

Court Knoll Community Excavations Nayland with Wissington Suffolk

Archaeological Excavation



for:
Nayland with Wissington
Conservation Society

CA Project: NYLCOU006
CA Report: NYLCOU006_1
HER Ref: NYW006
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SUMMARY

Project name:	Court Knoll Community Excavation
Location:	Court Knoll, Nayland with Wissington
NGR:	597500 234000
Type:	Community Excavation
Date:	2nd September to 16th October 2016
SMC:	S00142079
OASIS ID:	Cotswold2-533986
Location of archive:	To be deposited with English Heritage and the Archaeology Data Service (ADS)
Site code:	NYW 006

This report brings together the significant findings resulting from detailed analytical work on selected parts of the finds and environmental assemblage recovered as a result of a community excavation at Court Knoll in 2016. The extensive and protracted post-excavation work has been supported and resourced by the Nayland with Wissington Conservation Society through their own funds and attracting grant funding from a range of sources, working alongside members of the team from Cotswold Archaeology.

Court Knoll is an archaeological and historical site that has statutory protection as a Scheduled Monument. The significance of the site is based on the surviving earthworks which enclose area of just under two hectares, surrounded by an external ditch. The site is located within the flood plain of the River Stour, where the course of the river splits and runs either side of Court Knoll. Access to nearby Colchester, c. 5 miles away would have been by a road which ran to the west of the site.

Documentary evidence that shows that the site was owned by an important nobleman, Robert fitz Wimarc of Norman/Breton descent and who held key positions in the courts of Edward the Confessor and William the Conqueror. Unusually for the period these lands did not change hands in 1066. The archaeological work was triggered by a systematic and detailed geophysical survey of the interior of the Court Knoll enclosure carried out between 2014 and 2016 by the Nayland with Wissington Conservation Society under the guidance of Dr Tim

Dennis. This had identified a range of masonry structures including one that apparently reflected a plan form suggestive of a continental-style cruciform church, usually attributed to the Late Anglo-Saxon period. The inference from the combined evidence was that the site may have originated as a Late Anglo-Saxon thegn's residence, including a church and hall complex within a defended enclosure. The excavation was designed to test this assumption and to assess the level of preservation and condition of below ground remains on a site that although now pasture, had been ploughed in recent decades.

Excavation of seven hand-dug trenches investigated, through sampling, the entire area of the Court Knoll enclosure uncovering evidence that supported and developed the interpretations from the preceding non-intrusive surveys. The enclosure was internally divided by a moat that segregated the east end, and which had contained two phases of substantial masonry structures built of re-used Roman stone, brick and tile, probably in the early 11th century. The first structure had been at least partly destroyed by fire in the 12th century, which appears to have prompted a complete remodelling (or possibly entirely new construction) of the building and the introduction of domestic occupation of the site. Radiocarbon dating of burnt, carved wood suggests that there may have been an earlier non-masonry structure on the site, but no further evidence of this was found.

Records of the soil profiles within the trenches showed that the natural topography of the enclosed area was uneven and sloped from north to south and west and to a lesser extent to the east. Within the eastern internal enclosure, it appears that a level platform was created for the first stone building using upcast material from the digging of the inner and outer enclosure ditches.

Excavation recovered evidence not only of the base of the masonry structures, but significant evidence of the decorative schemes with the burnt remains of coloured window glass and intricately carved wood. Most significant was the discovery of eleven pieces of Anglo-Saxon polychrome relief tile dating to the early 11th century and only previously found in the highest of ecclesiastical contexts. In this case, they appeared to have adorned the front face of a small altar at the east end of the building, indicating that it can be interpreted as a church. Also identified were fragments of mortar and plaster mouldings that would have adhered to the rough masonry structure to form chamfers, string courses and other decorative elements.

There is little evidence of domestic occupation associated with the earlier structure seemingly ruling out interpretation of Court Knoll as a Manorial site or Thegn's residence in the pre-

conquest period. There is however strong artefactual and documentary evidence for a change in use of the site in the 12th-13th centuries perhaps a direct result of the fire and the reduction in scale of the church, or of the documented disgrace and forfeiture of lands of its owner in 1163. The evidence from the pottery seems to indicate a decline in occupation by the end of the 13th century and the presence of at least one hearth apparently overlying robbed walls of a second phase of the structure, may suggest a continued but declining use of the site. By the 15th century, the site no longer seems to have been inhabited; an assemblage of pottery dating to late medieval early post-medieval period could be indicative of limited occupation on the site but seems more likely to represent rubbish dumping on a largely abandoned area originating from the growing settlement of Nayland (the site of the current village) to the north.

Despite the extraordinary wealth of evidence recovered, the total excavation area included no more than 125.5m² and therefore there are questions left unanswered, and conclusions are drawn from incomplete evidence. Comparisons for the floor plan of Structure 1 can be found in either the Bishops Chapel at N. Elmham in Norfolk or St Botolph's in Hadstock in Essex (reputedly founded in 1020 by King Cnut). On its destruction or severe damage by fire, it appears that the east and west ends at least were replaced, either by remodelling or complete replacement. The core of the building may have been retained (we did not investigate this part of the structure) at a reduced scale, perhaps with two apsidal ends similar to St Giles in Langford, Essex or with the addition of one or more free-standing or attached tower(s).

Detailed scientific analysis of the composition of the mortar/plaster, polychrome tiles and window glass has helped clarify the significance of these results in the history of early stone church building in England, and more conventional finds reports have elucidated the story of the site whilst also raising further questions. The report concludes with unashamed attempts to define the building plans from partial information and interpret this site in the 11th century local context.

1. INTRODUCTION

- 1.1. Between October and November 2016 Suffolk Archaeology Community Interest Company (SACIC) (now Cotswold Archaeology (CA)) worked with members of Nayland with Wissington Conservation Society (NWWCS) to carry out archaeological investigation at Court Knoll, a Scheduled Monument (List number 1003757, Old County Number SF115) on the southern edge of Nayland with Wissington in Suffolk (centred at NGR: 597500 234000; Fig. 1).
- 1.2. Court Knoll is a 'D' shaped earthwork enclosing an area of just under 2 hectares on the southern edge of the village of Nayland with Wissington, previously interpreted as the site of a medieval ringwork or motte and bailey castle (Suffolk HER record for NYW 006).
- 1.3. The investigations were initiated by members of the NWWCS following their involvement in 15 years of non-intrusive surveys of this enigmatic site. An initial design for the project was put forward by John Newman Archaeological Services, and on his reluctant withdrawal from the project, he referred the society to SACIC to help them take it forward.
- 1.4. A revised scheme for seven excavated trenches designed to sample all areas of the enclosure was agreed in conjunction with Historic England (Nick Carter) and Scheduled Monument consent was secured (SMC S00142079).
- 1.5. The excavation was also in line with:
 - Management of Research Projects in the Historic Environment (MoRPHE) PPN 3: Archaeological Excavation (Historic England 2015); and
 - *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide* (Historic England 2015).
 - *Standards for Field Archaeology in the East of England. East Anglian Archaeology Occasional Paper No 14.*
 - *Standard and Guidance for archaeological excavation. Chartered Institute for Archaeologists, 2008,*
 - *Excavation and post-excavation treatment of cremated and inhumed human remains. IFA Technical Paper No 13.*
 - *Deposition of Archaeological Archives in Suffolk, SCCAS, 2010.*

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- *First Aid for Finds. Third Edition, revised. 2001, Rescue/UKIC Archaeology Section, London.*

- 1.6. Fieldwork was carried out by members of the NWWCS and volunteers from the local community, as well as members of the Colchester Archaeological Group and the Stour Valley Community Archaeology, all of whom were supervised by Linzi Everett under the management of Jo Caruth (both SACIC), who also wrote the Written Scheme of Investigation (Caruth 2016, Appendix I). The fieldwork was carried out between 2nd September and 16th October 2016, and the project was overseen by Nick Carter of Historic England and Faye Minter of Suffolk County Council Archaeological Service
- 1.7. The post-excavation assessment report was commissioned by the Nayland with Wissington Conservation Society and produced by SACIC (Everett 2017).
- 1.8. This excavation report was also commissioned by the Nayland with Wissington Conservation Society, but in 2019 Suffolk Archaeology was acquired by Cotswold Archaeology, who have produced this latest report.

The site

- 1.9. The monument consists of a generally flat platform with a distinct low mound to the east, enclosed by a large, wide ditch, with an entrance at the north-west corner. It lies at a height of about 11m-12.50m above Ordnance Datum (aOD) on the floodplain of the River Stour which forms the present day boundary between Suffolk and Essex. The river divides to the east of Court Knoll, passing to the north and the south of the site before rejoining. The platform is slightly raised around 1m above the surrounding floodplain and may have been artificially built up or modified from a natural promontory (Fig. 2).
- 1.10. The land is now pasture but was subject to arable farming between 1958 and 1990 after which it has been under various environmental protection schemes (Dennis 2015, Appendix 1). There are no above ground structures surviving but a fieldwalking survey in 2001 when it was under set-aside identified significant quantities of building debris (Everett, 2001). When Essex historian Philip Morant visited Court Knoll ('the mansion house' at Nayland) in 1768 he commented that 'no foundations of any part of it are to be seen, except the Chapel'. It is described as pasture one hundred years earlier, in a deed of 1669 (see Breen 2001) thus

suggesting that any buildings that had been on the site were already ruinous by then.

- 1.11. The underlying bedrock geology of the site is mapped as Thanet Sand Formation and Lambeth Group, sedimentary bedrock formed between 66 and 47.8 million years ago during the Palaeogene era. This is overlain by alluvial deposits laid down from c. 11,800 years ago to the present. (BGS 2024). This material is more sorted than most of the glacial sediments are, forming complex inter-bedded layers and lenses of gravels, sands, silts and clays, each with their own characteristics producing variations in soils and drainage even within a small area (Wade, 2018).

2. BACKGROUND

Physical setting

- 2.1. The earthwork known as Court Knoll is a Scheduled Monument (1003757, legacy no. 115), and the scheduling information describes it as of a type referred to as a 'ringwork', a form of fortified site usually surrounded by a defensive bank and ditch. Such monuments are believed to be Saxo-Norman in date, and to have essentially functioned as an early form of medieval castle or fortified manorial complex. No above ground building remains survive, leading to much interest and speculation over the years about the history of the site, its form and function.
- 2.2. The information below is a brief summary taken from a report by Sybil Wade (a project participant) prepared as background information on the physical setting of Court Knoll and its surroundings for the Post-Excavation Assessment (Wade 2018).
- 2.3. Nayland is located 9.5km north of Colchester on the north bank of the River Stour which here flows due east to the North Sea and forms the present-day boundary between Suffolk and Essex (Fig. 2). The village itself sits in the bottom of the valley and on its northern flanks, at c. 10-30m aOD. Topographically, the landscape around Nayland takes the form of a low dissected plateau sloping gently south-east from a height of 60-70m in the hills north of Nayland to c. 30-35m in the south at Colchester.
- 2.4. The name Stour is from 'stor' or 'storr', Anglo-Saxon/Old Norse/Old Icelandic meaning 'great, strong, violent' suggesting a river larger than now (Wade 2018, River Stour Trust). Extreme weather events would have flooded the whole valley floor. The present Stour is tidal as far up as the barrier at Cattawade (approximately 16km downstream from Nayland) and North Sea tidal/storm surges would have added to the flooding risk.

