12.54m OD. The tiles are dated to 1480-1550. The back of the fireplace must represent the alignment of an external east wall of a N/S orientated wing of a building that extends to the west.

7.8.19 To the south of the fireplace flagstones ([1138] and [1137]) laid on a bed probably represent the floor of the west wing. Although the flagstones were truncated by a later 18th-century well [210] (see para 7.12.2) the floor was at least 2.50m N/S by 0.70m E/W. The level on the floor was at 12.47m OD.

Gatehouse

7.8.20 The medieval gatehouse to the monastery was retained after the Dissolution. There was no apparent change to the gatehouse (east), however the west gatehouse was modified.

Gatehouse (west)

7.8.21 In Bay 6, along the line of the supposedly already demolished south wall of Room 1 in Phase 3.2, probable robber trenches were recorded [1152] (fill [1151]) and [1088] (fill [1087], [1086]). The two cuts [1152] and [1088] probably represent a single trench 2.80m long by 0.70m wide by 0.40m deep. The robber trench was filled with stone and chalk rubble mixed with clayey silts and sand. Medieval pottery was found in the backfill to the robber trench but these ceramics are considered residual. Later dating cbm dated 1480-1600 was found in the fill [1086].

7.8.22 The robber trench [1152]/[1088] was covered by a levelling layer of chalk and stone rubble and crushed mortar and chalk. The deposit measured 4.20m E/W by 3.60m N/S and the highest level was at 13.09m OD. Pottery recovered from layer [1048] dated 1270-1500 and the cbm dated 1480-1600.

7.8.23 Further to the west in Room 2, a dump of chalky silt [948] with frequent lumps of chalk and occasional fragments of tile was spread on the east side. The deposit measured 1.96m by 1.62m by 0.03-0.12m thick. Pottery dated 1700-1900 found assigned to this context is considered to be intrusive. Context [948] probably represents discarded building rubble.

7.8.24 The layer [948] was truncated by a robber trench [943] (fill [972], [942], [941], [940]). The robber trench was on the alignment of and truncated the south wall of Room 2. Cut [943] measured 2.25m E/W by 1.34m N/S and 1.30m deep and was characterised by vertical sides falling to a flat base. A sequence of stone rubble, crushed mortar and sandy silts filed the trench. Pottery found in fill [942] dated to 1270-1350 and the cbm dated 1480-1600.

7.8.25 The robber trench [943] does suggest that the south wall of Room 2 had now been pulled down and presumably the medieval cistern/well feature to the south would have been filled in at the same time.

Room 5

7.8.26 A layer of chalk and stone rubble [939] overlay the medieval wall [1185] that divided Room 1 and 2, evidence that this wall had now been demolished and the two rooms merged to form a single space Room 5.

7.8.27 The demolition layer [939] was overlain by compacted silty clay deposits [911] and [581]. These deposits are interpreted as floor makeup and they covered the whole of both Rooms 1 and 2, an area that measured 7.80m E/W by at least 3.5m N/S. Pottery found in [581] is dated 1480-1600. The highest level on the floor make up was at 13.21m OD.

Room 3

7.8.28 Alterations were also made to Room 3. The late-medieval drain [729] (see Phase 3.4) was truncated by sub-circular pit [715] (fill [714]) that measured 1.24m by 1.08m by 0.16m deep. The cut was characterised by steeply sloping sides falling to a flat base. The fill was silty clay with frequent broken brick and tile. Clay tobacco pipe recovered from the pit dated to 1610-1640. Separated by a later intrusion probably the same feature was excavated further to the east and here recorded as [756] (fill [755]). The pit [715]/[756] extended E/W at least 1.90m. The function of the pit is uncertain.

7.8.29 The pit [756] was truncated by a possible post pit [754]. Two other post pits [734] and [785] and two postholes [808] and [800] truncated medieval floor deposits. All the features were circular in shape and were characterised by steeply sloping sides falling to a flat or concave base. A similar silty clay filled all the post pits and postholes. Dimensions are given in Table 5 below. The postholes and post pits may have been necessary to support posts that held the ceiling or other temporary structures while repair or rebuilding was carried out.

Table 5: Post pits and postholes in Room 3

Cut	Fill	Dimensions
734	733	0.38m x 0.34m x 0.30m deep
754	753	0.47m x 0.44m x 0.25m deep
785	784	0.40m x 0.36m x 0.22m deep
808	807	0.10m x 0.10m x 0.14m deep
800	799	0.11m x 0.11m x 0.08m deep

7.8.30 Context [835] represents the remains of the N/S aligned east wall of a cellar. Only a single course survived built of Reigate stone, chalk blocks and tile. The masonry measured

2.20m N/S by 0.26m wide and 0.24m high. The highest level was at 12.19m OD. The cbm is dated 1180-1600. This wall may represent a rebuild of the cellar in the 16th century.

7.8.31 To the west of wall [835] layers of firmly compacted sandy clayey silt [849] and silty sand [816] are interpreted as floor makeup. Partially overlying [816] was a layer of light brown-yellow sandy mortar and crushed chalk [700] that probably was the remains of a bedding layer for the floor. The highest level on the mortar was at 12.13m OD,

7.8.32 Although the west wall of the cellar (Room 3) was destroyed by later rebuilding and the back of the north side of the room was truncated by modern intrusion, the surviving floor deposits indicate a cellar that measured 4.35m E/W by at least 2.20m N/S.

Lean-to structure

7.8.33 In Bay 6, the N/S aligned wall [790] (see Phase 3.4) which was thought to represent an extension of the gatehouse to the north (Room 4) was demolished. A firmly compacted clay layer [742] covered the medieval remains. The layer [742] measured 3m E/W by 2m N/S and 0.13m thick was truncated to the north, west and east. The level on the clay was at 12.85m OD. Pottery found in the layer dated to 1270-1500.

7.8.34 The northern edge of layer [742] was truncated by a short stretch of E/W aligned wall foundation [760]. The masonry was formed by stone, chalk lumps and brick bonded with mortar. The wall remains measured 1.10m long by 0.22m wide and 0.16m high. The highest level was at 12.94m OD. The wall [760] may represent the back wall to a one storey lean-to building erected against the north wall of the gatehouse.

7.8.35 To the south of the foundation [760] a sequence of silty clays overlying a layer of crushed Reigate stone (contexts [749], [740], [724], [722], [721]) probably represented floor makeup layers within the lean-to. The highest level on layer [721] was at13.01m OD

An adjacent building?

7.8.36 In the southwest corner of Bay 6, built over the ‘buttress’ [900] of Phase 3.4 was a raft of brick, ragstone, chalk and broken tile bonded with a loose yellow sandy mortar [895]. The level on this masonry was at 13.17m OD. The rubble foundation [895] was supported on the western side by corbelled brick wall [894]. The brick work measured 1.56m N/S by 0.36m E/W by 0.50m high (6 courses). The highest level was at 13.29m OD. It is thought that the masonry [894] and [895] was part of a supporting buttress to the west wall of the gatehouse or the remains of the east wall of an adjacent building.

Avenue

7.8.37 In Bay 5, a dump of clayey silt and broken tile [598] was recorded. The layer measured 4.30m N/S by 2.78m E/W but was truncated to the west and south. The highest level was at 12.78m OD. The pottery found in the deposit was probably residual and dated 1270-1400 while the cbm dated 1480-1700. The deposit which contained a large concentration of medieval and early post-medieval roofing tile may represent demolition or renovation of a close by building, most likely the gatehouse.

7.8.38 Also in Bay 5, truncating the surface of the avenue was a large rectangular pit [635] (fill [634]). The cut measured 2.12m E/W by 1.25m N/S and at least 0.74m deep (not bottomed) and was characterised by near vertical sides. The pit was filled with gravelly sandy silt with frequent cbm fragments and occasional pieces of bone. The cbm dated to 1180-1450. The function of the pit is uncertain but a well is a possibility. The pit would be partially truncated by a well sunk in Phase 5.

7.8.39 In Bay 6, there was evidence that the avenue was still in use and had been resurfaced. A series of compacted sandy gravel layers (contexts [672], [671], [669], [670], [668], [667], [666], [826], [827], [820], [823], [822], [821] and [825]) raised the level of the road to between 13.18m OD and 13.14m OD.

Open Area 1

7.8.40 In Bay 4, a greenish grey clayey sandy silt layer [400] was excavated to the east of the road. The excavated layer measured 2.36m N/S by 2.18m E/W and 0.11m thick. The highest level was at 12.65m OD. Pottery found in the deposit is dated 1550-1800 and the cbm dated to 1480-1600. This layer probably represents the open ground (Open Area 1) to the east of the still retained medieval avenue.

7.8.41 The layer [400] was truncated to the south by a probable E/W orientated drainage feature. The construction cut [334]/[263] measured 5.80m long by 1.0m wide and 1.07m deep but it was truncated to the south. The cut was characterised by near vertical sides falling to a flat base. Lying on the base were timber planks (contexts [301], [302], [300] and [299]) pinned in place by timber stakes [297] and [298].

7.8.44 A sequence of silty clays ([276], [275], [274][and [261]) filled the drain. Pottery recovered from these deposits dated to the late 16th century and the fragments of cbm were also consistent with deposition during this period.

7.9 Phase 5: 1600-*c.* 1670 (Fig. 9)

7.9.1 This phase represents the period 1600-*c.* 1670. The Tudor house was retained although there is now evidence for a north wing with a brick-built fireplace unearthed in Bay 2. The floor of the fireplace in the west wing of the house was raised and rebuilt. In the south wing the dividing wall between Room 1 and 2 was rebuilt and the floor in Room 2 re-laid. A cess

pit was dug adjacent and to the east of the putative stair-tower. The gatehouse continued to be retained although some rebuilding and alterations were recorded. A new drain and a well house were constructed in Open Area 1.

Robber trenches

7.9.2 In Bay 1, a robber trench [245] (fill [268], [273] and [246] was recorded that reduced the medieval foundation [256] for the east wall of the west range of the cloister. The cut [245] measured 4.85m N/S by 0.92m E/W and 0.68m deep but it continued north beyond the limits of the excavation and was truncated to the south by modern truncation. The cut was characterised by vertical sides falling to irregular base. A sequence of sandy clay, silty sand and sandy silt filled the feature. Fragments of cbm dated to 1480-1600 was recovered from all the fills, pottery dated 1580-1700 was found in the basal fill [268], pottery dated 1570-1600 and clay tobacco pipe dated 1580-1740 was retrieved from fill [273] and in the uppermost fill [246] pot dated 1630-1650, clay tobacco pipe dated 1640-1660 and pieces of 17th-century glass were found.

7.9.3 In Bay 2, what was probably another robber trench [945] (fill [944] was recorded truncating the medieval foundation [1323] and [1324] (see Phase 3.2). The cut [945] measured 1.40m E/W by 1.0m N/S 0.32m deep but it continued east beyond the limits of the trench. The cut was characterised by vertical sides to the north and sloping sides at the west end falling to an irregular base. The fill was a clayey silt with frequent broken cbm and occasional fragments of oyster shell. Pottery dated to 1630-1650 and cbm dated 1664-1725 was found in the fill. The robber trenches described above may have been a necessary precursor to the building or re-modelling of the north wing of the Tudor house described below.

North wing

7.9.4 In Bay 2, a fireplace [889] (fill [887], [882], [883], [884], [817], [842], [841] [813], [782] and [781]) was recorded orientated E/W and facing north. The construction cut for the fireplace measured 1.84m E/W by 0.80m N/S and 0.30m deep but it was truncated to the north and east. Only a single course of the west and south walls [817] of the fireplace survived. They were built with unfrogged orange fabric brick laid as headers on bed. The bricks are dated 1664-1725. The base of the fireplace was formed of layers of scorched clay and may have been renewed on several occasions. Pottery found in the clay [813] dated to 1480-1550 and the cbm dated 1664-1725. Pottery found in context [781] (the uppermost clay base) dated 1570-1700 and the clay tobacco pipe to 1610-1640. The level on context [817] was at 12.71m OD. The fireplace is evidence of an extant north wing.

West wing

7.9.5 In Bay 2, a loose, black, sandy silt [387] with very frequent charcoal fragments 0.14m thick overlay the tile floor of the fireplace (see Phase 4, para 7.8.18). This fire deposit probably dated to the mid 17th century as the finds included pottery dated 1600-1650, clay tobacco pipe dated 1610-1640, shards of glass dated 1575-1650 and cbm dated 1628-1650.

7.9.6 The fire deposit [387] was overlain by a compacted silty clay 0.08m thick the makeup for a new base [384] for the fireplace. The level on the tiles was at 12.88m OD. Only part of this fireplace had survived and it measured 1.40m by 1.20m. The fireplace was built with Flemish floor tile dated 1450-1600, set on edge in a herringbone pattern.

South wing

7.9.7 The south wing was retained in this phase although there is some evidence of structural alterations. To the west of the N/S aligned wall [514] assigned to Phase 4 (see para 7.8.13) a layer of loose yellow grey sandy crushed chalk with very frequent lumps of chalk and moderate fragments of cbm was laid down across all of Room 2 and the portico. The layer measured 6.22m N/S by 3.36m E/W and 0.05m thick. The cbm dated 1450-1700.

7.9.8 The wall [514] may have been demolished but to the west an adjacent freestanding wall [401] was built. The wall [401] was constructed on a bed of compacted sandy silt [496] and silty clay [415]. Pottery recovered from the layer [496] dated 1550-1700. The wall [401] measured 2.70m N/S by 0.39m E/W and 0.52m high (7 courses). The highest level was at 13.55m OD. The wall was built predominantly with narrow unfrogged red brick in an English bond but with some chalk, Reigate stone ragstone and medieval glazed tile was also incorporated. The mortar was a yellowish sandy type with inclusions of fragments of chalk and cbm and occasional small stones.

7.9.9 The floor in Room 1, may have been repaired. Overlying earlier floor deposit of Phase 4 were deposits of silty clay (contexts [380], 390], [391], [392] and [395]) in turn overlain by a patch of brick floor [320] measuring 2.34m by 2.31m. The level on the floor was at 13.10m OD. The bricks are dated 1600-1700.

Cess pit

7.9.10 In Bay 3, adjacent to the south wall of the south wing and the east wall of the stair-tower (formerly the medieval portico) a large brick-lined cess pit [236] (fill [234], [235]) was excavated. The rectangular construction cut measured 2.80m by 2.25m by 0.82m deep and was characterised by vertical sides falling to a flat base. The cut was lined with unfrogged orange fabric brick, laid on bed in alternating header and stretcher pattern, and bonded with a yellow sandy and lime mortar. Tile had been used as levelling in the bottom

course. The cbm is dated 1480-1900. Pottery recovered from the backfill to the construction cut dated to 1550-1700.

Open Area 1

7.9.11 In Open Area 1, the timber drain of Phase 4 recorded in Bay 4 had probably silted up in Phase 5. Pottery found in the sandy clay [262] fill of the drain dated to 1570-1650 and the cbm dated 1480-1660.

7.9.12 The drain fill [262] was truncated by a new N/S orientated drain [229] (fill [247], [239], [228] and [227]). The construction cut measured 4.60m long by 0.84m wide and 0.73m deep but it was truncated to the south. The cut was characterised by vertical sides falling to a flat base. There were traces of degraded wood that suggest that the drain was lined and quite possibly covered with timber. The silt fills of the drain produced dating evidence that suggests a mid 17th-century date for the construction and use of the drain; from the basal deposit [247] pottery dated 1550-1610 was found, pot dated 1630-1650 and clay tobacco pipe dated 1610-1640 were retrieved from context [239], in fill [228] was found pot dated 1600-1700 and clay tobacco pipe dating to the mid 17th century, and the uppermost fill produced pot dated 1580-1650 and clay tobacco pipe dated 1640-1660.

7.9.13 In Bay 5, the pit [635] (see Phase 4, para 7.8.38) was truncated by a brick-lined well [633] (fill [[632], [625], [644], [643], [641], [613]). The circular construction cut measured 1.20m in diameter and was at least 2.28m deep. The cut was lined with orange fabric unfrogged brick dated 1664-1725. To the north of the well an adjacent brick floor [625]. The floor measured 0.98m by 0.70m and the level was at 12.30m OD. The brick floor suggests that the well may have been enclosed within a structure, i.e. a well-house, and the level indicates that it was sunken *c.* 0.70m below ground level. The dating evidence recovered from the well is consistent with its use in the 17th century (details are given in Table 6 below).

Table 6: Dating evidence for the well [614]

Fill of well [614]	Pot	Clay tobacco pipe	Glass	Ceramic building material
644	1550-1700			1500-1700
643		1580-1740	1640-1700	1500-1700
641	1630-1680	1580-1740		1730-1850
613	1630-1700	1660-1670		

7.9.14 In Bay 6, another possible well [828] was recorded, to the northwest of the gatehouse (west). The well was at least 0.80m in diameter and brick lined. Only a 0.30m width of the well fell within the Trench and the feature was not archaeologically excavated.

The Gatehouse

7.9.15 The gatehouse was retained in Phase 5 but there was evidence that both the east and west sides of the gatehouse had been altered

Gatehouse (west)

7.9.16 In Room 5, truncating the floor deposits of Phase 4, three possible postholes [610], [608] and [590] were recorded. The features were rectangular in shape with near vertical sides falling to a flat base (details are given in Table 7 below). The postholes may have been necessary in temporary works to renovate the building.

Table 7: Postholes in Room 5

Cut	Fill	Dimensions	Pot
610	609	0.48m x 0.44m x 0.31m deep	
608	607	0.20m x 0.16m x 0.23m deep	1480-1650
591	590	0.12m x 0.09m x 0.24m	

7.9.17 On the west side of Room 5, a drain was inserted into the floor. The construction cut [458] was a curvi-linear feature that was aligned SW/NE, approximately 4.50m long, 0.95m wide and 1.04m deep. The cut penetrated the foundations of the west wall of the medieval cistern/well and the north wall of Room 5. The drain was lined with unfrogged orange bricks laid on edge [538] and capped with bricks [509] laid on bed. The brick is dated 1664-1725. Pottery retrieved from the backfill [489] to the construction cut dated 1580-1700 and clay tobacco pipe found in the backfill [459] dated 1610-1640.

7.9.18 Drain [538] appeared to flow from south to north, debouching into a ’soakaway’ [595] in Room 3. Where the drain penetrated the north wall of Room 5 the wall was rebuilt [611] with chalk blocks, irregularly coursed. A silt deposit [517] filled the drain but only residual medieval pottery dating to 1270-1350 was retrieved from the fill.

7.9.19 The floor deposits of Room 5 were also truncated by the feature [623] (fill [619], [622]). The square cut measured 0.35m across by 0.22m deep and was characterised by vertical sides falling to a flat base. The cut was lined with unfrogged, orange brick on edge and two bricks laid on bed for the base. It was filled with a sandy silt with fragments of charcoal and chalk as well as occasional sherds of glass, cbm, pot and animal bone. The pottery is dated to 1600-1700 and the clay tobacco pipe is dated 1660-1680. The function of this feature is uncertain.

7.9.20 Context [865] represents a brick rebuild to the medieval west wall of Room 5. The brickwork measured 2.30m N/S by 0.42m E/W by 0.07m high, only a single course of the unfrogged orange fabric brick survived. The highest level was at 13.32m OD.

7.9.21 To the south of [865] and also built partly on the medieval west wall but projecting at an angle to the northwest beyond the wall line was brickwork [866]. Context [866] measured 1.25m by 1.20m but was truncated to the west.

7.9.22 Abutting and to the north of [866] and to the west of the wall [865] a layer of silt [881] was recorded. The deposit measured 0.91m by 0.60m by 0.11m thick. The highest level was at 13.23m OD. Pottery found in the deposit was dated to 1580-1700. The deposit was thought to be makeup for a surface. It may be that the brickwork [866] and the layer [881] represent the remains of a lightwell.

7.9.23 In the gateway, a large block of Reigate stone [636] (550mm x 250mm x 240mm) placed adjacent to the east wall of the may represent a door step and the entrance to the gatehouse and Room 5.

Room 3

7.9.24 The east wall of Room 3 was probably rebuilt during this phase. Built on a foundation of chalk rubble and occasional brick [836] was the wall [560]/[490]. The lower part of the wall was built with predominately chalk and occasional ragstone blocks randomly coursed. The upper part of the wall was built with unfrogged orange brick and bonded with a yellow-brown coarse sandy mortar. The brick is dated 1480-1600 and pottery from the backfill to the construction cut is dated 1610-1640. The wall [560]/[490] was aligned NW/SE and measured 2.30m long, *c.* 0.50m wide and survived to a height of 1.18m. The highest level on the wall was at 13.44m OD.

7.9.25 The medieval north wall of Room 1 was demolished and Room 3 extended to the south. Context [746] represented an L-shaped construction cut that enlarged the cellar to the south. The cut measured 3.66m E/W, a return to the west aligned N/S measured 1.13m and it was 0.91m deep. The cut was characterised by a vertical side falling to a flat base. The construction cut was lined with brickwork [477] that formed the south wall of Room 3, in Phase 5. The wall was built with unfrogged orange brick, laid in English Garden wall pattern and bonded with a greyish-yellow sandy mortar.

7.9.26 The expanded L-shaped Room 3 measured 5.0m E/W by 2.80m N/S and with a recessed bay to the south that measured 3.80m wide and 1.30m deep increasing the N/S dimension on the east side of Room 3 to at least 4.10m.

7.9.27 Within Room 3, layers of compacted silty clay and gravel (contexts [783], [631], [617] and [629]) probably represented floor makeup. The highest level was at 12.28m OD. Pottery found in layer [631] dated 12.28m OD and the clay tobacco pipe dated 1680-1710. Within the recessed bay a small patch of brick floor [469] survived. The level on the floor was at 12.35m OD.

7.9.28 Truncating the floor deposit [631] cut [547] was recorded. The sub-circular cut measured 1.14m by 0.94m by 0.95m deep and was characterised by vertical sides falling to a flat base. Filling the base was very degraded wood [595], the remains of a barrel 0.64m in diameter. A silty clay [840] backfilled the construction cut. A silty clay [596] also filled the barrel and cbm found in this deposit dated 1664-1725. The pottery found in the fill [596] was medieval and residual. The sunken barrel was probably a 'soakaway'.

7.9.29 Feeding into the 'soakaway' [595] was a brick-built drain. [502]/[548]. The drain was 2.50m long and 0.10m wide and 0.05m deep and was built with unfrogged orange brick dated 1664-1725. Pottery found in the fill [615] of the drain dated to 1580-1700. Also discharging in to the 'soakaway' was the drain in Room 3.

7.9.30 In the southeast corner of Room 3 abutting the wall [477] a block of masonry [468]/[474] formed of blocks of mortared stone encased by brick may be the remains of stairs. The masonry measured 1.70m E/W by 0.30m and to the west descended in four steps to the floor of the cellar.

7.9.31 The lean-to of Phase 4 appears to have been pulled down. Adjacent to the north wall of Room 5, in the area where previously the lean-to had stood a rectangular feature [493] (fill [583], [492], [491]) was excavated. The construction cut measured 1.80m E/W by 1.40m E/W and 0.20m deep. The cut was characterised by vertical sides falling to a flat base. A thick mortar formed the base and the sides of the cut were lined in part by brick and tile irregularly coursed. The cbm is dated 1459-1700. A soft, clayey silt [491] filled the feature. Pottery found in context [491] is dated 1580-1700. The function of this sunken rectangular feature is uncertain but the base for a tank is a possibility

7.9.32 External to the northwest corner of the gatehouse (west) a curving masonry feature [639] (fill [627], [638]) was unearthed. The masonry consisted of orange unfrogeed brick forming a curving 'wall' and the remains of a brick floor. The masonry measured approximately 1.40m by 1.40m and the highest level of the wall was at 13.12m OD and the level on the floor at 12.86m OD. It is possible that this feature represents the remains of a winding staircase.

Gatehouse (east)

7.9.33 In Trench 2, there was evidence that the east side of the gatehouse had at least in part been rebuilt, possibly in the 17th century. Contexts [1502]/[1522] represented a N/S orientated wall that abutted the south (internal) face of the medieval E/W aligned north wall but was truncated to the south. The surviving wall was 3.19m long, 0.46m wide and *c.* 1.0m high (max). The wall was built with unfrogged orange bricks dated 1450-1700. The wall [1502]/[1522] is presumed to be internal and would have divided the ground floor into two rooms (Rooms 1 and 2).

7.9.34 Within gatehouse (east) a brick floor [1500]/[1519]/[1520] was laid at 13.53m OD. On top of this floor was constructed a single course of bricks laid to form a raised rectangular shaped structure with a sunken centre. The outside dimensions were 1.14m by 1m and the inside was 0.62m by 0.50m. The structure was located centrally within the room but with the walls angled NW/SE. The function for this feature is uncertain.

7.9.35 Abutting the north face (external) of the north wall of the gatehouse was a brick-built wall [1501] 0.74m long by 0.28m wide and extending beyond the limits of the excavation to the north. The highest level on the wall was at 15.53m OD. This masonry may represent an extension of the gatehouse to the north or an adjoining 'garden' wall.

Gateway

7.9.36 In Bay 6, within the gateway of the gatehouse gravel layers [688], [687] and [686] represented the repeated resurfacing or repair of the surface. The highest level was at 13.49m OD. From the uppermost layer [686] clay tobacco pipe was collected that dated to 1580-1740 and fragments of cbm were also dated 1480-1700.

7.9.37 The gravel surface was truncated by possible postholes [650], [648] and [646]. These cut features were up to 1.05m long, 0.50m wide and 0.30m deep and were characterised by sloping sides falling to slightly concave base. A similar sandy silt filled the features. Pottery dated 1580-1700 was found in pit [650] and pot dated 1600-1700 was retrieved from pit [648]. Pieces of residual medieval tile were found in pit [646].

7.10 Phase 6: *c.* 1670-1710 (Fig. 10)

7.10.1 This phase represents the period *c.* 1670-1710 when the west and north wings of the Tudor house appear to have been pulled down. Wells and an ancillary building now occupied the land to the north of the south wing, Open Area 2 (formerly the courtyard in Phase 4 and 5). The south wing of the Tudor house remains and there is evidence that the floor in Room 1 was raised and re-laid. The gatehouse was retained largely unchanged, although the Phase 5 drains in gatehouse (west) appear to have gone out use, and a new drainage system from Room 5 into a 'soakaway' in Room 3 constructed. The brick floors in gatehouse (west) were re-laid. A lead pipe laid in the gateway may have supplied water.

Demolition of the north and west wings of the Tudor house

7.10.2 In Bay 2, truncating the east side of the fireplace [817] was a shallow sub-rectangular pit [780] (fill [809], [779]). The cut measured 1.20m by 1.0m a 0.36m deep and was characterised by steeply sloping sides falling to a flat base. The basal fill of the pit was red clay lumps, mortar and gravel [809]. The upper fill was a chalk and stone rubble [779].

Pottery found in context [809] dated 1580-1700 and pot retrieved from fill [779] dated to 1480-1600. The pit [780] may represent the partial robbing of the fireplace [817] and the wider demolition of the north wing

7.10.3 Truncating the remains of the fireplace [394] in the west wing were a sequence of inter-cutting pits (details are given in Table 8 below). The pits were sub-rectangular in shape with near vertical sides falling to flat bases and filled with similar sandy silt with very frequent fragments of cbm, chalk, small-medium stones and occasional fragments of oyster shell. The pits are an indication that the fireplace in the west wing had been pulled down and it is likely that the whole of the west wing had also been demolished.

Table 8: Intercutting pits truncating fireplace [394]

Cut	Fill	Dimensions	Pot	Ctp	Cbm
471	457	1.40m x 1.0m x 0.67m	1580-1680	1580-1740	1660-1750
451	450	2.58m x 1.30m x 0.49m	1570-1700	1580-1740	1450-1700
417	426 416	1.0m x 0.61m x 0.70m	 1550-1600		1480-1700 1135-1300

7.10.4 Across Bay 2, and the area of the former courtyard dumped deposits of compacted sandy silt and silty sand and mortar (contexts [385], [364], [351], [352], [331] and [330]) were laid down. The highest level on these deposits was at 12.93m OD. Pottery dated 1600-1650 was found in context [385], and pot dated 1480-1550 was recovered from layer [331]. The pottery dated 1770-1830 and attributed to context [364] is thought to be intrusive.

7.10.5 Truncating layer [380] was pit [255] (fill [254], [288]). The sub-rectangular cut [255] measured 1.54m E/W by 0.96m N/S by 0.41m deep but was truncated to the north. The basal fill [254] was a silty sand with very frequent large stone blocks and fragments of cbm capped by a sandy silt [288]. Pottery found in [254] dated to 1550-1600 and ceramics found in context [288] dated to 1600-1650. This pit is also thought to be associated with the pulling down of the north and west wings of the Tudor house.

7.10.6 Another indication that 16th-century house was undergoing a major change was the infilling of the cess pit [234] (see Phase 5, para 7.9.10). The cess pit had been filled in with sandy silt [233] with very frequent broken brick tile, fragments of mortar, pottery, animal bone and occasional glass, charcoal and burnt flint. Pottery retrieved context [233] dated to 1689-1710, the clay tobacco pipe dated to 1680-1710 and the sherds of glass dated to *c*. 1680-1690. The deliberate infilling of the cess pit may represent a house clearance prior to the buildings partial demolition.

The south wing (retained)

7.10.7 In Bay 3, abutting the east face of the N/S orientated wall [401] was a layer of sandy silt [286] 0.38m thick overlain by a brick floor [282] built with unfrogged orange brick laid on

bed. The floor measured 1.32m N/S by 0.52m E/W and the level was at 13.53m OD. Clay tobacco pipe from the floor makeup [286] dated to 1680-1710 and glass sherds were dated *c.* 1670-1690. The relaying of the floor in Room 1 of the south wing does suggest that at least this part of the Tudor house was retained and continued to be occupied.

Yard surface

7.10.8 In Bay 2, the robber cuts described above (see para 7.10.3) were partially covered by the remains of a surface [214] built with whole and broken brick, ragstone, Reigate stone, chalk and flint laid in an irregular pattern. The surface measured 2.32m E/W by 2.02m N/S and was at *c.* 13.07m OD. Pottery recovered from the sandy silt bedding layer [237] dated to the mid 17th century and the clay tobacco pipe dated to 1640-1660. Pottery from context [214] dated to 1570-1650 and the cbm to 1450-1600. The surface layer [214] probably represents a yard.

Wells

7.10.9 Also In Bay 2, a probable barrel well [283] (fill [267], [271], [269], [266]) was excavated. The construction cut [283] measured *c.* 0.82m in diameter and 1.03m deep and was characterised by steeply sloping sides falling to a flat base. Very degraded wood [267] represented the barrel. Pottery found in the clayey gravel backfill [271] dated to 1480-1600. The well was filled with grey–brown sandy silt [269] with frequent fragments of charcoal and occasional fragments of oyster shell and cbm 0.75m thick overlain by a black soft sandy silt [266]. Pottery found in the basal deposit [269] dated to 1650-1700 and pottery dated 1580-1650 and clay tobacco pipe dated 1660-1680 was found in fill [266].

7.10.10 To the north of the barrel well a pit [375] (fill [1243], [374]) was also recorded. The sub-rectangular cut measured 1.20m N/S by 0.60m E/W by 0.98m deep but it was truncated to the east. The cut was characterised by vertical and then concave sides falling to a flat base. Filling the pit were silty clay deposits with frequent flecks and fragments of cbm, and oyster shell [1296] and [374]. The pit may have been used for refuse disposal or even a cess pit.

7.10.11 Pit [375] was truncated by well [1270] (fill [1315], [1271], [1268], [1269]). The circular construction cut for the well was 1.90m in diameter and at least *c.* 1.81m deep (not bottomed) and characterised by vertical sides. The lower part of the well was lined with large blocks of stone (800mm x 300mm x 220mm). The level on the top course of stone was at 11.13m OD. The stone-lining was capped with unfrogged orange brick bonded with a yellow-brown sandy mortar. Pottery found in the backfill to the construction cut is dated to 1600-1800. A sandy silt [1268] filled the well but unfortunately no dating evidence was recovered from this deposit.

7.10.12 To the south of the well the remains of a brick-built building were recorded. Contexts [241], [242] and [240] represented the foundations for the south, east and west walls of the structure. The foundations were *c.* 0.30m wide and 0.29m deep and were built with unfrogged orange brick and occasional Reigate stone, chalk and flint. The masonry defined a rectangular structure measuring 2.0m E/W and at least 1.70m N/S. The brickwork is dated 1450-1650 and pottery recovered from the backfill [250] of the construction cut dated to 1580-1700. The building may represent a well house enclosing the well [1270].

Ancillary building

7.10.13 The remains of possibly another ancillary building lay just 0.50m to the west of the putative well house. The building measured 3.50m N/S and at least 2.50m E/W. The wall foundations ([206], [204] and [205]) of this structure truncated the yard surface [214]. These foundations were built in similar fashion and using similar materials to that used in the well house.

Gatehouse

7.10.14 The gatehouse was retained in this phase. Gatehouse (east) was unaltered however gatehouse (west) did undergo alteration

Gatehouse (west) Room 3

7.10.15 In Bay 6, the remains of a brick floor (context [550], [453], [454], [466]) in Room 3 was recorded at *c.* 12.28m OD. The bricks were dated 1664-1725. Pottery recovered from the floor makeup layer [467] dated to 1580-1700.

7.10.16 The brick floor [453] and [454] was covered with a black cinder deposit [424] with frequent fragments of charcoal. This deposit is thought to represent industrial activity taking place within the cellar. Hammerscale, copper and slag were among the artefacts found in the environmental sample {6}. Analysis of the slag also identified lots of smithing spheres and hammerscale.

7.10.17 Close to the south wall of Room 3, a circular brick ‘soakaway’ [342] was built. The structure was 0.52m high and 0.76m in diameter. The highest level was at 13.0m OD.

7.10.18 Context [397] represented brickwork that overlay the E/W orientated dividing wall between the ground floor Room 5 and Room 3. The brickwork measured 0.67m E/W by 0.48m N/S and was built with unfrogged orange brick laid on bed with a central channel two bricks wide with the bricks laid end to end. It is thought that the brickwork [397] represented a

drain from the ground floor room, cut through the dividing wall and feeding into the 'soakaway' in the cellar. The level on the drain was 13.13m OD falling to 13.05m OD.

7.10.19 Filling the 'soakaway' was a silty clay [345] overlain by a clayey silt [341]. Pottery retrieved from the basal deposit [345] dated to 1650-1800 and the clay tobacco pipe dated 1660-1680. Pot found in context [341] dated to 1630-1700 and the clay tobacco pipe dated to 1660-1680.

Room 5

7.10.20 The floor in Room 5 was probably re-laid during this phase. A bedding layer of grey-yellow sandy mortar [448] up to 0.10m thick covered the earlier floor deposits. Pottery found in the bedding layer dated to 1580-1650 and the clay tobacco pipe dated to 1640-1660. The floor [430] was built with unfrogged orange brick and occasional glazed tile. The level on the floor was between 13.28m OD and 13.03m OD.

Paved surface

7.10.21 Adjacent to the gatehouse west of Room 3, compacted clay sand [483] in turn partially covered by a silty clay [423] was recorded. These clay deposits covered an area 2.10m N/S by 2.0m E/W and are thought to represent surface makeup. A single Flemish floor tile [482] dated 1480-1550 was all that remained of the actual floor. The level on the tile was at 13.25m OD. These deposit could represent an outside paved area.

Well

7.10.22 In Bay 6, a brick-lined well [795] ([797], [794]) was recorded adjacent and to the west of the gatehouse. The construction cut measured 2.03m N/S by 0.75m E/W and at least 0.92m deep (not bottomed) but was truncated to the west. Pottery retrieved from the backfill to the construction cut dated to 1580-1800 and the clay tobacco pipe dated to 1580-1740.

Gateway

7.10.23 In Bay 6, truncating the earlier gravel surface of the gateway a lead pipe was laid. The construction cut was at least 5m long by 0.42m wide and 0.42m deep and the lead pipe *c.* 0.04m in diameter. A sandy silt [685] backfilled the trench and pottery found in this deposit pottery dated to 1570-1680. The lead pipe probably supplied water either to the gatehouse or other buildings close-by.

7.11 Phase 7: 1710-1780 (Fig. 11)

7.11.1 This phase represents the period 1710-1780 when the south wing of the Tudor house remained standing and unaltered. To the north of the Tudor house in Open Area 2, the wells and structure of the pervious phase probably went out of use. However, a new well was sunk and a possible rubbish pit dug suggest that the ground continued to be used as a 'backyard'. In Bay 1 there was evidence that a new building extending beyond the limits of the excavation to the north and east was constructed. The gatehouse was also retained largely unchanged although Room 3 in gatehouse (west) does appear to have been demolished. Cess pits were excavated to the north of Room 5 suggesting that the gatehouse continued to be occupied. In Trench 2, brick walls were unearthed that may be part of buildings extending further to the east.

Open Area 2

7.11.2 In the southwest of Bay 2, to the north of the retained south wing of the Tudor house a well was recorded. The construction cut measured 1.54m by 1.38m by at least 0.97m deep but the feature was not bottomed. The well [210] was lined with unfrogged, orange brick dated 1450-1700. A sequence of silt deposits ([213], [211], [209] [208]) filled the well. Eighteenth-century pottery, clay tobacco pipe and glass were recovered from these deposits. The latest dated pot was 1720-1780 and the latest dated clay tobacco pipe dated 1740-1780.

7.11.3 Two metres to the east of the well [210] a pit [306] (fill [305]) was excavated. The ovoid pit measured 0.82m N/S by 0.78m E/W by 0.17m deep but it was truncated to the west. The cut was characterised by sloping sides falling to a flat base. The fill was grey-brown silty sand with very frequent small stones, frequent fragments of chalk, cbm, mortar and fragments of animal bone, and metal. The pit was probably for refuse disposal and the pottery is dated 1740-1830.

Building in Bay 1

7.11.4 In the northeast of Open Area 2, a block of masonry foundation [244] (fill [243], [232]) was recorded. The construction cut measured 0.64m E/W by 0.62m N/S by 0.16m deep but it was truncated to the north and continued beyond the limits of the excavation to the east. The foundation was trench built with a mix of unfrogged orange brick and lumps of Reigate stone in 3 courses. The cbm dated to 1750-1900. The highest level was at 12.71m OD. It may be that the foundation [243] represented the southwest corner of a building that extended to the north and east.

Gatehouse (west)

7.11.5 In Bay 6, the 'soakaway' in Room 3 was covered by a dumped deposit [350] of sandy silt with frequent brick and tile fragments. The layer measured 3.70m E/W by 3.56m N/S by 0.50m thick (maximum) but it was truncated to the west and north. The highest level was at *c.* 13.44m OD. The pottery and the clay tobacco collected from context [350] dated to 1680-1710. It seems that Room 3 had now been demolished

7.11.6 Truncating the floor [430] (see Phase 6, para 7.10.20) in Room 5 was a probable post pit [338] (fill [339]). The feature was sub-rectangular in shape and measured 0.98m by 0.67m by 0.29m deep. The cut was characterised by vertical sides falling to a flat base. The fill was sandy silt with occasional inclusions of charcoal, animal bone and oyster shell. Pottery retrieved from the fill dated to 1630-1680 and the clay tobacco pipe to 1640-1660. The post pit may have held a post that supported a corner of building possibly weakened by the demolition of Room 3.

Cess pits

7.11.7 Layer [350] was truncated by a rectangular pit [354] (fill [355]). The cut measured 1.46m N/S by 1.44m E/W and at least 0.35m deep and was characterised by steeply sloping sides falling to a flat base. Interestingly large blocks of roughly hewn ragstone had been placed around the southern and western edges of the cut against the standing wall. The purpose of these stones is not known although the excavator thought that they may have been to improve drainage. Dark grey-brown sandy silt [353] with frequent fragments of mortar filled the feature. Pottery found in the fill dated to 1680-1700 and the clay tobacco pipe dated to 1700-1710/40. The function of pit [354] is uncertain but a cess pit is a possibility.

7.11.8 Another possible cess pit was built adjacent to pit [354]. The west wall [418]/[412] of the cess pit was 1.8m long by 0.12m wide and was built with unfrogged orange brick, in stretcher courses and bonded with a yellow brown silty mortar. The highest level was at 13.45m OD. The south and north sides of the cess pit were formed by blocks of masonry [314] [355] and [356] which were 0.50m wide. The cess pit measured 1.50m by 1.50m. It is uncertain why the walls of a cess pit should be so wide unless they also supported a substantial above ground super-structure, possibly the privy itself.

7.11.9 Built over the west wall of the cess pit, was a brick floor [425]. The bricks were unfrogged orange and reddish brick laid on bed. The remains of the floor measured 0.35m by 0.25m and the level was at 13.44m OD. The brick floor probably indicates the entrance to the privy.

7.11.10 Cess pit [314] was filled with a sequence of silty sand deposits [333], [332] and [313]. The uppermost deposit [313] produced pottery dating to 1770-1800 and clay tobacco pipe dated to 1700-1740.

Gatehouse (east)

7.11.11 There was evidence that gatehouse (east) may have gone out of use in the late 18th century. Overlying the floor of the east gatehouse was a deposit [1526] at least 0.10m thick that contained late 18th-century pottery and clay tobacco pipe dated to 1730-1780.

Soakaway'

7.11.12 In Bay 5, well [614] (see Phase 5, para 7.9.13) retained in Phase 6 now appears to have been adapted to use as a 'soakaway'. The remains of a brick-built drain [597] fed into the well/'soakaway'. The drain measured 1.29m E/W by 0.79m and was formed by a single course of brick laid on bed. The drain sloped west to east falling from 12.34m OD to 12.25m OD discharging into the well. The brickwork is dated 1450-1700 and pottery recovered from the drain dated to 1720-1780 and the clay tobacco pipe dated to 1660-1680.

Trench 2

7.11.13 In Trench 2, to the north of the gatehouse (east) a N/S aligned wall [1543] measuring 2.60m long by 0.40m wide by 1.06m high and extending beyond the limits of the excavation to the north and south was recorded. The wall was built with unfrogged orange brick bonded with a pale yellow mortar. The highest level was at 13.84m OD. Another N/S aligned wall [1527] was recorded further to the north and here the wall measured 5m long by 0.80m wide and 0.66m high. These walls probably formed part of building(s) that extended further to the east.

7.12 Phase 8: 1780-*c*. 1850 (Fig. 12)

7.12.1 This phase represents the late 18th/early 19th century (1780-*c*. 1850) when the last vestiges of the priory church and the Tudor house were demolished. The gatehouse was also probably pulled down during this period. Unearthed in Bay 1 were the remains of a building extending to the north and exposed in Trench 2 were the remnants of probably garden walls. Other features included a brick-built sewer constructed in the former gateway and a few pits some probably for rubbish disposal, excavated across Trench 1.

Infilling of well [210]

7.12.2 In Bay 2, the well [210] associated with occupation of the Tudor house in Phase 7 was probably deliberately filled in during Phase 8. The primary fill [208] of Phase 7 was overlain by silty sand [201] with ash and frequent fragments of cbm, in turn covered by silty sand [200] with frequent fragments of oyster shell and cbm. Pottery collected from context [201]

dated to 1770-1800. From context [200] pot dated 1820-1840 and clay tobacco pipe dated 1820-1845 was recovered.

Demolition of south wing

7.12.3 In Bay 3, on the west side of the Trench 1, a layer of crushed chalk and mortar [281] 0.25m thick was laid down. The layer measured 5.65m N/S by 1.70m E/W but continued to the west beyond the limits of the excavation. Pottery found in the layer dated to 1760-1830. The layer is interpreted as demolition rubble and the deposit may represent the final pulling down of the south-wing of the 16th-century house.

7.12.4 Partially overlying the dumped deposit [281] lay a spread of light cream-yellow mortar [405] with frequent chalk, ash and cbm fragments that was the bedding of a brick floor. The bedding layer measured 1.60m by 0.60m and was overlain by the remnants of brick floor [403] and [404]. The floor consisted of unfrogged dark red bricks laid on bed. The level on the floor was between 13.22m OD and 13.25m OD. It is uncertain if these bricks represent an internal floor or an external surface but they appear to post-date the Tudor house.

Demolition of the gatehouse

7.12.5 In Bay 7, an indication that the gatehouse may no longer have been inhabited was the infilling of the well [797] (see Phase 6, para 7.10.22). Dark brown-black silt [989] with frequent fragments of charcoal and cbm filled the well. Pottery found in the well dated to 1835-1840, clay tobacco pipe dated to 1820-1880 and the cbm dated to 1830-1850.

7.12.6 Evidence that the gatehouse was no longer standing was pit [304] (fill [303]) that truncated the floor [430] (see Phase 6, para 7.10.20). The rectangular cut measured 1.47m long by 0.67m wide and 1.30m deep and was characterised by vertical sides falling to a flat base. Filling the pit was sandy silt with frequent broken brick and tile. Pottery found in the pit dated to 1780-1830, the clay tobacco pipe dated to 1660-1689 and the cbm dated 1480-1600. While the function of the pit is uncertain it is unlikely that such a feature would have been dug if the building was still standing.

Building in Bay 1

7.12.7 There was evidence for continued occupation of the site. In Bay 1, the remains of a building were recorded. Contexts [215] and [222] represented the stepped foundations for an E/W aligned wall. The foundations measured 3.30m long and 0.70m wide and *c*. 0.44m high but continued both to the east and west beyond the limits of Trench 1. The foundations were stepped in 3 courses and bricks laid in header fashion. Slate was used

to cap the foundations so as to provide damp proofing. The top of the foundation was at *c*. 12.64m OD.

7.12.8 Foundation [215]/[[222] supported the E/W aligned wall [207]/[203]. Only two courses of standing wall survived. The wall was 0.56m wide and was built with similar bricks and mortar to that used in the foundations with the bricks laid in header fashion. The highest level on the wall was at 12.85m OD. The E/W wall line described above probably represents a building that extends to the north.

7.12.9 To the north of the wall [207]/[203] were two abutments. The western abutment [221] was 0.49m N/S by 0.32m E/W but was truncated to the north. The foundation was only two brick courses high. Set 1.50m to the east a second abutment [212] of similar dimensions was recorded. The abutments may represent the foundations for a fireplace.

7.12.10 Both frogged and unfrogged orange/red fabric bricks bonded with a yellow-brown sandy lime mortar, were employed in the masonry remains of Bay 1. The brickwork is dated 1825-1900.

Brick sewer

7.12.11 In Bay 6, a brick built sewer [653] (fill [655], [654], [656]) was recorded in the area of the former gateway. The construction cut was at least *c.* 6.80m long by 0.90m wide and at least 1.0m deep. The sewer was built with frogged purple and red brick and measured internally 0.75m wide by at least 0.45m high.

Garden walls

7.12.12 In Trench 2, an E/W aligned wall [1532]. The wall was built with orange and purple and red brick bonded with a mid grey mortar with occasional charcoal flecking. The wall was 2.10m long and 0.56m high and continued beyond the limits of the excavation to the east and west. The highest level was at *c.* 15.04m OD. Abutting the north face of wall [1532] was a N/S aligned wall [1533}. The wall [1533] was built with orange unfrogged brick bonded with a pale grey-yellow mortar with fragments of chalk and charcoal. The wall [1533] was 2.30m long by 0.20m wide and 0.60m in height but was truncated to the north. Both walls [1532] and [1533] are thought to be external ‘garden’ walls demarcating property divisions.

Rubbish pits

7.12.13 A couple of pits excavated in the north of Trench 1 are also evidence of continued occupation. In Bay 2, pit [326] (fill [325] measured 1.40m by 0.96m by 0.25m deep and was characterised by steeply sloping sides falling to a flat base. The fill was a dark brown-

black sandy silt with occasional fragments of animal bone. The pit was probably for the disposal of domestic refuse and pottery found in the pit dated to 1770-1820.

7.12.14 A second possible rubbish pit [312] (fill [311]) was excavated in Bay 3. The rectangular cut measured 1.95 E/W by 0.90m N/S and 0.76m deep and was characterised by vertical sides falling to a base that inclined to the east. A silty sandy with frequent fragments of brick and tile, crushed mortar and occasional fragments of shell and animal bone filled the pit. Pottery dated 1770-1830 was retrieved from the pit.

7.13 Phase 9: Late 19th and 20th century (not illustrated)

7.13.1 Several modern features and foundations were observed across the site.

N

Bay 1

ditch
[513]

posthole
[516]

Bay 2

TRENCH 1

posthole
[1360]

Bay 3

[913]

Bay 4

[520]

[525]

gully/ditch
[537]

S.33

WATER COURSE

Bay 5

[771]

[748]

TRENCH 2

S.42

[875]

Bay 6

[1384]

[1340]
[1343]
[1348]

posthole
[1330]

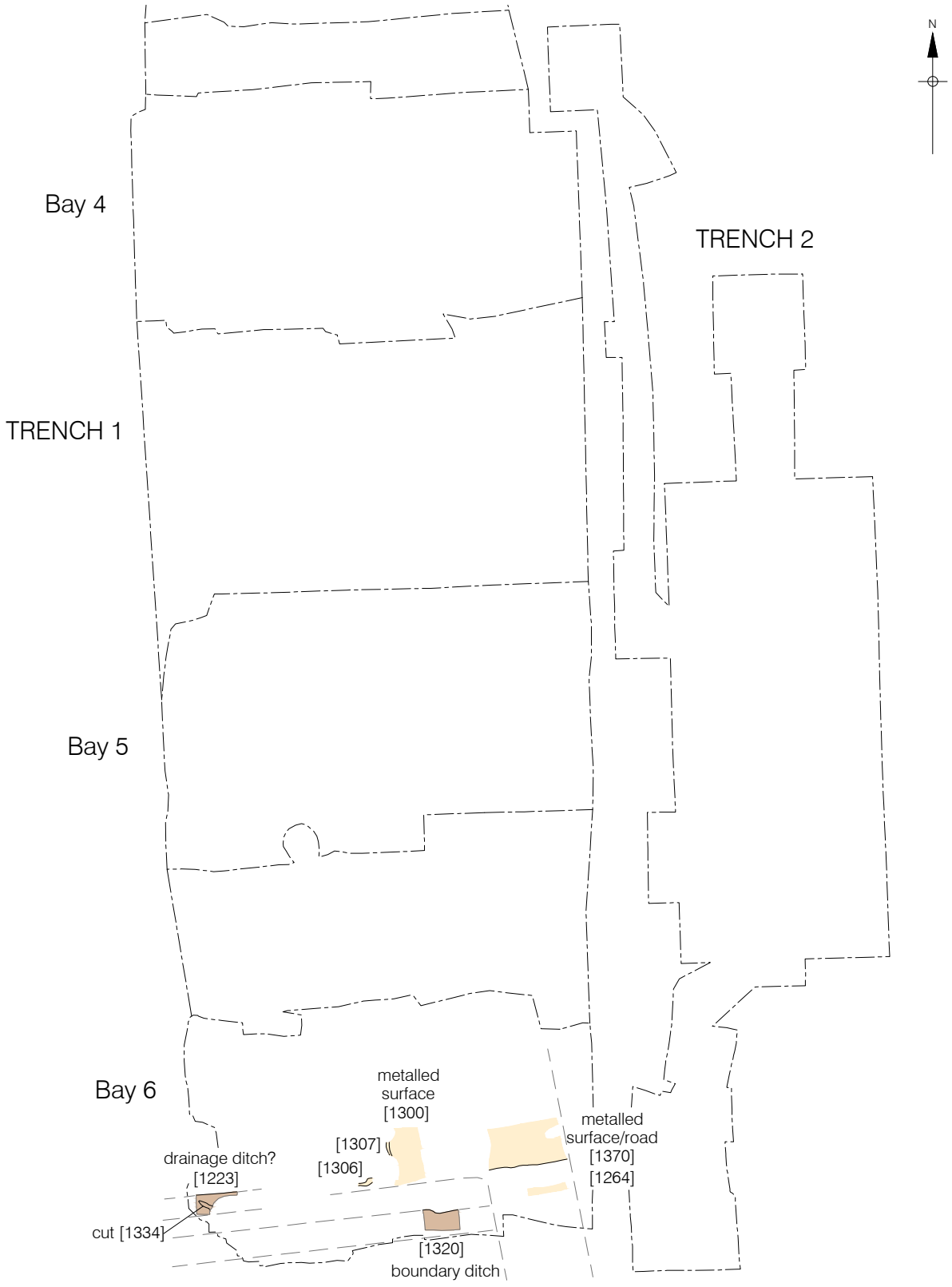
[1272]
[1304]

Posthole/Stakehole
Ditch/Gully
Open watercourse
Conjecture

0 10m

19/08/16 MR

Figure 3
Phase 2: Roman
1:200 at A3

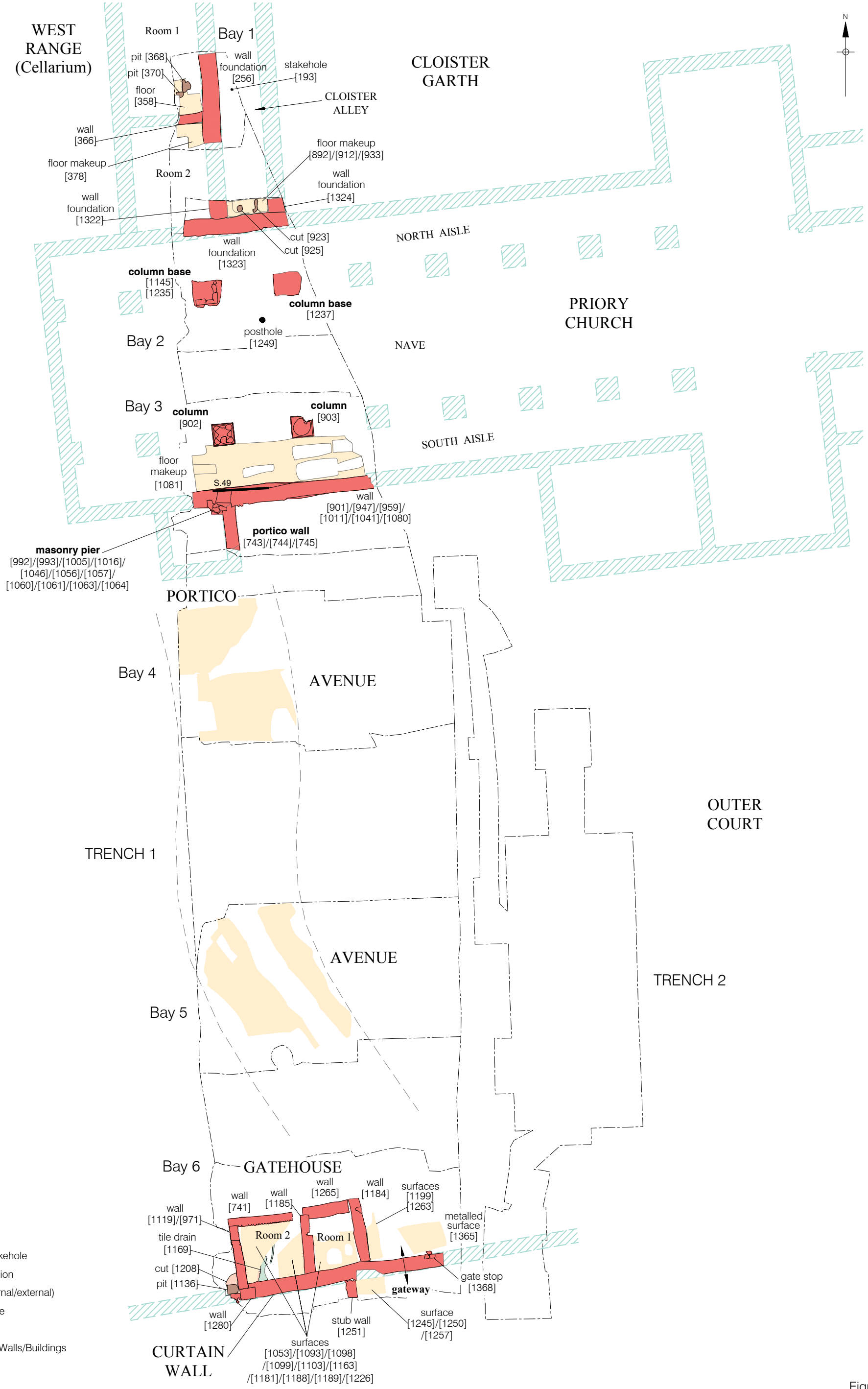


Surface
Ditch/Gully
Conjecture

0 10m

19/08/16 MR

Figure 4
Phase 3.1: Early Medieval
1:200 at A4



19/08/16 MR

Figure 5
Phase 3.2: c.1190-1240 - construction of church, curtain wall and gatehouse
1:200 at A3

WEST RANGE (Cellarium)

Bay 1

Room 1
[361]

CLOISTER ALLEY

CLOISTER GARTH

N

Room 2

[1314]

NORTH AISLE

Bay 2

[1225]

pit
[1230]

[1387]

posthole
[1355]

PRIORY CHURCH

NAVE

[1326]

[1287]

[1327]

[1342]

[1240]

[1111]

Bay 3

[1349]

[983]

[1076]

[1002]

SOUTH AISLE

[999]

[1084]

[1036]

[1049]

[765]

[910]

[707]

[710]

[909]
/[886]

[713]

PORTICO

[488]

[487]

Bay 4

AVENUE

surface repairs
[363]/[367]

OUTER COURT

TRENCH 1

AVENUE

TRENCH 2

Bay 5

Bay 6

postholes
[1180]
[1197]

posthole
[1092]

Room 1

tile
floor
[1055]

S.61

metalled
surface
[1339]

Room 2

gateway

CURTAIN WALL

postholes
[1158]/[1161]

GATEHOUSE

Posthole/Stakehole
Surface (internal/external)
Pit/Cut feature
Inhumation
Retained features
Conjectured Walls/Buildings (Retained)
Conjecture

0 10m

19/08/16 MR

Figure 6
Phase 3.3: c.1200-1350
1:200 at A3

WEST RANGE (Cellarium)

Room 1

Bay 1

wall [317]

PASSAGE

CLOISTER ALLEY

CLOISTER GARTH

N

Room 2

[1311]

NORTH AISLE

Bay 2

Westminster tile floor [567]

postholes [1127] [1129]

[1010]

[1067]

[1039]

[1298]

[1274]

[1148]

[1131] [1133] postholes

[1037] posthole

[1276]

PRIORY CHURCH

NAVE

tile floor [1282]

surface [1155]

[1394]

Bay 3

tile floor [951]

[1115] [981]

[1254] [1252]

pit [1070]

pit [929]

posthole [1072]

tile floor [877]

SOUTH AISLE

postholes [1020] [955]

surfaces [985] [702]

posthole [1018]

pit [936]

tile floor [878]

[995]

wall [456]

threshold [1062] [1089]

[752]

[569]

[726]

[603]

[585]

[606]

PORTICO

surface repairs [438] [360]

Bay 4

AVENUE

OUTER COURT

TRENCH 1

AVENUE

Bay 5

TRENCH 2

Bay 6

surface [792]

drain [729]

wall [790]

Room 3

[815]

yard surface [793]

Room 4

yard surface [830]

wall [778]

surface [1178]

wall rebuild [961]/[1006]

[938]

Room 1

wall [914]/[962]/[970]

Room 2

[1162]

[976]

buttress? [900]/[946]/[949]

[1100]

gateway

S.50

stanchion base [1025]/[1026]

cistern [1295]/[1301] [1354]/[1411]

wall [1293]

well [1012]

GATEHOUSE (WEST)

wall [1505]

wall [1523]

GATEHOUSE (EAST)

Posthole/Stakehole
Wall/Foundation
Surface (internal/external)
Pit/Cut feature
Inhumation
Well/Cistern
Retained features
Conjectured Walls/Buildings
Conjectured Walls/Buildings (Retained)
Conjecture

0 10m

19/08/16 MR

Figure 7
Phase 3.4: c.1350-1540
1:200 at A3

19/08/16 MR

Figure 8
Phase 4: c.1540-1600 - Dissolution and demolition of the church
1:200 at A3

N

Bay 1

robber cut [245]

TUDOR HOUSE NORTH WING

robber cut [945]

fireplace [384]

wall [817]

surface [782]

TUDOR HOUSE WEST WING

COURTYARD

Room 3 (kitchen?)

Bay 2

corridor

TUDOR HOUSE SOUTH WING

brick/masonry floor [320]/[365]

wall [401]

plaster [389]

Room 2

Room 1

Bay 3

pit [328]

cess pit [234]

STAIR-TOWER?

AVENUE

Bay 4

drain [229]

OPEN AREA 1

TRENCH 1

AVENUE

Bay 5

TRENCH 2

brick floor [625]

well [614]

WELL HOUSE?

soakaway [548]/[549]

posthole [832]

well [828]

sunken rectangular feature [493]

Room 3

wall G115.1

rebuild [611]

drain [502]

stairs? [468]/[474]

winding staircase? [627]

floor [469]

postholes [648]/[650]

wall [865]

brick drain [538]

wall [477]

posthole [591]

posthole [646]

ash trap? [619]

lightwell? [866]

Room 5

posthole [608]

posthole [610]

gateway

stone doorstep [636]

Bay 6

GATEHOUSE (WEST)

wall [1501]

wall [1504]

brick floor [1500]/[1519]

wall [1502]/ [1506]

Room 1

wall [1522]

Room 2

brick floor [1520]

brick structure [1521]

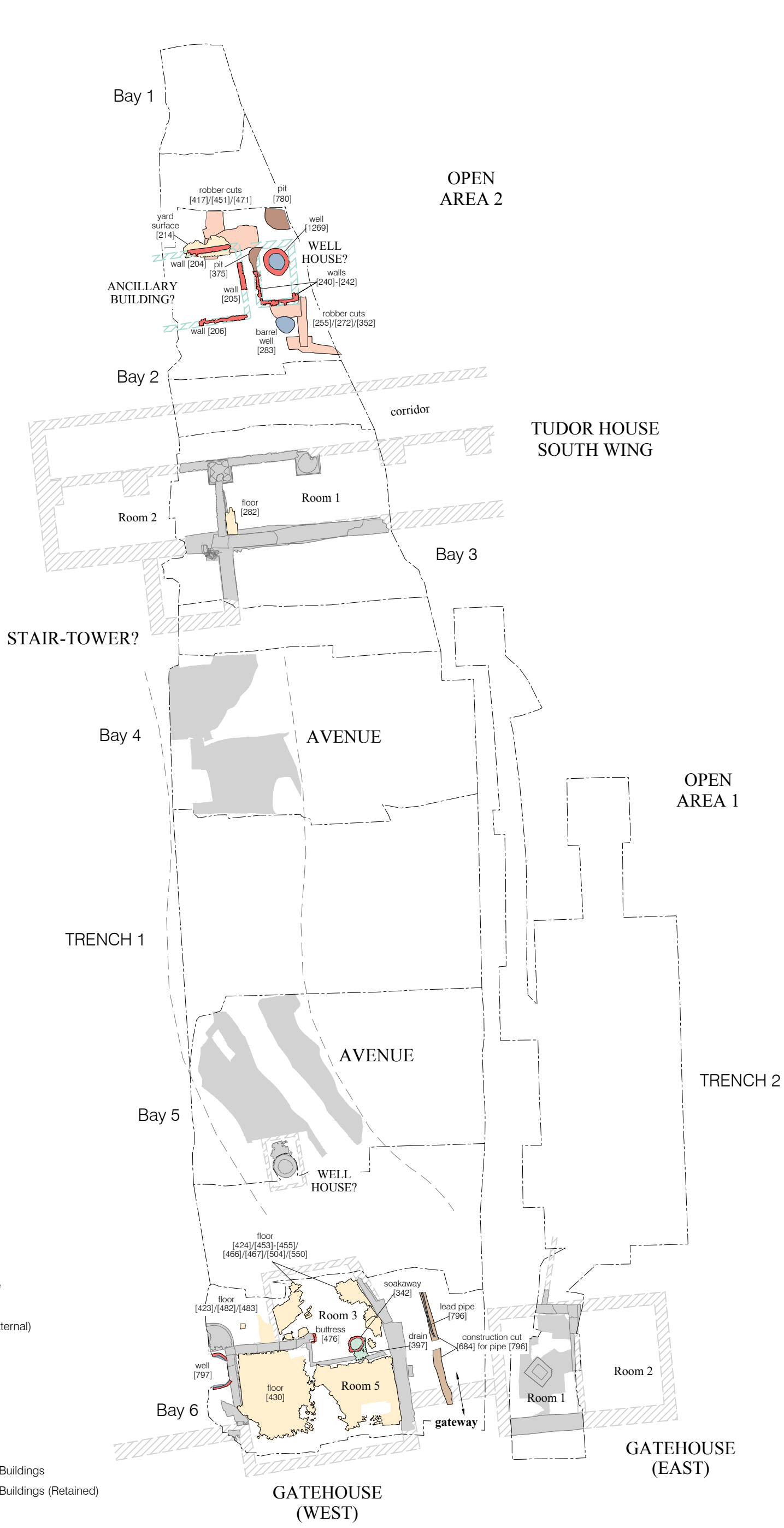
GATEHOUSE (EAST)

Posthole/Stakehole
Wall/Foundation/Masonry
Surface (internal/external)
Pit/Cut feature
Robber cut
Drain/Sewer
Fireplace/Hearth
Well
Retained features
Conjectured Walls/Buildings
Conjectured Walls/Buildings (Retained)
Conjecture

0 10m

19/08/16 MR

Figure 9
Phase 5: 1600-c.1670
1:200 at A3



19/08/16 MR

Figure 10
Phase 6: c.1670-1710
1:200 at A3

N

building?

Bay 1

wall
[243]

OPEN
AREA 2

Bay 2

pit
[306]

well
[210]

corridor

TUDOR HOUSE
SOUTH WING

Bay 3

Room 1

Room 2

STAIR-TOWER?

Bay 4

AVENUE

OPEN
AREA 1

wall
[1527]

TRENCH 1

AVENUE

Bay 5

TRENCH 2

drain
[597]

soakaway

wall
[1543]

cess pits
[314]/[355]-[357]

pit
[716]

wall
[412]/[413]/[418]

floor
[425]

cess pit
[354]

Bay 6

pit
[338]

Room 5

gateway

Room 2

Room 1

GATEHOUSE
(EAST)

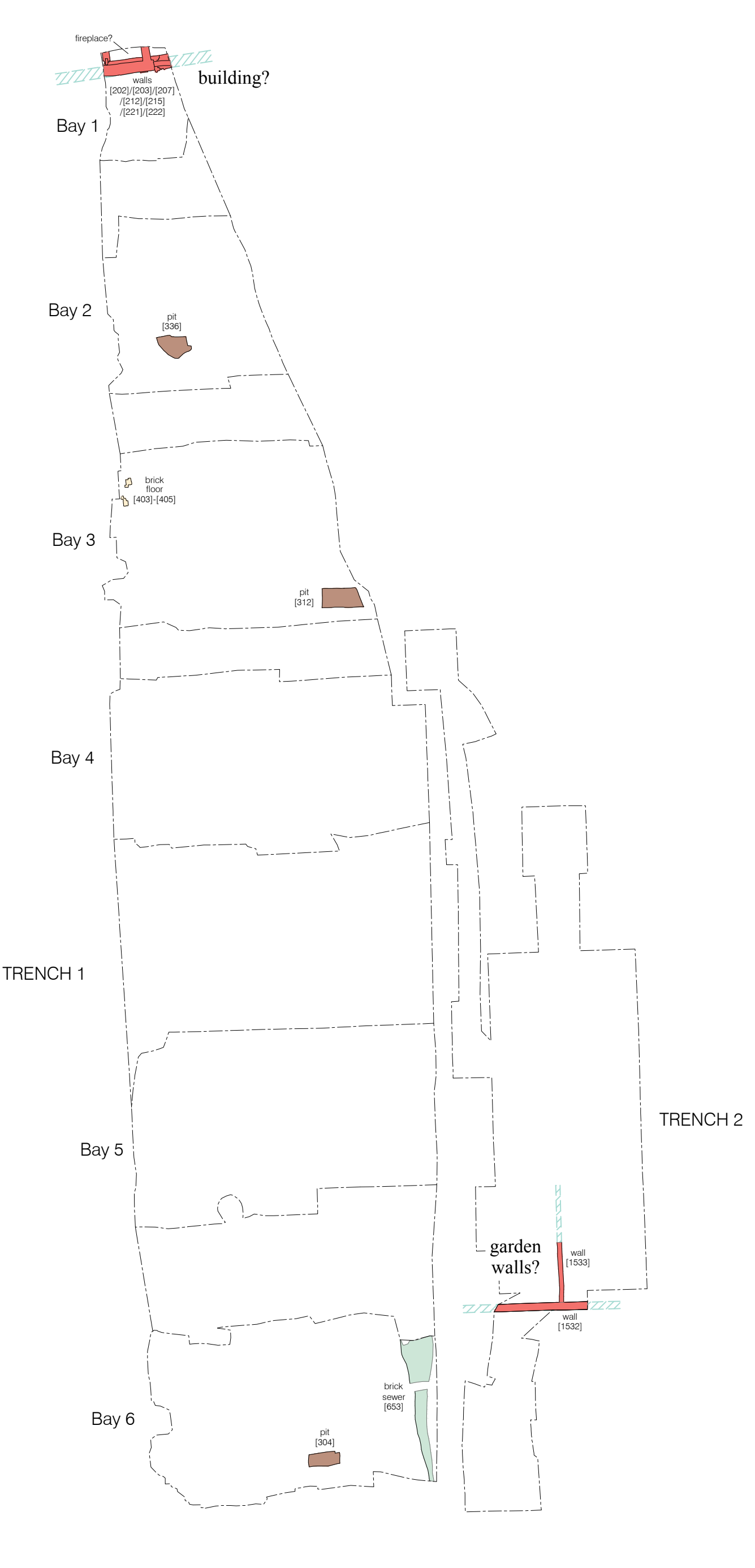
GATEHOUSE
(WEST)

Wall/Foundation
Surface (internal/external)
Pit/Cut feature
Well
Drain/Sewer
Retained features
Conjectured Walls/Buildings
Conjectured Walls/Buildings (Retained)
Conjecture

0 10m

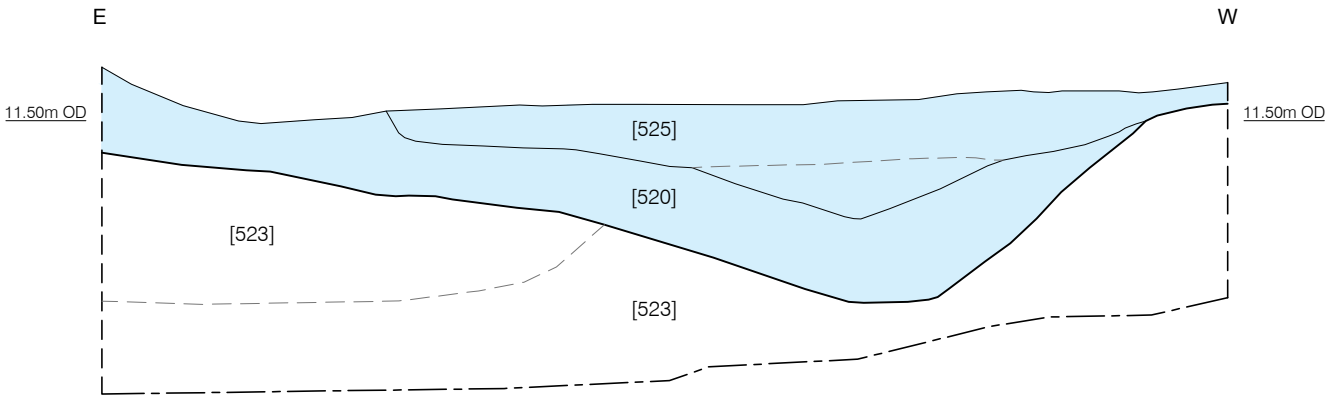
19/08/16 MR

Figure 11
Phase 7: 1710-1780
1:200 at A3

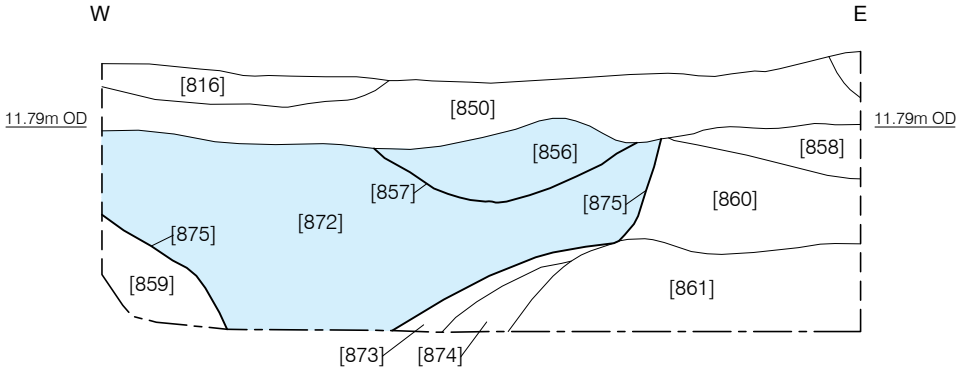


19/08/16 MR

Figure 12
Phase 8: 1780-c.1850
1:200 at A3



Section 33
North facing
Section through watercourse



Section 42
South facing
Section through watercourse [875]

Watercourse

0 1m

09/09/16 MR

Figure 13
Sections 33 and 42 Phase 2 Watercourse
1:25 at A4

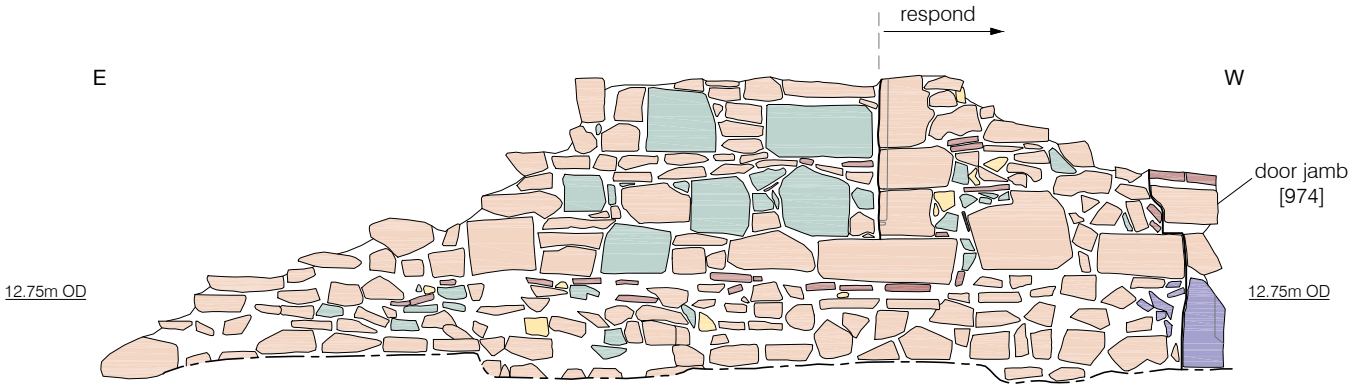


Figure 14
Section 49
North facing elevation of the south priory wall [1011] including
a respond and the rebuilt early post-medieval door jamb [974]

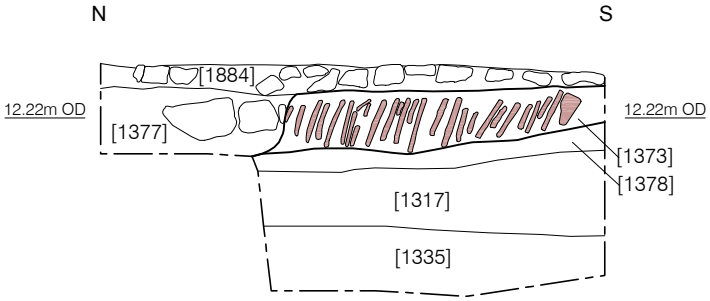


Figure 15
Section 61
West facing section showing the threshold? [1373]
in east wall foundations of Gatehouse (west) Room 1

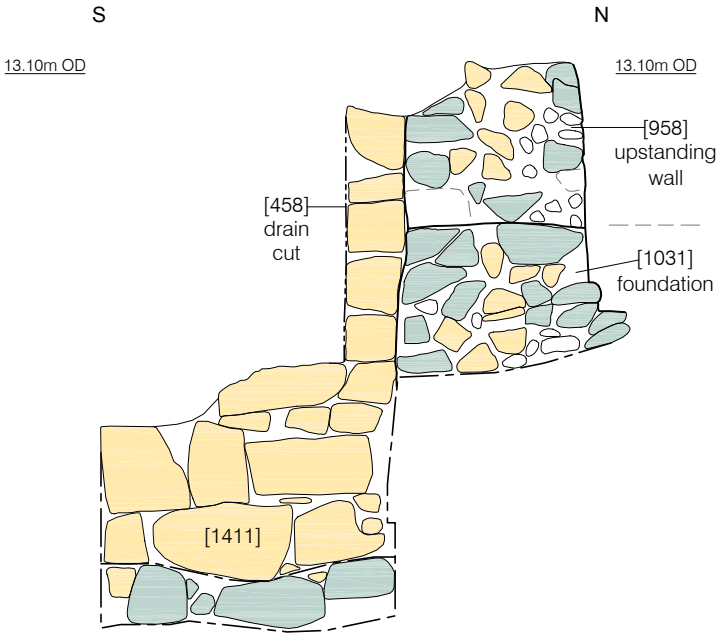


Figure 16
Section 50
East facing section showing the west wall of the cistern/well [1411]
built against the curtain wall [958]

Kentish ragstone
Chalk
Reigate stone
Caen stone
Tile and Brick
Slate

0 1m

09/09/16 MR

Figures 14-16
Sections 49, 61 and 50
1:25 at A4

Figure 12 Phase 8

Figure 13 **Sections 33 and 42** showing Phase 2 watercourse

Figure 14 **Section 49** showing north facing elevation of the south priory wall [1011] including a respond and the rebuilt early post-medieval door jamb [974]

Plate 1: Looking east at the portico portal and the Reigate stone pier

Plate 2: Looking north at the gate entrance with the 'sleeper' wall and the gate stop

Plate 3: Looking west at the Westminster tile floor [567]

Plate 4: Looking west at skeleton [605] with mortuary chalice placed on the left shoulder

Plate 5: Looking southwest at the post-medieval wall [599]/[600] with the medieval columns [902] and [903] incorporated in the build

8 Summary of Archaeological Phases

8.1 Phase 1: Natural

8.1.1 Untruncated natural deposits were encountered between 12.24m OD and 11.05m OD in Trench1 and were not exposed in Trench 2. In the HLW 06 excavations natural gravel deposits were recorded at between 12.28m OD and *c*. 11.76m OD in the north of the site and 11.44m OD to 10.73m OD in the south.