Summary of recent archaeological and historical research

2.5. Several phases of archaeological and documentary research have contributed to the understanding of the site, and these are listed below:

- Small-scale excavations were carried out in 1924 by Major W.F. Dick, revealing the remains of walls described as of ragstone construction with courses of Roman tile.
- In the 1960s the records of the 1924 excavations were re-assessed by L.S. Harley Esq., from Stoke by Nayland. He went on to bore at least one test hole into the base of the outer ditch in 1964 (See Appendix F).
- Non-intrusive study of the site, including geophysical survey by GSB Prospection (Martinez 2001) and a community based fieldwalking survey, overseen by Suffolk County Council Archaeological Service in 2001 (Everett 2001). The geophysics identified likely building remains whilst the fieldwalking provided evidence for 11th-13th century activity amongst a large assemblage of building material, including 35kg of Roman tile.
- A documentary search by independent researcher Anthony Breen was included in the 2001 project, outlining the ownership of the site from pre-Conquest times and providing evidence of the site's manorial status during the medieval period.
- In 2002, Compotus Rolls (estate accounts relating to the crown, SC 6/1003/1 Description of Officer 1280 - 1281) for Nayland dated to the year 1280 and held by the Public Record Office (now The National Archives), were translated by Nayland resident, Pam Walker. These vividly describe a range of manorial buildings actively being maintained.
- Detailed geophysical and topographic survey of the monument was carried out between 2014-2016 by Dr Tim Dennis and local volunteers, defining a series of structures mainly focused on the low mound in the north-east quarter of the site and identifying the likely location of the recorded 1924 excavation.

Archaeological background

2.6. In 1924, excavation of the Court Knoll site was initiated by Major W. F. Dick from Little Horkesley (Appendix F). Few records of this event are known to survive but those that do describe the excavation of foundations 'of Flint and ?Roman tile.' Two contemporary photographs show the corner of a well-preserved building, incorporating courses of what does indeed appear to be Roman tile, and

accompanying plans show the approximate location of the excavation within the monument as well as some details of the structures uncovered. A 1924 hand drawn location map showed the structural remains in relation to the enclosure's outer ditch and a sight line from the church tower. Superficially, the archive appears lacking in detail and accuracy, calling the value of the information into question. In 2016 however, the accuracy of this map was successfully tested by Dr Tim Dennis, and along with the results of the 2016 excavation, proves the contemporary recording of the 1924 work to be much more reliable than it initially appeared. It would seem that the plans were drawn up on behalf of Major Dick by D.W. Clark, a local architect, and whilst they do not show the extent of the excavated area, they are reliable, measured drawings of the exposed masonry. Unfortunately, no records are currently known which describe the deposits removed during the excavation, and the only reference to any finds is from a local newspaper article, noting 'the discovery of coins, pieces of glazed tile, charcoal *etc.*' Despite past and recent enquiries, the finds have not been located.

2.7. In 2001, non-intrusive survey was carried out at Court Knoll, including geophysical survey by GSB, a documentary search and a systematic fieldwalking survey of the internal area of the monument (Everett, 2001). This was a community-led project in conjunction with the Nayland with Wissington Conservation Society and the Dedham Vale and Stour Valley Countryside Project, funded by the Local Heritage Initiative. The fieldwalking was carried out by local volunteers under the supervision of Suffolk County Council Archaeological Service (SCCAS). Geophysics identified a number of anomalies, including what appeared to be evidence of various buildings in line with the results of the documentary search which described an extensive medieval manorial complex. The fieldwalking assemblage was dominated by late medieval and post-medieval material but it included a small quantity of earlier medieval pottery. Whilst the pottery was not indicative of particularly high status, the distribution of finds was of interest, with the majority of medieval pottery and post-Roman roof tile collected from the vicinity of a distinct low mound in the north-eastern corner of the site.

2.8. Between 2014 and 2016, an extensive and detailed programme of geophysical survey (resistivity, magnetometry, and Ground Penetrating Radar (GPR)) and topographic analysis was carried out by local volunteers led by Dr Tim Dennis. This recorded a series of likely buildings, well defined and largely focused on the area of the low mound in the north-west of the site. The most striking of these seemed to

represent a (masonry) cruciform structure aligned west – east with the appearance of apsidal east and west ends and squared chambers on its north and south sides (Figs 3 and 4). Further possible masonry structures were suggested by GPR results north-east of this. A feature within the north-eastern corner of the earthwork enclosure looked to represent an inner moat and just south-west of this were results suggestive of a further building and possible hearth. This latter structure was interpreted as a possible manorial hall.

2.9. In order to ‘ground truth’ the geophysical survey results, the Nayland with Wissington Conservation Society (NWWCS) worked with John Newman Archaeological Services (JNAS) to formulate a community-led fieldwork project at Court Knoll. When JNAS withdrew from the project, Suffolk Archaeology Community Interest Company (SACIC) was employed to submit the Written Scheme of Investigation (WSI; Appendix I), acquire the necessary Scheduled Monument Consent from Historic England and provide archaeological management and supervision.

2.10. As the site was within the Higher Level Stewardship scheme, derogation from Natural England was also required, as was a licence from the landowners, the Trustees of the Tendring Hall Estate.

Test Pitting in Nayland village

2.11. Two campaigns of archaeological test pitting were undertaken within Nayland village in 2012 and 2014 (Collins, Lewis and Pryor 2012 rev 2014).

2.12. This work identified some limited evidence for 9th-11th century settlement, with two test pits (NAY/12/26 and NAY/12/30, Collins, Lewis and Pryor 2012 rev 2014) producing more than one sherd of late Anglo-Saxon Thetford ware pottery. These both lay close to the current church, suggesting the location of the Saxo-Norman settlement around the current church and market place. Test pit NAY/12/30, which contained 15 sherds of Thetford ware pottery however also lay at the southern end of the village within 200mm of Court Knoll.

2.13. Most test pits produced Early Medieval Wares, suggesting a significant expansion to settlement activity from the late 11th and 12th centuries.

2.14. The evidence from the 2012 and 2104 Test Pitting Survey found a concentration of the earliest medieval settlement evidence above the floodplain within this larger ‘island’ (Lewis *et al.*, 2012) some distance from Court Knoll (see above para 2.19).

HER Summary

- 2.15. The Suffolk HER records 85 sites within a 2000m radius of Court Knoll and a search of the Essex HER a further 16 within 1000m of the site south of the River Stour.
- 2.16. Most of the records relate to listed buildings and farmsteads that date from the late medieval to post-medieval period. These have not been included.
- 2.17. The summary below presents a record of selected sites pre-dating and contemporary with the activity discussed in this report (Fig. 5).

Prehistoric

- 2.18. The earliest period is represented by a Palaeolithic flint flake (NYW 011) found in gravel cutting during roadworks, on Harpers Hill c.1500m from Court Knoll.
- 2.19. A Late Neolithic arrowhead (SU049, not illustrated) has also been recovered from Harper's Hill and an undated cropmark in Stoke by Nayland (SBN 028) appears to be of a Neolithic long-barrow. These both lie more than 1km north of Court Knoll.
- 2.20. The Stour Valley is noted for the crop marks of ring ditches that have been identified on both sides of the valley both north and south of Nayland with Wissington. A cluster of two c.30m ring ditches and at least 12 smaller ones in Wissington is recorded in the HER as NYW 005, and others in Stoke By Nayland (SBN 013, SBN 016, SBN 024- 027, SBN 036, SBN 042 - 050, SBN 066-068, SBN 079 and SBN 082). These are undated but assumed to be of Bronze Age date.
- 2.21. The Essex HER also records crop marks. Within 1000m of Court Knoll are MCC7189, a series of ring ditches and possible trackway and MCC7190 and ring ditch and possible cursus, MCC7225 and MCC 7228 linear cropmarks and possible ring ditches. These are all undated, but likely to be Neolithic or Bronze Age in date.
- 2.22. Also of Bronze Age date are cremation burials which included two bucket urns and a small pot found at Nayland Vicarage (NYW 015) within the village.

Roman

- 2.23. Three spreads of Roman tile (NWW 008-010) indicate the likely site of a Roman villa (roof tiles and hypocaust suggested by box tiles). These sites lie c.1.5km west of Court Knoll and may cover an area of up to six hectares.
- 2.24. A possible section of the Roman road from Colchester to Great Horkesley SUF 102 may continue in a north-westerly direction to the west of Nayland.

Post-Roman

- 2.25. The HER only records three instances of post-Roman, pre-Norman conquest activity in the area, all finds made during the excavation in Nayland of fifty test pits in 2012 and 2014 by the residents in conjunction with Access Cambridge Archaeology. Of the three Test Pits (7, 26 and 30) that produced any Late Saxon pottery only Test Pit 30 (NYW 058) produced more than a single sherd of Thetford ware pottery. Fifteen sherds were recovered from this test pit c.400m NE of Court Knoll.
- 2.26. Medieval sites include St James Church, Nayland (NYW 023, which does not appear in Domesday), medieval pottery finds from Gravel Hill (NYW 031) finds from Nayland test pitting (NYW 057 and NYW 058), postholes representing a possible building found during monitoring at the Fire Station (NYW 034), a 14th century aisled hall in Court Street Nayland (NYW 050), and Alston Court (NYW 059) with 13th century elements. These two earlier medieval buildings lie at the southern edge of the village within 200m of Court Knoll and the property boundary of Alston Court bounds the Court Knoll enclosure to the north. The earliest element, the 13th century wing, of Alston Court, faces onto Nayland market place (Alston, Colne Stour website).
- 2.27. There are many post-medieval records, mostly listed buildings and farmsteads, but two bridges in Nayland are of note indicating river crossings (NYW 026 and NYW 027) north of Court Knoll that could have had earlier origins.
- 2.28. A deer park is recorded from 1280 at Tendring Hall, Stoke-by-Nayland, which also includes a Grade II Registered Park and Garden (List number 1000406).

Undated

- 2.29. Most of the undated records are included above as probably Bronze Age in date. Additional records are crop marks from enclosures and trackways (NYW 061, SBN 077, SBN 089, SBN 080) and occasional undated ditches (NYW 032) but include now lost ancient woodland (NYW 045)

South of the Stour (Essex)

- 2.30. In Essex, separated from Court Knoll by the River Stour, the picture is very similar with undated cropmarks of trackways and ring ditches at sites MCC 4183, MCC 4814, MCC 7189, MCC 7190, MCC 7225, MCC 7225, MCC 7228.