8.2 Phase 2: Roman

8.2.1 Phase 2 represents the earliest identifiable archaeological features and deposits unearthed on the site and the artefactual evidence suggests that they dated to the Roman period.

8.2.2 In Trench 1, a natural palaeo-channel was recorded on the western side of the excavation running nearly the whole length of the trench. The watercourse which flowed from north to south was probably a tributary of the River Walbrook. The ceramic evidence recovered from the putative channel suggests that it silted up some time during the late Roman period.

8.2.3 Across Trench 1 greenish-brown clayey sandy silt deposits were recorded that represented a Roman ground horizon formed at about 12.12m OD. Evidence of field ditches recorded in Bay 1 and 4 suggests that at least some of the land was parcelled out and used for agriculture.

8.2.4 The environmental sample {9} (see Appendix 14) taken from the ditch in Bay 1 was particularly rich in charred and uncharred seeds including wheat, fig, garlic, mustard, nettle and sedges, all consistent with the proximity of cultivated and disturbed ground.

8.2.5 The very small animal bone assemblage (only 11 bones) all recovered from the water-course does suggest that the site was marginal to occupation (see Appendix 13).

8.2.6 The general paucity of Roman ceramic building material found on the site is another indication that the site was peripheral to settlement (see Appendix 10). Perhaps this is not unexpected as the site is outside *Londinium* but not so far that the land could not be worked by residents of the city.

8.2.7 The artefactual evidence does suggest that what activity there was on the site probably peaked in the Late Roman period. The small assemblage of Roman pottery dates mainly to the 3rd and 4th centuries (see Appendix 2) and of the nine Roman coins recovered from the site and most of these were 3rd or 4th century although one was 1st or 2nd century (see Appendix 3). A bone hair pin SF <40> was also identified as 4th century and a Colchester type broach SF <146> could only be broadly dated to the 1st-3rd century (see Appendix 3).

8.3 Phase 3.1/; Early Medieval

8.3.1 Phase 3.1 represents the period from the 5th century until the founding of the priory of the Virgin Mary and St John the Baptist in the middle of the 12th century. The archaeological evidence suggests that for most of this period the site was open ground with little evidence of human activity. The watercourse of the Roman period silted up and across the site soils up to 0.50m thick formed covering the Roman deposits of Phase 2.

8.3.2 No Saxon pottery was found on the site and only a small assemblage of early medieval pottery was recovered mostly in residual contexts. The small assemblage of early medieval pottery is probably a reflection of the very limited occupation and domestic activity on the site, only at the end of Phase 3.1 (see Appendix 4).

8.3.3 The excavation at HLY 12 found no trace of the early priory church built in the mid 12th century. It was only in Bay 6 in the south of Trench 1 that archaeological deposits and features were recorded of certain anthropogenic origin. These included a possible drainage ditch [1223] and a boundary ditch [1320]. Both these features were undated but their stratigraphic position is consistent with a possible early 12th-century origin.

8.3.4 There is no reason to suppose that there would have been a masonry wall enclosing the monastery in the early 12th century and indeed it would be exceptional if there was one. The boundary ditch ran parallel with the monastic curtain wall of Phase 3.2 and it could be that the ditch was a precursor to the wall and represented the precinct boundary before the curtain wall or the gatehouse were built in Phase 3.2, at the end of the 12th century/early 13th century.

8.3.5 In Bay 6, in the area of the gatehouse assigned to Phase 3.2 earlier metalled surfaces were recorded. It is probable that these surfaces were the remains of a gateway that preceded the gatehouse of Phase 3.2.

8.4 Phase 3.2: *c.* 1190-1240

8.4.1 Phase 3.2 represents the construction of the priory church and the west range of the cloisters in the late 12th century or early 13th century. Probably at the same time the curtain wall enclosing the monastery was built along with the main gate house on Holywell Lane. An avenue was laid out connecting the gatehouse to the southwest portico entrance to the church.

8.4.2 The remains of the priory church were unearthed in Bays 2 and 3 and this included a stretch of the south wall, foundations that delineated the north wall, columns and column bases that demarcated the north and south aisle and the nave. The columns [902] and [903] confirmed the supposition from the excavations of HLW 06 that a system of plain

columns and compound piers was employed. The distance between columns (centre to centre) was 4.246m and this is near enough to 14 'English' feet (see Appendix 9).

8.4.3 Part of a portico entrance to the church was revealed in Bay 3. The portico was no flimsy add on. The foundations were contiguous with the foundation of the south wall of the church and could have supported two stories. The portal jamb was embellished with a segmented pier that was probably associated with a vaulted structure. At St Mary Clerkenwell a tower was built above the porch bay (Sloane 2012, 35) although the portico at Holywell is not thought to have been such a substantial feature.

8.4.4 At Holywell the conventual buildings were placed to the north of church arranged in three ranges placed around a central square. This enclosure known as the cloister garth was flanked by cloister alleys. In Bay 1 part of the west range of the cloisters were excavated. This included part of a probably a two storey building (*cellarium)* with the ground floor the cellarer's range used for the storage of food stuffs and drink. The upper floor could have served as the prioress's chamber and/or guest accommodation (Coppack 1990, 75). In Bay 2 what were probably the remains of the west cloister alley were identified. To the east of the alley lay the cloister garth, the spiritual core of the monastery and a place of quiet contemplative retreat.

8.4.5 It seems likely that the construction of the west range of the cloisters and probably the other conventual buildings in stone, took place and was integral to the rebuilding campaign of the priory church at the end of the 12th century. This 'process of foundation 'could take many years and at St Mary Clerkenwell also an Augustinian nunnery, the 'temporary' timber buildings were not replaced by masonry structures until the great rebuilding in the 1180/90's when the priory church there was also rebuilt (Sloane 2012, 141).

8.4.6 At Holywell to the south of the church a curtain wall enclosed an outer court. Access was controlled by a gatehouse. In Bay 6 the remains of the curtain wall, the west side of a gatehouse and part of the gateway were excavated. The gatehouse was a two-cell structure (Rooms 1 and 2) and the width and depth of the masonry foundations suggest an imposing structure of at least 2 stories. Room 1, adjacent to the gateway was a ground floor room. Room 2 was slightly sunken and had a drain set into the floor that discharged to the north. The gatehouse would have provided accommodation for the porter but may also have included a gate-chapel and/or an almonry where alms would be dispensed (Coppack 1990, 120).

8.4.7 Running from the gatehouse to the portico entrance to the church was a metalled road or avenue recorded in Bays 4 and 5. The avenue also probably gave access to the inner gate to the west of the church (Bull *et al.* 2011, 37 fig. 20).

8.4.8 The key component in the construction of the monastic buildings in the late12th/early 13th century was the use of yellow Caen stone from Normandy and green Reigate stone from east Surrey bonded with a coarse sand mortar (see Appendices 9 & 10).

8.4.9 A polished Purbeck marble shaft recovered from a later post-medieval wall (context [600], Phase 4, Appendix 9) probably used originally to embellish interior feature of church does suggest a certain measure of affluence for the priory.

8.4.10 A few objects were recovered from Phase 3.2 that may be associated with the construction of the priory included numerous iron nails and a puddle of lead SF <164> (see Appendix 7). Lead would have been used fairly extensively in the monastery for roofing, window cames and water pipes.

8.4.11 The Phase 3.2 pottery assemblage was still comparatively small and limited largely to jars and jugs. The size of the assemblage probably reflects that the site did not cover the main areas of domestic activity within the monastery. However, the occurrence of a few sherds of imported Saintonge ware does indicate a degree of status and wealth (see Appendix 4).

8.5 Phase 3.3: *c.* 1200-1350

8.5.1 Phase 3.3 represents use of monastery in the period 1200-1350 which was marked by the exhumation of 27 burials. The burials were assigned to this phase on the basis of their stratigraphic position and the dating evidence recovered from the grave fills.

8.5.2 In Phase 3.3 the number of males or probable males identified was 8 and the number of females or probable females was 5 (Appendix 12). That there are males amongst the burial assemblage is not surprising as there would have been a number of individual males employed or associated with the priory (Bull *et al*. 2011, 120). This would include chaplain to the priory, brethren who witnessed deeds and charters and may have aided on the compilation of the cartulary, clerks of the nunnery, boarders, guests and corrodians of the nunnery and servants many of whom would have been resident within the precinct (Sloane 2012, 154-5).

8.5.3 In Phase 3.3 18 burials were within the church. The majority of those buried within the church were probably benefactors, their wives, widows and children (Bull *et al*. 2011, 118). Most monasteries attracted and were increasingly dependent upon land grants, monetary gifts and other grants from wealthy benefactors. In return these patrons requested for themselves and their families to be buried in the church to demonstrate their piety and for the religious to pray for the salvation and to lessen the torment of purgatory.

8.5.4 In the HLY 12 excavations burials were discovered in the nave and both the south and north aisles and in the portico. The burials outside the church were placed close to it so that it does appear that if burial within the church was not an option then the preference was to be interred as close to the church as possible. There were burials (two in Phase 3.3) interred in the avenue as it approached the portico entrance.

8.5.5 In Phase 3.3 there was evidence that at least 11 of the burials were interred within a wooden coffin. Most appear to have been a simple rectangular wooden box fastened with nails.

8.5.6 The quantity of pottery recovered from deposits assigned to this phase is still fairly small and similar to that of the proceeding phase. However, with 13th- and early 14th-century pottery recovered in both Phases 3.3 and 3.4 it is probably true to say that there was an intensification of activity up until the mid 14th century (see Appendix 4).

8.5.6 The small finds assemblage was dominated by iron nails and many of these would have been derived from coffins interred in the burials. However, a small number of other objects was also recovered including the foot of a copper-alloy vessel SF <112>, part of a knife blade SF <135>, a hone stone SF <111> and a possible arrow head SF <110> (see Appendix 7).

8.6 Phase 3.4: *c.* 1350-1540

8.6.1 Phase 3.4 represents the period *c.* 1350 to 1540. The site continued to be used for burials both inside and outside the church.

8.6.2 Nineteen of the excavated skeletons were assigned to Phase 3.4 on the basis of their stratigraphic position and/or dating of pottery and cbm found in the grave. The human bone assemblage included male and female and ranged in age from juveniles to mature adults (Appendix 12).

8.6.3 It is clear that the church encouraged the intense reuse of space and preferred focal points for burials. This was a practice that has been noticed elsewhere including Bermondsey Abbey (A. Douglas pers comm.).

8.6.4 Interestingly one of the burials, grave [606] located outside of the church, was of a young adult [605] accompanied by a lead/pewter funerary or mortuary chalice SF <77>. Such objects were prevalent in the 13th and 14th century and are usually taken to signify the individual was a priest. A similar object associated with a skeleton was unearthed in the earlier excavations of HLW 06 (Bull *et al.* 2011, 122). A priest acting as chaplain to the nunnery would have been a necessary appointment as only a priest could say Mass. At Holywell there were normally 2 priests (Bull *et al.* 2011, 122).

8.6.5 The placing of burials within the church and the portico meant that the floor would be raised and re-laid on numerous occasions. In Bay 2, of particular interest was the surviving floor formed of Westminster tiles dated 1250-1310, one of the best and well preserved i*n situ* medieval floors discovered in London. For this reason the floor tiles were painstakingly individually lifted and conserved. The tiles included plain glazed tile in yellow and brown-black, triangular forms in yellow or black, and patterned tiles in yellow, black, brown and red. The majority of the pattern examples have been documented elsewhere (Betts 2002)

but three examples are new (see Appendices 10 & 11). A small patch of *in situ* 'Westminster' floor tile was also excavated at Holywell priory in the excavations of HLW 06 (Bull *et al*. 2011, 152).

8.6.6 In the greater London area 'Westminster' tiles have been associated with 19 monastic sites and 15 parish churches and other buildings (Betts 2002, 12, fig. 8) including the Augustinian nunnery at St Mary Clerkenwell where 'Westminster' tiles were the most common variety of floor tile (Sloane 2012, 212). Other types of medieval floor tile used at Holywell include Penn tile dated 1350-90 and Flemish glazed tile dated 1350-1450 (see Appendix 10).

8.6.7 Certainly modifications and embellishments were added to the priory church throughout the 14th, 15th and early 16th centuries. It is thought that a stretch of the south wall of the church may have been rebuilt. It is also noted that in the HLW 06 excavations a wall thought to be part of the south aisle of the church was rebuilt just above ground level (Bull *et al*. 2011, 37-8).

8.6.8 Some of the recovered architectural fragments also suggest later rebuilding (see Appendix 9). For example, two late 13th-century architectural fragments found in context [514] post date the construction of the church in the late 12th/early 13th century. A window jamb that probably originated from the church, dates to the mid 14th century and was found incorporated into a later Tudor wall [514]. At HLW 06 a fragment of window tracery <A43> is an indication that the windows of the nave were replaced probably sometime during the 15th or 16th century (Bull *et al*. 2011, fig. 43, 58).

8.6.9 It has been suggested that Hollywell priory was probably largely rebuilt in the Tudor period by Sir Thomas Lovell who built a chapel in 1513 (Sloane 2012, 150; Survey of London 1922, 154-5). The intimate relationship between the lord and monastery is surely demonstrated by a covered way that linked Lovell's house to his chapel. The ceramic building material does provide evidence of a later medieval building campaign with a quantity of octagonal vaulting bricks (see Appendix 10). These bricks are rare in London monastic houses and their presence here suggests a late 15th- or early 16th-century phase of renovation in the latest architectural style and using new and expensive materials.

8.6.10 Further modification of the monastery was evidenced in Bay 1, with the introduction in the west range of a passage separating Rooms 1 and 2. The passage may have provided direct access form the great court to the cloisters. In Bay 6, there was evidence that the gatehouse was enlarged with the ground plan of the west gatehouse comprising 4 rooms. The east gatehouse was unearthed in Trench 2 with dimensions matching the late medieval west gatehouse.

8.6.11 An interesting feature at Holywell priory was a sunken well/cistern adjacent, external and to the south of Room 2 of gatehouse (west). Presumably this well/cistern was accessible

to the passing public and it is tempting to see the well/cistern as a gift from the priory to the people of Shoreditch.

8.6.12 There were approximately 80 small finds assigned to this phase and again the assemblage was dominated by coffin nails (see Appendix 7). There were a couple of objects possibly associated with the fabric of the church including lead window came SF <143> and an iron staple SF <95>. A couple of devotional objects recovered residually in later contexts probably date to this phase and include a small copper-alloy crucifix SF <57> and a double cross also copper-alloy moulded with the figure of a praying saint SF <15>. A number of other objects recovered from this phase may perhaps be associated with secular occupation of the precinct and include an annular brooch SF <109>, a fine copper-alloy pin SF <149> and a lace–chape SF <147>.

8.6 13 There was a marked increase in the quantity of pottery collected in this phase, a greater variety of fabric although dominated by 14th- and 15th-century Surrey-Hampshire pottery and a wider range of form including jars, jugs, bowls, and dishes (see Appendix 4). The Phase 3.4 pottery assemblage appears to indicate a real rise in activity. This rise in activity is probably associated with the secular occupation in the late medieval period of the priory precinct.

8.6.14 The animal bone assemblage for Phase 3.4 also reflects an increase of occupational activity presumably from the expansion of the secular population now living in the precinct. Some indication of the monastic diet was however provided with the occupation deposit in the west range and a floor makeup in the south aisle. The animal bone from these deposits was dominated by sheep/goat. Interestingly the only fallow deer bone was recovered was from Phase 3.4 (see Appendix 13).

8.6.15 At HLW 06 the medieval animal bone assemblage was also dominated by cattle and sheep/goat with a smaller component of pig and sparse recovery of poultry that included mostly chicken and small amount of goose (Bull *et al.* 2011, 169). The dominance of sheep/goat might may seem a little odd given the supposed Benedictine rule that allowed the eating of ‘two-legged’ but not ‘four-legged’ meat but by the 15th century the rules had relaxed a little (Sloane 2012, 155). It is thought that the main community of nuns would not have enjoyed meat or even fowl on a regular basis at least in the earlier medieval period (Sloane 2012, 155). Perhaps the bone assemblage is reflecting the diet of the associated community of clerks, chaplains, officers, guests and increasingly in the late medieval period of secular tenants.

8.6.16 Fish was eaten on Fridays and for much of the medieval period Wednesdays and Saturdays too (Sloane 2012, 155). Fish bone recovered from HLW 06 included a range of marine and estuarine species including herring, cod, conger, plaice/flounder, gurnard, smelt and eel (Bull *et al.* 2011, 169).

8.7 Phase 4: 1540-1600

8.7.1 Phase 4 represented the period 1540 to 1600. The Sissolution of the monastic houses began in 1536 and by 1540 around two-thirds of the monastic land had been sold to the laity. Holywell priory was dissolved in October 1539 and its sister house St Mary Clerkenwell had been closed in September of the same year.

8.7.2 The church and the conventual buildings as symbols of the old order were usually the initial focus for demolition. In the excavations of HLY 12 robber cuts and layers of demolition debris marked the destruction of the church and the west range. It was noted by Bull *et al.* that it appeared that the priory church underwent several phase of demolition and robbing (Bull *et al*. 2011, 87).

8.7.5 In Trench 1, in Bays 2 and 3 the remains of a large Tudor house were excavated. In Bay 3, part of the E/W aligned south wing was unearthed. The south wing comprised of at least two rooms (Room 1 and 2) that were built over the footprint of the former south aisle to the church. The south wall of the church survived because it was incorporated into the new build and formed the south wall of the south wing. The lower courses of the medieval columns [902] and [903] also survived because they were incorporated into the north wall of Rooms 1 and 2. It is very likely that the south wing extended at least as far as the excavations at HLW 06 where the south arcade also survived in part with the bottom course of the piers incorporated into later building (Bull *et al.* 2011, 87)

8.7.6 At HLY 12 there was no evidence for the north wall of the south wing as presumably this would have been totally robbed out by the railway viaduct footings. Nevertheless it is possible to conjecture such a wall and a corridor that would have provided access to the ground floor rooms (see Fig 8).

8.7.7 The portico entrance to the church also survived refurbished; with the door jamb rebuilt and a Flemish tile floor laid. However, the south wall of the Tudor house (formerly the south wall of the church) was the Webbe-Rutland property boundary and it seems unlikely that the portico would have remained as an entrance way to the building. It is possible that the former portico was now converted into a stair-tower providing access to an upper floor.

8.7.8 In Bay 2 the remains of a large 16th-century fireplace and flagstone floor provide evidence for Room 3 and a west wing to the Tudor house. The principal high status living rooms were usually on the first floor and the ground floor rooms used for storage and service functions and it seems likely that Room 3 was the kitchen.

8.7.9 The south and west wings would have enclosed a courtyard and although there was no evidence in Phase 4 for a north wing (probably because it was truncated by the 19th-railway viaduct) the ground plan of the Tudor house conforms to a ‘typical’ 16th-century courtyard house. The use of brick and large Flemish floor tile (see Appendix 10) in the construction of the Tudor house, at this early post-medieval date, is an indication of wealth and status.

8.7.10 In Bay 6 and in Trench 2, there was evidence that the gatehouse was retained, refurbished and modified. The principal alteration was to the west gatehouse where Rooms 1 and 2 were combined to form a single room (Room 5). The east wall of semi-basemented Room 3 was rebuilt and the floor raised. Room 4 was demolished and replaced by a probably single lean-to structure. Limited excavation meant that there was no evidence that the east gatehouse had been altered in this phase.

8.7.11 The avenue does appear to have been retained although it would not have provided the approach to the Tudor house which would have probably been from Shoreditch High Street.

8.7.12 An assemblage of 70 small finds was recovered from Phase 4 (see Appendix 7) deposit. These included remnants of roofing lead (SF <72> and SF <141>) and is evidence for the demolition of the church. Lead was a valuable material and would have been carefully stripped, and melted down to be sold and reused. A lead smelting pit was unearthed in the HLW 06 excavations. Other small finds give an indication of daily life of the residents and include a lace-chape SF <99>, a copper-alloy pin SF <88>, bone cutlery handles SF <134> and SF <153>, jetons SF <87> and SF <47> and a curtain ring SF <79>. An indication that industrial activity was taking place, if not on site then in the close proximity, was a pinner's bone SF <41> used for the sharpening of pins. It is noted that pinner's bone was recovered from post-Dissolution contexts at St Mary Clerkenwell (Sloane 2012, 249).

8.7.13 The pottery assemblage (see Appendix 4) was dominated by London-area early post-medieval redware and slipware, Surrey-Hampshire Border wares, imported German stonewares and Low Countries red ware. The assemblage is very comparable with the 16th-century pottery recovered in the earlier excavations of HLW 06 (Bull *et al*. 2011, 159).

8.7.14 The animal bone assemblage (see Appendix 13) was dominated by sheep/goat, followed by cattle, then smaller quantities of chicken, rabbit and goose and probably does reflect the meat consumed on the site during the 16th century.

8.8 Phase 5: 1600-*c*. 1670

8.8.1 Phase 5 represents the period 1600-*c.* 1670. The period was characterised by a continuity of occupation in both the Tudor courtyard house and in the gatehouse.

8.8.2 In Bay 2, the north facing fireplace [889], is evidence that a E/W orientated north wing to the Tudor house was extant. Either the north wing had been built in the 16th century as part of the original design and the fireplace was a later addition or the whole wing was a 17th-century development.

8.8.3 Continued occupation of the Tudor house saw the renewal of the large fireplace in the west wing, in the south wing a new internal wall was built between Room 1 and 2 and a new brick floor was laid in Room 1. A large brick-lined cess pit was also built adjoining the

putative stair-tower. The position of the cess pit adjacent to the stair-tower (formerly the portico entrance to the priory church) further supports the argument that the former portico was not used as an entrance. A garderobe attached to the stair-tower is a plausible interpretation.

8.8.4 An environmental sample {5} of the fire debris [387] of the kitchen fireplace (see Appendix 14) provided some interesting information on fuel use and diet of the inhabitants of the Tudor house in the 17th century. The sample included wood charcoal of a size to determine species, as well as fish bone, oyster shell, fig, mustard, and elder seeds, and charred cereal grains including wheat, barley and rye.

8.8.5 At the gatehouse a major refurbishment was undertaken. At gatehouse (west) the west wall was rebuilt with a lightwell illuminating Room 5. Room 3, a semi-basement was rebuilt and expanded with a bay to the south. The introduction of a connecting drainage system installed in Room 5 and 3 with a 'soakaway 'in Room 3 may be an indication of change of use for the building. A possible external tank adjacent to the northwest corner of Room 5 again may suggest a particular and specific requirement. The provision of an external winding staircase that gave access to the upper levels of gatehouse (west) could be an indication of multiple occupancy or the necessity or convenience of avoiding activity taking place on the ground floor.

8.8.6 It may be significant that smithing spheres and hammerscale (see Appendix 8) was recovered from the posthole [650] in the gateway and adjacent to gatehouse (west).

8.8.7 The gatehouse (east) was also altered with the ground floor divided into two rooms (Rooms 1 and 2). In Room 1 there was again evidence for specialised activity taking place with the construction on the floor of a raised square internally indented brick base.

8.8.8 The east wall of Room 3 was angled NW/SE and probably reflects a realignment of the avenue. The avenue may have provided a route to the north and west skirting the Tudor house and connecting with the former priory 'Great Court' later known as Holywell Court.

8.8.9 The Phase 5 pottery assemblage included the expected Surrey-Hampshire Border wares, Essex post-medieval red wares, London area post-medieval redwares and imported Frechen stoneware. However, a potentially important aspect of the assemblage was the biscuit-fired tin-glazed ware that amounted to one third of the assemblage and included a sizeable proportion of production waste. Whether this assemblage is an indication of a close by and previously unknown pothouse or merely represents dumping of waste from a production centre further afield is an interesting question (see Appendix 4).

8.8.10 Only a small group of small finds was recovered in this phase and they included a copper-alloy pin SF <82>, copper-alloy chain link SF <83>, two coins; a silver groat SF <73> and a 17th-century farthing SF <150> and two possible jetons (SF <16> and SF<151>) (see Appendix 7).

8.8.11 The clay tobacco pipe assessment (see Appendix 5) identified a number of 17th-century pipes of non-local manufacture. This is perhaps not surprising for a site located so close to one of the main thoroughfares leading into London.

8.9 Phase 6: *c.* 1670-1710

8.9.1 Phase 6 represents the period *c.* 1670-1710 when the west and north wings of the Tudor house were pulled down.

8.9.2 Nearly a third of all the pottery collected at HLY 12 was assigned to Phase 6 (see Appendix 4) and the largest single group was recovered from the cess pit [234], adjacent to the stair-tower/south wing of the Tudor house. It is thought that the fill [233] of the cess pit marks it disuse and represents a house clearance probably prior to the transformation of the house in the early 18th century. The pottery from the cess pit, included green-glazed Border table-ware and yellow-glazed Border kitchen and sanitary ware, as well as other pieces of high quality pottery such as a tin-glazed drugs jar, and imported fabrics such as a Saintonge chafing dish and a Westerwald stoneware drinking jug that suggest an affluent household. A rare and interesting find was two chicken feeders examples of which have been found on other high status sites in the post-medieval period.

8.9.3 A concentration of animal bone was also recovered from the cess pit [234]. Much of this was butchery waste (see Appendix 13). Both the animal bone and the pottery found in the cess pit appear to suggest proximity to the kitchen previously thought to have been located in the west wing.

8.9.4 The ground to the north of the retained south wing (Open Area 2) appears to have been used as a backyard occupied by wells and an ancillary building. There was some indication for industrial activity taking place with bone working-waste (see Appendix 7) recovered the fill of the wells.

8.9.5 The gatehouse was retained in this phase and in Room 3 there was further evidence that metal working was taking place with hammerscale and smithing spheres identified in the slag recovered from the debris [424] that covered the floor (see Appendix 8).

8.9.6 The small finds assemblage for Phase 6 (see Appendix 7) included household and personal items that give an indication of the daily life of some of the occupants at Holywell. Objects such as ivory handles for knives and forks, tortoiseshell fan SF <160>, and a gun-powder flask SF <163> that suggest a degree of status and more mundane items including bone combs (SF <60>, <68>, <70> and <162>), a hone stone SF <61> and a toy marble SF <55>.

8.10 Phase 7: 1710-1780

8.10.1 Phase 7 represents the period 1710-1780. The south wing of the Tudor house was retained unaltered. A well and a rubbish pit excavated in the Open Area 2 to the north are the only archaeological features that attest to occupation. Rocque's map of 1746 shows what appears to be the south wing of the Tudor house (formerly the south aisle of the priory church) including the incorporated southwestern portico entrance to the priory church. The ground to the north of the south wing is shown as gardens.

8.10.2 The masonry remains in Bay 1 are thought to be related to a building extending to the north and east of Trench 1, and may date to the second half of the 18th century.

8.10.3 The cartographic evidence also corroborates the archaeological evidence that the gatehouse remained standing until the late 18th century.

8.10.4 The ceramics from Phase 7 reflected the changes in pottery production with the introduction of white salt-glazed stonewares and printed-transfer wares (see Appendix 4).

8.10.5 A small assemblage of small finds was collected from deposits assigned to this phase including a an ivory cutlery handle SF <50>, a glass and an amber bead (SF <154> and <39>, a copper-alloy button SF <127> , a toy marble SF <44> and a number of 18th-century coins (see Appendix 7).

8.10.6 The animal bone assemblage recovered from well [210] in Open Area 2 and from the cess pit [314] associated with the gatehouse was consistent with domestic occupation at both locations (see Appendix 13).

8.11 Phase 8: 1780-*c.* 1850

8.11.1 Phase 8 represents the period 1780-1850 and the final demolition of the last remnants of the Tudor house and the last remnants of the medieval priory including the gatehouse.

8.11.2 Only a small vestige of the early 19th-century terraced housing that now occupied the site survived to be archaeologically recorded. Unearthed in Bay 1 of Trench 1 was part of a building that extended to the north. The Horwood maps of 1799 and 1813 show buildings fronting onto New Inn Yard and an E/W aligned road that connected Shoreditch High Street to Curtain Road to the west. The garden walls of Trench 2 may be associated with properties fronting on Holywell Lane also depicted on the Horwood maps.

8.11.3 The pottery (see Appendix 4) recovered from Phase 8 deposits, exemplified the rise in mass production with pearlware and creamwares decorated with printed transfers and the ubiquitous English stonewares and post-medieal red wares. Apparent also was the growth of consumerism and the specialisation of form with the refined wares used for the table and serving wares and the stone ware and red earthen ware confined to the kitchen wares and the flowerpot.

8.11.4 The small animal bone assemblage (see Appendix 13) was consistent with domestic occupation in the early 19th century. An interesting find was a turkey bone that probably reflects the increasing popularity of this once exotic meat.

9 Original Research Aims and Objectives and Revised Research Questions

9.1 The original aims and objectives of the archaeological field work as set out in the Written Scheme of Investigation (Mills Whipp Projects 2014) were:

9.2 Prehistoric

● What is the nature of the prehistoric occupation in the upper reaches of the Walbrook?

9.2.2 No evidence for prehistoric activity was identified.

9.3 Roman

● The nature of the Roman occupation known from the area will be explored in detail.

9.3.1 The excavation confirmed earlier findings of HLW 06 that in the early Roman period the site was open ground, marginal to settlement and periodically subjected to flooding.

9.3.2 There was some evidence of the land was managed with drainage ditches and field boundaries and was probably utilised for arable agriculture.

9.3.3 At HLY 12 there was no evidence for Roman burials and it is presumed that the site lay to the west and beyond the late Roman cemetery identified in the HLW 06 excavations.

9.4 Saxon

● Land-use during the Saxon and early medieval period will be examined in detail.

9.4.1 There was no evidence for Saxon activity on the site.

9.4.2 The earliest evidence for post-Roman activity probably dates to the 12th century and was concentrated in the area (Trench 1, Bay 6) of the later medieval priory gatehouse. Holywell priory was founded in the middle of the 12th century and if the boundary ditch excavated, was the precinct enclosure ditch then at least one gate must have given access to the precinct and it is likely that it would be on the same site as the later gatehouse (see Phase 3.2).

9.5 Medieval

● The development of Holywell Priory will be examined in detail.

9.5.1 At HLY 12 no remains of the early priory church (1150-90) were identified although the church was partially unearthed in the excavations of HLW 02 (Bull *et al.* 2011) and was supposed to have fallen within the area of excavation. The excavations did however identify what may have been a ditch that enclosed the priory before the curtain wall was built in the late 12th or early 13th century. Deposits were also excavated that may be associated with an early gateway. Gilchrist notes that the relative poverty of nunneries at their foundation 'was felt in slow initial building campaigns, limited building and departure from standard monastic planning' (Gilchrist 1994, 125).

9.5.2 The excavations did unearth remains of the later priory church built in the late 12th century**.** In particular part the south wall of the church which stood in places nearly a metre high and the southwest portico entrance to the church. Two columns formed part of the south arcade and the foundations of two more columns defined the north aisle. The foundations of the north wall of the church were also recorded. The width of the nave and the north and south aisles is new information. *In situ* floor and floor makeup deposits showed that the floor was re-laid on multiple occasions raising the floor level significantly. In the nave a large area of decorated Westminster tile pavement survived laid in a pattern of diamond shapes delineated by zig-zagged plain yellow, black and triangular shaped tiles.

9.5.3 Part of the west range of the cloisters was also revealed in the excavation. It was clear that the west range was integral to the design of the church and that both elements were contemporary in construction. In the later medieval period there was some alteration to the west range with a passage way or slype may have separated the north end of the cellarer's range from the church.

9.5.4 The decision to place the cloisters to the north or south was as much controlled by access to water supply, drainage and the size and shape of the plot but there was a tendency to put them on the sheltered south side. However, at the priory of St Mary Clerkenwell the conventual buildings were to the north of the church. The fact that the Holywell and St Mary were both Augustinian perhaps suggests that this was a preferred position. In fact where the plan is certain, in over a third of nunneries the cloisters were to the north. It is possible that there was some symbolic meaning in the position of the cloisters (Sloane 2012, 142-3).

9.5.5 A total of 45 inhumations were excavated at HLY 12, 30 of the burials were within the church. All the burials conformed to the 'normal' medieval practice of the body laid in a supine position with the head to the west. The burial group included male and female and juvenile to mature adults. Within the medieval church there was a hierarchy of preferred burial locations with the most desirable places closest to the high altar but other sought

after locations included the choir, aisles of the presbytery, the nave, and the aisles and arches (Bull *et al*. 2011, 131; Gilchrist and Sloane 2005, 61). To be buried under a road may appear to be an unusual location but it was a deliberate act that may have a particular symbolic meaning.

9.5.6 Shrouds were the most common form of burial wrapping in the medieval period. Coffins were often a communal, reusable resource used to bear the corpse from the home or infirmary to church for a service before processing to the grave side, where the body would be removed and laid in the grave in their shroud (Gilchrist and Sloane 2005, 111). Nevertheless a significant minority of bodies were interred in coffins. The practice of coffin burials may have an association with status. In Phase 3.3, ten of the coffin burials were located inside the church and one was in the portico. In Phase 3.4 there was evidence for six of burials being interred within a coffin; all of these were located inside the church.

9.5.7 The curtain wall and gatehouse were unearthed in the south of the site. There was clear archaeological evidence for a major rebuilding of the gatehouse in the later medieval period, with the construction of more imposing building that projected bastion like beyond the alignment of the precinct wall.

9.5.8 A prominent feature of the later medieval gatehouse was a well/cistern located adjacent and south of gatehouse (west) on the outside of the monastic precinct. The site of the priory contained a spring called Haliwell (Holy Well) and indeed this may have been a determining factor in the choice of the site (Bull *et al.* 2011, 35). The priory of St Mary Clerkenwell was also associated with a well of miraculous curative powers and an object of pilgrimage. At St Mary a nun was deputed to collect oblations left there (Sloane 2012, 140). The priory's strong association with a holy well may have given the well/cistern particular significance.

9.5.9 A metalled avenue connected the gatehouse to the southwest entrance of the priory church. However, it seems a little odd that the gatehouse and the entrance to the church are not in alignment. It is possible that the position of the gateway was fixed earlier and in line with the entrance to the mid 12th-century church and that the later church extended further to the west than the original church.

9.5.10 There was evidence in the building material assemblage and in the architectural fragments that parts of the church may also have been rebuilt in the later medieval period. The late 15th and early 16th century was a time when a good deal of replacement work was undertaken on the richer nunnery churches and cloisters, perhaps suggesting an Indian summer of patronage and popularity on the eve of the Dissolution (Sloane 2012, 150).

9.5.11 The pottery, animal bone and some of the small finds assemblages for the medieval period do appear to reflect an increase in occupational activity. By the late 15th / early 16th century it has been suggested that the nunneries were 'saturated' with officials as a result of their female status – rent collectors, stewards, confessors and others with a large number of

tenements inside the precinct (Sloane 2012, 193). Furthermore some members of the aristocracy and gentry were moving into urban and suburban monastic precincts, where they developed a symbiotic relationship with their hosts. The monastic community provided a town house and spiritual services and the lord gave an injection of patronage and a degree of protection (Bull *et al*. 2011, 133). This was exemplified at Holywell with Lord Lovell and his occupation of the outer precinct.

9.6 Post-medieval

● The early post-medieval land-uses will be examined in detail appropriate to significance.

9.6.1 The filling out of the precinct was well underway before the Dissolution. This was a process seen at other monasteries for example St Mary Clerkenwell and the hospital of St Mary Spital. Thus fragmentation after the Dissolution in the nunneries and hospitals was hastened and more pronounced because of pre-existing tenements, while great male monasteries which tended to be transferred in single units, tended to break up towards the end of the 17th century (Sloane 2012, 194).

9.6.2 The Dissolution saw the break-up of the monastic complex and the pulling down of the church and presumably the conventual buildings. At HLY 12 layers of demolition debris attest to the destruction of the church and west range. It is likely that the process of demolition and transformation of the priory into solely the secular was carried out over a number of years. In 1544 the lead was stripped from the church and cloister, however the stone walls of the church were still standing; there were stones, timber, tiles, glass and iron still in the chapel and all these materials were reserved for the crown. Apparently there was still intact lead on the roof of a chapel (Lovell's chapel?) as late as 1548 (Bull *et al.* 2011, 85).

9.6.3 At Holywell the land to the south of the church and east of the avenue was owned by the Earl of Rutland (Bull *et al.* 2011, 87, fig. 68). The land in the northern area including the church and conventual buildings were in the hands of Henry Webbe. A large 16th-century house courtyard house was unearthed in Bays 2 and 3. The south wall of the house (the former south wall of the priory church) was also the property boundary between the Earl of Rutland's land and Henry Webbe's estate. It is presumed that Henry Webbe or Giles Allen (see Archaeological and Historical Background) was the builder of the house.

9.6.4 There was no evidence at HLY 12 for any buildings associated with the Earl of Rutland's residence that lay in the south and east of the former monastic precinct.

9.6.5 The gatehouse was retained and would have provided a readymade symbol of seigniorial power. The survival of former monastic gateways and their adaption to secular use was a

notable characteristic of other monasteries including St Mary Clerkenwell and Bermondsey Abbey.

9.6.6 For most of the 17th century the Tudor house appears to have remained a high status residence with an additional fireplace and chimney added to the north wing. However, by the end of the 17th century the building was drastically altered with the tearing down of the north and west wings.

9.6.7 There was archaeological evidence that in the 17th century, at least part of the gatehouse was used for specialised activities including metal working.

9.7 The 18th century

● The site uses after the 18th century will be examined as a brief recording exercise.

9.7.1 The former south wing of the Tudor house and the gatehouse survived until the late 18th century when they were pulled down to make way for terraced housing fronting on to Holywell Lane to the south and New Inn Yard to the north. Only a few late18th/early 19th-century features and deposits could be associated with this last phase of occupation of the site, prior to construction of the railway viaduct in the 1860s.

9.8 Revised Research questions

9.8.1 The excavation at Holywell has raised a number of additional research questions. These are:

● How do the medieval monastic remains found at HLY 12 confirm or challenge previous conjectural plans for the early priory church?

● How do the medieval monastic remains found at HLY 12 confirm or challenge previous conjectural plans of the late 12th century priory church?

● How do the remains of the west cloister range confirm the presumed layout of the conventual buildings

● When was the cloister formalised?

● How do the deposits and features of the early medieval period of Phase 3.1 inform our understanding of the layout of the priory precinct in the first few decades of it foundation?

● How do the early post-medieval remains inform our understanding of the process of Dissolution and redistribution of previously monastic property and resources.

● What can the remains of the Tudor house at HLY 12 tell us about early post-medieval architecture, use of building material, layout and use of space in a high-status residence?

● How do the remains at Holywell inform our understanding of the transformation of the village of Shoreditch into a suburb of the City of London in the later 17th to early 19th century.

● What can further study of the pottery assemblage tell us of how pottery was used within the priory and how that changed during the medieval period, as well as after the Dissolution and during the later 17th and 18th century?

● How can further study of the post-Roman small finds add to our knowledge of church furnishings and devotional objects in the medieval period?

● How can the further study of the large assemblage of the small finds recovered in Phase 6 contribute to our knowledge and understanding of the daily life of the residents of Holywell during the 17th century.

● How does the clay tobacco pipe assemblage inform our knowledge of the local clay tobacco pipe industry in particular local production and marketing.

● How does the decorated medieval window glass inform our understanding of the decorative scheme of the priory and how and when might this have been changed or introduced?

● How does the early post-medieval window glass add to our reconstruction of the Tudor house?

● How does the post-medieval glass assemblage inform on the changing socio-economic status of inhabitants of Holywell during the 16th, 17th and 18th centuries.

● How do the architectural fragments provide evidence for and dating of the medieval building campaigns in the construction of the priory.

● How might the loose architectural fragments inform our understanding of the structural features employed in the different monastic buildings.

● How does the building material inform our understanding of the type, use and dating of this material in the construction of the priory? Of particular importance are the Westminster floor tiles and the vaulted moulded brick.

● How was the medieval building material of Holywell priory re-used in later post-medieval structures on site and in the further locality.

● How might the human bone assemblage inform our knowledge of the London's medieval population gender, age, stature, diet, health and disease.

● How can the animal bone assemblage inform our understanding of the medieval monastic diet.

● How can the animal bone help in our understanding of changes to animal husbandry in the medieval and post-medieval periods.

10 Importance of the Results, Further Work and Publication Proposals

10.1 Importance of the results

10.1.1 The excavations at HLY 12 provided evidence of activity for the Roman, medieval and post-medieval periods. The natural water channel detected on the west side of Trench 1 is an important contribution to our modelling of tributaries to the Walbrook and the upper Walbrook valley in the Roman period.

10.1.2 Activity in the Roman period probably concentrated to the 3rd and 4th centuries, was pretty low key and with only a few features probably related to field boundaries. However, an interesting assemblage of seeds collected from one of field ditches may inform our understanding of late Roman agricultural production and consumption.

10.1.3 The excavations at HLY 12 provided new information on the late 12th-century church in particular defining definitively the width of the north and south aisles and the nave. The new findings will provide an opportunity to reassess previous conjectured plans of both the early priory church and the late 12th-century church.

10.1.4 The Westminster tile pavement in the nave is of national importance and further study will provide new knowledge especially for tile design and layout patterns.

10.1.5 Tantalizing evidence for later medieval rebuilding of at least part of the church was also discovered. In particular the rare vaulted moulded brick provide an opportunity to understand how Renaissance architecture was beginning to influence monastic church design.

10.1.6 At HLY 12 part of the west range was unearthed; this was first time that any part of the cloisters has been investigated archaeologically and an opportunity to test the validity of the documentary sources.

10.1.7 The excavation at HLY 12 also provided for the first time an opportunity to archaeologically investigate the main gatehouse to the priory.

10.1.8 The excavations at HLY 12 exhumed 45 burials that can be added to the 29 burials all within the priory church excavated at HLW 06 (Bull *et al*. 2011, 118) and provide an opportunity to understand further burial practice and zoning within the church. It also, when combined with the HLW 06 skeletal group, provides a significantly larger assemblage to compare with other monastic and non-monastic assemblages.

10.1.9 The excavations at HLY 12 also provided a wealth of cultural and environmental material that can be compared with the earlier excavations at Hollywell and enhance our understanding of life within a medieval nunnery.

10.1.10 The earlier excavations at Hollywell provided some insight into the process of Dissolution and the fragmentation of the former priory. Of particular significance was the unearthing of

a major part of a 16th-century Tudor courtyard house that was built over and incorporated elements of the priory church.

10.2 Further work

10.2.1 The site is of local, regional and national importance and further work will enable a detailed stratigraphic report fully integrated with the specialist data so as to address the research objectives. It is recommended that further work include a close comparative study of the priory of St Mary Clerkenwell. The histories of the two monasteries of Holywell and St Mary Clerkenwell are strikingly similar. Both Augustinian nunneries were founded in the mid 12th century, Holywell in 1152 and St Mary Clerkenwell slightly earlier in 1144. And both undertook a rebuilding of the priory church at the end of the 12th century only about 40 years after their foundation. It has been suggested that there would have been economies of scale in employing the same masons (Sloane 2012, 150). There may have been other cooperation and further research should look for similarities in design and use of materials across the two priories.

10.2.2 Further work should include, in the light of the discoveries made at HLY 12 a reappraisal of the findings unearthed at HLW 06 in particular the conjectured plans of the early monastic church and the late 12th-century priory church. Further consideration should be given to burial practice, social hierarchy and zoning by age and gender and locational preference.

10.2.3 It is recommended that opportunity will be given for relevant historical sources to be consulted and researched in particular land ownership deeds, and titles in particular for the ownership of the Tudor house.

10.2.4 A report of the Roman pottery assemblage should be included in the publication but only one sherd from a Nene Valley Colour-coated ware Roman field-flask, requires further research and illustration.

10.2.5 The small Roman coin collection requires further cleaning and conservation to allow full identification. This would contribute to our understanding of the nature of the occupation around Ermine Street. Of the other Roman small finds one iron fragment was recommended for x-ray and no further work is required on the other objects.

10.2.6 The post-Roman pottery assemblage although small was well stratified and for the most part associated with particular buildings or structures and as such offers an opportunity to study changes in pottery selection, use and disposal from the 11th to the 18th century. In particular further work will focus on a comparison with the earlier excavations at Holywell (HLW 06) and other monastic sites including, St Mary, Clerkenwell, Holy Trinity Priory, St Mary Spital, Bermondsey Abbey and St Mary Graces Abbey.

10.2.7 To further understand the source of the 17th-century tin-glazed biscuit ware it is recommended that, parallel forms should be sought and most importantly chemical

analysis of the fabric be undertaken and this compared with the existing data-base for London tin-glazed production centres.

10.2.8 It is also recommended that full quantification and partial reconstruction be undertaken of the key clearance group from the cess pit [233] and the group to be compared with other contemporary assemblages. This would add significantly to our understanding of pottery consumption in a high status 17th-century residence.

10.2.9 The post-Roman small finds assemblage should be included in the publication report. Of particular significance was the small group of medieval church furnishings and devotional objects. Another group of particularly importance was the assemblage from Phase 6 relating to households in the 17th century. The occurrence of bone working waste was also interesting especially it can be associated with the collection of bone combs and an indication of manufacturing taking place on site. A number of objects are recommended for further, cleaning, conservation and x-ray.

10.2.10 The clay tobacco pipe assemblage is of local significance and warrants inclusion in the publication report. Further research on a number of bowls to establish where they were made should be undertaken and eighteen bowls are recommended for illustration.

10.2.11 The glass assemblage is generally mundane and only of local significance but it should be included in the publication report. It is recommended that a number of items require illustration or photography. Of particular importance was the medieval and post-medieval window glass which has the potential to inform on the fenestration of the priory and post-Dissolution house.

10.2.12 Diagnostic slag including hammerscale and smithing spheres was recovered from Room 3 of gatehouse (west) in Phase 6 indicative of welding and hot iron work taking place. The slag assemblage is of local importance and should be included in the publication report but no further work is required,

10.2.13 Further work on the architectural fragments from Holywell priory will include full recording and illustration of any new ‘type’ stones recovered and a description of their setting.

10.2.14 A full report of the recovered building material should be included in the final publication. The ceramic building material from HLY 12 includes some groups that are of national importance, including the *in situ* Westminster floor that included at least 24 patterned designs some of which are probably ‘new’. Detailed examination of the ‘Westminster’ tiles should be undertaken. The very rare vaulted moulded bricks, needs further study, parallels sought and possible influences of design researched. Further work would also include the study of the re-use of monastic building material and comparisons made with other monastic sites. It is recommended that a petrological review be undertaken of the architectural stone types.

10.2.15 It is recommended that full analysis be undertaken of the 45 human skeletons recovered from the site. No further work is required on the assemblage of disarticulated human bone.

The demographic and pathological data should be compared with the 29 inhumations exhumed in the HLW 06 excavations and other comparable cemetery assemblages. The completed report should be included in the publication.

10.2.16 The animal bone from the medieval and post-medieval periods should be included in the final publication and further work is recommended to study the age data and butchery on the assemblages from Phase 4 and 6. A comparison should be made with the HLW 06 assemblage as well as other London monastic sites including St Mary Clerkenwell, and Bermondsey Abbey. The fish bone should be fully identified.

10.2.17 Full identification of the taxa present in the environmental samples will provide further information of the surrounding environment. In particular the rich seed assemblage from the Roman ditch [513] sample {9} has the potential to inform on Roman arable agricultural production and consumption. The charred grain and uncharred seeds from the fire deposit [387] sample {5} has the potential to inform our understanding of diet in the 17th century. Furthermore further study of industrial waste [424] sample {7} may provide information on wood fuel procurement and woodland management in the 17th century.

10.3 Publication Outline

10.3.1 The results of the archaeological excavation will be published in an appropriate peer reviewed journal such as London and Middlesex Archaeological Society Transactions. If further field work is undertaken on the Shoreditch Village development in the near future then it may be more appropriate to include these findings with the HLY 12 data in an integrated monograph.

10.3.2 The publication of the excavation will focus on the foundation of the site as an Augustinian nunnery in the 12th century through to the Dissolution and the subsequent transformation of the site and its secular development through to the late 18th century. The site will be considered in context with other comparable suburban monastic houses.

10.3.3 A proposed outline of the publication is as follows:

- Introduction to the project
- Historical and archaeological background
- Archaeological sequence
- Specialist data where appropriate integrated into the archaeological sequence
- Specialist reports
- Discussion
- Acknowledgements
- Bibliography

● The text will be illustrated by AutoCAD plans, historic maps, finds illustrations and photographs where appropriate.

11 Contents of the Archive

The archive comprises:

The paper archive:

	Scale	Drawings	Sheets
Context Sheets	-	-	1238
Plans	1:20	700	1750
Sections	1:10	74	91

The photographic archive:

Black & White Prints	18 Films
Digital Format	1250 shots

The finds archive:

Roman pottery	2 boxes
Post Roman pottery	37 boxes
Clay tobacco pipe	9 boxes
Glass	3 box
Architectural stone	150 pieces
CBM, stone & mortar	33 crates & 2box
Roman coins	9 coins
Roman small finds	6 objects
Post Roman small finds	145 objects
Iron slag	1 box
Animal bone	39 boxes
Human bone	50 boxes
Bulk samples	19

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Appendix 1: Context Index

Context No	Grid Sq	Phase	Plan	Section	Type	Description
200	Bay 2	8			Fill	Top fill of well [210]
201	Bay 2	8			Fill	Fill of well [210]
202	95/265	8	202		Masonry	N/S wall
203	100/265	8	203		Masonry	E/W wall
204	100/255	6	204		Masonry	E/W wall
205	100/255	6	205		Masonry	N/S wall
206	100/255	6	206		Masonry	E/W wall
207	95-100/265	8	207		Masonry	L-shaped wall
208	100/250	7			Fill	Fill of well [210]
209	100/250	7			Fill	Fill of well [210]
210	100/250	7			Masonry	Well
211	100/250	7			Fill	Fill of well [210]
212	100/265	8	212		Masonry	N/S wall foundation
213	100/250	7			Fill	Fill of well [210]
214	100/255	6	214		Masonry	Yard surface
215	100/265	8	215		Masonry	E/W wall foundation
216	100/265	8	216		Cut	Construction cut for wall foundation [215]
217	95-100/265	8	217		Cut	Construction cut for wall foundation [222]
218	100/265	8			Fill	Backfill to construction cut [216]
219	95-100/265	8			Fill	Backfill to construction cut [216]?
220	100/265	8			Fill	Levelling layer for [215]
221	95/265	8	221		Masonry	N/S wall foundation
222	95-100/265	8	222		Masonry	E/W wall foundation with buttress to the south at the east end
223	95-100/265	8			Layer	Sandy lime mortar-bedding layer
224	100/250	7			Fill	Backfill to construction cut [225]
225	100/250	7			Cut	Construction cut for [210]
226	100/240	8	226		Layer	Ashy layer - dumped deposit
227	100-105/230	5			Fill	Fill of cut [229]
228	100-105/230	5			Fill	Degraded wood poss lining
229	100-105/230	5	229		Cut	Drain?
230	100/255	6	230		Layer	Levelling layer for [205]
231	100/265	8	231		Layer	Sandy lime mortar
232	100/265	7			Layer	Sandy mortar layer
233	100/240	6			Fill	Fill of cess pit [234]

234	100/240	5	234		Masonry	Brick lining of cess pit
235	100/240	5			Fill	Backfill to construction cut [236]
236	100/240	5	236		Cut	Construction cut for cess pit [234]
237	100/255	6	237		Layer	Make up for yard surface [214]
238	95-100/265	8			Fill	Backfill to construction cut [217]
239	100-105/230	5			Fill	Fill of cut [229]
240	100/255	6	240		Masonry	N/S brick wall
241	100-105/255	6	240		Masonry	E/W brick wall
242	105/255	6	240		Masonry	N/S brick wall
243	100/265	7	243		Masonry	Foundation?
244	100/265	7	244		Cut	Construction cut for [243]
245	100/260-265	5	245		Cut	Robber trench
246	100/260-265	5			Fill	Backfill to robber cut [245]
247	100-105/230	5			Fill	Fill of cut [229]
248	100/255	6			Fill	Backfill to construction cut [249]
249	100/255	6	249		Cut	Construction cut for [240]
250	100-105/255	6			Fill	Backfill to construction cut [251]
251	100-105/255	6	249		Cut	Construction cut for wall [241]
252	105/255	6			Fill	Backfill to construction cut [253]
253	105/255	6	249		Cut	Construction cut for wall [242]
254	100-105/255	6			Fill	Fill of cut [255]
255	100-105/255	6	255		Cut	Robber trench?
256	100/260-265	3.2	256		Masonry	Wall foundation
257	100/230	3.2	257	20	Layer	Silty sandy gravel
258	100/230	3.1		20	Layer	Silty sandy clay - makeup?
259	100/230	2		20	Layer	Sandy clay
260	100/230	2		20	Layer	Sandy clayey silt - Roman horizon
261	100/230	4		20	Fill	Fill of cut [334]
262	100-105/230	5		20	Fill	Fill of cut [263]
263	105/230	4	263		Cut	Ditch?
266	100-105/250-255	6			Fill	Top fill of barrel well [267]
267	100-105/250-255	6	267		Fill	Barrel well - timber decayed
268	100/265	5			Fill	Backfill to robber cut [245]
269	100-105/250-255	6			Fill	Fill of barrel well
270	105/250-255	6			Fill	Fill of cut [272]
271	100-105/250-255	6			Fill	Backfill to construction cut [283]

272	105/250-255	6	272		Cut	Robber trench?
273	100/265	5			Fill	Backfill to robber cut [245]
274	100-105/230	4			Fill	Fill of cut [263]
275	100-105/230	4			Fill	Fill of cut [263]
276	100-105/230	4			Fill	Fill of cut [263]
278	100/265	4	278		Cut	Pit
279	100/265	4			Fill	Top fill of cut [278]
280	100/260-265	4	280		Layer	Demo layer
281	95-100/240-245	8	281		Layer	Demo layer
282	100/245	6	282		Masonry	Brick floor
283	100-105/250-255	6	283		Cut	Construction cut for barrel well [267]
284	100/265	4			Fill	Fill of cut [278]
285	100/265	4			Fill	Fill of cut [278]
286	100/245	6	286		Layer	Floor makeup
287	100/265	4			Fill	Fill of cut [278]
288	105/250-255	6	288		Layer	Demo layer
289	100/265	4			Fill	Fill of cut [278]
290	100/265	4			Fill	Fill of cut [278]
291	100/265	4			Fill	Basal fill of cut [278]
292	100/265	3.2			Fill	Fill of cut [293]
293	100/265	3.2	293		Cut	Stakehole
294	100/260-265	3.2			Fill	Backfill to construction cut [295]
295	100/260-265	3.2	295		Cut	Construction cut for [256]
296	100/260	4	296		Layer	Floor makeup
297	105/230	4	297		Timber	Stake? - lifted
298	105/230	4	297		Timber	Post? - lifted
299	105/230	4	297		Timber	Plank?
300	105/230	4	297		Timber	Plank? - lifted
301	105/230	4	297		Timber	Plank? - lifted
302	105/230	4	297		Timber	Plank?
303	105/200	8			Fill	Fill of cut [304]
304	105/200	8	304		Cut	Modern intrusion
305	100/250	7			Fill	Fill of cut [306]
306	100/250	7	306		Cut	Ovoid pit
307	100/260-265	3.4			Layer/fill	Sandy crushed limestone - foundation?
308	100/260-265	3.2	295		Cut	Construction cut for [372]
309	100/265	3.4			Fill	Backfill to construction cut [310]
310	100/265	3.4	310		Cut	Construction cut? For wall [317]
311	105-110/240	8			Fill	Fill of cut [312]
312	105-110/240	8	312		Cut	Rectangular pit

313	100/205	7			Fill	Fill of cess pit [314]/[355]/[356]
314	100/205	7	315		Masonry	Cess pit
317	100/265	3.4	317		Masonry	Remnants of E/W wall
318	100/240-245	4	318		Masonry	Brick floor
319	100/245	4	319		Masonry	Brick floor
320	105/245	5	320		Masonry	Brick floor
321	105/245	4	321		Masonry	Brick floor
322	105/245	4	322		Masonry	Brick floor
323	105/240	4	323		Layer	Trample?
324	100/230	3.4	324		Layer	Sandy silty clay
325	100/250	8	325		Fill	Fill of cut [326]]
326	100/265	3.4	326		Layer	Broken tile
327	100/240	5			Fill	Fill of cut [328]
328	100/240	5	328		Cut	Pit
329	100-105/240	4	329		Layer	Made ground - post-med
330	105/250-255	6	330		Layer	Clayey silt - occupation?
331	105/250-255	6	331		Layer	Sandy silt
332	100/205	7			Fill	Fill of cess pit [314]/[355]/[356]
333	100/205	7			Fill	Fill of cess pit [314]/[355]/[356]
334	100/230	4	334	20	Cut	Pit?
335	100/265	3.4	335		Layer	Thin layer of silty clay
336	100/250	8	336		Cut	Irregular cut
337	100/265	3.4	337		Layer	Clayey silt - occupation?
338	100/200-205	7	338		Cut	Small irregular pit
339	100/200-205	7			Fill	Fill of cut [338]
341	105/205	6			Fill	Upper fill of [342]
342	105/205	6	342		Masonry	Well/soakaway
343	100-105/200-205	6	343		Layer	Dump of roof tile
345	105/205	6			Fill	Fill of [342]
346	100/230	4		20	Fill	Fill of cut [334]
347	100/265	3.2	347		Layer	Silty gravelly sand - makeup
350	105/200 100-105/205	7	350		Layer	Demolition?
351	105/255	6	351		Layer	Compact sandy silt
352	105/250	6	352		Layer	Mortar spread
353	105/200-205	7			Fill	Fill of cut [354]
354	105/200-205	7	354		Cut	Square pit
355	100/205	7	355		Masonry	Cess pit
356	100/205	7	356		Masonry	Cess pit
357	100/205	7	357		Cut	Construction cut for cess pit [314]/[355]/[356]
358	100/265	3.2	358		Layer	Fine sand and gavel - surface?

359	100/265	3.4	359		Layer	Sandy gravel
360	100/230	3.4	360	6, 20	Layer	Gravel spread - surface?
361	100/265	3.3	361		Layer	Silty sandy clay - occupation?
362	100/265	3.2	362		Layer	Clayey silt - occupation?
363	100/230	3.3	363	20	Layer	Silty sandy clay - surface makeup?
364	105/250-255	6	364	62	Layer	Compact silty sand
365	105/245	5	365		Masonry	Floor?
366	100/260-265	3.2	366		Masonry	E/W med wall
367	100/230	3.3	367		Layer	Silty sandy clay - makeup?
368	100/265	3.2	368		Cut	Small irregular pit
369	100/265	3.2			Fill	Fill of cut [368]
370	100/265	3.2	370		Cut	Small irregular pit
371	100/265	3.2			Fill	Fill of cut [370]
372	100/260-265	3.2	372		Masonry	Chalk foundation
373	100/205	7			Timber	Floor beam/joist
374	100/255	6			Fill	Fill of cut [375]
375	100/255	6	375		Cut	Pit
376	100/230	3.2	376		Layer	Silty sandy clay with patches of gravel- road?
377	100/230	3.2	377	20	Layer	Silty sandy clay with patches of gravel & Reigate chippings- road?
378	100/265	3.2	378		Layer	Clayey silt - occupation? Abutting [366]
379	100/240-245	4	379		Layer	Bedding layer
380	105/245	5	380		Layer	Loose yellow/grey mortar spread
381	105/245	4	381		Layer	Silty clay - floor makeup
382	105/245	4	382		Layer	Mortar - bedding layer?
383	105/245	4	383		Layer	Silty clay - floor makeup
384	100/255	5	384		Masonry	Brick/tile floor of fireplace
385	100-105/250-260	6	385		Layer	Demolition?
386	100/255	5	386		Layer	Makeup for floor [384]
387	100/255	5	387		Layer	Fire deposit?
388	100/265	3.2			Fill	Backfill to construction cut [295]
389	100/240-245	5	389		Layer	Thin layer of chalk/plaster
390	105/245	5	390		Layer	Silty clay
391	105/245	5	391		Layer	Silty clay - floor makeup
392	105/245	5	392		Layer	Silty clay - floor makeup
393	100/255	4	393		Masonry	Tile floor to fireplace
394	100/255	4	394		Layer	Mortar bedding for floor [393]

395	105/245	5	395		Layer	Silty clay - floor makeup
396	95-100/255	4	396		Cut	Cut for fireplace?
397	105/200-205	6	397		Masonry	Drain
398	95-100/245	8			Fill	Fill of cut [399]
399	95-100/245	8	399		Cut	Small pit
400	105/230	4	400	23	Layer	Clayey sandy silt - occupation
401	100/240-245	5	401	22	Masonry	N/S wall
402	95-100/255	4	402		Layer	Makeup for [393]
403	95-100/245	8	403		Masonry	Brick floor
404	100/245	8	404		Masonry	Brick floor
405	95-100/245	8	405		Layer	Mortar - bedding layer?
406	105/230-235	3.1		23	Layer	Compacted gravel - road surface?
407	105/230	2		23	Layer	Silty sand - mid greenish brown
408	105/230	2		23	Layer	Silty sand -Roman horizon
409	105/230-235	3.2	409	23	Layer	Sandy clayey silt
410	100/240	4	410		Masonry	Post-med build on south wall of church
411	100/205	7			Fill	Fill of cut [413]
412	100/205	7	412		Masonry	Rebuild?
413	100/205	7	413		Cut	Construction cut for [412] & [418]
414	100-110/240	4	414		Layer	Demo layer?
415	100/245	5	415		Layer	Silty clay with freq charcoal
416	100/255	6			Fill	Upper fill of cut [417]
417	100/255	6	417		Cut	Robber cut
418	100/205	7	418		Masonry	N/S wall
419	105/205	6	419		Masonry	Floor
420	105/205	6			Fill	Bedding for floor [419]?
421	105/205	6	421		Cut	Construction cut for floor [419]?
422	100/260-265	2	422	34, 35	Layer	Gravelly silt
423	100/205	6	423		Layer	Clay floor?
424	100-105/200-205	6	424		Layer	Occupation/industrial waste?
425	100/205	7	425		Masonry	Brick floor
426	100/255	6			Fill	Fill of cut [417]
427	105/245	4	427		Layer	Bedding layer
428	100-105/230	2	428		Layer	Roman horizon?
429	105/245	5			Layer	Bedding layer for floor [320]
430	100-105/200 100/205	6	430		Masonry	Brick floor
431	100-105/240	4			Fill	Fill of cut [432]
432	100-105/240	4	432		Cut	Large rectangular pit

435	100/260	3.2	435		Layer	Clayey silt
436	100/265	3.2	436		Layer	Clayey silt
437	100/230-235	3.4		24	Layer	Sandy silty clay - occupation above road
438	100/230	3.4		24	Layer	Poss road surface
439	100/230-235	3.4		24	Layer	Sandy silty clay - occupation?
440	100/230-235	3.3		24	Layer	Silty sandy clay - occupation?
441	100/230-235	3.3		24	Layer	Compacted silty sandy clay with v. Freq gravel - road surface?
442	100/230-235	3.1	442	24	Layer	Silty sandy clay
443	100/230-235	2		24	Layer	Sandy silty clay - Roman horizon
444	105/230	3.4		24	Layer	Sandy silty clay - occupation deposit?
445	100/240 100-105/245	4	445		Layer	Floor makeup?
446	100/260-265	3.2	446		Layer	Sandy silt - levelling layer
447	100/260-265	3.1	447		Layer	Clayey silt - made ground pre-dating priory
448	100-105/200 100/205	6	448		Layer	Mortar bedding layer
449	105/200	6	449		Masonry	Tile spread/base?
450	100/255	6			Fill	Fill of cut [451]
451	100/255	6	451		Cut	Robber trench?
452	100/205	7	452	25	Masonry	N/S cellar wall
453	100/205	6	453		Masonry	Brick floor
454	105/205	6	454		Masonry	Brick floor
455	100-105/205	6	455		Layer	Mortar bedding layer
456	105/240-245	3.4	456	26, 44, 45	Masonry	2 courses of rebuild on top of [947]
457	100/255-260	6			Fill	Fill of cut [471]
458	100/200-205	5	458		Cut	Construction cut for drain [538]
459	100/200-205	5			Fill	Backfill to drain
460	100-105/250-255	4	460	62	Layer	Sandy silt - dump layer
461	100/255	4	461		Layer	Compact silty clay
462	100/250-255	4	462		Layer	Demolition?
463	100-110/240	3.4	463		Layer	Made ground
464	100/260-265	3.1	464	35	Layer	Clayey silt - made ground pre-dating priory
465	100/265	3.1	465		Layer	Clayey silt
466	105/205	6	466		Masonry	Brick floor

467	105/205	6	467		Layer	Broken brick - poss floor repair?
468	105/200-205	5	468	28	Masonry	Stairs?
469	100-105/200-205	5	469	28	Masonry	Brick floor
470	100/235	3.3			Fill	Fill of cut [486]
471	100/255-260	6	471		Cut	Robber trench?
472	105/245	4	472		Layer	Demolition?
473	100/260	2	473		Layer	Silty clay - Roman?
474	105/205	5	474	28	Masonry	Steps?
475	100/205	7	475		Cut	Construction cut for [452]
476	100-105/205	6	476	30	Masonry	Buttress?
477	100-105/200 100/205	5	477	27, 28	Masonry	Cellar wall
478	100/260	2	478	34	Layer	Silty clay
479	100/240-245	4	479		Layer	Demolition?
480	95-100/235	3.3			Fill	Fill of cut [488] - 60% of a skeleton excavated as disarticulated
481	100-110/240	3.4	481		Layer	Made ground
482	100/205	6	482		Masonry	Floor tile
483	100/205	6	483		Layer	Bedding layer
484	100/255	4	484		Layer	Sand
485	95-100/235	3.3	485		Skeleton	Standard burial in cut [488]
486	100/235	3.3	486		Skeleton	Inhumation in cut [487]
487	100/235	3.3	487		Cut	Grave
488	95-100/235	3.3	488		Cut	Grave
489	100/200-205	5			Fill	Backfill to drain
490	105/205	5	490	29	Masonry	NW/SE aligned cellar wall
491	100/205	5			Fill	Clay silt fill of cut [493]
492	100/205	5	492		Masonry	Lining to cut [493]
493	100/205	5	493		Cut	Construction cut for [492]
494	100/255-260	4	494		Layer	Floor makeup?
495	100/255	4	495		Masonry	Remains of fireplace wall
496	100/240-245	5	496		Layer	Bedding layer for [401]
497	100/230 95-100/235	3.2	497		Layer	Spread of crushed stone and chalk
500	100-105/200-205	5			Layer	Grey silty layer
501	100-105/200-205	5			Layer	Black silty layer
502	105/205	5	502		Masonry	Drain
503	105/205	5			Fill	Fill of drain [503]
504	100/205	6	504		Layer	Clay
505	100-105/205	5			Fill	Fill of soakaway [548]
506	100/255	4			Fill	Backfill to construction cut [507]

507	95-100/255	4	507		Cut	Construction cut for fireplace [508] & [495]
508	100/255	4	508		Masonry	Remains of fireplace wall
509	100/200-205	5	509		Masonry	Brick lid to drain
510	100-110/240	3.4	510		Layer	Silty sand & gravel
511	100/265	2	512, 513	34	Fill	Fill of cut [513]
512	100/265	2	512, 513		Layer	Upcast bank
513	100/265	2	512, 513	34	Cut	N/S ditch
514	100/240-245	4	514	31, 32	Masonry	N/S wall
515	100/265	2			Fill	Fill of cut [516]
516	100/265	2	516		Cut	Posthole
517	100/200-205	5			Fill	Fill of drain
518	100/205	5	518		Layer	Clay
519	100/205	5	519		Layer	Clayey silt
520	95/230-235	2	523	33	Layer/fill	Sandy silt
521	100-105/230-235	1	523		Layer	Sandy silty gravel - natural
522	100/230 105/230-235	2	523		Fill	Fill of cut [537]
523	105-110/230-235	1	523	33	Layer	Sandy silty gravel - natural
524	100/205	5	524		Layer	Clay
525	95-100/230-235	2	523	33	Layer	Greyish green, silty sand - Roman
526	95-100/265	3.1	526	34	Layer	Clayey silt - made ground pre-dating priory
527	100/265	2		34	Layer	Silty clay - Roman horizon?
528	100/265	3.1		35	Layer	Gravelly silt
529	100/265	2		35	Layer	Silty clay - Roman horizon?
530	100/265	2		35	Layer	Silty gravel
531	100/205	5	531		Layer	Clayey silt
532	100/265	3.1		34	Layer	Gravelly silt
533	100/205	5			Fill	Fill of cut [541]
534	100/205	5	534		Layer	Silty clay - defining beam slot?
535	100/205	5			Fill	Fill of cut [536]
536	100/205	5	536		Cut	Post hole?
537	100/230 105/230-235	2	523		Cut	Natural channel?
538	100/200-205	5	538	48	Masonry	Brick drain
539	95-100/240	4	539		Masonry	Flemish tile floor in portico
540	95-100/240	4	540		Layer	Bedding layer for floor [539]
541	100/205	5	541		Cut	V. Shallow pit
542	95-100/240	4	542		Layer	Sand - levelling/bedding
543	100/205	5	543		Layer	Clayey silt

544	100/205	5			Fill	Fill of cut [545]
545	100/205	5	545		Cut	Posthole?
546	100/205	5	546		Layer	Small patch of mortar
547	100-105/205	5	547		Cut	Construction cut for [595]
548	100-105/205	5	548		Masonry	Soakaway
549	100/205	5	549		Masonry	Drain/soakaway
550	100/205	6	550		Masonry	Brick surface?
551	95-100/240	4	551		Layer	Mortar spread - levelling/bedding
552	105/205	5	552	29	Masonry	Possible blocking of doorway?
553	95-100/240	4	553		Layer	Sand- levelling/bedding
554	100/200-205	5	554		Fill	Levelling? for [477]
555	105/200-205	5	555		Cut	Construction cut for [474]
556	105/200-205	5	556		Cut	Construction cut for [468
557	95-100/240	4	557		Layer	Levelling?
558	95-100/240-245	5	558		Layer	Demolition
559	100/205	5			Fill	Fill of drain [547]
560	105/205	5	560	29	Masonry	NW/SE aligned cellar wall
561	105/205	5			Fill	Back fill to construction cut [562]
562	105/205	5	562		Cut	Construction cut for [560]
563	100/205	5	563		Layer	Clayey silt occupation?
564	100/205	5	564		Layer	Mortar surface?
565	100/200	5	565		Fill	Levelling? for [477]
566	105/200-205	5			Layer	Basal mortar layer underneath [468]
567	100/250-255	3.4	567		Masonry	West minster tile floor
568	105/240	3.4			Fill	Backfill to grave [569]
569	105/240	3.4	569		Cut	Grave
570	105/240	3.4	570		Skeleton	Standard burial in cut [569]
571	105/205	7		36	Layer	Silty sandy gravel
572	105/205	5		36	Layer	Cbm rubble & mortar
573	105/205	5		36	Layer	Sandy silt
574	105/205	5		36	Layer	Silty clay
575	105/205	5		36	Layer	Silty clay & gravel
576	105/205	3.4		36	Layer	Silty sand
577	105/205	3.4		36	Layer	Sandy silt
578	105/205	3.3		36	Layer	Silty clay
579	105/205	3.3		36	Layer	Mortar layer
580	105/205	3.3		36	Layer	Silty clay
581	100-105/200 100/205	4	581		Layer	Compacted silty clay
583	100/205	5	583		Layer	
584	105/240	3.4			Fill	Backfill to grave [585]

585	105/240	3.4	585		Cut	Grave
586	105/240	3.4	586		Skeleton	Standard burial in cut [585]
587	100/240	3.4			Fill	Backfill to grave [588]
588	100/240	3.4	588		Cut	Grave
589	100/240	3.4	589		Skeleton	Standard burial in cut [588]
590	105/200	5			Fill	Fill of cut [591]
591	105/200	5	591		Cut	Posthole
592						VOID
593						VOID
594	100-105/205	5	594		Cut	Construction cut for [549]
595	100-105/205	5	595		Fill	Decayed barrel
596	100-105/205	5			Fill	Fill of barrel well [595]
597	100/210-215	7	597		Masonry	Brick surface/drain?
598	100/210-215	4	598		Layer	Clayey silt & broken tile
599	95-100/245	4	599		Masonry	E/W post-med wall
600	100-105/245	4	600	37	Masonry	E/W wall
601	100/240	3.4			Fill	Backfill to grave [603]
602	100/240	3.4	602		Skeleton	Very disturbed skeleton
603	100/240	3.4	603		Cut	Grave
604	100/240	3.4			Fill	Backfill to grave [606]
605	100/240	3.4	605		Skeleton	Extended supine burial - priest
606	100/240	3.4	606		Cut	Grave
607	100/200	5			Fill	Fill of cut [608]
608	100/200	5	608		Cut	Posthole
609	100/200	5			Fill	Fill of cut [610]
610	100/200	5	610		Cut	Posthole
611	100/205	5	611	48	Masonry	Blocking in wall associated with drain [509]
612	100/205	5	612		Layer	Clayey silt with lenses of gravel & mortar
613	100/210	5		39	Fill	Upper fill of well [614]
614	100/210	5	614	39, 40	Masonry	Brick lining of well
615	105/205	5			Fill	Fill of drain chute
616	105/205	5	616		Cut	Construction cut for drain chute
617	105/205	5	617		Layer	Floor makeup
618	105/205	5	618		Cut	Construction cut for drain [502]
619	105/200	5	619		Masonry	Ash trap?
620	100/200	4	620		Cut	Posthole?
621	100/200	4			Fill	Fill of cut [620]
622	105/200	5			Fill	Fill of [619]
623	105/200	5	623		Cut	Construction cut
624	100/215	3.4	624	39	Layer	Sandy silt

625	100/210-215	5	625		Masonry	Brick floor?
626	105/205	5			Layer	Bedding/levelling layer
627	100/205	5	627		Masonry	Newel staircase?
628	100-110/240	3.3	628		Layer	Sandy silt - cemetery soil
629	105/200-205	5	629		Layer	Bedding layer for floor [469]
630	95-100/245	4	630		Layer	Sandy mortar layer
631	100-105/205	5	631		Layer	Charcoal rich - occupation?
632	100/210	5		39	Fill	Backfill to construction cut [633]
633	100/210-215	5	633	39, 40	Cut	Construction cut for well [614]
634	100-105/210 100/215	4		39, 40	Fill	Fill of cut [635]
635	100-105/210 100/215	4	635	39, 40	Cut	Large rectangular pit
636	105/200	5	636		Masonry	Single large stone - doorway?
637	105/200-205 110/205	5	637		Layer	Silty sand
638	100/205	5			Fill	Backfill to construction cut
639	100/205	5	639		Cut	Construction cut for [627]
640	100-105/245	4	640		Layer	Bedding layer
641	100/210	5			Fill	Fill of well [614]
642	100/245	4	642		Layer	Floor makeup?
643	100/210	5			Fill	Fill of well [614]
644	100/210	5			Fill	Fill of well [614]
645	95-100/240	3.4	645		Layer	Mortar bedding layer
646	105-110/200	5	646		Cut	Posthole?
647	105-110/200	5			Fill	Fill of cut [646]
648	105-110/200	5	648		Cut	Posthole?
649	105-110/200	5			Fill	Fill of cut [648]
650	105/205	5	650		Cut	Pot hole?
651	105/205	5			Fill	Fill of cut [650]
652	100-105/245	4			Fill	Silty sand foundation fill
653	110/200-205	8	820	38	Cut	Construction cut for [655]
654	110/200-205	8		38	Fill	Backfill
655	110/205	8		38	Masonry	Brick sewer
656	110/205	8		38	Fill	Fill of sewer [655]
657	110/205	4		38	Layer	Sandy gravel - firm compaction
658	110/205	3.4		38	Layer	Sandy silt
659	110/205	3.4		38	Layer	Sandy gravelly mortar
660	110/205	3.4		38	Layer	Sandy silt
661	110/205	3.4		38	Layer	Sandy silt
662	110/205	3.4		38	Layer	Chalk lumps & sandy silt
663	110/205	3.2		38	Layer	Sandy gravel

664	110/205	3.2		38	Layer	Crushed green sandstone
665	110/205	3.1		38	Layer	Sandy silt
666	110/205	4	820	38	Layer	Sandy chalk
667	110/205	4		38	Layer	Sandy gravel
668	110/205	4		38	Layer	Sandy gravel
669	110/205	4		38	Layer	Sandy silt
670	110/205	4		38	Layer	Sandy silt
671	110/205	4		38	Layer	Silty sandy mortar
672	110/205	4		38	Layer	Sandy chalk
673	110/205	3.4		38	Layer	Sandy silt
674	110/205	3.4		38	Fill	Fill of cut [915]
675	110/205	3.4		38	Fill	Fill of cut [916]
676	110/205	3.4		38	Fill	Fill of cut [917]
677	110/205	3.3		38	Layer	Sandy silt
678	110/205	3.3		38	Layer	Sandy gravel
679	110/205	3.3		38	Layer	Crushed & frag tile & silty sand
680	110/205	3.2		38	Layer	Sandy silt
681	110/205	3.2		38	Layer	Sandy silt
682	110/205	2		38	Layer	Compacted sandy gravel
683	110/205	2		38	Layer	Compacted sandy gravel
684	110/200-205	6	684	38	Cut	Construction cut for [796]
685	110/205	6		38	Fill	Backfill to cut [684]
686	105-110/200-205	5	686	38	Layer	Sandy gravel
687	110/205	5		38	Layer	Silty sandy gravel
688	105-110/200-205	5	688	38	Layer	Sandy gravel
689	105-100/205	4	820	38	Layer	Sandy chalk
690	105-100/205	4	820	38	Layer	Sandy silt
691	110/205	4		38	Layer	Sandy chalk
692	110/205	3.4		38	Fill	Fill of cut [918]
693	110/205	3.4		38	Fill	Fill of cut [919]
694	110/205	3.4		38	Fill	Fill of cut [920]
695	110/205	3.2		38	Layer	
696	110/205	3.4		38	Layer	Sandy silt
697	100/205	5			Fill	Fill of cut [739]
698	100/205	5			Fill	Fill of cut [699]
699	100/205	5	699		Cut	Post hole?
700	100-105/205	4	700		Layer	Mortar bedding layer?
701	100-105/210-220	3.2	701	39	Layer	Medieval road
702	100/240	3.4			Masonry	Tile floor
703	100/240	3.4	703		Layer	Mortar bedding for floor [702]
704	95-100/240	3.4	704		Layer	Floor makeup
705	105/240	3.3			Fill	Backfill to grave [707]
706	105/240	3.3	706		Skeleton	Standard inhumation

707	105/240	3.3	707		Cut	Grave
708	110/240	3.3			Fill	Backfill to grave [710]
709	110/240	3.3	709		Skeleton	Standard inhumation
710	110/240	3.3	710		Cut	Grave
711	110/240	3.3			Fill	Backfill to grave [713]
712	110/240	3.3	712		Skeleton	Standard inhumation
713	110/240	3.3	713		Cut	Grave
714	100-105/205	4			Fill	Fill of cut [715]
715	100-105/205	4	715		Cut	Pit
716	105/205	7	716		Cut	Pit
717	105/205	7			Fill	Fill of cut [716]
718	100/205	5			Fill	Fill of [719]
719	100/205	5	719		Masonry	Brick drain
720	100/205	5	720		Cut	Construction cut for [719]
721	100/205	4	721		Layer	Silty clay - surface?
722	100/205	4	722		Layer	Bedding sand/levelling?
723	95-100/240	3.4	723		Layer	Mortar bedding layer?
724	100/205	4	724		Layer	Silty clay
725	100/240	3.4			Fill	Backfill to grave [726]
726	100/240	3.4	726		Cut	Grave
727	100-105/205	3.4			Fill	Fill of drain [728] & [732]
728	100-105/205	3.4	728		Masonry	Brick lining of east side of drain
729	100-105/205	3.4	729		Cut	Construction cut for [732] & [728]
730	100/210-215	3.2	701	39	Layer	Makeup for road surface [701]
731	105/210-215	3.2	701		Layer	Makeup for road surface [701]
732	100/205	3.4	732		Masonry	Chalk lumps lining west side of drain
733	100/205	4			Fill	Fill of cut [734]
734	100/205	4	734		Cut	Posthole
735	100/245	4	735		Cut	Small pit
736	100/245	4			Fill	Fill of cut [735]
737	100/240	4			Masonry	Render on the inside of portico wall [743]
738	95-100/240	3.4	738		Layer	Floor makeup
739	100/205	5	739		Cut	E/W linear cut - poss gully
740	100/205	4	740		Layer	Dumped deposit - crushed Reigate stone
741	100/205	3.2	741	48	Masonry	E/W wall
742	100/205	4	742		Layer	Clay floor?
743	100/240	3.2	743	21, 41	Masonry	N/S portico wall - med
744	100/240	3.2	744	21, 41	Masonry	N/S portico wall -

						foundation?
745	100/240	3.2	745	21, 41	Masonry	Chalk foundation for portico wall
746	100-105/200 100/205	5	746		Cut	Construction cut for [477]
747	100/245	4	747		Layer	Levelling?
748	100/215	2	748	40	Layer	Fluvial deposit - Roman?
749	100/205	4	749		Layer	Silty clay
750	95-100/240	3.3	750		Layer	Bedding layer?
751	95-100/240	3.4			Fill	Backfill to grave [752]
752	95-100/240	3.4	752		Cut	Grave
753	105/205	4			Fill	Fill of cut [754]
754	105/205	4	754		Cut	Posthole?
755	105/205	4			Fill	Fill of cut [756]
756	105/205	4	756		Cut	Pit
757	100/245	4	757		Layer	Levelling?
758	100-110/240	2	758		Layer	Sandy silt
759	100/205	4			Fill	Backfill to construction cut [761]
760	100/205	4	760		Masonry	E/W wall
761	100/205	4	761		Cut	Construction cut for [760]
762	100/240	4	762	21, 41	Masonry	N/S portico wall – post-med rebuild
763	105/240	3.3			Fill	Backfill to grave [765]
764	105/240	3.3	764		Skeleton	Standard burial in grave [765]
765	105/240	3.3	765		Cut	Grave
766	100/215	3.2		39	Layer	Makeup? for road surface [701]
767	100/215	3.2		39	Layer	Makeup? for road surface [701]
768	100/215	3.2		39	Layer	Clayey gravel
769	100/215	3.2		39	Layer	Gravelly clay
770	100/210	2	748	40	Fill	Fill of cut [771]
771	100/210	2	748	40	Cut	Palaeo-channel
772	100/210	2	748	40	Layer	Natural deposit - colluvium
773	105/215	1	748		Layer	Natural terrace? Gravel
774	105/215	1	748	39	Layer	Natural terrace gravel same as [775]
775	100/210	1	748	39, 40	Layer	Natural terrace gravel
776	100/210	1		40	Layer	Natural terrace gravel
777	100/210	1		40	Layer	Natural sand
778	105/200-205	3.4	778	53	Masonry	N/S east wall of gatehouse
779	100-105/255-260	6			Fill	Upper fill of cut [780]
780	100-105/255-260	6	780		Cut	Pit
781	100-105/255-260	5	781		Layer	Silty clay

782	100-105/255	5	782		Layer	Floor/surface makeup?
783	105/205	5	783		Layer	Gravel dump
784	105/205	4			Fill	Fill of cut [785]
785	105/205	4	785		Cut	Posthole?
786	100/240-245	4	786		Layer	Demolition?
787	95-100/240	3.3	787		Layer	Makeup
788	100/245	4	788		Layer	Levelling?
789	100/205	4			Fill	Backfill to robber cut
790	100/205	3.4	790		Masonry	N/S wall
792	100/205	3.4	792		Layer	Surface?
793	100/205	3.4	793		Layer	Surface?
794	100/200-205	6			Fill	Backfill to construction cut [797]
795	100/200-205	6	795		Cut	Construction cut for well [797]
796	110/205	6	796	38	Fill	Lead pipe
797	100/200-205	6	797		Masonry	Brick lining of well
798	105/245	4	798		Layer	Bedding layer for med floor
799	105/205	4			Fill	Fill of cut [800]
800	105/205	4	800		Cut	Stakehole
801	105/205	3.4	801		Layer	Mortar spread
802	105/205	3.3		36	Layer	Clayey silt
803	105/205	3.2		36	Layer	Silty clay with crushed tile
804	105/205	3.2		36	Layer	Gravelly silty clay
805	105/205	3.2		36	Layer	Silty clay
806	100/205	3.4	806		Layer	Surface makeup
807	105/205	4			Fill	Fill of cut [808]
808	105/205	4	808		Cut	Stakehole
809	100-105/255-260	6			Fill	Basal fill of cut [780]
810	100/205	3.4	810		Layer	Surface make up?
811	100/205	3.4	811		Layer	Silty clay - occupation deposit?
812	100/205	3.4	812		Layer	Floor make up?
813	100/255-260	5	813		Layer	Burnt clay - base of fireplace?
814	100/205	3.4	814		Layer	Floor makeup - silty clay
815	100-105/205	3.4	815		Layer	Silty clay
816	105/205	4	850	42	Layer	Gravel floor makeup
817	100/255-260	5	817		Masonry	Fireplace
820	105-110/205	4	820		Layer	Sandy silty gravel - road surface
821	105/205	4	820		Layer	Mortar, broken tiles & sand - dump
822	105/205	4	820		Layer	Silty sand - dump
823	105/205	4	820		Layer	Dumped deposit
825	110/205	4	820		Layer	Sandy gravel - dumped

						deposit
826	110/205	4	820		Layer	Sandy silty gravel - dumped deposit
827	105/200 110/200-205	4	820		Layer	Sandy silty gravel - dumped deposit
828	100/205	5	828		Masonry	Brick lining of well
829	100/205	5	829		Cut	Construction cut for well [828]
830	100/205	3.4	830		Layer	Cobbles
831	105/205	5			Fill	Fill of cut [832]
832	105/205	5	832		Cut	Stakehole
833	100/205	5			Fill	Backfill to construction cut [829]
834	100/205	3.4	834	42	Layer	Silty clay
835	105/205	4	835		Masonry	Wall foundation
836	105/205	5	836		Masonry	Foundation for [560]
837	105/205	5			Cut	
838	100/245	4	838		Layer	Demolition?
839	105/245	4	839		Layer	Floor makeup?
840	100-105/205	5			Fill	Backfill to construction cut [547]
841	100/255-260	5	841		Layer	Mortar
842	100/260	5	842		Layer	Makeup
843	100/205	3.4			Fill	Backfill to construction cut [844]
844	100/205	3.4	844		Cut	Construction cut for wall [790]
845	100/240	3.4	845		Skeleton	Standard inhumation - remains of shroud!
846	95-100/240	3.4	846		Skeleton	Standard burial in grave [752]
847	105-110/205	1	850		Layer	Sandy gravel - natural deposit
848	105/205	1	850		Layer	Silty gravel
849	105/205	4	850		Layer	Sandy clayey silt - floor makeup
850	100-105/205	2	850	42	Layer	Greenish sandy silty clay - poss Roman?
851	100/205	3.2	850		Layer	Silty clay - N/S linear strip-drain?
853	100/240	2	855		Layer	Sandy silt
854	105/240	2	855		Layer	Sandy silt
855	105-110/240	1	855		Layer	Natural - terrace gravel
856	105/205	2		42	Fill	Fill of cut [857]
857	105/205	2		42	Cut	Pit - unknown function
858	105/205	2		42	Layer	Made ground - clayey sand
859	105/205	1		42	Layer	Natural gravel

860	105/205	1		42	Layer	Silty sandy clay
861	105/205	1		42	Layer	Sandy clayey gravel - natural
862	105/205	1		42	Layer	Sandy clayey gravel - poss natural
863	100/205	1		42	Layer	Sandy gravel - natural deposit
864	100/205	1		42	Layer	Sandy gravel - natural deposit
865	100/200	5	865		Masonry	Brick wall
866	100/200	5	866		Masonry	Brick floor?
867	105/245	3.4	867		Layer	Compact gravelly sand
868	100/205	2		42	Layer	Silty clay
869	100/205	1		42	Layer	Natural? silty sandy gravel
870	100/205	1		42	Fill	Silty sand Fill of cut [871]
871	100/205	1		42	Cut	Palaeo-channel
872	105/205	2		42	Fill	Fill of cut [875] - silty sand
873	105/205	2		42	Fill	Fill of cut [875] - silty clay
874	105/205	2		42	Fill	Fill of cut [875] - sand
875	105/205	2		42	Cut	Palaeo-channel
876	95-100/240	3.3			Fill	Upper fill of grave [886]
877	105/245	3.4	877		Masonry	Tile floor?
878	100/245	3.4	878		Masonry	In situ floor tile
879	95-100/240	3.3			Fill	Lower fill of grave [886]
880	95-100/240	3.4	880		Skeleton	Skeleton in grave [752]
881	100/200	5	881		Layer	Floor make up?
882	100/255-260	5	882		Fill	Fill of cut [889]
883	100/255-260	5	883		Fill	Fill of cut [889]
884	100/255-260	5	884		Layer	Bedding layer for [817]
885	95-100/240	3.3	885		Skeleton	Standard inhumation - truncated by grave [909]
886	95-100/240	3.3	886		Cut	Grave
887	100/255-260	5			Fill	Fill of cut [889]
888	100-105/250-255	3.4	888		Layer	Bedding layer for [567]
889	100/255-260	5	889		Cut	Construction cut for [817]
890	100/245	4	890		Layer	Floor?
891	105/245	4	891		Layer	Bedding layer?
892	100/255-260	3.2	892		Layer	Clayey sandy silt
893	100/240	3.3	893		Layer	Sandy clayey silt
894	100/200	4	894		Masonry	Brick stepped foundation
895	100/200	4	895		Masonry	Rubble foundation
896	95-100/240	3.3			Fill	Fill of cut [910]
897	95-100/240	3.3			Fill	Fill of cut [910]
898	95-100/240	3.3			Fill	Fill of cut [910]
899	100/240 100-	3.4	899		Layer	Bedding layer for med floor

	105/245					
900	100/200	3.4	900		Masonry	Chalk foundation
901	100-105/240-245	3.2	901	43, 49	Masonry	E/W wall foundation - south wall of church
902	100/245	3.2	902		Masonry	Column & column base
903	105/245	3.2	903		Masonry	Segmented column
904	100/240	3.3	904		Fill	Upper fill of grave [909]
905						VOID
906	100/240	3.3			Fill	Fill of grave [909]
907	100/240	3.3			Coffin	V. poorly preserved
908	100/240	3.3	908		Skeleton	Standard inhumation - truncated to the west
909	100/240	3.3	909		Cut	Grave
910	95-100/240	3.3	910		Cut	Poss grave
911	100/200-205	4	911		Layer	Silty clay floor make up
912	100/255-260	3.2	912		Layer	Silt
913	95-100/240	2	913		Layer	Silty clay - Roman horizon?
914	100/200	3.4	914	46, 47	Masonry	Stone wall N/S aligned
915	110/205	3.4		38	Cut	Cart rut?
916	110/205	3.4		38	Cut	Cart rut?
917	110/205	3.4		38	Cut	Cart rut?
918	110/205	3.4		38	Cut	Cart rut?
919	110/205	3.4		38	Cut	Cart rut?
920	110/205	3.4		38	Cut	Cart rut?
921	105/245	3.4			Masonry	Wall plaster (internal) on south wall of church [456] - contemporary with the last med floor?
922	100/255-260	3.2			Fill	Fill of cut [923]
923	100/255-260	3.2	923		Cut	Unknown function
924	100/255-260	3.2			Fill	Fill of cut [925]
925	100/255-260	3.2	925		Cut	Posthole?
926	95-100/240	1	913		Layer	Clay - fluvial deposit?
927	95-100/240	1	913		Layer	Clayey gravel - fluvial deposit?
928	100/245	3.4			Fill	Fill of cut [929]
929	100/245	3.4	929		Cut	Small pit
930	105/245	3.4	930		Layer	Sandy mortar
931	105/245	3.4	931		Layer	Yellow mortar spread
932	105/245	3.4	932		Layer	Silty clay - [930] & [932] appear to be fills of a cut perhaps a repair to the floor /surface [937]
933	100/255-260	3.2	933		Layer	Silty clay
934	100/245	3.4	934		Layer	Make up?

935	100/245	3.4			Fill	Fill of cut [936]
936	100/245	3.4	936		Cut	Posthole?
937	100/240 100-105/245	3.4	937		Layer	Sandy silt - floor make up
938	100/200	3.4	938		Layer	Clay floor?
939	100-105/200	4	939		Layer	Demolition?
940	100/200	4			Fill	Top fill of robber cut [943]
941	100/200	4			Fill	Fill of cut [943]
942	100/200	4			Fill	Fill of cut [943]
943	100/200	4	943		Cut	Robber trench?
944	100-105/255	5			Fill	Fill of cut [945]
945	100-105/255 105/260	5	945		Cut	Robber cut
946	100/200	3.4	946		Masonry	Chalk & stone foundation
947	105/240-245	3.2	947	43, 45	Masonry	South wall of church at east end
948	100/200	4	948		Layer	Chalky silt with freq chalk lumps
949	100/200	3.4	949		Masonry	Foundation
950	105/245	3.4	950		Masonry	Broken tile surface
951	100/245	3.4	951		Masonry	Tile floor
954	100/245	3.4			Fill	Fill of cut [955]
955	100/245	3.4	955		Cut	Posthole?
956	100/245	3.4	956		Layer	Mortar bedding layer
957	100/245	3.4	957		Layer	Bedding/make up for [951]
958	100/200	3.2	958	46, 50	Masonry	E/W curtain wall?
959	100/245	3.2			Masonry	Render/mortar in the north (internal) face of wall [1011]
960	105/245	3.4	960		Layer	Clayey silt - bedding layer
961	100/205	3.4	961	48	Masonry	Rebuild to wall [741]
962	100/200	3.4	962	47	Masonry	Stone wall N/S aligned
963	100/200	3.4			Fill	Fill of construction cut [964]
964	100/200	3.4	964		Cut	Construction cut for [962]
965	100/245	3.4			Fill	Fill of cut [966]
966	100/245	3.4	966		Cut	N/S aligned gully
967	105/245	4	967		Layer	Silty sand
968						VOID
969						VOID
970	100/200	3.4	970	47	Masonry	Rebuild of [971] - north end
971	100/200	3.2	971	47	Masonry	N/S wall abuts [741] to the north
972	100/200	4			Fill	Basal fill of cut [943]
973	100/200	3.4	973		Cut	Construction cut for [946]
974	100/240	4	974	49	Masonry	Rebuild of doorway

975	100/245	3.4	975		Layer	Mortar bedding/makeup
976	100/200	3.4	976		Layer	Clay floor?
977	100/200-205	3.4			Fill	Backfill to [978]
978	100/200-205	3.4	978		Cut	Runs parallel with wall [741] - but it is uncertain that this is the construction cut for [741]
979						VOID
980	100/200	3.4	980		Cut	Prob the same as [964]
981	100/245	3.4	981		Cut	Grave
982	100-105/245	3.4	982		Layer	Floor makeup
983	95-100/245	3.3	983		Cut	Grave
984	95-100/245	3.4	984		Layer	Floor make up
985	100/240	3.4	985		Masonry	Tile floor
986	105/250	3.4	986		Skeleton	Standard inhumation - adolescent
987	100/250	3.4	567		Masonry	Westminster tiles part of [567] but in a very fragmentary condition.
988	100/200	3.4	988		Cut	Construction cut for [949]
989	100/200	8			Fill	Fill of well [797]
990	100/200	3.4	990		Layer	Occupation?
991	100/200	3.4	991		Layer	Occupation?
992	100/240	3.2	992		Masonry	Worked stone
993	100/240	3.2	993		Masonry	Worked stone
994	105/245	3.4			Fill	Fill of cut [995]
995	105/245	3.4	995		Cut	Grave
996	100/200	3.4			Fill	Upper fill of barrel well [1012]
997	100/245	3.3			Fill	Fill of cut [999]
998	100/245	3.3	998		Skeleton	Standard inhumation - juvenile
999	100/245	3.3	999		Cut	Grave
1000	105/245	3.3			Fill	Fill of cut [1002]
1001	105/245	3.3	1001		Skeleton	Standard inhumation - truncated
1002	105/245	3.3	1002		Cut	Grave
1003	105/245	3.4			Fill	Fill of cut [995]
1004	105/245	3.4	1004		Coffin	
1005	100/240	3.2	1005		Masonry	Worked stone
1006	100/205	3.4	1006	48	Masonry	Rebuild of wall [741]
1007	100/200	3.4	1007		Layer	Clay floor?
1008	100/250	3.4			Fill	Fill of cut [1010]
1009	100/250	3.4	1009		Skeleton	Standard inhumation
1010	100/250	3.4	1010		Cut	Grave

1011	100/240	3.2	1011	43, 49	Masonry	E/W wall - south wall of the church at the west end
1012	100/200	3.4	1012		Cut	Construction cut for barrel well
1013	100/200	3.4	1013		Fill	Fill of barrel well [1012]
1014						VOID
1015						VOID
1016	100/240	3.2	1016		Masonry	Worked stone
1017	100/240-245	3.4	1017		Layer	Floor makeup/bedding layer - mortar
1018	100/240	3.4	1018		Cut	Posthole?
1019	100/240	3.4			Fill	Fill of cut [1018
1020	100/245	3.4	1020		Cut	Posthole?
1021	100/245	3.4			Fill	Fill of cut [1020
1022	100/200	3.4	1022		Layer	Silty clay - occupation deposit?
1023	105/245	3.4	1023		Skeleton	Standard inhumation
1024	100/200	3.4	1024		Layer	Silty clay - floor make up?
1025	100/200	3.4	1025		Masonry	Stanchion base
1026	100/200	3.4	1026		Cut	Construction cut for [1025]
1027	100/240-245	3.4	1027		Layer	Floor make up
1029	100/240-245	3.4	1029		Layer	Floor make up/ levelling
1030	100/245	3.3	1030		Coffin	
1031	100-110/200	3.2	1031	50, 57	Masonry	E/W curtain wall
1032	100-105/250	3.4	1032		Layer	Silty clay
1033	105/250	3.4			Fill	Fill of cut [1037]
1034	105/245	3.3			Fill	Fill of cut [1036]
1035	105/245	3.3	1035		Skeleton	Standard inhumation
1036	105/245	3.3	1036		Cut	Grave
1037	105/250	3.4	1037		Cut	Posthole?
1038	105/250	3.4			Fill	Fill of grave [1039]
1039	105/250	3.4	1039		Cut	Grave
1040	100/240-245	3.2	1040		Layer	Mortar bedding layer
1041	100-105/240-245	3.2	1041	43	Masonry	Chalk foundation for south wall of church
1042	100/200	3.4	1042		Layer	Stone & tile - remnants of floor?
1043	100/200	3.4			Fill	Fill of cut [1044]
1044	100/200	3.4	1026		Cut	Posthole
1045	105/245	3.3	1045		Coffin	
1046	100/240	3.2	1046		Masonry	Worked stone
1047	100/200	3.4	1047		Layer	Demolition?

1048	100-105/200	4	1048		Layer	Demolition?
1049	95-100/245	3.3	1049		Cut	Grave
1050	95-100/245	3.3	1050		Skeleton	Standard inhumation
1051	95-100/245	3.3			Fill	Backfill to cut [1049]
1052	100/240-245	3.2	1052		Layer	Floor make up
1053	100/200	3.2	1053		Layer	Tile floor
1054	100/200	3.4	1054		Layer	Floor make up?
1055	100/200-205	3.3	1055		Layer	Tile floor
1056	100/240	3.2	1056		Masonry	Worked stone
1057	100/240	3.2	1057		Masonry	Worked stone
1058	100/200	3.4	1058		Layer	Stone & tile - remnants of floor?
1059	100/200-205	3.3	1059		Layer	Floor make up
1060	100/240	3.2	1069		Masonry	Worked stone
1061	100/240	3.2	1061		Masonry	Worked stone
1062	100/240	3.4	1062		Masonry	Threshold
1063	100/240	3.2	1063		Masonry	Worked stone
1064	100/240	3.2	1064		Masonry	Worked stone
1065	100/240	3.4	1065		Layer	Bedding layer?
1066	105/250	3.4			Fill	Fill of [1067]
1067	105/250	3.4	1067		Cut	Poss grave but empty!
1068	100/240	3.4	1068		Layer	Make up?
1069	105/245	3.4			Fill	Fill of cut [1070]
1070	105/245	3.4	1070		Cut	Small pit
1071	105/245	3.4			Fill	Fill of cut [1072]
1072	105/245	3.4	1072		Cut	Posthole?
1073	95-100/240	3.2	1073		Layer	Bedding layer?
1074	105/245	3.3			Fill	Fill of cut [1076]
1075	105/245	3.3	1075		Skeleton	Standard inhumation
1076	105/245	3.3	1076		Cut	Grave
1077	95-100/245	3.3			Fill	Fill of cut [983]
1078	95-100/245	3.3			Skeleton	Standard inhumation - truncated to the west
1079	105/245	3.3	1079		Coffin	V. poorly preserved
1080	100-105/240-245	3.2	1080		Cut	Construction cut for [1041]
1081	100-105/245	3.2	1081		Layer	Medieval construction layer
1082	95-100/245	3.3			Fill	Fill of cut [1084]
1083	95-100/245	3.3	1083		Skeleton	Standard inhumation
1084	95-100/245	3.3	1084		Cut	Grave
1085	100-105/245	3.2	1085		Layer	Levelling layer/dumped deposit
1086	105/200	4			Fill	Upper fill of cut [1088]
1087	105/200	4			Fill	Basal fill of cut [1088]
1088	105/200	4	1088		Cut	Robber trench?
1089	100/240	3.4	1089		Layer	Make up?

1090						VOID
1091	100/200	3.3			Fill	Fill of cut [1092]
1092	100/200	3.3	1092		Cut	Posthole
1093	100/200	3.2	1093		Layer	Floor make up
1094	105/250	3.4	1094		Layer	Sandy mortar
1095	105/250	3.4	1095		Layer	Sandy mortar
1096	95-100/245	3.3	1096		Coffin	Coffin nails
1097	100-105/245	3.1	1097		Layer	Pre-monastic soil - not excavated
1098	100/200	3.2	1098		Layer	Tile floor
1099	100/200-205	3.2	1099		Layer	Floor make up
1100	105/200	3.4	1100		Layer	Floor?
1101	105/200	3.4	1101	49	Layer	Silty sand
1102	105/200	3.4	1102		Layer	Sandy clayey silt
1103	100/200	3.2	1103		Layer	Floor make up
1104						VOID
1105						VOID
1106						VOID
1107						VOID
1108						VOID
1109	105/245	3.3			Fill	Backfill to cut [1111]
1110	105/245	3.3	1110		Skeleton	Standard inhumation
1111	105/245	3.3	1111		Cut	Grave
1112						VOID
1113						VOID
1114						VOID
1115	100/245	3.4	1115		Cut	Grave
1116	100/245	3.4	1116		Skeleton	Standard inhumation
1117	100/245	3.4			Fill	Fill of grave [1115]
1118	105/200	3.4	1118		Layer	Crushed chalk & mortar
1119	100/200	3.2	1119	51	Masonry	N/S wall poss same as [971]
1120	105/200	3.2		51	Masonry	Wall foundation
1121	105/200	3.4	1121		Layer	Floor make up?
1122	105/200	3.4	1122		Layer	Floor make up?
1123	100/245	3.4			Fill	Fill of grave [981]
1124	100/245	3.4	1124		Skeleton	Standard inhumation
1125	100/200	3.2	1125		Cut	Construction cut for [1119]
1126	100/250	3.4			Fill	Fill of cut [1127]
1127	100/250	3.4	1127		Cut	Posthole
1128	100/250	3.4			Fill	Fill of cut [1129]
1129	100/250	3.4	1127		Cut	Posthole
1130	100/250	3.4			Fill	Fill of cut [1131]
1131	100/250	3.4	1127		Cut	Posthole
1132	100/250	3.4			Fill	Fill of cut [1133]
1133	100/250	3.4	1127		Cut	Posthole

1134	105/200	3.4	1134		Layer	Demolition?
1135	100/200	3.2			Fill	Fill of cut [1136]
1136	100/200	3.2	1136		Cut	Small pit?
1137	100/250-255	4	1137		Layer	Stone surface/floor?
1138	100/250	4	1138		Layer	Stone surface/floor?
1139	105/200	3.4			Fill	Fill of cut [1140]
1140	105/200	3.4	1140		Cut	Poss assoc with wall [778] but prob not construction cut.
1141	105/200	3.4	1141		Layer	Floor make up?
1142	105/200	3.4	1142		Layer	Floor make up?
1144	105/245	3.3	1144		Coffin	Poorly preserved
1145	100/255	3.2	1145		Masonry	Column base
1146	95-100/250	3.4			Fill	Backfill to cut [1148]
1147	95-100/250	3.4	1147		Skeleton	Truncated - lower legs only
1148	95-100/250	3.4	1148		Cut	Grave
1149	100-105/245	3.4	1149		Layer	Chalky mortar bedding layer
1150	105/245	3.4	1150		Layer	Chalky mortar bedding layer
1151	105/200	4			Fill	Fill of cut [1152]
1152	105/200	4	1152		Cut	Robber trench?
1153	100-105/245	8	1153		Cut	Construction cut for viaduct footing?
1154	100/200-205	3.2			Fill	Fill of drain [1169]
1155	105/245	3.4	1155		Layer	Floor/surface makeup?
1156	105/200	3.3			Fill	Post packing in cut [1158]
1157	105/200	3.3			Fill	Fill of cut [1158]
1158	105/200	3.3	1158		Cut	Posthole
1159	105/200	3.3			Fill	Fill of cut [1161]
1160	105/200	3.3	1160		Fill	Fill of cut [1161]
1161	105/200	3.3	1161		Cut	Posthole
1162	105/200	3.4	1162		Layer	Silty clay - floor?
1163	105/200	3.2	1163		Layer	Floor make up?
1166	100/255-260	3.2	1126		Layer	Dumped deposit
1167	100-105/245	8	1153		Fill	Fill of cut [1153]
1168	105/245	3.4	1168		Layer	Sandy silt - bedding layer?
1169	100/200-205	3.2	1169		Masonry	Tile drain
1170	100/200-205	3.2	1170		Cut	Construction cut for [1169]
1171	105/245	3.4	1171		Layer	Floor make up?
1172						VOID
1173	100-105/245	3.4	1173		Layer	Floor make up
1174						VOID
1175	100/245	3.4			Fill	Lime? within fill [1117]
1176	105/200	3.4	1176		Layer	Compact silty clay
1177	105/200	3.4	1177		Layer	Sandy silty clay
1178	105/200	3.4	1178		Layer	Broken tile floor

1179	105/200	3.3			Fill	Top fill of cut [1180]
1180	105/200	3.3	1180		Cut	Posthole
1181	105/200	3.2	1181		Layer	Spread of stones
1182	105/200	3.4			Fill	Fill of cut [1183]
1183	105/200	3.4	1183		Cut	Robber trench?
1184	105/200-205	3.2	1184	61	Masonry	N/S wall foundation
1185	100-105/200-205	3.2	1185	52	Masonry	N/S wall
1186	105/200	3.4	1186		Layer	Bedding layer for [1178]
1187						VOID
1188	105/200	3.2			Fill	Fill of cut [1189]
1189	105/200	3.2	1189		Cut	Shallow pit
1191	105/200	3.2	1191		Cut	Construction cut for [1185]
1192	105/200	3.3			Fill	Fill of cut [1180]
1193	105/200	3.3			Fill	Fill of post-pipe in cut [1180]
1194	105/200	3.3			Fill	Fill of cut [1197]
1195	105/200	3.3			Fill	Secondary fill of cut [1197]
1196	105/200	3.3			Fill	Basal fill of cut [1197]
1197	105/200	3.3	1197		Cut	Posthole
1198	105/200	3.3			Fill	Fill of post-pipe in cut [1197]
1199	105/200	3.2	1199		Layer	Compacted gravel surface
1201	95-105/245	3.2	1201		Layer	Compacted sandy silty clay
1202	105/200	3.4	1202		Cut	Construction cut for wall [778]
1203	100/255	4	1203		Fill	Fill of cut [1212]
1204	95-100/255	4	1204		1204	Silty clay
1205	95-100/255	4	1205		Cut	Unknown function
1206	100/200	3.2	1206		Masonry	Fragment of chalk foundation
1207	100/200	3.2			Fill	Fill of cut [1208]
1208	100/200	3.2	1208		Cut	Robber trench?
1209	100/200-205	3.2	1209		Layer	Make up?
1210	105/200	3.4	1210		Layer	Loose sandy silt
1211	100-105/250-255	3.4	1211	62	Layer	Floor make up
1212	100/255	4	1212		Cut	Robber trench?
1213	105/200	3.4	1213		Layer	Compact crushed chalk
1214	95-100/255	4	1214		Fill	Unexcavated
1215	105/200	3.3			Fill	Basal fill of cut [1180]
1216	105/200	3.4	1216		Fill	Fill of cut [1219]
1217	105/200	3.4	1217		Fill	Fill of cut [1219] tile & stone
1218	105/200	3.4			Fill	Basal fill of cut [1219]
1219	105/200	3.4	1219		Cut	Robber trench?
1220	100/200	3.4	1220		Fill	Sandy clay
1221	100/200	3.1	1221		Layer	Dumped deposit clayey silt
1222	100/200	3.1			Fill	Fill of cut [1223]
1223	100/200	3.1	1223		Cut	E/W linear cut

1224	100/255	3.3			Fill	Fill of cut [1225]
1225	100/255	3.3	1225		Cut	Grave
1226	105/200	3.2	1226		Layer	Clay pad
1227	105/200	8	1227	53	Cut	Pit - unknown function
1228	105/200	8		53	Fill	Fill of cut [1227]
1229	105/250	3.3			Fill	Fill of cut [1230]
1230	105/250	3.3	1230		Cut	Small pit
1231	105/250	3.4			Fill	Fill of cut [1232]
1232	105/250	3.4	1232		Cut	Pit - unknown function
1233	100/200	3.4	1233		Fill	Sandy silt
1234	105/200	3.4	778	53, 60	Masonry	Rebuild of [778] at south end
1235	100/255	3.2	1235		Masonry	Foundation for column base [1145]
1236	100/255	3.2			Cut	Construction cut for [1235] -
1237	100-105/255	3.2	1237		Masonry	Column base foundation
1238	100-105/255	3.2			Cut	Construction cut for [1237] -
1239	100/200	3.4	1239		Layer	Sandy silt & crushed chalk
1240	105/245	3.3	1240		Cut	Grave
1241	105/245	3.3	1240		Skeleton	Standard inhumation - skull only
1242	105/245	3.3			Fill	Fill of cut [1240]
1243	100/255	6			Fill	Primary fill of cut [375]
1244	105/200	3.4	1244	54	Layer	Sandy bedding layer?
1245	105/200	3.2	1245	54	Layer	Floor make up
1246	105/205	3.2			Fill	Fill of cut [1247]
1247	105/205	3.2	1247		Cut	Uncertain function
1248	100/250	3.2			Fill	Fill of cut [1249]
1249	100/250	3.2	1249		Cut	Posthole
1250	105/200	3.2	1250	54	Layer	Sandy gravel - surface?
1251	105/200	3.2	1251		Masonry	N/S wall/buttress foundation
1252	100/245	3.4	1252		Coffin	V. poorly preserved
1253	100/245	3.4			Fill	Fill of grave [1254] - The charnel collected in [1117] may contain the skeleton belonging to grave [1254]
1254	100/245	3.4	1254		Cut	Grave
1255	105/200	3.2			Fill	Backfill to cut [1256]
1256	105/200	3.2	1256		Cut	Construction cut for [1251]
1257	105/200	3.2	1257	54	Layer	Silty clay
1258	100/245	3.4	1258		Coffin	V. poorly preserved - 3 coffin nails
1259	105/245				Cut	Construction cut for viaduct footing. - VOID
1260	105/245				Fill	Fill of cut [1259] - VOID

1262	100/255	3.2	1262		Layer	Compact gravel surface
1263	105/200-205	3.2	1263		Layer	Gravel surface
1264	110/200	3.1	1264	56	Layer	Mixed clay & gravel - surface?
1265	105/200	3.2	1265		Masonry	E/W wall foundation
1266	105/200-205	3.2	1266		Cut	Construction cut for [1184] - not excavated
1267	105/200-205	3.2			Fill	Backfill to construction cut [1266]
1268	100-105/255	6			Fill	Fill of well [1315]
1269	100-105/255	6	1269		Masonry	Brick lining of well
1270	100-105/255	6	1270		Cut	Construction cut for well [1315]
1271	100-105/255	6			Fill	Backfill to construction cut [1270]
1272	100/200	2	1272		Layer	Sandy clay
1273	105/250	3.4			Fill	Fill of cut [1274
1274	105/250	3.4	1274		Cut	Grave
1275	105/250	3.4	1275		Skeleton	Standard inhumation
1276	105/250	3.4	1276		Coffin	
1278	110/200	3.1		56	Layer	Gravelly silty clay
1279	110/200	2		56	Layer	Silty clay
1280	110/200	3.2			Cut	Construction cut for [1031]
1281	105/200	3.4	1281	58	Masonry	Wall foundation
1282	105/250	3.4	1282		Masonry	Patch of Westminster tile floor
1283	105/250	3.4	1283		Layer	Bedding layer - white chalky mortar
1284	100/245	3.3			Fill	Backfill to grave [1287]
1285	100/245	3.3	1285		Skeleton	Standard inhumation
1286	100/245	3.3	1286		Coffin	Nails only
1287	100/245-250	3.3	1287		Cut	Grave
1288	105/250	3.4			Fill	Backfill to grave [1290]
1289	105/250	3.4	1290		Skeleton	Standard inhumation
1290	105/250	3.4	1290		Cut	Grave
1291	100/255	3.3	1291		Skeleton	Standard inhumation - truncated
1292	100/255	3.3			Coffin	Nails only
1293	105/200	3.4	1293	57, 59	Masonry	N/S wall
1294	105/200	3.4	1293	57, 59	Masonry	Foundation for [1293]
1295	100/200	3.4	1295		Masonry	Lining of water cistern/well
1296	105/200	2	1296		Layer	Sandy clay
1297	105/250	3.4			Fill	Fill of cut [1298]
1298	105/250	3.4	1298		Cut	Grave
1299	105/250	3.4	1299		Skeleton	Standard inhumation
1300	105/200	3.1	1300		Layer	Metalled surface

1301	100/200	3.4	1301		Masonry	Foundation for [1295]
1302	105/200	3.4	1302		Cut	Construction cut for [1294]
1303	105/200	3.4			Fill	Backfill to cut [1302]
1304	100/200	2	1304		Layer	Silty clay
1305	105/200	3.2			Fill	Backfill to construction cut [1256]
1306	105/200	3.1	1306		Layer	Dumped deposit
1307	105/200	3.1	1307		Layer	Dumped deposit
1308	105/255	3.4	1308		Skeleton	Skull only
1309	105/255	3.3	1309		Coffin	
1310	105/255	3.4			Fill	Fill of cut [1311]
1311	105/255	3.4	1311		Cut	Grave
1312	105/255	3.3			Fill	Fill of cut [1314]
1313	105/255	3.3	1313		Skeleton	Lower legs only
1314	105/255	3.3	1314		Cut	Grave
1315	100-105/255	6			Masonry	Stone lining of well
1316	105/200	3.1	1316		Layer	Sandy silt
1317	105/200	2	1317		Layer	Sandy silt
1318	100/200	3.1	1318		Layer	Sandy clay
1319	105/200	3.1		60	Fill	Fill of cut [1320]
1320	105/200	3.1	1320	60	Cut	E/W poss boundary ditch
1321	105/250	3.3	1321		Coffin	V. poorly preserved
1322	100/255-260	3.2	1323		Masonry	N/S foundation - west range of cloisters
1323	100/255-260	3.2	1323		Masonry	E/W foundation - north wall of church
1324	100-105/255 105/260	3.2	1323		Masonry	N/S foundation - inner wall west range of cloisters
1325	100/255-260	3.2	1323		Layer	Dumped deposit - mottled orangey/brown silty sandy clay
1326	105/250	3.3	1326		Cut	Grave
1327	100/245	3.3	1327		Cut	Grave
1328	100/245	3.3	1327		Skeleton	Standard inhumation - truncated
1329	100/245	3.3			Fill	Fill of cut [1327]
1330	105/200	2	1330		Cut	Posthole
1331	105/200	2			Fill	Fill of cut [1330]
1332	100/200	3.1	1332		Layer	Silty clay
1333	100/200	3.1			Fill	Fill of cut [1334]
1334	100/200	3.1	1334		Cut	Uncertain function
1335	105/200	2	1335	61	Layer	Clayey silt
1336	110/200	3.4	1336	55	Layer	Silty clay
1337	110/200	3.4	1337	55	Layer	Clay
1338	110/200	3.4	1338	55	Layer	Silty clay

1339	110/200	3.3	1339	55	Layer	Metalled surface
1340	100/200	2	1340	63, 64	Layer	Silty clay
1341	100/245	3.3			Fill	Fill of cut [1342]
1342	100/245	3.3	1342		Cut	Grave
1343	100/200	2	1343	63, 64	Layer	Sandy silty clay
1344	100/245	3.3	1344		Skeleton	Standard inhumation
1345	100/245	3.3	1345		Coffin	Nails only
1348	100/200	2	1348	63, 64	Layer	Silty sandy clay
1349	100/245	3.3	1349		Cut	Grave
1350	100/245	3.3	1349		Skeleton	Standard inhumation
1351	100/245	3.3			Fill	Fill of cut [1349]
1354	105/200	3.4	1293	59	Masonry	Lining of water cistern/well
1355	105/250	3.3	1355		Cut	Posthole
1356	105/250	3.3			Fill	Fill of cut [1355]
1357	100/245	3.2	1357		Layer	Dumped deposit - coarse sand with a crust of lime mortar
1358	105/250	3.3			Fill	Fill of cut [1326]
1359	105/250	2			Fill	Fill of cut [1360]
1360	105/250	2	1360		Cut	Posthole?
1361	110/200	3.4		55	Fill	Fill of cut [1362]
1362	110/200	3.4	1362	55	Cut	Uncertain function
1363	100/255	3.2	1363		Layer	Surface make up
1364	110/200	3.3	1364	55	Layer	Silty clay
1365	110/200	3.2	1365	55	Layer	Metalled surface
1366	100/255-250 95/255	3.2	1366	62	Layer	Crushed Reigate & Caen stone
1367	100/245	3.2	1367		Layer	Gravelly clay
1368	110/200	3.2	1368	55	Masonry	Door stop
1369	105/200	1	1369		Layer	Sandy gravel
1370	110/200	3.1	1370		Layer	Sandy silty gravel
1371	105/200	2	1371		Layer	Clayey silty gravel
1372	100-105/250-255	3.2	1366	62	Layer	Clay crusted with crushed Reigate & Caen stone
1373	105/200	3.2		61	Masonry	Mortar & tile on edge - doorway?
1374	100/245	3.2	1374		Layer	Stone chips & silt
1375	105/245	3.2	1375		Layer	
1376	110/200	3.2		56, 57	Fill	Fill of cut [1280] - foundation
1377	105/200	3.2		61	Masonry	Stone & mortar foundation
1378	105/200	3.2		61	Fill	Bedding later for foundation - fill of cut [1266]
1379	100-105/255	3.3	1379		Skeleton	Standard inhumation
1380	100/200	1	1380	63, 64	Layer	Clayey sandy gravel-natural?

1381	105/245	3.2	1381	65	Layer	Silty clay
1382	105/245	3.2		65	Layer	Greenish clayey silt - poss Roman?
1383	110/200	3.2	1370		Fill	Backfill to construction cut [1280]
1384	100/200	2	1384		Layer	Sandy silty clay
1385	95-100/255	3.1	1366		Layer	Clayey sandy silt - pre-Monastic deposit
1386	105/255	3.3	1378		Coffin	
1387	100-105/255	3.3	1387		Cut	Grave
1388	105/255	3.3			Fill	Backfill to grave [1387]
1389	105/255	3.4	1389		Coffin	
1390	100/255	3.1	1366		Layer	Sandy silt - pre-Monastic deposit
1391	95-100/250	3.2		62	Layer	Sandy silt
1392	100-105/250	3.2		62	Layer	Sandy silt
1393	105/245	3.4			Fill	Backfill to grave [1394]
1394	105/245	3.4	1394		Cut	Grave
1395	105/245	3.4	1395		Skeleton	Standard inhumation
1396	105/245	3.4	1396		Coffin	Degraded wood
1397	100-105/250	3.1		62	Layer	Sandy silt - pre-Monastic deposit
1398	100/250	2		62	Layer	Clayey silt
1399	105/250	2		62	Layer	Clayey silt
1400	100-105/250	2		62	Layer	Clayey silt
1401	105/250	3.1		62	Layer	Sandy silt
1402	105/250	3.1		62	Layer	Sandy silt
1403	105/250	2		62	Layer	Silty sandy clay
1404	105/245	3.2		65	Layer	Light brown/grey mortar
1405	105/245	3.2		65	Layer	Sandy mortar
1406	105/245	3.2		65	Layer	Crushed Reigate stone
1407	105/245	3.1		65	Layer	Sandy silt
1408	105/245	2		65	Layer	Sandy silt
1409	95/245	3.3	1409		Skeleton	Standard inhumation - exposed in final watching brief
1410	105/255	3.3			Skeleton	Standard inhumation - exposed in final watching brief
1411	100/200	3.4	958	50	Masonry	Context sheet to do - west wall of cistern
1500	W/B	5	SW08	5	Masonry	Brick floor of gatehouse
1501	W/B	5	SW08		Masonry	N/S brick wall
1502	W/B	5	SW08		Masonry	N/S wall foundation
1503	W/B	5	SW08		Layer	Surface make up

1504	W/B	5	SW08		Masonry	Brick frag, chalk & clay rebuild of [1505] appears to abut [1502]
1505	W/B	3.4	SW08		Masonry	E/W wall - north wall of gatehouse?
1506	W/B	5	SW08		Masonry	N/S brick wall adjacent & parallel with [1502]
1507	W/B	5			Layer	Floor makeup
1508	W/B	8		103	Layer	Clay & gravel surface
1509	W/B	8		103	Layer	Bedding/make up for [1508]
1510	W/B	8		103	Layer	Surface? Clay & gravel
1511	W/B	8		103	Layer	Surface make up
1512	W/B	7		103	Layer	Metal frags, slag fire rake out
1513	W/B	7		103	Fill	Fill of cut [1514]
1514	W/B	7		103	Cut	Rubbish pit
1515	W/B	7		103	Layer	Poss demolition/levelling layer
1516	W/B	7		103	Layer	Cinder & ash fire rake out
1517	W/B	1			Layer	Sandy gravel
1518	W/B	8	SW08		Masonry	N/S brick wall - 19th C
1519	W/B	5	SW08		Masonry	Brick floor
1520	W/B	5	SW08		Masonry	Brick floor
1521	W/B	5	SW08		Masonry	Hollow square brick base
1522	W/B	5	SW08		Masonry	Chalk & brick N/S wall internal/external?
1523	W/B	3.4	SW08		Masonry	Med E/W south wall of gatehouse
1524	W/B	5			Layer	Floor makeup
1525	W/B	1			Layer	Sandy gravel
1526	W/B	7			Layer	Dumped deposit - representing disuse of gatehouse
1527	W/B	7		100	Masonry	N/S wall
1528	W/B	8		100, 101, 102	Layer	Made ground - post-med
1529	W/B	7		100, 101	Layer	Clay surface?
1530	W/B	7		100, 101	Layer	Made ground - post-med
1531	W/B	3.4	1537	100, 101	Layer	Clay surface?
1532	W/B	8		102	Masonry	E/W brick wall
1533	W/B	8		102	Masonry	N/S wall
1534	W/B	9			Layer	Modern made ground
1535	W/B	8		105,	Layer	Sandy silt

				106		
1536	W/B	7			Layer	Sandy clay
1537	W/B	9	1537	106	Masonry	E/W wall foundation
1538	W/B	9	1537	106	Masonry	E/W wall foundation
1539	W/B	8			Layer	Sandy silt prob same as [1541]
1540	W/B	9		106	Masonry	N/S wall
1541	W/B	8			Layer	Sandy silt poss same as [1539]
1542	W/B	8		107	Layer	Sandy silt poss same as [1528]
1543	W/B	7	1543		Masonry	N/S wall
1544	W/B	7	1543	107	Layer	Made ground - post-med
1545	W/B	7		108	Layer	Clayey silt
1546	W/B	3.4	1537	108	Layer	Clay silt poss same as [1531]
1547	W/B	7	1537	109	Layer	Clayey silt
1548	W/B	7		109	Layer	Gravelly sandy silt - made ground
1549	W/B	7		109	Layer	Silty sand
1550	W/B	7		109	Fill	Yellow/white mortar fill of cut [1551]
1551	W/B	7		109	Cut	Pit?
1552	W/B	8	1537	109	Fill	Fill of cut [1558]
1553	W/B	9	1537	108	Masonry	Remnants of building - 19th c.
1554	W/B	9		108	Masonry	Stone floor - internal
1555	W/B	9		108	Layer	Bedding layer for [1554]
1556	W/B	9	1537	108	Layer	Floor make up
1557	W/B	9	1537	108	Layer	Floor make up
1558	W/B	8	1537	108	Cut	Pit

Appendix 2: Roman Pottery Assessment

Eniko Hudak

Introduction

Excavations at Holywell Lane (HLY12) produced a small assemblage of Roman pottery of 292 sherds weighing 4210g, and representing 4.00 EVEs. The pottery was fully quantified and catalogued using the standard measures of sherd count, weight, and Estimated Vessel Equivalents (EVEs). The assemblage was recorded using standard Museum of London fabric codes (Symonds 2002) into an MS Access database.

The assemblage

The pottery was recovered from 63 individually numbered contexts, and only a single sherd was unstratified. Individual context assemblages were small (less than 30 sherds) many containing a single sherd, and there was only one medium sized assemblage (30-100 sherds).

Less than half of the total site assemblage was recovered from contexts phased as Roman (Phase 2), totalling 128 sherds weighing 1676g and representing 1.28 EVEs. The Phase 2 assemblage shows trends very similar to the total assemblage, see below.

The rest of the assemblage was residual in medieval and post-medieval contexts, possibly a result of later activity disturbing the Roman layers. This is also implied by the degree of abrasion observed in the assemblage, and the rather low average sherd weight (14.46g).

There is a range of Romano-British and imported fabrics represented in the assemblage mainly dating to the Late Roman period (mid-late 2nd to 4th century AD). In fact, over half of the assemblage has an earliest production date later than AD 200.

Coarseware fabrics dominate with 73% of sherd count, and 70% of weight of the total site assemblage. The most commonly occurring fabrics are Alice Holt Farnham Ware in forms of jars and dishes (AHFA, 39% of SC, 38% of weight of total), followed by Black Burnished wares (BB1 and BB2) also in forms of jars, dishes and bowls. Typical late Roman fabrics such as Portchester D (PORD), and Mayen ware (MAYEN) are also present, which further reinforces the late Roman date of the assemblage. Another typical late Roman fabric, calcite gritted ware (CALC), is represented by a single sherd only, which might be due to the size of the assemblage, however, it has to be noted since it is considered to be more common in late Roman pottery assemblages in London (Gerrard 2011).

Finewares account for 24% of the assemblage by sherd count and 22% by weight, and are also dominated by typical late Roman fabrics, such as the products of the Oxfordshire potteries (OXRC and OXWC, 14% of SC, 12% of weight) in forms of flagons, bowls and especially *mortaria*; Nene Valley Colour-coated wares (NVCC) and Much Hadham Red-slipped wares (MHAD). There are only four sherds of *Terra Sigillata* in the assemblage, possibly all residual, three of which refit and are from a 4Drag37 bowl with *ovolo* and hare decoration. Most of the fineware sherds are heavily abraded, especially the OXRC and OXWC fragments.

There are only 8 sherds of amphorae in the assemblage, most of which are Baetican Dressel 20 olive oil amphora fragments.

Despite its small size, the overall composition of and trends observed in the assemblage compare well with the general composition of late Roman (post-AD 230) pottery assemblages in London as discussed by Symonds and Tomber (1991). On the other hand, the size of the assemblage and the high degree of residuality in post-Roman contexts limit the discussion of the assemblage beyond the fact that there was Late Roman activity on the site.

Recommendations

The NVCC(?) sherd from context [1103] is of intrinsic interest. It seems to be the top of a completely enclosed vessel with a handle across the top and a hole, similar to the complete example found at Puckeridge, which was interpreted as a Roman field flask. As this type of vessel is rare, and it does not form part of the Nene Valley Colour-coated ware repertoire, the sherd is recommended for further research and illustration. It is also recommended to include a Romano-British pottery report in the publication of the excavation.

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Context	SC	Wt(g)	EVEs	Spotdate	Notes
0	1	116		-	
68	1	12		AD250-400	based on a single sherd
72	1	72	0.4	AD250-400	based on a single sherd
411	1	77		AD150-400	based on a single sherd
422	7	96	0.04	AD270-300	
428	8	127	0.48	AD250-400	
431	1	23		AD150-400	based on a single sherd
435	1	17		AD270-400	based on a single sherd
443	4	85	0.14	AD270-400	
478	2	19		AD250-400	
480	4	49	0.03	AD250-400	
510	3	79	0.13	AD350-400	
511	6	61	0.04	AD270-400	
525	1	6		AD250-400	based on a single sherd
568	1	4		AD50-400	based on a single sherd
584	3	31		AD270-400	
596	5	109	0.14	AD250-300	
602	1	1		AD250-400	based on a single sherd
628	16	149	0.26	AD350-400	
634	1	10		AD50-400	based on a single sherd
725	3	38		AD270-400	
758	9	97	0.05	AD250-400	
787	1	22		AD350-400	based on a single sherd
794	2	41	0.08	AD250-400	
840	18	245	0.21	AD350-400	
856	38	550	0.16	AD250-400	
858	1	12		AD250-400	based on a single sherd
879	2	40		AD250-400	
893	5	55		AD270-400	
896	4	158		AD250-400	
906	2	101		AD250-400	
913	1	6	0.07	AD120-400	based on a single sherd
997	1	12		AD150-400	based on a single sherd
1003	4	85	0.18	AD270-400	
1034	2	26		AD250-400	
1038	1	2		AD200-275	based on a single sherd
1051	12	130	0.28	AD270-400	
1066	3	28	0.07	AD270-400	
1077	2	54	0.04	AD250-400	
1081	1	11	0.12	AD250-400	based on a single sherd
1082	10	105		AD350-400	
1103	11	182	0.36	AD350-400	

1117	2	34		AD270-400	
1123	1	9		AD270-400	based on a single sherd
1151	1	7		AD250-400	based on a single sherd
1201	3	50	0.15	AD240-400	
1204	1	7		AD350-400	based on a single sherd
1224	3	10		AD250-400	
1239	1	8		AD270-400	based on a single sherd
1272	2	40		AD200-400	
1284	1	32		AD150-400	based on a single sherd
1297	1	47		AD50-400	based on a single sherd
1317	6	226		AD50-300	
1340	1	6		AD250-400	based on a single sherd
1341	2	20	0.08	AD350-400	
1343	28	195	0.19	AD270-400	
1344	1	3		AD250-400	based on a single sherd
1348	10	85		AD350-400	
1351	4	17	0.06	AD270-400	
1371	4	65	0.06	AD270-400	
1382	11	67	0.18	AD350-400	
1388	2	11		AD250-400	
1393	5	68		AD270-400	
2119	1	60		AD50-300	based on a single sherd
TOTAL	292	4210	4.00		

Table 1: Quantification of the total site assemblage by context and spotdates

Fabric	SC	%	Wt(g)	%	EVEs	%
AHFA	112	38.36%	1581	37.55%	1.03	25.75%
AHFA?	3	1.03%	23	0.55%		0.00%
AMPH?	1	0.34%	47	1.12%		0.00%
BAET	6	2.05%	226	5.37%		0.00%
BAET?	1	0.34%	60	1.43%		0.00%
BB1	10	3.42%	126	2.99%	0.31	7.75%
BB2	18	6.16%	221	5.25%	0.36	9.00%
CALC?	1	0.34%	37	0.88%		0.00%
CC	2	0.68%	76	1.81%	0.4	10.00%
ERMS?	1	0.34%	23	0.55%	0.08	2.00%
GROG	5	1.71%	39	0.93%	0.18	4.50%
MAYEN	2	0.68%	133	3.16%	0.03	0.75%
MAYEN?	1	0.34%	11	0.26%		0.00%
MHAD	3	1.03%	28	0.67%		0.00%
MHAD?	3	1.03%	57	1.35%		0.00%
MICA	2	0.68%	17	0.40%		0.00%
MISC	1	0.34%	10	0.24%		0.00%
MOSL?	3	1.03%	32	0.76%		0.00%

NFCC?	1	0.34%	6	0.14%	0.07	1.75%
NVCC	6	2.05%	55	1.31%		0.00%
NVCC?	6	2.05%	132	3.14%		0.00%
NVGW?	1	0.34%	5	0.12%		0.00%
OXID	9	3.08%	71	1.69%		0.00%
OXPA?	4	1.37%	38	0.90%		0.00%
OXRC	30	10.27%	359	8.53%	0.18	4.50%
OXRC?	3	1.03%	11	0.26%		0.00%
OXWC	8	2.74%	147	3.49%	0.7	17.50%
OXWW	2	0.68%	80	1.90%	0.15	3.75%
PORD	15	5.14%	168	3.99%	0.21	5.25%
SAM	3	1.03%	15	0.36%		0.00%
SAM?	1	0.34%	9	0.21%	0.04	1.00%
SAND	18	6.16%	295	7.01%	0.26	6.50%
TSK	7	2.40%	57	1.35%		0.00%
TSK?	3	1.03%	15	0.36%		0.00%
TOTAL	292	100.00%	4210	100.00%	4.00	100.00%

Table 2: Quantification by fabrics

Appendix 3: Roman Small Finds and Coins Assessment

Chris Faine

Introduction/Methodology

Six small finds of Roman date were recovered from the excavation along with 9 coins. Finds were recorded using standard catalogues (Crummy 1983; Manning 1985), and entered on Microsoft Excel spreadsheet. Coins were catalogued using criteria set out by English Heritage (Brickstock 2004), with identifications (where possible) being made using *Roman Imperial Coinage* and *Late Roman Bronze Coinage.* Aside from cleaning no conservation was carried out, although each object was assessed for potential to be x-rayed or for further conservation/illustration (see Tables 1 & 2). Objects are considered by phase.

The Assemblage

As mentioned above 9 Roman coins were recovered; 1 unstratified, 2 from securely dated Roman contexts and 6 residual coins from Phases 3.2 to 3.4 (1190-1540). The unstratified coin (SF 120, context [1353]), is Trier minted "Securitas Reipublicae" issue of uncertain ruler dated AD 324-330. Coins from Phase 2 context [428] (SF 62 & 63) are illegible 4th-century *nummi.* Phase 3.2 yielded the 2 best preserved coins in the assemblage in the form of 2 issues of the House of Valentinian (AD 367-375). SF 106 (context [1081]) is a "Gloria Romanorum" issue of Gratian minted in Siscia (Modern day Sisak, Croatia). Issues from this mint are comparatively rare in Britain and can be difficult to attribute, given the frequent changes of ownership from the accession of Constantius II in AD 337 onwards and the large number of *officinae* minting coins under the auspices of the houses of Constantine and Valentinian. For most of the 4th century 4 or 5 workshops were operating, leading to uniquely complex system of mintmarks especially after the death of Constantine.

SF 121 (context [1382]) is a "Securitas Reipublicae" issue of uncertain ruler minted in either Trier or Lyon. Three coins were recovered from Phase 3.3 contexts. Two (SF 84, context [705] & SF 116, context [116]) are illegible 4th-century issues. A single late 1st/early 2nd century *dupondius* of uncertain ruler was also recovered from context [628] (SF 78). Although the obverse is currently unclear the shape of the bust and hairstyle perhaps suggests an Antonine issue. Only one coin was recovered from a Phase 3.4 context in the form of a mid 4th-century issue (possibly a "Spes Republicae" type) dating from AD 355 at the earliest.

Few small finds of Roman date were recovered; three from secure Roman contexts (Phase 2), one from Phase 3.2, one from Phase 3.3 and one unstratified find. SF 40 is an unstratified "Crummy type 5" bone hairpin shaft typologically of 4th-century date. The finds assemblages from Roman contexts (Phase 2), consists of iron nails (contexts [428], [473] & [1348]), of "Manning 1b" type and larger masonry bolts. A copper alloy brooch fragment of 3rd–4th-century date was recovered from Phase 3.2 context [1201] (SF

122). A single find was recovered from Phase 3.3 context [1045] (SF 146) in the form of a copper alloy Colchester type brooch. Exact dating is difficult but it is most likely of late 1st–3rd-century date.

Discussions & Recommendations

Given the residual nature of much of the assemblage it is difficult to place it within its wider context. Although small, the coin assemblage suggests activity concentrated in the mid-late 4th century, with a single 1st/2nd-century issue. Given the later Roman nature of the activity in the area (Bull 2011; Swift 2003) this is not unexpected although it is worth noting that this pattern of coin loss is common in Roman Britain as a whole (Reece 1991). Denominations and issues are of commonly occurring types although the Siscian minted SF 106 is somewhat rarer. Although many of the obverse portraits/inscriptions are illegible cleaning would aid in their exact identification, therefore conservation is recommended on all but 2 cases (see Table 1). The exact nature of Roman occupation in the area around Ermine St is unclear and analysis of the coins would aid in its clarification. Residual and unstratified small finds are commonly occurring dress accessories, with nails from securely dated Roman contexts being structural rather than associated with burials. No further work is required on these although the iron fragment from context [473] should be x-rayed.

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SF No.	Phase	Context	Date	Mint	Officina	Denom	Obv	Rev	Reece Period	Size	Axis	Conserve?	Notes
120	0	1353	AD 324-330	PTR.		AE3		SECVRITASREIPUBLICAE	16	16	6	Y	
62	2	428	C4th			AE3				11		Y	Illegible
63	2	428	C4th			AE3				11			Illegible
106	3.2	1081	AD 367-375	ASISC	F*M	AE3	DNGRATIANVSPFAVG	GLORIAROMANORVM 8	19	16	6	Y	LRBC 1327
121	3.2	1382	AD 367-375		OF1	AE3		SECVRITASREIPUBLICAE	19	16	6	Y	LRBC 25
78	3.3	628	C1st/2nd			DP		Standing figure L		31	6	Y	Poss Antonine?
84	3.3	705	C4th			AE3				14		Y	Illegible
116	3.3	1312	C4th			AE3				15			Illegible
104	3.4	1038	AD 355+			AE3		SPESREPUBLICAE??		13	6	Y	

Table 1: Roman coins

SF No.	Phase	Context	Type	Material	L	W	D	Date	Notes	References	X ray?
40	0	0	Pin	Bone	55		5	4th century AD	Shaft of bone hairpin. Crummy Type 5	Crummy 1982 N.397	
0	2	428	Nail	Fe	41		25	Roman	Square section nail with round head. Manning type 1a	Manning 1985 R85	
0	2	473	Nail	Fe	38			Roman	Unidentifiable nail		Y
0	2	1348	Nail	Fe	64		41	Roman	Square section bolt with round head.		
122	3.2	1201	Bracelet	Cua	20	11		3rd-4th century AD	Hatched bracelet fragment	Crummy, 1982. N.1714	
146	3.3	1045	Brooch	Cua	22			Late 1st-3rd century AD	Copper alloy brooch pin (Colchester derivative type)		

Table 2: Roman small finds

Appendix 4: Post Roman Pottery Assessment

Berni Sudds

A medium sized assemblage of pottery was recovered from the evaluation and excavation phases of investigation amounting to 37 boxes. In total there are 2836 sherds, 1863 ENV, 103,330kg of which: 595 sherds, 379 ENV and 13,958kg are unstratified. The post-Roman pottery dates from the 11th to the 19th century. The majority is in good condition, with little evidence for abrasion and was probably deposited fairly rapidly after breakage. In general, the medieval pottery is more highly fragmented and dispersed than the later pottery. The post-medieval assemblage is also more readily identifiable to vessel form and has a number of complete profiles and a few complete pots. Residuality is a feature of the later assemblages on site, with a significant quantity of 17th-century pottery re-deposited during the late 18th and early 19th century.

The assemblage was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an Access database, by fabric, form and decoration. The classification of the pottery types is according to the Museum of London Archaeology typology. The Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics was followed for recording and the forms were identified in accordance with the Medieval Pottery Research Group's guide to the classification of forms (MPRG 1998; 2001). The pottery was quantified by sherd count (SC), estimated number of vessels (ENV's) and weight. Pottery was recovered from 244 contexts. A table of the contexts containing pottery with date ranges and suggested spot dates appears at the end of the report (Table 6). A summary of the pottery types and forms appears below in Table 1 and is followed by a discussion of distribution.