Summary of documentary evidence

- 2.31. The summary below is taken largely from Anthony Breen's survey of 2001, updated from other sources where appropriate.
- 2.32. The Domesday name for Nayland is recorded as 'Eilanda', and by the 13th century, this had become 'Neiland', an adaptation of the Old English 'at the island' (Breen, 2001). It is likely that this refers to the wider area, the 'island' created by the division of the River Stour north and south of the main settlement rather than Court Knoll alone.
- 2.33. Domesday entries for Nayland are split across two hundreds (Babergh in Suffolk and Lexden in Essex, (Williams and Martin, 1992, 2003 edn 1004 and 1269)). In 1066 it was recorded as having 139 households worth 10.6 geld units in tax but the Suffolk element of this was small at 25 residents and tax value of 2 geld (Collins, Lewis and Prior 2012, rev 2014).
- 2.34. The manor was held in 1086 by Swein of Essex, an important landowner who had inherited extensive estates, including Nayland (and Stoke by Nayland) from his father Robert fitz Wimarc.
- 2.35. Robert fitz Wimarc was born in Normandy, probably in the first decade of the 11th century and was a kinsman of both Edward the Confessor and William the Conqueror. He was probably brought to England when Edward returned from exile to claim the throne in 1042. He served Edward the Confessor as staller and household officer in Essex and William the Conqueror as Sheriff of Essex before his death before 1075 (Williams 2013).
- 2.36. Robert's caput is thought to have been at Clavering in Essex where he had a castle and he was probably installed sometime in the late 1040s (Williams 2013). It appears that despite his closeness to Edward the Confessor, Robert did not attract the hostility of the Godwines during the Crisis of 1051-2 and even though Archbishop Robert used his castle in 1052, he was not expelled after the reconciliation (Williams 2013) and he remained in favour after the Norman Conquest. Nayland represents a rare example of continued land holding before and after the Norman Conquest.
- 2.37. The family held the Earldom of Essex through to his great grandson Henry of Essex who forfeited all their lands for an act of treason in 1163 (ODNB).

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- 2.38. The manor of Nayland was then held by the crown until it passed to the de Burgh family in the reign of Henry III (1216-1272). Records, in particular an extraordinary set of Court Rolls, show that it remained an active and well-maintained manor through the 13th century, but by the later medieval period, the manor appears to have gone into decline under the tenancy of a series of absentee landlords.
- 2.39. Domesday does not mention a church in Nayland. In a document dated 1303 Edward I declares the Church at Nayland (King's Free-Chapel of Nayland) free from any jurisdiction by the Bishop of Norwich. The current church, St. James, is of 14th century origin and in 1333 Nayland is recorded as a chapel-of-ease to Stoke-by-Nayland which it remained until the 18th century. (Nayland with Wiston website).
- 2.40. In the 13th century, Nayland was granted the right to hold a market and from the 14th century, the town prospered from the weaving industry and cloth trade until the decline of that trade in the 17th century. In 1705, Parliament passed a Bill to make the River Stour navigable from Sudbury to Manningtree, and whilst the river had always provided an essential means of transport, by around 1724, improved navigation helped new industries in Nayland to expand, and the town continue to flourish (Breen 2001).
- 2.41. In his 1768 publication *History of Essex*, Philip Morant documents the descent of the Manor of Nayland. He observes that 'The Mansion House was at Nayland in a pasture ground still called the Court but no foundations of any part of it are to be seen except the chapel' (Everett 2001). Various 18th century deeds make no mention of any surviving buildings, describing 'the Court' only as meadow or pasture, suggesting that by the 18th century, the visible remains of the manor complex were all but gone.
- 2.42. The name 'Court Knoll' does not appear on maps until the first edition Ordnance Survey Map of 1885. In this context the word 'knoll' has always been read in its more usual meaning of a round-topped mound/hill, from the Anglo-Saxon 'cnoll'. It can, however, have another meaning, now archaic, from the Anglo-Saxon 'cnyll' - the sound of a large bell or the act of ringing a bell especially as a summons. So far only one other mention of the word 'Knoll' in connection with Nayland has come to light. This is a reference in the Court Rolls to 'Phillip at Knolle', Reeve of Nayland in 1279/80 (Wade 2018).

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- 2.43. The earliest documents for the wider area relate to a series of wills of the family of Aelfgar, who was Ealdorman of Essex from 941-951. In his will (St Edmundsbury Chronical S 1483) Aelfgar left money to endow a foundation at Stoke by Nayland 'to pray for the souls of his ancestors', and both his daughters, Aethelflaed who was the widowed second wife of King Edmund and Aelfflaed (who was the widow of Byrhtnoth, Ealdorman of Essex who was killed at the Battle of Maldon) also left money to the foundation at Stoke (Foot 2014, 40). St Peter's in Mersea, Essex was also a beneficiary of these wills. Aethelflaed was left Chelsworth by King Edmund's son King Edgar (Foot, 2014, 40).
- 2.44. The foundation at Stoke has never been located, there has been some question as to whether it was ever realised, but the will of Aelfflaed who died in 1002 asks King Aethelraed II (the unready) to protect the holy foundation at Stoke, which suggests that it did exist. (St Edmundsbury Chronical - S 1486).

3. AIMS AND OBJECTIVES

Original Research Aims

- 3.1. The general objectives of the archaeological excavation as defined in the WSI (Caruth 2016, Appendix I) were to:
- To preserve by record all archaeological deposits encountered during the excavation.
 - To produce a permanent record of the archaeological deposits suitable for further research, the archive of which will be deposited with the Suffolk HER.
 - To test the results of the geophysical survey, both the probable buildings and other more ephemeral features, thus allowing more confident interpretation of the existing and any future non-intrusive surveys.
 - To provide information that will lead to a better understanding of the date, function and character of the Court Knoll complex.
 - To investigate the apparent evidence for a Roman presence with particular regard to the dating of the brick and tile; is it Roman or is it early medieval?
 - To assess the impact on the archaeological remains of the historic cultivation of the site, in line with the objectives of Historic England's Conservation of Scheduled Monuments in Cultivation (COSMIC) programme, and to evaluate the beneficial impact of the current land-management of the site under the HLS scheme.

- To engage the local community in the research of their nationally important monument whilst carrying out the work to professional standards.
- To disseminate the results to a local and wider interested audience, and to enhance the Scheduled Monument record for Court Knoll.

3.2. More specific objectives related to regional research goals at the time specifically to gain a better understanding of the medieval hall and church complex lying at the centre of many parishes originating in the late Saxon to 11th/12th century period, (Medlycott, 2011, 58 & 70) and contribute to the study of the significance and development of settlement within the valley of the River Stour.

3.3. These specific objectives were to:

- Examine the main structure with the possible eastern apsidal end on the low mound with regard to its state of preservation, function and date of construction.
 - Can this structure be identified as a chapel/church? If so, can a Continental inspiration related to Robert son of Wimarc be recognised and an overall pre-conquest date for the overall complex confirmed?
 - Can this structure be securely dated to the period when Court Knoll was held by Robert son of Wimarc and then by Swein?
- Re-examine and record the 1924 excavation trench which is located at the site of the structure on the low mound and relate these findings to any extant archives from 1924.
- Confirm the presence and state of preservation and date of a second structure to the north-east of the main structure on the low mound where survey evidence also suggests the presence of a possible western apse.
- Examine the possible hall type structure recorded by geophysical survey on the south-western side of the low mound to gain evidence relating to its structural form, state of preservation and date of construction and use, and relationship to the adjacent structures.
- To examine how the probable structures relate to adjacent geophysical anomalies?
- To examine the evidence for internal enclosures, and other evidence for the internal layout of the site. The structural evidence appears to be focused in the east side of the site. Is this in fact the case? If so, is there evidence for the use of the rest of the site? Is there any evidence for burials or a cemetery?

Revised Research Aims

- 3.4. Following the production of a Post-Excavation Assessment (PXA, Everett 2018) the research objectives were redefined to reflect the fieldwork results. These were focused on the range and sequence of the buildings and interpretation of their function, as well as looking at the finds, in particular the window glass, tiles and decorative plaster in terms of their inherent interest and their potential to give further insights into the structure's function, status and appearance. The results detailed in the body of the report reflect these questions, but a summary of the success in addressing them is provided below.
- 3.5. **RRA 1:** Can the physical nature of the main building be better defined? Are there any known parallels? Is there any clearer evidence for the physical superstructure, either in the finds assemblage or in the physical features themselves?
- Suggestions as to the layout and interpretation of the structures have been presented, with varying levels of confidence. At least one possible parallel for one of the alternative interpretations has been found.
- 3.6. **RRA 2:** Can the interpretation of the main building as religious in nature (e.g. a church or chapel) be confirmed? This will be mainly reliant on wider research, both documentary and into similar structures, as well as more focused dating evidence and analysis of finds distribution.
- Interpretation of the earlier building as a church is confirmed by the evidence.
- 3.7. **RRA 3:** What is the date and function of the circular building which post-dates the Late Anglo-Saxon church? Could it relate to a change in ownership/use of the site? Could further targeted geophysical survey work define its extent?
- The second structure is probably 12th-13th century in date. There is insufficient existing evidence to define its likely extent.
- 3.8. **RRA 4:** The presence of exceptionally rare Late Anglo-Saxon tiles and associated decorative plaster is highly significant, and worthy of further research in its own right. Furthermore, their very localised distribution indicating a primary association with a Saxo-Norman church may provide important information about their use beyond high-status monastic sites. Specialist research into the tiles themselves and known parallels is required.

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- The report contains a detailed study of the tiles, their fabric, use and significance.
- 3.9. **RRA 5:** The majority of the window glass, glazed tiles and decorative plaster/mortar was recovered from a well-sealed deposit of demolition material within building 0107 (Structure 1). What is the association between the building and the finds?
- There is good evidence that the window glass, tiles and decorative plaster belong to the Church (Structure 1), although not everything is necessarily original to its construction.
- 3.10. **RRA 6:** If its role can be defined, what implications does the main structure have for Court Knoll and the wider area? This will need to refer back to the documentary research.
- The discussion addresses this in detail.
- 3.11. **RRA 7:** Can the sequence of site development be closely dated? Does demolition relate to other activity on the site and can this be characterised? Further analysis of the stratigraphic sequence, finds (particularly quantities and condition of the material) will be necessary to answer this using a variety of available dating techniques.
- The radiocarbon dating undertaken has produced dates from the 9th-10th centuries until the 12th-13th centuries that has informed interpretation of the site sequence.
- 3.12. **RRA 8:** The ceramic spotdates appear to show a gap in activity between the early/high medieval (12th- early 14th centuries) and late medieval periods (15th-16th centuries). Is this suggestive of a lack of occupation or of low impact activity? Can any change of use or hiatus in activity be related to specific documented events such as a change of ownership? This will be addressed somewhat in the documentary research, but also through analysis of the finds assemblage.
- The further analysis supported this observation, and in addition it is clear that there is an absence of ceramic evidence for the period when the (first) Church was in use. This is addressed in the discussion.
- 3.13. **RRA 9:** What evidence is there for specific activities on the site, such as craft or industrial activities and are they likely to be *in-situ* or redeposited? Full analysis of the material and comparison with other assemblages will be required.

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- Full analysis has been undertaken, there is little evidence for such activities taking place on the site.
- 3.14. **RRA 10:** Is the site comparable in any way to any local fortifications or manors, e.g. Clare Castle, Mount Bures motte? Further afield, can we learn anything from fitz Wimarc's other holdings, in particular the castle sites at Rayleigh and Clavering? In what ways does the location and form of Court Knoll reflect the political background of the period either side of the Norman Conquest?
- This is addressed in the discussion.
- 3.15. **RRA 11:** Can the likely source of the Roman building material be narrowed down, and what more can the finds assemblage tell us about the function, form and status of this building? Could a non-intrusive fieldwalking survey of a potential site in Wissington, provide any material link between the sites?
- Suggestions as to the origins of the ragstone are made in the discussion.
- 3.16. **RRA 12:** Could a palaeoenvironmental survey of the monument and its surrounding area assist the interpretation of its landscape context?
- The study has identified probable manipulation of the landscape. Palaeoenvironmental survey has not been undertaken but would undoubtedly be informative.
- 3.17. **RRA 13:** Can any more information from the original 1924 investigations be traced? A paper archive or notes are recorded in Colchester Museum in 1964, does the museum still hold this material? Were the 1924 finds deposited with the museum and if so, can they be located?
- No further trace of this archive was found.
- 3.18. **RRA 14:** Could further documentary work enhance our understanding of the layout and development of Court Knoll, the economy of its inhabitants and relationship with the wider landscape?
- There are documents that have not been studied, but it is likely that there are no surviving documents for the critical period in the site's development.
- 3.19. Outstanding areas for research and new questions are presented in the conclusions of the report.

4. METHODOLOGY

- 4.1. Seven hand excavated trenches totalling 139m² were opened within the enclosed pasture. The excavation areas were set out on OS National Grid co-ordinates using Leica GPS (Fig. 4). The final excavated areas and key features were plotted during and at the end of the excavations.
- 4.2. Locations were agreed with Historic England as part of the SMC S00142079 and were designed not only to test the interpretation of the geophysical survey results but also to address the original research aims listed above (Table 1 and Fig. 4). These included an examination of the survival and quality of preservation of the below ground remains and the impact of historic agricultural activity on the archaeological horizons.
- 4.3. In accordance with the Written Scheme of Investigation (Caruth, 2016), trenches were opened in their numbered sequence, initially with no more than three trenches actively worked upon at any one time. Turf was cut and removed by hand from each trench and stored nearby to be reinstated at the end of the excavation. Subsequent overburden was removed in spits until archaeological levels were reached.
- 4.4. Following hand-cleaning of features and deposits with hoes, shovels and trowels, a variety of excavation techniques was used. The features were excavated and recorded in accordance with standards laid down in Gurney 2003 and to at least the minimum requirements of the WSI.

Trench no.	Orientation	Dimensions	Objective	Ground level
1	N-S	10m x 4m	to investigate the eastern end of the main building, and to reopen the 1924 trench	12.40m aOD at the north end and 12.78m aOD at the south end
2	SSE-NNW	14m x 1.5m	to investigate the southern cell of the main apsidal ended building, examine the wall construction, the area outside the building and a linear feature on the geophysical survey	c.12.60m aOD to the south and c.12.85m aOD to the north
3	SE-NW	7m x 2m	to examine an area of contrasting geophysical results tentatively interpreted as indicative of an internal enclosure	11.8m aOD
4	SE-NW	'L-shaped' 15m x 3m and 4m x 1.5m – adjusted in the field to 15m x 1.5m	to investigate a possible hall located to the south-west of the main complex, to investigate its possible hearth, to examine another apparent structure to	c.12.50m aOD at the north end and c.12.25m aOD at the south end

Trench no.	Orientation	Dimensions	Objective	Ground level
			the north of it and a possible internal moat.	
5	N-S	5m x 2m	to investigate an area of anomalies in the north-centre of the enclosure	c.12.20m aOD
6	NW-SE	7m x 1.5m	to examine the junction between the apse of the possible Church and another less well defined and probably not contemporary building	c.12.35 aOD to the NW and c.12.60 aOD to the SE
7	ENE-WSW	5m x 1.5m	to investigate the evidence for a further building to the north-east, to establish its construction method and current condition.	12.25m aOD to 12.30m aOD

Table 1. Trench details.

- 4.5. Archaeological contexts were allocated unique context numbers and written descriptions made on *pro-forma* context sheets, within a continuous sequence under the Historic Environment Record (HER) code NYW 006.
- 4.6. All features were planned at a scale of 1:20, with more detailed plans and sections drawn at 1:10, as appropriate.
- 4.7. The photographic record consisted of high-resolution digital images which were taken of the trenches, their soil profiles and excavated features,
- 4.8. Metal detecting was routinely undertaken on all exposed trench surfaces and upcast spoil. This was carried out by a number of experienced volunteers.
- 4.9. All finds were initially retained but masonry was examined on site and only a sample retained for further examination. Roman tile was processed and recorded off-site but only a sample was retained in the archive.
- 4.10. Selected deposits were sampled and assessed for their palaeoenvironmental potential.
- 4.11. Much of the initial post-excavation work was carried out by volunteers. Finds were washed and dried on site and subsequently quantified and bagged in a nearby barn when the fieldwork was over, before passing the assemblage and records to various specialists. The vast quantities of ceramic building material (CBM) and other building material collected were sorted and quantified, with interesting and informative examples subsequently washed and retained but the bulk of this material was returned to the landowner.

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- 4.12. Environmental samples were processed by volunteers at SACIC facilities in Needham Market and context information was input onto an Excel spreadsheet by Rosemary Knox.
- 4.13. Project volunteers Penny Richards and Sybil Wade carried out finds illustration and research the geographical, topographical and historic context of the site respectively.
- 4.14. The results from each trench are summarised in Section 5 below, with the WSI specification and aims for each trench included in italics.
- 4.15. The archive for the fieldwork is currently located at the Needham Market offices of Cotswold Archaeology, to be finally deposited with English Heritage upon approval of the excavation report.
- 4.16. A summary of information from this project, as set out in Appendix H, will be entered onto the OASIS online database of archaeological projects in Britain.

5. RESULTS

- 5.1. This section provides an overview of the excavation results. Detailed summaries of the recorded contexts are given in Appendix A. Details of the artefactual material recovered from the site are given in Section 6 and Appendix B. Details of the environmental samples (palaeoenvironmental evidence) are given in Section 7 and Appendix C. Details of the relative heights of the principal deposits and features expressed as metres Above Ordnance Datum (m AOD) are given in Appendix D.

Summary of site sequence

- 5.2. The excavations uncovered features and deposits dating from the Late Saxon to modern periods, and where possible, for the purposes of this assessment, these have been allocated to one of six phases based on a combination of finds dating, stratigraphic and spatial relationships and physical similarity (Table 2). The main periods of occupation defined on the site occurred between the Late Saxon (probably from the 10th century, but possibly earlier) and the high medieval period (up to the late 14th century).
- 5.3. Dating and phasing is determined by a combination of finds information, spatial or physical relationships, physical similarity and five radiocarbon dates.
- 5.4. The site sequence is tabulated below:

Period	Phase	Trenches	Description	Dating
Late Saxon or earlier, pre-dating the first stone building	1	1,2,4, 6, and 7	Includes the construction of the enclosure, relatively sterile soil layers underlying the first surviving phase of building which may be contemporary with the construction of the enclosure and preparation of the land for building. Also, radiocarbon dates on two oak charcoal samples which suggest the possibility of an earlier wooden structure on the site. Does not include Roman material which is believed to have all been imported. May include construction of the internal moat	Radiocarbon dates, metal finds
Early Medieval, 11th to 12th centuries	2	1, 2, 4, 5, 6 and 7	Includes construction of the first stone building and the inhumation burial, includes use of internal moat, its construction date may be earlier. Material apparently banked up against the base of the building walls. Subsoil layer in T5.	Radiocarbon dates, polychrome relief tiles, possibly the window glass, metal finds
Medieval, 12th-13th century	3a	1,2,4,6 and 7	3a, Destruction by fire of the first stone building. 3b, Salvaging of building material, spread of demolition debris. Possible excavation of large pit to the north of the first building. 1163 lands of Henry of Essex forfeited.	Radiocarbon dates, stratigraphic sequence
Medieval, 13th-14th century	4	1,2,4,6 and 7	Construction of second building. Change of use to manorial site Occupation by the De Burgh family.	Pottery finds, stratigraphic sequence
Medieval, 14/15th century	5	1,2, 4 and 6	Destruction/dereliction of some buildings, possibly the ovens relate to the start of this phase, site falls into partial abandonment. 1336, site passed to the Scrope family, absentee landlords	Pottery finds, stratigraphic sequence
Late-medieval to post-medieval, 15th-16th centuries	6	1,2,4 and 6	Agricultural use, pasture, possible farm structures	Ceramic finds, stratigraphic sequence, metal finds
Post-medieval, 16th-18th centuries	7	1,2,3 and 4	Pasture, all structures gone	Documentary evidence
Early 20th century	8	1	Excavation backfill,	Documentary evidence
Modern	9	1,2,3,4,5,6 and 7	Plough damage	

Table 2. Summary of phasing.

5.5. It is notable that the first two phases of activity from possibly as early as the 9th century to the early 12th century are accompanied by a very low level of artefactual evidence, with only some metal finds, the few highly diagnostic polychrome relief tiles and radiocarbon dates defining them.

Site stratigraphy and site formation processes

Vertical stratigraphy and stratigraphic integrity

5.6. Archaeological levels were reached below topsoil and subsoil layers which ranged from 0.22m thick to 0.4m thick, with the shallowest deposits located on the low mound in the north-east corner of the site, within Trench 1.

5.7. The site is no longer under cultivation, but deposits are likely to have been impacted by agricultural activity in the past, with the tops of standing walls as revealed in Trenches 1, 4 and 6 (0107, 0108, 0074 and 0191 respectively) particularly vulnerable, at 0.3m below current ground level. Suggestions of plough damage were visible in layers immediately below the topsoil in Trench 6, but archaeological horizons on the higher ground, such as Trench 1 seemed to have suffered little

between 1924 and 2016. However, descriptions of the site from the 16th century as pasture (Breen 2001) suggest that the period of arable cultivation has been limited to the middle part of the 20th century.

- 5.8. Deposits of demolition material across the site have provided a protective buffer, ensuring the survival of well-sealed features such as floor surfaces in Trenches 1 and 2 and the possible inner moat feature in Trench 4.
- 5.9. Vertical stratigraphy is evidenced in archaeological layers below demolition deposits, particularly in the eastern part of the site where ground levels appear to have been built up, thus the natural horizon is well preserved at depths of c. 1.5m in places.
- 5.10. Previous investigations in the area of Trench 1 have masked/removed evidence of the relationships between walls and adjacent deposits.
- 5.11. Most finds were redeposited, some more than once, with only some assemblages of burnt material recovered from over the floor in Trench 1 *in situ* where they fell.

Stratigraphic relationships between and within features

- 5.12. Relatively few cut features were identified within the excavated areas, and of those, few related stratigraphically to each other. The majority of features were structures or layers.

Descriptions by Trench

Trench 1 (Figs 6-11)

Summary

- 5.13. Excavation of Trench 1 identified the area of the 1924 excavations and revealed two phases of substantial structural remains indicating two different successive buildings (Structure 1 and Structure 2). Deposits that pre-dated and post-dated both structures were recorded, as well as the 1924 backfill.

Trench description (Fig. 6)

- 5.14. Topsoil (former ploughsoil, 0002 and 0004) was 0.26m deep and on its removal a mixture of variable mortar-rich deposits (0046, 0047 and 0053) was exposed.
- 5.15. No features could be identified within these, but their removal revealed the tops of the walls of the two structures, with layers of rubble deposits either side of them (e.g. 0034, Fig. 8, Section GG. The level of the tops of the walls varied as they had

been damaged and robbed, but the highest surviving point of Structure 2 was c. 12.28m aOD (a minimum of 0.3m below the current ground level) and that of Structure 1, 12.10m aOD.