Pottery types

Fabric code	Expansion	Date range		SC	ENV	Wg	Forms
EMS	Early medieval sandy ware	970	1100	3	2	10	-
NEOT	St Neots ware	970	1100	1	1	5	-
EMCALC	Early medieval sandy ware with calcareous inclusions	1000	1150	1	1	4	-
EMSS	Early medieval sand- and shell-tempered ware	1000	1150	1	1	3	-
EMSHX	Essex early medieval ware with fossil shell	1000	1225	1	1	19	-
EMSH	Early medieval shell-tempered ware	1050	1150	3	2	66	Jar
ESUR	Early Surrey ware	1050	1150	1	1	22	-

LOGR	London-area greyware	1050	1170				-
EMCS	early medieval coarse sand-tempered ware	1050	1200	1	1	11	Jar
EMGRX	Essex early medieval grog-tempered ware	1050	1200	1	1	13	Jar
EMGY	early medieval gritty ware	1080	1200	1	1	23	-
LCOAR	coarse London-type ware	1080	1200	12	7	245	Jug
LCOAR CALC	coarse London-type ware with calcareous inclusions	1080	1200	3	2	42	Jug
LOND	London-type ware	1080	1350	51	29	786	Jug, finial, louver
SSW	shelly-sandy ware	1140	1220	4	2	47	-
SHER	south Hertfordshire-type greyware	1170	1350	2	2	41	Jar
SHER COAR	south Hertfordshire-type coarse greyware	1170	1350	1	1	10	-
SHER FL	south Hertfordshire-type flint-tempered greyware	1170	1350	1	1	58	-
EARL	Earlswood-type ware	1200	1400	2	1	16	Jug
COLS	Colchester-type slipware	1200	1480	1	1	3	-
HARM	Harlow sandy ware	1200	1500	2	2	8	-
SOWX	Essex unsourced sandy orange ware	1200	1550	1	1	10	Jug
KING HD	Kingston-type ware in the highly decorated style	1240	1300	2	2	7	Jug
KING	Kingston-type ware	1240	1400	40	36	362	Jug
EGS	early German stoneware	1250	1300	1	1	6	-
SAIM	Saintonge ware with mottled green glaze	1250	1650	1	1	5	-
SAIN	Saintonge ware	1250	1650	1	1	26	Chafing dish
MG	Mill Green ware	1270	1350	12	10	103	Jug
CBW incl. BUNG /FT/ BIF	coarse Surrey-Hampshire border ware	1270 / 1340 / 1380	1500	223	149	3221	Jug, cooking pot, bowl, bunghole jar
SAIG	Saintonge ware with even green glaze	1280	1350	5	2	23	Jug
SAIP	Saintonge ware with polychrome decoration	1280	1350				-
SAIPG	Saintonge ware with polychrome decoration and green glaze	1280	1350	1	1	3	Jug
FKING	fine Kingston-type ware	1320	1400	2	2	5	Jug
LMHG	late medieval Hertfordshire glazed ware	1340	1450	10	7	53	Jug
CHEA	Cheam whiteware	1350	1500	23	19	188	Jug
TUDG	Tudor Green' ware	1350	1500	2	2	22	Jug
LLON	late London-type ware	1400	1500	1	1	99	Jug
MISC	miscellaneous unsourced medieval/post-medieval pottery	900	1500	32	16	1322	Bowl, colander, stove tile

MISC WW	miscellaneous unsourced medieval/post-medieval whiteware	900	1500	1	1	3	Jug
SPGR	Spanish green-glazed ware	1250	1650	1	1	13	Jar
SIEG	Siegburg stoneware	1300	1630	1	1	19	Jug
DUTR	Dutch red earthenware	1300	1650	9	8	242	Cauldron/ pipkin, jar
DUTSL	Dutch slipped red earthenware	1300	1650				-
MPUR	Midlands purple ware	1400	1750	10	10	1176	Butter pot
MORAN	Midlands orange ware	1400	1820	5	4	218	Butter pot
TGW IMP	Miscellaneous imported tin-glazed ware	1450	1900	2	2	56	Altar vase, dish
EBORD	early Surrey-Hampshire border whiteware	1480	1550	2	2	3	-
MART1	Martincamp-type ware type I flask (buff earthenware)	1480	1550	2	2	43	Flask
CSTN	Cistercian ware	1480	1600	1	1	8	-
PMRE	London-area early post-medieval redware	1480	1600	44	37	1624	Cauldron, cauldron/pipkin, dish, dripping dish, jug
PMREM	London-area early post-medieval redware with metallic glaze	1480	1600	2	2	25	-
RAER	Raeren stoneware	1480	1610	33	18	1253	Drinking jug, jug, trichterhalskrug
PMSRG	London-area post-medieval slipped redware with green glaze	1480	1650	9	8	194	Dish
PMSRY	London-area post-medieval slipped redware with clear (yellow) glaze	1480	1650	23	12	507	Dish, cauldron/pipkin, jug
PMCR	post-medieval crucible fabric	1480	1900	1	1	132	Crucible
BORD	Surrey-Hampshire border whiteware	1550	1700				-
BORDG	Surrey-Hampshire border whiteware with green glaze	1550	1700	63	43	2435	Dish, chamber pot, bowl, porringer/ skillet, tripod pipkin, candlestick
BORDO	Surrey-Hampshire border whiteware with olive glaze	1550	1700	60	13	2085	Chamber pot, tripod pipkin
BORDY	Surrey-Hampshire border whiteware with clear (yellow) glaze	1550	1700	95	48	4298	Dish, porringer, skillet, tripod pipkin, chamber pot, chicken feeder, bowl
FREC	Frechen stoneware	1550	1700	60	47	5852	Jug

FRECW	Frechen whiteware	1550	1700	7	4	117	Drinking jug, jug
RBOR	Surrey-Hampshire border redware	1550	1900	92	62	5433	Dish, bowl, chamber pot, tripod pipkin, porringer, skillet
TGW A	London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style A)	1570	1650	42	35	1262	Dish, bowl, jar
NHS	north Holland slipware	1570	1750	1	1	6	Dish/ bowl
TGW	English tin-glazed ware	1570	1846	59	48	873	Bowl, plate, dish, gaming counter, wet drug jar, ointment pot, figurine
TGW BISC	London biscuit-fired tin-glazed ware	1570	1846	103	81	4900	Saggar, trivet, dish, albarello, storage jar, ointment pot, porringer, mug, chamber pot, candlestick
PMBL	Essex-type post-medieval black-glazed redware	1580	1700	59	23	2116	Tyg, chamber pot, jug, mug, bowl
PMFR	Essex-type post-medieval fine redware	1580	1700	123	44	10002	Chamber pot, bowl dish, jug, drinking jug, tripod pipkin
RBORB	Surrey-Hampshire border redware with brown glaze	1580	1800	9	5	371	Pipkin, chamber pot
RBORG	Surrey-Hampshire border redware with green glaze	1580	1800	22	12	1372	Chamber pot, dish, bowl, pipkin
PMR	London-area post-medieval redware	1580	1900	273	151	23524	Bowl, jar, chamber pot, dish, flower pot, tripod pipkin, cauldron, porringer/ skillet, colander, syrup collecting jar, lid
CHPO BW	Chinese blue and white porcelain	1590	1900	15	12	302	Bowl, plate, tea bowl, saucer, jar, lid.
MART3	Martincamp-type ware type III flask (red earthenware)	1600	1650	1	1	3	-
WEST BIC	Westerwald stoneware biconic panel jug	1600	1650	2	2	124	Jug
BORDB	Surrey-Hampshire border whiteware with brown glaze	1600	1700	12	10	356	Chamber pot, tripod pipkin, bowl, dish, mug, money box
NIMS BICR	north Italian bichrome marbled slipware	1600	1750	2	2	8	Bowl/ dish
NIMS POLY	north Italian polychrome slipware	1600	1750	3	1	19	Bowl
BLACK	Blackware	1600	1900	2	1	13	Jar

TGW B	London tin-glazed ware with manganese-mottled glaze (Orton style B)	1630	1680	3	3	231	Mug, jug
TGW D	London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style D)	1630	1680	128	71	4224	Dish, bowl, storage jar, ointment pot, albarello, porringer, saucer, gaming counter
METS	metropolitan slipware	1630	1700	47	26	3383	Dish, bowl, jug, candlestick
TGW BLUE	London tin-glazed ware with plain pale blue glaze	1630	1846	7	5	175	Ointment pot
TGW C	London tin-glazed ware with plain white glaze (Orton style C)	1630	1846	31	23	756	Ointment pot, plate, porringer, mug, bowl, dish
BORDB CHP2	Surrey-Hampshire border brown-glazed whiteware flat-rimmed chamber pot	1650	1750	2	1	19	Chamber pot
BORDG CHP2	Surrey-Hampshire border green-glazed whiteware flat-rimmed chamber pot	1650	1750	8	3	176	Chamber pot
STEM	Staffordshire-type embossed flatware	1650	1750	5	2	125	Dish
STMO	Staffordshire-type mottled brown-glazed ware	1650	1800	3	2	102	Jug
STSL	Staffordshire-type combed slipware	1660	1870	17	13	745	Dish, cup
TGW F	London tin-glazed ware with 'Chinaman among grasses' decoration (Orton style F)	1670	1690	16	9	204	Plate, bowl, posset pot, gaming counter
LONS	London stoneware	1670	1926	22	20	1660	Jar, jug
TGW M	London tin-glazed ware with 'Persian blue' decoration (Orton style M)	1680	1710	4	4	25	Bowl/ dish, fluted bowl/dish
STMB	Staffordshire-type marbled slipware	1680	1800	2	2	45	Dish
TGW H	London tin-glazed ware with pale blue glaze and dark blue decoration (Orton and Pearce style H)	1680	1800	21	19	180	Plate, bowl, fluted dish
CHPO IMARI	Chinese Imari porcelain	1680	1900	4	3	41	Tea bowl, saucer, tankard
TGW SPNG	London tin-glazed ware with sponged decoration	1700	1760	9	5	62	Plate
CHPO BLANC	Chinese porcelain, blanc de Chine	1700	1800	1	1	2	-
NOTS	Nottingham stoneware	1700	1800	1	1	23	-

DERBS	Derbyshire stoneware	1700	1900	2	2	158	Jar
ENGS	English brown salt-glazed stoneware	1700	1900	13	9	928	Ginger beer, ale, blacking and ink bottle
TGW G	London tin-glazed ware with 'Lambeth polychrome' decoration (Orton and Pearce style G)	1701	1711	2	1	44	Bowl
CONP	continental porcelain	1710	1900	1	1	39	Figurine
SWSG	white salt-glazed stoneware	1720	1780	7	7	94	Plate, bowl, tankard, tea bowl, chamber pot
CHPO ROSE	Chinese porcelain with famille rose decoration	1720	1800	29	5	439	Bowl
AGAT	agate ware	1730	1780	6	1	40	Tea bowl
REST	red stoneware	1730	1780	1	1	10	-
TGW J	London tin-glazed ware with panel decoration on manganese ground	1735	1770	1	1	11	Bowl
WEST CHP2	Westerwald stoneware chamber pot with flanged rim	1740	1760	1	1	41	Chamber pot
STBL	Staffordshire-type black-glazed ware	1740	1780	1	1	48	Dish
CREA	Creamware	1740	1830	25	24	511	Plate, dish, chamber pot
STRSB	Staffordshire-type red-slipped black-glazed ware	1750	1800	1	1	8	-
CREA DEV	creamware with developed pale glaze	1760	1830	55	49	1490	Plate, dish, bowl, jar, saucer, chamber pot
CREA OTR	creamware with over-glaze transfer-printed decoration	1760	1830	2	2	19	Plate, saucer
PEAR OTR	pearlware with over-glaze transfer-printed decoration	1770	1800	1	1	16	Saucer
PEAR BW	pearlware with under-glaze blue-painted decoration	1770	1820	17	17	264	Plate, saucer, tea bowl, bowl
PEAR	pearlware	1770	1840	16	13	381	Plate, dish, cup, saucer, chamber pot
PEAR PNTD	pearlware with under-glaze painted decoration	1770	1840	1	1	23	Saucer
PEAR TR	pearlware with transfer-printed decoration	1770	1840	73	52	980	Plate, cup, saucer, bowl, jug, dish, tureen, chamber pot
BBAS	black basalt ware	1770	1900	5	5	118	Teapot
CREA SLIP	creamware with slip decoration	1775	1830	12	6	103	Bowl, jug

PEAR SLIP	pearlware with slip decoration	1775	1840	1	1	14	Bowl
SUND MOT	Sunderland-type coarseware with mottled glaze	1775	1850	3	2	80	Bowl
ENPO HP	English hard paste porcelain	1780	1900	2	2	47	Bowl, cup
TPW	refined whiteware with under-glaze transfer-printed decoration	1780	1900	7	6	57	Plate, saucer
PEAR SPON	pearlware with sponged or spattered decoration	1800	1840	1	1	6	Bowl
SUND	Sunderland-type coarseware	1800	1900	2	2	131	Bowl
LUST	lustreware	1805	1900	1	1	3	-
PEAR TR3	pearlware with under-glaze brown or black transfer-printed decoration	1810	1840	2	2	85	Plate
YELL	yellow ware	1820	1900	5	4	151	Bowl, dish, chamber pot
YELL SLIP	yellow ware with slip decoration	1820	1900	2	1	19	Bowl
PEAR TR4	pearlware with under-glaze colour transfer-printed decoration (green, mulberry, grey etc)	1825	1840	1	1	2	Saucer
TPW4	refined whiteware with under-glaze colour transfer-printed decoration (green, mulberry, grey etc)	1825	1900	2	2	75	Saucer, tureen
TPW FLOW	refined whiteware with under-glaze transfer-printed 'flow blue' decoration	1830	1900	3	3	41	Plate, cup
MAJO	majolica	1850	1900	1	1	5	Plate

Table 1: Quantification of the assemblage by ware type. SC = Sherd count. ENV = Estimated number of vessels. Wg = Weight in grams.

Distribution

Phase 3.1: Early medieval

A small group of pottery, totalling 11 sherds, was retrieved from deposits dated to the early medieval period, representing less than 0.5% of the entire assemblage by sherd count and ENV (Table 5). The material was recovered from four layers. Layer [258] produced a single unsourced sherd, although the fabric and technology are consistent with an early medieval date, whilst layer [1318] contained a

sherd of early medieval sand and shell-tempered ware (EMSS), dated to the 11th or early 12th century. Sherds from the same London-type ware jug (LOND), decorated with white slip and combed vertical lines, were recovered from layer [1332] and also re-deposited in make-up layers associated with the construction of the gatehouse in Phase 3.2 ([1099] and [1209]). Finally, layer [447] contained a sherd of coarse London-type ware (LCOAR), pre-dating *c.* 1200., a south Hertfordshire-type coarse greyware jar (SHER) and a sherd of Kingston-type ware (KING), one, or both, of which may be intrusive.

A further 45 sherds of early medieval pottery were recovered residually or were unstratified but even accounting for this, the early medieval assemblage is small, in keeping with findings during earlier investigations on the site and a reflection of limited contemporary occupation in the vicinity (Blackmore and Pearce 2011, 155). No late Saxon pottery was identified, with the earliest deposits dating to the 11th century, possibly even towards the end of this century. The range of types is quite narrow, also in line with those previously recorded (Blackmore and Pearce 2011, 156). In addition to those already mentioned these include early medieval sandy ware (EMS), early medieval sandy ware with calcareous inclusions (EMCALC), Essex early medieval ware with fossil shell (EMSHX), early medieval coarse sand-tempered ware (EMCS), Essex early medieval grog-tempered ware (EMGRX), early medieval shell-tempered ware (EMSH), early Surrey ware (ESUR), London-area greyware (LOGR) and early medieval gritty ware (EMGY). These types were in common use across London. The range of forms is also limited, comprised of jars and jugs.

Phase 3.2: *c.* 1190-1240

A slightly larger, although still comparatively small assemblage, was recovered from deposits assigned to Phase 3.2, comprising 3% of the pottery recovered by sherd count and ENV (Table 5). The majority of the pottery is comprised of the finer London-type ware (LOND), introduced in the late 11th century, but becoming common during the second half of the 12th century, at expense of the earlier LCOAR (Blackmore and Pearce 2011, 157). Just one sherd of LOCAR was recovered from this phase, with Surrey whitewares comprising the next most frequent type to LOND, in the form of KING and coarse Border ware (CBW). The remainder of the pottery includes small quantities of SHER, Harlow sandy ware (HARM), Mill Green ware (MG), fine Kingston-type ware (FKING) and Cheam whiteware (CHEA). A few imported wares were also recovered, namely Saintonge wares with mottled and even green glaze, and also polychrome decoration (SAIM; SAIG; SAIP). Sherds from the same fragmented EMSH jar base comprise the only residual pottery, derived from compacted clay layer [1201], and a single sherd of Surrey-Hampshire border redware (RBOR) is intrusive.

The floor make-up layers within Room 2 of the gatehouse ([1093] and [1099]) produced sherds of LCOAR and LOND, but also KING, MG and SAIG. The latter post-date *c.* 1240, 1270 and 1280 respectively and thus must either be intrusive or suggest the floor post-dates the initial construction of the gatehouse. The fill of drain [1169] contained a similar combination of types including KING, CBW, SAIM and a sherd from a SAIP jug. Again unless intrusive, in combination these are indicative of a date post *c.* 1280. Similarly, the majority of the pottery recovered from road surface [376]/[377] is

comprised of KING and CBW, dating from *c*. 1240 and *c.* 1270 respectively, but here a few sherds of FKING and CHEA that post date *c.* 1320 and *c.* 1350. Some of this pottery may derive from later trample and consequently be intrusive, although the absence of any earlier pottery might suggest this section of the roadway is a later repair.

The range of forms is again limited, comprised of jars and jugs, although a fragment of a possible London-type ware roof finial of 13th-century date was recovered from tile floor [1053], more of which occurs residually in a Phase 3.4 floor make-up ([1054]). Although small, the presence of a number of imported vessels, along with decorative roof furniture, would suggest some degree of affluence in the vicinity, a least by later 13th century if not before.

Phase 3.3: *c.* 1200-1350

The quantity of pottery recovered from Phase 3.3 remains at a similar level to Phase 3.2, accounting for 2% of the site assemblage by sherd count and 3% by ENV (Table 5). This might appear to contrast with earlier investigations on the site where there is an evident increase in the quantity of pottery of 13th to mid 14th-century date (Blackmore and Pearce 2011, 157), but there are fairly significant quantities of pottery of this date both in Phase 3.2 and 3.4 deposits, suggesting an intensification in activity during this period.

Coarse Border ware occurs most commonly in Phase 3.3 deposits, with smaller quantities of MG, KING, LOND, SHER, Earlswood-type ware (EARL) and CHEA. Deposits dated from *c.* 1170 to 1350 contain combinations of LOND and SHER, and where CBW is also present a date from *c.* 1270 to 1350 is suggested. A number of groups remain only broadly dated, containing KING or CBW in isolation, including road repair deposit [363], and a few that include CHEA post date *c.* 1350. One such example is the fill of grave [1225], containing KING, CBW, including a flat-topped cooking pot, and CHEA, dating to the second half of the 14th century.

The range of types recovered corresponds to that recovered previously, as does the dominance of jugs over jars (Blackmore and Pearce 2011, 156-7). In fact this bias is even more pronounced in the current assemblage, although this is probably due to the positive identification of non-diagnostic body sherds through the presence of glaze or decoration.

Phase 3.4: *c.* 1350-1540

There is a marked increase in the size of the Phase 3.4 assemblage, comprising 11% by sherd count and 12% ENV of the site total (Table 5), in part due to the longer period covered but also reflecting a further rise in activity. Again, as noted during the earlier investigations at the Priory, and across London more broadly, the late 14th- and 15th-century pottery is dominated by coarse Surrey-Hampshire border ware (Blackmore and Pearce 2011, 158). The next most common type is late and residual KING, followed by CHEA and Late medieval Hertfordshire glazed ware (LMHG). Small quantities of Tudor green ware (TUDG) and Dutch redware (DUTR) were also recovered. Later Phase

3.4 deposits incorporate a few sherds of London-area early post-medieval redware (PMRE), London-area post-medieval slipped redware (PMSR) and Raeren stoneware (RAER).

Similarly to the later Phase 3.3 deposits, early groups contain combinations of CBW with LOND or MG, the latter particularly diagnostic of a late 13th to mid 14th-century date. The assemblage from floor make-up [1024] comprises LOND, SHER, MG, SAIG and CBW, including a flat-topped cooking pot, suggesting a *c.* 1340 to 1350 date, although it is possible some of the earlier pottery is residual, or was old when deposited. This group includes the fragment of a possible London-type ware louver. Other groups pre-dating *c*. 1400 contain KING, with occupation layer [1022] and grave [1090], both dating to the late 14th century, combining KING, CBW and LMHG. Mortar bedding [975], fill of cut [1362] and grave [981] are dated from *c.* 1350 or 1380 to 1450, including CHEA or coarse Surrey-Hampshire border ware cooking pots with a bifid rim with LMHG. More broadly dated late 14th to 15th-century groups contain TUDG or CHEA, with or without CBW. Floor [976] in the gatehouse and clay floor [1007] are both dated from *c*. 1340 to 1500 with flat-topped CBW cooking pots, as is the backfill of barrel well [1012], truncating floor (976), the latter also containing a Dutch redware.

Floor make up [937] produced a medium sized assemblage (76 sherds, 65 ENV), comprised predominantly of CBW, CHEA and TUDG, but also including a few sherds of PMSR, PMRE and RAER, that together suggest a deposition date in the last decades of the 15th century, or perhaps slightly later. This group also contains a sherd of Frechen stoneware (FREC) and Surrey-Hampshire border whiteware (BORDO) that post-date *c.* 1550, although these are probably intrusive. A late 15th-century date is also suggested for make-up layer [934]. A few other Phase 3.4 deposits contain PMRE or RAER, suggesting they post-date *c.* 1480, including fills [954], [994] and [1273].

Again the range of types can be paralleled, both in the assemblage recovered from earlier excavations on the site and across London (Blackmore and Pearce 2011, 158-9). A slightly broader range of imports was associated with this period during the earlier work at the Priory, although even then imports represented a relatively uncommon find, a feature of a number of other contemporary monastic assemblages. Greater diversification of form is also apparent during this phase, mostly with the arrival of the CBW but also with introduction or PMRE/SR. In addition to jars and jugs there are bowls, dishes, drinking jugs and a bunghole jar.

Phase 4: *c.* 1540-1600 Dissolution and demolition

A smaller assemblage of pottery was retrieved from Phase 4 features, accounting for 5% by sherd count and 7% by ENV of the total site assemblage, but this likely results from the small date range covered, as opposed to any real decline in activity. There are few groups that can be firmly attributed to the period of the dissolution, although a number of demolition and levelling deposits that are broadly dated to the 16th century. Again the range of types mirrors earlier findings at the Priory and is more broadly in line with 16th-century ceramic developments in the London area, with groups dominated by London-area early post-medieval redware and slipware (PMRE/ PMSRY/G), Surrey-Hampshire Border wares, imported German stonewares and Low Countries redware (Blackmore and

Pearce 2011, 159). Later groups include early tin-glaze (TGW), developed London-area post-medieval redware (PMR) and Essex post-medieval redwares (PMFR/ PMBL).

Bedding layer [891] and floor [890] both contain early Surrey-Hampshire border ware (EBORD), dating from *c.* 1480 to 1550, along with PMRE. Demolition deposit [786] may also be early, containing CBW along with PMRE and PMSRY, although the former could be residual. More broadly dated groups include non-diagnostic sherds of PMRE or RAER stoneware. Where RAER is present an early to mid 16th-century date may be more likely, although by no means certain, it was imported in large quantities from *c*. 1480, but succeeded by Frechen stoneware during the second half of the century. The pottery from levelling layer [788], including PMSRY and London-area early post-medieval redware with metallic glaze (PMREM), dates from *c*. 1480 to 1600, but the pulled feet evident on more than one vessel are more indicative of a mid 16th-century date.

Deposits dated to the second half of the 16th century include the developed Surrey-Hampshire Border whitewares (BORDG/Y) or Frechen stonewares (FREC), in addition to PMRE, PMSRY/G and some RAER. These include make-up layer [642] and demolition layer [472], the former also containing a Martincamp-type buff earthenware (type I) flask from France and the latter a London biscuit-fired tin-glazed ware trivet. The latter represents the earliest example of a large assemblage of biscuit-fired tin-glazed ware recovered from site, the majority of which was retrieved from Phase 5 and 6 deposits and is discussed further below.

Timber drain [334]/[263] in the carriageway provides somewhat contradictory dating. Fill [261] of [334], and the fills of the subsequent cut [263] ([274], [275] and [276]), contain material of 16th-century date including a PMRE dripping dish, Raeren stoneware trichterhalskrug and drinking jugs, but the presence of a single sherd of PMFR from the basal fill suggests deposition occurred post *c.* 1580. The rim sherd from a rare and high-status tin-glaze altar vase was also recovered from this feature, probably imported form the Netherlands during the late 15th or early 16th century. Unless intrusive, however, the presence of 17th- and early 18th-century tin-glaze (TGW C, D and SPNG) in cut [334] would suggest the feature post-dates *c*. 1700. Other features dated to the late 16th to early 17th century include dump layer [460], containing TGW and Dutch slipped red earthenware (DUTSL) and foundation fill [652], with TGW and PMREM.

As mentioned above the composition of the imported pottery falls in line with that recovered elsewhere within the Priory, deriving predominantly from Germany and the Low Countries but also from France. The range of types is noticeably more limited, however, with little imported tin-glaze and no Spanish wares, even taking the residual assemblage into consideration. It is not clear why this should be the case, although the more limited size of the assemblage is a potential factor, and possibly the location of the trenches, in an area of the complex that, for a short time more at least, was deemed unsuitable for the disposal of significant quantities of waste.

Phase 5: *c.* 1600-1670

The Phase 5 assemblage comprises 7% of the site total by sherd count and ENV. A third consists of biscuit-fired tin-glazed ware, including saggars and other kiln furniture, representing production waste. This material is considered separately below. A number of the Phase 5 feature assemblages are small and contain BORDY, FREC, Essex post-medieval redwares (PMFR/ PMBL) and developed London-area post-medieval redware (PMR) that can only be broadly dated from the mid or late 16th to 17th century. Those dated to the 17th century also include Surrey-Hampshire border whiteware with brown glaze (BORDB).

Early groups contain combinations of PMSRY/G and early tin-glaze (TGW A), suggesting a pre *c.* 1650 date, unless residual or old when deposited. These include the final infill of Phase 4 timber drain [263] that also contains further Raeren stoneware trichterhalskrug and drinking jugs and a Siegburg stoneware jug (SIEG). The backfills of robber cut [245] contain a significant quantity of the tin-glaze production waste, in addition to BORDY, PMR, TGW A, London tin-glazed ware with manganese-mottled glaze (TGW B), Frechen stoneware and north Italian bichrome marbled slipware (NIMS BICR). The combination of TGW A and B suggest a date from *c.* 1630 to 1650, although deposition could have occurred slightly later. The same date is provided by the presence of PMSRY and Metropolitan slipware (METS) in the fill of cut [945].

Drain [229] produced four fills, all of which contained some early vessels including a DUTR cauldron, RAER jugs, and TGW A dishes, but the presence of a BORDB type 2 chamber pot in the secondary fill would suggest the feature was not fully backfilled until after *c.* 1650. Further diversification is evident in form during this phase. Utilitarian and kitchen forms include DUTR, PMRE, PMR, PMFR and Surrey-Hampshire border redware (RBOR) cauldrons and pipkins and Midlands purple stoneware butterpots (MPUR). Table and serving wares include TGW, METS and NIMS BICR dishes and bowls, BORDY and TGW porringers, TGW mugs, PMBL tygs and RAER and FREC jugs. Sanitary and pharmaceutical forms include BORDO/B chamber pots and TGW storage jars. There is also a BORDB money box from construction cut [236].

Tin-glaze production waste

The recovery of over 100 fragments of biscuit-fired tin-glazed ware in a variety of forms (Table 2), including saggars, trivets and spacers, from site is both interesting and potentially significant. The question is whether this material has been dumped on site from elsewhere, and if so where, or could it provide evidence for more localised production. The manufacture of tin-glazed ware in London is focused primarily along the south bank of the Thames, but the earliest and only known production centre away from the river is at Aldgate, in the grounds of what was Holy Trinity Priory (Edwards 1974; Edwards 1999; Edwards and Stephenson 2002; Blackmore 2005). Significant dumps of biscuit-fired tin-glaze ware have been found on more than one site with no other evidence for production and away well away from the river where they are suggested to form part of levelling or ground raising deposits (L. Blackmore pers comm.).

Form	SC	ENV	Weight
Dish	9	7	262
Dish FBB	3	3	55
Dish FBB/D	14	12	890
Dish FBD	1	1	19
Rounded porringer	6	4	118
Rounded jug	1	1	112
Mug	1	1	16
Chamber pot	1	1	74
Saucer candlestick	1	1	68
Albarello	2	2	365
Storage jar	1	1	12
Ointment pot	2	2	53
Kiln furniture	1	1	20
Saggar	33	29	2223
Trivet	4	4	166
Non-diagnostic	23	11	447

Table 2: Tin-glaze production waste by form. SC = Sherd count. ENV = Estimated number of vessels. Weight in grams.

A summary of the distribution of the biscuit-fired tin-glaze and kiln furniture by phase appears below in Table 3. A single trivet occurs in a Phase 4 demolition deposit but the majority occurs in Phase 5 features, with less into Phases 6 and 7. The largest single group comes robber cut [245], provisionally dated from *c.* 1630 to 1650. Indeed, the majority of the dating favours a pre-1650 date. In terms of narrowing down potential sources the dating is not particularly helpful, as although production at Aldgate dates from the late 16th to early 17th century, a number of other pothouses were also in production by 1650, including Montague Close, Pickleherring and Rotherhithe (Edwards and Stephenson 2002, 173). Aldgate is the closest to the current site, although a cursory comparison of form offers few similarities and, although possible sources, the remaining pothouses are at some distance. Proving on-site production is also problematic as no in-situ evidence appears to have been uncovered and Holywell Priory is not mentioned in the extensive survey of London potters undertaken by Rhoda Edwards (Edwards 1974). Other avenues of research are available, however, and may provide further resolution (see below).

Phase	Considered dates of contexts containing waste	Form	SC	ENV	Weight
Unstratified	-	Dish	2	2	125
		Dish FBB/D	14	12	890
		Rounded jug	1	1	112
		Albarello	2	2	365
		Chamber pot	1	1	74
		Saucer candlestick	1	1	68
		Ointment pot	1	1	47
		Kiln furniture	1	1	20
		Saggar	8	7	1123
		Non-diagnostic	4	4	93
4	1550 – 1650	Trivet	1		
5	1570 – 1600/50	Dish	4	2	83

	1570 – 1700 1630 – 1650 1630 – 1680	Dish FBB	3	3	55
		Dish FBD	1	1	19
		Rounded porringer	6	4	118
		Mug	1	1	16
		Storage jar	1	1	12
		Saggar	18	16	927
		Trivet	1	1	34
		Ointment pot	1	1	6
		Non-diagnostic	17	5	263
6	1580 – 1650 1580 – 1680 1580 – 1700 1600 – 1650 1670 – 1700 1689 – 1710	Dish	3	3	54
		Saggar	7	6	173
		Trivet	2	2	121
		Non-diagnostic	1	1	6
7	1700 – 1710	Trivet	1	1	11

Table 3: Distribution of tin-glaze production waste. SC = Sherd count. ENV = Estimated number of vessels. Weight in grams.

Phase 6: *c.* 1670-1710

Close to a third of the site assemblage by sherd count (30%) was retrieved from deposits dated to the late 17th to early 18th century, comprised in large part of the pottery recovered from two contexts, the backfill of cesspit [234] and dump layer [343]. These large, fresh groups contain many semi- or near complete vessels and consequently the phase accounts for a lower relative percentage of the site ENV at 22%. A sizeable quantity of pottery of this date is also redeposited in Phase 7 features and thus it is likely this period is far more significant than is immediately apparent. Indeed, there appears to have been a fairly significant episode of clearance and demolition during the late 17th and early 18th century.

Clearance group from cesspit [234]

The backfill of cesspit [234] ([233]), associated with the large courtyard house identified to the north of site, produced a large tightly dated assemblage of pottery, comprising 499 sherds, representing 181 vessels (weighting 37116g), that is likely to represent a clearance group. A breakdown of the group by function, form and fabric appears below in Table 4. Local and Essex-type redwares represent the most frequently occurring type, accounting for 49% of the group by sherd count and 40% by ENV. These primarily consist of utilitarian forms for food storage, preparation and cooking, and sanitary wares in the form of chamber pots but also include serving and drinking forms. The latter include Metropolitan slipware dishes and jugs, Essex-type post-medieval black-glazed redware and Essex-type post-medieval fine redware jugs, drinking jugs and tygs. Notably, the Essex redwares are more numerous than the local London area redwares.

Surrey-Hampshire Border wares and tin-glazed wares represent the next most frequent types. By sherd count the former are more numerous, comprising 28% and with tin-glaze comprising 22%. By ENV, however, the reverse is apparent with tin-glaze accounting for 28%, indicating this material is more fragmentary. The Surrey-Hampshire Border wares, particularly the whitewares, occur in a

broader range of forms than the redwares including pipkins, skillets, bowls, dishes, porringers, and chamber pots. The tin-glaze wares are represented primarily as serving wares, namely dishes and bowls, but also as pharmaceutical, sanitary and a few drinking forms. Five gaming counters were also recovered, cut from TGW dishes and bowls. Imported wares account for 7% of the feature assemblage by ENV, the majority Frechen and Westerwald stoneware from Germany, but including single examples of Saintonge ware and Chinese porcelain.

The recovery of at least two BORDY chicken feeders is notable, as these are a relatively rare find. There are also a few rarer pieces of TGW that would suggest the material originated from an affluent household including a wet drug jar, a fragment from a William and Mary dish and a figurine of a nude female (SF 20). Additionally, there are high quality imports, including a stamp decorated Saintonge ware vessel, possibly a fuming pot or lantern, and a Westerwald stoneware biconical drinking jug. The dominance of better quality Essex redwares over local examples and the presence of a green-glazed stove tile with moulded decoration, including a Tudor rose, provides further evidence of status. Some of these vessels are likely to have been old when deposited but the combination of types, and incidence of the William and Mary dish date the group from *c.* 1689 to 1710. A slightly later date is possible, but the absence of refined SWSG that became fairly commonplace following 1720, suggest it is unlikely to have been filled after this date.

Function	Use	Form	Fabric	SC	ENV	Weight
Kitchen/ storage	Multi	Storage jar	PMR	6	6	972
		Butter pot	MPUR	1	1	287
Kitchen	Food preparation	Colander	PMR	1	1	35
Kitchen	Cooking	Dripping dish	PMR	1	1	125
		Tripod pipkin 2	BORDY	3	1	127
		Tripod pipkin	PMFR	12	1	1075
		Pipkin	PMR	8	2	613
			RBOR/G	5	2	728
		Skillet	BORDY	3	3	212
Kitchen/ table	Food preparation/ serving	Bowl (including handled/ flared)	BORDG	1	1	58
			PMFR	2	2	128
			PMR	19	9	2098
			RBOR/G	3	2	241
			MISC	13	1	762
		Dish (including flared and straight-sided)	BORDG	2	1	113
			PMFR	6	3	782
Table	Food serving	Bowl	TGW/C/D/H	7	6	129
		Dish (including deep and fluted)	RBOR	1	1	175
			TGW/A/D	34	17	1798
			TGW H/ M	2	2	13
			BORDG	1	1	137
		Flanged dish	BORDG	19	2	1223
			BORDY	1	1	66
			METS	15	6	1973
			PMR	3	2	165
			RBOR/G	8	4	973
Table	Food consumption	Porringer	BORDG/Y	9	4	285
			TGW C	5	1	231

		Plate	TGW/F	3	3	62
Drink	Drink serving	Jug (including rounded, Bartmann & biconical types)	FREC	10	10	2315
			WEST BIC	1	1	63
			WEST BIC	1	1	61
			METS	13	2	527
			PMBL	8	1	81
			PMFR	2	2	144
		Drinking jug	PMFR	1	1	49
		Tyg	PMBL	8	3	262
		Rounded mug	TGW C	3	1	89
		Tea bowl	CHPO BW	4	1	34
		Miscellaneous	TGW	1	1	105
Hygiene	Pharmaceutical	Wet drug jar	TGW	1	1	18
		Ointment pot	TGW BLUE/C	5	4	260
		Storage jar	TGW A/D	3	3	124
Hygiene	Sanitary	Chamber pot (incl. Type 1 & 2)	BORDO/Y	12	5	744
			PMBL	15	2	903
			PMFR	26	6	3349
			PMR	22	6	2993
			RBOR/G	5	5	454
Display	Misc	Figurine	TGW	1	1	96
Industrial	Kiln furniture	Saggar	TGW BISC	1	1	37
Leisure	Gaming	Counter	TGW/ D/ F	5	5	31
Heat/light	Lighting/ fuming	Fuming pot/ lantern	SAIN	1	1	26
	Lighting	Upright candlestick	METS	1	1	91
	Heating	Stove tile	MISC	2	1	96
Other	Misc	Chicken feeder	BORDY	8	2	1234

Table 4: Breakdown of the diagnostic pottery from cesspit fill [233] by function, form and fabric. . SC = Sherd count. ENV = Estimated number of vessels. Weight in grams.

Phase 7: *c.* 1710-1780

There is an evident decline in the quantity of pottery recovered during the 18th century, comprising 13% of the site total by sherd count and 12% by ENV. This decrease is even more marked when it is apparent that a significant quantity of this material is residual.

Significant changes in the composition of ceramic assemblages occur during the 18th century, as observed across the country, with the introduction of centralised mass-production and the emergence of a culture of consumerism. The 18th century material at Holywell is no exception, with a similar range of types observed elsewhere across London and across much of England (Hildyard 2005). White salt-glazed stonewares (SWSG), representing the first of the industrialised refined wares, are present, in addition to Nottingham stoneware (NOTS) and imported 18th-century Chinese porcelain. Tin-glazed wares, Surrey-Hampshire border redware and local London-area post-medieval redware continue to be used. A small number of transfer-printed earthenwares were also recovered, which became widely available at towards the end of the century.

To the north of site well [210] contained six fills, the earliest four of which appear to have been deposited between *c.* 1720, or possibly 1750, and 1780. The fills contain a similar combination of types including some 16th- and 17th-century material in the form of CSTN, BORDB/G/Y, FREC and PMFR, more broadly dated RBOR and PMR, and late 17th- or 18th-century Staffordshire-type embossed flatware (STEM), TGW H/SPNG, NOTS and SWSG. The recovery of fragments of the same Chinese porcelain bowl with famille rose decoration from the basal fill and three of the subsequent fills would, however, suggest the feature was first backfilled no earlier than *c.* 1720 and the presence of a Staffordshire-type red-slipped black-glazed ware cup or jug (STRSB) in the secondary fill would suggest deposition occurred sometime post *c.* 1750.

Similar assemblages were recovered from demolition layer [350] and the fills of the subsequent cesspits [314] ([313]) and [354] ([353]). These also included fairly significant quantities of 17th-century pottery, in addition to the 18th-century material, but also included small quantities of Creamware (CREA) and Pearlware (PEAR) that would suggest deposition occurred post *c.* 1740 or 1760. Indeed, cesspit fill [313] also produced a single sherd of Pearlware with sponged decoration (PEAR SPON), post-dating *c.* 1800.

The range of Phase 7 forms diversifies but also changes, including fewer jugs, but a broader range of serving forms, including tea bowls, cups and an increasing number of plates.

Phase 8: *c.* 1780-1850

The Phase 8 assemblage accounts for 7% of the site total by sherd count and 9% by ENV. Groups of this date are characterised by the mass-produced finewares that became widespread throughout London and the rest of the country towards the end of the 18th century and into the 19th century. The smaller feature assemblages are broadly dated through the presence of pearlware with under-glaze blue-painted decoration pearlware (PEAR BW), pearlware with transfer-printed decoration (PEAR TR), creamware with developed pale glaze or over-glaze transfer-printed decoration (CREA DEV/ OTR). However, the majority of the material from this phase was derived from the backfill of three wells containing larger and consequently better dated assemblages, backfilled sometime just prior to or around the mid 19th century.

The largest of these was retrieved from well [210], representing the last two fills of this feature. The earlier fill includes CREA DEV and pearlware with over-glaze transfer-printed decoration (PEAR OTR), but in addition to 18th-century tin-glaze (TGW SPNG and TGW H). This combination could suggest a late 18th-century deposition date but the tin-glaze may be old or residual, so a later date is possible. The upper fill of this well produced a large assemblage of CREA DEV, PEAR BW and PEAR TR/TR3, but one yellow ware bowl would suggest the group post-dates *c.* 1820 and, unless intrusive, a single sherd of Majolica might even suggest the group was deposited after *c*. 1850, perhaps as part of a clearance.

There is a greatly increased specialisation of form, the beginnings of which are evident in Phases 6 and 7, commensurate with the rise of mass-production. These new refined earthenware industries

were both helping to create and responding to increasingly prescribed social habits. In early 19th century groups, such as well [210], different pottery types were designed and used for differing functions. The refined wares are generally reserved for table and serving wares, comprising dishes and plates of varying shape and size, bowls, cups, saucers and cream jugs, although also occur as sanitary wares. There is also a Black Basalt ware teapot. The English stoneware occurs as ginger, ale and blacking bottles and the local red earthenwares as utilitarian kitchen wares and flowerpots. A thick base fragment from a flared post-medieval crucible (PMCR) was also recovered, although it contains no visible residue to indicate what it may have been used for. The other two wells, [304] and [797] contain a similar range of material, with the presence of the 'wild rose' transfer-print design suggesting deposition occurred after *c.* 1835.

Recommendations

The assemblage from site is of a medium size but is well-stratified, dates from the 11th to the 19th century, and perhaps most significantly, can be associated with known and newly identified structures. The material not only has the potential to reveal how activity developed and changed over this period but can add to an understanding of pottery consumption within the Priory and how this changes following the dissolution, first with the advent of high-status secular occupation, and subsequently through the 18th- and 19th-century sub-divisions and multiple occupancy. The early tin-glaze production waste and late 17th to early 18th-century clearance group from the high-status courtyard house are of particular interest and should form the primary focus of any further research.

In particular, the assemblage should be more closely compared to the material recovered during earlier excavations at the Priory (Blackmore and Pearce 2011) and to other monastic groups from London, including Holy Trinity Priory, St Mary Graces Abbey, St Mary Clerkenwell, St Mary Spital and Bermondsey Abbey (Blackmore 2005; 2011; 2012; Stephenson 1997; Pearce 2011). This will add to an understanding of whether or not these share traits in common and if they differ from contemporary secular assemblages.

In an attempt to identify a source for the tin-glaze production waste, parallels for the forms should be sought further afield, amongst the pothouses along the southbank of the river. Chemical analysis of the fabrics using inductively coupled plasma analysis (ICP-AES) and comparison of the results to the existing dataset for the key London tin-glaze production centres will also be critical (Hughes 2008). Documentary research has some limited potential to determine the existence of any potters living or working in the vicinity of Holywell, although extensive research already undertaken appears to have been fruitless in this respect (Edwards 1974).

Full quantification and partial reconstruction of clearance assemblage from cesspit [233] is also recommended as a tightly dated closed group with many complete vessels. Comparison with other groups of this date should also be undertaken.

Approximately 30 illustrations will be required for publication, including a group photograph of the reconstructed clearance group.

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Fabric	U/S	3.1	3.2	3.3	3.4	4	5	6	7	8
EMCALC	1									

EMSHX					1					
EMSS		1								
EMCS					1					
EMGRX					1					
EMSH	3									
ESUR	1									
EMGY					1					
LCOAR	10		1		1					
LCOAR CALC					3					
LOND	5	6	27	3	7	2			1	
SSW	2				2					
SHER				1	1					
SHER COAR								1		
SHER FL				1						
COLS						1				
EARL				2						
HARM			1			1				
SOWX					1					
KING			10	3	27					
KING HD						2				
EGS					1					
SAIM			1							
SAIN								1		
SPGR	1									
CBW	2		13	25	115	16		2		
MG			2	4	5	1				
SAIG			4		1					
SAIP										
SAIPG			1							
DUTR	3				2		1	2		1
DUTSL										
SIEG							1			
FKING			2							
CBW BUNG					1					
CBW FT				1	46					
LMHG					9			1		
CHEA	1		1	5	13			3		
TUDG					1		1			
CBW BIF					2					
LLON						1				
MORAN	2							3		
TGW IMP						1		1		
MPUR	1						3	6		

CSTN								1	
EBORD							2		
MART1						1	1		
PMCR									1
PMRE	4			5	6	5	20	3	1
PMREM					1			1	
PMSRG	2			4		2	1		
PMSRY	2				1	1	18	1	
RAER	1			7	6	17	1	1	
BORD									
BORDG	21					4	33	5	
BORDO	5			1		10	42	2	
BORDY	10					7	63	14	1
FREC	9			1	2	9	31	8	
FRECW	1						6		
RBOR	35		1		1		23	23	9
NHS	1								
TGW	13						15	31	
TGW A	7				1	9	22	3	
TGW BISC	35					53	13	2	
PMBL	5					3	44	1	6
PMFR	13				2	7	98	2	1
PMR	95				4	10	107	45	12
RBORB	3							6	
RBORG	2					7	11	1	1
CHPO BW	8						4	1	2
BLACK	2								
BORDB	3					1	6	2	
MART3							1		
NIMS BICR						1	1		
NIMS POLY	3								
WEST BIC							2		
METS	9					2	34		2
TGW B	1					1		1	
TGW BLUE	3						1		3
TGW C	6				1		17	6	1
TGW D	42				3		44	39	
BORDB CHP2						2			
BORDG CHP2	3							5	

STEM					5	
STMO				3		
STSL	8				6	3
LONS	10		1	1	6	4
TGW F	2			3	11	
CHPO IMARI	4					
STMB	2					
TGW H	4		1	2	12	2
TGW M	1			1	2	
CHPO BLANC					1	
DERBS	1					1
ENGS	2					11
NOTS					1	
TGW SPNG	3		3		2	1
TGW G					2	
CONP	1					
CHPO ROSE	4				24	1
SWSG	5				2	
AGAT	6					
REST	1					
TGW J	1					
CREA	2		6	2	3	11
STBL	1					
WEST CHP2	1					
STRSB					1	
CREA DEV	28				1	26
CREA OTR						2
BBAS	4					1
PEAR	5				2	9
PEAR BW	8					9
PEAR OTR						1
PEAR PNTD	1					
PEAR TR	36		1	1		35
CREA SLIP	7					5
PEAR SLIP	1					

SUND MOT	3									
ENPO HP	1									1
TPW	4									3
PEAR SPON									1	
SUND	1									1
LUST	1									
PEAR TR3	1									1
YELL	3									2
YELL SLIP	2									
PEAR TR4	1									
TPW4	2									
TPW FLOW	3									
MAJO										1
MISC	1	1	5	1	1	3	2	18		
MISC WW				1						
EMS					3					
NEOT	1									
	551	8	69	47	264	67	160	711	287	172

Table 5: Distribution of the pottery by phase and fabric.

Context	Size	Date range of the pottery		Latest dated pottery type		Context considered date
0	L	1250	1926	1780	1900	
4	S	1630	1846	1770	1846	1800 - 1820
5	M	1550	1926	1820	1900	1820 - 1840
8	S	1550	1846	1630	1846	1630 - 1700
9	S	1550	1900	1630	1700	1630 - 1700
10	S	1480	1900	1580	1900	1580 - 1600
11	S	1300	1900	1550	1900	1580 - 1600
49	M	1570	1846	1680	1800	L.18th century
52	S	1580	1900	1580	1900	1580 - 1900
53	S	1580	1900	1630	1680	1630 - 1680
55	M	1400	1900	1630	1700	1630 - 1680
57	S	1080	1500	1270	1500	1270 - 1350
66	S	1570	1900	1630	1700	1630 - 1700
68	S	1000	1350	1140	1220	1175 – 1200
70	S	970	1150	1050	1150	1050 - 1150
73	S	1080	1350	1080	1350	1080 – 1350
76	S	1350	1900	1630	1700	1630 - 1650
200	L	1480	1926	1850	1900	M.19th century
201	S	1550	1900	1770	1800	1770 - 1800
204	S	1550	1700	1550	1700	1550 - 1700
208	S	1480	1926	1720	1800	1720 - 1780
209	S	1550	1900	1580	1900	1580 - 1700
211	S	1550	1900	1750	1800	1720 - 1750
213	M	1480	1900	1720	1800	1720 - 1750
214	S	1570	1650	1570	1650	1570 - 1650
218	S	1480	1600	1480	1600	1480 - 1600

226	S	1550	1700	1630	1700	1630 - 1700
227	S	1480	1900	1580	1900	1580 - 1650
228	S	1550	1800	1580	1800	1600 - 1700
230	S	1400	1846	1600	1650	1600 - 1650
233	VL	1250	1900	1680	1800	1689 - 1710
235	S	1550	1700	1550	1700	1600 - 1700
237	S	1550	1700	1570	1650	Mid 17th century
239	M	1400	1900	1650	1750	1650 – 1700
243	S	1570	1846	1570	1846	1570 - 1800
246	M	1550	1900	1630	1680	1630 – 1650
247	S	900	1700	1550	1700	1550 – 1610
250	S	1580	1700	1580	1700	1580 - 1700
254	M	1480	1700	1550	1700	1550 - 1600
258	S	900	1500	900	1500	1000 - 1200
261	S	1270	1610	1480	1610	1480 - 1610
262	S	1300	1650	1570	1650	1570 - 1650
266	S	1480	1900	1580	1900	1580 - 1650
268	S	1580	1700	1580	1700	1580 - 1700
269	S	1550	1700	1550	1700	1650 - 1700
271	S	1480	1600	1480	1600	1480 - 1600
273	S	1480	1846	1570	1846	1570 - 1600
274	S	1400	1700	1580	1700	1580 - 1600
275	S	1480	1650	1570	1650	1570 - 1610
276	S	1480	1610	1480	1610	1480 - 1600
281	S	1300	1830	1760	1830	1760 - 1830
285	S	900	1500	900	1500	1000 - 1200
288	S	1170	1550	1480	1550	1480 - 1550
296	S	1270	1500	1270	1500	1270 - 1500
303	S	1580	1900	1780	1900	1835 - 1840
305	S	1480	1926	1740	1830	1740 - 1830
311	S	1550	1900	1770	1840	1770 - 1830
313	M	1480	1926	1800	1840	1800 - 1840
325	S	1770	1820	1770	1820	1770 - 1820
326	S	900	1500	900	1500	1200 - 1400
331	S	1270	1700	1550	1700	1550 - 1600
334	S	1550	1900	1700	1760	1700 - 1760
337	S	970	1100	1050	1170	1050 – 1170
339	S	1570	1846	1630	1680	1630 - 1680
341	S	1400	1750	1630	1700	1630 - 1700
343	L	1300	1926	1670	1926	1670 - 1700
345	S	1650	1800	1650	1800	1650 - 1800
346	S	1200	1500	1200	1500	1200 - 1500
350	M	1080	1900	1740	1830	1740 - 1830
353	M	1550	1900	1740	1830	1740 - 1830
358	S	1080	1350	1080	1350	1080 - 1350
359	S	1300	1650	1300	1650	1300 - 1650
362	S	900	1500	1170	1350	1170 - 1350
363	S	1270	1500	1270	1500	1270 - 1500
364	S	1480	1830	1770	1840	1770 - 1830
376	S	1200	1500	1350	1500	1350 - 1500
377	S	1240	1500	1320	1400	1320 - 1400
384	S	1350	1500	1350	1500	1350 - 1500
385	M	1400	1900	1740	1830	1600 – 1700 (Creamware x1 intrusive?)
386	S	1580	1900	1580	1900	1580 - 1900
387	M	1480	1900	1600	1700	1600 - 1650
400	S	1400	1750	1480	1600	1480 - 1600
409	S	1270	1500	1270	1500	1270 - 1350
411	S	1350	1500	1350	1500	1350 - 1500

414	S	1240	1500	1270	1500	1270 - 1400
416	S	1480	1750	1600	1750	1600 - 1700
420	S	1580	1700	1580	1700	1580 - 1700
424	M	1450	1900	1680	1800	1680 - 1700
428	S	1480	1600	1480	1600	1480 – 1600 (Intrusive?)
431	S	1050	1500	1270	1500	1270 - 1350
436	S	1050	1350	1170	1350	1170 - 1200
445	M	1240	1900	1600	1700	1600 - 1700
446	S	1080	1200	1080	1200	1080 - 1200
447	S	1170	1350	1170	1350	1240 - 1350
448	S	1480	1600	1480	1600	1580 - 1650
450	S	1550	1700	1550	1700	1570 - 1700
455	S	1580	1700	1580	1700	Mid 17th century
457	S	1570	1846	1570	1846	1580 - 1680
459	S	1270	1500	1340	1500	1340 - 1500
460	S	1270	1800	1570	1800	1570 - 1650
461	S	1550	1840	1770	1840	1770 - 1840
462	S	1340	1450	1340	1450	1340 - 1450
463	S	1080	1400	1270	1350	1270 - 1350
467	S	1580	1700	1580	1700	1580 - 1700
470	S	1170	1350	1170	1350	1170 - 1350
472	S	1270	1846	1570	1846	1570 - 1650
476	S	1570	1846	1570	1846	1630 - 1700
479	S	1480	1600	1480	1600	1480 - 1600
481	M	1080	1350	1270	1350	1270 - 1350
484	S	1080	1200	1080	1200	1080 - 1200
489	S	1080	1700	1580	1700	1580 - 1700
491	M	1240	1700	1580	1700	1580 - 1700
496	S	1550	1700	1550	1700	1550 - 1700
506	S	1580	1700	1580	1700	1580 - 1700
517	S	1080	1500	1270	1500	1270 - 1350
563	S	1550	1700	1550	1700	1550 – 1700
581	S	1480	1600	1480	1600	1480 – 1600
584	S	1080	1200	1080	1200	1080 - 1200
587	S	1240	1400	1240	1400	1240 - 1300
596	S	1170	1350	1170	1350	1170 - 1350
597	S	1480	1900	1720	1780	1720 – 1780
598	S	1240	1400	1270	1400	1300 – 1400
607	S	1480	1650	1480	1650	1480 – 1650
613	S	1630	1700	1630	1700	1630 – 1700
615	S	1580	1900	1580	1900	1580 – 1700
621	S	1270	1500	1270	1500	1270 - 1500
622	S	1580	1900	1600	1700	1600 - 1700
628	S	1080	1350	1080	1350	1170 - 1350
631	S	1550	1700	1630	1680	M.17TH
632	S	1550	1700	1550	1700	1550 - 1700
637	S	1480	1650	1480	1650	1480 - 1650
641	S	1550	1846	1630	1680	1630 - 1680
642	S	1480	1700	1550	1700	1550 - 1610
644	S	1080	1700	1550	1700	1550 - 1700
645	S	1270	1500	1350	1500	1350 - 1500
649	S	1600	1700	1600	1700	1600 - 1700
651	S	1550	1700	1580	1700	1580 - 1700
652	S	1480	1650	1570	1650	1570 - 1650
685	S	1300	1846	1570	1846	1570 - 1650
704	S	1240	1500	1270	1500	1270 - 1400
708	S	1240	1400	1240	1400	1240 - 1400
717	S	1550	1846	1570	1846	1570 - 1700
722	S	1270	1500	1270	1500	1270 - 1500

724	S	1340	1500	1340	1500	1340 - 1500
725	S	1270	1500	1280	1350	1280 - 1350
727	S	1270	1500	1270	1500	1270 - 1500
736	S	900	1900	1580	1900	1580 - 1650
742	S	1270	1500	1270	1500	1270 - 1500
747	S	1580	1800	1580	1800	1580 - 1800
751	S	1270	1500	1270	1500	1350 - 1500
763	S	1080	1350	1080	1200	1080 - 1200
779	S	1480	1600	1480	1600	1480 - 1600
781	S	1570	1846	1570	1846	1570 - 1700
782	S	1570	1700	1570	1650	1570 - 1650
786	S	1480	1800	1580	1800	1580 - 1650
788	S	1480	1650	1480	1650	Mid 16th century
792	S	1270	1500	1270	1500	1270 - 1500
794	S	1580	1800	1580	1800	1580 - 1800
801	S	1250	1500	1270	1500	1270 - 1500
809	S	1570	1846	1580	1700	1580 - 1700
811	S	1350	1500	1350	1500	1350 - 1500
812	S	1280	1350	1280	1350	1280 - 1350
813	S	900	1550	1480	1550	1480 - 1550
814	S	1080	1450	1340	1450	1340 - 1350
815	S	1000	1500	1350	1500	1350 - 1500
838	S	1300	1600	1480	1600	1480 - 1500
839	S	1480	1600	1480	1600	1480 - 1600
843	S	1270	1500	1270	1500	1270 - 1500
879	S	1350	1500	1350	1500	1350 - 1500
881	S	1580	1700	1580	1700	1580 - 1700
890	S	1270	1600	1480	1600	1480 - 1550
891	S	1480	1550	1480	1550	1480 - 1550
899	S	1480	1900	1580	1700	1580 - 1600
911	S	1270	1500	1270	1500	1270 - 1500
912	S	900	1500	900	1500	1200 - 1500
932	S	1270	1500	1270	1500	1270 - 1500
934	S	1080	1600	1480	1600	1480 - 1500
937	M	1240	1700	1550	1700	1550 - 1610
938	S	1270	1500	1350	1500	1350 - 1500
942	S	1080	1500	1270	1500	1270 - 1350
944	S	1400	1750	1630	1700	1630 - 1650
948	S	1580	1900	1580	1900	1700 - 1900
954	S	1480	1600	1480	1600	1480 - 1600
957	S	1240	1400	1240	1400	1240 - 1400
960	S	1270	1500	1270	1500	1270 - 1350
965	S	1240	1500	1270	1500	1270 - 1400
967	S	1550	1926	1770	1840	1770 - 1830
975	S	1240	1500	1380	1500	1380 - 1450
976	S	1200	1550	1340	1550	1340 - 1500
977	S	1270	1500	1270	1500	1270 - 1500
979	S	1270	1500	1270	1500	1270 - 1500
984	S	1270	1500	1270	1500	1270 - 1500
989	S	1550	1900	1800	1900	1835 - 1840
990	S	1270	1500	1270	1500	1270 - 1500
994	S	1270	1600	1480	1600	1480 - 1600
996	S	1270	1500	1270	1500	1270 - 1500
1003	S	1050	1400	1240	1400	1240 - 1400
1007	S	1340	1500	1340	1500	1340 - 1500
1011	S	1550	1900	1550	1900	1550 - 1900
1013	S	1270	1650	1340	1500	1340 - 1500
1022	S	1240	1500	1340	1450	1340 - 1400
1024	S	1080	1500	1340	1500	1340 - 1350
1029	S	1270	1500	1350	1500	1350 - 1500

1032	S	1240	1400	1240	1400	1240 - 1400
1035	S	1270	1500	1270	1500	1270 - 1500
1048	S	1270	1500	1270	1500	1270 - 1500
1053	S	1080	1350	1080	1350	1200 - 1350
1054	S	1080	1500	1350	1500	1350 - 1500
1059	S	1080	1400	1270	1400	1270 - 1350
1066	S	1240	1400	1240	1400	1240 - 1400
1073	S	1240	1400	1240	1400	1240 - 1400
1074	S	1080	1500	1270	1500	1270 - 1350
1087	S	1240	1300	1240	1300	1240 - 1300
1093	S	1080	1500	1270	1500	1270 - 1350
1099	S	900	1500	1280	1350	1280 - 1350
1102	S	1240	1500	1270	1500	1270 - 1400
1103	S	1080	1350	1080	1350	1240 - 1350
1109	S	1270	1500	1270	1500	1270 - 1500
1123	S	1080	1500	1350	1500	1350 - 1450
1134	S	1270	1500	1270	1500	1270 - 1500
1151	S	1080	1500	1270	1500	1270 - 1300
1152	S	1270	1500	1270	1500	1270 - 1500
1154	S	1080	1650	1280	1350	1280 - 1350
1156	S	1270	1500	1270	1500	1270 - 1500
1159	S	1270	1500	1270	1500	1270 - 1500
1162	S	1270	1500	1270	1500	1270 - 1500
1167	S	1810	1840	1810	1840	1810 - 1840
1179	S	1350	1500	1350	1500	1350 - 1500
1194	S	1270	1500	1270	1500	1270 - 1500
1201	S	1050	1600	1480	1600	1050 – 1150 (x1 PMRE intrusive?)
1209	S	1080	1350	1080	1350	1240 - 1350
1211	S	1270	1500	1350	1500	1350 - 1500
1215	S	1270	1500	1270	1500	1270 - 1500
1224	S	900	1500	1350	1500	1350 - 1400
1271	S	900	1820	1400	1820	1600 - 1800
1273	S	1080	1610	1480	1610	1480 - 1610
1288	S	1240	1500	1340	1450	1340 - 1400
1297	S	1050	1200	1080	1200	1080 - 1200
1318	S	1000	1150	1000	1150	1000 - 1150
1329	S	1170	1500	1270	1500	1270 – 1350
1332	S	1080	1350	1080	1350	1080 - 1350
1361	S	1270	1500	1340	1450	1340 - 1450
1379	S	1350	1500	1350	1500	1350 - 1500
1388	S	900	1500	900	1500	1100 - 1500
1511	S	1580	1900	1580	1900	1580 - 1900
1513	S	1550	1900	1580	1900	18th century
1515	S	1570	1846	1630	1800	1630 - 1800
1526	S	1550	1900	1770	1840	Late 18th century
1528	S	1580	1900	1780	1900	1780 - 1840
1535	S	1580	1900	1580	1900	1580 - 1900

Table 6: Dating table. Size: S = Small (1-30 sherds), M = Medium (31-100 sherds), L = Large (100+ sherds), VL = Very large (multiple boxes).

Appendix 5: Clay Tobacco Pipe Assessment

Chris Jarrett

Introduction

A small sized assemblage of clay tobacco pipes was recovered from the site (nine boxes). Most fragments are in a good condition, indicating the material had been deposited soon after breakage or discard; although elements of some groups of tobacco pipes contained quantities of residual material. Clay tobacco pipes occur in 55 contexts, as mostly small (under 30 fragments), four medium sized (31-100 fragments) and four large groups (more than 100 fragments).

All the pipe clay tobacco pipes (1586 fragments, of which 145 are unstratified) were recorded in a database format and classified by Atkinson and Oswald's (1969) typology (AO) and 18th-century examples are by Oswald's (1975) typology and prefixed OS. Further additions to the former typologies or redating of the types are according to Higgins (2004). All decorated and maker marked pipes were given a unique registered finds number. The pipes are further coded by decoration and quantified by fragment count. The degree of milling on 17th-century examples has been noted and recorded in quarters (see Table 1), besides their quality of finish. The tobacco pipes are discussed by their types and distribution.

The Clay Tobacco Pipe Types

The clay tobacco pipe assemblage from the site consists of 667 bowls, 898 stems and 21 mouth parts. The clay tobacco pipe bowls range in date between 1610 and 1910. There are also fragments from eight bowls that have not been classified to type and were given a broad date range where possible.

The degree of milling on the 17th-century bowls is shown in Table 1. This shows that the majority of the bowls have three quarters milling of the rim. Amongst the 1610-1640 dated bowls, the AO5 shape is most frequent and these have notably more examples (seventeen/76%) with full milling of the rim and probably reflect that clay tobacco pipes dating towards the beginning of the industry were a better made product aimed at those who could afford to smoke tobacco. The mid 17th-century dated pipe shapes have mostly three quarters milling of the bowl rim and coincide when tobacco smoking was more affordable, so the bowls were manufactured more rapidly. Generally, only 22-27% of the 1640-1660 and 10-17% of the 1660-1680 bowls have full milling of the rim, indicating possibly that better quality pipes were less prevalent on the study area. At the end of the 17th century the practice of milling bowl rims was going out of fashion and ultimately ceased. This trend is seen in the assemblage where 49-59% of the bowl types have no milling, 20% of the AO20 and AO22 bowls have only a quarter milling or cursory knife mark on the back of the bowl and only 2-3% of those bowl types have full milling of the rim.

Bowl type	Date Range	No milling	1/4	half	3/4	Full	Damaged rims	Total
AO4	1610–1640	1		1	3	1		6
AO5	1610–1640	1			2	13	1	17
AO6	1610–1640				2			2
AO7	1610–1640					1		1
AO9	1640–1660		2		7	4	2	15
AO10	1640–1660	11	1	2	16	11	8	49
AO11	1640–1670	1	2	1	1	2	1	8
AO12	1640–1670				5			5
AO13	1660–1680	2	3	5	12	5	3	30
AO15	1660–1680	9	25	15	59	21	30	159
AO18	1660–1680	2	16	7	36	9	16	86
AO19	1680–1710		1				1	2
AO20	1680–1710	21	8	4	3	1	3	40
AO21	1680–1710	10					6	17
AO22	1680–1710	84	34	7	8	4	34	171
Total		142	92	42	154	72	105	608

Table 1: HLY12: Milling index of 17th-century bowls

Table 2 shows the degree to which the bowls were burnished or finished. Overall the bowls tend to have an average finish or level of burnishing throughout the 17th and 18th century, although the early and middle 18th-century heeled bowls (the OS10 and OS12 types) tended to have more of a better quality of finish. The assemblage of clay tobacco pipes indicate that generally the pipes were derived from lower socio-economic groups rather than middling or higher ones, according to level of finish of the bowls.

Bowl type	Date range	Not perceived	Poor	Average	Good	Fine	Total
Unknown		41	1	18		7	67
AO4	1610–1640			4	2		6
AO5	1610–1640			11	4	2	17
AO6	1610–1640				1	1	2
AO7	1610–1640			1			1
AO9	1640–1660		3	10	2		15
AO10	1640–1660		1	38	10		49
AO11	1640–1670		2	3	2	1	8
AO12	1640–1670			4		1	5
AO13	1660–1680	4	1	19	3	3	30
AO15	1660–1680	4	12	128	11	4	159
AO18	1660–1680		11	71	3	1	86
AO19	1680–1710			1	1		2
AO20	1680–1710		4	28	6	2	40
AO21	1680–1710		2	13	2		17
AO22	1680–1710		6	107	56	2	171
OS10	1700–1740	28		36	33	2	99
OS11	1730–1760				1		1
OS12	1730–1780	4		1	5	1	11
AO26	1730–1800			1			1
OS23	1760–1800	1		1			2
AO27T	1760–1845	2		1	1		4

Bowl type	Date range	Not perceived	Poor	Average	Good	Fine	Total
AO27	1770–1845	2		5			7
AO28	1820–1860	2		1			3
AO30	1840–1910	1		1			2
Total		89	43	503	143	27	805

Table 2: HLY12: burnishing and finishing index of the clay tobacco pipes

The range of clay tobacco pipe bowl shapes and their quantification are shown in Table 3. The earliest bowl types dated *c.* 1580-1610 are absent in the assemblage and these are very rare archaeological finds. During the 17th century heeled bowls (types AO5 and AO10) are more frequent over the period 1610-1660, while during the 1660-1680 timeframe the spurred AO15 bowl was more frequent, the latter matching a distribution pattern seen in the City and Southwark. The heeled AO18 bowl appears to have been preferred by tobacco pipe smokers in east London (Jarrett in prep).

Bowl type	Description	Date Range	No. of bowls
AO4	Angled heel, rounded bowl profile	1610–1640	6
AO5	Heel, rounded bowl profile	1610–1640	17
AO6	Spur, rounded bowl profile	1610–1640	2
AO7	Spur, humped back, rounded front profile (?variants)	1610–1640	1
AO10	Heel, rounded bowl profile	1640–1660	49
AO9	Spur, rounded bowl profile	1640–1660	15
AO11	Heart-shaped in plan heel, squat rounded profile	1640–1670	8
AO12	Heart-shaped in plan heel, tall rounded profile	1640–1670	5
AO13	Heel, rounded bowl profile	1660–1680	30
AO15	Spur, rounded bowl profile	1660–1680	159
AO18	Heel, straight-sided or more often a barrel-shaped bowl profile	1660–1680	86
AO19	Spur, tall rounded bowl profile	1680–1710	2
AO20	Heel, tall rounded bowl profile	1680–1710	40
AO21	Heel, tall with a straight back and a rounded front bowl profile	1680–1710	17
AO22	Heel, tall straight-sided bowl profile	1680–1710	171
OS10	Heel, tall with a more upright straight back and a rounded front bowl profile, thick stems	1700–1740	99
OS11	Heel, tall with a large more upright, straight back and a rounded front bowl profile, thick to thin stems	1730–1760	1
OS12	Heel, tall with a more upright, straight back and a rounded front bowl profile, thin stems	1730–1780	11
AO26	Generic spurred 18th century bowl fragments	1730–1800	1
OS23	Spurred bowl with a straight back and founded front	1760–1800	2
AO27T	Square heeled, tall, rounded front, straight back	1760–1845	4
AO27	Square heeled, squat, rounded front, straight back	1770–1845	7
AO28	Spurred, rounded front, straight back	1820–1860	3

Bowl type	Description	Date Range	No. of bowls
AO30	Without a heel or spur and generally a rounded shape	1840–1910	2

Table 3: HLY12: the range of bowl types and their quantification

The late 17th century saw an attempt at uniformity in clay tobacco pipe shape production across London and the AO22 shape is encountered more frequently on archaeological sites in most areas of London, as it is here. From *c*. 1700 the London clay tobacco pipe industry became standardised with the introduction of the AO25/OS10 shape, with the choice of spurred pipes (AO26/OS22 shape) being introduced around *c*. 1730. The late 18th- and 19th-century bowls are typically of those types used in other areas of London.

The profiles of the bowl shapes used in Atkinson and Oswald's (1969) typology have been taken as the norm. The assemblage displays a number of variant bowls shapes within many of the 17th-century types (see Table 4) and this may be a reflection of the local clay tobacco pipe industry. The AO13 and AO18 shapes were more problematic in differentiating, especially as the AO18 shape here is defined as more of an angled barrel-shape, rather than straight-sided. A small number of the AO13 variant bowls (ten examples) have a much more rounded barrel shape that seemed more appropriate to assign to this type rather than that of the AO18. Some of the variant bowls may be from a non-local source and could have been the property of travellers from counties north of London travelling on the major road adjacent to the site. The AO15 bowl made in a sandy fabric with moulded mulberry decoration (context [350], SF 198) and bowls with this type of decoration were widely made across England, although the distribution is largely confined to the Midlands and East Anglia and the South Coast (Oswald 1975, 90). Additionally a stem fragment recovered from context [233] (SF 186] has diamond stamp decoration that is similar to examples made in Chester (See Table 4: Rutter and Davey 1980, figs. 52 and 62).

Bowl type	Date range	Initials	Context: registered find no.	No. of bowls/frags.	Comments
			[200] SF 169	2	Two fragments of stems from a coiled pipe, one of which forms a loop. 19th century
			[233] SF 186	1	Heel with an ?oval section and part of an incuse circular stamp in relief containing leaves. Thick stem oval in profile (maximum width 13mm) with a wide bore. On the top of the stem are nine diamond shaped stamps in a diamond pattern and around the stem is a milled line with the diamond stamps. Possibly from a Chester source
			0, Bay 4: SF 223	1	AO27 or AO28. The rim is mostly missing as is the heel or spur. Masonic symbols. Leaf and grass border on the front.

Bowl type	Date range	Initials	Context: registered find no.	No. of bowls/frags.	Comments
					On the stem are moulded leaf borders on the top and bottom of the stem. The leaves are flattened ovals, on the left side of the stem 'B...IR...'
AO5	1610–1640		[424]: SF 206	1	Short variant bowl. Small circular stamp(2mm) on the heel featuring a cross in relief
AO5	1610–1640		[459]: SF 208	1	Variant bowl shape. Wide heel with a stamp of a wheel with eight spokes and pellets. An AO7 shape except that the bowl is heeled
AO10	1640–1660		0: SF 2	1	T1. S. On the heel is a circular stamp with in relief dots found between eight spokes. Too poorly impressed to define better.
AO10	1640–1660		[339]: SF 204	1	Biconical variant shape. The underside of the heel has a simple, possibly improvised, circular incuse stamp with six indistinct segments
AO15	1660–1680		[350]: SF 198	1	Poorly milled rim. A moulded mulberry on each side of the heel. Yellow surfaces. Fine sandy fabric with sparse rose quartzes. Non-local
AO18	1660–1680	I P	0,105/215: SF 241	1	Barrel shaped variant with an angled stem, on top of which is a small circular incuse stamp with 'I P' and a tobacco plant between the letters. Below the letters are ‘cusps’. Possibly a non-local pipe, otherwise a local pipe maker is John Preston, 1667, Finsbury plague list (Oswald 1975, 173)
AO20	1680–1710	S M	[350]: SF 197	1	On the underside of the heel is a small circular stamp with the initials 'SM' in relief. Possibly a non-local pipe maker, otherwise Samuel Mathews, 1709, St Giles Cripplegate Without is known (Woollard 2006, 40)
AO21	1680–1710	I G	[233]: SF 185	1	Variant slender bowl. An incuse I G stamp occurs on the lower back of the bowl. Possibly a non-local pipe maker, otherwise five contemporaneous pipe makers are known, one of which was working in East London (Oswald 1975, 137)
AO22	1680–1710	? ?	[350]: SF 196	1	Uncertain marks/initials on the heel

Bowl type	Date range	Initials	Context: registered find no.	No. of bowls/frags.	Comments
OS10	1700–1740		[213]: SF 179	1	A crown above a flower on each side of the heel
OS10	1700–1740	.	[313]: SF 191	1	A small dot on the left side of the heel. The rim is missing
OS10	1700–1740		0: Bay 7: SF 231, SF 233, SF 234, [313]: SF 200	1	Crowns on each side of the heel
OS10	1700–1740		0, Bay 7: SF 235	1	Daisy type flower on each side of the heel, the right side is smudged
OS10	1700–1740	?	[313]: SF 188	1	A flower on the left side of the heel, uncertain/poorly moulded mark on the right side
OS10	1700–1740	. .	0, 105/215: SF 218, SF 220, 0/ Bay 7: SF 230, SF 232 [313]: SF 192, SF 201, SF 202, [334]: SF 203	9	Small dots on each side of the heel.
OS10	1700–1740	.	0, 105/215: SF 237, [1526], SF 210	2	A raised dot on the right side of the heel
OS10	1700–1740	I ?	213]: SF 174	1	probably I R
OS10	1700–1740	I ?	[213]: SF 184	1	the last initial is smudged and could be a R or possibly a B
OS10	1700–1740	? ?	[313]: SF 189, SF 193	2	Crowned heel initials. An uncertain mark on the left side of the heel, uncertain/poorly moulded mark on the right side. left side of rim missing
OS10	1700–1740	? ?	0, Bay 4: SF 226, [313]: SF 190	2	Illegible marks
OS10	1700–1740	? ?	[334]: SF 195	1	Illegible marks, possibly a W or crown and a P or R
OS10	1700–1740		0, Bay 4: SF 215	1	A ?*fleur de lis* on each side of the heel
OS10	1700	I ?	0,105/215: SF 242	1	Short heel. I and C/G or O
OS10	1700–17400	I B	0, 105/215: SF 217, SF 222, [343], SF	3	There were a large number of contemporaneous London pipe makers who could have made this bowl, although John Bayley, 1719-31, St Botolphs, Bishopsgate was close by (Oswald 1975, 131)
OS10	1700–1740	T D	[353]: SF 199	1	Possibly made by Thomas Davis, 1710, or Thomas Dormer, 1730, both St Giles Cripplegate Without (Woollard 2006, 33–4)
OS10	1700–1740	I H	0.105/215, SF 219	1	A large number of possible London pipe makers could have made this bowl (Hammond 2004, 18; Woollard 2006, 36–38)
OS10	1700–1740	I R	0, Bay 7, SF 227, SF 238, [213], SF 175, 176, SF 178, SF 182,	9	Possibly made by John Reynolds (2), 1718–30 , St George in the East (Oswald

Bowl type	Date range	Initials	Context: registered find no.	No. of bowls/frags.	Comments
			SF 183, [313], SF 187, SF 194		1975, 144) as well as several others working in St Giles Cripplegate Without and Old Street, Islington (Woollard 2006, 43–44)
OS10	1700–1740	? W	[213]: SF 177	1	The left side of the heel is damaged. The W is horizontal with the heel
OS10	1700–1740	?T W	0, Bay 4: SF 216	1	See below for possible pipe makers
OS10	1700–1740	I W	0, Bay 7: SF 228, SF 229	2	A number of London pipe makers, including several working in nearby parishes could have made these bowls (Oswald 1975, 148)
OS10	1700–1740	T W	0, 105/215: SF 221	1	Possibly made by Thomas Waldron, 1729–31 (Hammond 2004, 22; Woollard 2006, 48)
OS10	1700–1740	R W	0, Bay 7: SF 239	1	The R is not very clear.
OS11	1730–1760	. .	0, Bay 7: SF 236	1	A large dot on each side of the heel
OS12	1730	.	[208], SF 172	1	A dot on the left side of the heel
OS12	1730–1780	H D	[208], SF 171	1	Crowns above the initials. Possibly made by Henry Thomas Doubtfire (2 and ?3), 1705–87, St Giles Cripplegate Without and Old Street, Islington, although many contemporaneous pipe makers with these initials are known (Woollard 2006, 34)
OS12	1730–1780	W W	0, Bay 4: SF 211,	1	Hanoverian coat of arms, slightly worn mould. Possibly made by William Wilder 1 and 2, 1717–88, Whitecross St., although many other pipe makers could have made the bowl (Oswald 1975, 149; Woollard 2006, 49)
OS12	1730–1780	W W	[213]: SF 173	1	See above
OS23	1730–1780	R B	[208]: SF 170	1	Hanoverian coat of arms. The bowl could have been made by a number of pipe makers, although Richard Bryant, 1733–40 has been previously suggested (Atkinson and Oswald 1969, 197)
OS23	1730–1780	W D	[200]: SF 167	1	Possibly made by William Delap, 1730 (Oswald 1975, 136)
AO27T	1760–1845	W G	0, T2: SF 3	1	Possibly made by William Gibbs, 1761/62–69 (Woollard 2006, 35)
AO27T	1760–1845	I H	[200], SF 165	1	The back of the bowl has a small incuse, oval circular

Bowl type	Date range	Initials	Context: registered find no.	No. of bowls/frags.	Comments
					stamp containing the London shield and the pipe maker's name 'J. HURST' on the top and 'COW CROSS' below. Probably made by John Hurst, 1808-49, Smithfield (Oswald 1975, 138)
AO27T	1760–1845	L J	[200]: SF 164	1	L J on the heel, post c. 1830. On the back of the bowl is a circular stamp containing the London shield and 'JONES' written around the lower half of the shield. The pipe makers is uncertain
AO27T	1760–1845	T R	0, TR3: SF4	1	Possibly made by Thomas Ruscoe, 1799–1807, Limehouse (Oswald 1975, 144)
AO27	1770–1845	R B	[359]: SF 207	1	The B is upside down. Possibly made by Robert Baddeley, 1805 (Oswald 1975, 132)
AO27	1770–1845	I I	[1528]: SF 214	1	A number of pipe makers could have made this bowl, although John Jarman, 1806, Bishopsgate was local (Hammond 2004, 19)
AO27	1770–1845	W T	[1528]: SF 212, SF 213	2	Leaf and grass border on the front of the bowl. the bowl could have been made by several pipe makers, although William Thornton, 1823–54, Shoreditch was local (Oswald 1975, 147)
AO27	1770–1845	H W	[200]: SF 166	1	Possibly made by Henry Wickstead, 1836, Theobalds Rd (Oswald 1975, 148)
AO27	1770–1845	W W	[200]: SF 168	1	Moulded fluting of the same size. There are a number of London pipe makers who could have made this bowl, one is local: William Walker, 1837-60, Spitalfields (Oswald 1975 (Oswald 1975, 149)
AO28	1820–1860	A C	0, Bay 7: SF 181	1	Small raised circles on the heel. The back of the bowl has a circular incuse stamp containing a shield and written around it 'AA CRITCHFIELD LONDON'. Alfred C. Critchfield, 1861-9, Halfmoon St, Mile End (Oswald 1975, 133)
AO28	1820–1860	J H	[989]: SF 209	1	Leaf borders. A large number of London pipe makers could have made this bowl, however James Hilliard (1), 1850–68, Smithfield and James Hayslem, 1852–4, Shoreditch

Bowl type	Date range	Initials	Context: registered find no.	No. of bowls/frags.	Comments
					were local (Oswald 1975, 138)
AO28	1820–1860	?T T	0, Bay 7: SF 224	1	Leaf borders. Probably made by Thomas Taylor (1), 1835–77, Shoreditch (Oswald 1975, 147)
AO30	1840–1910		0, Bay 7: SF 180, SF 225	2	Eight large, round ended flutes around the bowl, the back and front ones have leaf borders, on the sides is a central plain flute t which is flanked by flutes with denticulated leaves

Table 4: HLY12: catalogue of clay tobacco pipes with registered find numbers

Distribution

The tobacco pipes are found in Phases 3.4-8 and their distribution is shown in Table 5. Contexts [4] to [55] were recovered from the evaluation work and not phased.

Context	Phase	No. of	Assemblage size	Context ED	Context LD	Spot date
4	-	8	S	1580	1910	1740–1910
5	-	2	S	1580	1910	1730–1910
7	-	1	S	1580	1910	1580–1740
8	-	1	S	1640	1660	1640–1660
9	-	1	S	1640	1670	1640–1670
55	-	20	S	1640	1660	1640–1660
200	8	8	S	1780	1845	1800–1845
201	8	1	S	1640	1660	1640–1660
208	7	5	S	1760	1800	1760–1780
213	7	11	S	1580	1910	1580–1740
213	7	31	M	1700	1740	1700–1740
220	8	5	S	1580	1910	1730–1910
226	8	5	S	1660	1680	1660–1680
227	5	3	S	1660	1680	1660–1680
228	5	1	S	1660	1680	1660–1680
230	6	3	S	1640	1660	1640–1660
233	6	349	L	1680	1710	1680–1700
238	8	2	S	1580	1910	1730–1910
239	5	7	S	1640	1660	1640–1660
246	5	2	S	1640	1660	1640–1660
266	6	7	S	1640	1680	1640–1680
273	5	2	S	1580	1910	1580–1740
286	6	15	S	1680	1710	1680–1710
303	8	2	S	1660	1680	1660–1680
311	8	2	S	1580	1910	1730–1910

Context	Phase	No. of	Assemblage size	Context ED	Context LD	Spot date
313	7	363	L	1700	1740	1700–1740
325	8	4	S	1580	1910	1580–1740
334	4	33	M	1700	1740	1700–1740
339	7	14	S	1640	1660	1640–1660
341	6	17	S	1660	1680	1660–1680
343	6	60	M	1700	1740	1700–1710
345	6	19	S	1660	1680	1660–1680
350	7	154	L	1700	1740	1700–1710
353	7	159	L	1700	1740	1700–1710/40
359	3.4	1	S	1770	1845	1770–1845
384	5	2	S	1680	1740	1580–1740
387	5	13	S	1610	1640	1610–1640
424	6	19	S	1660	1680	1660–1680
448	6	3	S	1640	1660	1640–1660
450	6	1	S	1680	1740	1580–1740
457	6	1	S	1580	1740	1580–1740
459	5	1	S	1610	1640	1610–1640
476	6	2	S	1580	1740	1580–1740
500	5	1	S	1580	1740	1580–1740
561	5	1	S	1610	1640	1610–1640
597	7	2	S	1660	1680	1660–1670
613	5	8	S	1660	1680	1660–1670
622	5	20	S	1660	1680	1660–1680
631	5	1	S	1680	1710	1680–1710
637	5	1	S	1640	1660	1640–1660
641	5	6	S	1580	1740	1580–1740
643	5	1	S	1580	1740	1580–1740
685	6	1	S	1640	1660	1640–1660
686	5	1	S	1580	1740	1580–1740
714	4	2	S	1610	1640	1610–1640
717	7	8	S	1830	1780	1730–1780
781	5	1	S	1610	1660	1610–1640
782	5	2	S	1580	1740	1580–1740
794	5	1	S	1580	1740	1580–1740
989	8	3	S	1820	1860	1820–1860
1513	7	1	M	1700	1740	1700–1740
1515	7	1	S	1580	1910	1580–1740
1516	7	1	S	1580	1910	1730–1910
1526	7	10	S	1730	1780	1730–1780
1528	8	8	S	1770	1845	1800–1845

Table 5: HLY12. Distribution of the tobacco pipes showing the number of fragments, the phase, the size of the assemblage, the latest clay tobacco pipe bowl (Context ED and LD), the and a context considered date (spot date) for each context clay tobacco pipes occurred in.

Significance of the assemblage

The clay tobacco pipes are of some significance at a local level and it is assumed that the assemblage is derived mostly from sources on the site. However, the large groups of clay tobacco pipes recovered from contexts [233], [313], [350] and [353] probably represent mostly residual material dumped on the site from nearby sources as these contexts additionally contain coins of a later date (see Gaimster, Appendix 7). The bowl types present on the site fit within the typology for London, although a number of 17th century items appear to be from non-local sources, such as the AO15 bowl with the moulded mulberry decoration (context [350]:SF 198). The assemblage also informs upon the local clay tobacco pipe industry as several of the maker marked pipes can be equated to pipe makers working in Bishopsgate, Shoreditch and the post-medieval City suburbs to the east and north of the site. Clay tobacco pipe assemblages have been recovered from other local excavations, such as at 103-106 Shoreditch High Street (Jarrett 2013) and 117-121 Bishopsgate (Jarrett 2016).

Potential

The material has the potential to date the contexts in which they were found and to provide a sequence for them. The assemblage also has the potential to further inform upon the local clay tobacco pipe industry or infer upon what was being marketed to the area. A number of clay tobacco pipe bowls merit illustration.

Recommendations for further work

A publication report is recommended for the clay tobacco pipes, supplemented by eighteen bowl illustrations. A number of the non-local bowls will require research as to where they were made.

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Appendix 6: Glass Assessment

Chris Jarrett

Introduction

A small sized assemblage of glass was recovered from the site (three boxes). The glass dates from the Roman, medieval and particularly the post-medieval period. Very few fragments show evidence for abrasion or lamination and were probably deposited fairly rapidly after breakage. However, the medieval/early post-medieval natural (high-potash) glass is heavily weathered and recorded in a mainly crystalline state owing to the burial conditions. The post-medieval natural (and to a lesser extent) the soda glass is also naturally weathered. The material is in a fragmentary state and no items are intact although forms are recognisable. The glass was quantified by fragment count, estimated number of vessels (ENVs) and weight. Only the dimensions of the complete diagnostic parts of vessels, e.g. rims and bases, were measured. The glass was recovered from 40 contexts and individual deposits produced mostly small groups (fewer than 30 fragments), although four medium (less than 100 fragments) sized groups are noted.

All of the glass (123 fragments, 57 ENV, 3.205kg, of which 23 fragments, 19 ENV, 634g is unstratified) was recorded in a database format, by type colour and form. The glass is discussed by the forms and its distribution.

The glass can be quantified as belonging to the following periods:

Roman: 1 fragment, 1 ENV, 3g

Medieval/early post-medieval: 68 fragments, 6 ENV, 210g

Post-medieval:264 fragments, 129 ENV, 5.696kg

The glass forms

The vessels types can be broken down as follows according to their period:

Roman

Vessel glass: 1 fragment, 1 ENV, 3g

Medieval/early post-medieval

Vessel: 2 fragment, 2 ENV, 13g

Window pane: 1 fragment, 1 ENV, 1g

Window quarries: 65 fragment, ?3 ENV, 196g

Post-medieval

Beaker, cylindrical: 3 fragments, 2 ENV, 31g

Beaker, pedestal: 1 fragment, 1 ENV, 15g

Bottle (generic fragments): 2 fragments, 2 ENV, 20g

Bottle or phial: 3 fragments, 1 ENV, 1g

Bottle, case: 8 fragments, 5 ENV, 132g

Bottle, octagonal section: 1 fragment, 1 ENV, 37g

Bottle, oval-section: 2 fragments, 1 ENV, 135g

Bottle, oval-section, flat: 3 fragment, 1 ENV, 113g

?Demijohn: 2 fragments, 1 ENV, 139g

English wine bottle: 88 fragments, 22 ENV, 1.543kg

English wine bottle, cylindrical: 5 fragments, 2 ENV, 111g

English wine bottle, cylindrical, early: 4 fragments, 3 ENV, 952g

English wine bottle, cylindrical, late: 5 fragments, 5 ENV, 451g

English wine bottle, globe and shaft: 19 fragments, 7 ENV, 1.098kg

English wine bottle, onion-type, 2 fragments, 2 ENV, 153g

Ink well: 1 fragment, 1 ENV, 36g

?Jug: 1 fragment, 1 ENV, 69g

Phial: 3 fragments, 3 ENV, 21g

Phial, conical: 1 fragment, 1 ENV, 5g

Phial, cylindrical: 1 fragment, 1 ENV, 12g

Phial, globular: 1 fragment, 1 ENV, 5g

Tumbler: 1 fragment, 1 ENV, 102g

Vessel: 12 fragments, 11 ENV, 31g

Window pane: 75 fragments, 34 ENV, 267g

Window quarry: 12 fragments, 9 ENV, 117g

Vessel glass: 12 fragments, 11 ENV, 28g

Unknown: 9 fragments, 8 ENV, 41g

Wine glass: 2 fragments, 1 ENV, 22g

Roman

The single fragment of diagnostic Roman glass consists of an applied, round ended handle terminal made in green-blue soda/natron glass and was recovered from context [414].

Medieval/early post-medieval

All of the medieval or early post-medieval glass as previously stated was made in natural (forest/high pot ash) glass and is in a highly weathered condition, often appearing white and degraded to a crystalline state. Occasionally the core of the section of the vessels survives as a light green or clear colour.

Vessel glass

There are two fragments of vessels made in natural glass assigned to this period. The first item survives as a convex base made in clear natural glass and possibly belongs to a bottle and this item was found in context [1245], while a second vessel wall part has a cylindrical section and was found in context [385].

Window glass

All of the window glass from this period appears to be cylinder made, although the state of the surfaces makes the manufacturing technique difficult to be certain.

Window pane

The one thin walled fragment of clear glass was found in context [343]

Window quarries

This material was found only in two contexts. The second largest quantity (28 fragments, ?2 ENV, 80g was found in deposit [385] and different shaped quarries could be identified. The material was too fragmentary to quantify properly at this stage and determine its characteristics, although decorative elements could be identified that included scroll motifs. Possible putty or another securing material could be detected on the edges of some of the quarry fragments. Context [460] produced the largest quantity of window glass for this period (36 fragments, 107g) although it was in an extremely fragmentary and poor state and it was not possible to determine if the material was decorated. One fragment appears to have mortar stuck to one surface and may have been the securing medium to

the window cames. The rounded edge of another fragment of green-tinted quarry glass was found in context [288] and has possibly painted and additionally has a mortar-like deposit on one edge.

Post-medieval

The post-medieval vessel forms are discussed by function

Alcohol consumption

Beaker, cylindrical-type

There are two vessels of this type dated *c*. 1575-1650/75 (Willmott 2002) and are made in clear soda glass. One vessel survives solely as a rim with plain horizontal trails (context [339]). The other two examples survive as bases with splayed bases and conical kicks, one vessel has a horizontal trail, which like the foot, is embellished with notching (context [350]), while a second, optically-blown vessel has vertical ribbing decoration and a notched base edge (context [387]). Additionally there is the body sherd of a third vessel (context [228]) decorated with ribs and horizontal threads and this style of decoration is dated *c*. 1600-50 (Willmott 2002).

Pedestal beaker

A single, unstratified, optically blown vessel of this type survives as a base with a kicked underside and the exterior surface has vertical facets which relate to the overall decoration, such as possible vertical ribs. Beakers of this type are dated *c*. 1550-1650 (Willmott 2002).

Other drinking vessel glass fragments

Two other fragments of optically blown drinking vessels are recorded, made in clear soda glass and dated *c*. 1550-1650 (Willmott 2002). A small fragment of a drinking vessel has wrythen decoration (context [213]), while the conical kick from a base shows evidence for external horizontal thin-'cut trails' (context [387]). The latter deposit also produced a plain wall sherd from a cylindrical form.

Tumbler

The base of a moulded tumbler was found in context [989] and the underside of the vessel has a moulded eight-petalled 'flower' motif, while the wall has sixteen, rounded section vertical ribs/flutes. The item is dated from the mid 19th century onwards.

Wine glass

A single wine glass made in clear soda glass and was found in context [213] and it consists of a rim fragment with a flaring/funnel shaped bowl and a baluster-type stem knop with a central elongated air bubble. The item is dated to the 18th century.

Alcohol storage

This category is represented by two types of vessels: case bottles and wine bottles

Case bottles

There are four examples of this optically blown, square-section vessel type dated from *c*. 1550 onwards and survive mostly as wall fragments with rounded, right-angled corners. Two vessels occur in olive-green natural glass (contexts [226] and [233]), the latter present as a crudely finished, asymmetrical everted rim attached to a short conical neck and rounded shoulder. Other fragments of case bottles occur in olive-green high-lime low-alkali glass (HLLA) and clear soda glass (both found in context [226]) while an example is present in blue-grey tinted soda glass (context [387]).

Wine bottles

A large number of generic fragments of wine bottles, made mostly in olive-green natural glass are recorded. An example with a rim finish dated *c*. 1680-90 (Dumbrell 1983, 38) occurred in context [226].

English wine bottle, globe and shaft

The free-blown form is dated *c*. 1640-1700 and occurs in olive-green natural glass. Rim finishes on these vessels dated *c*. 1660 occur and were found in contexts [226], [233], [286] and [622] while an example with a rim finishes dated *c*. 1680-90 was noted in context [353].

English wine bottle, onion-type

This shape of wine bottle is dated *c*. 1680-1730 and only two definite examples could be recognised by a base in dark olive-green natural glass and a rim with a string finish dated *c*. 1680-90 (Dumbrell 1983) and both examples were unstratified.

English wine bottle, cylindrical-type

The form is dated from *c*. 1740 and in this generic category for the vessel shape are fragmentary and could not be assigned to the early and late types (see below), although they all occur in HLLA glass. An unstratified example survives as a neck and shoulder made in dark olive-green/black glass, while the neck and rounded shoulder of another vessel was found in context [200].

English wine bottle, cylindrical, early-type

The shape dates from *c.* 1740 and is free blown and is most distinguishable by its splayed base and all three examples recorded were found in context [200] and made in either dark olive green or black glass.

English wine bottle, cylindrical, late-type

This mould made form dates from *c*. 1810 and it is mostly recognisable by the mould seams and the right-angled base. The vessels are made in HLLA glass in pale or dark olive green, occasionally black glass. Two items are unstratified and singular examples occur in contexts [334] and [350].

Architecture

Window panes

This material was quite frequently recorded in the assemblage, although its fragmentary state made it sometimes difficult to determine how it was made. The crown and cylinder glass was given a general post-medieval date. The rounded edges of two fragments of soda crown glass were each found in contexts [5] and [387]. Cylinder made window glass was much more frequent (58 fragments, approximately 2 panes, 216g. Natural glass examples, which were clear or slightly green-tinted, were noted solely in context [385], while green-tinted HHLA examples only occurred in context [460]. Clear or slightly green tinted soda glass examples were noted in deposits [213], [233], [353], [384], [385], [415], [424], [460], [462] and [651]. A single fragment of plate glass (context [220]) made in clear soda glass was noted and it is probably of a 19th-century date. Additionally there appears to be two fragments of 20th-century machine made HLLA window glass, one fragment is thick walled and has a blue green tint (context [460]) and has a rubbery type adhesive on one edge, while another clear fragment is decorated (context [989]) and has on one side a red line, which is possibly curving, while on the other side are the ‘shadows’ for the outline of a small semi-circle and a cross at a diagonal with three dots at the ends.

Window quarries

The window quarries were in a fragmentary state and it was not always certain of their shape, although they appear to be cylinder made and mostly symmetrical shapes, while diagnostic fragments usually have angular ends and the surviving edges have been nibbled. A natural glass example was noted in context [385]. One fragment is in clear glass and the other is in pale green glass and both have a curving edge which is either concave or convex and indicates a window possibly comprised of asymmetrical quarries. A clear soda glass hexagonal quarry with rounded ends was noted in context [353]. Three HLLA quarries were noted in context [460] and consist of two probable green-tinted diamond-shaped examples and a single clear glass hexagonal shape and these may have all been components of a single window, the glass held in place with lead cames.

Drink serving

Jug

A jug fragment found in context [233] was made in pale green soda glass and was dated to the 17th century. The item survives as a narrow, folded, hollow rim with a collar below it. Attached to the rim is an applied oval section strap handle, which has been folded at the top, while and at the bottom terminal the end is rounded.

Liquid storage

Bottle (generic)

The everted rim of a free-blown blue-green soda glass has a spiralling trail from the top of the rim down the neck and this item was broadly dated to the post-medieval period and was found in context [286].

Bottle or phial

These fragmentary vessels were broadly dated to the 17th-18th century and were all made in soda glass and mostly survived as bases with conical kicks. One vessel was found in context [213] as a rounded shoulder made in pale green glass and it is dated to the 17th and 18th century. Three items occur in context [226] in either aquamarine or blue tinted glass and may include a possible apothecary bottle, while the base of another vessel was made of two layers of different aquamarine glass and occurred in context [286].

Bottle, octagonal section

The moulded base of a vessel of this type occurs in aquamarine coloured soda glass and it is dated from *c*. 1810 onwards and was found in context [200].

Bottle, oval-section

An ornamental vessel of this type was found in context [208] with another family shard noted in context [211]. The item is free-blown and was formed as a cylindrical type, which was subsequently modified by flattening two sides and so creating the oval section. The item survives as a constricted neck to base, has a rounded shoulder and a concave base with a pontil scar. The vessel is decorated with horizontal lines of pale blue (badly mixed blue and white) glass which has been trailed across the vessel and discrete lines have then been dragged vertically upwards to form a 'wavy line' effect. The pale blue glass is prone to weathering and shows scratch marks, which are probably resultant from washing the vessel with sand. This item is provisionally dated to the late 18th century and although decorative, probably represents a low socio-economic group item.

Bottle, oval-section, flat

Body fragments of this moulded vessel type has vertical ribs and panels with pointed tops and was made in green-tinted soda glass and it is dated from the mid 19th century onwards and was found in context [303].

Demijohn

The concave base of a free-blown probable demijohn, made in olive green natural glass is dated to the 17th century and was found in context [237].

Ink well

An ink well made in clear soda glass survives as an everted rim (40mm in diameter) with a short neck attached to a possible globular body. The top of the vessel has a shallow, flat recessed top with a small central hole. The item is date to the 19th century and was found in context [353].

Pharmaceutical

Phial

One vessel was placed into a generic category and it has a wide prescription rim, short conical neck and a rounded shoulder and it is broadly dated to the late 17th-18th century. The item was recovered from context [233].

Phial, conical

The form is dated to the late 17th-18th century and survives as a clear/blue-tinted soda glass base with a conical kick and inturned wall and the vessel was recovered from context [233].

Phial, cylindrical

A single free-blown item of this type survives as a base with a conical kick and was made in green soda glass. The item is dated to the 17th-18th century and was found in context [213].

Phial, globular

A single vessel is identified as of this type and it is free-blown and made in pale blue soda glass and has an everted rim, short conical neck and a rounded shoulder. The item is dated to the late 17th-18th century and was unstratified.

Unknown functions

Vessel glass

In HLLA glass there is a single vessel represented in bright green HLLA glass as a fire rounded rim with a very small diameter with evidence of a spout and the item is probably of a 19th or 20th century date and was found in context [481]. Amongst the soda vessel glass there were two fragments from late 16th-mid 17th-century drink consumption items that have been discussed above. However, of the same date was a fragment of thin-walled, dark turquoise glass decorated with applied and marvered horizontal strands of either white glass with clear threads or blue glass with a white thread. This item probably represents an import and was recovered from context [254]. Another item of note is the base of a pale aquamarine large cylindrical vessel (possibly another demijohn) with a conical kick and the item is dated to the 17th-18th century and was found in context [226]. Two vessels in this category are made in lead glass and one is free-blown and thin walled with a cylindrical section (context [5]), while the other fragment is flat and thick walled and either represents the base of a vessel or possibly a window pane (context [246]).

Distribution

The distribution of the glass is shown in Table 1. Glass was recovered from Phases 3.2-8. For each context containing glass, then the phase, number of fragments, estimated number of vessels (ENV) and weight, the forms and a spot date is shown.

Context	Phase	Size	No.	ENV	Wt (g)	Forms	Spot date
5	-	S	4	3	9	Vessel, window pane	
53	-	S	1	1		Vessel glass	Post-medieval
55		S	3	2	9	Vessel glass	Post-medieval
200	8	S	9	6	1065	Bottle: octagonal section, English wine bottle, English wine bottle: cylindrical, English wine bottle: cylindrical, early	*C*. 1740–1800
208	7	S	1	1	134	Bottle, oval-section	Late 18th century
211	7	S	2	1	6	Bottle, oval-section, English wine bottle	Late 18th century
213	7	S	11	8	69	Bottle or phial, English wine bottle, phial: cylindrical, vessel glass , window pane, wine glass	18th century
220	8	S	1	1	6	Window pane	19th century
226	8	M	54	14	792	Bottle or phial, case bottle, English wine bottle, English wine bottle: globe and shaft, vessel glass, window pane	Early 18th century
228	5	S	1	1	1	Beaker: cylindrical, with ribs and horizontal thread decoration	*C*. 1575–1650
233	6	M	40	12	1216	Case bottle, English wine bottle, English wine bottle: globe and shaft, jug, phial, phial: conical, window pane,	Late 17th century
237	6	S	2	1	139	?Demijohn	?17th century
246	5	S	2	2	1	Vessel glass, window pane	Post-medieval
248	6	S	1	1	2	Vessel glass	Post-medieval
254	6	S	1	1	1	Vessel glass	16th-17th century
286	6	S	17	7	249	Bottle, bottle or phial, English wine bottle, English wine bottle: globe and shaft, window pane	Late 17th century
288	6	S	1	1	9	Window quarry	Early post-medieval
303	8	S	6	3	149	Bottle: oval-section, flat, English wine bottle: globe and shaft, window pane	Mid 19th century +
313	7	S	4	2	94	English wine bottle, window pane	19th-20th century
334	4	S	1	1	12	English wine bottle: cylindrical, late	1810+
339	7	S	1	1	1	Beaker: cylindrical, with plain horizontal trail decoration	1575–1650/75
343	6	S	1	1	1	window pane	Early post-medieval
350	7	S	2	2	370	Beaker: cylindrical, English wine bottle: cylindrical, late	1810+
353	7	S	9	4	276	English wine bottle: globe and shaft, ink well, window pane, window quarry	19th century
384	5	S	2	1	2	Window pane	Post-medieval
385	6	M	39	9	120	Vessel, window pane, window quarry	Early Post-medieval
387	5	S	10	5	91	Beaker: cylindrical, decorated with vertical ribbing, case bottle, vessel, window pane	1575–1650/75
414	4	S	1	1	3	Vessel glass	Roman
415	5	S	1		1	Window pane	Post-medieval
424	6	S	9	4	40	Window pane	Early post-medieval
460	4	M	60	11	223	Window pane, window quarry	Early post-medieval
462	4	S	1	1	1	Window pane	Post-medieval
481	3.3	S	1	1	1	Vessel glass	?19th/20th century
622	5	S	3	1	20	English wine bottle: globe and shaft	C. 1660
643	5	S	3	1	45	English wine bottle: globe and shaft	Mid-late 17th century
651	5	S	2	2	3	window pane	Post-medieval
794	5	S	1	1	1	Vessel glass	Post-medieval
989	8	S	2	2	103	Tumbler, window pane	Mid 19th -20th century
1245	3.2	S	1	1	12	Vessel glass	Medieval/early post-medieval

Significance of the assemblage

The glass as a whole has some significance at a local level. The fragment of Roman glass is of little significance, although its presence on the site with other finds of the same date indicates that it was part of the study area material culture for this period. The medieval window glass, which includes decorated fragments, is of importance and may have been derived from the church of Hollywell Priory or other buildings associated with this establishment. The medieval/early post-medieval vessel glass

from this period is small in quantity, largely fragmentary and in a poor condition, although its presence demonstrates that it was part of the material culture of this religious establishment. The early post-medieval glass is of significance and the window glass may inform upon the form of the windows in the pre-Dissolution priory or the Earl of Rutland's mansion. The high-quality glass drinking vessels and fragments of other late 16th-early 17th-century decorative glass is a very good indication of the material culture associated with a high-socio economic group residing in the mansion. Some of the wine bottles and the pharmaceutical wares may also belong to that household. The later post-medieval glass ware is generally mundane, although it probably reflects a down turn in the socio-economic history of this area at that time. Of interest is the brown glass oval section bottle with pale blue glass trailed decoration (context [208]). Comparable assemblages of glass have been recovered from adjacent excavation of Hollywell Priory (Richardson 2011a; 2011b).

Potential of the assemblage

The potential of the glass is to date the features it occurs in. A small number of items require illustration or photographing. The medieval and early post-medieval window glass has the potential to inform upon the nature of the structures associated with Holywell Priory and the Earl of Rutland's mansion. The vessel glass can also inform upon activities associated with the mansion and the later development of the site.

Recommendations for further work

It is recommended that the medieval and early post-medieval window glass is looked at separately by a specialist in this material and a publication report be written. A short publication report is required for the post-medieval glass from this site. Seven items require illustrating to compliment the text.

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Appendix 7: Post Roman Metal and Small Finds Assessment

Märit Gaimster

Around 450 individual objects or fragments were recovered from the excavations; all are listed in Table 1. Identifiable and significant objects are discussed by phase below.

Phase 3.1: Early Medieval

Only three finds were recovered from this phase. Besides an iron nail, they comprise heavily corroded iron pieces that may be fragments of decayed objects.

Phase 3.2: *c.* 1190-1240 (Construction of Church, Curtain Wall and Gatehouse)

This phase produced around 20 finds, including numerous fragmentary iron nails and a substantial lead puddle (SF 164). The puddle, which measures roughly 135 x 180mm, is partly hacked off, presumably for re-melting. It provides evidence for lead working on site, something that is likely to relate to the construction of the church, where lead would have been used both for roofing and for window cames. A complete round-section ring cast of copper alloy was also recovered (SF 58). The ring may be a little small for the characteristic medieval annular buckles, which would have been provided with a separate pin of folded sheet (cf. Egan and Pritchard 1991, fig. 36). It is possible this object may be residual Roman.

Phase 3.3: *c.* 1200-1350

Finds from this phase included over 150 individual objects or metal fragments, strongly dominated by iron nails. Among the nails are coffin nails from five burials (Grave [710], [1036], [1084], [1225], [1314] and [1342]). Among the few other identified finds is a heavily corroded fragment of lead window came, or possibly waste from came manufacture (SF 119). A handful of other diverse objects include the probable fragment of a cast copper-alloy vessel foot (SF 112), parts of an iron tang-hafted knife blade (SF 135), a narrow stone hone (SF 111) and the possible fragment of a strap-end of copper alloy (SF 165). The tip of a flat iron object may be from a knife or an arrowhead (SF 110).

Phase 3.4: *c.* 1350-1540

Around 80 individual objects or metal fragments were recovered from Phase 3.4, again dominated by iron nails. Among these, seven are coffin nails from grave [1394]. Of particular interest are the fragmentary remains of a lead chalice in Grave [606] (SF 77). Chalices are well-recorded in medieval burials and generally considered to indicate the burial of a priest (cf. Biddle and Kjølbye-Biddle 1990). The custom is documented from the late 12th and through to the 16th centuries, but appears to be particularly prevalent in the 13th and early 14th centuries (Gilchrist and Sloane 2005, 160-62). Also

from a burial is a twisted copper-alloy pin or handle, which was associated with Skeleton [880] in Grave [752] (SF 86). Some structural fittings can be related to the church building, chiefly fragments of fine reeded window came that include multi-pane pieces (SF 143); there is also a complete iron staple (SF 95). A minute ivory pin or rivet has a head delicately carved with a star motif (SF 124); this small and unusual object may originate from a casket or reliquary. It was associated with pottery dating from 1340-1400. Very likely residual from the Priory are a small crucifix and an openwork cross, both of copper alloy. The crucifix, from a Phase 5 context, has remnants of wood at the back, indicating it was originally fixed to a wooden cross (SF 57). The openwork cross is a *crux gemina* with double cross arms, moulded with the figure of a praying saint (SF 15). The cross has two small rivet holes, at the top and the bottom, indicating this too was originally mounted onto something else. It was recovered from a Phase 8 context. Both objects were associated with 17th-century pottery, but would represent highly contentious objects at this time.

Among the finds from this phase were also some medieval dress accessories, including the flat-section frame of a large annular brooch (SF 109; cf. Egan and Pritchett 1991, fig. 161), the shaft of a fine copper-alloy pin (SF 149) and a fragmentary lace-chape (SF 147). Part of a substantial tang-hafted knife with remnants of a wooden handle was also recorded (SF 85). These objects may perhaps be best associated with the secular access to and presence in the South Precinct in the late medieval period.

Phase 4: 1540-1600 (Dissolution and Demolition of the Church)

Some 70 finds were retrieved from Phase 4 contexts, much of which are nails and fragmented metal objects. Remnants of roofing lead (SF 72 and 141) testifies to the demolition of the church building and the robbing of this valuable material for reuse. A number of objects may be residual from the priory, or belong to the immediate post-Dissolution activities on site. They include small dress accessories in the form of a copper-alloy pin (SF 88) and fragments of lace-chape (SF 89), an iron horseshoe (SF 71) and a pinner's bone, a tool for filing the tips of drawn-wire pins (SF 41). Two fine and very narrow bone cutlery handles, for scale-tang implements, may be more likely late medieval (SF 134 and 153). A copper-alloy jeton, used for calculating sums on a chequered board or cloth, would more likely date from the second half of the 16th century. Featuring the frequent rose-and-orb motif, the jeton was produced in Nuremberg, which dominated the production of these reckoning counters by the mid-16th century (SF 87). A residual Nuremberg jeton, likely of Wolf Laufer who was master 1554-1601, came from a Phase 7 context (SF 47). More probably a post-Dissolution object is also a flat-section curtain or drape ring of copper-alloy (SF 79).

Phase 5: 1600-*c.* 1670

A smaller group of just below thirty individual objects or pieces came from Phase 5. They include dress accessories in the form of a copper-alloy pin with a large solid bulbous head (SF 82) and the fragment of a fine copper-alloy chain link or simple hook-and-eye fastener (SF 83; cf. Margeson 1993,

fig. 10 nos. 90-95). There are also two coins; a probable 16th-century silver groat (SF 73) and an early 17th-century copper-alloy royal farthing (SF 150). Two thin and heavily worn copper-alloy discs may be jetons (SF 16 and 151). .

Phase 6: *c.* 1670-1710

Phase 6 produced around 60 individual finds or fragments of objects. Among these are several categories of objects reflecting households and residents at the time. They include cutlery, with four ivory handles for knock-on tang implements (SF 69, 152, 159 and 161) and with good parallels in other finds from the period (cf. Thompson *et al.* 1974, fig. 51). A copper-alloy upholstery pin is likely to originate from a chair (SF 25); the function of a sturdy copper-alloy chain is not known, but it would have been used to suspend an object or fitting (SF 23). A ceramic figurine is discussed elsewhere (SF 20; see Sudds Appendix 4). There are also structural elements relating to buildings and services, in the form of two substantial lengths of narrow lead pipe from context [796], testifying to the presence of piped water (cf. Picard 2003, 10). No dress accessories are among the finds, but personal objects are reflected in fragments of a tortoiseshell fan (SF 160) and four bone combs (SF 60, 68, 70 and 162). All are double-sided simple combs of a form that is characteristic for the early modern period, when they may have been more frequently made of ivory or boxwood (cf. Egan 2005, 64-65; Mann 2008, 12-13; Margeson 1993, 66-68). Two unstratified bone combs of the same form may also originate from Phase 6 (SF 29 and 157). Of particular interest is the fragmentary remains of a gunpowder flask carved of antler with incised decoration on one side (SF 163). Part of the necessary equipment for firearms, gunpowder flasks are rare finds from excavations (cf. Egan 2005, 202 and fig. 189 no. 1109). Another unusual object is represented by a substantial horn sheet, cut to an undulating shape at one end and with a large circular perforation, perhaps for a thumb or finger? (SF 65). Horn very rarely survives in the ground, and is broadly underrepresented among archaeological finds. The function of this particular horn object is not known, but examples of horn products in the early modern period would have included window and lantern panes, as well as horn books (cf. Mann 2008, 66-68).

Other finds from Phase 6 contexts include a small element of bone-working waste (SF 24 and 115). While it may be possible to associate this with the four bone combs also recovered, the two pieces cannot be directly and obviously related to comb manufacture (cf. Whipp 2006, fig. 37). General tools are reflected in a stone hone (SF 61) and playthings in a toy marble of polished flint (SF 55). Numismatica is represented by a George I halfpenny of 1717 (SF 67) and a probable jeton (SF 19); a heavily corroded coin may be a Charles II farthing, but will require cleaning to fully identify (SF 18). An unstratified copper-alloy farthing is possibly of William and Mary (1688-94; SF 17); there is also a possible unstratified farthing of Charles II (SF 28).

Phase 7: 1710-1780

This phase produced around 35 finds, providing backyard evidence of households on or near the site. They include an ivory cutlery handle (SF 50), of the same type as the group of handles from Phase 6

contexts, and a pewter spoon with oval bowl (SF 51). The spoon appears unworn and raw edges suggest it is an unfinished product. A handful of small dress accessories include two beads of glass and amber (SF 154 and 39), a heavily corroded copper-alloy finger ring with oval bezel (SF 14) and a copper-alloy domed button (SF 127). There is also a toy marble (SF 44). A number of heavily corroded coins were recovered (SF 11-13, 46 and 48-49), along with halfpennies of George I (1714-27) and George II (1727-60) and a copper-alloy *reis* of John V of Portugal (1706-50; SF 126).

Phase 8: 1780-*c.* 1850

Besides the residual copper-alloy cross discussed above (SF 15) only a handful of metal and small finds came from Phase 8. They comprise nails and iron lumps, and the fragment of a cowrie shell, likely a household ornament (SF 166). An 1809 halfpenny of George III is unstratified (SF 32).

The Significance and Potential of the Assemblage and Recommendations for Further Work

The metal and small finds from Holywell Priory provide some evidence for the monastic church and South Precinct, notably in the possible remnants of church furnishings presented by the small decorative ivory pin or rivet (SF 124) and the copper-alloy small mounted cross and crucifix (SF 15 and 57). The large assemblage in Phase 6 presents important finds relating to households in the early modern period, including the unusual finds of a decorated antler gunpowder flask (SF 163) and an unidentified object of horn sheet (SF 65). The numerous bone combs from this phase are also interesting, in particular with reference to some presence of bone-working waste on site at this time. Some evidence of 18th-century households are also provided by finds from Phase 7. These and other relevant finds discussed above should be included in any further publication of the site. For this purpose, a number of objects will require further x-ray or cleaning by conservator to aid full identification; these recommendations are made in the table below. Some objects, in particular the elements of possible church furnishings, will need additional research for identification and parallels.

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SITECODE	PHASE	CONTEXT	SF NO	MATERIAL	DESCRIPTION	OBJECT DATE	POT DATE	RECOMMENDATIONS	NO. OF OBJECTS
HLY12	3.1	447	bulk	iron	iron ?object; three frgts only		1240-1350	x-ray	1
HLY12	3.1	1332	bulk	iron	iron ?objects; two heavily corroded lumps		1080-1350	x-ray	1
HLY12	3.1	1332	bulk	iron	iron nail; incomplete		1080-1350		1
HLY12	3.2	256	bulk	iron	iron nail; incomplete and heavily corroded		n/a		1
HLY12	3.2	371	164	lead	lead waste; substantial puddle; part hacked off for ?reuse; 135 x 180mm; 20mm thick		n/a		1
HLY12	3.2	376	58	copper	copper-alloy round-section ring; diam. 32mm		1350-1500		1
HLY12	3.2	377	bulk	iron	iron nails; two incomplete		1320-1400		2
HLY12	3.2	901	bulk	iron	iron nail; incomplete with large head		n/a		1
HLY12	3.2	959	bulk	iron	iron nails; three corroded pcs		n/a		3
HLY12	3.2	1201	bulk	iron	iron nails; ten corroded pcs		1050-1150		10
HLY12	3.3	363	bulk	iron	iron nails; three		1270-1500		1
HLY12	3.3	470	bulk	iron	iron nails; four fine; one clenched		?1170-1350		4
HLY12	3.3	480	bulk	iron	iron nails; two heavily corroded				2
HLY12	3.3	628	bulk	iron	iron nail; corroded and incomplete; from the backfill of Grave 710		1170-1350		1
HLY12	3.3	708	80	iron	iron nail; incomplete		1280-1400		1
HLY12	3.3	1030	bulk	iron	iron nails; a dozen heavily corroded		n/a		14

HLY12	3.3	1034	102	copper	copper-alloy embossed ?mount; two small pcs		Roman	x-ray	1
HLY12	3.3	1045	bulk	iron	iron coffin nails; fifteen heavily corroded; from Grave [1036]		n/a		15
HLY12	3.3	1051	bulk	iron	iron ?nail; substantial lump		Roman	x-ray	1
HLY12	3.3	1059	bulk	iron	iron object; flat corroded pce		1270-1350	x-ray	1
HLY12	3.3	1079	bulk	iron	iron nails; nine incomplete		n/a		9
HLY12	3.3	1096	bulk	iron	iron coffin nails; twenty fine and heavily corroded; from Grave [1084]		n/a		20
HLY12	3.3	1144	bulk	iron	iron nails; numerous incomplete and heavily corroded		n/a		33
HLY12	3.3	1192	135	iron	iron tang-hafted knife; incomplete and heavily corroded		n/a	x-ray	1
	3.3	1192	136	iron	iron knife; tip section only; W 20mm; L 75mm+		n/a	x-ray	1
HLY12	3.3	1194	bulk	iron	iron ?strap; flat frgt only; W 30mm		1270-1500	x-ray	1
HLY12	3.3	1194	bulk	iron	iron ?nail; corroded		1270-1500	x-ray	2
HLY12	3.3	1195	111	stone	narrow hone of Norwegian ragstone; concave wear on one side only; L 65mm		n/a		1
HLY12	3.3	1195	bulk	iron	iron ?objects; two heavily corroded lumps		n/a	x-ray	1
HLY12	3.3	1196	110	iron	iron ?arrowhead; tip frgt only		n/a	x-ray	1
HLY12	3.3	1215	bulk	iron	iron nail; clenched; 70mm		1270-1500		1

HLY12	3.3	1224	112	copper	copper-alloy ?vessel foot; triangular-section fragment only; L 45mm+		1350-1400	x-ray	1
HLY12	3.3	1242	bulk	iron	iron nails; fine; four corroded pcs		n/a		4
HLY12	3.3	1286	bulk	iron	iron nails; eleven incomplete		n/a		11
HLY12	3.3	1292	bulk	iron	iron coffin nails; ten corroded pcs; from Grave [1225]		n/a		13
	3.3	1292	bulk	iron	iron ?strap; five corroded pcs; from Grave [1225]		n/a	x-ray	
HLY12	3.3	1309	bulk	iron	iron coffin nails; eighteen incomplete; from Grave [1314]		n/a		18
HLY12	3.3	1321	bulk	iron	iron nails; three fine pcs		n/a		1
HLY12	3.3	1339	165	copper	copper-alloy ?strap end; tapered finial only; L 22mm		n/a	x-ray	1
HLY12	3.3	1345	bulk	iron	iron coffin nails; fine; twenty-six pcs; from Grave [1342]		n/a		26
HLY12	3.3	1388	119	lead	lead ?window came; heavily corroded; L 80mm		n/a		1
HLY12	3.4	568	bulk	iron	iron nails; five corroded pcs		Roman		5
HLY12	3.4	584	bulk	iron	iron nails; two corroded pcs		1080-1200		1
HLY12	3.4	587	bulk	iron	iron nails; four corroded pcs		1240-1300		4
HLY12	3.4	604	77	lead	lead chalice; heavily fragmented and corroded; enough survives tro show a shallow bowl with straight edges; ht. 30mm; from Grave 606	medieval	n/a		1

HLY12	3.4	704	bulk	iron	iron nail; corroded and incomplete		1270-1400		1
HLY12	3.4	811	bulk	copper	copper-alloy ?waste; small folded pce; L 25mm		1350-1500	x-ray	1
HLY12	3.4	811	bulk	iron	iron nail; corroded and incomplete		1350-1500		1
HLY12	3.4	814	bulk	iron	iron nail; corroded and incomplete		1340-1350		1
HLY12	3.4	815	85	compos	iron tang-hafted knife; incomplete and heavily corroded; substantial with remnants of wooden handle; blade W 22mm		1340-1500	x-ray	1
HLY12	3.4	880	86	copper	copper-alloy pin or handle with twisted body; incomplete; L 70mm; associated with Skeleton 880, in Grave 752		n/a	x-ray	1
HLY12	3.4	937	91	iron	iron ?strap; three pieces; W 15mmm		1550-1610	x-ray	1
HLY12	3.4	937	92	iron	iron nail; complete with curved shank		1550-1610		1
HLY12	3.4	937	93	lead	lead waste; two thin cut frgts		1550-1610		1
HLY12	3.4	938	97	copper	copper-alloy object; heavily corroded D-section pce		1350-1500	x-ray	1
HLY12	3.4	938	98	copper	copper-alloy object; heavily corroded square-section pce		1350-1500	x-ray	1
HLY12	3.4	938	bulk	iron	iron ?nail; substantial lump		1350-1500	x-ray	1
HLY12	3.4	965	bulk	iron	iron nail; incomplete		1270-1400		1

HLY12	3.4	975	95	iron	iron staple; complete rectangular; W 55; L 105mm		1380-1450	x-ray	1
HLY12	3.4	975	bulk	iron	iron nail; incomplete		1380-1450		1
HLY12	3.4	976	bulk	iron	iron nails; three incomplete		1340-1500		1
HLY12	3.4	984	bulk	iron	iron nail; incomplete		1270-1500		1
HLY12	3.4	990	96	copper	copper-alloy ?coin; heavily corroded; diam. 10mm		1270-1500	x-ray/clean to identifty	1
HLY12	3.4	994	bulk	iron	iron nail; incomplete		1480-1600		1
HLY12	3.4	1003	bulk	iron	iron nails; several corroded pcs		1240-1400		14
HLY12	3.4	1004	bulk	iron	iron nail; incomplete		n/a		1
HLY12	3.4	1007	bulk	copper	copper-alloy ?objects; seven small frgts		1340-1500	x-ray	1
HLY12	3.4	1007	bulk	iron	iron nail; incomplete		1340-1500		1
HLY12	3.4	1008	99	copper	copper-alloy ?jeton; thin and corroded disc; diam. 25mm		n/a	clean to identifty	1
HLY12	3.4	1013	101	copper	copper-alloy ?coin; frgts of thin corroded disc		1340-1500	clean to identifty	1
HLY12	3.4	1013	bulk	iron	iron nail; incomplete		1340-1500		1
HLY12	3.4	1022	124	ivory	minute ivory pin/rivet; end face carved with fine star motif		1340-1400	further identify	1
HLY12	3.4	1022	bulk	iron	iron nail; heavily corroded and incomplete		1340-1400		1
HLY12	3.4	1024	105	copper	copper-alloy ?strap-end; folded frgt only; W 15mm		1340-1350	x-ray	1
HLY12	3.4	1038	103	copper	copper-alloy coin; irregular and heavily worn; Roman; 19 x 21mm		Roman	clean to identifty	1
HLY12	3.4	1066	bulk	iron	iron ?nail		1240-1400	x-ray	1

HLY12	3.4	1122	147	copper	copper-alloy lace-chape; incomplete and heavily corroded		n/a	x-ray	1
HLY12	3.4	1123	143	lead	lead window came; five fine reeded pcs, including multi-pane		1350-1450		1
HLY12	3.4	1130	bulk	iron	iron nails; two incomplete		n/a		2
HLY12	3.4	1134	148	copper	copper-alloy ?strap/mount; three flat pieces		1270-1500	x-ray	1
HLY12	3.4	1134	bulk	iron	iron nail; incomplete		1270-1500		1
HLY12	3.4	1162	107	iron	iron nail; L 60mm		1270-1500		1
HLY12	3.4	1162	108	copper	copper-alloy ?sheet/vessel; two thin pieces		1270-1500	x-ray	1
HLY12	3.4	1162	109	copper	copper-alloy brooch; annular with flat frame with constriction for pin; diam. 45mm	medieval	1270-1500	x-ray	1
HLY12	3.4	1168	bulk	iron	iron nails; three corroded pcs		n/a		3
HLY12	3.4	1186	113	lithic	narrow flint flake or blade; ?tool		n/a	further identify	1
HLY12	3.4	1252	bulk	iron	iron nails; six corroded pcs		n/a		6
HLY12	3.4	1258	bulk	iron	iron nails; six incomplete		n/a		6
HLY12	3.4	1288	149	copper	copper-alloy pin; fine shaft only; L 29mm		1340-1400		1
HLY12	3.4	1297	117	iron	iron ?strap; corroded frgt only; W 20mm		1080-1200	x-ray	1
HLY12	3.4	1297	bulk	iron	iron nail; incomplete		n/a		1
HLY12	3.4	1338	123	copper	copper-alloy ?sheet/vessel; four thin pieces		n/a	x-ray	1

HLY12	3.4	1396	bulk	iron	iron coffin nails; seven incomplete; from coffin in Grave [1394]		n/a		7
HLY12	4	261	41	bone	pinner's bone of cattle metatarsus; square working end heavily worn and fragmented; L 145mm		1480-1610		1
HLY12	4	261	130	iron	iron ?horseshoe; frgt only		1480-1610	x-ray	1
HLY12	4	261	bulk	bone	?worked		1480-1610		1
HLY12	4	261	bulk	iron	iron nails; three heavily corroded		1480-1610		1
HLY12	4	274	30	bone	bone ?inlay; long narrow strip with raw back and three heavily polished and rounded sides; L 165mm; W 4mm; th. 3mm		1580-1600		1
HLY12	4	274	31	copper	copper-alloy coin; heavily corroded; diam. 15mm		1580-1600	clean to identifty	1
HLY12	4	275	bulk	iron	iron nails; two heavily corroded		1570-1610		1
HLY12	4	276	36	iron	substantial square section iron ?bar in two heavily concreted lumps		1480-1600	x-ray	1
HLY12	4	289	bulk	iron	iron nail; shaft only		n/a		1
HLY12	4	334	59	copper	copper-alloy coin; halfpenny; heavily corroded and illegible	post-medieval	1700-1760	x-ray	1
HLY12	4	334	bulk	iron	iron nails; two incomplete		1700-1760		1
HLY12	4	346	bulk	iron	iron nail; incomplete		1200-1500		1
HLY12	4	382	132	iron	iron ?strap; W 15mm		n/a	x-ray	1

HLY12	4	394	bulk	iron	iron nail; L 65mm		n/a		1
HLY12	4	402	bulk	iron	iron nail; incomplete		n/a		1
HLY12	4	414	64	lead	lead ?window came; triangular-section pce; heavily corroded; L 55mm		1270-1400		1
HLY12	4	414	141	lead	lead waste; two substantial partially folded pcs; ?roofing lead		1270-1400		1
HLY12	4	431	66	lead	lead waste; thin curled-up strip; L 55mm		1080-1200		1
HLY12	4	445	bulk	iron	iron ?objects; three corroded pcs		1600-1700	x-ray	1
HLY12	4	445	bulk	iron	iron nails; several corroded and incoplete, including two substantial with square heads		1600-1700		1
HLY12	4	460	71	iron	iron horseshoe; complete but corroded; W 110mm; L 115mm		1570-1650	x-ray	1
HLY12	4	460	72	lead	lead waste; substantial folded rectangular sheet; W 40mm; ?roofing lead		1570-1650		1
HLY12	4	460	133	iron	iron object; incomplete; rectangular-section bar with flat transverse ?blade		1570-1650	x-ray	1
HLY12	4	460	134	compos	delicate iron knife with bone scales; frgt only; W 15mm		1570-1650	x-ray	1
HLY12	4	460	bulk	iron	iron nails; seven, mostly incomplete		1570-1650		9
HLY12	4	460	bulk	lead	lead melting waste; two thin pcs		1570-1650		1

HLY12	4	460	bulk	lithic	worked flint		1570-1650		1
HLY12	4	461	153	compos	Fine narrow bone handle for tanged implement; now cracked from iron corrosion; decorated with carved line spiral and pairs of ring-and-dot patterns; traces of copper-alloy staining from ?cap; L 70mm+		1770-1840	x-ray	1
HLY12	4	472	bulk	iron	iron nails; ten corroded pcs		1550-1650		1
HLY12	4	472	bulk	lead	lead waste; thin cut strip; L 55mm		1550-1650		1
HLY12	4	479	79	copper	copper-alloy flat-section curtain ring; diam. 20mm		1480-1600		1
HLY12	4	479	bulk	iron	iron ?object; thin frgt only		1480-1600	x-ray	1
HLY12	4	479	bulk	iron	iron nails; four corroded pcs		1480-1600		4
HLY12	4	494	bulk	iron	iron nails; two heavily corroded		n/a		2
HLY12	4	581	81	bone	?worked		1480-1600		1
HLY12	4	600	bulk	lead	lead waste; short cut pce; L 35mm		n/a		1
HLY12	4	621	bulk	iron	iron nail; corroded and incomplete		1270-1500		1
HLY12	4	652	bulk	iron	iron nail; corroded		1570-1600		1
HLY12	4	736	bulk	iron	iron nails; three corroded pcs		1580-1650		1
HLY12	4	899	87	copper	copper-alloy jeton; Nuremberg, rose-and-orb; heavily corroded; diam. 25mm	post-medieval	1580-1600	clean to identifty	1
HLY12	4	899	89	copper	copper-alloy lace-chape; three small pcs		1580-1600	x-ray	1

HLY12	4	935	88	copper	copper-alloy pin; Caple Type B; incomplete		n/a		1
HLY12	4	940	90	copper	copper-alloy ferrule of embossed sheet; W 9mm; slightly oval diam. 16 x 21mm		n/a	x-ray	1
HLY12	4	967	bulk	iron	iron nail; incomplete		1770-1830		1
HLY12	4	1204	bulk	iron	iron nail; L 60mm		Roman		1
HLY12	5	239	16	copper	copper-ally ?jeton; thin and heavily corroded flan; diam. 28mm		1630-1650	clean to identifty	1
HLY12	5	387	56	copper	copper-alloy ?disc button; heavily corroded; diam. 13mm		1600-1650	x-ray	1
HLY12	5	387	57	copper	copper-alloy crucifix; incomplete with top end missing; remains of ?wood at the back; ht. 45mm+		1600-1650	x-ray	1
HLY12	5	387	bulk	iron	iron ?strap; two pcs; W 12mm		1600-1650	x-ray	1
HLY12	5	387	bulk	iron	iron nails; four; one L 70mm		1600-1650		4
HLY12	5	415	bulk	iron	iron nails; incomplete		n/a		1
HLY12	5	459	73	silver	silver coin; heavily ?burnt and corroded; ?Mary or Elizabeth I groat; diam. 23mm	post-medieval	1340-1500	clean to identifty	1
HLY12	5	459	74	iron	iron ?hinge; incomplete and heavily corroded; W 25mm		1340-1500	x-ray	1
HLY12	5	489	bulk	iron	iron nail; corroded		1580-1700		1
HLY12	5	517	bulk	iron	iron nail; fine; incomplete		1270-1350		1
HLY12	5	613	bulk	iron	iron nails; eight corroded pcs		1630-1700		2
HLY12	5	622	76	copper	copper-alloy ?coin; heavily corroded; diam. 15mm		1600-1700	clean to identifty	1

HLY12	5	622	150	copper	copper-alloy coin; ?Charles I rose farthing		1600-1700	clean to identifty	1
HLY12	5	622	bulk	iron	iron ?nail; two pcs		1600-1700	x-ray	2
HLY12	5	631	151	copper	copper-alloy ?jeton; thin and corroded and in two pieces; diam. 24mm		mid-17th c	clean to identifty	1
HLY12	5	631	bulk	leather	shoe		mid-17th c		0
HLY12	5	641	bulk	iron	iron nail; incomplete and corroded to stone		1630-1680		1
HLY12	5	651	bulk	copper	copper-alloy frgts;several minute pcs		1580-1700	x-ray	1
HLY12	5	686	82	copper	copper-alloy pin with ?solid bulbous head; L 53mm		n/a	x-ray	1
HLY12	5	688	83	copper	copper-alloy ?chain link; incomplete; L 15mm		n/a		1
HLY12	6	233	18	copper	copper-alloy coin; extremely corroded and illegible		1689-1710	x-ray	1
HLY12	6	233	19	copper	copper-ally ?jeton; thin and heavily corroded flan; diam. 30mm		1689-1710	clean to identifty	1
HLY12	6	233	20	ceramic	figurine		1689-1710		1
HLY12	6	233	23	copper	sturdy copper-alloy chain; heavily corroded frgt only; L 50mm		1689-1710	x-ray	1
HLY12	6	233	25	copper	copper-alloy upholstery pin with domed head and short shank; diam. 13mm		1689-1710		1

	6	233	139	lead	lead ?pipe; plugged and partly ripped apart; diam. 30mm; L 100mm+		1689-1710	further identify	1
HLY12	6	233	152	compos	fine ivory cutlery handle for knock-on-tang implement; tapering with slightly bulbous end; L 75mm		1689-1710		1
HLY12	6	233	159	ivory	fine ivory cutlery handle for knock-on-tang implement; tapering with slightly bulbous end; fragment only; L 78mm+		1689-1710		1
HLY12	6	233	160	tortoise	tortoiseshell fan; two fragments of blade with circular pierced base; L 105mm+		1689-1710		1
HLY12	6	233	bulk	iron	iron nail; heavily corroded		1689-1710		1
HLY12	6	250	bulk	iron	iron nails; four incomplete		1580-1700		1
HLY12	6	266	24	bone	bone-working waste; roughly cut circular section of horse or cattle humerus; file marks on edges and one surface; diam. 38mm; 3mm thick		1580-1650	further identify	1
HLY12	6	266	bulk	iron	iron ?strap; frgt only; W 15mm		1580-1650	x-ray	1
HLY12	6	271	bulk	iron	iron object; frgt only		1580-1650	x-ray	1
HLY12	6	286	161	ivory	fine ivory cutlery handle for knock-on-tang implement; tapering with bulbous end; L 80mm	late 17th to early 18th century	n/a		1

HLY12	6	343	60	bone	one-piece bone comb; double-sided with fine and coarse teeth on either side; incomplete; W 40mm+; ht. 60mm		1670-1700		1
HLY12	6	343	61	stone	hone of fine sandstone grit; rectangular-section with concave wear on one side and deep groove on opposing side; L 65mm		1670-1700		1
HLY12	6	343	162	bone	one-piece bone comb; double-sided with fine and coarse teeth on either side; near-complete; W 45mm; ht. 50mm		1670-1700		
HLY12	6	343	163	antler	red deer antler gunpowder flask; incomplete with one rabbeted arm for iron cap and part of a second; part of incised decoration on one side		1670-1700	further identify	1
HLY12	6	343	bulk	copper	copper-alloy objects; ten heavily corroded lumps		1670-1700	x-ray	1
HLY12	6	343	bulk	iron	iron objects; four pcs, partly corroded to ceramic roof tile; include ?horseshoe		1670-1700		1
HLY12	6	343	bulk	iron	iron nails; three heavily corroded		1670-1700	x-ray	3
HLY12	6	374	54	copper	copper-alloy frgts; three minute		n/a	x-ray	1

HLY12	6	380	55	stone	toy marble of polished flint; diam. 13mm		n/a		1
HLY12	6	380	bulk	iron	iron nails; four pcs		n/a		3
HLY12	6	385	bulk	iron	nail		1600-1650		1
HLY12	6	385	bulk	iron	iron nails; two clenched		1600-1650		2
HLY12	6	385	bulk	lead	lead window came; three fine reeded pcs		1600-1650		1
HLY12	6	424	65	horn	flat object of horn sheet; slightly tapering with narrow end cut to undulating shape with large circular perforation for ?finger; wider end with edge worn to thin wedge shape; W 90mm; L 125mm		1580-1650		1
HLY12	6	424	67	copper	copper-alloy coin; George I halfpenny, 1717	post-medieval	1580-1650		1
HLY12	6	424	68	bone	one-piece bone comb; double-sided with fine and coarse teeth on either side; incomplete; W 53mm+; ht. 58mm		1580-1650		1
HLY12	6	424	69	ivory	very short ivory handle for knock-on-tang implement; slightly facetted with diamond-section end; L 50mm		1580-1650	further identify	1
HLY12	6	424	142	lead	lead fitting; circular with central collared opening; diam. 20mm		1580-1650	further identify	1
HLY12	6	424	bulk	iron	iron ?sheet; thin frgt only		1580-1650	x-ray	1

HLY12	6	424	bulk	iron	iron nail; fine; incomplete		1580-1650		1
HLY12	6	448	bulk	iron	iron nail; corroded		1580-1650		1
HLY12	6	455	70	bone	one-piece bone comb; double-sided with fine and coarse teeth on either side; near-complete but in three pcs; W 58mm; ht. 60mm		1580-1700		1
HLY12	6	796	bulk	lead	lead pipe; diam. 40mm; two lengths of 1.26 and 1.12 m		n/a		
HLY12	6	1268	115	bone	bone-working waste; thin sliver from long bone; marks from ?draw knife along one surface: 88mm; W 15mm		n/a		1
HLY12	6	1268	118	copper	copper-alloy ?strap/mount; frgt only, corroded to stone; W 17mm		n/a	x-ray	1
HLY12	7	208	11	copper	copper-alloy coin; extremely corroded and illegible	post-medieval	1720-1780	x-ray	1
HLY12	7	208	bulk	iron	iron ?nail; heavily corroded		1720-1780	x-ray	1
HLY12	7	209	12	copper	copper-alloy coin; extremely corroded and illegible	post-medieval	1580-1700	x-ray	1
HLY12	7	211	144	copper	copper-alloy pins; two Caple Type C; L 22 and 30mm; also frgts of ?lace-chape		1720-1750		1
HLY12	7	211	154	glass	glass bead; small barrel shaped; greemish blue opaque; diam. 4mm; ht. 2mm	roman	1720-1750		1
HLY12	7	213	13	copper	copper-alloy coin; thin and heavily corroded; diam. 24mm		1720-1750	x-ray	1

HLY12	7	213	14	copper	copper-alloy finger ring with ?oval bezel; complete but heavily corroded; diam. 16mm		1720-1750	clean bezel to identifty	1
HLY12	7	213	145	copper	copper-alloy pin; Caple Type C; L 30mm; also shank of further pin		1720-1750		1
HLY12	7	305	bulk	iron	iron nails; three heavily corroded		1740-1830		1
HLY12	7	313	37	copper	copper-alloy coin; George II (1727-1760) halfpenny, date illegible	post-medieval	1770-1800		1
HLY12	7	313	39	amber	?amber bead; large barrel shaped; diam. 13mm; ht. 12mm				1
HLY12	7	313	bulk	iron	iron nails; three incomplete		1770-1800		1
HLY12	7	333	44	stone	toy marble of Carrara marble; diam. 14mm		n/a		1
HLY12	7	350	46	copper	Copper-alloy coin; heavily corroded and illegible farthing	post-medieval	1680-1710	x-ray	1
HLY12	7	350	47	copper	copper-alloy jeton; Nuremberg, ?Wolf Laufer (master 1554-1601); diam. 21mm	post-medieval	1680-1710	clean to identifty	1
HLY12	7	350	48	copper	copper-alloy coin; heavily corroded and illegible farthing		1680-1710	clean to identifty	1
HLY12	7	350	49	copper	copper-alloy coin; heavily corroded and illegible farthing		1680-1710	clean to identifty	1
HLY12	7	353	45	copper	copper-alloy coin; heavily corroded and illegible halfpenny		1680-1700	clean to identifty	1

HLY12	7	353	50	ivory	ivory cutlery handle for knock-on-tang implement; tapering with slightly bulbous end; L 90mm		1680-1700		1
HLY12	7	353	51	pewter	pewter spoon with oval bowl and part of flat stem; partly heavily corroded but clean surfaces suggest no wear; rough edges to bowl and faint maker's mark inside; bowl L 67mm?unfinished		1680-1700	clean maker's mark to identify	1
HLY12	7	353	52	iron	iron ?knife blade; incomplete and heavily corroded		1680-1700	x-ray	1
HLY12	7	353	131	iron	iron ?knife; frgt of blade only		1680-1700	x-ray	
HLY12	7	353	bulk	iron	iron nails; six heavily corroded		1680-1700		1
HLY12	7	717	bulk	iron	iron nail; incomplete		1570-1700		1
HLY12	7	1526	125	copper	Copper-alloy coin; George I halfpenny; date illegible	1714–1727	n/a		1
	7	1526	126	copper	copper-alloy coin; reis of John V of Portugal (1706-1750); diam. 31mm	1706–1750	n/a	further identify	
HLY12	7	1526	127	copper	copper-alloy two-part domed button with integral loop; diam. 17mm	post-medieval	n/a		1

HLY12	8	226	15	copper	copper-alloy *crux gemina* with double cross arms and figure of praying saint; openwork with small holes for fixing at top and bottom; one in-situ rivet present; ht. 56mm		1630-1700	clean and further identify	1
HLY12	8	226	bulk	iron	iron ?objects; two heavily corroded lumps		1630-1700	x-ray	1
HLY12	8	311	bulk	iron	iron ?nail; very sturdy corroded bar		1770-1830	x-ray	1
HLY12	8	325	bulk	iron	iron nails; two incomplete		1770-1820		1
HLY12	8	989	166	shell	cowrie shell; fragment only		1835-1840		1
HLY12	?	5	75	?silver	?Silver coin; ?crown of George IV; heavily degraded and illegible; diam. 39mm	post-medieval	1820-1840	x-ray	1
HLY12	?	5	137	pewter	pewter tankard; squashed and broken; diam. 100mm; ht. *c.* 110mm	post-medieval	1820-1840		1
	?	5	138	pewter	pewter tankard; squashed and broken; diam. 120mm; ht. *c.* 150mm	post-medieval	1820-1840		1
HLY12	?	55	bulk	iron	nails		1630-1680		1
HLY12	void	1028	100	bone	bone pin or tool, roughly carved from cattle or horse long bone; tapering to a point with a small perforation for suspension at the other end; point heavily polished from use; L 155mm		n/a	further identify	1

		0	17	copper	copper-alloy ?coin, possibly of William and Mary; too small for a farthing; obverse with GVLIELMIU...REX; reverse ?MARIA ... REGINA; diam. 19mm; bent and punched through centre from reverse			further identify	
HLY12		0	21	copper	copper-alloy flat-section curtain ring; diam. 25mm				1
HLY12		0	27	copper	copper-alloy ?coin or button; heavily corroded; diam. 18mm			x-ray	1
HLY12		0	28	copper	copper-alloy coin; heavily worn ?Charles II farthing			clean to identifty	1
HLY12		0	29	bone	one-piece bone comb; double-sided with fine and coarse teeth on either side; near-complete; W 73mm; ht. 53mm				1
HLY12		0	32	copper	Copper-alloy coin; George III halfpenny, 1809; heavily worn	post-medieval			1
HLY12		0	33	copper	Copper-alloy coin; halfpenny; extremely worn and illegible; ?18th century	post-medieval			1
HLY12		0	34	copper	copper-alloy flat-section curtain ring; diam. 30mm				1
HLY12		0	35	copper	copper-alloy flat-section curtain ring; diam. 25mm				1

HLY12		0	38	compos	ivory cutlery handle for knock-on-tang implement; tapering with slightly pistol-shaped end; L 90mm	late 17th to early 18th century			1
HLY12		0	42	copper	Copper-alloy coin; large penny; extremely worn and corroded; diam. 34mm	post-medieval		x-ray	1
HLY12		0	43	stone	narrow square-section hone of fine millstone grit; L 70mm				1
HLY12		0	94	bone	bone implement; sturdy tapering object with wider end slightly set back and with a wedge-shaped end; heavily polished from use; narrow end with transverse slot for ?thread; L 135mm; W 15mm			further identify	1
HLY12		0	128	iron	iron rotary key; oval bow; complete but corroded; L 10mm			x-ray	1
HLY12		0	129	iron	iron rotary ?key; small and heavily corroded; L 60mm			x-ray	1
HLY12		0	155	stone	square-section hone of fine micaceous sandstone, possibly from Wealden source; for use on finer tools; concave wear on three sides; L 85mm				1
HLY12		0	156	ivory	ivory cutlery handle for knock-on-tang implement; tapering with flat end; L 80mm	late 17th to early 18th century			1

HLY12		0	157	bone	one-piece bone comb; double-sided with fine and coarse teeth on either side; fragment only; ht. 35mm+				1
HLY12		0	158	bone	cylindrical bone container; fragment only with threading at both ends; diam. c. 28mm; L 80mm; ?syringe			further identify	1
HLY12		0	bulk	glass	window pane	?medieval			1
HLY12		0	bulk	iron	iron ?strap hinge; incomplete; W 15mm			x-ray	1
HLY12		0	bulk	iron	iron nails; four heavily corroded				3
HLY12		0	bulk	iron	iron nails; three heavily corroded				3
HLY12		0	bulk	iron	iron ?vessel; curved frgt only			x-ray	1

Appendix 8: Slag Assessment

Lynne Keys

Introduction and methodology

A small assemblage of material (weighing just over 4.1kg) was recovered by hand on site and from soil samples processed after excavation.

For this report it was examined by eye and categorised on the basis of morphology; a magnet was used to test for iron-rich material and to detect smithing micro-slags in the soil adhering to slags. Each slag or other material type in each context was weighed except for smithing hearth bottoms, which were individually weighed and measured for statistical purposes. Quantification data and details are given in the table below in which weight (wt.) is shown in grams, and length (len.), breadth (br.) and depth (dp.) in millimetres.

Number of boxes and types stored

The slag is stored in one shoe box-sized box. None of the slag is liable to be affected by current storage conditions.

Quantification table and explanation of terms

HLY 12 **(Holywell Priory) 142 Shoreditch Village West**

cxt	^s	slag identification	wt	len	br	dp	comment
55	1	burnt coal	9				
246		ferruginous concretion	86				and chalk lump
246		non-ferrous rivet?	12				
246		wall plaster/daub	80				with a wattle impression
288		ferruginous concretion	41				
353		undiagnostic	36				incorporates cinder, flake hammerscale & burnt coal fragments
415	7	burnt coal	4				
424	6	hammerscale sample	3				all are smithing spheres of different sizes, some distorted
424	6	mixed sample	283				undiagnostic, fuel ash slag, burnt coal, fired clay, cinder
424	6	mixed sample	488				< 2mm. Lots smithing spheres and occ. broken hammerscale flake, tiny fired clay, crushed shell, charcoal
424	6	mixed sample	901				burnt coal, cinder, fuel ash slag, some slagged stones; smithing spheres and hammerscale flake adhering to burnt coal & stones
460		undiagnostic	64				vitrified run on surface

489		burnt coal	17				
489		iron	13				round flat end plus a shank (?key)
500		ferruginous concretion	46				plus a nail
647		burnt coal	39				
651	10	burnt coal	16				
651	10	mixed sample	330				< 2mm. Mod. amount of smithing spheres and occ. broken hammerscale flake, tiny fired clay, crushed shell, charcoal
1134		burnt coal	6				
1246		mixed sample	80				undiagnostic runs, ferruginous concretions (with burnt coal, occasional flake hammerscale inclusions)
1272	114	smithing hearth bottom	258	100	60	35	coated with burnt coal, charcoal etc.
+ Bay 4		iron	8				flat one side: rounded on other
+ Bay 4		smithing hearth bottom	243	100	60	45	contains lots of hammerscale flake and spheres
+ Bay 4		smithing hearth bottom	368	105	65	40	
+ Bay 4		smithing hearth bottom	524	105	90	75	
+ Bay 4		undiagnostic	64				runny
+ Bay 4		undiagnostic	96				
							Total wt. = 4.115kg

Activities involving iron can take two forms; smelting or smithing:

Smelting is the manufacture of iron from ore and fuel in a smelting furnace. The products are a spongy mass called an unconsolidated bloom consisting of iron with a considerable amount of slag still trapped inside, and slag (waste).