- 5.16. Sections showed that the 1924 excavations (Phase 8) had removed most of the original deposits in and around the structures (Figs 6 and 9) but undisturbed deposits were recorded, particularly internally to the buildings. It appears that the excavation trenches had been cut around most of the external faces of both walls.
- 5.17. **Structure 1 (0107, Phase 2)**, represented the remains of a masonry building orientated approximately east – west. This is identified in the magnetometry and GPR surveys. It measured 6.6m north-south (external measurements, 4.7m internal) with up to 2.4m length surviving of the east–west wall returns, both of these latter were truncated at the west end. The wall thickness varied between 0.8m and 0.9m.
- 5.18. The walls (0060) were built of a flint and mortar core faced with ragstone blocks (mostly between 100mm and 200mm, square and rectangular) and thick flat Roman tile (c. 60mm, see CBM report below). The latter were incorporated as regular courses within the construction as well as used to form corners and were bonded with a yellow sandy mortar with some chalk (Fig. 7, section CC, Fig. 9.1 and 2).
- 5.19. The base of the walls was found at c.11.60m aOD. Foundations appeared limited, with the basal two courses of stone stepped out. The walls appeared to stand on a dark orange silty-sand (0115, 0134, 0159, 0167, **Layer 1**, attributed to Phase 1 in the site sequence). The walls were built into the top of the deposit and where it could be measured it was between 0.4m and 0.6m deep but there was no evidence for cut footing trenches beneath the masonry (Fig. 7, section CC, Fig 8, Section FF).
- 5.20. Patches of applied mortar adhering to the wall faces suggest that they were originally externally rendered and internally plastered. This was in a relatively fine sandy matrix, designed as a surface finish (see Mortar report below) with some evidence of limewash on the internal surfaces. There was sooting and some scorching apparent.
- 5.21. A layer of mortar (0215) adhered to the external face at base of wall 0060 and spread away from it as a thin, solid layer sealing layer 0114. This material could represent mortar spilled during the construction of 0107 and trodden into the surrounding area, suggesting a likely ground level at the time of its construction of

11.60m aOD, the same as the wall footings and further indicating that they were built onto flat surface rather than into a trench.

5.22. Internally, a rectangular stone structure (0162) was located just north of centre along the eastern end wall (Fig. 6, Fig. 10.1 and 2). This measured 1.26m x 0.56m and survived up to 0.34m high and was similarly constructed of Kentish ragstone with courses of reused tiles and a stepped base.

5.23. The two structures were abutting suggesting that 0162 was a secondary construction, however the exposed faces of 0162 were finished with a plaster that continued over the internal faces of the north-eastern corner of 0107 suggesting a sequence of construction but contemporaneous use. The plaster face has a reddish-pink hue that suggests exposure to heat.

5.24. The interior of Structure 1 south of 0162 was filled with loose rubble and mortar, backfill from the 1924 excavations (0207), removal of which exposed the standing walls shown in the surviving photographs from that earlier excavation. At the base of the walls, a rammed chalk floor (0104) was present, at a level of 11.70m aOD. Some reddening of the mortar at the base of the walls extending into the chalk floor suggests burning. Where the floor had been cut through by the later building it appeared to have been laid on a sub-base of large loose stones (Fig. 9.4).

5.25. Blackened and reddened, heat-altered deposits comprising two layers of loose mortar and plaster fragments mixed with frequent charcoal (0131 and 0165, Phase 3) were observed above the surface of floor 0104 (Fig. 10.1). Numerous sherds of window glass (identified as potash glass, see report below) were recovered from this, some of which appeared warped through heat-damage, as well as charcoal pieces, fragments of glazed polychrome relief tiles and decorative moulded plaster and two small fragments of medieval pottery. All these have subsequently been identified as decorative elements of Structure 1. These deposits appeared undisturbed from the time of their deposition.

5.26. Three radiocarbon dates from oak charcoal pieces (sapwood or heartwood-sapwood interface), provided calibrated dates between the late 8th and late 10th century:

- SUERC-94185 (GU55336): 1172 ± 24 calibrated at 95.4%, 772 (87.2%) 900calAD, 922 (8.2%) 948calAD Context 0131

- GU56329: 1196 ± 24 calibrated at 95.4%, 732 (0.5%) 735calAD, 769 (94.9%) 891calAD
- SUERC-100702 (GU58889): 1140 ± 25 calibrated at 95.4%, 774 (4.1%) 786calAD, 831 (4.7%) 851calAD, 875 (86.6%) 991calAD. Context 0131

A further date on a burnt holly twig (SUERC-100701, (GU58888), 896 ± 25) provided a calibrated date at 95.4% of 1045 (26.7%) 1085calAD, 1093 (2.5%) 1105calAD, 1121 (66.3%) 1220calAD. Context 0096

5.27. Structure 2 (0108, Phase 4) consisted of a curving wall (0059) partially exposed in the eastern side of the trench (Fig. 6). Both of the east–west walls of Structure 1 had been cut away to allow for its construction, and projection of the arc of the wall would suggest a diameter of at least 5.2m. It was not possible to confirm whether this was a circular tower or semi-circular apse from the evidence contained in the excavated area. The only evidence is provided in the 1924 excavation drawings (Appendix F) which seem to imply that sufficient was seen of the wall to indicate the curve coming back round to more than a semi-circle.

5.28. The wall was c.1.3m thick constructed largely of ragstone, mortared together with flints, septaria (a local mudstone) and occasional tiles. It was faced with ragstone blocks and occasional courses of tile but featured less prominently in its construction than in Structure 1 (perhaps because it was circular rather than requiring squared corners). Similarity of the material suggests that it was constructed from masonry salvaged from Structure 1. Mortar covered some of the block faces suggesting that this may also have had an external render (Figure 10.5).

5.29. The top of the wall was 0.3m below the current ground level and (where exposed) it could be seen (Fig. 7, Section AA, Fig. 10.5) to have had a double stepped foundation the top of which was at 11.99m aOD continued to a depth of c.0.95m from the wall top (c.11.65m aOD), under which was the same orange-brown stony sand seen across the trench (0159, Layer 1). It appeared to be slightly stonier here, so perhaps may have been a part of the wall footing, but there was no sign of a cut for a trench (although the 1924 excavation had removed some of the potential for such evidence to be observed).

5.30. Only a small part of the structure's internal area was available to excavate, but it contained layers of mortar-rich material as well as mixed deposits likely to have been the backfill of Major Dick's investigations (0147, 0152). Incorporated into this fill was material (0152 and 0153) similar to deposits 0131 and 0165 recovered from

within building 0107, and a small fragment of polychrome glazed tile (SF (small find) 1046) was recovered (Fig.7, section AA). Small pieces of glass were also recovered from an environmental sample taken from layer 0153 under 0152. It is possible that these fills, 0152 and 0153, incorporated material removed from the interior of 0107 during the 1924 excavations.

5.31. Below these layers, at a depth of 1.04m below the current ground surface, a rammed chalk floor was observed (Fig. 10.3) which was similar in appearance to and occurred at approximately the same level (11.67m aOD) as that to the east and is assumed to be a continuation of the same surface.

5.32. Whilst the walls of 0107 were cut away in order to build 0108, it did not damage the rectangular structure 0162, leaving a gap of just 0.1m between the two. This may simply be coincidental but that it was deliberate placement to respect 0162 cannot be discounted.

Outside the Buildings

5.33. A series of five 1m x 1m test pits (0016, 0018, 0020, 0022 and 0024) were excavated along the eastern edge of Trench 1 to investigate the deposits outside the buildings and two 1.1m wide trenches (0012 and 0013) were opened along the western edge, in the north-west and south-east corners respectively, in order to characterise the deposits and attempt to understand the relationships with the walls.(Fig. 6).

5.34. The five test pits contained broadly the same range of deposits, consisting mainly of a coarse orange redeposited sand with regular thin layers of mortar rich material to the full depth of each pit (up to 1.2m). The steep east-west aligned cut of a pit or linear feature was recorded in Test Pit 18 and the fills of this (0027 and 0041) seem to correspond to those in Test Pit 16 (0032, 0039). Possible natural was suggested in 0016 at 11.40m aOD but elsewhere there was still made-up ground below this depth, so it is unclear whether this was actually the natural geology.

5.35. A section (Fig. 8, Section GG) excavated outside the northern edge of Structure 1 shows a steep cut (0212) close to the north wall with natural gravelly sand at its southern edge at c.11.40m aOD and cutting the basal Layer 1 that lay under the walls. This cut broadly aligns with that seen in Test Pit 0018 and in Sondage 0012 against the west face of the Trench, suggested a large cut feature (0209) on the north side of Structure 1.

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- 5.36. A sequence of deposition is demonstrated by tip lines in the pit fills (Fig. 8, Section GG) sealed by a deep upper fill of clean orange-brown sand with few inclusions (0032, 0039, 0086, 0120). The upper level of fill 0120 was above that of the top of wall 0059, suggesting that it could have covered it. Under 0120, one of the upper mortar fills could be seen to extend over layer 0159 and up to wall 0060 (Fig. 8, Section GG). Where the pit ran alongside Structure 1 the fills below 0120 were distinct layers of dark brown material (0128), mortar deposits (0129) and dark sand-silt containing large lumps of tile (0135). The contact between the layers is sharp, suggesting a stabilised slope or distinct deliberate deposit, buried by redeposited sandy material. The presence of mortar and building waste in the lower layers may either imply the sloped ground level at a time of either building or demolition, or possibly that the material was deliberately deposited within the pit. Finds were sparse but included Roman CBM; the pottery suggests an 11th-13th century date.
- 5.37. Two linear slots (0012, 0013) were excavated against the west edge of the trench either side of Structure 2.
- 5.38. Sondage 0012, in addition to deposits associated with pit 0151 (see above), was excavated through backfill likely to be associated with the 1924 excavation (Fig. 7, Section AA, Fig. 10) visible as a cut directly below the topsoil which extended c.1m north of the face of the wall and reached 0.8m deep (0061). It had a generally flat base and a vertical northern edge, whilst its southern edge was formed by the exposed wall. Its fills were mixed, loamy layers with modern finds. From this, it was possible to follow the cut to the north where it could be seen as a shallow, narrow cut around the external edges of Structure 1 (Fig. 9.6).
- 5.39. Sondage 0013, on the south side was excavated to a depth of 0.55m through loose, pale grey mortar layers of demolition rubble incorporating frequent Roman CBM. Whilst other finds were infrequent, two small sherds of 12th-14th century medieval coarseware were recovered. Several layers subsequently excavated below this sondage are likely to be also associated with demolition.
- 5.40. In most cases the excavations of 1924 could be seen cutting these deposits outside the wall lines so definitive relationships could not be established and the stratigraphic sequence has been interrupted.

Summary interpretation of the structures

- 5.41. The earlier Structure 1, consisted of the rectangular east end of a building made of re-used Roman material. The recovery of fragments of rare early 11th century glazed relief tiles and evidence of glazed windows indicates that this is likely to have been an ecclesiastical building. The small construction in roughly the centre of the east wall, built unconnected to the walls but probably at the same time may be interpreted as an altar base. If the 'altar' were to be a later addition or repair, it was built against a bare chancel wall, with both features simultaneously finished with plaster.
- 5.42. The floor comprised a rammed chalk surface. No contemporary floor tiles were recovered so it is assumed that this was the finished surface and not a sub-base for a tiled floor. It was laid on a sub-base of flint, septaria and ragstone.
- 5.43. The second structure was cut through Structure 1 and represents at least a curving wall, probably (based on the 1924 evidence) a circular building but possibly a semi-circular apse. It was built from about the same level as the earlier building and the chalk floor surface of Structure 1 survived within it and may have been re-used; no subsequent floor was identified in the limited area seen. Evidence from comparison of the height of the stepped footing of each structure, mortar spreads and *in-situ* destruction deposits, however suggests that ground level during its construction, may have been raised above that of the wall remnants of Structure 1, possibly to cover them.
- 5.44. The walls of both structures appear to have been built onto made-up ground, and additional material may have been deliberately built up against the buildings, although the presence of the cut for the 1924 excavation trench around all the walls makes it impossible to be conclusive about this relationship.
- 5.45. A large pit (or possibly linear feature) cuts the early deposits immediately north of the buildings (0209, Fig. 8, see section GG). This was only sampled, but it appears to have lower fills of building rubble, with at least one deposit of mortar tipping in from outside the pit, and an upper fill of clean sand, possibly suggesting that the feature was filled with demolition debris and subsequently infilled in a single event. This later infilling appears to align as if it may have extended over the top of the demolished walls of Structure 1, and may be part of the same raising of levels indicated by the evidence recorded above.

Phased sequence

- 5.46. Phase 1, Late Saxon, 9th-10th centuries: Layer 1 (0212:0115, 0134, 0159, 0167), orange-brown silty sand underlying Structures 1 and 2. The radiocarbon dates from the charcoal from Structure 1, may suggest a former building on the site of this Phase.
- 5.47. Phase 2, Early Medieval, 11th-12th centuries: Structure 1 (0107: 0060, 0104, 0166, 0196, 0204), including altar base 0162 and floor 0104. Layers 2 (0150: 0114, 0119, 0190) and Layer 3 (0030, 0035, 0036, 0040, 0057) similar to Layer 1, gravelly and relatively clean of debris but possibly built up against the base of the walls.
- 5.48. Phase 3, Medieval 12th-13th centuries: Destruction by fire of Structure 1, layers 0131 and 0165 containing *in situ* burnt debris. Possible excavation of pit 0209 on the north side of Structure 1 and which appears to contain some burnt debris and is perhaps part of post-fire site clearance (fills: 0041, 0086, 0087, 0102, 0118, 0128, 0129, 0135).
- 5.49. Phase 4, Medieval 13th-14th centuries: Construction of Structure 2 (0108, 0059). and the upper (relatively clean) fills of pit 0209 (0032, 0039, 0120). Some mortar deposits that spread across Layer 2 and appear to be spillage from construction (0099, 0130), fill 0100 between the two structures.
- 5.50. Phases 5-7, Late medieval and Post-medieval. Demolition debris spread across the site in a series of layers, probably from both buildings and forming and interface with the plough soil. There is no sign of domestic activity contemporary with these phases.
- Phase 5: 0013, 0051, 0103, 0141, 0142, 0143, 0144, 0145
 - Phase 6: 0017, 0027
 - Phase 7+: 0019, 0021, 0023, 0025, 0026, 0046
- 5.51. Phase 8, the backfill from the 1924 excavations, seen cutting the demolition and other deposits and following the wall lines.
- Cuts: 0061, 0089, 0090
 - Fills: 0058, 0062, 0071, 0080, 0084, 0147, 0152, 0153
- 5.52. Phase 9, mid 20th century ploughsoil (0002, 0004, 0033, 0034, 0052, 0082).

Trench 2 (Figs 12-14)

Summary

- 5.53. Trench 2 revealed a post-medieval ditch, worked soils, demolition deposits and remnants of *in situ* structure associated with Structure 1, as well as bonded fallen material from that building.

Trench description

- 5.54. Following removal of the topsoil (0003, 0005), a ditch (0007) aligned approximately east–west was visible c.4.0m from the southern end of the trench (Fig. 12).
- 5.55. Ditch 0007 measured 1.4m wide with a shallow lip on the north side but otherwise had generally steep sides creating a rounded v-shaped profile, 0.5m deep (Fig. 13, Section BB). Its primary fill, 0010, was a thin layer of mid yellowy brown silty gravelly sand with frequent charcoal flecks, which was sealed by 0008, a mid to dark greyish brown friable silty, sandy loam with occasional lumps of mortar and post-medieval CBM. A moderate assemblage of pottery of late medieval and post-medieval forms was recovered suggesting a 16th century date (Phase 6) for the filling of the ditch.
- 5.56. The southern end of the trench was made up of various relatively sterile and homogenous layers of sand and gravel with fine demolition material (0029, 0043, 0049, 0055, 0070, 0079, 0154), all cut by ditch 0007. This was sampled to a depth of 1.2m, at which point, the base of the trench was augured a further 0.53m before hitting a layer of coarse sand which may have been natural (at c.10.90m aOD).
- 5.57. The northern 6m of the trench contained a sequence of layers rich in mortar, Roman CBM and likely building stone (0044, 0050). There were cuts into the top of these layers (0065, 0045), all filled with similar material. The pottery assemblage was dominated by Early Medieval wares but with occasional sherds of a later date.
- 5.58. At the base of 0044, at a depth of 0.85m (c.12m aOD). a trench (0063) approximately 1.5m wide and steep-sided, with the suggestion of the remnants of a solid masonry footing (0149) surviving in its base (at c. 11.68m aOD) (Figs 12-14). It consisted mainly of a solid layer of pale yellowish brown with regular chalk, c. 0.8m wide and similar to that seen at base of wall 0060 where it had been truncated. Its location corresponds to the east – west wall shown by the geophysics and is interpreted as a robber trench for and vestiges of the masonry of that wall.

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- 5.59. Immediately to the north of 0063, a rammed chalk floor (0112) was exposed (Fig. 14.4), with a thin but dense charcoal deposit (0096) and other burnt debris (0111, 0095 and 0064) directly over it. Floor 0112 was found at 11.72m aOD, broadly comparable to the similar floor surface, 0104 seen in Trench 1.
- 5.60. These results tie in with the geophysical survey and it is assumed that this relates to the southern cell of the structure as shown in the survey. Similarity of the floor and wall fabric suggest that this belongs to the earlier Structure 1 (Phase 2).
- 5.61. Mortar-bonded tiles forming an arch (0127) were found lying roughly horizontally within 0.8m outside (to the south of) the robbed out wall 0149 (Fig. 14.3 and 4). These were found under c.0.15m depth of fine rubble and clean yellow mortar (0154, under 0044) and appear to represent part of a window (or perhaps a door) arch. There was some evidence of mortar/plaster facing adhering to the tiles which may suggest that they were being used to create the structural shape and strength that was subsequently finished with a plastered face.
- 5.62. This was the only substantial block of collapsed bonded masonry from the upper part of the walls identified in any of the trenches and it seems to have been an element of the southern wall of Structure 1 that collapsed or was pulled down but escaped being salvaged for re-use. Its survival intact when so much of the site appears to have been systematically robbed may be because tiles were being rejected in favour of the flint and ragstone (certainly there were fewer tiles in the fabric of Structure 2). However, the mortar covering them may be evidence that in the course of separating out the good building stone and cleaning it down, this fragment became obscured and was overlooked.
- 5.63. Soil layers 0088 and 0125 lay at the base of the trench. Both were a fine orange-brown sand similar to 0159 etc. seen in Trench 1, but were found at c. 11.9m aOD a higher level than the base of the wall footing.

Summary interpretation of the structural remains

- 5.64. The earliest features identified represent the robbed out wall of the southern cell of Structure 1 and a continuation of the associated floor identified in Trench 1. Bonded masonry found outside the wall line represents a fallen window or door arch. Further evidence for the impact of fire, and its spread east of the chancel is provided by the burnt layers overlying the floor.

5.65. It is unclear what the later cuts (0065 and 0045) into the top of the demolition debris represent but similar features were observed in Trench 6. 0065 cut down almost onto the top of the fallen arch material (0127) and may have been almost contemporary re-excavation for masonry recovery (Phase 5) or later activity once the use was purely agricultural and contemporary with ditch 0007 (Phases 6-7). Immediately above 0127 the debris could be seen to be tipping away from it and the concentration reducing into the deposits in the south end of the trench which contained a more degraded and lower concentration of demolition debris. This seems to suggest that the main demolition material was retained quite closely to the structure.

5.66. Layers 0088 and 0125 seem to represent a similar subsoil over the natural as seen in Trench 1 and onto which the building was constructed.

Phasing summary

5.67. Phase 1, Late Saxon or earlier. Soil layer (0088) comparable to Layer 1 in Trench 1.

5.68. Phase 2, Early Medieval 10th-12th centuries. Wall remnant 0149 and floor 0112 from Structure 1. Soil layer 0049, probably contemporary with Layers 2 or 3 in Trench 1.

5.69. Phase 3, Medieval 12th-13th centuries. This clearly represents debris associated with the burning of the building and its subsequent demolition. It is unclear how long after the burning the dismantling of this part of the building occurred. Unlike Trench 1, it would not have been required in order to build Structure 2 and could therefore have been later. These contexts have therefore been split into 3a for the burning, and 3b for the dismantling. Contexts associated with the fire include 0064, 0095, 0096 and 0111. These all contain burnt material. Contexts associated with the subsequent destruction include the bonded masonry 0127 and the robber cut 0063, and fills associated with it (0081 and 0121).

5.70. Phases 4 and 5, Medieval 13th- 15th centuries. Layers that seal the demolition debris, 0054, 0154, 0161 (Phase 4) and 0015, 0029, 0055, 0070, 0079 (Phase 5).

5.71. Phases 5-6 and 6, Medieval, early Post-medieval (14th - 16th centuries). Further demolition material being worked into the soil (0014, 0044, 0045, 0050, 0053), ditch 0007 (fills 0008 and 010) and possible pit 0065, associated with the agricultural use of the site.

5.72. Phase 9, ploughsoil (0003, 0005 and 0011)

Trench 3 (Figs 14-16)

Trench description

5.73. This trench was located in the western part of the enclosure, over a well-defined approximately north – south orientated area of high-low resistivity on the geophysical results (Fig. 4).

5.74. The removal of topsoil (0006, Phase 9) at an average depth of 0.36m revealed a U-shaped ditch, 0037 (undated) at the end of the trench. This was aligned north – south and filled by 0038, a dense gravel held in a mid-grey brown sandy silt from which no finds were recovered (Fig. 16). It appeared to be cut into a yellow-brown gravelly sand that was interpreted as natural and recorded at c.11.50m aOD. Ditch 0037 is likely to be a late feature, not much earlier than the ploughsoil as it was cut from immediately below it.

5.75. Immediately to the west of 0037, the ground fell away steeply (0067). The section showed two layers filling it: 0009, a mid-grey-brown sandy silt, slightly loamy subsoil, over 0068, a compact pale-mid yellow brown clay silt with some sand content which was fairly homogenous, with noticeably few stones and no finds. The sterile and highly consolidated nature of this fill, along with the lack of cultural material, suggests that it was a natural deposit filling a geological feature. These layers were hand-sampled to a depth of 0.82m below ground level and then augured a further 0.64m at which point, a compact, coarse sand was reached at c.10.30m aOD. This was assumed to be natural and evidenced a steep natural drop across the length of the trench consistent with the results of the geophysical survey.