Smithing involves the hot working (using a hammer) of the bloom to remove excess slag (primary smithing) or, more commonly, the hot working of one or more pieces of iron to create or to repair an object (secondary smithing). As well as bulk slags, including the smithing hearth bottom (a plano-convex slag cake which builds up under the tuyère hole - hottest part - where the air from the bellows enters the hearth), smithing generates micro-slags; these can be hammerscale flakes from ordinary hot working of a piece of iron (making or repairing an object) and/or tiny spheres from bloom smithing or high temperature welding used to join or fuse two pieces of iron. Hammerscale, because of its tiny size, is usually only recovered by taking soil samples from fills and deposits but it is very magnetic and its presence can be detected using a magnet; it is most prevalent (thickest) in the immediate area of smithing, i.e. in the vicinity of the anvil and between it and the smithing hearth.

Slag described as undiagnostic cannot be assigned to smelting or smithing either because of morphology or because it has been broken up during deposition, re-deposition or excavation. Other types of debris in an assemblage may derive from variety of high temperature activities - including domestic fires - and cannot be taken on their own to indicate iron-working was

taking place. These include fired clay, vitrified hearth lining and cinder. If found in association with iron slag they are almost certainly products of the process. Ferruginous concretions are made up of a re-deposition of iron hydroxides (rather like iron panning), enhanced by surrounding archaeological deposits, particularly if there is iron-rich waste present as a result of iron working.

Slag types and other debris present and the process(es) they represent

Slag type	Wt (g)	Process
smithing hearth bottom	1393	smithing
hammerscale	3+	smithing
undiagnostic	260	smithing
burnt coal	91	not diagnostic
ferruginous concretion	173	not diagnostic
iron	21	not diagnostic

Statistical data for the smithing hearth bottoms

	4 examples; total wt. 1.4kg range (g/mm)	mean	std. dev.
weight	243 - 524	313	130
length	100 - 105	103	3
breadth	60 - 90	63	14
depth	35 - 75	43	18

Key groups

Layer [424] in Phase 6;

Fill [651 of posthole [650] in Phase 5.

Discussion of the assemblage

The diagnostic slags are those of secondary smithing. One smithing hearth bottom was recovered from a Roman layer [1272], while three others were, unfortunately, were retrieved from unstratified deposits in Bay 4. The other stratified diagnostic slags in the assemblage were from (mainly) post-medieval features and consisted of hammerscale flakes and spheres indicative of both high temperature welding and ordinary hot working of iron.

Phase 2

One smithing hearth bottom was present in layer [1272].

Phase 3.2

Fill [1246] of cut [1247] contained a small quantity of undiagnostic slag runs, ferruginous concretion and occasional hammerscale flake.

Phase 5

Posthole [650] contained moderate quantities of smithing spheres and occasional pieces of broken flake hammerscale, Both are indicative of smithing in the vicinity, if not within the structure the posthole formed part of.

Phase 6

Layer [424], which is described as an occupation or industrial waste layer, was sampled and found to contain lots of smithing spheres and occasional pieces of broken flake hammerscale. It is not known whether this layer was within a building or structure but if it was the micro-slags indicate smithing probably took place here.

Significance of assemblage

The assemblage indicates secondary smithing probably took place on the site (on or near the features containing diagnostic slags such as hammerscale flakes and spheres and undiagnostic slags).

Importance – locally, regionally, nationally

The assemblage is of local importance.

Recommendations for further work

If further work towards publication is intended, distribution plans of features with slags will be required in order to attempt to locate the focus or foci of smithing activity (if possible). Information on any buildings with contained slag would be useful, as would details of any other finds that might be associated with iron working or other metalworking activity.

After publication the slag assemblage could be discarded.

Appendix 9: Architectural Stone Assessment

Mark Samuel

The Background of the Report

This report is based on a one-day visit to an outdoor store at Poplar on the 27th of April 2016. The stone had been stored in steel ship containers. Conditions were dry and bright. Stones were marked with string and labels, but the method of attachment and string type is highly vulnerable to disturbance and biodegradation. However, the PCA 'worked stone sheets' have been laboriously filled in, and a detailed photographic record was made of all Architectural Fragments (AF). These are useful but did not in themselves provide enough detail for an assessment. A direct inspection was therefore necessary.

The State and Storage of the Assemblage

Some AF appeared to have been cleaned, but others were obscured with dried-on dirt. This and burial by other objects subsequently placed in the containers made inspection impossible in a handful of cases. These items should be retained until proper examination is possible. Note that physical removal of the material for rejection has yet to be carried out. A list is provided of items that must be 'rejected' (X47; i.e. about a third).

General Points

The assemblage was heterogeneous: a residue of 55 AF originally retained on my recommendations in September 2015 and all parts of two in-situ column bases, as well as dressings deriving from the nave south ?portico and the nave south wall. A number of stone dressings had also been excavated since the 2015 visit. These needed inspection and where appropriate a justification for further analysis. The need to dispose of unnecessary retentions was however paramount.

The Purpose of the Report

The report summarises further recording and assessment needs. These should when complete perform the role of a 'substitute archive'. Given the uncertainties attending what any further work on the location of the priory will find, it is not possible to give much more than a formulaic (numbers-based) idea of publishing requirements. The degree to which AF can be discussed in tandem with the in-situ structures is uncertain for the same reason, but some possibilities are outlined here. It is desirable that the same 'integrated' approach is used employed in the MoLA publication (Bull *et al.* 2011).

The views given here are therefore provisional and only of limited use; they allow a certain amount of information at this stage of use in understanding the dating/development of the site. The picture may be very much affected by the completion of any future work on the site.

Selection and Recording Carried Out for this Assessment (Methodology)

Retention is usually judged by the presence or absence of 'shapelessness', recognisable orientation, mouldings or tooling marks). Items with less than three facets and lacking mouldings have not usually been recommended for further study. Simple chamfers and ashlars are not usually retained unless complete. These rules may be broken where unusual building stone, well-preserved tooling marks/masons' marks or an important context are recognised.

The main interest of any AF assemblage is the recovery of a coherent group of common provenance. This can be a variety of conditions - a re-use context, a contemporary act of demolition, or simple disposal of stones in the same pit. It is uncommon to find large in-situ features containing dressed stone performing its original purpose. The survival of such structures at Holywell priory gives it an exceptional importance. Conversely an isolated loose AF rarely provides much information other than a TAQ for the context that it is recovered from. The uncertainty of provenance, especially in an urban context, makes over-interpretation a hazard. Essentially, isolated AF serve the same role as other portable finds.

Note that no complete records of the AF has yet been carried out; the views given here are based on a rapid scan, with more detailed examination during the visit restricted to 'loose' material. The minimalist 'appraisal' approach of the loose items is only intended to convey a general idea of date and purpose.

Much reliance was set on a new photographic record, given the time limitations. The nature of the in-situ material is self-evident and the previous visit allowed the necessary understanding to be arrived at.

Supplementary Recording of in-situ Features

Two column bases formed part of the south nave arcade ([903] and [905]). Earlier excavation by MoLA recorded two similar features; better preserved but essentially identical (Bull *et al.* 2011, fig 32).

The information now available, including discoveries in the nave south wall, can be regarded as important new knowledge. The newly-uncovered column bases illustrate that the predictions made in the previous publication were broadly correct. The survival of one north arcade base introduces hard fact into the discussion concerning nave width, aisle width and other details only inferred from the MoLA excavation.

Written measurements of the architecture had not been made during the original MoLA excavation. I was therefore anxious to make a series of direct measurements of the nave during the 2015 visit. I also made in-situ records (including photography) of the ?portal jamb in the south nave wall. My additional records will hopefully supplement the existing records to allow a better understanding of this architecturally complex area.

No in-situ mouldings were observed in the gatehouse structure during the 2015 visit.

Architectural Fragments of Interest

Of about 90 items initially retained by site staff, 56 were retained by me for further study during the 2015 visit. Slightly fewer than a hundred additional fragments (94) had been added to the collection by April 2016. There were therefore a total of 150 fragments to be examined in April 2016. Forty-seven items are recommended for 'disposal' (see above for the criteria for such non-retention and see below for their numbers). Some AF retained during the original visit was disposed of at this stage. Of the remaining AF, ten retained items derive from the dismantled nave south wall; thirty from the base [905]; nine from the base [903]. Thirteen fragments were retained. These all derive from a single ?re-use context [514], while four derived from [600] and two from [599]. This leaves thirty-four isolated fragments deemed worthy of some measure of further study.

The Piers [903] and [905]

The 'new' Packstone arcade piers show that, as predicted in the 2011 publication (Bull *et al.* 2011), an alternating system of plain columns and compound piers continued without alteration towards the west front. There is no current evidence to suggest the new discoveries differed from the earlier ones, and they are relatively less well preserved. Alterations included the removal of base mouldings; apparently during the existence of the Priory.

The earlier analysis can be largely reprised. However, it is worth noting that the piers can now be demonstrated to be 4.246m from centre to centre (no attempt was made to directly measure this value during the 2006-7 excavation). This value is close enough to fourteen Statute Feet (13.93ft) to illustrate the use of the 'English Foot'. The recovery of several 'whole' measurements from the nave may allow a computer statistical analysis to recover the module employed. This has knock-on effects in understanding the design process of the Priory church.

The south Nave wall; contexts [1056+]

The enigmatic and highly complex architectural feature appears contemporary with the nave arcade. It seems to incorporate the elements of a portico jamb with a respond, perhaps

associated with a vaulted cloister. There is evidence of major alterations at various dates. Part of the structure owes its excellent preservation probably to an early ?rise in ground level. The areas of the feature that remained in use show severe abrasion/weathering as well as the replacement of the original portal jamb in the post-Dissolution period.

Supplementary recording is required to determine the original nature of the feature (see above).

Context [514]

Of the thirteen recognised mouldings, three are broadly contemporary with the later Priory church foundation (1190+) such as a bowtell. Two postdate this foundation period; being late 13th century in character. None seem to directly associate at this stage. A complex window jamb dates to around the mid 14th century.

Context [600]

This contains various 13th-century dressings including a polished Purbeck marble shaft, evidence for the use of this high-grade treatment in the church or its priory building. The presence of a conjoined label springer illustrates the existence of conjoined arched ?lancet lights in the 13th century. Mid 13th-century work is also illustrated by a scroll moulding string course.

Context [500] and isolated AF from individual contexts

A series of self-contained items are probably derived from individual architectural features associated with the priory. These are, by statistical probability, the dressings employed in the most extensive features - typically ashlars, string courses, quoins, scoinsons and chamfered plinths. A handful of small fragments derive from later windows or are funerary items such as fragments of stone coffin lids. No late (post-1340) medieval or post-medieval elements have been recognised. This paucity of later material reflects the situation in the MoLA excavation (Bull *et al.* 2011).

General Conclusions

For a full understanding of the in-situ structures it is desirable that the recovered elements are recorded on a 1:1 basis for interpretative and display purposes.

At the end of current fieldwork (excepting the in-situ structures) the assemblage is chiefly of use as dating evidence for building campaigns not otherwise witnessed by archaeological or documentary evidence. Some general observations may be possible about the stylistic

influences that shaped the priory architecture over the centuries. The AF also provides very broad TAQs for the re-use contexts they are recovered from (bearing in mind that an AF is unlikely to be re-used until at least a century or so has elapsed).

There is little prospect of directly using the recently-excavated loose material to directly enhance the understanding of the in-situ structures. It is however justifiable to make educated guesses about the employment of such features for illustrative purposes only (i.e. a recovered isolated string course may be used to supply detail in any enhanced reconstruction; this does not however constitute proof of such use).

The picture may be radically altered by any further excavation, because this may cover areas such as the south transept. If further in-situ features are revealed - or prolific re-use contexts found; the preliminary conclusions given above will be affected.

Analysis and Publication

The specialist section for the report is assumed to follow the same broad lines as the MoLA publication. It is necessary that a realistic provision is made for editorial liaison. It is possible to give all-inclusive estimates for such work, based on past reports on similar material. Note that MoLA 'worked stone recording sheets' will be used for consistency with existing records in the LAARC. The existing PCA Worked Stone Sheets/photographs therefore take on broadly the significance of the old MoL Accession Cards in that they serve as a curatorial rather than analytic purpose.

Further work will consist of further assessment of the assemblage and publication drawing/writing/editing/photography. The final publication images will be provided in a draft publication state as AutoCAD drawings, but final conventions would have to be decided in consultation

Petrological examination may be required for some of the assemblage.

Curatorial work required

Before I can deal with the material, the following must be carried out on the retained items only (see below for discard numbers) and any items that may be recovered from future fieldwork (after an on-site discard process):

- Cleaning should be carried out using only a hose/soft brush, plastic picks. Stones marked as 'paint' on the label have specific conservation requirements and should not be hosed. Do not use a pressure spray without consultation.

- AF should be transferred to cardboard boxes where possible when thoroughly dry. If plastic bags/boxes are used, provision should be made for 'breathing' (note: newspaper padding allows breathing and prevents abrasion).

- Larger AF should be stored on timber pallets, laid on flat surfaces.

- WSNs should be written on the fragments with fine permanent marker pens in unobtrusive positions not subject to abrasion. 'Finds-type' Indian ink/varnish marking is very vulnerable and is not suitable for AF.

- Labels should be attached with polyester parcel string (a sample can be provided if necessary) as this is not bio-degradable and is least prone to slipping off

- There is no need to go overboard in the descriptions on the 'Worked Stone list'. Dimensions should be roughly recorded and digital images made of each item from at least two directions, with details written on a separate visible whiteboard or similar. A scale is desirable. 'Square-on' or only slightly oblique views are best.

Items to be 'discarded' (see above)

001	002	003	004	006	007	008	010	011	013
014	017	021	022	023	034	036	040	062	069
079	080	085	097	101	110	113	114	115	116
117	118	119	120	121	122	124	127	128	130
133	136	137	141	142	143	148			

Bibliography

Bull, R., Davis, S., Lewis, H., Phillpotts, C. with Birchenough, A., 2011. *Holywell Priory and the development of Shoreditch to c. 1600, Archaeology from the London Overground East London line*. Museum of London Archaeology Monograph 53.

Appendix 10: Building Material Assessment

Kevin Hayward

Introduction and Aims

Thirty-three crates and two shoe boxes of ceramic building material, stone and mortar were retained from the evaluation and assessment phase at the site.

This large sized assemblage (4801 examples 961.4kg) was assessed in order to:

- Identify (under binocular microscope) the fabric and forms of the Roman, medieval and post-medieval ceramic building material including whole brick samples, floor tile, floor tile, drain; and mortar to provide spot dates and fabric types.
- Review the fabric and decoration of a large in-situ Westminster floor tile surface, which was subsequently removed and conserved. (see Appendix 11)
- Identify the geological character and source of any examples of worked stone not previously seen in the accompanying moulded stone report and index (see Samuel, Appendix 9).
- Create catalogues for ceramic building material (both assessment and evaluation) HLY12cbmall.accdb and stone - evaluation (HLY12stoneeval;mdb) and assessment (HLY12stone.accdb)
- Made recommendations for further study.

Methodology

A site visit was conducted on Monday 5th November 2012 at evaluation stage, to provide spot dates for some of the major structures, collect mortar samples and make recommendations for a field sampling strategy of building materials. Further visits on the 8th May and 15th May 2015 were carried out during the excavation. Here on-site processing of the bulky whole brick samples was undertaken as well as acquainting the staff with the types of stone that would be expected at the excavation. The sampling strategy, formulated at evaluation stage, required a minimum of two whole brick samples to be taken for each major structure (unless there was more than one fabric type). Representative examples of stone and tile were also retained from each context.

One further facet was to examine the fabric and review the photographs of a large in-situ Westminster floor tile surface and make comparison with existing publications of 13th-century floor tiles in London (Betts 2002), including Holywell Priory (Betts 2011).

The application of a 1kg mason's hammer and sharp chisel to each example ensured that a small fresh fabric surface was exposed. The fabric was examined at x20 magnification using

a long arm stereomicroscope or hand lens (Gowland x10). Matches then made with the London fabric collection

Ceramic Building Material 4746 examples 853kg

Roman 182 examples 15kg

Very little Roman material is present accounting for just 1.8% of the entire assemblage.

Daub *3102* 25 examples 436g

It was not possible to ascertain whether this small group of daub was Roman or medieval in origin, as it is often intermixed with both Roman brick and tile and glazed peg tile. Essentially the daub shows signs of burning and has an orange earthy fabric. Most of the material concentrates in [387] [415] [424] [428] [436] as well as [651]. Its presence merely attests to dumped wattle and daub material once used in timber-framed constructions to the north of the town wall, perhaps collecting in boundary ditches that criss-cross this area.

Roman Tile and Brick 157 examples 14.6kg

Distribution and Condition

The character of the Roman ceramic building material assemblage is largely unremarkable, often being found in a broken up, abraded and reused condition, dispersed and largely intermixed with 12th-and 13th-century medieval peg tile. No mortar and opus signinum has survived. The condition, fabrics and forms compare favourably with existing studies in this area of Shoreditch, beneath the footprint of Holywell Priory (e.g. Betts 2011, 149 Area A), where land use at this time was rural, with background building material collecting in boundary and drainage ditches quarry pits and probable manure spread. With the exception of one tile, all was recovered from the assessment phase of the excavation. Just Roman Tile and Brick were found in the following contexts (Table 1).

Context	Fabric	Form	Number	Spotdate
422	3238	Roman Silty tile fragment	1	71-100
428	3102; 2459a; 3009	Small group of Roman tile, tegulae, imbrex brick and daub	24	100-160+
447	3023; 3006	Roman imbrex and tegulae early	3	50-160
465	3006, 3009	Imbrex and Roman tile	2	100-160
473	3006	Abraded Roman tile	1	50-160+
478	2459b	Late Roman tegula	1	120-250
480	3054	Hampshire grog Roman brick	1	70-140
511	2459a	Roman tile	1	50-160+
990	3102	Daub	2	1500bc-1600
1051	3050	Late Roman brick	1	140-230
1335	2815	Roman tile	9	50-160

1343	24522; 3028	Roman silty and sandy fabrics reused box flue comb and tile	6	55-160
1348	2452, 2459b	Late and early Roman tile and brick	4	120-250
1371	2459a	Roman tile and tegulae	10	50-160

Table 1: list of contexts with just Roman Ceramic Building Material

Most relate to silty clay layers in areas 100/265 and 100/200 that probably form part of the Roman landscape [465] [1371] and others like the made ground for the priory church e.g. [447] are clearly later.

Fabrics

Fabric	Kiln Source	Date Range	Weight Kg	%
2815 Early Sandy Group Red sandy 2452; 2459a 3006	Tileries between London and St Albans along Watling Street	50-160	10.1	69.6
2454 Eccles Group Cream Yellow Sandy	North-West Kent - River Medway	50-80	<0.1	0.1
3023 Early Radlett Group 3023; 3060 Iron Oxide Rich	Radlett - Hertfordshire	50-120	0.2	1.1
Weald Silt Group 3018; 3238	Weald area south of London	60-200	0.2	1
2459b; 2459c Late Sandy Group	North-east London and Essex	120-250	2.1	13.9
West Sussex Grog 3054	West Sussex	70-140	1.3	8.9
Hampshire “Hartfield” Group 3009; 3018	Possibly kilns Braxells Farm, Hampshire	100-120	0.7	4.8
Reigate Fabric Group 3050	Reigate Surrey	140-230	0.1	0.9
Calcareous fabric 350	Coastal southern or south-east England	140-250	<0.1	0.1
Red Silty Fabric *3500*	Unknown	50-200	5.3	0.3

Table 2: Roman fabric type, source, date of manufacture and weight (%) (all periods) Holywell Priory HLY12

By fabric type (Table 2) the early sandy fabric group *2815* (AD 50-160) is especially common, accounting for above two-thirds by weight, a figure matched or exceeded throughout Roman London and Southwark. It is noticeable, however that other early common fabrics for London, e.g. 3023, *2454* and silty *3238*, are largely absent from this site. Instead the grog rich West Sussex (AD 70-140) mainly as thick brick and clay inclusion Hampshire Braxells Farm (AD 100-120) form significant components. It may be that the proximity of Ermine Street, has allowed easy access of these more distant tile and brick kiln sources south of the river, but why so little Kent material is present cannot be determined.

There are some late Roman fabrics, especially the late sandy group *2459b* (AD 120-250) the second most common fabric (13.9%) and a Reigate fabric too. These two tater Roman fabrics have previously been recorded in this area (Betts 2011, 149)

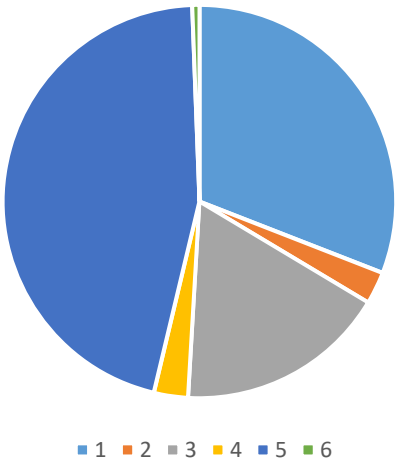
Form

Figure 1 illustrates the relative proportions of each major element of Roman Ceramic Building Material at Holywell. What is immediately apparent are how so poorly represented the curved imbrex (2.9% weight) and flanged tegulae (16.2% weight) components are, with flat thick bricks (31.4%) and especially flat tile (46.5% weight) far more important. This may suggest selective recycling of the flatter elements from Roman demolition debris *away* from the site for incorporation into the early fabric of the 1150 church, a feature of early churches at for example Bermondsey Abbey and throughout southern England (Eaton 2000). Selective stockpiling of Roman material in the immediate surroundings would leave notable concentrations of the neglected curved elements.

However, quantities of brick are very small, when compared with Bermondsey and they are largely fragmentary, with only one brick fragment [265] incorporated into a structure. From this we may deduce that very little Roman tile and brick was incorporated into the actual priory a reflection perhaps of the paucity of *spolia* and demolition debris this far out in Shoreditch.

Box flue tiles are limited to just two very small fragments of late first to early-mid second-century coarse combed forms from [400] [1343]. Only two other items are worthy of further comment a near complete *opus spicatum* or paving brick reused in early post-medieval demolition layer [472], along with other more unusual items of medieval floor tile. There is also a brick with a hob nail footprint from a 12th/13th-century layer [1077].

Figure 1 Roman form weight % Holywell Priory



1= Brick 2= Opus Spicatum 3= Tegulae 4=imbrex 5= Undiagnostic Flat Tile 6 Box Flue Tile

Medieval and Early Post-medieval

It has been necessary to subdivide up the post Roman ceramic building material assemblage at Holywell Priory into two groups. First, an earlier medieval (1150-1450) grouping associated with the construction and development of both the early and main priory, where stone (see Samuel Appendix 9) was the primary building material as walling rubble and architectural embellishment with floor tile and roofing tile forming a lesser (though still impressive) component. Then a later medieval to early post-medieval grouping characterised by the widespread use of large glazed Flemish floor tiles, the introduction and reuse of construction and moulding red brick and peg tile. This grouping represents an upsurge in wealth of the priory reflected in the embellishment of chapels by wealthy patrons but also spans the post Dissolution period where the priory itself is rebuilt into the structure of wealthy Tudor merchants. .

Earlier Medieval (1150-1450) 3751 examples 321.8kg

This section concentrates on the dumped medieval ceramic building material as well as that included within the masonry walls of the priory. Some mention too will also be made of the medieval 1250-1310 Westminster floor tile surfaces [567] [987] [1282] which accounts for well over half by weight 177kg (55%) but for a more detailed considered review please consult Appendix 11. Unlike the stone assemblage only moderate quantities of medieval ceramic building material were recovered; these were dominated by roofing tile and especially flooring tile. Medieval structures with ceramic building material in are listed below (Table 3). A fine white lime mortar (Type 11) was used to adhere the Westminster Floor Tile surfaces, whilst the yellow-brown Type 8 mortar is associated with the foundation walls, with a tufa rich gravel mortar (Type 2a) occasionally present in some structures [961] [962].

Context	Fabric	Form	No.	Date Range	Spotdate CBM	Mortar Date
567	2892; 2587	Very large group of Westminster floor tile with T11 white mortar and one medieval peg tile	7	1240-1450	1250-1450+	1250-1310
702	2892	Plain Westminster floor tile fragments T11 backing	15	1250-1310	1250-1310	1250-1310
790	2587; 2274	Medieval peg tile with brown iron gravel mortar T8	7	1080-1450	1240-1450	1150-1500
835	2586	Medieval late peg tile T8 mortar attached	2	1180-1800	1180-1600	1150-1500
838	1678; 3076	Plain medieval Penn tile and calcareous floor tile glazed	2	1350-1550	1350-1550	No mortar
900	2271; 2587	Medieval peg and curved roofing tiles reused in T2 mortar	7	1180-1800	1240-1450+	1400-1600

958	2274	Early medieval peg tile with T8 medieval yellow gravel mortar	4	1080-1350	1080-1350	1150-1500
961	2271; 2276; 2587	Medieval and early post-medieval peg tile reused T2a tufa gravel (was	12	1180-1900	1480-1700	1400-1600
962	2274; 3031	Flanders tile, and early organic peg tile possible used in T2a	3	1080-1450	1350-1450+	1400-1600
987	2892	Very large group of Westminster floor tiles	???	1250-1310+	1250-1310+	1250-1310+
1006	2587	Medieval peg tile reused	2	1240-1450	1240-1450+	Mortar not clear
1031	2459a; 2271; 2274	Roman Tile and medieval peg tile in medieval T8 brown gravel mortar	11	50-1800	1180-1450	1150-1500
1062	2271; 2276	Medieval and early post-medieval peg tile traces of relict T8 medieval mortar	13	1180-1900	1480-1600	Traces of relict 1150-1500 mortar
1119	2271	Medieval peg tile reused	1	1180-1800	1180-1450+	Mortar not clear
1169	2271; 2587	Medieval peg tile T8 brown gravel mortar	12	1180-1800	1240-1450	1150-1500
1184	2271; 2274	Medieval peg tile T8a organic core	16	1080-1800	1180-1450	1150-1500
1282	2892	Very large group of Westminster floor tile only triangular yellow and green plain normal floor tile T11 mortar backing one	6	1250-1310	1250-1310+	1250-1310+
1373	2271; 2271nr2272	Medieval peg tile	10	1135-1800	1180-1450	No mortar

Table 3: Medieval Structures with CBM in HLY12

Floor Tile 204 examples 28.7kg 573 examples (177kg) 777 examples (205.7kg)

Westminster Floor Tile (1250-1310) 752 examples 198.6kg

As well as the extensive Phase 3.3 medieval Westminster floor tiled surface [567] [987] [1282] (see Appendix 11) with its 573 examples (177kg) of glazed square and triangular tiles in fabric *2199*, including 22 designs, there were appreciable quantities (179 examples 21.6kg) of dumped floor tile. One of these may be the traces of another 1250-1310 tile surface [702]. Again all are of dimensions 112mm x 112mm x 24-27mm consistent with the Westminster Floor Tile Design. Most were dispersed although small clusters were present from [1008] [1109] [1117] [1229] [1231] [1347].

Patterned Designs

A total of 10 designs (17 examples (Betts 2002) were identified including 6 unclear patterns (Table 4). Most of these were present in the *in-situ* pavement [567] [987] [1282] (see

Appendix 11). The exception is the inward facing rhomb design W49 and branched design W99.

Betts code	Description Design	Number	Context Number	Present in Floor Tiled surface
W35	3 Lions shield	1	[1341]	Seen
W37	Shield design 3	1	[1038]	Seen
W38	Shield design 4	2	[1109] [1231]	Seen
W48	4 pairs of inward facing triangles	1	[1008]	Seen
W49	Inward facing rhombs	1	[1347]	Not seen
W76	Large fleur-de-lys	1	[1347]	Seen
W81	Variant on fleur-de-lys	1	[1003]	Seen
W99	Branched design	1	[246]	Not seen
W116	Large petal design	1	[1008]	Seen
W124	Four small petals	1	[1038]	Seen
Not clear	Various	6	[228] [271] [377] [567] [1167] [1297] [1347]	Probably seen

Table 4: Westminster Floor Tile Designs HLY12 from *ex-situ* contexts

Plain floor tile

Square

Complete and fragmentary examples (98) of brown and yellow glazed floor tile which may have formed the borders of groups of designs (See Appendix 11).

Triangular

A small group (9) of black and yellow triangular glazed designs would have been used on the border edge. One example is very small [1082] suggesting the incision of a square tile into four with a further example [1231] with a diagonal incision mark, which indicates that the tile had not been fully incised or cut into two triangles.

Penn Tile 1350-1390 20 examples 4549g

Fabrics *1810; 1811; 2894; 3076*

The shallower (111mm x 111mm x 19-21mm), sharper glazed 14th-century decorated floor tile manufactured at Penn, Buckinghamshire (1350-1390) is by comparison far less well represented (22) at Holywell Priory. This was also a feature of the medieval floor tile observed

at earlier excavations (Bull *et al.* 2011, 63) where they concentrate in a floor bedding deposit at the centre of nave. Only seven had a design (Table 5), three of which matched with Eames (1980) catalogue.

Eames code	Description Design	Number	Context Number	Fabric code	Present in Holywell Priory 2011 excavations
1843		1	[401]	1810	Not seen
2539		2	[1069] [1123]	1810 ; 3076	Not seen
2837	Floral pattern	1	[786]	1811	Yes - centre of nave
Not clear	Various	3	[318] [786] [946]	1810	Probably seen

Table 5: Penn Floor Tile Designs HLY12 from *ex-situ* contexts

Most of the Penn floor tile was in a fragmentary condition, indicating that unlike the Westminster flooring which still remained *in-situ* these floors had been dismantled. There were examples of yellow, forest green and brown glaze with a rare example of a green triangular tile (150mm x 121mm x 21mm) from fill [1034]. Examples were reused in wall [401] [946] and examples were also present from possible relict floor surfaces [286] [383] [838].

Local *2320* 1300-1500 5 examples 2.3kg

Traces of sandy locally produced green and yellow glazed floor tile were identified from a Flemish floor tile surface [539] and [1034].

Early Calcareous Floor Tile *1678* 4 examples 1.1kg 1350-1450

Four plain glazed small (111mm x 111mm x 28mm) calcareous provide the earliest evidence for Flemish imports and used. These smaller earlier forms date from the mid 14th to mid-15th century and have been recorded at earlier excavations at Holywell Priory (Betts 2011). They are present at masonry lining to cut [493], possible floor [890], demolition layer [1048] and grave backfill [1393].

Peg Tile 1472 examples 105.4kg

2271 (1180-1450); *2271nr2272 (1135-1300); 2272* (1135-1220); *2273 (*1135-1220); *2274* (1080-1350); *2586* (1180-1600); *2587* (1240-1450); *3090* (1200-1500); *3205* (1200-1500); *3498* (1100-1400)[1]

Examples of thin, often abraded medieval peg tile characterised by coarse moulding sand and glaze are especially common. These are often present in a variety of fabrics as levelling courses within the walling bonded by the red-brown sandy mortar Type 8 (Table 3), and more often than not as dumped roofing material. The latter are characterised by two nail holes with

[1] Hard biscuit coloured calf brown fabric seen at Stratford

which to affix nails or wooden pegs, forming a pitched or slanting roof. The fact that there was almost no stone roofing tile recovered (North Wales slate; Horsham stone), would suggest that the main priory roof was tiled with ceramic peg, curved and bat tile (see below).

The very common London sandy 2271 and slightly later iron oxide rich 2587 fabrics dominate. Of interest in terms of the development of the initial mid-12th century priory are the appreciable quantities of earlier fabrics such as *2274* (1080-1350) 17.1kg (16.6%) and coarser thicker sandy black glazed *2271nr2272; 2272* and *2273* (1135-1220) 9.4kg (8.9%). Fabric *2274* with its soft organic core and scattering of white shell fragments rather than moulding sand is a common fabric in medieval buildings outside of London to the north and east (e.g. Barking Abbey, Stratford). Likewise the rare biscuity coarse *3498* (1100-1300?) is present here and at Barking, indicating the presence of peg tile kilns to the north and east of London.

Bat Tile 10 examples 566g
2272; 2273; 2274
The presence of a small quantity of much thicker bat or shouldered tile, the preferred method of laying and securing in earlier medieval roofing despite the fact that it produced a roof twice as heavy as ordinary peg tiles (Schofield 1995, 96),may point to use in the earlier mid 12th-century church. The fact that all the fabrics are early *2272* and *2274* may reinforce this link but quantities are very small and may merely represent background scatter.

Curved or possible Hip Tiles 31 examples 3360g
2586; 2587; 3498; 2271nr2272; 2271
A small group of curved thickly glazed roofing tile in a number of fabrics had not been identified at Holywell Priory until now. They are thin (15mm) often asymmetric and often characterised by an unidentified coarse sandy red iron oxide fabric *3498* with inclusions of grog and clay with large tiles concentrating in a possible floor make up layer [812] that latter being finger pressed. We may infer from this that this was a local tilery outside of London (north?), manufacturing specialist curved (possible hip tiles) for medieval buildings.

Brick 8 examples 6602g
3031 (1350-1450)

Small white Flemish brick imports or *Flanderstiles* (Ryan 1996) are a frequent component of late medieval monastic renovation throughout London including Merton Priory (Betts 2007, 213), Charterhouse (Betts 2002, 99), St Mary Spital (Crowley 1997, 200) St John Clerkenwell (Pringle 2004, 237) and Holywell Priory (Betts 2011, 151) and occasionally much further afield in Yorkshire (Coppack 1990, 55). They are often associated with drainage such as their use in culverts and well houses (Hayward in prep.). The examples from the current excavations at Holywell vary widely in size from very large flat forms (235mm x 111mm x 45mm) from stone

wall [962] to much smaller wedge shaped designs perhaps with traces of paint (141mm x 93mm x 49mm) identified in a grave fill [1052] perhaps once used as an arch brick in the culvert. Other examples turn up in late medieval [741] and post-medieval walls [372] or renaissance demolition deposits in the area of the chapel [472] [479].

Wall Plaster 4 examples 71g

Fragments of painted wall plaster in a pink and white fresco on a very white mortar backing from a 17th-century ground raising layer [9] is likely to represent medieval plaster from the interior wall of a monastic building (Bull *et al.* 2011, 59).

Later Post-Medieval/Early Post-medieval (1450-1650) 1270 examples 535.3kg

This section investigates the form and fabric of much larger later medieval to early post-medieval grouping of ceramic building material. It forms part of a building programme that is essentially mid 15th to mid 16th century in date, characterised by very large plain glazed floor tile surfaces, vaulting bricks and red brick walls with far less stone. This grouping represents an upsurge in wealth of the priory, reflected in the embellishment of chapels by wealthy patrons but also spans the post Dissolution period where the priory itself is rebuilt into the structure of wealthy Tudor merchants.

Late medieval early post-medieval Floor Tile 598 examples 239.4kg

Fabric and Form

Over 25% by weight of the ceramic building material from the entire assemblage at Holywell Priory consists of complete or partially complete plain glazed floor tile, whose size and fabric conform to a late medieval to early post-medieval date (1450-1550). At least 237kg of these are of Flemish origin either speckled with white calcareous fragments (*Flemish calcareous*) or with layers of inclusions of fine yellow silt (*Flemish silt*). Most are pointed by a primary white low density concretionary gravel type mortar (Type 2), different to the finer white mortar used to point the Westminster Floor Tile surfaces (Type 11). This suggests that most were used during one phase of building, although occasionally they are pointed by a very fine pale cream sandy mortar (Type 9) [878]. Four sub-types of floor tile can be identified.

a) Large, complete thick plain glazed Flemish Calcareous Floor Tiles 1678; 2323; 2497 (1450(1480)-1500) 240mm x 240mm x 27mm thickness, with others 32mm thick or 36mm thick in yellow and black glaze (50:50) and arranged in a chequerboard fashion. Especially prevalent in floor tiled surface surrounding the fireplace [393] and in portico [539] and also the dissolution dump [398]. Tiles of these dimensions typically post-date 1450, although earlier excavations (Betts 2011) date these from1480 to 1550.

b) Large thick plain glazed Flemish Silty Floor Tile *1977; 2850; 3063* (1450-1600) Not as common, as the large a calcareous group and more often than not in a fragmentary condition,

these Flemish yellow, black glazed silty floor tiles continue to be manufactured up to 1600. They form a smaller component *c*. 5-10% to the tiled surface surrounding the fireplace [393] and the portico (539), but are more common (33%) in the tiled surface in the portico [539]. When complete they are of a very similar (245mm x 245mm x 29mm) though not identical size to the calcareous floor tiles.

c) Very thin plain glazed Flemish Silty Floor Tile *1977*; *2850* (1450-1500) 4kg

Distinctive, very well made thin (18-22mm) brightly coloured (yellow cream; bottle green; variegated light to bottle green) Flemish silty tiles with very fine moulding sand were found in discrete locales within the excavation. These include the backfill to robber cut and related features in Area 100/260-265 [246] [268] [273] [307] [385] or re-used in walls [514] [946] and floor make up? [445] and floor tiled surface [950] in Area 100/105/245 (Table 6). None of the other very large Flemish floor tile surfaces had these smaller tiles. Tiles conforming to these dimensions can be dated to 1450-1500. Quantities are small, however, (24 examples 4kg) and absence of any definable mortar further hinders correlation (if any) with the larger tiles.

d) Large brown glazed (without slip) Local Floor Tile *3065* 12 examples 2.1kg (1450-1500)

From the same area around the chapel [457] where the moulded brick was identified are a small group of well-made brown plain thick glazed floor tile without any slip. The fabric is very sandy and is comparable to the brick fabric *3065*. They are like the Flemish import type c, very thin (18mm) and are probably of a similar date but of local manufacture.

Below (Table 6) are listed the floor tiled surfaces at Holywell Priory, where the floor tile size and fabric conforms to a post 1450 to 1550 date.

Context	Fabric	Form	No.	Date Range	Spotdate CBM	Mortar Date
384	2323; 2850; 3105	Flemish calcareous and silty floor tile; Kentish ragstone rubble material	6	50-1600	1450-1600	Mortar unclear
393	2323; 1678; 2850	Very large group of complete and near complete glazed Flemish calcareous floor tile backed with a T2 pebbly chalky white mortar. Just one Flemish silty floor tile typically 240mm x 240mm x 32mm sometimes 37mm rare 27mm	22	1350-1600	1480-1550	1400-1600
449	1678	Flemish calcareous glazed floor tile	2	1350-1450	1480-1550	No mortar
482	2850	Large complete glazed Flemish silt floor tile	1	1450-1600	1480-1550	Mortar not clear
539	2199; 2320; 1678; 2323; 2850; 2276; 3106	Large group of medieval floor tile Westminster one, one local, majority Flemish calc glazed and occasional Flemish silt; early post-medieval peg	68	50-1900	1480-1550	1400-1600 Note also relict Type 11 (1250-1310 mortar

		tile T2 mortar also T11 relict white mortar on back of the Westminster Floor Tile with a base of Hassock stone				on the back of the Westminster Floor tile
878	1678	Flemish calcareous floor tile glazed Type 9 mortar fine brown	1	1350-1550	1480-1550+	1450-1700
950	1678; 2323; 3498;; 2850; 3030; 2276; 3107; 3105	Early post-medieval peg tile, Flemish calcareous and silty floor tile, late medieval brick curved medieval glazed roofing tile T2 mortar present, Kentish ragstone rubble, Reigate stone ashlar	17	50-1900	1480-1550	1400-1600
951	2323	Large group of floor tile all Flemish calcareous glazed backed with T2 mortar	7	1350-1550	1480-1550	1400-1600
985	1678; 2323	Calcareous glazed Flemish floor tile one triangular backed by T2 mortar	13	1350-1550	1480-1550	1400-1600

Table 6: Late medieval to early post-medieval Floor Tile Surfaces HLY12

Tin Glaze Floor Tile *2196; 3067* 16 examples 2.2kg

There are some mid 16th-century painted floral Antwerp designs including a complete 138mm x 138mm x 17mm thick unstratified example (Betts & Weinstein 2010 Design 28) and three different bright yellow and bright blue floral and berry designs from a late 17th-century roof tile dump [343].

Locally made 17th-century Pickleherring floor tile from a floor make up layer [286] and a mid 17th-century fire deposit [387] (1618-1650) was recorded. This was comparable to no.94 and 95 of Betts & Weinstein (2010). There was also a probable Rotherhithe design also from the late 17th-century roof tile dump [343].

These groups are likely to have embellished the flooring and maybe the fireplace surrounds of the wealthy 16th and 17th century buildings.

Brick 163 examples 215.6kg

3033; 3046; 3065; 3039 (1450-1700)

Robust red construction brick made out of the local brickearth clays which underlie this part of north London are a feature of this transitional late medieval / early post-medieval building programme within the structure of Holywell Priory. Their survival in many cases, however can be attributable to their extensive reuse in later 17th to early 18th-century structures and even later 18th- and 19th-century foundations of the residential houses.

First, are a group of very large bricks up to 250mm x 127mm x 54mm 3-3.5kg) especially from evaluation structures [14] [54] but also [318] [327] [365] [409] [459] [479] [514] [619] [894]. What is of interest here is that when found in a primary context that are often bonded in a T2 or sometimes at T9 mortar rather than a Type 1 mortar, characteristic of most of the smaller red bricks (see below Table 7). These larger bricks had already been noted before at Holywell

Priory (Betts 2011, 151) and comparison was made with other examples from London in the walls of the early 15th-century proto undercroft at Billingsgate (Betts 1991) but also Lincoln's Inn Old Hall 1489-90. It seems likely given the identical character of the mortar type with those found with the Flemish floor tile surfaces that the later post 1480 date is preferred. These bricks also are broadly similar in size with the earliest (Early 16th century) Wolsey size bricks from Hampton Court.

Smaller bricks (230mm x 105mm x 55mm) especially fabric *3046* where they have not suffered subsequent reuse and still remain incorporated into the primary structures most are bonded with a soft calf brown lime mortar with chalk lumps (Type 1). These are probably later Tudor structures perhaps introduced to the house of an aristocrat e.g. Earl of Rutland after the Dissolution. These structures are listed below (Table 7).

Context	Fabric	Form	No.	Date Range	Spotdate CBM	Mortar Date
7	3033; 3046; 3101	Narrow and wide Tudor-225x120x58 Stuart red bricks pointed in a soft brown mortar T1	5	1450-1700	1450-1650	1450-1650
8	3033; 3101	Crinkly wide Tudor bricks pointed in a soft brown mortar T1	2	1450-1700	1450-1650+	1450-1650
56	3033; 3101	Very large wide (240 x 120 x 54mm) Tudor red brick pointed in a soft brown mortar T1	5	1450-1700	1450-1550	1450-1650
240	3031; 3033	Complete Flanderstile brick and early post-medieval brick	2	1350-1700	1450-1650	No mortar
319	3033	Early post-medieval brick no mortar	1	1450-1700	1450-1700	No mortar
430	1678; 2323; 3033	Flemish calcareous floor tile and complete Tudor/Stuart bricks T1 mortar only on bricks	21	1350-1700	1480-1550+	1450-1650
452	3030; 3046	Late medieval brick covered in T2 mortar and early post-medieval Tudor bricks complete with T1 mortar	3	1400-1700	1450-1600+	1450-1650 with some earlier 1400-1600 mortar still attached to brick fabric 3030
468	2271nr 2272; 3033	Early medieval peg tile fragments 4 large Tudor/Stuart bricks T1 mortar very thick and large. Early	5	1135-1700	1450-1550	1450-1650
474	2271nr 2272; 3033	Early medieval peg tile and two complete Tudor BricksT1 mortar	3	1135-1700	1450-1700	1450-1650
476	3033	Complete Tudor bricks T1 mortar	2	1450-1700	1450-1700	1450-1650
490	2271; 2274; 2276; 3033	Herringbone wall, medieval and early post-medieval peg tile and Tudor brick T1 mortar	14	1080-1900	1480-1600	1450-1650

492	1678; 2850; 3033	Flemish silty and early small calcareous glazed floor tile, Tudor red brick traces of T1 mortar	3	1350-1700	1450-1700	1450-1650
560	3033; 3046; 3065; 2274; 2276; 2587	Medieval and early post-medieval peg tile, Tudor relict T8 mortar on peg tile but also T1 calf brown on bricks possible T7 mortar top of 3046	8	1080-1900	1480-1700	1450-1650 with relict T9 medieval gravel mortar (1150-1500)
597	3033	Tudor Red possible T1 mortar	1	1450-1700	1450-1700	1450-1650
599	2323; 1678; 2276; 3033	Flemish Calcareous glazed floor tile, early post-medieval Tudor brick, and peg tile T2 mortar on back of floor tile	7	1350-1900	1480-1550	1400-1600
619	2271; 2276; 3030; 3033	Early post-medieval peg tile and brick, reused medieval peg tile and heavily vitrified 3030 possible kiln furniture	4	1180-1900	1480-1800	Mortar not clear as vitrified
728	3033; 3065	Early post-medieval bricks traces of T1 mortar but also a Victorian T5 Roman Cement?	2	1450-1700	1450-1700+	
877	2276	Early post-medieval peg tile	1	1480-1900	1480-1700	Mortar not clear
894	2323; 2271; 3033; 2586	Medieval peg tile, Flemish glazed calcareous floor tile and Tudor brick medieval peg tile sandwiched in a mortar T2a evidence for T9 mortar at base of brick	4	1180-1800	1450-1700	Mortar 1400-1600 T2a Tufa As 786 also t9 Mortar on brick
900	2271; 2587	Medieval peg and curved roofing tiles reused in T2 mortar	7	1180-1800	1240-1450+	1400-1600

Table 7: Late medieval to early post-medieval Brick Structures HLY12

Moulded Brick 17 examples 7851g

3046; 3065 and 3039 [1450-1700]

Restricted to demolition layers in areas 100/240-24 [472] and especially [479] are a group of still crisply dressed moulded bricks in the same local sandy fabric groups as the larger moulded brick but pointed in the same primary white low density concretionary gravel type mortar (Type 2) as that used to back the floor tiled surface surrounding the fireplace [393] and the portico [539]**,** suggesting that the brick constructions and these floor tiled surfaces may be contemporary. Most are small (400g) octagonal shaped cusped elements with occasional evidence for plaster and paint cover, splaying out thicker and carved in their shape by sharply defined *c.* 18-22mm wide chisel markings. Their overall shape suggest that they form a number of interconnecting vaulted bricks to support a ceiling perhaps in a chapel associated with the later medieval to early post-medieval embellishment of the priory. Such vaulting bricks are rare in London medieval priories, and apart from the occasional example are usually associated with Teutonic order late medieval castles embellishment. A good example of this are the 15th- and 16th-century vaulting bricks associated with the Livonian order Grand

Masters residence in the castle at Cesis, Latvia (Hayward in prep.). It may be that a wealthy patron or merchant who lived within the priory may have adopted fashionable continental ideas and even craftsmen with which to embellish the part of the priory renovated or extended by him.

The ends of some of the larger T-shaped bricks are identical in width and heights to conventional Tudor bricks used in the walling from this period (see above) and that they have been worked from the standard rectangular brick form, something also observed from the Teutonic order bricks or specials.

Peg Tile 500 Examples 59.5kg
2276 (1480-1900); *2271* (1400-1880); *2586* (1400-1800);
Curved roofing tile 3 examples 308g

Another feature of this transitional period were the enormous quantities of poorly made unglazed peg tile in the very common London fabric *2276* (1480-1700), although other fabrics featured, e.g. 2586. Most of these, were undoubtedly used as roofing slats. With a majority pointed in the same Type 1 brown mortar as the smaller Tudor Brick which means that they date from between 1480 and 1650. Others, however, are bonded in the white type 2 mortar.

Although most were probably used as later medieval roofing tile, e.g. [343] [472] [479], at least one floor from Phase 4 was covered in these peg tiles [877], whilst complete peg tiles, pointed in Type 2 mortar were used in the mortar bedding [394] for the 1480-1550 tiled floor by the fire place [393]. Others were used in levelling courses such as the Phase 3.4 (1340-1540) chalk foundation [900] (Table 7).

Phase 5 and 6 brick surfaces

3032nr3033 (1664-1725); *3033; 3039; 3046; 3065* (1450-1700+) 28 examples 34.6kg
A number of brick surfaces, drain lids, drains, doorway block and fireplaces (Table 8) made from reused Tudor bricks or fresh consignments of early post great fire maroon bricks (1664-1725) and all pointed in a T10 white grey lime mortar (Table 9) form a single episode of mid late 17th to early 18th-century building. The form of the bricks with sunken margins and the occasional scooped frog [467] are typical of this period.

Context	Fabric	Form	No.	Date Range	Spotdate CBM	Mortar Date
365	3033; 3046; 3065	Early post-medieval brick and T10 (formerly T12) pale cream-grey soft mortar	14	1450-1700	1600-1700+	1660-1725
403	3046; 3032nr3033	Post-medieval brick and transitional early post great fire complete brick	11	1450-1725	1664-1725	No mortar
404	3033	Complete early post-medieval bricks. Reuse of grey T10 on top of T1	5	1450-1700	1450-1700+	1660-1725

453	3032nr3033	Intermediate early post great fire bricks unfrogged T10 mortar complete bricks	2	1664-1725	1664-1725	1664-1725
454	3033 3039	Muddy hand made early post-medieval bricks reused in T10 mortar	2	1450-1700	1600-1700	1664-1725
509	3033; 3032nr3033	Whole Tudor and Intermediate post great fire brick T10 mortar attached	2	1450-1725	1664-1725	1664-1725
549	3032nr3033	Intermediate post great fire brick sunken margins T10 mortar attached to both whole bricks	2	1664-1725	1664-1725	1664-1725
552	3065; 3033	Reused Tudor bricks whole in T10 mortar	2	1450-1700	1450-1700+	1664-1725
614	3033; 3032nr3033	Complete Tudor and early post great fire intermediate brick possibly T10 found reused on 3033	2	1450-1725	1664-1725	1664-1725
817	3032nr3033	Early intermediate post great fire bricks x 2 sunken margins	2	1664-1725	1664-1725	No mortar

Table 8: Table listing the brick structures from HLY12 made out of the late 17th-century fabric *3032nr3033*

Late Post-medieval (1750-1900) 110 examples 118.2kg

The later post-medieval (mid-late 18th to late 19th century) structural development of the site are dominated by a series of brick and stone foundation walls relating to the growth of low cost housing and structures of the Victorian railway viaduct (Table 9) as population expanded outwards in this part of London. It is a feature of many of these walls that there was a significant component of reused stone from the priory (see below) as well as red brick relating to the later priory, its demise and its rebuild following the dissolution of the monasteries. A number of mortar types are represented. The most common being the Type 3 grey clinker mortar (1700-1900) and later hard brown gravel mortar Type 4 (1850-1900)

78	3034	Post great fire narrow unfrogged brick in type 4 mortar	1	1664-1900	1775-1900	1800(1850)-1900
79	3032	Post great fire narrow unfrogged brick in type 3	1	1664-1900	1775-1900	1700-1900
80	3032R	Red Post great fire narrow unfrogged brick in type 3	1	1664-1900	1775-1900	1700-1900
81	3033	Wide (240x120x54mm) Tudor red brick pointed in a soft brown mortar T1 but overprinted (reused again in light grey T3 mortar)	1	1450-1700	1450-1650	1700-1900 (as reused) With some relict 1450-1650 mortar
82	3046 3032R; 3107	Reused Reigate stone ashlar and mouldings and narrow post-medieval brick with narrow post great fire brick in T3 mortar	4	1050-1900	1775-1900	1700-1900

113	3046	Locally produced narrow red brick with T3 mortar	1	1450-1850	1775-1900	1775-1900
114	3032	Post great fire narrow unfrogged brick in type 3 mortar	1	1664-1900	1775-1900	1775-1900
116	3034; 3032	Post great fire narrow unfrogged brick in type 4 brown gravel mortar	2	1664-1900	1775-1900	1800(1850) -1900
117	3032	Post great fire narrow unfrogged brick in type 4 dark-grey brown hard mortar	1	1664-1900	1775-1900	1840-1900
202	3032	Large post great fire frogged machined bricks used in T4 mortar	2	1664-1900	1850-1900	1850-1900+
203	3032	Narrow unfrogged post great fire bricks used in T4a mortar	2	1664-1900	1775-1900	1850-1900+
205	3033	Tudor/Stuart brick reused in a T5 Roman cement? Not clear	1	1450-1700	1450-1700	1850-1925+?
207	3032	Post great fire frogged brick used in T4 and T6 mortars	4	1664-1900	1825-1900	1825-1900+
212	3032; 3034	Narrow frogged and unfrogged post great fire bricks T4 mortar	4	1664-1900	1825-1900	1850-1900+
215	3046; 3032	Narrow post great fire brick and reused red Tudor Stuart BrickT4 mortar	2	1450-1900	1780-1900	1850-1900+
221	3032; 3034	Post Great Fire bricks reused in T4 mortar	2	1664-1900	1700-1900	1850-1900+
222	3032	Wide frogged post great fire bricks and unfrogged in T4 mortar	4	1664-1900	1850-1900	1850-1900+

Table 9: the brick structures from HLY12 dating from 1750 to 1900 by brick type and mortar

Brick 48 examples 100.8kg

Post Great Fire

Bricks 47 examples 98.2kg

Post Great Fire Clinker Brick (1664-1900) *3032; 3034*

Along with the reused earlier post-medieval reds; purple, clinker rich post great fire bricks, manufactured after 1664 are a feature of the late 18th century to early 19th-century terrace housing and subsequent post 1860 viaduct walling.

The clinker rich post great fire bricks used in the late 18th-century housing [79] [80] [82] [113] [114] and drainage repairs [63] from Phase 8 are very narrow (98-100mm) and small (<2kg) and bonded in a T3 light grey mortar (Table 10). The reduction in brick width and length was done in order to meet regulatory standards for brick tax only after 1775.

Some machined, wider frogged, post great fire bricks bonded in a harder brown grey gravel mortar (Type 4 of Table 10), characteristic of the later 19th century are a feature of the viaduct construction [78] [116] [17] [202] [203] [206] [207] [212] [215] [221] [222]. There are also bricks pointed in later Portland (Type 6) and Roman (Type 5) waterproof cements patented after 1840.

Yellow London (observed in-situ)
3035 (1780-1940)
Yellow frogged bricks, manufactured in large quantities out of North Kent estuarine clay to meet demands for housing, service and industrial construction in Victorian London and beyond were only observed in-situ from 20th-century drains and were recorded in dumped deposits associated with viaduct construction [137].

Roofing Tile 45 examples 9.3kg

Peg Tile *2276; 2271; 2586* (1600-1900) 26 examples 4.3kg (1600-1900)
Fragments of later post-medieval peg tile with fine moulding sand, used in the roofing of terraced housing and earlier are present in small quantity in Phase 6 to 8 layers such as dump [343].

Pan tile
Fabric 2279; 3090; 2271 (1630-1850) 19 examples 5kg

Fragments of curved roofing material produced only after 1630 are present in Phase 6 to 8 layers such as dump [343] but also the 18th-century fill [53] of a garden wall.

Floor Tile 4 examples 5.6kg
2850
3498
As well as the occasional Flemish unglazed floor tile (1600-1850), there was a Victorian encaustic floor tile from a Phase 6 layer [779] which was probable intrusive.

Wall Tile 3 examples 103g
Just a handful of unstratified thin delftware tiles were identified. These tiles were manufactured from 1700-1800.

Drain 8 examples 1472g
3261 (1850-1950+)
All of the drain fragments were identified from unstratified contexts, and consisted of brown glazed pipes in two diameters 80mm and 30mm. They were manufactured from low alumina clays, from the Upper Carboniferous coal measure clays of northern England, Wales and Scotland which became accessible with the advent of the railways after 1850.

Mortar and Concrete
A summary of mortar types and concrete as well as their period of use from the excavations at HLY12 are given below and provide a chronological framework, which along with the brick

and floor tile spreads, may help to decipher the date of some of the structures recovered from HLY12 (Table 10).

Mortar/Concrete Type	Description	Use at HLY12
T1 Soft brown mortar	Soft brown mortar with chunks of chalk	1450-1650 Always adhered to moderate sized Tudor bricks or post-medieval peg tile see Figure 8 for list of structures affected by them
T2 White soft concretionary mortar	Pebbly chalky mortar quite hard very pale grey	1400-1550 backing for the large Flemish floor tiled surface [393] [539] also associated with some very large early Tudor bricks and moulded bricks [318] [327] [365] [409] [459] [479] [514] [619]
Type 2a mortar	Harder white concretionary gravel mortar than Type 2 with flint and Tufa	1400-1550 Associated with reused medieval and early post-medieval peg tile [741] [961] [962] and [894]
T3 Soft grey mortar	Soft light grey clinker mortar	1750-1900 The most common type of late post-medieval mortar adhered to narrow red and post great fire bricks (18th-19th century) terrace housing and drain repair [79] [80] [82] [114] Many Tudor Bricks also re-pointed as in the flooring of these houses [14] [54] [81]. Also [243] [314] [779]
T4 Hard brown gravel mortar	Hard brown gravel mortar – rather like a coarse version of a “Roman” mortar patented after 1800	1850-1900 possibly even associated with wide often frogged post great fire bricks [116] [78] the viaduct and structures [202] [207] [212] [215] [221] [222]
T4a Hard grey gravel mortar	Hard grey gravel mortar – rather like a coarse version of a “Roman” mortar patented after 1800	1850-1900 Narrow unfrogged post great fire brick [203] [205]
T5 hard grey mortar	Very hard dark grey Roman type- mortar	1840-1900 Associated with just [117] a later phase (repointing?) of the late 18th early/mid19th century housing
T6 Hard light grey mortar	Very hard white/cream grey Portland type-mortar	1840-1900 Associated with just [63] a later phase (repointing?) of the late 18th early/mid19th century housing
T7 Brick Gravel mortar	Brick Gravel mortar	1600-1900 on re-used peg tile [234] also associated with [456] [560]
T8 Yellow Brown gravel Mortar	Yellow brown gravel mortar	1150-1500 [331] [790] [900] associated with medieval wall with peg tile levelling course [1169] [1184] [1233]
T8a Yellow Brown gravel mortar and organic fleck	Yellow Brown gravel mortar and organic fleck	1150-1500 [1184] medieval wall with peg tile levelling

T9 Very fine brown sandy mortar	Very fine brown sandy mortar	1450-1700 at the base of Flemish glazed silty floor tile and brick from [364] [459] [878] [894]
T10 Pale cream grey soft mortar	Pale cream grey soft mortar occasional flecks of charcoal	1660-1725 Associated with intermediate post great brick and fresh/reused Tudor bricks from 404] [453] [466] [467] [509] [549] [552]
T11 Soft Fine white mortar	Soft fine white mortar	1250-1310 Backing of all Westminster floor tiled surfaces including [539] [567] [702] [1282]

Table 10: Mortar types identified from evaluation and assessment phase at Holywell Priory (HLY12)

Stone 59 examples 108.8kg (4 whetstones)

The foundations and the architectural elements of the 1190 Holywell Priory were primarily constructed from stone.

As well as the large items of architectural form, belonging to Holywell Priory (see Samuel, Appendix 9), there was an appreciable quantity of poorer quality moulds, ashlar, rubble relating to its use, as well as smaller items of worked stone (hones; mortar).

The focus of this section is to review the rock types, and their geological character, source and probable function/ form are summarised below (Table 11). At publication it will be necessary to look at the stone types used in the architectural fragments so that a more considered overall interpretation of the materials used at Holywell Priory can be discussed.

Many of the fifteen rock types had already been identified from previous excavations (Betts 2011; Egan 2011; Samuel 2011). The most important are the imported yellow Caen stone from Normandy and lime-green Reigate stone from East Surrey used as freestone mouldings and ashlar from the priory, accounting for 89kg (82% of all stone by weight). This dominance of these materials was also seen at site A Holywell Priory (Betts 2011; Samuel 2011). Kentish ragstone as paving and rubble and Hassock stone both from the Maidstone area of Kent are also common, with a small group of roofing materials (Horsham stone[2], banded micaceous sandstone, North Wales slate) present. The principal walling material of the priory consisted of blocks of chalk. Hones (see Gaimster Appendix 7) are made of Norwegian ragstone, previously identified (Egan 2011) and some Millstone Grit. Petrologically of greatest interest was part of a column shaft from 13th-14th-century made ground [481] and possible opus sectile or triangular paving fragments from a late medieval grave fill [1066] made from a very shelly sandstone comparable somewhat with Bargate stone from Godalming and Guildford.

[2] Both Horsham slate and banded sandstone had previously been identified as roofing materials at Holywell (Betts 2011).

This material, which is rare for London, is usually only present as rubble in late Roman contexts from Southwark (Hayward 2015) and so its presence at the site in carved and flooring elements is a bit of mystery. Further analysis is necessary to establish what this material is, if it indeed is Bargate stone. Three further items of interest was a 280mm diameter Reigate stone container or possible stoup from the backfill of a 17th-century drain [459], a Purbeck limestone mortar for processing foods from a late medieval Phase 3.4 demolition layer [1134] and a Reigate stone roll holl moulding with red paint reused in a Phase 4 late medieval wall [514]

MoL fabric code	Description	Geological Type and source	Quantity	Use at HLY12
3105	Fine hard dark grey sandy limestone	Kent ragstone, Lower Cretaceous, Lower Greensand Maidstone District - Kent	4 examples 9.2kg	Construction Rubble [384 [415] [839] Complete Paving slab 230mm x 230mm x 50mm medieval [63]
3106	Yellow-green glauconitic sandstone	Hassock stone Lower Cretaceous, Lower Greensand Maidstone District - Kent	3 examples 0.9kg	Construction Rubble [55] [628]
3107	Fine grained low-density glauconitic limestone	Reigate stone – Upper Greensand, Lower Cretaceous Reigate-Mertsham Surrey	20 examples 56kg	Reused medieval ashlar [54] [81] [82] [431] [724] [950] rubble [63] and cornice [0] [479] Roll Holl moulds [214] [470] [514] glaze on a kiln block? [246], container or stoup [459]
3108	Fine banded light brown calcareous sandstone	Lower Cretaceous (Wealden) Kent	1 example <0.1kg	Unknown possible roofing or paving [415]
3110	Fine, pale-grey oolitic grainstone (Dunham 1962)	Portland stone Whit Bed, Portlandian (Upper Jurassic) Isle of Portland Dorset	1 example 0.4kg	Paving slab [+]
3115M	Dark grey hard fissile slate	North Wales Slate – Cambrian – Ordovician Snowdonia Area North Wales	1 example 0.4kg	Roofing [385]
3116	Fine white powdery coccolithic limestone	Chalk, Upper Cretaceous (Upper Chalk) London Basin	2 examples 186g	Rubble [72] [517] also observed as the key material in the foundation walls of the medieval priory
3119	Fine yellow to orange-yellow	Caen stone – Calcaire de Caen, Bathonian,	12 examples	Reused medieval rubble [1388] ashlar

	limestone Yellow Packstone (Dunham 1962)	Middle Jurassic , Departement Calvados Normandy,	38.9kg	[0] [33] [786] Cornice [33] and other mouldings voussoir [472] [479] column shaft [965]
3120a	Fine hard red-brown micaceous sandstone	Brownstone, Devonian Forest of Dean, South Wales	1 example 152g	Medieval to post-medieval whetstone Whetstone {+}
3120b	Fine hard calcareous greensand with flecks of shell and ooids	Bargate stone – Lower Cretaceous Godalming and Guildford	2 examples 0.5kg	Possible Opus Sectile or Triangular shaped paving slabs [1066] and column shaft [481]
3120c	Hard very hard dark grey fine grained quartz-muscovite-biotite-chlorite-magnetite schist	Norwegian ragstone, Various possible sources most likely Eidsborg, Scandinavia	1 example <0.1kg	Whetstone [1195] with cut mark
3120d	Burnt carbonaceous shale	Kimmeridge Shale, Upper Jurassic, Dorset	2 examples < 0.1kg	Fuel [424] [651]
3126a	Fine light-grey Unio (bivalve) rich slabby limestone	Purbeck limestone, Upp Jurassic, (Purbeckian) Isle of Purbeck, Dorset	1 example 0.5kg	Mortar [1134]
3129	Ripple-marked fine Calcareous sandstor	Horsham slate, Weald Clay (Lower Division) Wealden, Lower Cretaceous Crawley-Horsham-Brighton	3 examples 675g	Roofing material [246]
3130	Open textured sugar white to fawn quartz arenite	Millstone Grit, Namurian (Upper Carboniferous) Derbyshire, South Yorks South Wales	3 examples 282g	Hones [0] [343] Roofing [994]

Table 11: Character, source, quantity and probable function of the main stone types from HLY12

Many of the larger fragments of Caen and Reigate medieval ashlar and architectural fragments from Holywell priory were reused and incorporated into the fabric of an early post-medieval well as well as later 18th- and 19th-century post-medieval walls and floors. These included 10kg blocks of ashlar in an 18th-century garden wall [54], wall stub [81] and in walling of the terraced housing along with post great fire bricks [82] and a trench built wall [60]. Kentish ragstone paving from the church was reused in an 18th-century repair to a cellar wall [63].

This ready quarry of stone materials was utilised in both the earlier (Earl of Rutland and 17th-century cellar walls) and later (poor quality housing from the late 18th to 19th century) post-medieval structures. Extensive reuse of priory stone is seen elsewhere in London, in particular Bermondsey Abbey (Douglas *et al.* in prep.).

Summary

Phase 2: Roman to Phase 3.1: Early Medieval

Only a very small quantity of broken up Roman tile 15kg (1.8% weight) was recorded in Roman and early medieval make up and levelling layers beneath Holywell Priory, reflecting the rather low level of activity this far out from the Roman town walls. The little that has survived contains almost no items of box flue tile and high status stone suggesting that the debris came from lower status housing and commercial premises rather than bath-house material. The near absence of Roman brick and tile within the foundation walls of the priory is a further indication of a low background density of Roman occupation.

Phase 3.2 to 3.3: Medieval Holywell Priory

In addition to the large quantity of medieval mouldings and ashlar (see Samuel, Appendix 9) which dominated the priory made out of yellow Caen stone from Normandy and lime green Reigate stone from East Surrey, stone was also the key component in the foundation walls of the 1190 medieval priory. Bonded in a red-brown sandy mortar (T8) these walls consisted of large chalk blocks with levelling courses of glazed medieval peg tile, these could have been reused from an earlier structure, possibly the early priory church of 1150-1190. These formed part of a large ceramic building material component 321.8kg (37% of all tile and brick) relating to the late 12th to 14th-century church The other feature from this period were the very large spreads of surviving Westminster patterned and yellow/black squared and triangular flooring surfaces [567] [987] [1282] in at least 24 designs. Each of these designs were arranged in blocks of four with the yellow and black plain square and triangular tiles forming the borders. A second mortar fabric, a very fine lime mortar (T11), characterised the underside of these surfaces. Later decorated Penn Tile floor surfaces were a 14th-century addition to the embellishment of the church interior.

Phases 3.4: Late medieval church to Phase 4: Dissolution and demolition of church

It was not particularly easy to distinguish the later medieval (Phase 3.4) from the early post-medieval grouping (Phase 4) of ceramic building material (including the Dissolution and demolition of the church). Both are characterised by the widespread use of large glazed Flemish floor tiles, the introduction and reuse of construction and moulding red brick and peg tile. This grouping represents an upsurge in wealth of the priory reflected in the embellishment of chapels by wealthy patrons but also spans the post Dissolution period where the priory itself is rebuilt into the structure of wealthy Tudor merchants. Quantities are enormous 535kg (60%) including over 200kg of large in-situ flooring tile surrounding the fireplace [393] and in portico [539] by late 15th-century influential patrons, unusual vaulting bricks used in a side chapel [479], reflecting further continental influences in eastern and northern Europe and very large 120mm wide bricks more typical of mid-late 15th century rather than Tudor. Most of these are pointed in a hard lime gravel mortar (Type 2). Structures made from smaller Tudor

bricks bonded in a fine fawn lime mortar (Type 1) may represent later 16th-century (e.g. Earl of Rutland) and post Dissolution changes to the layout of the Priory.

Phases 5 and 6: 17th-century structures

A number of floors, drains, fireplaces surrounds made from early post great fire brick fabric *3032nr3033* and bonded in an entirely different off grey powdery mortar (Type 10) represent structural changes that can be dated to the Stuart and William and Mary period.

Phase 7 and Phase 8: Late Post-medieval

Given this available quarry of red brick from late medieval, Tudor and 17th-century dismantled walls; it is not surprising that so much was recovered reused from the later 18th to early 19th-century terraced housing in this part of Hackney. The red brick along with large quantities of reused ashlar from the priory together with fresh consignments of post great fire bricks provide the structural materials for this group of low-quality housing. The clinker brick used in walls [79] [80] [82] [114] were very narrow (98-100mm) and small (<2kg) and bonded in a T2 light grey mortar (Table 10). The reduction in brick width and length was done in order to meet regulatory standards for brick tax only after 1775.