5.76. Both upper fills 0006 and 0009 contained a mixed assemblage of finds including modern and post-medieval pottery as well as abraded medieval sherds and one Roman pottery sherd.

Trench 4 (Figs 17-20)

Summary

5.77. In conjunction with Historic England a decision was made to reduce the size of this trench from that planned, in order to ensure there was time to sample all seven of the planned trenches. Therefore, the width of the trench was halved and the shorter arm removed so that the final excavated area measured 15m x 1.5m; this no longer allowed space for a stepped section to excavate below 1.2m.

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- 5.78. Excavation identified the cut of the moat indicated by the geophysical survey, a probable medieval oven and two post-medieval wall footings with associated CBM.

Trench description

- 5.79. Topsoil (0056, Phase 9) was up to c.0.35m deep and its removal revealed two wall footings (Fig. 17).
- 5.80. Footing 0083 was a narrow linear feature, 0.52m wide by up to 0.20m deep and (Figs 18 and 19, Section KK) filled with densely packed lumps of chalk or chalky mortar with traces of tile and held in a mid-greyish brown sandy silt (0077). A small number of 14th-16th century finds were present in this fill; however, if these are contemporary rather than residual finds, the latter part of this date range would seem more likely as the feature was cut into a brown loam 0078 that contained late medieval – post-medieval tile. This is assumed to be the footing for a late medieval or post-medieval wall associated with later use of the site, attributed to Phase 6-7; probably an agricultural structure as domestic occupation is believed to have been abandoned by the 15th century (Breen 2001).
- 5.81. Towards the northern end of the trench, also immediately below the topsoil was a west –east aligned wall (0074, 0.52m wide) which survived as two courses of frogless soft-red bricks (c.12cm wide, 6cm thick) bonded with a pale brown chalky lime mortar, with a maximum width of 0.4m (Figs 17, 18, Section KK and 20). Much of this feature was left intact but one brick taken for examination has been identified as of late medieval/early post-medieval date. It is not known whether the bricks were contemporary with the structure they were used to build or they represent older, re-used examples so the feature is phased as belonging to either Phase 6 or Phase 7. This wall appears to relate to a possible structural feature shown on the geophysical survey interpretation and originally targeted as the possible site of a manorial hall.
- 5.82. To the north of 0074 and bounded by it was a spread of densely packed tile fragments (0073) directly below the topsoil in the northern end of the trench, over layer 0109. A representative sample of these tiles was dated as medieval/late medieval in date, whilst pottery from the layer gives a 16th century spot date. The tiles created a fairly level, solid surface which may have functioned as a yard surface or hardstanding, but whilst it is not clear whether the material was derived from former buildings within Court Knoll or if it was imported from elsewhere, the proximity to 0074 suggests an association.

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- 5.83. North of 0083, layers of compact clay sandy silt (0076 and 0124) were removed which contained both Roman and post-medieval CBM, in addition to finds of 15th-16th century date (Fig. 18, Section KK). These are also assigned to Phase 6-7.
- 5.84. The possible hearth suggested by the geophysics was revealed as an area of burning in the southern end of the trench, first visible at 0.48m deep (11.77m aOD) and allocated the context number 0097 (Figs 18 and 19, Section JJ, Fig. 20.2 and 20.3). Excavation of two quadrants of the feature showed that it included at least two distinct burning episodes. The earlier of these consisted of an irregular and amorphous layer or surface, heat-altered red and baked hard (0123), over which was a thin layer of ash and charcoal, itself sealed by compact heat-altered material (0122). No distinct cut or structure was observed to denote a formal limit to this feature, with evidence of burning grading out northwards into layer 0078 c.2.45m from the end of the trench. Whilst surfaces likely to be suitable for archaeomagnetic dating were identified, this was not undertaken during this phase of fieldwork. No *in situ* fired surfaces were fully exposed or removed entirely. There were no datable finds from these contexts but layer 0078, which directly seals the hearth, with some mixing at the interface and is cut by footing 0083 which contained Medieval Coarseware pottery and CBM dated as late Medieval or Post-medieval. The absence of any Early Medieval material in this deposit may suggest that, assuming this was a domestic feature, the hearth was more likely to belong to the medieval (12th-14th century, Phase 4/5) activity than any earlier occupation.
- 5.85. The earliest feature identified in this trench is the very large ditch 0168 identified c.7.5m from the southern end of the trench and which corresponds with the possible internal moat shown on the geophysical survey (Figs 4, 17, 18, Section KK and 20.4. Only the upper profile of the cut was revealed which sloped down towards the north-east gradually at first, becoming steeper after 1m. The ditch cut was visible at c.11.70m aOD.
- 5.86. The upper fills, 0094 and 0109 which represent the very latest slump into the top, appeared to be predominantly made up of friable, mortar-rich material likely to be associated with demolition of either Structure 1 or 2 and included a small assemblage of finds of 12th-13th century date. These layers measured up to 1.6m thick and sealed 0155, a dark brown silty sand, which was moist and slightly humic and was visible as a thin layer mirroring the southern edge of the feature and still

continuing down at the base of the trench at a depth of 1.4m (c.11.10m aOD, Fig. 18 Section KK).

- 5.87. It was not possible to excavate to the full profile or depth of the feature but what was exposed was characteristic of a deep, wide moat-type feature into which demolition material had later accumulated or been deliberately dumped. Upper fill 0109 continued through to the north-east end of the trench, suggesting a total width of over 7m at the top.
- 5.88. Auguring (Fig. 20.4) showed that fill 0155 extended a further 0.33m, below which a mid-brown silty sand with mortar flecks was identified for a further 0.16m, suggesting a total depth from the current ground level of at least 2.89m (c.9.6m aOD). This would put it below the surrounding floodplain and has the potential for the lower fills of this feature to provide conditions capable of preserving organic remains.
- 5.89. The southern edge of 0168 cut 0110, a mid-dark orangey brown gravelly silty sand, of friable-loose compaction which had the appearance of natural undisturbed subsoil but contained a small quantity of shell, animal bone, plaster and sherds of 12th-13th century date. This layer continued to the full depth of the trench, which was 1.1m at this point (c.11.40m aOD) and the natural geology was not reached.

Discussion

- 5.90. The moat represented by 0168 and showing on the geophysical survey appears to encircle the eastern end of the site and the area identified as the 'knoll'. The upper fills contain demolition material which has accumulated within the top of the partially filled feature probably both immediately after demolition and as part of later agricultural activity on the site. Datable material recovered from lower fill 0155 was mostly of Early Medieval date and suggests that it was still open during the domestic occupation contemporary with Structure 2. The cutting of it is assumed to be contemporary with the first activity on the site (Phase 1 or 2).
- 5.91. The oven at the southern end of the trench is probably medieval in date. It may have been located inside a domestic building, but the absence of any Late Saxon or very Early medieval occupation evidence suggests that all the domestic activity belongs to a later period and it is not associated with a Late Saxon hall.

Phasing summary

- 5.92. Phase 2+. Early medieval. The earliest feature identified was moat 0168. It was not bottomed but layers sampled on the lower edge of the moat suggested that this had filled in the 11th-12th centuries and therefore it is suggested that this was cut to accompany Structure 1 and it is therefore attributed to Phase 2.
- 5.93. Phase 3. The fills of 0168 are assumed to have accumulated over many decades with lower fill 0155 attributed to Phase 3. Layer 0110 is also attributed to this phase.
- 5.94. Phases 4-5, medieval 13th-15th century. Fills/layers 0091, 0094 and 0109 are attributed to Phase 4. Oven 0122 represents a domestic function outside the moated enclosure. Dating is limited, but it can be attributed stratigraphically to latter part of the occupation of the site.
- 5.95. Phase 6, Late medieval to post-medieval. Later layers (0072, 0073, 0075, 0076 0124) some which seal the oven and others containing tile fragments. These may be associated with, or slightly earlier than walls 0074 and 0083 which are phased to 6-7. These represent the move from a domestic to an agricultural function.
- 5.96. Phase 9, former ploughsoil 0056.

Trench 5 (Fig. 21)

Trench description

- 5.97. Topsoil 0113 (Phase 9), measuring 0.3m thick, was systematically removed and sieved for finds. A low level of cultural material was recovered but this included a small assemblage (nine sherds) of Early medieval wares, as well as late post-medieval and modern fragments. A 0.1m thick layer of subsoil (0132) lay under 0113 sealing what appears to be an undisturbed natural dark orangey brown silty gravel. Deeper excavation through this material in the north-west corner of the site seemed to confirm that this was the natural gravelly subsoil recorded at c.11.80m aOD. One possible small pit, 0136, was excavated in the south-east corner of the trench but no other features were present (Fig. 21). The anomalies suggested by the geophysical survey are likely to be geological in origin.
- 5.98. Mixed pottery was recovered from the topsoil and one of the four small abraded Roman pottery sherds from the site was recovered from 0132.

Trench 6 (Figs 22-24)

Summary

- 5.99. This trench revealed evidence for the two robbed out walls suggested by the geophysical survey and a slightly later oven (attributed to site Phases 2-5, Fig. 22). The relationship between the walls could only tentatively been identified in the stratigraphic evidence, but this was supported by the stratigraphic and scientific analyses.

Trench Description

- 5.100. Topsoil (0116) and subsoil (0117) were a combined depth of c. 0.35m and produced a mixed date ceramic assemblage including Late and Post- Medieval wares (Phase 9).
- 5.101. The south-eastern 4.5m length of the trench was covered with a series of yellow sandy mortar and chalk deposits recorded under different context numbers (0140, 0146, 0158, 0170 – not all shown on the plan, Fig. 22). The upper surface of these had wide linear indentations initially recorded as gullies (0138, 0139). On conclusion of the investigation of the trench it became clear that this was all a collection of demolition deposits and backfill of robber trenches with the upper surfaces perhaps damaged by ploughing giving the undulating appearance (Fig 23, Section MM). These are all recorded under Phase 4, with perhaps some of the redeposition in Phase 5.
- 5.102. Evidence of burning was visible within and cutting these deposits at the south-eastern end of the trench and minimal excavation identified this as the remains of an oven (0177) consisting of ashy and charcoal rich deposits over a roughly circular spread of heat-altered clay thought to be remnants of the collapsed clay dome (Fig 23, Section MM). This was bright orange and baked almost solid in some places and heavily blackened in others, with a possible stoke hole at its western end. This structure was partially exposed and recorded but left *in situ*, unexcavated. The only datable finds were three small sherds of Early Medieval pottery and fragments of Roman tile recovered from the soils around the structural material. The mix of rubble and fired clay in the upper deposits may suggest that the collapse/demolition of the oven dome led to the mixing of surrounding demolition material from the nearby structure into the void. Stratigraphically this appears to post-date the later wall and therefore likely to belong to either Phase 4 or 5.