The foundations [78] [116] [202] [203] [205] [207] [212] [215] [221] [222] of the railway viaduct and other structures (all constructed after 1860?) use fresh consignments of frogged post great fire brick, rather than use poor quality materials from the demolished terraced housing. The mortar a hard gravel Roman cement is typical of the later Victorian period

Distribution

MORTAR TYPES

Type 1 Soft brown calf mortar associated with Tudor Bricks 1450-1650

Type 2 White mortar concretionary gravel associated with later medieval and early post-medieval floor tiles (was T6) 1400-1550 concretionary gravel type mortar late

Type 2a harder white concretionary gravel mortar with flint heavily reused on medieval brick and medieval and early post-medieval peg tile possible TUFA [741] and structure [961] [894] Was T10 Mortar [962]

Type 3 grey clinker mortar typical of later post-medieval reused on brick etc 1700-1900

Type 4 brown hard gravel mortar Victorian *was Type 3* 1850-1900+

Type 4a variant grey hard gravel mortar Victorian 1850-1900+

Type 5 (still Type 5) hard grey lime mortar Roman 1840-1925+

Type 6 mortar White hard calcareous Portland mortar 1800-1900+

Type 7 brick gravel mortar reused oh peg tile from [234] 1600-1900 also present in [456] (formerly Type 6)

Type 8 Medieval gravel deep yellow-brown 1150-1500 [331] Was T13 on assessment list [790] [900]

Type 8a as above with organic core one context [1184] 1150-1500 was type 6a

Type 9 Very fine brown sandy mortar at base of floor tile only [364] Flemish silt only and in context [459] 1450-1700 [878] Was T8 [894] brick

Type 10 pale cream grey soft mortar associated with 3032nr3033 and some Tudor bricks (formerly T12) 1660-1725 [404] [453] [466] [467] scoop frog, [509] [549] [552]

Type 11 Fine white mortar backing mortar for Westminster Floor Tile [539] 1250-1310 [567] [702]

EVALUATION

Spot Dates HLY12 Trench 3

Context	Fabric code	Description	No	Date	Suggested spot date cbm	Spot date latest mortar
7	3033; 3046; 3101	Narrow and Wide Tudor-225x120x58 Stuart Red bricks pointed in a soft brown mortar T1	5	1450-1700	1450-1650	1450-1650
8	3033; 3101	Crinkly Wide Tudor Bricks pointed in a soft brown mortar T1	2	1450-1700	1450-1650+	1450-1650
9	2271 2276 3100	Medieval and early post-medieval peg tiles in a white mortar T6 (now T2) a fragment of medieval painted wall plaster	3	1180-1900	1480-1700	1400-1550
11	2276	Poorly made post-medieval peg tile in a white mortar T6 (now T2)	3	1480-1900	1480-1700	1400-1550
12	2276	Poorly made post-medieval peg tile in a white mortar T6 (now T2)	1	1480-1900	1480-1700	1400-1550
14	3033	Reused Wide (240x120x54mm) Tudor red brick in a soft grey clinker type mortar common in 18th/early 19th (T3)	1	1450-1700	1450-1650	1700-1900 (as reused)
33	3119	Reworked Caen stone block mouldings in a soft brown mortar T1 similar to [7]	4	1050-1700	1550-1700+	1450-1650
42	2276; 2271	Medieval and post-medieval peg tile medieval in white mortar T6 (now T2)	20	1180-1900	1480-1700	1400-1550

Spot Dates HLY12 Other Trenches

Context	Fabric code	Description	No	Date	Suggested spot date cbm	Spot date latest mortar
49	2271; 2272; 2276; 1678	Fragments of 12th century peg tile mixed with later medieval and post-medieval peg tile and one late medieval glazed Flemish Calcareous floor tile	22	1135-1900	1480-1600	No mortar
53	2276; 2279; 2587; 3033; 3046; 3032R; 2850	Medieval and early post-medieval peg tile, complete pan tile, Tudor, Stuart and one post great fire brick, Flemish unglazed floor tile	14	1240-1900	1664-1800	Mortar type not clear
54	3033; 3107; 3101	Large Wide Tudor-225x120x58 Stuart Red bricks pointed in a soft brown mortar T1 1 possible reused in a later T3 grey clinker mortar, Reigate stone	4	1050-1700	1450-1650	1450-1650 possible reuse in T3 mortar suggest could be 1700-1900
55	2276; 2586; 3046; 2850; 3032nr3033; 1678; 2271; 2452; 3106	Late medieval curved and peg tile; early post-medieval peg tile; Stuart Brick sunken margin ; early post great fire brick Flemish calc and silty glazed tile T6 (now T2) mortar; Hassock stone rubble	19	50-1800	1664-1725+	Remnant 1400-1550
56	3033; 3101	Very large Wide (240x120x54mm) Tudor red brick pointed in a soft brown mortar T1	5	1450-1700	1450-1550	1450-1650
57	2271; 2586; 2587; 1678	Medieval glazed and unglazed peg tile; Flemish calc unglazed floor tile	10	1180-1800	1350-1550+	No mortar
62	2271	Medieval peg tile fragment no glaze	1	1180-1800	1180-1450	No mortar
63	3046; 3105; 3032; 3107	Stuart brick; complete Kentish ragstone paving block; Reigate stone rubble; Post great fire frogged brick Hard T4/T5 mortar	4	50-1900	1750-1900	1840-1925+
66	3101 1678 ; 2276; 2586	Large chunks of soft brown mortar T1; Flemish calc glazed floor tile; early post-medieval peg tile	53	1180-1800	1480-1700	1450-1650
68	2271; 2276; 2452	Roman tile – early London sandy fabric; glazed medieval and early post-medieval peg tile T1 and T6 (now T2) white mortar	6	50-1900	1480-1700	1450-1650 With some earlier relict 1400-1550
70	2273	Thick early medieval bat tile	1	1135-1220	1135-1220+	No mortar
72	3116	Chalk Rubble	1	1060-1600	1060-1600	No mortar
73	2276	Post-medieval peg tile with small ridges	5	1480-1900	1480-1700	No mortar

76	2497; 2276; 3046; 2850; 2271; 3101	One late medieval glazed Flemish Calcareous floor tile; Glazed and unglazed Flemish floor tile; medieval and post-medieval peg tile T1 Mortar? Stuart Brick	18	1180-1900	1480-1700	1450-1650
78	3034	Post great fire narrow unfrogged brick in type 4 mortar (was type 3)	1	1664-1900	1775-1900	1800(1850) -1900
79	3032	Post great fire narrow unfrogged brick in type 3 (was type 2) mortar	1	1664-1900	1775-1900	1700-1900
80	3032R	Red Post great fire narrow unfrogged brick in type 3 (was type 2) mortar	1	1664-1900	1775-1900	1700-1900
81	3033	Wide (240x120x54mm) Tudor red brick pointed in a soft brown mortar T1 but overprinted (reused again in light grey T3 mortar)	1	1450-1700	1450-1650	1700-1900 (as reused) With some relict 1450-1650 mortar
82	3046 3032R; 3107	Reused Reigate stone ashlar and mouldings and narrow post-medieval brick with narrow post great fire brick in T3 mortar	4	1050-1900	1775-1900	1700-1900
113	3046	Locally produced narrow red brick with T3 mortar	1	1450-1850	1775-1900	1700-1900
114	3032	Post great fire narrow unfrogged brick in T3 mortar	1	1664-1900	1775-1900	1700-1900
116	3034; 3032	Post great fire narrow unfrogged brick in type 4 brown gravel mortar	2	1664-1900	1775-1900	1800(1850) -1900
117	3032	Post great fire narrow unfrogged brick in type 5 dark-grey brown hard mortar	1	1664-1900	1775-1900	1840-1925+
132	1678	Glazed Calcareous Flemish Floor Tile	1	1350-1550	1350-1550+	No mortar
165	3032	Early post great fire brick reused in Type 3 and Type 4 mortars	1	1664-1900	1664-1900	1840-1925+

EXCAVATION spot dates **structures in bold**

Context	Fabric code	Description	No	Date	Suggested spot date cbm	Spot date latest mortar
202	**3032**	**Large post great fire frogged machined bricks used in T4 mortar**	**2**	**1664-1900**	**1850-1900**	**1850-1900+**
203	**3032**	**Narrow unfrogged post great fire bricks used in T4a mortar**	**2**	**1664-1900**	**1775-1900**	**1850-1900+**
204	**2271nr2272; 2276; 3090; 3033**	**Earlier medieval curved tile early post-medieval peg tiles and Tudor/Stuart type brick**	**11**	**1135-1900**	**1480-1700+**	**No mortar**

205	**3033**	**Tudor/Stuart Brick reused in a T5 Roman cement? Not clear**	**1**	**1450-1700**	**1450-1700**	**1850-1925+?**
207	**3032**	**Post great fire frogged brick used in T4 and T6 mortars**	**4**	**1664-1900**	**1825-1900**	**1825-1900+**
208	2276	Later post-medieval peg tile fine moulding sand	1	1480-1900	1600-1900	No mortar
210	3033; 3065	Tudor-Stuart unfrogged red bricks	2	1450-1700	1450-1700+	No mortar
212	**3032; 3034**	**Narrow frogged and unfrogged post great fire bricks T4 mortar**	**4**	**1664-1900**	**1825-1900**	**1850-1900+**
214	2271; 2587; 2850; 3107	Reused medieval peg tile and early post-medieval Flemish silty floor tile; weathered Reigate Roll Holl mould	5	1060-1600	1450-1600+	1400-1600
215	**3046; 3032**	**Narrow Post great fire brick and reused Red Tudor Stuart BrickT4 mortar**	**2**	**1450-1900**	**1780-1900**	**1850-1900+**
221	**3032; 3034**	**Post Great Fire bricks reused in T4 mortar**	**2**	**1664-1900**	**1700-1900**	**1850-1900+**
222	**3032**	**Wide frogged post great fire bricks and unfrogged in T4 mortar**	**4**	**1664-1900**	**1850-1900**	**1850-1900+**
224	2452; 2587; 2274	Roman Tegula, medieval peg tiles traces of splash glaze	3	55-1450	1240-1450	No mortar
227	2276	Early post-medieval peg tile	3	1480-1900	1480-1700	No mortar
228	2892; 2586; 2279	Pan Tile, Abraded patterned Westminster Floor Tile and early post-medieval peg tile	6	1180-1850	1630-1850	No mortar
230	2452; 2459a; 2271; 2587; 2276; 1678; 2850; 3032nr3033	Early Roman tile, brick and tegulae, remnant medieval peg tile, early post-medieval peg tile, transitional post great fire brick	15	50-1900	1664-1800	Mortar type unclear
234	**2276**	**Post-medieval peg tile and curved tile reused in tile rich gravel mortar Type 7**	**3**	**1480-1900**	**1480-1900**	**1600-1900**
237	2271; 2586; 2276;; 2850; 3046	Worn medieval peg tile some post-medieval peg tile; post-medieval brick Thin and thick Flemish glazed Floor Tile	15	1180-1900	1480-1700+	Mortar type unclear
239	3033; 2271; 3090; 2276	Pan Tile, medieval and post-medieval peg tile and Tudor/Stuart Brick	13	1180-1900	1630-1850	No mortar
240	**3031; 3033**	**Complete Flanderstile brick and early post-medieval brick**	**2**	**1350-1700**	**1450-1650**	**No mortar**
241	**2892; 2850; 1977**	**Westminster Floor Tile, reused Glazed Flemish floor tiles possibly Type 3 mortar**	**3**	**1250-1600+**	**1450-1600+**	**1700-1900?**
243	**3033**	**Victorian red pointed with a Type 3 mortar**	**1**	**1750-1900**	**1750-1900**	**1700-1900**
246	2892; 2894; 2850, 3498; 2271; 2276;	Westminster Floor Tile, Penn Floor Tile, medieval and post-medieval peg tile, medieval	17	200-1900	1480-1500+	1400-1600

	3107; 3120	curved tile, Thin Flemish Glazed silty floor tile; Type 2 Mortar, Reigate stone green glaze kiln?? Horsham Slate Roofing				
247	2271; 2276; 2850	Burnt Flemish Floor tile silty glaze worn off, splash glaze medieval and early post-medieval peg tile	5	1180-1900	1480-1600+	No mortar
248	2274; 2276	Medieval and post-medieval peg tile	4	1080-1900	1480-1700	No mortar
254	2276	Early post-medieval peg tile	3	1480-1900	1480-1700	No mortar
256	**1678; 2459a; 2271nr2272; 2276**	**Very thick Flemish Calcareous floor tile, Roman Tile, medieval peg tile and early post-medieval peg tile**	**10**	**50-1900**	**1480-1700**	**Mortar not clear**
258	2459b	Late Roman tile fragments	2	120-250	120-250	No mortar
261	2271; 2587	Medieval peg tile thick glaze	2	1180-1800	1240-1450	No mortar
262	2276; 3030	Early post-medieval peg tile and late medieval to early post-medieval brick; thick cover of lead glaze over brick	3	1400-1900	1480-1660	Mortar not clear
266	2271; 2276	Early post-medieval peg tile and late medieval peg tile	3	1180-1900	1480-1700	No mortar
268	2271; 2276; 2850; 3065	Medieval peg tile splash glaze; lots of silty Flemish glazed floor tile, post-medieval peg tile and brick T2 mortar on peg tile	13	1180-1900	1480-1600+	1400-1600
269	2276	Post-medieval peg tile	1	1480-1900	1480-1700	No mortar
270	2276	Post-medieval peg tile backing of T2 white gravelly mortar	3	1480-1900	1480-1700	1400-1600
271	3100; 2892; 2276	White plaster prob med early post-med, Westminster Floor Tile, post-medieval peg tile	8	1060-1900	1480-1700	No mortar
273	2271nr2272; 2271; 2276; 1678; 2323; 2850; 3065	Glazed medieval and unglazed post-medieval peg tile, some Flemish calc floor tile and very shallow silt glaze, Tudor/Stuart Bricks pebbly chalky mortar T2	21	1135-1900	1480-1600+	1400-1600
274	2276; 2323	Flemish calc floor tile, post-medieval peg tile	3	1350-1900	1480-1600+	No mortar
275	2276	Post-medieval peg tile	3	1480-1900	1480-1700	No mortar
280	2271nr2272; 2271	Thick and thin Medieval peg tile	2	1135-1800	1180-1450	No mortar
283	2271; 2276; 2586; 1977; 1678	Medieval and early post-medieval peg tile thick glazed Flemish silt and calc floor tile	11	1180-1900	1480-1600+	T12 mortar CHECK
285	2271nr2272	Early medieval peg tile fleck	1	1135-1300	1135-1300	No mortar

286	2894, 2276; 2196	Complete Antwerp Glazed floor tile, plain glazed Penn Tile, post-medieval peg tile	5	1330-1900	1520-1600	No mortar
288	2892	Complete plain glazed Westminster Floor Tile	1	1250-1310	1250-1310+	No mortar
296	2271; 2587; 1678	Medieval peg tile and late medieval Flemish calcareous floor tile	3	1180-1550	1350-1550	No mortar
303	2271; 2587; 2276; 1977	Medieval peg tile early post-medieval peg tile and Flemish silty glazed floor tile pebbly chalky white mortar T2	11	1180-1900	1480-1600	1400-1600
305	2587; 1678; 2892; 1977; 2850	Floor tiles many types; Triangular Westminster, Flemish Calc and Silt, Medieval peg tile pebbly chalky white mortar T2	8	1240-1600	1480-1550	1400-1600
307	1977	Thin Flemish silty floor tile	1	1450-1600	1450-1500	No mortar
309	2274	Medieval peg tile	1	1080-1350	1080-1350+	No mortar
311	2276	Post-medieval peg tile	1	1480-1900	1480-1700	No mortar
314	**2276; 3032**	**Narrow Post great fire brick and post-medieval peg tile T3 mortar**	**3**	**1480-1900**	**1780-1900**	**1700-1900**
318	**1810; 3033**	**Penn Tile with relict medieval brown sandy gr mortar T8, Very large Tudor Bricks with relict T1 mortar reused in T3 mortar**	**4**	**1350-1700**	**1450-1540**	**1700-1900**
319	**3033**	**Early post-medieval brick no mortar**	**1**	**1450-1700**	**1450-1700**	**No mortar**
323	2271; 2271nr2272; 2274; 2276; 2272	Group of medieval and early post-medieval peg tile some reused in White T2 mortar	15	1135-1900	1480-1600+	1400-1600
324	1678; 2276	Flemish Calcareous floor tile and early post-medieval peg tile	4	1350-1900	1480-1700	No mortar
325	2271	Medieval peg tile reused in pebbly chalky white mortar T2	2	1180-1800	1180-1450+	1400-1600
326	2271nr2272; 2271; 2272; 2274; 2587	A big group of medieval peg tile lots of splash glaze	38	1135-1800	1240-1450	Mortar not clear possibly T2 1400-1600?
Later p	3031; 3033; 3034; 2276	Group of medieval, early post-medieval and post great fire brick Flanderstile, post-medieval peg tile	6	1350-1900	1664-1800	1450-1650 relict mortar only
331	2271; 2274; 2587; 2892; 1678	Medieval peg and curved tile, Westminster Floor Tile and Flemish Calc floor tile; T13 (now T8) but also T2 later	15	1080-1550	1350-1550	1400-1600 with some relict medieval mortar 1150-1500

335	2271	Medieval peg tile	1	1180-1800	1180-1450	No mortar
337	2271nr2272; 2274	Early medieval peg tile	4	1080-1350	1135-1350	No mortar
343	2271; 2276; 2587; 2279; 3067F; 3033; 3046; 2850; 3130	Medieval peg tile but mainly post-medieval peg tile, pan tile, Rotherhithe floor tile, Post-medieval brick and Flemish Floor tile; Millstone Grit hone	37	1180-1900	1630-1700	1450-1650
346	2459b; 2271; 2273; 2587; 2276; 3046	Late Roman Tile, Medieval and post-medieval peg tile, post-medieval brick, Relict T6 mortar	21	1135-1900	1480-1700	1400-1600 Relict mortar only
347	2271	Medieval peg tile	4	1180-1800	1180-1450	No mortar
350	3067F	Antwerp patterned tin glaze Floor Tile	2	1520-1540	1520-1540+	No mortar
352	2276	Post-medieval peg tile possibly T2 mortar	2	1480-1900	1480-1700	1400-1600
353	1678	Thick Glazed Flemish calcareous floor tile	1	1350-1550	1480-1550	No mortar
357	1678; 2850	Thick Calcareous Flemish floor tile and thin silt Flemish floor tile	4	1350-1600	1450-1500+	No mortar
359	2587	Medieval peg tile fleck	1	1240-1450	1240-1450+	No mortar
360	2271nr2272; 2273; 2587; 2323	Medieval peg, curved, bat tile; Plain glazed Flemish calc tile; possibly relict T2 mortar	6	1135-1550	1350-1550	1400-1600
361	2274	Medieval peg tile	1	1080-1350	1080-1350+	No mortar
362	2274	Medieval peg tile	4	1080-1350	1080-1350+	No mortar
363	1678; 2850	Late medieval and early post-medieval Flemish floor tile one backed with T2 pebbly chalky white mortar	3	1350-1600	1450-1600	1400-1600
364	2271; 2276; 2586; 3063; 2323	Late medieval and early post-medieval peg tile no glaze, Glazed Flemish silt and calcareous floor tile relict T2 pebbly chalky white mortar but also T9 fine brown sandy mortar	9	1180-1900	1480-1600	CHECK MORTAR T9 1450-1700 With relict 1400-1600
365	**3033; 3046; 3065**	**Early Post-medieval brick and T10 (FORMERLY T12) pale cream-grey soft mortar**	**14**	**1450-1700**	**1600-1700+**	**CHECK MORTAR T10 1660-1725**
376	2271nr2272; 2271; 2587	Group of medieval peg tile thick brown glaze common	7	1135-1800	1240-1450	Mortar not clear
377	2271; 2892	Medieval peg tile and Westminster Floor Tile chunks petal decoration	6	1180-1800	1250-1310+	No mortar
383	1811	Corner of a Penn Tile	1	1350-1390	1350-1390	No mortar

384	**2323; 2850; 3105**	**Flemish Calcareous and Silty Floor Tile; Kentish Ragstone Rubble material**	**6**	**50-1600**	**1450-1600**	**Mortar unclear**
385	2587; 2276; 1678; 2323; 2850; 2272; 3065; 3115	A few bits of medieval peg and bat tile mainly post-medieval peg tile T2 pebbly chalky white mortar Early post-medieval brick and BIG GROUP OF Flemish floor Tile mainly thick 32-40mm yellow and black glaze, North Wales Roofing Slate	30	1060-1900	1480-1600+	1400-1600+
387	3102; 2271; 2276; 1678; 2323; 3067F	Daub, some medieval and post-medieval peg tile, Pickleherring 1628-1650 or possibly Antwerp tin glazed floor tile, Flemish Calcareous Floor Tile No mortar	18	1500bc-1900	1628-1650+	No mortar
393	**2323; 1678; 2850**	**Very large group of complete and near complete Glazed Flemish Calcareous Floor Tile backed with a T2 pebbly chalky white mortar Just one Flemish silty floor tile typically 240mm x 240mm x 32mm sometimes 37mm rare 27mm**	**22**	**1350-1600**	**1480-1550**	**1400-1600**
394	2271nr2272; 2276	Large group of early post-medieval peg tile near complete with one medieval peg tile in T2 pebbly chalky white mortar	9	1135-1900	1480-1700	1400-1600
398	1678; 2323; 2850; 3063; 1977	Very large group of complete and near complete Glazed Flemish Calcareous Floor Tile backed with a T2 pebbly chalky white mortar More Calcareous Silty in 2850 typically 240mm x 240mm x 32mm sometimes 37mm rare 27mm	73	1350-1600	1480-1550	1400-1600
400	3006; 2271; 2272; 2274; 2276; 3033; 1678; 2850	Combed Roman box flue tile; Early brick paver very thin Tudor; odd fragment of Flemish Calc and silty floor tile; medieval and post-medieval peg tile	13	50-1900	1480-1600+	Mortar not clear
401	**1811; 3033; 3032R**	**Decorated Penn Floor Tile, Early post-medieval brick and narrow red post great fire brick chunk in Type 3 mortar**	**4**	**1350-1900**	**1780-1900**	**1700-1900**
402	2586; 2279	Pan tile and complete early post-medieval peg tile	3	1180-1850	1630-1850	No mortar
403	**3046; 3032nr3033**	**Post-medieval brick and transitional early post great fire complete brick**	**11**	**1450-1725**	**1664-1725**	**No mortar**

404	**3033**	**Complete early post-medieval bricks Reuse of grey T10 on top of T1**	**5**	**1450-1700**	**1450-1700+**	**1660-1725**
409	2323; 2850; 2276; 3033	Early post-medieval brick, glazed Flemish calc and silt floor tile, peg tile post-medieval	6	1350-1900	1480-1550+	Mortar not clear
411	2276; 3033	Early post-medieval peg tile and brick whole brick T1 mortar sunken margin	8	1450-1900	1480-1700	1450-1650
414	2271nr2272; 2271; 2274; 2587	Medieval peg tile group some with splash glaze	36	1080-1800	1240-1450	No mortar
415	3102; 3100; 2271; 3105; 3108	Fragments of daub and some wall plaster perhaps associated with each other as timber framed medieval wattle and a medieval peg tile; Kentish Ragstone rubble, flecks of Banded laminated sandstone Wealden function unclear	12	1500bc-1800	1180-1450	No mortar
416	2271nr2272	Early medieval peg tile	1	1135-1300	1135-1300	No mortar
419	**3032**	**Post great fire brick complete dog leg vitrified possibly earlier**	**1**	**1664-1900**	**1664-1800**	**No mortar**
422	3238	Roman Silty tile fragment	1	71-100	71-100+	No mortar
423	2586; 2276	Post-medieval peg tile	5	1180-1900	1480-1700+	No mortar
424	3102; 1811; 2323; 2850; 3120	Burnt clay, Penn Decorated Tile, Flemish calc and Flemish silt reused in Type 2 tuffaceous gravel mortar, coal	5	1500bc-1600	1450-1600	1400-1600
426	1811; 1678; 2276	Penn Decorated Tile, Flemish calc and early post-medieval peg tile reused Penn Tile not clear what mortar type is	4	1350-1900	1480-1700+	Mortar not clear
428	3102; 2459a; 3009	Small group of Roman tile, tegulae, imbrex brick and daub	24	1500bc-1600	100-160+	No mortar
430	**1678; 2323; 3033**	**Flemish Calcareous Floor Tile and complete Tudor/Stuart Bricks T1 mortar only on bricks**	**21**	**1350-1700**	**1480-1550+**	**1450-1650**
431	2271nr2272; 2271; 2274; 2587; 2892; 3032; 3107	Medieval peg tiles, Westminster Floor Tiles query Post Great Fire brick as may be intrusive, Burnt ashlar block of Reigate stone	21	1060-1900	1250-1310+ Post great fire brick fragment (1664-1900) is probably intrusive	Mortar not clear
425	2452; 2274; 2271nr2272	Roman Tile early medieval peg tile	4	55-1350	1135-1350	No mortar
436	3102; 2459a; 2273	Daub, Early medieval bat tile, Roman Tile	5	1500bc-1600	1135-1220+	No mortar

445	2271; 2271nr2272; 2587; 2276; 1678; 2497; 2323; 2318; 1977; 3030	Medieval and early post-medieval peg tile and one curved tile large group of Flemish calc floor tile and Flemish floor tile, late medieval brick some T2 pebbly chalky white mortar on the back of floor tile	32	1135-1900	1450-1600	1400-1600
446	2459a; 2459b; 2271nr2272	Early and late Roman tile and imbrex early medieval peg tile	5	50-1220	1135-1220	No mortar
447	3023; 3006	Roman imbrex and tegulae early	3	50-160	50-160	No mortar
448	2318; 1977	Flemish glazed silty-sand and silt floor tile	2	1450-1600	1450-1600	No mortar
449	**1678**	**Flemish Calcareous glazed floor tile**	**2**	**1350-1450**	**1480-1550**	**No mortar**
450	3039	Early post-medieval brick	2	1450-1700	1450-1700	No mortar
452	**3030; 3046**	**Late medieval brick covered in T2 mortar and early post-medieval Tudor Bricks complete with T1 mortar**	**3**	**1400-1700**	**1450-1600+**	**1450-1650 with some earlier 1400-1600 mortar still attached to brick fabric 3030**
453	**3032nr3033**	**Intermediate early post great fire bricks unfrogged T10 mortar complete bricks**	**2**	**1664-1725**	**1664-1725**	**1664-1725**
454	**3033 3039**	**Muddy hand made early post-medieval bricks reused in T10 mortar**	**2**	**1450-1700**	**1600-1700**	**1664-1725**
456	**2271; 2587; 2276**	**Reused Medieval in T6 brick mortar and T7?? MORTAR and early post-medieval peg tile**	**23**	**1180-1900**	**1480-1800**	**Mortar T6 and T7 needs to be checked**
457	1678; 2323; 3063; 2850; 2586; 3065 (or 2318); 1811; 3032	Group of Flemish calc and thin early silt floor tiles; post-medieval peg and pan tile, post great fire brick; also curious large group of well-made thin brown glazed sandy fabric like 3065 local or 2318 sandy Flemish; decorated Penn Tile;	24	1180-1900	1660-1750	No mortar
459	2452; 3006 1678; 2323; 1977; 3076; 2271; 2274; 2587; 3039; 3107	Another large group of Flemish silt and calc floor tiles, Penn Tile, Roman Tile and brick, medieval peg tiles one early post-medieval peg tile; Early earthy Tudor Brick; Evidence of pebbly chalky white mortar and T9 fine brown sandy mortar	35	55-1900	1480-1700	CHECK MORTAR T9 1450-1700 With relict 1400-1600 Like [364]
460	1678; 2323; 2850; 3063;	More floor tile, including Penn Tile but mainly Flemish silt and	14	1250-1900	1480-1600+	1400-1600

	2276; 2892; 3107	calc, post-medieval peg tile; One Westminster Floor Tile some T2 mortar, Reused Reigate stone Bowl				
462	2271; 1678; 3076	Late medieval early post-medieval peg tile, one splash glaze, Penn Tile, and Flemish Calc floor tile	7	1180-1800	1350-1600	No mortar
463	2271; 2271nr2272; 2274; 2586; 2587	Big group of medieval peg tile	33	1080-1800	1240-1450	No mortar
465	3006; 3009	Imbrex and Roman Tile	2	50-160	100-160	No mortar
466	**3032nr3033**	**Intermediate early post great fire bricks whole sunken margins probably T10 mortar attached**	**2**	**1664-1725**	**1664-1725**	**1664-1725**
467	3033; 3046; 1977; 2850	One brick has a rare scoop frog which may be late 17th early 19th; Flemish glazed floor tile silt possible T10 mortar on one brick	5	1450-1700	1600-1700	1664-1725
468	**2271nr2272; 3033**	**Early medieval peg tile fragments 4 large Tudor/Stuart Bricks T1 mortar very thick and large EARLY**	**5**	**1135-1700**	**1450-1550**	**1450-1650**
470	3102; 2459a; 2587; 2271; 2274; 3107	Roman Tile and brick, daub, mainly early medieval peg tile, small medieval mould in Reigate stone	18	1500bc-1800	1240-1450	No mortar
472	3031; 3065; 3046; 2271; 2274 2276; 1678; 2323;; 3054; 2850; 3119	Huge quantity of early post-medieval peg tile; Rare Opus spicatum brick 3054 CHECK THIS Flanderstile, moulded brick for arch, red Tudor brick, some earlier medieval peg tile and some Flemish silt and calc floor tiles lots of T2 pebbly chalky white mortar, Caen stone voussoir medieval	78	70-1900	1480-1600	1400-1600
473	3006	Abraded Roman Tile	1	50-160	50-160+	No mortar
474	**2271nr2272; 3033**	**Early medieval peg tile and two complete Tudor BricksT1 mortar**	**3**	**1135-1700**	**1450-1700**	**1450-1650**
476	**3033**	**Complete Tudor Bricks T1 mortar**	**2**	**1450-1700**	**1450-1700**	**1450-1650**
478	2459b	Late Roman Tegula	1	120-250	120-250	No mortar
479	3046; 3039; 3031; 2276; 2271; 3009; 1678; 2323; 2850; 3119; 3107	Red moulded vaulting bricks in at least 5 forms, cusped, cornice, cusped ended in two fabrics evidence for plaster and paint and mortar T2 pebbly chalky white mortar ,	35	100-1700	1480-1600	1400-1600

		Flanderstile, early post-medieval peg tile; Roman brick – Flemish silt and calcareous glazed floor tile.. Reigate stone and Caen stone moulds				
480	3054	Hampshire grog Roman Brick	1	70-140	70-140	No mortar
481	2452; 3054; 2271; 2271v; 2271nr2272; 2274; 2586; 2272; 3120	Early Roman Tile and brick, group of medieval glazed and unglazed peg and bat tile, Bargate stone column could be Roman	23	55-1800	1180-1350	No mortar
482	**2850**	**Large complete glazed Flemish silt floor tile**	**1**	**1450-1600**	**1480-1550**	**Mortar not clear**
489	2271; 2318; 1678	Sandy Flemish floor tile , medieval peg tile; Flemish glazed calcareous floor tile some T2 pebbly chalky white mortar	3	1180-1600	1450-1600	1400-1600
490	**2271; 2274; 2276; 3033**	**Herringbone Wall, medieval and early post-medieval peg tile and Tudor Brick T1 mortar**	**14**	**1080-1900**	**1480-1600**	**1450-1650**
491	2271; 2276; 2323; 1678; 2892	Westminster Floor tile glaze removed, thin calcareous and thick Flemish glazed, medieval and early post-medieval peg tile	10	1180-1900	1480-1550	No clear mortar
492	**1678; 2850; 3033**	**Flemish silty and early small calcareous glazed floor tile, Tudor red brick traces of T1 mortar**	**3**	**1350-1700**	**1450-1700**	**1450-1650**
494	2587	Medieval peg tile	1	1240-1450	1240-1450+	No mortar
496	2587; 3046	Medieval peg tile and vitrified Tudor/Stuart Brick	2	1240-1700	1450-1700	No mortar
502	**3033; 3032nr3033**	**Reused Red and Intermediate post great fire bricks sunken margins T3 mortar**	**2**	**1450-1725**	**1664-1725+**	**1780-1900**
505	3032nr3033	Intermediate post great fire bricks sunken margin no mortar with slag attached.	1	1664-1725	1664-1725+	No mortar
506	2271nr2272	Early medieval peg tile	1	1135-1300	1135-1300+	No mortar
509	**3033; 3032nr3033**	**Whole Tudor and Intermediate post great fire brick T10 mortar attached**	**2**	**1450-1725**	**1664-1725**	**1664-1725**
510	3006; 3054; 2271; 2274; 2587	Roman Hampshire Grog and sandy tile medieval peg tile	6	50-1800	1240-1450	No mortar
511	2459a	Roman Tile	1	50-160	50-160+	No mortar
514	**2271; 2276; 3033; 2850; 1678; 3107**	**Very large Early Tudor brick, medieval and early post-medieval peg tile, Silty and Calcareous Flemish Floor**	**10**	**1060-1900**	**1480-1600+**	**1400-1800**

		Tile Traces of T2 mortar on back of floor tile; Reigate stone mould good condition				
517	2271; 2587; 3116	Medieval peg tile, chalk rubble	6	50-1800	1240-1450	No mortar
521	2271; 2587	Medieval peg tile	3	1180-1800	1240-1450	No mortar
524	2587	Medieval peg tile reused in brown gravel mortar T8	2	1240-1450	1240-1450+	1150-1500
525	1678; 2459a	Roman tile and Flemish Calcareous glazed floor tile possibly T2 backing	2	50-1550	1480-1550	1400-1600
539	**2199; 2320; 1678; 2323; 2850; 2276; 3106**	**Large group of medieval floor tile Westminster one, one local, majority Flemish Calc glazed and occasional Flemish silt; early post-medieval peg tile T2 mortar also T11 relict white mortar on back of the Westminster Floor Tile with a base of Hassock stone**	**68**	**50-1900**	**1480-1550**	**1400-1600 Note also relict Type 11 (1250-1310 mortar on the back of the Westminster Floor tile**
548	**2892; 3046**	**Small group of Westminster Floor Tiles, one with pattern, Whole Red Tudor Brick no obvious mortar**	**30**	**1250-1700**	**1450-1700**	**No mortar**
549	**3032nr3033**	**Intermediate post great fire brick sunken margins T10 mortar attached to both whole bricks**	**2**	**1664-1725**	**1664-1725**	**1664-1725**
552	**3065; 3033**	**Reused Tudor Bricks Whole in T10 mortar**	**2**	**1450-1700**	**1450-1700+**	**1664-1725**
558	2271nr2272; 3039	Early medieval glazed peg tile biscuit and Tudor brick	2	1135-1700	1450-1700	No mortar
560	**3033; 3046; 3065; 2274; 2276; 2587**	**Medieval and early post-medieval peg tile, Tudor relict T8 mortar on peg tile but also T1 calf brown on bricks possible T7 mortar too on 3046**	**8**	**1080-1900**	**1480-1700**	**1450-1650 with relict T9 medieval gravel mortar (1150-1500)**
561	2276	Post-medieval peg tile T2 mortar attached	3	1480-1700	1480-1700	1400-1600
565	2271; 2274	Medieval peg tile	10	1080-1800	1180-1450	Mortar not clear
567	**2892; 2587**	**Very large group of Westminster Floor Tile with T11 white mortar and one medieval peg tile**	**7**	**1240-1450**	**1250-1450+**	**1250-1310**
568	2586	Late medieval to early post-medieval peg tile	2	1180-1800	1300-1600	No mortar
581	2271; 2586; 2587; 2274	Group of medieval peg tiles	15	1080-1800	1240-1450	Mortar not clear

584	2452; 2271; 2274	Roman tile, medieval peg tiles	8	55-1800	1180-1450	No mortar
587	2452; 2271nr2272; 2274	Roman tile, early medieval peg tiles	5	55-1350	1135-1350	No mortar
596	**3033; 3032nr3033**	**Small Tudor red and early intermediate post great fire brick T10 mortar**	**2**	**1450-1725**	**1664-1725**	**1664-1725**
597	**3033**	**Tudor Red possible T1 mortar**	**1**	**1450-1700**	**1450-1700**	**1450-1650**
598	2271; 2276	Medieval and early post-medieval peg tile	5	1180-1900	1480-1700	No mortar
599	**2323; 1678; 2276; 3033**	**Flemish Calcareous glazed floor tile, Early post-medieval Tudor Brick, and peg tile T2 mortar on back of Floor Tile**	**7**	**1350-1900**	**1480-1550**	**1400-1600**
600	**2586; 1678**	**Flemish Calcareous glazed floor tile and late medieval peg tile T2 mortar**	**7**	**1180-1800**	**1480-1550+**	**1400-1600**
607	2271	Medieval peg tile no glaze	1	1180-1800	1180-1450	No mortar
611	**2276**	**Near complete early post-medieval peg tile no mortar**	**1**	**1480-1900**	**1480-1700**	**No mortar**
614	**3033; 3032nr3033**	**Complete Tudor and early post great fire intermediate brick possibly T10 found reused on 3033**	**2**	**1450-1725**	**1664-1725**	**1664-1725**
615	2271; 3032nr3033	Medieval peg tile early post great fire intermediate brick T10	3	1180-1800	1664-1725+	1664-1725
619	**2271; 2276; 3030; 3033**	**Early post-medieval peg tile and Brick, reused medieval peg tile and heavily vitrified 3030 possible kiln furniture**	**4**	**1180-1900**	**1480-1800**	**Mortar not clear as vitrified**
621	1678; 2271; 2276	Calcareous glazed floor tile; reused medieval and early post-medieval peg tile white gritty mortar	3	1180-1900	1480-1800	Mortar not clear
622	2271; 3032nr3033; 3046	Vitrified post-medieval red brick and early post great fire intermediate, medieval peg tile	7	1180-1725	1664-1725+	No mortar
625	**3033; 3046**	**Tudor, Stuart Bricks whole reused in a pale grey sandy mortar possibly T10**	**4**	**1450-1650**	**1450-1650+**	**1664-1725**
628	2815; 2459a; 3009; 2271; 2271nr2272; 2274; 2587; 3106	Mixture of Roman Tile and Tegulae mainly medieval peg tile; Hassock stone rubble	26	50-1800	1240-1450	No mortar
632	2271; 2271nr2272; 2274	Medieval peg tile	10	1080-1800	1180-1350	No mortar
634	2271; 2274	Medieval peg tile	6	1080-1800	1180-1450	No mortar
641	3090; 2271; 2276; 2587	Medieval peg tile and post-medieval pan tile and peg tile	9	1180-1850	1730-1850	Mortar not clear

642	2323; 3032nr3033	Flemish Calcareous Glazed tile and early post great fire intermediate brick	2	1350-1725	1664-1725	Mortar not clear
643	3046	Early post-medieval brick fragment	1	1450-1700	1500-1700	No mortar
644	3046	Early post-medieval brick fragment chaff at base	1	1450-1700	1500-1700	No mortar
645	2271	Medieval thick glazed peg and curved roofing tile	5	1180-1800	1180-1450	No mortar
647	2271	Medieval peg tile	2	1180-1800	1180-1450	No mortar
649	2276	Early post-medieval peg tile	1	1480-1900	1480-1700	No mortar
650	3101	Soft white lime mortar either T2 or T11	1			1400-1600 or 1250-1310 lll defined
651	2271; 2276; 2587; 3102; 3120	Daub, medieval peg tile and early post-medieval peg tile; Kimmeridge oil shale fuel	11	1500bc-1900	1480-1700	No mortar
652	1678; 2850; 2323; 2271; 2276; 2586; 2587	Group of medieval Flemish Glazed floor tile, medieval and early post-medieval peg tile. One Triangular Calcareous Floor Tile one thin Flemish silt T2 mortar backing in places	13	1180-1900	1480-1550	1400-1600
686	2271; 2276; 2587	Medieval and early post-medieval peg tile	15	1180-1900	1480-1700	No mortar
688	2274; 2587	Medieval peg tiles	5	1080-1450	1240-1450	No mortar
702	**2892**	**Plain Westminster Floor Tile fragments T11 backing**	**15**	**1250-1310**	**1250-1310**	**1250-1310**
704	2587	Medieval peg tile possible T11 backing	1	1240-1450	1240-1450	1250-1310?
705	2271	Medieval peg tile	1	1180-1800	1180-1450	No mortar
708	2271; 2274	Medieval peg tiles	9	1080-1800	1180-1450	No mortar
711	2271	Medieval peg tiles	3	1180-1800	1180-1450	No mortar
717	3046; 3030; 1977	Late medieval to early post-medieval bricks, Flemish silty glazed floor tile	4	1400-1700	1450-1600+	Mortar not clear
722	2271; 2587; 2274	Medieval peg tiles	13	1080-1800	1240-1450	No mortar
724	2271; 2271nr2272; 2273; 2274; 2587; 3107	Medieval peg tiles one curved tile Reigate stone ashlar fragment	24	1060-1800	1240-1450	No mortar
725	2271; 2587	Medieval peg tiles one burnt possible T11 mortar backing 2587	3	1180-1800	1240-1450	1250-1310+
728	**3033; 3065**	**Early post-medieval bricks traces of T1 mortar but also a Victorian T5 Roman**	**2**	**1450-1700**	**1450-1700+**	**1850-1925?? Query as**

		Cement??				**mortar not clear and could be result of burning**
740	2586	Late medieval peg tile	1	1180-1800	1300-1700	Mortar not clear
741	**2271; 2276; 3031**	**Medieval Flanderstile, medieval and post-medieval peg tile heavily Reused in T2a a concretionary flint gravel mortar harder than T2**	**4**	**1180-1900**	**1480-1700**	1400-1600+
746	3498 2271nr2272	Early medieval peg tile Biscuity, Flinty possible Brill Borstall and other early medieval peg tiles	3	1135-1900	1150-1235	No mortar
749	2271nr2272; 3498; 3205; 2274; 2271	Early group of medieval peg tile and curved tile (3 fabrics) including Brill Borstall type biscuit and Wealden yellow	33	1080-1900	1150-1350	No mortar
751	1678	Part of a near complete Flemish glazed calcareous floor tile	1	1350-1550	1480-1550	No mortar
757	2276; 1678; 3065	Early post-medieval peg tile, Large Tudor Bricks and Flemish Calcareous Floor Tile	5	1350-1900	1480-1600+	No mortar
763	2459a; 2271	Roman Tegulae and medieval peg tile mainly	5	50-1800	1180-1800	No mortar
779	3498	Dense Encaustic Floor Tile and Eturia Marl Type Brick T3 mortar	2	1080-1900	1825-1925	1780-1900
782	2587; 1678; 1977	Medieval peg tile, Flemish Calcareous glazed floor tile and Flemish Silty floor tile T2 mortar on back of floor tile	4	1240-1600	1450-1600	1400-1600
786	2271; 2276; 1811; 2323; 1678; 3063; 3119	Very large group of Calcareous Flemish Glazed floor tiles some Silty Flemish and Penn Tiles a few medieval peg tiles and one early post-medieval peg tile backed with T2 mortar; Caen stone ashlar	28	1060-1900	1480-1550+	1400-1600
788	2850	Thin Flemish silty floor tile	1	1450-1500	1450-1500	Mortar not clear
790	**2587; 2274**	**Medieval peg tile with brown iron gravel mortar T8**	**7**	**1080-1450**	**1240-1450**	**1150-1500**
792	2276; 2274; 2271; 2586; 2587	Medieval and early post-medieval peg tile	21	1080-1900	1480-1600	No mortar
794	2323	Thick glazed Calcareous floor tile T2 mortar attached	1	1350-1550	1480-1500	1400-1600
801	2271; 2274	Medieval peg tile	3	1080-1800	1180-1450	No mortar
811	2271; 2271nr2272; 2587; 2274	Very large group of medieval peg tile	45	1080-1800	1240-1450	Mortar not clear

812	2586; 3498; 2271	Some very large Medieval curved roofing tiles in two fabrics 2586 and 3498 silty lumps and peg roofing tile	6	1180-1800	1180-1450	No mortar
813	3045; 3032nr3033	Early post-medieval intermediate post great fire and red brick lime mortar	2	1450-1725	1664-1725	Mortar not clear white lime
814	2271; 2587; 2274; 2892	Westminster Floor Tile and medieval peg tile burnt	16	1080-1800	1250-1310+	No mortar
815	2271; 2274; 2586; 2276	Mixture of medieval and early post-medieval peg tile	20	1180-1900	1480-1600	Mortar not clear
817	**3032nr3033**	**Early intermediate post great fire bricks x 2 sunken margins**	**2**	**1664-1725**	**1664-1725**	**No mortar**
835	**2586**	**Medieval late peg tile T8 mortar attached**	**2**	**1180-1800**	**1180-1600**	**1150-1500**
838	**1678; 3076**	**Plain Medieval Penn Tile and Calcareous Floor Tile glazed**	**2**	**1350-1550**	**1350-1550**	**No mortar**
839	2271; 2587; 3105	Medieval peg tile; Kentish ragstone rubble	8	50-1800	1240-1450	Mortar not clear
843	2271	Medieval peg tile	1	1180-1450	1180-1450	No mortar
865	**3032; 3039; 2850**	**Post Great Fire Brick, early post-medieval brick and Flemish floor tile reused T3 mortar**	**3**	**1450-1900**	**1700-1900**	**1700-1900**
866	**3032nr3033; 2271nr2272**	**Intermediate post great fire early bricks, Early glazed peg tile had T2 mortar relict but T3 mortar reused on brick**	**6**	**1130-1725**	**1664-1725**	**1700-1900 Note relict 1400-1600 mortar on early peg tile**
876	2271	Medieval peg tile	1	1180-1800	1180-1450	No mortar
877	**2276**	**Early post-medieval peg tile**	**1**	**1480-1900**	**1480-1700**	**Mortar not clear**
878	**1678**	**Flemish Calcareous Floor Tile Glazed Type 9 Mortar fine brown**	**1**	**1350-1550**	**1480-1550+**	**1450-1700**
879	2452; 3500; 2459b; 3238; 2274	Mainly Roman Tile but also some very early organic core medieval peg tile	5	50-1350	1080-1350	Mortar not clear
890	1678; 2323	Group of Flemish Glazed Calcareous Floor Tile including one thin 20mm example T2 mortar attached	10	1350-1550	1450-1500+	1400-1600
891	2271nr2272; 2271; 2323	Medieval peg tile and Flemish Thick glazed Calcareous floor tile	10	1135-1600	1450-1550	Mortar not clear
894	**2323; 2271; 3033; 2586**	**Medieval peg tile, Flemish Glazed Calcareous floor tile and Tudor Brick Medieval peg tile sandwiched in a mortar T2a evidence for T9 mortar at base of brick**	**4**	**1180-1800**	**1450-1700**	**Mortar 1400-1600 T2a Tufa As 786 also t9 Mortar on brick**

900	**2271; 2587**	**Medieval peg and curved roofing tiles reused in T2 mortar**	**7**	**1180-1800**	**1240-1450+**	**1400-1600**
911	2271; 2274	Medieval peg tile T8 medieval mortar sandy	7	1080-1800	1180-1450	1150-1500
932	1678; 2276	Flemish Calcareous Floor Tile and early post-medieval peg tile T2 mortar	2	1350-1900	1480-1600+	1400-1600
937	2892; 2323; 1678; 2271; 2272; 2271nr2273; 2586; 2587; 2276; 3046; 3065	Medieval Westminster and Calcareous Flemish Glazed floor tile medieval bat tile, early med and post-medieval peg tile, early post-medieval brick traces of T2 mortar	26	1135-1900	1480-1600	1400-1600
938	2271	Medieval peg tile possible Type 11 mortar white on backing	15	1180-1800	1180-1450	1250-1310+
942	2271; 2272; 2274; 2587; 2276	Big group of Medieval and just one “intrusive”? early post-medieval peg tile	54	1080-1900	1480-1600	Mortar not clear
944	3063; 3032nr3033	Intermediate post great fire brick and Flemish Glazed Floor Tile	2	1450-1725	1664-1725+	No mortar
946	**1810; 2274; 2850**	**Early medieval peg tile, Penn Floor Tile and Thin Flemish glazed silt**	**3**	**1080-1600**	**1450-1500+**	**Mortar not clear**
950	**1678; 2323; 3498;; 2850; 3030; 2276; 3107; 3105**	**Early post-medieval peg tile, Flemish calcareous and silty floor tile, late medieval brick curved medieval glazed roofing tile T2 mortar present, Kentish ragstone rubble, Reigate stone ashlar**	**17**	**50-1900**	**1480-1550**	**1400-1600**
951	**2323**	**Large group of floor tile All Flemish Calcareous Glazed backed with T2 mortar**	**7**	**1350-1550**	**1480-1550**	**1400-1600**
956	2323	Flemish Calcareous Glazed reused ill define mortar	1	1350-1550	1480-1550+	Mortar not clear
957	1678; 2323	Flemish Calcareous Glazed floor tile T2 mortar	2	1350-1550	1480-1550	1400-1600
958	**2274**	**Early medieval peg tile with T8 medieval yellow gravel mortar**	**4**	**1080-1350**	**1080-1350**	**1150-1500**
961	**2271; 2276; 2587**	**Medieval and early post-medieval peg tile reused T2a tufa gravel (was**	**12**	**1180-1900**	**1480-1700**	**1400-1600**
962	**2274; 3031**	**Flanderstile, and early organic peg tile possible used in T2a**	**3**	**1080-1450**	**1350-1450+**	**1400-1600**
965	1678; 3119	Yellow Calcareous Floor Tile Glazed; Caen stone moulding	2	1060-1550	1450-1550	No mortar
975	2271	Late medieval peg tile	6	1180-1800	1300-1600	Mortar not clear
976	2271; 2274; 2276; 3102	Daub and medieval and just one early post-medieval peg tile	53	1500bc-1900	1480-1700	Mortar not clear like 975

977	2271; 2274; 2587	Medieval peg tile	8	1080-1800	1240-1450	No mortar
979	2587	Medieval peg tile	2	1240-1450	1240-1450	No mortar
984	2271; 2276	Late medieval to early post-medieval peg tile	3	1180-1900	1480-1700	No mortar
985	**1678; 2323**	**Calcareous Glazed Flemish Floor Tile one triangular backed by T2 mortar**	**13**	**1350-1550**	**1480-1550**	**1400-1600**
987	**2892**	**Very large group of Westminster Floor Tiles**	**??? ?**	**1250-1310+**	**1250-1310+**	**1250-1310+**
989	2279	Pan Tile	1	1630-1850	1830-1850	No mortar
990	3102	Daub	2	1500bc-1600	50-400	No mortar
994	2459a; 2271nr2272; 3130	Roman tile and early medieval peg tile, millstone grit roofing tile could be Roman or early post-medieval	3	50-1300	1135-1300	No mortar
996	2274; 2587	Medieval peg tile	7	1080-1450	1240-1450	No mortar
1003	2452; 2459b; 2271V; 2892	Roman Tegulae, early medieval peg tile Westminster Floor Tile one with pattern	6	55-1800	1250-1310+	No mortar
1006	**2587**	**Medieval peg tile reused**	**2**	**1240-1450**	**1240-1450+**	**Mortar not clear**
1008	2892; 1678	Group of medieval floor tile mainly Westminster floor tile but also some Flemish Calc Glazed one of which has T2 mortar	14	1250-1550	1480-1550	1400-1600
1009	2271	Medieval peg tile	9	1180-1800	1180-1450	No mortar
1011	**2586; 2276**	**Late medieval to early post-medieval peg tiles mortar ill defined**	**2**	**1180-1900**	**1480-1700**	**Mortar not clear**
1013	2271; 2274; 2587	Medieval peg tiles	10	1080-1800	1240-1450	No mortar
1022	2271; 2274; 2587	Medieval peg tiles large group	55	1080-1800	1240-1450	No mortar
1031	**2459a; 2271; 2274**	**Roman Tile and medieval peg tile in medieval T8 brown gravel mortar**	**11**	**50-1800**	**1180-1450**	**1150-1500**
1032	2452, 1810; 2276; 2586	Roman Imbrex, medieval and early post-medieval peg tile, Penn Floor Tile	13	55-1900	1480-1600	No mortar
1034	3031; 3076; 1678; 1810; 2459a; 2323; 2320; 2271; 3119	Medieval Flanderstile Brick, Triangular Penn Tile and Flemish glazed floor tile calcareous, medieval peg tile, Roman Brick, local sandy Floor Tiles T2 mortar in places; Caen stone ashlar	14	50-1800	1350-1550	1400-1600
1038	2892; 2850; 1810	Floor tiles only Westminster and Flemish Glazed silt And	5	1250-1550	1350-1550	No mortar

		Penn				
1042	2452; 3060; 3238; 2271; 2274; 2587	Roman imbrex and Brick; mainly medieval peg tile	30	50-1800	1240-1450	Mortar not clear possibly T11 1250-1310
1047	2271; 2274; 2587; 1678	Medieval peg tile and Flemish glazed Calcareous Floor Tile	7	1080-1800	1350-1550	Mortar not clear possibly T11 1250-1310
1048	2452; 2271; 2274; 2587; 2276; 1678	Roman tile, mainly medieval peg tile, early post-medieval peg tile Flemish Calcareous Floor Tile	30	55-1900	1480-1600	Mortar not clear
1051	3050	Late Roman Brick	1	140-230	140-230	No mortar
1053	2271; 2587	Medieval peg tile	6	1180-1800	1240-1450	No mortar
1055	2271; 2274; 2587	Medieval peg and varied group of curved roofing tiles	16	1080-1800	1240-1450	Mortar not clear
1059	2271; 2274	Medieval peg tile	10	1080-1800	1180-1450	No mortar
1062	**2271; 2276**	**Medieval and early post-medieval peg tile traces of relict T8 medieval mortar**	**13**	**1180-1900**	**1480-1600**	**Traces of relict 1150-1500 mortar**
1066	2892; 2850; 3120	Floor Tile mainly Westminster but also thin Flemish glazed floor tile, opus sectile Roman or medieval triangle fragment	6	50-1600	1450-1500	No mortar
1069	3076	Fresh patterned Penn Tile no mortar	1	1350-1390	1350-1390	No mortar
1074	2276; 2323; 1678	Post-medieval peg tile Flemish calc floor tile glazed T2 mortar	5	1350-1900	1480-1550	1400-1600
1077	2452; 2459b; 2271nr2272	Roman Tegula and brick hob nail print early medieval peg tile glazed	3	55-1300	1135-1300	No mortar
1081	2271nr2272	Thick early medieval peg tile	3	1135-1300	1135-1300	No mortar
1082	2452; 2459a; 2274; 2587; 2892	Mainly Roman brick and tile mainly medieval peg tile and Small Triangle Westminster Floor Tile	8	50-1450	1250-1310+	No mortar
1086	2274; 2276; 2587	Medieval and early post-medieval peg tile	12	1080-1900	1480-1600	No mortar
1087	2271; 2274; 2586	Medieval peg tile	7	1080-1800	1180-1600	Mortar not clear
1093	2271; 2276	Medieval and early post-medieval peg tile	4	1180-1900	1480-1600	No mortar
1098	2271nr2272; 2271; 2274; 2587	Medieval peg tile	16	1080-1800	1240-1450	No mortar

1099	3205; 2271; 2274; 2587	Medieval peg tile including one Wealden and one curved	11	1080-1800	1240-1450	No mortar
1102	2271; 2587	Medieval peg tile medieval relict t8 brown gravel	14	1180-1800	1240-1450	1150-1500
1103	2271; 2274	Medieval peg tile	3	1080-1800	1180-1450	No mortar
1109	2892; 2452; 2271; 2272	Mainly Westminster Floor Tile, Roman Brick, Medieval peg and bat tile	18	55-1800	1250-1310+	No mortar
1117	2892; 2894; 2271; 2276; 2586	Westminster and Penn Floor Tile, medieval and early post-medieval peg tile T11 mortar	16	1180-1900	1480-1600	Relict T11 mortar only on Westminster Floor Tile 1250-1310
1119	**2271**	**Medieval peg tile reused**	**1**	**1180-1800**	**1180-1450+**	**Mortar not clear**
1123	2271; 2274, 2587; 1810	Medieval peg tile and Medieval Floor Tile Penn	6	1080-1800	1350-1450	No mortar
1134	2271, 2274; 2587; 2276; 3126a	Medieval early post-medieval peg tile 3 examples, Purbeck limestone mortar probably medieval	13	50-1900	1480-1700	Mortar not clear possibly T11 1250-1310
1137	2892	Westminster Floor Tile	6	1250-1310	1250-1310+	No mortar
1143	2271; 2274; 2587	Medieval peg tile t8 brown gravel mortar	28	1080-1800	1240-1450	1150-1500
1151	2271; 2271nr2272; 2586; 2274	Medieval peg tile	15	1080-1800	1180-1450	No mortar
1154	2271; 2271nr2272; 3498; 2587; 2274; 2892	Medieval peg tiles and Triangle Westminster Floor Tile	32	1080-1800	1250-1450	No mortar
1155	2587; 2274	Medieval peg tile	6	1080-1450	1240-1450	No mortar
1156	2271; 2274; 2586	Medieval peg tile	9	1080-1800	1180-1450	Mortar not clear
1159	2271; 2276	Medieval and early post-medieval peg tile	2	1180-1900	1480-1700	No mortar
1162	2271nr2272	Early thick glazed medieval peg tile	1	1135-1220	1135-1220	No mortar
1167	2459a; 1678; 2892	Roman tile, Flemish glazed floor tile, Mainly Westminster Floor Tile	15	50-1550	1350-1550	No mortar
1168	2271; 2587	Medieval peg tile	3	1180-1800	1240-1450	No mortar
1169	**2271; 2587**	**Medieval peg tile T8 brown gravel mortar**	**12**	**1180-1800**	**1240-1450**	**1150-1500**
1184	**2271; 2274**	**Medieval peg tile T8a organic core**	**16**	**1080-1800**	**1180-1450**	**1150-1500**
1188	3102; 3022; 2271; 2274	Roman tile Eccles, Daub and early medieval peg tile	6	1500bc-1800	1180-1450	No mortar

1194	2276	Early post-medieval peg tile	21	1480-1900	1480-1700	No mortar
1195	3120c	Norwegian ragstone whetstone	1	850-1500	1150-1500	No mortar
1196	2271; 2586; 3498	Late Medieval peg tile and curved tile in unknown fabric possible louver/finger pressed chimney fragment medieval not Roman	18	1100-1900	1300-1600	No mortar
1204	2271; 2276; 3063	Flemish glazed floor tile early post-medieval peg tile and flecks of medieval peg tile	5	1180-1900	1480-1700	No mortar
1209	2452; 2271; 2274	Roman brick and medieval peg tile	8	55-1800	1180-1450	No mortar
1211	2459a; 2271; 2274	Roman tile and medieval peg tile	11	50-1800	1180-1450	Mortar not clear
1215	2271	Medieval peg tile	2	1180-1800	1180-1450	No mortar
1216	2587; 2271	Medieval peg tile	19	1180-1800	1240-1450	No mortar
1219	2271; 2587	Medieval peg tile	2	1180-1800	1240-1450	No mortar
1220	2271; 2587	Medieval peg tile	11	1180-1800	1240-1450	No mortar
1224	2271; 2587	Medieval peg tile	13	1180-1800	1240-1450	No mortar
1229	2892; 2271; 2587;	Mainly Westminster Floor Tile some medieval peg tile and curved roofing tile possible T11 mortar	6	1180-1800	1250-1310+	Possible T11 mortar 1250-1310+
1231	2892	Westminster Floor Tile – Triangle, glazed and pattern	4	1250-1310	1250-1310+	No mortar
1233	2892; 2271; 2274; 2276	Westminster Floor Tile, Nearly all Medieval peg tile and early post-medieval peg tile T8 mortar present on peg tile	13	1080-1900	1480-1700	Relict T8 mortar on medieval peg tile 1150-1500
1239	2271; 2274; 2276; 2587	Medieval and early post-medieval peg tile	15	1080-1900	1480-1700	Mortar not clear
1245	2271; 2587	Medieval peg tile	10	1180-1800	1240-1450	No mortar
1250	2587; 2274	Medieval peg tile	8	1080-1450	1240-1450	No mortar
1253	2199	Westminster Floor Tile T11 mortar attached	1	1250-1310	1250-1310+	1250-1310
1257	2271; 2274; 2587	Medieval peg tile	12	1080-1800	1240-1450	No mortar
1273	3054; 2271nr2272; 2587	Roman tile Hampshire Grog, medieval peg tile	4	70-1450	1240-1450	No mortar
1282	**2892**	**Very large group of Westminster Floor Tile only Triangular yellow and green plain normal Floor Tile T11**	**6**	**1250-1310**	**1250-1310+**	**1250-1310+**

		mortar backing one				
1288	2892; 2587	Westminster Floor Tile 6 examples pattern worn, and medieval peg tile	8	1240-1450	1250-1450	No mortar
1297	2815; 2271; 2587; 2292	Westminster plain glaze Floor Tiles mainly, Roman Tile medieval peg tiles	16	50-1800	1250-1450	No mortar
1317	2459a; 3006; 3009; 2271; 2271nr2272	Roman Sandy and Hartfield fabric brick and tile early medieval peg tile 50:50	10	50-1800	1180-1450	No mortar
1318	2815; 2271nr2272	Mainly Roman tile and early medieval peg tile	6	50-1300	1135-1300	No mortar
1329	2273; 2274; 2586; 2587	Medieval peg tile	5	1080-1800	1240-1450	No mortar
1332	2815; 2271	Mainly Roman Tile and medieval peg tile	5	50-1800	1180-1450	No mortar
1335	2815	Roman Tile	9	50-160	50-160+	No mortar
1338	2587	Medieval peg tile	8	1240-1450	1240-1450	No mortar
1339	2271; 2587	Medieval peg tile	7	1180-1800	1240-1450	Mortar not clear
1341	2452; 2459a; 3009; 2892; 2271; 2587; 2273	Roman tile and brick, Westminster Floor Tile one decorated medieval peg tile	12	50-1800	1250-1450	Mortar not clear
1343	2452; 3028	Roman silty and sandy fabrics reused Box Flue comb and Tile	6	55-160	60-160+	Mortar not clear
1347	2892; 2271; 2276	Another group of Westminster Floor Tile patterned and triangular and conventional plain glazed medieval and early post-medieval peg tile backing T11 mortar	23	1180-1900	1480-1600	Relict 1250-1310 Mortar back of Westminster floor tile
1348	2452; 2459b	Late and early Roman tile and brick	4	50-250	120-250	No mortar
1361	2271; 2274; 2587; 2892	Westminster Floor Tile and medieval peg tile	26	1080-1800	1250-1450	No mortar
1370	2271; 2274	Medieval peg tile	7	1080-1800	1180-1450	No mortar
1371	2459a	Roman Tile and Tegulae	10	50-160	50-160+	No mortar
1373	**2271; 2271nr2272**	**Medieval peg tile**	**10**	**1135-1800**	**1180-1450**	**No mortar**
1376	2587	Medieval peg tile	1	1240-1450	1240-1450	No mortar
1388	2273; 3119	Early medieval peg tile, Caen stone rubble	2	1060-1600	1135-1220	No mortar
1393	2271; 2323	Medieval peg tile and Flemish Glazed Floor Tile –Calcareous	2	1180-1800	1350-1550	No mortar
1501	3046	Tudor Stuart Red Brick	3	1450-1700	1450-1700+	No mortar

1502	3046	Reused Tudor Stuart Red Brick in T3 mortar	2	1450-1700	1450-1700	1700-1900
1511	2276; 3032	Post-medieval peg tile and post great fire brick	2	1480-1900	1664-1900	No mortar
1548	3046	Scoop frog Stuart Brick reused	1	1450-1700	1650-1700+	1700-1900

Recommendations/Potential

Recovery of items of building material from structures at HLY12, have provided a very good idea of the medieval, later medieval development and Dissolution of Holywell Priory as well as later 16th- and 17th-century development and widespread later 18th-century later residential development in this part of Hackney, culminating with the 1860 railway viaduct.

The ceramic building material assemblage includes unique and nationally important examples of medieval ecclesiastical embellishment, including at least three mid to late 13th-century in-situ patterned and plain glazed Westminster Floor Tile surfaces with at least 24 patterned designs. The widespread restructure of the priory during the later medieval period includes enormous spreads of plain glazed Flemish floor tile surfaces, very rare vaulted moulded brick from a side chapel and very early mid 15th-century red brick structures, perhaps influenced by wealthy patrons.

At publication stage, as well as a section on medieval and post-medieval stone, tile and brick types and use in an appendix there should detailed evaluation of the removed Westminster Floor Tile surface which will need to include an re-examination of the 24+ pattern floor tile designs (and 200+ patterned tiles) by Dr Ian Betts. This should be done in order to establish whether any new designs can be added to his existing Corpus (Betts 2002). Detailed illustration of the tiled pavements based on the rectified photographs should also be undertaken.

It is vital that a petrological review of the architectural stone types is undertaken, where seven examples have been pinpointed as possible unusual materials. It has already been established from a much smaller petrological review of the remaining stone materials here that there may be the possible use of Bargate stone column shafts and even paving. It is recommended that a petrological sample from here and from any other material types uncovered from the architectural group be thin-sectioned.

In the publication, emphasis must be placed on the later medieval embellishment of Holywell Priory, the materials, ideas brought in from the continent (including the use of vaulting bricks and any parallels in London and England) and who these patrons were.

Finally, the question of how important was reuse of medieval monastic stone and late medieval to Tudor red bricks in the later post-medieval terraced development in this part of London should be addressed. Comparison should be made with other monastic sites elsewhere in London, e.g. Bermondsey Abbey, where there are also enormous quarries of medieval and post Dissolution stone and brick.

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Appendix 11: In Situ Westminster Floor Tile Assessment

Kevin Hayward

Introduction

The uncovering of large decorated Westminster floor tile surfaces within Holywell Priory [567] [987] [1282] necessitated a different approach to recording and preservation of the 573 items (177kg) of floor tile.

The floors which were constructed sometime between 1250 and 1310, when the Westminster tile production at Farringdon and other sites was in full swing (Betts 2002), provide one of the largest and best preserved examples of *in situ* floor tile from London. It was for this reason that a more detailed review of their size, shape, fabric and pattern was made.

Methodology

Following the lifting of the *in situ* paving during 2015, each item of Westminster Floor Tile was allocated an individual number prefixed by T, thus T1 up to T566. As part of the conservation project, each item was then recorded, photographed and placed within the overall pattern. Fabric samples (20mm) were obtained using a small (1kg) mason's hammer and sharp chisel, from 10% of the items (56 examples) ensuring an adequate representation of the floor tile fabric and mortar in the pavement could be made. Each small fresh fabric sample was as examined at x20 magnification using a long arm stereomicroscope or hand lens (Gowland x10). The tile was examined using the London system of classification with a fabric number allocated to each object

The results from this study have been placed in an accompanying catalogue (Tile Worksheet.xlsx). The photographs of individual tiles and of the rectified in-situ tile pavements can be consulted in the accompanying image files.

Quantification

In all there were 573 items (177kg) of Westminster floor tile (*T1-T566)* (Tile Worksheet.xlsx). Most were complete (383 examples) thick or broken (79 examples) small square tiles with a bevelled edge, typical in size of the Westminster Tile Group (110mmx 110mm x 24-27mm) with a weight of between 370g to 400g. There were 109 Triangular tiles (that is square Westminster floor tiles cut diagonally) and typically weighed between 180g and 190g.

Square

Patterned (all fabric 2892)

The patterned tiles, all in fabric *2892*, a light brown fabric with frequent black iron oxide, red iron oxide and some coarse quartz (Betts 2002) account for at least 186 (32.5%) of all the floor tile from these 1250-1310 floor surfaces from Holywell Priory. At least 19 patterns were found to conform with Betts classification, in addition to which are at least three possible new designs and a number of designs so badly worn it was not possible to determine the detail. These have been labelled as unclear in Table 1 below.

Betts code	**Description Design**	**Number**	**Tile number**	**Identified in previous excavations at Holywell Priory (Betts 2011)**
W4	Knight on horse back	23	17, 131, 135-136, 142, 162,174, 351, 356, 361-2, 368, 408, 419 (reversed), 430, 500, 507, 510, 513, 514 (?),	Not seen
W9	Griffin	6	170, 318, 343, 516, 527, 540 (?)	Not seen.
W35	3 Lions shield	20	157-8, 178, 188, 320, 357-9, 363-4, 367, 369-70, 372, 380, 406-7, 504-5, 512	Site A1
W36	Shield design 2	7	171, 327, 376, 431, 522, 528, 531	Site A1
W37	Shield design 3	10	169, 187, 319, 360, 399, 487, 490, 506, 532, 572	Site A1
W38	Shield design 4	8	328, 373, 429 (worn), 434, 436, 470, 524, 530	Not seen
W39	Shield design 5	1	159	Not seen
W48	4 pairs of inward facing triangles	12	160, 196, 207, 321, 337, 339, 342, 375, 391, 420 (worn). 536-7	Site A1 4 examples
W60	5 circles forming part of a much larger four tile group seen in-situ	1	346	Similar design W58 Area A1
W61	5 circles forming part of a much larger four tile group seen in-situ	7	206, 215, 347, 352, 394, 397, 472?,	Similar design W58 Area A1
W63	5 circles forming part of a much larger four tile group seen in-situ	5	132, 137, 353, 395, 405	Similar design W58 Area A1
W76	Large fleur-de-lys	1	389	Not seen
W78	Large fleur-de-lys design 2	10	140-141, 381-2, 385, 488?, 502-3, 525-6	Not seen
W81	Variant on fleur-de-lys	5	161, 202, 324, 338, 398	Not seen
W82	Variant on fleur de lys 2	2	138, 400	Not seen
W108	Saltiare Cross	9	156, 175-176, 185-186,	Site A2

	floral design		189, 325, 392-393	
W116	Large petal design	5	322. 386, 437-8, 477	Site A1
W124	Four small petals	20	143-144, 330-332, 335, 348-50, 354-55, 404, 448, 475, 497, 508 (OK) -509 (?), 518, 534-5	Not seen
W134	Large central petal surrounded by a smaller ring	10	134 198, 331, 334, 340,365-366, 371, 501, 519-520	Site A1
Design similar to 115 may be new	Large petal design	7	115 165 , 388, 390, 474, 492, 511, 538	Possibly Site A1
New ?	4 motif design unclear	1	547	Not seen
New	New design	1	517	Possibly site A1
Not clear	Various	15+	15,16, 150, 166-167, 168 (W115/116?), 170 (**W3? Upright knight on horse**),177, 179-180, 184, 194, 195 (W3?), 197, 205, 216, 318 (W9? **griffin**), 323, 326,336, 384 (ANIMAL?), 387 (ANIMAL?), 396, 401-403, 433 & 435, 473, 491, 493, 499, 516 (3?), 521 (8? **creature**), 523, 545-6, 551, 566 **3**	Possibly some site A1

Table 1: list of Westminster Floor Tile Designs from the in-situ flooring at Holywell Priory

General comments

Certain designs, the knight on horseback (W4), 3 lion shield (W35) and four small petals (W124), are especially common accounting for 30% of all the patterned designs. It was clear from the rectified photography that circle designs W60; 61 and 63 formed groups of 4 tiles, each forming a central motif, consisting of a larger circle. Most of the designs were arranged in groups of 4, type E of Betts (2002) in diamonds including the saltaire cross, (W108), shield design 2 (W36) and many more. This type of patterning is seen at other in-situ floors from the Westminster Abbey Muniment Room, south of the 14th-century partition including designs W35; W38 and W78 (Betts 2001, fig. 17) also very common designs at Holywell. Some but not all of these designs were also present at earlier excavations at Holywell Priory (Bull *et al*. 2011, fig. 51), and conversely some designs listed then are not present in these excavations.

Glazed complete floor tiles

The very common, 274 examples, (48%) plain glazed tiles, again in fabric 2892 consist of two colours; bright-yellow-fawn and brown-black. The brown is the product of lead glaze above a reddish-firing clay body, whilst the yellow is the result of adding lead glaze above a white slip (Betts 2001, 7). The contrast between the colours means that plain tile are often used to designate rectangular borders, as is case with the yellow plain glaze, defining certain design

groupings as seen in the in-situ flooring from the rectified photography and in other parts of London, e.g. Muniment Room, Westminster Abbey (Betts 2002, figs. 13 & 14). The borders form a regular zig-zag pattern. The black tiles sometimes alternate with the yellow or lie alongside the yellow border areas, in each case bringing out the definition of the floor.

Triangular forms

The third element to the Holywell pavements are the triangle Westminster Floor Tiles, again either yellow or black glazed. These are particularly common (109 examples – 19.1%) and typically in size are 24mm thick. These were used for the edges of tile pavements, laid diagonally and in decorative bands or panel areas (Betts 2001, 7) and have been used for this purpose in the pavements at Holywell. They were once complete Westminster Floor Tiles that have subsequently been split in two, probably before the application of lead glaze, when the edges of the tile were being knife trimmed. One example from Holywell still had the diagonal score mark of a sharp knife. There is also a smaller Triangular tile, possibly the result of a complete square Westminster Floor Tile being split 4 ways.

Mortar

All of the mortar used to adhere the back of the tile pavements, consisted of a fine chalky white lime mortar, Type 11. It was only present in the 1250 and 1310 tile pavements, and in contrast to the much tougher medieval gravelly, pebbly deep yellow-brown mortar type (8) used to adhere the foundation walls and levelling courses of the priory.

Summary and Recommendations

A review of the very large (177kg) *in-situ* patterned tile pavements at Holywell Priory, by fabric, form and layout, [567] [987] [1282] has identified all the floor tile as Westminster type tile, manufactured between 1250 and 1310. At least 22 designs have been identified, some in concordance with patterns seen at earlier excavations at Holywell (Betts 2011), but others not previously seen. There is also the possibility that 3 more could be new to the gazetteer of Westminster Floor Tiles, something also seen at previous excavations at Holywell. *In-situ* photography has identified the patterning as diamond shaped, delineated by zig-zagged plain yellow border tiles, black tile and smaller triangular tile, a common design (Type E) seen at Westminster Abbey.

A great deal needs to be done on the layout of the pavement, photographed in detail at publication stage, subsequently removed and conserved, including finding closer parallels. Photographing individual tiles, as well as consulting a floor tile specialist (Dr Ian Betts) to see whether some of the designs have not previously been seen in London. With all the loose tiles, kept in archive, and with an extensive and thorough study already in place including an extensive in-situ and finds photographic archive the opportunity is there to review and publish one of the important Westminster Floor Tiles pavements in London

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Appendix 12: Human Bone Assessment

James Young Langthorne

Introduction

During the archaeological investigation at Shoreditch Village (West) 45 individual articulated human skeletons were recovered from the church of Holywell Priory, a building founded in the 12th century. The majority of the skeletons were exhumed within the body of the church itself while 16 individuals were located to the south of the church. Amongst the assemblage the skeleton of a priest, [605], was indicated by the presence of a mortuary chalice placed within the grave. Additionally several hundred disarticulated elements of human bone were exhumed. This report contains the results of an assessment of the skeletal remains from these burials. A skeletal catalogue of the remains is included at the end of the report as is a list of the disarticulated human bone.

Methodology

The skeletal remains from the inhumation burials were analysed to assess the condition of the remains and where possible the age and sex of the individual. Additionally any gross pathology present was recorded to site and morphological changes described.

The condition and completeness of a skeleton affects the amount of data that can be recorded. The condition of the bone was recorded according to the stages of surface preservation suggested by McKinley (2004) and the completeness of the skeleton was based on a complete skeleton consisting of:

Skull	20%
Torso	40%
Arms	20%
Legs	20%

Age was assessed using the stages of epiphyseal fusion, dental development and eruption, dental attrition (Brothwell 1981), changes within the pubic symphysis (Brooks and Suchey 1990) and the auricular surface (Lovejoy 1985). All individuals where ageing data could be collected were placed into one of the following age ranges:

Infant	≤1 year
Infant	1-5 years
Juvenile	6-12 years
Adolescent	12-20 years
Young Adult	20-35 years

Middle Adult	35-50 years
Old Adult	50+ years
Adult	>20 years
?	Undetermined

Sexually dimorphic traits in the pelvis and skull were used to ascertain the sex of the individual. Each individual was placed into one of the following categories; male, female (positive identification), male?, female? (favourable comparison to a sex but not conclusive), indeterminate (inconclusive mixture of male and female traits), unknown (lacking elements that define sex or not possible).

Pathological conditions were diagnosed based on the standards and classifications defined by Roberts and Connell (2004), Roberts and Manchester (1995), Auferderheide and Rodríguez-Martín (1998), and Walker (2012).

Results

Completeness

Skeletal completeness ranged from 4% to 95% present but the vast majority had more than 50% of the elements present. The skeletal completeness probably reflected a lack of truncation within many parts of the site.

Table 1: Skeletal Completeness

Completeness	Number of skeletons (n)	Percentage (n/45)
<25%	6	13.33%
<50%	9	20%
<75%	12	26.67%
>75%	18	40%

Preservation

Nearly three quarters of the skeletons in the assemblage, 73.33%, were in good-moderate condition or better (Table 2) which reflected that both soil conditions at the site and the situation of the majority of the bodies beneath the church itself allowed for a fairly high degree of preservation.

Table 2: Preservation

Preservation	Number of skeletons (n)	Percentage (n/45)
Very Good-Good	1	2.22%
Good	19	42.22%

Good-Moderate	13	28.89%
Moderate	9	20%
Moderate-Poor	3	6.67%

Demography

The largest age group amongst the burials were adults (91.11%), the largest proportion of which were attributed to the middle or older adult age range. Children were present amongst the group although no neonates or infants were identified within the articulated assemblage.

Table 3: Age distribution

Age	Number of skeletons	Percentage (n/45)
Juvenile	3	6.67%
Juvenile-Adolescent	1	2.22%
Young adult	7	15.55%
Young adult-Middle adult	1	2.22%
Middle adult	3	6.67%
Middle adult-Older adult	8	17.78%
Older adult	8	17.78%
Adult (unspecified)	14	31.11%
Total	**45**	**100%**

The high level of adult skeletons within the assemblage coupled with the survival of necessary skeletal elements implied that a large proportion of the cemetery population could be sexed. The results of the assessment indicated that males or possible males were slightly more frequent within the assemblage, making up 29.27% of the group in comparison to women at 17.07%. However it was not possible to sex just over half of the adult population, 53.66%, which argued against drawing a conclusion of a male bias within the buried population.

Table 4: Sex distribution in the adult part of the articulated assemblage

Sex	Number of skeletons	Percentage (n/41)
Male	7	17.07%
Possible male	5	12.19%
Indeterminate	14	34.15%
Possible female	5	12.20%
Female	2	4.88%
Undetermined	8	19.51%
Total	**41**	**100%**

Pathology

Pathologies were recorded in 32 skeletons (71.11% of the entire assemblage); of which 22 had dental pathologies and 23 had skeletal pathologies. Of those affected 31 were adults and 1 was a juvenile. Of the adults 10 were male, 7 were female and 13 were of unknown sex.

Dental Pathology

The principal dental pathologies recorded within the assemblage comprised 16 individuals that exhibited at least one tooth with calculus, 9 cases of caries and the same number with ante-mortem tooth loss, 5 cases of gum recession, 2 individuals with periodontal disease and single cases of individuals with periapical lesions and enamel hypoplasia.

Table 5: Distribution of dental pathology in relation to age in male individuals

Age	Gum Recession	Caries	A-M tooth loss	Calculus	Periapical lesions
Mid-Old Adult	2	3	1	2	-
Old Adult	1	-	3	3	1

Table 6: Distribution of dental pathology in relation to age in female individuals

Age	Gum Recession	Caries	A-M tooth loss	Calculus
Young-Mid Adult	1	1	-	1
Mid Adult	1	-	-	2
Mid-Old Adult	-	-	1	1
Old Adult	-	1	1	1
Unspecified Adult	-	-	1	-

Table 7: Distribution of dental pathology in relation to age in indeterminate/inconclusively sexed individuals

Age	Caries	Periodontal disease	A-M tooth loss	Calculus	Enamel Hypoplasia
Juvenile	1	1	-	-	-
Young Adult	1	1	-	3	1
Mid-Old Adult	2	-	1	3	-
Unspecified Adult	-	-	1	-	-

The most prevalent form of dental pathology was deposition of calculus, 16 cases (35.56% of the entire assemblage), closely followed by ante-mortem tooth loss and caries, both conditions appearing in 9 individuals apiece (25.71%).

Calculus, a build up of dental plaque on the teeth can be a pre-cursor to other problems including gum recession and ante-mortem tooth loss. Ante-mortem tooth loss itself has been attributed to several causes including caries. Tooth loss can also be the result of severe periodontal disease, in which the inflammatory reaction to an irritant such as calculus can result in alveolar resorption. Conditions such as syphilis or deficiencies within a group's diet which can lead to weakening of the bone, trauma and scurvy are also possible causes of ante-mortem tooth loss.

Due to the low numbers of individuals involved in the osteological assessment no particular trends in relation to the dental pathology and age or sex were identified within the cemetery population.

Skeletal Pathology

Several skeletal pathologies were recorded from individuals including 2 individuals suffering from cribra orbitalia, 3 cases of trauma, and 5 individuals with other conditions such as ossified soft tissue, possible infection and neoplasms. The most frequently observed pathologies were joint diseases, for instance osteoarthritis, which had affected 18 individuals.

Table 8: Skeletal pathology in relation to age in male individuals

Pathology Type	**Trauma**	**Joint Disease**			**Neoplastic**	**Other**
Age	Fracture (Post-cranial)	Potential vertebral OA	Other vertebral conditions (including Schmorl's nodes, isolated pitting or osteophytic activity, fusion, etc.)	Other extra vertebral conditions (including isolated pitting, osteophytic activity, etc.)	Button Osteoma	Ossified soft tissue
Young Adult	0	0	1	0	0	0
Mid-Old Adult	0	1	1	1	1	0
Old Adult	0	3	1	2	0	1
Unspecified Adult	1	0	0	0	0	0

Table 9: Skeletal pathology in relation to age in female individuals

Pathology Type	**Metabolic**	**Trauma**	**Joint Disease**		**Other**
Age	Cribra Orbitalia	Fracture (Post-cranial)	Potential vertebral OA	Other vertebral conditions (including Schmorl's nodes, isolated pitting or osteophytic activity, fusion, etc.)	Possible malformation
Mid Adult	1	0	0	0	0
Mid-Old Adult	0	0	1	1	0
Old Adult	0	0	1	1	0
Unspecified Adult	0	1	0	1	1

Table 10: Skeletal pathology in relation to age in indeterminate/inconclusively sexed individuals.

Pathology Type	**Metabolic**	**Joint Disease**			**Infectious disease**	**Other**
Age	Cribra Orbitalia	Potential vertebral OA	Other vertebral conditions (including Schmorl's nodes, isolated pitting or osteophytic activity, fusion, etc.)	Other extra vertebral conditions (including isolated pitting, osteophytic activity, etc.)	Potential Non-Specific Infection	Possible malformation
Young Adult	1	0	2	0	0	0
Mid-Old Adult	0	0	1	0	0	1
Old Adult	0	1	1	1	0	0
Unspecified Adult	0	2	0	0	1	0

In general no immediately identifiable trends correlated to age or sex with pathological conditions can be observed within the Holywell Priory assemblage.

The most prevalent pathological conditions related to joint disease: 8 males, 3 females and 7 indeterminately or inconclusively sexed individuals suffered from one or more joint diseases

comprising 40% of the entire cemetery population. The most prevalent form of joint disease within the adult portion of the assemblage related to the degeneration of the vertebral elements particularly Schmorl's nodes and osteophytic activity around the margins of the vertebral bodies.

A small number of potential fractures that had subsequently healed were noted within the burial ground population as well as a low level of cribra orbitalia which is often associated with lifestyle or diet.

Disarticulated Bone

Disarticulated human bone was present in 25 contexts on site and several fragments were also removed from unstratified deposits. Almost every element of the skeleton was accounted for in various states of preservation varying from very poor and fragmentary to complete bones in excellent condition.

A small number of pathological conditions such as periostitis, gum recession and traces of joint disease were found within the disarticulated assemblage.

The minimum number of individuals the entire collection of disarticulated bone represented was 35.

Recommendations for further work

The individuals that make up the skeletal assemblage are for the most part relatively complete and in a good- moderate condition or better. This gives an excellent chance to study both the demography and pathology of the cemetery population, as is reflected in the results of the assessment study detailed above.

A full analysis of the skeletons would allow for the creation of complete inventories for each skeleton and fuller recording of extant pathologies as well as the collection of metric and non-metric data and calculate stature estimates for as many members of the Holywell Priory population as possible. Given the small size of the assemblage it is recommended full analysis be performed on all 45 skeletons regardless of completeness or preservation. Photographs will have to be taken of a variety of the individuals and respective pathologies.

There is a large quantity of disarticulated human bone from the site, most of which will have resulted from the disturbance of burials. However it is unlikely that further work on this material will provide any further insights into the cemetery population.

The completeness and preservation of dentition, ribs and long bones in the assemblage would present an opportunity to perform trace element or stable isotope studies should they be requested.

The results of this assessment and any further work should be presented in a publication text with the demographic profiles and health of the group considered and discussed in reference

to phasing and spatial distribution, if any are apparent. The pathologies present within the assemblage should also be discussed with reference to those found in comparable burial assemblages.

Skeletal Catalogue

Context no.	Completeness (%)	Condition	Age	Sex	Pathology/Other Comments
480	60%	Moderate	Old Adult	Male	Severe osteophytic lipping around vertebral body margins. Pitting on vertebraal body surfaces. Possible osteophytic lipping and remodelling of vertebral articular facets. Soft tissue ossification on pelvis.
485	45%	Good-Moderate	Old Adult	Male	Severe Schmorl's nodes and osteophytic lipping on vertebral bodies. Periapical lesion on mandible. Ante-mortem tooth loss. Calculus.
486	12%	Moderate	Adult	Undeterminate	Potentially part of skeleton [485]. Pitting and osteophytic lipping on vertebral bodies.
570	90%	Good	Young Adult	Indeterminate	Slight traces of calculus.
586	75%	Moderate-Poor	Old Adult?	Indeterminate	Osteophytic lipping around vertebral body margins and pitting on vertebral body surfaces. Possible osteophytic lipping and remodelling on vertebral articular facets.

589	90%	Good-Moderate	Old Adult	Male	Robust individual. Osteophytic lipping around rib head facet margins. Schmorl's nodes on vertebral bodies. Slight osteophytic lipping around vertebral body margins. Osteophtic activity and remodelling of vertebral articular facets. Slight pitting on verte
602	40%	Good-Moderate	Adult	Indeterminate	No visible pathology.
605	90%	Good-Moderate	Young Adult	Indeterminate	PRIEST. Robust individual. Schmorl's nodes on vertebral body surfaces. Calculus. Possible cribra orbitalia.
706	90%	Good	Old Adult	Male?	Schmorl's nodes. Slight osteophytic lipping around vertebral body margins. Ante-mortem tooth loss. Calculus.
709	55%	Moderate	Adult	Female?	Possible Schmorl's nodes and pitting on vertebral body surfaces. Malformation of left distal epicondyles. Ante-mortem tooth loss.
712	30%	Good	Mid Adult	Indeterminate	None visible.

764	90%	Good	Old Adult	Indeterminate	Severe osteophytic lipping on vertebral body margins. Pitting on cervical vertebrae body surfaces. Some osteophytic lipping, remodelling of vertebral articular facets. Pitting and osteophytic activity on acromial ends of right and left clavicles and on acromions.
845	35%	Moderate	Adult?	Undeterminate	No visible pathology.
846	85%	Good-Moderate	Old Adult	Female	Ante-mortem tooth loss. Caries. Calculus. Osteophytic lipping around vertebral body margins. Possible Schmorl's nodes and pitting on vertebral bodies.
880	60%	Moderate	Adult	Undeterminate	Ante-mortem tooth loss
885	10%	Moderate	Adult	Female?	MT5s slight angulation of shaft (possibly a well healed fracture but the condition's bilateral suggesting perhaps a distortion caused by long term use of overly tight footwear - thought there's no sign of any changes to the MT1s such as hallux valgus).
908	40%	Moderate	Adult	Undeterminate	No visible pathology.

986	80%	Good	Juvenile	Undeterminate	Severe caries on mandibular and possibly maxillary molars. Traces of periodontal disease on mandible.
998	90%	Very Good-Good	Juvenile-Adolescent	Indeterminate	None visible.
1001	70%	Good-Moderate	Mid-Old Adult	Male?	Calculus. Possible caries. Osteophytic lipping and eburnation on dens and dens facet of C2 and C1. Small button osteoma on frontal. Osteophytic lipping around margins of vertebral bodies. Schmorl's nodes.
1009	92%	Good	Old Adult	Male	(In 2 boxes). Robust individual. Slight pitting on acromial ends of left and right clavicles. Caluculus. Ante-mortem tooth loss. Probable gum recession. Osteophytic lipping and pitting on vertebral bodies and some collapse in lumbar vertebrae
1023	70%	Good	Young Adult	Indeterminate	Caries
1035	95%	Good	Young Adult	Male	Schmorl's nodes.
1050	80%	Good	Young Adult	Male	No visible pathology.

1075	90%	Good	Mid-Old Adult	Female	Gracile individual. Ante-mortem tooth loss. Calculus. Schmorl's nodes. Slight pitting and osteophytic lipping on vertebral body margins.
1078	65%	Good	Young Adult	Male?	Robust individual.
1083	85%	Good	Mid-Old Adult	Indeterminate	Schmorl's nodes on vertebral body surfaces. Ante-mortem tooth loss. Caries.
1110	70%	Good-Moderate	Mid-Old Adult	Indeterminate	Highly fragmentary in parts. Possible malformation of sternal end of left clavicle. Calculus.
1116	85%	Good-Moderate	Young-Mid Adult	Female?	Traces of copper staining. Caries. Calculus. Gum recession.
1124	95%	Good	Mid-Old Adult	Male	(In 2 boxes). Ante-mortem tooth loss. Possible gum recession. Robust individual. Osteophytic activity on both joint surfaces of left and right clavicles. Schmorl's nodes on vertebral bodies.Caries.
1147	30%	Good	Adult	Indeterminate	No visible pathology.
1275	60%	Moderate-Poor	Mid-Old Adult	Indeterminate	Caries. Possible calculus.

1285	45%	Moderate	Adult	Indeterminate	Osteophytic lipping around vertebral body margins and pitting on vertebral body surfaces.
1289	55%	Good-Moderate	Adult	Male?	Possible pathological damage to head of right ulna.
1291	80%	Good	Mid-Old Adult	Male?	Ante-mortem tooth loss. Caries, claculus. Gum recession.
1299	65%	Moderate-Poor	Juvenile	Undeterminate	No visible pathology.
1308	18%	Moderate	Mid-Old Adult?	Indeterminate	Calculus.
1313	18%	Good	Adult?	Undeterminate	No visible pathology.
1328	15%	Good-Moderate	Adult?	Undeterminate	Possible traces of lamellar bone on left tibia.
1344	90%	Good	Juvenile	Undeterminate	No visible pathology.
1350	50%	Good	Adult?	Undeterminate	Gracile individual. No visible pathology.
1379	80%	Good-Moderate	Mid-Adult	Female?	Gracile individual. Cribra orbitalia (right orbit). Calculus.
1395	4%	Good-Moderate	Adult	Undeterminate	None visible.
1409	60%	Good	Young Adult	Indeterminate	Calculus.Enamel hypoplasia, Possible trace of periodontal disease on mandible. Schmorl's nodes on vertebral bodies.
1410	35%	Good-Moderate	Mid-Adult?	Female?	Gum recession. Calculus.

Contexts containing disarticulated human bone

Context no.	Skeletal Element	No. of fragments	Condition	MNI for each context	Sex	Age	Pathology/Comments
0	Mandible (fragments)	3	Good-Moderate	2	Undeterminate	Adult	Ante-mortem tooth loss on x 1 fragment.
0	Skull (frontal x 1)	3	Good-Moderate	2	Indeterminate	Adult	Found north of WB pile.
0	Femur (right)	1	Good-Moderate	2	Indeterminate	Adult?	None visible.
0	Pelvis (left fragment)	1	Moderate	2	Indeterminate	Adult?	None visible.
0	Femur (shaft)	1	Good-Moderate	2	Indeterminate	Adult?	Found in grid square 100/249. No visible pathology.
0	Skull (various fragments)	22	Good-Moderate	2	Indeterminate	Adult?	None visible
0	Sacrum (fragments)	3	Moderate-Poor	2	Undeterminate	Adult?	Slight osteophytic lipping around the centrum margin of x 1 fragment.
0	Foot (Left 1st proximal phalanx)	1	Moderate	2	Undeterminate	Adult?	None visible.
0	Foot (middle phalanx x 1 and distal phalanx x 1)	2	Moderate	2	Undeterminate	Adult?	None visible.
0	Vertebrae (thoracic x 1 and atlas x 1)	2	Moderate	2	Undeterminate	Adult?	None visible
0	Skull (Left zygomatic x 1)	1	Good	2	Undeterminate	Adult?	Found north of WB pile.
0	Humerus (shaft)	1	Good-Moderate	2	Undeterminate	Adult?	None visible.

0	Pelvis (pubis fragment)	1	Moderate	2	Indeterminate	Mid-Adult?	None visible.
0	Unidentifiable fragments	46	Poor	2	Undeterminate	Unknown	None visible.
0	Ribs (shaft fragments)	8	Moderate-Poor	2	Undeterminate	Unknown	None visible
0	Patella (fragment)	1	Moderate-Poor	2	Undeterminate	Unknown	None visible.
0	Pelvis (pubis fragment)	1	Moderate	2	Undeterminate	Unknown	None
0	Ribs (Ossified soft tissue from rib end)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
0	Skull (fragments)	17	Moderate-Poor	2	Undeterminate	Unknown	Found north of WB pile.
0	Clavicle (shaft fragment)	1	Moderate-Poor	2	Undeterminate	Unknown	None visible.
0	Ulna (distal shaft and distal end)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
0	Ribs (right rib head)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
0	Ribs (shaft fragments)	5	Moderate	2	Undeterminate	Unknown	None visible.
0	Skull (fragments)	2	Good	2	Undeterminate	Unknown	None visible. Found in Bay 4.
0	Femur (right shaft?)	1	Moderate	2	Undeterminate	Unknown	None visible.
0	Mandible	1	Moderate-Poor	2	Undeterminate	Unknown	None visible.
233	Tibia (left x 1)	2	Moderate	2	Undeterminate	Adult	None visible.
233	Foot (MT1 fragment)	1	Good-Moderate	2	Undeterminate	Juvenile-Adolescent	None visible.
233	Mandible (fragment)	1	Good-Moderate	2	Indeterminate	Old Adult	Gum recession?

374	Vertebrae (lumbar x 2)	2	Good-Moderate	1	Undeterminate	Adult?	Possible Schmorl's nodes on superior body surface of 1 x body fragment
568	Skull (Frontal fragment)	1	Good	1	Undeterminate	Unknown	None visible.
568	Foot (MT1 fragment x 1 and MT3 right x 1)	2	Good-Moderate	1	Undeterminate	Unknown	None visible.
568	Long bone (shaft fragment)	1	Good	1	Undeterminate	Unknown	None visible.
568	Pelvis (fragments)	6	Moderate-Poor	1	Undeterminate	Unknown	None visible.
584	Pelvis (ilium fragment)	1	Good-Moderate	1	Undeterminate	Unknown	None visible.
584	Vertebrae (neural arch fragments)	3	Moderate-Poor	1	Undeterminate	Unknown	None visible.
584	Foot (2 x middle phalanges and 1 x distal phalanx)	3	Moderate	1	Undeterminate	Unknown	None visible.
584	Scapula (coarcoid process)	1	Good-Moderate	1	Undeterminate	Unknown	None visible.
584	Foot (metacarpal fragments)	2	Moderate-Poor	1	Undeterminate	Unknown	None visible.
628	Femur (shaft fragments)	2	Good-Moderate	1	Undeterminate	Adult?	None visible.
628	Ribs (shaft fragments x 3)	3	Good	1	Undeterminate	Juvenile	None visible.
628	Long bone (shaft fragments)	23	Moderate-Poor	1	Undeterminate	Unknown	None visible.
628	Pelvis (fragments)	2	Moderate-Poor	1	Undeterminate	Unknown	None visible.
628	Radius (shaft fragment)	1	Good-Moderate	1	Undeterminate	Unknown	None visible.
628	Fibula (shaft fragment)	1	Good-Moderate	1	Undeterminate	Unknown	None visible.

725	Femur (left x 1 and right x 1)	2	Moderate	2	Undeterminate	Adult	None visible.
725	Tibia (left x 1 and right x 1)	2	Good-Moderate	2	Undeterminate	Adult	None visible.
725	Fibula (left)	1	Good-Moderate	2	Undeterminate	Adult	None visible.
725	Vertebrae (Lumbar)	1	Moderate-Poor	2	Undeterminate	Adult?	None visible.
725	Foot (Left calcaneus x 1, right calcaneus x 1 and left talus x 1)	3	Moderate	2	Undeterminate	Adult?	None visible.
725	Femur (distal condyle-distal shaft fragment)	1	Moderate-Poor	2	Undeterminate	Adult?	None visible.
725	Skull (fragments)	9	Good-Moderate	2	Undeterminate	Juvenile	None visible.
725	Clavicle (right sternal end-midshaft)	1	Moderate	2	Undeterminate	Juvenile?	None visible.
725	Skull (fragment)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
725	Pelvis (ilium fragment)	1	Moderate	2	Undeterminate	Unknown	None visible.
725	Clavicle (left)	1	Moderate	2	Undeterminate	Unknown	None visible.
725	Unidentifiable fragments	12	Poor	2	Undeterminate	Unknown	None visible.
725	Ribs (shaft fragments)	2	Moderate-Poor	2	Undeterminate	Unknown	None visible.
725	Patella (x 2 fragments)	2	Moderate-Poor	2	Undeterminate	Unknown	None visible.
725	Tibia (proximal head fragments)	2	Poor	2	Undeterminate	Unknown	None visible.
725	Femur (distal condyle fragment)	1	Poor	2	Undeterminate	Unknown	None visible.
725	Scapula (fragments)	2	Moderate-Poor	2	Undeterminate	Unknown	None visible.
725	Scapula (left fragment x 1)	1	Moderate	2	Undeterminate	Unknown	None visible.

725	Radius (right shaft x 1 and left shafts x 2)	3	Moderate-Poor	2	Undeterminate	Unknown	None visible.
725	Ulna (proximal shaft-midshaft)	1	Moderate-Poor	2	Undeterminate	Unknown	None visible.
725	Fibula (shaft fragments)	2	Moderate-Poor	2	Undeterminate	Unknown	None visible.
725	Hand (left MT1 x 2 and right MT2 x 1)	3	Moderate	2	Undeterminate	Unknown	None visible.
725	Hand (Right MT2)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
725	Hand (Right MT3)	1	Moderate	2	Undeterminate	Unknown	None visible.
725	Hand (Right MT4)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
725	Hand (Left MT5 x 1 and Right MT5 x 1)	2	Good-Moderate	2	Undeterminate	Unknown	None visible.
725	Hand (metatarsal shaft)	1	Moderate	2	Undeterminate	Unknown	None visible.
725	Hand (proximal phalanx x 1)	1	Moderate	2	Undeterminate	Unknown	None visible.
751	Radius (right)	1	Moderate	3	Undeterminate	Adult?	None visible.
751	Clavicle (right)	1	Moderate	3	Undeterminate	Adult?	Pitting and porosity on sternal head.
751	Ulna (right proximal head and proximal-mid shaft)	1	Moderate	3	Undeterminate	Adult?	None visible
751	Femur (left)	1	Good	3	Undeterminate	Infant-Juvenile	None visible
751	Pelvis (left x 1 and right x 1)	2	Good-Moderate	3	Male?	Mid-Adult	None visible
751	Fibula (shaft fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
751	Sacrum (fragments)	2	Poor	3	Undeterminate	Unknown	None visible.

751	Ribs (shaft fragments)	2	Moderate-Poor	3	Undeterminate	Unknown	None visible
751	Hand (Left MC3, MC4 and MC5)	3	Moderate	3	Undeterminate	Unknown	None visible.
751	Hand (proximal phalanx)	1	Good-Moderate	3	Undeterminate	Unknown	None visible.
751	Foot (Left MT1 and right MT3)	2	Good-Moderate	3	Undeterminate	Unknown	None visible.
751	Foot (1 x proximal phalanx and 2 x middle phalanges)	3	Moderate	3	Undeterminate	Unknown	None visible.
751	Fibula (shaft fragments x 3)	3	Moderate-Poor	3	Undeterminate	Unknown	None visible.
751	Fibula (proximal head fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
751	Radius (shaft fragment)	1	Good-Moderate	3	Undeterminate	Unknown	None visible.
751	Pelvis (left x 1 and right x 1)	2	Moderate	3	Male?	Young-Mid Adult	None visible.
879	Femur (left x 1)	4	Moderate	1	Undeterminate	Adult	None visible.
879	Femur (Right proximal head-midshaft)	1	Moderate	1	Undeterminate	Adult	None visible.
879	Fibula (Left proximal shaft-distal end)	1	Moderate	1	Undeterminate	Adult	None visible.
879	Skull (parietal fragment)	1	Good-Moderate	1	Indeterminate	Unknown	None visible.
879	Hand (Left MC1)	1	Good	1	Indeterminate	Unknown	None visible.
879	Fibula (shaft fragment)	1	Moderate-Poor	1	Indeterminate	Unknown	None visible.
879	Skull (frontal fragment)	1	Good	1	Undeterminate	Unknown	None visible.
879	Radius (proximal head and distal end)	2	Good-Moderate	1	Undeterminate	Unknown	None visible.

879	Unidentifiable fragments	4	Poor	1	Undeterminate	Unknown	None visible.
879	Ribs (shaft fragments)	6	Moderate-Poor	1	Undeterminate	Unknown	None visible.
879	Long bone (shaft fragments)	3	Poor	1	Undeterminate	Unknown	None visible.
879	Foot (metacarpal shafts)	2	Moderate-Poor	1	Undeterminate	Unknown	None visible.
879	Foot (metatarsal distal head and shaft)	1	Good-Moderate	1	Undeterminate	Unknown	None visible.
879	Foot (proximal phalanges x 2 and middle phalanx x 1)	3	Good-Moderate	1	Undeterminate	Unknown	None visible.
879	Hand (proximal phalanx x 1 and distal phalanx x 1)	2	Good	1	Undeterminate	Unknown	None visible.
879	Hand (metacarpal shaft)	1	Moderate	1	Undeterminate	Unknown	None visible.
880	Tibia (distal end)	1	Moderate-Poor	1	Undeterminate	Adult?	None visible.
880	Skull (right temporal)	1	Moderate	1	Indeterminate	Adult?	None visible.
880	Foot (1st proximal phalanx)	1	Good-Moderate	1	Indeterminate	Unknown	None visible.
880	Hand (proximal phalanx)	1	Good-Moderate	1	Indeterminate	Unknown	None visible.
880	Unidentifiable fragments	21	Poor	1	Undeterminate	Unknown	None visible.
880	Skull (Frontal/parietal fragments)	28	Moderate	1	Undeterminate	Unknown	None visible.
880	Skull (occipital fragment)	1	Moderate-Poor	1	Undeterminate	Unknown	None visible.
880	Long bone (proximal head fragment)	1	Moderate-Poor	1	Undeterminate	Unknown	None visible.
880	Pelvis (acetabulum fragments)	2	Moderate-Poor	1	Undeterminate	Unknown	None visible.
893	Radius (right midshaft-distal end)	1	Moderate	1	Undeterminate	Unknown	None visible.

893	Ribs (shaft fragment)	1	Moderate-Poor	1	Undeterminate	Unknown	None visible.
893	Hand (Left MC3)	1	Moderate	1	Undeterminate	Unknown	None visible.
897	Ulna (proximal head fragment)	1	Moderate	1	Undeterminate	Unknown	None visible.
897	Foot (left talus)	1	Good-Moderate	1	Undeterminate	Unknown	None visible.
897	Foot (Right MT4 x 1)	1	Moderate	1	Undeterminate	Unknown	None visible.
897	Hand (Left MC3 x 1)	1	Moderate	1	Undeterminate	Unknown	None visible.
897	Ribs (shaft fragments)	2	Poor	1	Undeterminate	Unknown	None visible.
897	Unidentifiable fragments	3	Poor	1	Undeterminate	Unknown	None visible.
898	Tibia (proximal head)	1	Moderate	3	Undeterminate	Adult	None visible.
898	Femur (left x 1)	3	Moderate	3	Undeterminate	Adult	None vislbe.
898	Skull (x 2)	2	Moderate	3	Undeterminate	Adult	2 x adults. No visible pathology.
898	Dentition (incisor)	1	Very good	3	Undeterminate	Adult	Slight traces of calculus.
898	Femur (proximal-distal shaft)	1	Moderate	3	Undeterminate	Adult?	None visible.
898	Femur (right proximal shaft-distal condyles)	1	Moderate	3	Undeterminate	Adult?	Possible lamellar bone.
898	Skull (fragments)	11	Moderate	3	Undeterminate	Adult?	None visible.
898	Tibia (mid shaft fragment)	1	Moderate-Poor	3	Undeterminate	Adult?	None visible.
898	Tibia (right proximal head-distal shaft x 1)	2	Moderate	3	Undeterminate	Adult?	None visible.
898	Humerus (left proximal shaft-distal epicondyles)	1	Moderate-Poor	3	Undeterminate	Adult?	None visible.
898	Femur (proximal shaft - distal condyles)	1	Moderate	3	Undeterminate	Adult?	None visible.
898	Skull (parietal fragment)	1	Good-Moderate	3	Undeterminate	Adult?	None visible.

898	Skull (frontal fragments)	3	Moderate	3	Undeterminate	Adult?	Adults x 3. No visible pathology.
898	Mandible (left fragment)	1	Moderate	3	Indeterminate	Mid-Adult	Traces of calculus. Gum recession.
898	Sacrum (centrum fragment)	1	Good-Moderate	3	Undeterminate	Unknown	None visible.
898	Humerus (shaft)	1	Moderate	3	Undeterminate	Unknown	None visible.
898	Humerus (right distal epicondyles and distal shaft)	1	Moderate	3	Undeterminate	Unknown	None visible.
898	Scapula (fragments)	2	Moderate	3	Undeterminate	Unknown	None visible.
898	Clavicle (shaft fragment)	1	Good-Moderate	3	Undeterminate	Unknown	None visible.
898	Vertebrae (thoracic body)	1	Good-Moderate	3	Undeterminate	Unknown	Schmorl's nodes on superior and inferior body surfaces.
898	Long Bone (proximal head fragment)	1	Moderate	3	Undeterminate	Unknown	None visible.
898	Tibia (fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Femur (distal condyles fragments)	2	Moderate	3	Undeterminate	Unknown	None visible.
898	Femur (proximal head fragment)	1	Moderate	3	Undeterminate	Unknown	None visible.
898	Femur (distal shaft fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Long bone (shaft fragments)	5	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Tibia (shaft fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Tibia (distal ends x 2)	2	Moderate	3	Undeterminate	Unknown	None visible.
898	Humerus (left distal epicondyles and distal shaft)	1	Moderate	3	Undeterminate	Unknown	None visible.

898	Radius (proximal head-midshaft)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Clavicle (right acromial end-mid shaft)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Long bone (proximal head fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Vertebrae body fragment x 1 and neural arch fragment x 1)	2	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Unidentifiable fragments	23	Poor	3	Undeterminate	Unknown	None visible.
898	Tibia (proximal head fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Humerus (proximal shaft-distal shaft)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Skull (fragments)	17	Moderate	3	Undeterminate	Unknown	None visible.
898	Dentition (incisor x 1 and canine x 1)	2	Good	3	Undeterminate	Unknown	Traces of calculus on canine.
898	Unidentifiable fragments	29	Poor	3	Undeterminate	Unknown	None visible.
898	Humerus (shaft fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible
898	Humerus (distal epicondyles)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Ulna (shaft fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Tibia (distal end)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Fibula (Shaft fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Ulna (proximal head fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Radius (distal end fragment)	1	Poor	3	Undeterminate	Unknown	None visible.

898	Vertebrae (body fragment)	1	Moderate	3	Undeterminate	Unknown	Osteophytic lipping around extant body margin.
898	Long bone (distal condyle fragment)	1	Poor	3	Undeterminate	Unknown	None visible.
898	Long bone (shaft fragments)	13	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Ribs (shaft fragment)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Scapula (fragments)	2	Poor	3	Undeterminate	Unknown	None visible.
898	Skull (frontal/parietal fragments)	8	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Skull (Right temporal)	1	Moderate-Poor	3	Undeterminate	Unknown	None visible.
898	Skull (sphenoid fragment)	1	Moderate	3	Undeterminate	Unknown	None visible.
898	Skull (occipital fragments)	6	Moderate	3	Undeterminate	Unknown	None visible.
898	Skull (fragments)	6	Moderate-Poor	3	Undeterminate	Unknown	None visible.
904	Pelvis (right x 1)	3	Moderate-Poor	2	Indeterminate	Adult	None visible.
904	Tibia (Left)	1	Moderate	2	Undeterminate	Adult	None visible.
904	Femur (proximal head)	1	Moderate	2	Undeterminate	Adult?	None visible.
904	Tibia (distal end)	1	Moderate	2	Undeterminate	Adult?	None visible.
904	Fibula (shaft)	1	Moderate	2	Undeterminate	Adult?	None visible.
904	Radius (left proximal head-distal shaft x 2)	2	Moderate	2	Undeterminate	Adult?	None visible.
904	Humerus (left proximal shaft-distal epicondyles and right proximal shaft-distal epicondyles)	2	Moderate	2	Undeterminate	Adult?	None visible.
904	Tibia (Right shaft)	1	Moderate	2	Undeterminate	Adult?	None visible.

904	Skull (fragments)	5	Poor	2	Undeterminate	Unknown	None visible.
904	Clavicle (left)	1	Moderate-Poor	2	Undeterminate	Unknown	None visible.
904	Long bone (proximal head fragment)	1	Moderate	2	Undeterminate	Unknown	None visible.
1022	Skull (fragment)	1	Good	1	Undeterminate	Unknown	None visible.
1082	Ribs (left x 1 and right x 1)	2	Good-Moderate	1	Undeterminate	Unknown	None visible.
1109	Tibia (Right x 1)	1	Good	2	Undeterminate	Adult	None visible.
1109	Femur (right x 1)	1	Good	2	Undeterminate	Adult	None visible.
1109	Femur (left x 1)	1	Good-Moderate	2	Undeterminate	Adult	None visible.
1109	Tibia (left x 1)	1	Good-Moderate	2	Undeterminate	Adult	None visible.
1109	Humerus (Right x 1 and left x 1)	2	Good-Moderate	2	Undeterminate	Adult	None visible.
1109	Radius (Right x 1 and left x 1)	2	Good-Moderate	2	Undeterminate	Adult	None visible
1109	Fibula (Left shaft and distal end)	1	Good	2	Undeterminate	Adult	None visible.
1109	Ulna (right proximal head and proximal-middle shaft)	1	Good	2	Undeterminate	Adult	None visible.
1109	Ulna (distal end and distal shaft)	1	Good-Moderate	2	Undeterminate	Adult	None visible.
1109	Patella (Left x 1)	1	Good	2	Undeterminate	Adult	Osteophytic lipping around joint facets and severe eburnatio within lateral facet. Soft tissue ossification on anterior aspect.

1109	Vertebrae (cervical x 3)	3	Good	2	Undeterminate	Adult	Slight osteophytic lipping on inferior body margin of 1 x vertebra.
1109	Vertebrae (thoracic x 5)	5	Good-Moderate	2	Undeterminate	Adult	Schmorl's nodes on inferior body surfaces of 2 x vertebrae. Pitting on superior and inferior body surfaces of 2 x vertebrae. Osteophytic lipping on superior and inferior body margins of 2 x vertebrae and osteophytic lipping on bvody margin of 1 x vertebra
1109	Vertebrae (lumbar x 2)	2	Good	2	Undeterminate	Adult	Osteophytic lipping around superior and inferior body margins of both vertebrae and Schmorl's nodes on inferior body surface of 1 x vertebra.
1109	Sacrum (x 2)	2	Good-Moderate	2	Undeterminate	Adult	None visible.
1109	Fibula (Right shaft fragment)	1	Good-Moderate	2	Undeterminate	Adult?	None visible.
1109	Clavicle (Right shaft)	1	Good-Moderate	2	Undeterminate	Adult?	None visible.
1109	Fibula (Right distal head and distal shaft x 1)	2	Good-Moderate	2	Undeterminate	Adult?	None visible.
1109	Humerus (Left distal epicondyles)	1	Good-Moderate	2	Undeterminate	Adult?	None visible.

1109	Foot (left and right MT4 and left MT5)	3	Good-Moderate	2	Undeterminate	Adult?	None visible.
1109	Foot (proximal phalanx x 1)	1	Very Good	2	Undeterminate	Adult?	None visible
1109	Ribs (shaft fragments)	11	Good-Moderate	2	Undeterminate	Adult?	None visible.
1109	Ribs (right x 6 and left x 3)	9	Good-Moderate	2	Undeterminate	Adult?	None visible
1109	Clavicle (fragment)	1	Moderate	2	Undeterminate	Adult?	None visible.
1109	Scapula (acromion fragments)	2	Good-Moderate	2	Undeterminate	Adult?	Pitting on acromial head and some remodelling.
1109	Femur (proximal head fragment)	1	Good-Moderate	2	Undeterminate	Adult?	None visible.
1109	Pelvis (left x 1 and right x 1)	5	Good	2	Male	Old Adult	None visible.
1109	Pelvis (left pubis)	1	Good-Moderate	2	Indeterminate	Old Adult	None visible.
1109	Mandible (x 1)	2	Good	2	Female?	Old Adult?	Ante-mortem tooth loss.
1109	Scapula (left x 1 and right x 1)	3	Good	2	Indeterminate	Unknown	None visible.
1109	Long bone (proximal head fragment)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
1109	Unidentifiable fragments	6	Poor	2	Undeterminate	Unknown	None visible.
1109	Foot (Left MT1)	1	Moderate	2	Undeterminate	Unknown	None visible.
1109	Fibula (shaft fragment)	1	Moderate	2	Undeterminate	Unknown	None visible.
1109	Pelvis (ilium fragment)	1	Moderate	2	Undeterminate	Unknown	None visible.
1109	Vertebrae (neural arch fragment)	1	Moderate-Poor	2	Undeterminate	Unknown	None visible.
1109	Skull (Right zygomatic)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
1109	Scapula (fragments)	3	Moderate	2	Undeterminate	Unknown	None visible.

1109	Vertebrae (neural arch fragments)	3	Moderate-Poor	2	Undeterminate	Unknown	None visible.
1109	Tibia (proximal head fragment)	1	Moderate	2	Undeterminate	Unknown	None visible.
1109	Foot (Right calcaneus)	1	Moderate	2	Undeterminate	Unknown	None visible.
1109	Ribs (shaft fragments)	3	Moderate-Poor	2	Undeterminate	Unknown	None visible.
1109	Tibia (distal shaft fragment)	1	Moderate	2	Undeterminate	Unknown	None visible.
1109	Pelvis (fragments)	2	Poor	2	Undeterminate	Unknown	None visible.
1109	Foot (Right talus x 1)	1	Moderate	2	Undeterminate	Unknown	None visible.
1109	Hand (proximal phalanx)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
1109	Unidentifiable fragments	11	Poor	2	Undeterminate	Unknown	None visible.
1117	Femur (left)	1	Good	2	Undeterminate	Adult	None visible.
1117	Femur (right)	1	Good	2	Undeterminate	Adult	None visible.
1117	Sacrum	1	Very Good	2	Indeterminate	Adult	None visible.
1117	Vertebrae (cervical x 4, thoracic x 9, lumbar x 4 and thoracic neural arch fragment x 1)	18	Very good-Good	2	Undeterminate	Adult	Slight osteophytic lipping on L5.`
1117	Foot (left calcaneus x 1 and right calcaneus x 1)	2	Good	2	Undeterminate	Adult	None visible.
1117	Clavicle (right x 1)	1	Good	2	Undeterminate	Adult	None visible.
1117	Radius (left x 1 and right x 1)	2	Good	2	Undeterminate	Adult	None visible.
1117	Ulna (left x 1 and right x 1)	2	Good	2	Undeterminate	Adult	None visible.
1117	Scapula (left x 1 and right x 1)	2	Good-Moderate	2	Undeterminate	Adult?	None visible.
1117	Humerus (left x 1 and right x 1)	2	Good	2	Undeterminate	Adult?	None visible.
1117	Fibula (left distal end and distal-middle shaft x 1)	1	Good-Moderate	2	Undeterminate	Adult?	None visible.

1117	Fibula (distal end and distal shaft)	1	Good	2	Undeterminate	Adult?	None visible.
1117	Foot (Right MT1 x 1, Right MT2 x 1, Right MT4 x 1, Right MT5 x 1 and Left MT5 x 2)	6	Good	2	Undeterminate	Adult?	None visible.
1117	Scapula (right fragment)	1	Good-Moderate	2	Undeterminate	Adult?	None visible.
1117	Pelvis (x 1)	5	Good	2	Female?	Mid-Adult	None visible.
1117	Mandible (x 1)	2	Good	2	Female?	Mid-Adult?	Calculus and gum recession
1117	Fibula (shaft fragment)	1	Good	2	Undeterminate	Unknown	None visible.
1117	Sternum (sternal body)	1	Very Good	2	Undeterminate	Unknown	None visible.
1117	Ribs (shaft fragments)	16	Good	2	Undeterminate	Unknown	None visible.
1117	Ribs (Left x 9 and Right x 7)	16	Good	2	Undeterminate	Unknown	None visible.
1117	Scapula (fragments)	4	Good-Moderate	2	Undeterminate	Unknown	None visible.
1117	Patella (left)	1	Good	2	Undeterminate	Unknown	None visible.
1117	Unidentifiable fragments	12	Moderate	2	Undeterminate	Unknown	None visible.
1117	Foot (proximal phalanges x 2)	2	Very Good	2	Undeterminate	Unknown	None visible.
1117	Hand (Left MC1 x 1, Left MC2 x 1, Left MC3 x 1 and Left MC4 x 1)	4	Good	2	Undeterminate	Unknown	None visible.
1117	Hand (proximal phalanges x 3)	3	Good	2	Undeterminate	Unknown	None visible.
1117	Fibula (shafts)	2	Good	2	Undeterminate	Unknown	None visible.
1117	Clavicle (left)	1	Good-Moderate	2	Undeterminate	Unknown	None visible.
1117	Ribs (right x 2)	2	Good	2	Undeterminate	Unknown	None visible.
1117	Ribs (shafts)	2	Good-Moderate	2	Undeterminate	Unknown	None visible.
1117	Skull (x1)	15	Good	2	Female	Young-Mid Adult	Calculus. Gum recession.

1123	Tibia (left x 1)	2	Good	1	Undeterminate	Adult	None visible
1123	Tibia (Right middle shaft-distal end)	1	Good	1	Undeterminate	Adult?	None visible
1123	Tibia (proximal head fragments)	2	Good-Moderate	1	Undeterminate	Adult?	None visible
1123	Long bone (shaft fragments)	4	Moderate	1	Undeterminate	Unknown	None visible.
1123	Ribs (shaft fragment)	1	Good-Moderate	1	Undeterminate	Unknown	None visible.
1224	Sternum (sternal body fragment)	1	Good	1	Indeterminate	Unknown	None visible.
1241	Skull (fragments)	96	Good	1	Undeterminate	Infant-Juvenile	None visible.
1271	Hand (Right MC3)	1	Good-Moderate	1	Undeterminate	Unknown	None visible.
1310	Tibia (distal end and distal shaft)	1	Good	1	Undeterminate	Adult	Large amount of lamellar bone (non-specific infection? Periostitis?)
1310	Ulna (distal end and distal shaft)	1	Good	1	Undeterminate	Adult	None visible.
1310	Clivicle (right x 1)	2	Good-Moderate	1	Undeterminate	Adult?	None visible.
1310	Vertebrae (cervical x 1)	1	Good-Moderate	1	Undeterminate	Unknown	None visible.
1310	Vertebrae (thoracic body fragment)	1	Moderate-Poor	1	Undeterminate	Unknown	None visible.
1310	Vertebrae (neural arch fragments)	3	Moderate-Poor	1	Undeterminate	Unknown	None visible.
1310	Long bone (shaft fragment)	1	Moderate	1	Undeterminate	Unknown	None visible.
1310	Scapula (fragments)	2	Moderate-Poor	1	Indeterminate	Unknown	None visible.
1310	Unidentifiable fragments	6	Moderate-Poor	1	Undeterminate	Unknown	None visible.

1329	Pelvis (left ischium fragment x 1 left ilium fragment x unsided fragments x 4)	6	Good-Moderate	1	Undeterminate	Adult?	None visible.
1329	Foot (phalanges x 2)	2	Good	1	Undeterminate	Adult?	None visible.
1329	Sacrum (fragment)	1	Moderate-Poor	1	Undeterminate	Unknown	None visible
1329	Unidentifiable fragments	8	Moderate-Poor	1	Undeterminate	Unknown	None visible.
1393	Tibia (left)	1	Good	1	Undeterminate	Adult?	None visible
1393	Foot (Right talus)	1	Good-Moderate	1	Undeterminate	Adult?	None visible
1393	Humerus (shaft fragment)	1	Moderate	1	Undeterminate	Unknown	None visible
1393	Patella (unsided)	1	Moderate-Poor	1	Undeterminate	Unknown	None visible
1393	Foot (Metatarsal shaft)	1	Moderate	1	Undeterminate	Unknown	None visible
1393	Pelvis (right x 1)	2	Moderate	1	Male?	Unknown	None visible
1393	Rib (right x 1)	1	Moderate	1	Undeterminate	Unknown	None visible
1393	Ribs (shaft fragments)	2	Moderate-Poor	1	Undeterminate	Unknown	None visible.

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Appendix 13: Animal Bone Assessment

Karen Deighton

Introduction

A total of 1106 identifiable bones were collected by hand during the course of excavation. Material was also recovered from wet sieving (mesh sizes 2mm, 5mm, 10mm).The site was divided into 11 phases and animal bone was recovered from 10 as follows: Phase 2 Roman, Phase 3.1 Early Medieval, Phase 3.2 1190-1240, Phase 3.3. 1200-1350, Phase 4 1549-1600, Phase 5 late *c.* 16th-early *c.* 17th century, Phase 6 1670-1710, Phase 7 1710-1780 and Phase 8 1780-1830.

Method

The material was firstly sorted into recordable and non-recordable fragments and bones with fresh breaks were reassembled. Identification was aided by Schmid (1972); Prummel (1987) was consulted for neonates of the major domesticates, Lawrence and Brown (1974) for small mammals and Cohen and Serjeantson (1996) for birds. Sheep/goat distinction follows Boesneck (1969).

The following were recorded for each element: context, anatomical element, taxa, proximal fusion, distal fusion, side, burning, butchery, pathology and erosion. Ribs and Vertebra were recorded as horse, pig, dog, sheep size or cattle size but not included in quantification as their multiple numbers introduce bias. Recording of fusion follows Silver (1969). Cattle and pig teeth were aged after Grant (1982) and sheep teeth after Payne (1973). Recognition and recording of butchery is after Binford (1981). Recording of sexing data for pig canines follows von den Driesch (1976). Pathology is described after Baker and Bothwell (1980). The material was recorded onto an access database.

The bone assemblage

Preservation

Fragmentation was fairly high with only 12.8% of long bones complete. Surface condition was good with little evidence of root or chemical erosion. Canid gnawing was noted on 5% of bone and a single instance of rodent gnawing was seen in context 350.

Evidence of butchery was high at 51.5% and mostly consistent with chopping. Ten examples of knife rings cut around bone shafts were noted in Phases 4, 5 and 7. Four examples of sheep scapula with hook damage were recovered from context [233] (Phase 6). Only three instances of burning where noted, these were limited to discrete patches of blackening and do not appear to suggest that burning was a favoured method of disposal.

Table1: species by phase

Taxa/Phase	2	3.1	3.2	3.3	3.4	4	5	6	7	8	Grand Total
Cattle	4	4		5	35	35	23	90	30	4	232
Cattle size	1	3	2	1	11	10	10	15	9	2	64

Sheep/goat	4	5	9	5	54	74	53	193	51	26	475
Sheep									2		2
Goat						1					1
Sheep size		1		3	16	26	18	11	9	2	87
Pig	2		4	3	14	16	7	30	10	2	88
Horse				1	1	1				1	4
Dog				1	3	1	4	16		3	28
Cat							4	17		1	22
Fallow deer					1						1
Rabbit			1		3	12	6	2			24
Chicken		1	1	2	17	15	6	6	3		51
Chicken size				1	2	7	2	1	1		14
Goose			2	1	4	3	2	3			15
Corvid								1			1
Small corvid						6	1				7
Unidentified									1		1
Unidentified bird					3	1				1	5
Grand Total	**11**	**14**	**19**	**23**	**164**	**208**	**141**	**385**	**116**	**42**	**1121**

Table 2: material from sieving

Context	Sample	Phase	Cattle	Fish	Large mammal
55	1			2	
387	5	5		2	

424	6	6		1	
415	7	5		1	
517	8	5		2	
651	10	5		2	
748	11	2	2		
811	12	3.4		1	
990	14	3.4		10	
1022	15	3.4		1	
1154	16	3.2		1	
1239	17	3.4		1	1

Phase 2

Only 11 bones were recovered from waterlain silt layers. As features in this phase consist of water courses and boundary ditches suggesting the site was marginal to occupation, the small bone assemblage is consistent with this peripheral activity.

Phase3.1

A total of 14 bone fragments were noted from a boundary ditch, road surface layer, and channel infilling. The paucity of bone is consistent with a construction phase.

Phase 3.2

This phase sees large scale construction of the priory church and associated structures. Again the small bone assemblage from make-up and construction layers is consistent with this activity.

Phase 3.3

Bone was recovered from Grave [886] and post pits [1158], [1180], [1197] in Room 1 of the gatehouse. The lack of bone appears to be reflective of construction rather than occupation within the gatehouse.

Phase 3.4

Material was recovered largely from occupation and make-up layers, although a small amount of bone was observed in grave fills. Small concentrations of bone were seen in occupation layer [337] in Room 1 of the West range and in floor make-up layer [937] from the South Aisle of the church. The

phase was dominated by sheep/goat and has the only fallow deer and goat for the site. The larger, more diverse assemblage possibly represents increased activity maybe associated with the appearance of gentry dwellings within the Southern section of the precinct (?).

Phase 4

Small concentrations of bone were seen from pit [334]; ditch [263] and floor make up layer [642]. A possible small wader needs further work to confirm. The phase is dominated by sheep/goat, which is unsurprising for the late medieval/early post medieval period. A larger assemblage and more species diversity (indeed this phase has the widest range of taxa seen at the site) could reflect greater activity following the dissolution e.g. the occupation of houses built 1555-1562.

Phase 5

Small concentrations of material were seen in ditch [263] fill [262] and layer [631] and fill [228]. Bone was also noted from fill of well [614]. Once more the assemblage was dominated by ovicaprids. The assemblage would appear to be domestic in nature as no particular concentrations of specific bones (i.e. metapodia) were noted and possibly associated with building ranges grouped around yards within the former precinct (?) at this time.

Phase 6

The largest portion of the assemblage is in Phase 6 and is concentrated in cess pit [234]. (A concentration of sheep/goat mandibles and a number of partial ovicaprid skulls split along the sagital plane were noted here). Smaller concentrations are seen in layers [331], [343] and demolition layer [288]. Some material was also noted in the top fill of barrel well [267].

The assemblage is dominated by sheep, followed by cattle, then pig. The origin of material appears to be as butchery waste which would be consistent with occupation. However, a small concentration of disarticulated cat and dog bones within cess pit [234] could possibly suggest an association with the fur trade.

Phase7

A moderate amount of material was recovered from fills of well [210] and cesspit [314]/[355]/[356] and demolition layers. A single instance of rodent gnawing was noted which is often associated with post-medieval bone assemblages. Sheep/goat is once more the most common taxa. The mixed nature both taxa and bodyparts and the level of butchery would indicate domestic rubbish which would be consistent with occupation at Holywell Court (?).

Phase 8

Only 42 identified bone elements were recovered with a small concentration seen in ash layer [226], as well as a small amount in the top fill of well [210]. The material could reflect domestic waste from the terraced housing now occupying the site. A possible turkey bone was noted from this phase, maybe indicative of the growing popularity of the meat in late 18th/Early 19th-century London.

Potential and significance

Phases 2 to 3.3 inclusive and also Phase 8 have little significance or potential due to the paucity of material and in the case of Phase 2 the apparent peripheral nature of activity. However, further study of the later phases would help understand temporal changes in the animal economy of the site which in turn reflect social and economic changes. Although not large Phase 3.4 provides some idea about monastic occupation and economy. Phase 4 provides some information on domestic activity around the Dissolution and Phases 5 and 6 help to illuminate the nature of post-medieval secular occupation. Phase 7 again is fairly small but provides some information on 18th-century occupation. Limited comparisons with contemporary sites (e.g. Bermondsey abbey (Pipe *et al.* 2011) and previous work at Holywell (Morris 2011) for Phase 3.4 and Phase4/5 and The Rookery for later phases (Pipe 2011)) would be possible.

Recommendations

Phases 3.4, 5, and 7 are worth inclusion in final publication without more work but further analysis such as a study of ageing data and butchery should concentrate on Phases 4 and 6. Fish from wet sieving could be identified by a relevant specialist to prove an indication of the utilisation of marine, estuarine or riverine resources.

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Appendix 14: Environmental Assessment

Kate Turner

Introduction

This report summarises the findings from the rapid assessment of nineteen bulk samples taken during an excavation on land at Holywell Lane, Shoreditch. Four samples were from the initial evaluation, carried out in 2012, and fifteen from the full excavation in 2015. Full details of the sampled contexts can be found in Table 1.

The aim of this assessment is to: 1) give an overview of the contents of the assessed samples, 2) determine the environmental potential of these samples and 3) indicate whether any further analysis needs to be carried out.

Methodology

Nineteen bulk samples of between 1 and 32 litres of sediment were processed using the flotation method; material was collected using a 300µm mesh for the light fraction and a 1mm mesh for the heavy residue. The heavy residue was then dried, sieved at 1, 2 and 4mm and sorted to extract artefacts and ecofacts. The abundance of each category of material was recorded using a non-linear scale where '1' indicates occasional occurrence (1-10 items), '2' indicates occurrence is fairly frequent (11-30 items), '3' indicates presence is frequent (31-100 items) and '4' indicates an abundance of material (>100 items). The results for this stage of the assessment are presented in Table 2.

The light residue (>300 µm), once dried, was scanned under a low-power binocular microscope in order to quantify the level of environmental material, such as seeds, chaff, charred grains, molluscs and charcoal. Abundance was recorded as above. A note was also made of any other significant inclusions, for example roots and modern plant material. The results of this assessment are shown in Table 4.

Results and Discussion

Residues

All of the heavy residues with the exception of samples <3> and <4> contained environmental artefacts and/or finds.

Wood charcoal was present throughout the assemblage, with the exception of samples <2> and <19>; of these, 11 samples (<1>, <6>, <7>, <8>, <9>, <10>, <11>, <13>, <14>, <17> and <18>) contained pieces of a suitable size to be identified to species level. The highest concentration was present in sample <7>, a burnt layer dating to the 17th century. Identifiable samples should be sent to

a specialist for further analysis, as this could provide information on the local environment, as well as species exploitation for fuel during this period; this material could also be used for radiocarbon dating in deposits with the lowest potential for post-depositional disturbance.

Aside from the abundance of charcoal, the heavy residues were relatively poor in environmental remains; a single grain of charred wheat (*Triticum spp.*) was extracted from sample <9> and a small piece of nutshell in <1>. Land molluscs were sparsely represented in the heavy residues; the only samples to contain intact specimens were <8> and <17>, in which single shells of *Helix aspersa* (common garden snail) were identified.

Low frequencies of marine shell were identified in 11 of the 19 samples assessed; less than 10 specimens per sample, the exception being samples <12> and <14> which both contained over 100 fragmented valves of *Mytilus edulis* (common mussel), suggesting that this species may be a significant dietary componant. A substantial number of incomplete *Ceratsoderma edule* (common cockle) shells were also found in sample <12>, along with fragments of *Nucella lapuillus* (dog whelk) and *Littorina spp.* (periwinkle) in samples <12> and <1> respectively. Intact oyster shells were found in samples <1>, <5>, <7>, <10>, <16> and <16>, though not in large enough quantities to provide a statistically significant sample set (>100 individual valves), no further work is therefore recommended on this part of the assemblage. A complete record of the species identified is provided in Table 3.

Minor concentrations (<30 specimens) of animal bone were found in around 85% of the sample set (Table 2); the majority belonging to small mammals and/or amphibians, though small amounts of larger mammalian material were present in samples <1>, <2>, <6>, <7>, <10> and <13>. Un-sizeable fragments were also identified in 10 samples, along with low frequencies of fish bone in samples <1>, <5>, <6>, <7>, <8>, <10>, <12>, <14>, <15> and <16>.

Building material, in the form of tile, brick, stone, daub and mortar was identified in thirteen samples; tile being the most frequently occurring, found in ten samples. Generally concentrations were low, the majority under 30 pieces per sample; samples <1> and <16>, are the exception to this, both containing between 30 and 100 fragments of brick and tile respectively.

Eight samples were found to contain metal working by-products such as coal, slag, iron fragments and hammer-scale. Samples <6>, <8>, <10> and <12> also contained small pieces of copper. Sample <6> is of particular interest as it contains over 100 pieces of slag, along with hammer-scale, iron and copper; this deposit has been interpreted as being composed of occupational or industrial waste dated to the late 17th century, further analysis of which could provide valuable information as to the nature of the industry being undertaken on site during this period.

In terms of cultural artefacts, fragments of pottery were the most abundant; present in all but two residues (the exceptions being samples <7> and <19>), small amounts of glass and clay pipe fragments were also identified in several samples. In addition burnt/struck and/or worked flint pieces were found in low concentrations in samples <1>, <6>, <9>, <10>, <11>, <17> and <19>, along with a single worked bone pin found in sample <15>. All the material collected from the residues has been catalogued and passed to the relevant specialists for further assessment.

Flots

All of the processed samples produced flots, ranging from 0.2ml to 255ml in volume; as with the heavy residues, wood charcoal was identified in the majority of these samples, apart from sample <1>. With the exception of samples <6> and <16> abundances were generally high (>30 fragments), though only 7 samples (<5>, <6>, <7>, <10>, <11>, <12> and <13>) contained fragments of a size to determine species. Along with the material from the heavy residues this material should be sent to a specialist for identification, as should any preserved wood fragments (found in samples <1>, <9> and <10>) of suitable magnitude.

Seeds were well preserved throughout the assemblage, with un-charred specimens occurring in all of the samples aside from <2> and <4>. Peak concentrations were found in samples <5>, <9>, <11> and <18>, all of which contained over 100 identifiable specimens. Preliminary identification suggests flowering plant taxa, such as *Chenopodium spp.* (goosefoots), *Lamium spp.* (dead nettle) and *Urtica dioica* (common nettle) are dominant (Table 5), all indicative of waste or cultivated land. A significant amount of *Ficus carica* (fig) seeds was however observed in sample <5>, along with low concentrations of *Sambucus spp.* (elder) throughout, which may be indicative of a dietary component. Sample <9>, the fill of a Roman ditch, contains the highest concentration of seeds, alongside the greatest diversity of species; this sample is particularly recommended for further specialist analysis as it could yield valuable information about land use and the environment of the site locality.

Charred seeds were found in 6 out of the 19 samples (Table 4); in the case of samples <1>, <7>, <22> and <24> the majority of material is too heavily charred to be identifiable, however samples <5> and <6> contained recognisable specimens of *Brassica spp.* (mustards), also often a relic of cultivated or waste ground. Low concentrations of charred *Vitis spp.* (vines) were also found in this deposit. Along with this, sample <5> contained nearly 100 charred cereal grains, preliminary identification of which suggests the presence of *Triticum spp.* (indeterminate wheat), *Hordeum spp.* (barley) and *Secale cereale* (rye). As with the charred seeds, over 50% of the grain in this sample is puffy and heavily distorted, suggesting it has been subject to prolonged or repeated high temperature burning. No glumes or rachis fragments were discovered, suggesting that grain processing has been carried out elsewhere. Sample <15> also contained a small amount of burnt grain, though this was similarly too charred to be identified.

Molluscs were generally poorly preserved in the flots, though were present in greater abundance than in the heavy residues; complete land snail shells were identified in six samples <1>, <7>, <12>, <13>, <16> and <17>. Of these, only samples <1>, <7> and <13> contained greater than 15 specimens, the most common species being *Punctum pygmaeum, Euconulus alderi* and *Vallonia excentrica*. In addition, a small number of shells from the fresh water species *Gyraulus crista* and *Potamopyrgus antipodarum* were identified in samples <13> and <16>, the latter of which is an indicator of modern contamination or post-depositional disturbance, as this species is non-native to the British Isles and was only introduced in the 19th century; preliminary phasing suggesting that this deposit is dated to the 10th to 11th century. Samples <12>, <13> and <15> also contained fragments of marine shell.

Animal bone was found in small quantities in samples <7>, <13> and <17>, and fish bone in samples <13> and <14>, in each case less than 10 fragments per sample. 7 samples also contained insect remains (Table 5), though, as before, concentrations were not of a significant level to necessitate further processing.

As with in the heavy residues, industrial debris (coal, slag etc.) and possible metalworking residue was found in several samples, though samples <2>, <16>, <17>, <18> and <19> contain this material in the flot fraction only. Due to the smaller size of the fragments this may also be a sign of disturbance of post-depositional re-working within these contexts. Modern plant material, in the form of roots, moss and aquatic weed, is another indicator of bioturbation and was identified in samples <1>, <3>, <4>, <7>, <11>, <12> and <19>.

Conclusion and Recommendations for Further Work

This assessment has confirmed that, whilst seeds and charcoal are generally well preserved in the majority of samples, other environmental remains are sparse and often associated with possible contamination. The potential for bioturbation means that material from potentially disturbed contexts should be used with caution and a due consideration of any external influence.

However, as recommended in the discussion, the analysis of viable charcoal deposits could still be of great use. As there is substantial evidence for metal working and industry being undertaken on-site, an understanding of the taxa present, in conjunction an analysis of the residual material could provide information on not only the type of industry being carried out, but also the use of wood as a fuel in industrial activities during the 17th century. Radiocarbon dating of suitable samples could also be undertaken, in order to refine the current chronological model for the site. Additionally, through further study of the charred grain from sample <5> and the seed assemblage from sample <9> significant information could be gained on the consumption of cereals during this period, as well as aspects of land use, diet and the local environment.

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Table 1: Context details, HLY 12

Sample No	Context No	Phase	Type	Description	Date
1	55	7	Fill	Fill of construction cut for masonry wall stub, found in well.	1710-1780
2	115	7	Layer or Fill	Cess-like deposit , possible dump deposit	1710-1780
3	72	3	Layer	Redeposited brick earth/agricultural layer	Later Prehistoric to Roman
4	75	2	Layer	Fluvial channel deposit	Roman
5	387	5	Layer	Possible fire deposit	1600-c.1670
6	424	6	Layer	Possible occupational/industrial waste	c. 1670-1710
7	415	5	Layer	Possible burnt deposit	1600-c.1670
8	517	5	Fill	Fill of brick drain	1600-c.1670
9	511	2	Fill	Fill of N/S Roman ditch [513]	Roman
10	651	5	Fill	Fill of cut [650]	1600-c.1670
11	748	2	Layer	Fluvial deposit	Roman
12	811	3.4	Layer	Possible occupation deposit	c. 1350-1540
13	976	3.4	Layer	Possible clay floor	c. 1350-1540
14	990	3.4	Layer	Layer of occupation deposit within gatehouse	c. 1350-1540
15	1022	3.4	Layer	Possible occupation deposit	c. 1350-1540
16	1154	3.2	Fill	Fill of drain [1169]	c. 1190-1240
17	1239	3.4	Layer	Deposit from well base	c. 1350-1540
18	1272	2	Layer	Fluvial deposit	Roman
19	1319	3.1	Fill	Fill of cut [1320] poss boundary ditch	Early Medieval

Table 2: Assessment of residues, HLY 12

Sample number	Context number	Volume (litres)	Residue						
			Charcoal	Seeds/grain	Shells	Animal Bone	Fish Bone	Building material	Artefacts
1	55	27	3	1	Marine (1) Fragments (3)	Large (1)	2	Tile (3)	Coal (1) Bone fragments (2) Burnt flint (1) Struck flint (1) Pot (2) Clay pipe (1) Iron (1) Glass (1)
2	115	6				Large (1)			Bone fragments (1) Pot (1)
3	72	8							NO FINDS
4	75	9							NO FINDS
5	387	18	1		Marine (1) Fragments (3)	Small (3)	2	Tile (1)	Coal (1) Pot (2) Clay pipe (1) Iron (1) Glass (1)
6	424	25	3		Marine (1)	Large (1) Small (1)	1	Brick (2)	Coal (1) Bone fragments (2) Burnt flint (1) Pot (2) Iron (1) Hammerscale (3) Copper (1) Slag (4) Glass (2) Daub (1)
7	415	8	3		Marine (1)	Large (1) Small (1)	1	Tile (1) Stone (1)	Coal (1) Daub (1) Iron (1) Slag (1) Glass (1) Bone fragments (1) Eggshell (1)
8	517	26	3		*Helix Aspersa* (1) Fragments (1)	Small (2)	2	Tile (1)	Pot (1) Copper (1) Hammerscale (1)
9	511	24	3	1 (*Triticum spp.*)					Bone fragments (1) Pot (1) Struck flint (1)
10	651	12	1		Marine (1)	Large (2)	2	Brick (2)	Bonr fragments (1) Worked flint (1) Pot (2) Copper (1) Slag (1) Glass (1)
11	748	32	1			Small (1)		Tile (1)	Bone fragments (1) Burnt flint (1) Pot (1)
12	811	20	1		Marine (1) Fragments (4)	Small (1)	1	Brick (2) Tile (2)	Pot (2) Iron (1) Copper (1)

13	976	26	2		Marine (1) Fragments (2)	Large (1)		Tile (2) Mortar (2)	Pot (1) Iron (1)
14	990	24	3		Marine (1) Fragments (4)		2	Tile (1)	Bone fragments (3) Daub (1) Pot (2)
15	1022	24	1		Fragments (2)	Small (2)	1	Tile (2)	Pot (2) Iron (1) Bone pin (1)
16	1154	27	1		Marine (1) Fragments (2)	Small (2)	1	Brick (3)	Pot (1)
17	1239	24	1		*Helix aspersa* (1) Marine (1)	Small (2)		Brick (1) Tile (1)	Struck flint (1) Burnt flint (1) Bone fragments (1) Pot (1)
18	1272	1	2						Burnt (1) Pot (1)
19	1319	23				Small (1)			Bone fragments (1) Worked flint (1)

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Table 3: Identification of marine and terrestrial shell (heavy residues), HLY 12

Sample Number	1	5	6	7	10	12	13	14	15	16	17
Species											
Cerastoderma edule (fragments)		2		1		54	5	4	1		
Littorina spp.	1										
Mytilus edulis (fragments)			1			>200	16	>100	11		
Nucella lapillus (fragments)						1					
Ostrea edulis (left valve)	1	6								1	
Ostrea edulis (right valve)		2		1	1					1	1
Ostrea edulis (fragments)		31	5			4	4		12		

Table 4: Assessment of flots, HLY 12

Sample number	Context number	Volume (litres)	Vol (ml)	Flot						
				Charcoal >1mm	Charcoal <1mm	Seeds (uncharred)	Seeds (charred)	Grains	Mollusca	Other
1	55	27	100			2	3		Land (3)	Insect remains (1) Bone (1) Wood (4) Petrified plant matter (4) Pond weed (1) Slag/burnt deposit (4) Clinker (4) Coal (4) CBM (1)
2	115	6	5	1	3					Coal (3)
3	72	8	5		3	2				Moss/roots (3)
4	75	9	0.5		3					Coal (2) Modern plant (1)
5	387	18	83	4	4	4	3	3		Coal (4) Clinker (4) Slag (1) Insect remains (1)
6	424	25	255	1	1	3	3			Clinker (4) Slag (4) Coal (4) Hammerscale (2) Burnt bone (1) Bone frags (2)
7	415	8	65	4	4	3	2		Land (3)	Moss/roots (2) Coal (4) Slag (2) Animal bone (1)
8	517	26	33	3	3	2	2			Coal (4) CBM (2)
9	511	24	39	3	3	4				Wood (3) Insect remains (1)
10	651	12	210	4	4	2	3		Fragments (1)	Wood (2) Coal (4) Clinker (4) Slag? (3) Bone frags (1)
11	748	32	7	1	4	4				Weed (1) Insect remains (1)
12	811	20	30	3	4	3			Marine fragments (3) Land (1)	Weed (3)
13	976	26	33	4	4	2			Land (2) Freshwater (1) Oyster fragments (2) Misc. fragments (3)	Fish bone (1) Animal bone (1 fragment)

14	990	24	48	4	4	2				Insect remains (1) Fish bone (2)
15	1022	24	41	4	4	3		1	Fragments (1)	
16	1159	27	0.2	1	2	1			Land (1) Freshwater (1)	Coal (1)
17	1239	24	3	3	4	2			Land (1)	Coal (1) Insect remains (1) Animal bone (1)
18	1272	1	34	4	4	4				Slag (1) Coal (2)
19	1319	23	9	3	4	3				Coal (3) Insect remains (2) Pond weed (1)

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Table 5: Preliminary identification of charred and un-charred plant remains, HLY 12

Sample Number	1	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Uncharred seeds																	
Betula spp.							1		1			1					1
Ficus carica	5		187					6					6	1			
Prunus spp.							3										
Adoxa moscchatellina			2														
Agrostemma spp.									3								
Alliaria petiolata							48										
Alliaria spp.							76										
Amaranthus spp.			21				39										
Aphanes spp.			6														
Atriplex hortensis			1				3		3								
Atriplex spp.							34										
Brassica spp.		13		6								3		1			12
Carduus spp.							1										

Carex spp.	1	1	8		1		52		1	2	4	1	3				2
Chenopodium album	11		3				66		11							6	
Chenopodium spp.			61				121										
Drosera spp.																	3
Erucastrum spp.			1			3						1	22		5		
Fragaria spp.	3		49		1		4										
Hyoscyamus niger	2		1				10				2	7	13				
Lamium spp.	5		6		1		94		1							1	
Persicaria spp.							5					1					
Potentilla spp.							6										
Rubus spp.	3		41		1		30	12				1	3				
Rumex/polygonum spp.			3				37										
Sambucus spp.	4		2		1		13	2	15	50	2	13	9	1	9		28
Serratula spp.							7										
Silene spp.																1	1
Sinapis arvensis						3											
Solanum spp.							4										
Stellaria spp.							14		2								
Urtica dioica			3	56	28	11	>250	3	>100		2				12	130	
Viburnum spp.							5										
Vitis spp.	1		4														
Nuphar spp.							1										
Charred seeds																	
Ficus Carica			3														
Atriplex hortensis					2												
Brassica spp.			36	41													
Piper nigrum			3														
Vitis spp.			7														
Too charred to ID	>30		50		25	22		34									

Charred Grain																	
Hordeum spp.			9														
Secale cereale			5														
Triticum spp.			22														
Too charred to ID			44										9				

Table 6: Preliminary dentification of molluscs, HLY 12

Sample Number	1	7	12	13	16	17
Snail species						
Aegopinella pura	2		1			1
Cecilioides acicula						2
Cochlicopa lubrica					1	
Discus rotundatus	1			1	1	2
Euconulus alderi		13		8		
Euconulus fulvus	3					
Gyraulus crista				10		
Lauria cylindracea					1	
Oxychilus alliarius	4					
Oxychilus cellarius	1					
Potamopyrgus antipodarum					1	
Punctum pygmaeum	6	8		4	2	
Pupilla muscorum				2	5	
Pyramidula rupestris	3					
Vallonia excentrica	2	3				1
Vitrea contracta		1		6		3
Vitrea crystallina	4					
Juveniles (indeterminate species)	12	27				

Appendix 15: OASIS Form

OASIS ID: preconst1-263339

Project details	
Project name	Shoreditch village
Short description of the project	Open area excavation found Roman agricultural soils and a natural stream probably a tributary of the Walbrook, as well as Roman field ditches. Te excavation also uncovered part of the west end of Holywell priory church, tha main gatehouse and a mettalled road leading from the gatehouse to the church. In the nave a large spread of Westminster tiles was carefully lifted. 45 medieval inhumations in and outside of the church were exhumed. Emolition deposits associated with the dissolution of the monastery were unearthed. A 16th century courtyard house was built partly over the south aisle and nave of the church.
Project dates	Start: 07-04-2015 End: 13-06-2016
Previous/future work	Yes / No
Any associated project reference codes	HLY12 - Sitecode
Type of project	Recording project
Site status	Local Authority Designated Archaeological Area
Current Land use	Vacant Land 1 - Vacant land previously developed
Monument type	WALL Medieval
Monument type	WALL Post Medieval
Monument type	DITCH Roman
Monument type	INHUMATION Medieval
Monument type	FLOOR Medieval
Monument type	FLOOR Post Medieval
Monument type	CESS PITS Post Medieval
Monument type	PRIORY Medieval
Monument type	WELL Medieval
Monument type	WELL Post Medieval
Monument type	ROAD Medieval
Significant Finds	POT Roman
Significant Finds	POT Medieval
Significant Finds	POT Post Medieval
Significant Finds	TILE Medieval
Significant Finds	TILE Post Medieval
Significant Finds	BRICK Medieval
Significant Finds	BRICK Post Medieval
Significant Finds	ANIMAL BONE Roman
Significant Finds	ANIMAL BONE Medieval
Significant Finds	ANIMAL BONE Post Medieval

Significant Finds	HUMAN BONE Medieval
Significant Finds	COIN Roman
Significant Finds	GLASS Medieval
Significant Finds	GLASS Post Medieval
Significant Finds	CLAY TOBACCO PIPE Post Medieval
Investigation type	"Full excavation"
Prompt	National Planning Policy Framework - NPPF

Project location

Country	England
Site location	GREATER LONDON HACKNEY HACKNEY Shoreditch village
Postcode	EC2A 3ET
Study area	4622.78 Square metres
Site coordinates	TQ 3343 8232 51.523515008216 -0.076473330655 51 31 24 N 000 04 35 W Point
Height OD / Depth	Min: 10.8m Max: 12.24m

Project creators

Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	Mills Whipp Projects
Project design originator	Tim Bradley
Project director/manager	Tim Bradley
Project supervisor	Alistair Douglas
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Bouygues (UK)

Project archives

Physical Archive recipient	LAARC
Physical Archive ID	HLY12
Physical Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Industrial","Metal","Wood","Worked bone","Worked stone/lithics"
Digital Archive recipient	LAARC
Digital Archive ID	HLY12
Digital Media available	"GIS","Images raster / digital photography","Spreadsheets","Survey","Text"
Paper Archive recipient	LAARC

Paper Archive ID	HLY12
Paper Media available	"Context sheet","Drawing","Matrices","Plan","Report","Section","Survey ","Unpublished Text"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Assessment of an Archaeological Excavation at Shoreditch Village (West), London Borough of Hackney, EC2.
Author(s)/Editor(s)	Douglas, A
Date	2016
Issuer or publisher	PCA
Place of issue or publication	Brockley
Description	A 4 blue cover
Entered by	Alistair Douglas (adouglas@pre-construct.com)
Entered on	22 September 2016

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