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- 5.103. Evidence for the two robbed out walls (0191 and 0205), indicated by the geophysical survey lay under the rubble spreads and the stratigraphy seems to suggest that oven 0177 post-dates the initial robbing of the southern of these (0205) (Fig. 24).
- 5.104. 0191 was a straight, east – west aligned wall, c.0.75m thick, constructed from blocks of stone and flints bonded with a yellow sandy mortar. Although extensively robbed out, enough survived to expose c.0.4m of the walls northern face which was finished with large ragstone blocks (the top of the surviving wall was at c.12.05m aOD) The same yellow sandy mortar with which it was constructed could be seen adhering to the face in places suggesting a rendered finish. A thin, chalky mortar footing (0171) below wall 0191 (at c.11.65m aOD) lay directly over mid brown silty sand deposits which were very similar to those observed below building 0107 in Trench 1, this could have been the same as layer 0185 (see below).
- 5.105. Very little of wall 0205 was left standing within the trench, but a small area of solid flint and stone with occasional Roman tile fragments held in a pale grey chalky mortar survived against the eastern edge of the trench. Beyond this, its chalky mortar footing could be defined. Its full width was not established as the southern edge was assumed to be sealed below layers associated with oven 0177 and floor 0140 which were left *in situ*, however a minimum thickness of 1.1m is suggested.
- 5.106. The northern side of 0205 abutted wall 0191. There was no facing to 0205 at the point where they abutted and the robbing backfill of 0205 seemed to lie over the wall of 0191. It is therefore interpreted that wall 0191 had been removed to the surviving level when wall 0205 was constructed and therefore that 0205 was the later wall but not enough of either was exposed, or survived within the limits of the trench to be completely certain. Whilst observing this feature in the field, there was some suggestion of curvature, but the extent of damage and the limited area exposed made this also uncertain, and when planned, no curvature was obvious.
- 5.107. Analysis of the mortar (see below and Appendix D2) from these two structures suggests that the mortar mix found associated with 0205 is very similar to that for Structure 2, and that for Wall 0191, similar to that of Structure 1.
- 5.108. The north-western end of the trench, beyond the walls (and presumably outside the building) was filled with a series of deposits of mid-brown silty sand with frequent tile and stones. It is unclear what this represented and tip lines in the fills have identified it as a possible ditch but there is no certain evidence for a cut; the fills

were numbered 0133, 0160, 0164, 0186, 0202. Upper fill 0133 may be a separate cut or possibly slump into the top of a deeper feature. Fill 0133, and 0208, beneath it, ran over the top of robbed wall 0191 and the lower fills 0160, 0163 and 0164, orange-brown sands with rubble inclusions, abutted the wall or were cut by the later robbing. Little was seen of the lowest fill 0186 but it is described as being similar to 0160, so probably a further fill of the ill-defined feature. Neither the sections nor the photograph are conclusive (Figs 23 and 24) but it seems possible that there may have been a deep feature similar to that in Trench 1, that was filled with debris perhaps both during and after the demolition of both phases of structure. Deposit 0164 produced the largest Early Medieval pottery assemblage from the site.

5.109. Layer 0185 was a clean brown silty sand that could be seen abutting wall 0191 at the base of the sequence, and may have been the same material as seen under the wall, and similar to the deposits (Layer 1) seen under the walls in Trenches 1 and 2.

5.110. Natural sand and gravel was recorded under the basal fill (0186) at c.11.50m aOD.

Summary interpretation of the Structures

5.111. The combination of evidence seems to suggest that Wall 0191 may have been part of Structure 1. In this case, it would suggest that Structure 1 is represented in plan by the weaker geophysical indication of a building extending to the line of the moat (Fig. 4) and that Wall 0205 is a later feature possibly contemporary with Structure 2. There is no definitive evidence from the archaeology that Wall 0205 is curved, and interpretation of what these two walls really represent is open to discussion. There is no strong evidence of burning within this trench and nothing to support evidence that, if part of Structure 1, this end of it represented by wall 0191 was demolished at the same time as the eastern end. There was no evidence of the chalky floor seen in Trenches 1 and 2.

5.112. There is a suggestion of a feature outside the building, with deep soil deposits. The excavators were inclined to consider this perhaps a bank, but the possibility that it represents a cut feature, perhaps similar to that seen against the north wall in Trench 1, or even the natural topography as in Trench 3 should also be considered.

5.113. The oven 0177 appears to suggest later activity that succeeded both the masonry structures but which was presumably associated with domestic activity of the 13th-15th century, Phase 4-5.

5.114. The upper soil layers have undulations and cuts within them, similar to those observed in Trench 2. These could have been a result of agricultural disturbance, but it was not possible to confirm this.

Phasing summary

5.115. Phase 1, Late Saxon or earlier. Layers 0185 and 0186 (probably the same layer in different parts of the trench) underlay the walls and resembled Layer 1 found in Trench 1. Layers 160 and 0164 (maybe the same layer), are also early, but may be associated with the structures rather than pre-dating them.

5.116. Phase 2, Early medieval 10th-12th centuries. Wall 0191 and a mortar layer 0171 associated with it are attributed to Structure 1.

5.117. Phase 3, Medieval 12th-13th centuries. Layer 0163 and 0202 contain building debris but seem to be earlier than the robbing for wall 0205.

5.118. Phase 4, Medieval 13th-14th centuries. Heavily robbed wall 0205.

5.119. Phase 5, Medieval 14th-15th centuries. All contexts associated with oven 0177 (0157, 0172-0180). This is later than the robbing of wall 0205.

5.120. Phase 5 and later (14th-19th centuries). Demolition deposits covered the upper parts of this trench. Linear impressions in this material were originally recorded as possible ditches and gullies, but all are now interpreted as plough and agricultural disturbance of the upper deposits.

5.121. Phase 9, former ploughsoil 0116 and 0117.

Trench 7 (Figs 25-27)

Summary

5.122. Trench 7 was relatively sterile with homogenous fills, but an inhumation burial was identified c.1.1m below ground level, and retrospectively the possibility of a second is suggested by the soil profile (Fig. 25).

Trench description

5.123. Trench 7 was sealed by a 0.3m thick layer topsoil (0169, Phase 9), at the base of which was a thin layer rich in medieval pottery (0183), but which was otherwise indistinguishable from the topsoil (Fig. 26, Section OO). Sherd links between this and 0169 suggest that they are probably the same deposit.

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- 5.124. Below the topsoil were a series of deposits (0183, 0184, 0187, 0188, 0192) attributed to medieval Phases 3 and 4 on the basis of finds dating. The upper of these, 0184, was only distinguished from 0183 by the inclusion of frequent mortar flecks, and it may in fact represent soil worked at any point up to the abandonment of the site for daily use, probably in the 14th century.
- 5.125. The pottery assemblage from 0183 and 0184 comprised both Early and High medieval wares but typologically is probably of 13th century date. 0184 sealed a layer, approximately 0.2m thick, of loose yellow mortar held in a mid-grey brown silty sand (0188). A single sherd of Early medieval pottery from it can be dated to the 12th-13th century. Roman CBM fragments were also recovered. The rubble content of 0188 was more fragmented and mixed than the dense rubble deposits present directly around the buildings in Trenches 1, 2 and 6. A discreet spread of dense chalk (0192) lay at the base of 0188 and was probably a related deposit. Several patchy deposits (0187, 0189, 0194) of fine rubble, tile, stones etc. filled the irregularities in the top of 0188.
- 5.126. Beneath these, layer 0193, a mid-yellow-brown silty sand, was noticeably less stony than the layers above and no finds were recovered from it. The top of this layer sloped to the east and was recorded between 11.75m and 11.54m.
- 5.127. Exploratory excavation undertaken through 0193 in the southeast corner of the trench revealed part of an articulated human skeleton, 0201, at a depth of 1.1m below the current ground level (c.11.20m aOD). Only parts of both femurs and the right lower leg were exposed but it was clearly orientated approximately west – east and in a supine position. (Fig. 27). Further cleaning of the trench base defined the associated grave cut, visible in plan cutting layer 0193 at 0.9m Below Ground Level (BGL) (c.11.40m aOD) and visible in the short eastern trench. Whilst the remains were left *in situ*, a disturbed metatarsal bone was recovered and sent for radiocarbon dating. It produced a date of 942-1023cal AD (79.3%), or 10th to early 11th century (SUERC-70733 (GU42514, Appendix E)) The burial is attributed to Phase 2 (Late Saxon) and it is assumed that 0193 may be a subsoil or possibly mixed grave fill of a similar date.
- 5.128. It is notable that the profile of upper layer 0188 showed a broadly level horizon in the western c.2m, but then dropped down to the east, reflecting the profile of the layer (0193) below it. This does reflect the natural topography to an extent, but it also corresponds to the location of the grave (Fig.26).

5.129. A vertical sided cut (0213) filled with orange-brown silt 0198 was recorded at the south-west corner of the trench, directly under 0188 (Fig. 26 section OO). This was not investigated beyond the base of the trench but the possibility that it represents another grave cut cannot be ruled out; this has been attributed to Phase 2.

5.130. At the base of the sequence an orange gravel numbered 0197 is interpreted as natural geology seen in the eastern end of the trench at c.11.40m aOD, but dropping away to the west.

Discussion

5.131. There is no structural evidence in this trench despite the readings of the GPR survey. There is at least one grave at depth (and possibly more). It is assumed that this represents the burial ground associated with Structure 1 and therefore more burials should be expected.

5.132. The demolition material is present in a clear band between the lower deposits of grave fill and subsoil/pre-occupation accumulation and topsoil. The density is less that closer to the building, similarly to the south end of T2, there seems to be recurring evidence that the main demolition spread is retained quite close to the building.

Phasing summary

5.133. Phase 1, pre-dating the first stone building. Layer 0193, cut by grave 0199.

5.134. Phase 2, 10th-12th centuries. Grave 0199 and feature 0198, a possible second grave cut.

5.135. Phase 3-4, 12th -14th centuries. Layers of find demolition rubble (0187, 0188, 0192, 0193), possibly associated the demolition of Structure 1 or construction of Structure 2.

5.136. Phase 4-5, 13th-15th centuries. Upper soil layers 0183, 0184, 0189.

5.137. Phase 9, former ploughsoil 0169.

6. THE FINDS

Overview

Richenda Goffin

- 6.1. The artefactual assemblage is chronologically wide-ranging, from the Roman through to the late post-medieval period.
- 6.2. There is no evidence of any finds which pre-date the Roman period. Although there was also no activity of Roman date recorded on site, the enormous quantity of Roman building material which was re-used in the construction of later buildings formed a major feature of the finds assemblage. Fragments of ragstone, septaria, *opus signinum* and Roman brick and tile clearly indicate that at least one substantial Roman building of some quality had been located close enough to provide the source material and that it had been systematically plundered in subsequent periods. There was evidence that it had included a hypocaust system from the presence of a few box flue tile fragments; a small quantity of *tesserae* was also identified. Both these finds types are not as useful as basic bricks and roof tiles in terms of re-use so such small amounts were probably brought onto the site unintentionally. No Roman small finds were identified, and only four small and abraded sherds of Roman pottery were present, presumably also inadvertently brought onto the site with the Roman building material.
- 6.3. The next chronological element of the finds assemblage belongs to the Late Saxon period, but it is not always easy to discern amongst the overall collection of artefacts. It is likely that some items recovered from much later deposits may belong to this period but as they are undiagnostic, they remain unrecognised and undated. Other identifiable small finds were present of Late Saxon date, and a few of these may be even earlier, perhaps dating to the Middle Saxon period. Above all, it is the remains of the building materials and window glass belonging to this period that provide us with the most important findings of the excavation to date.
- 6.4. The most significant of these elements is the group of highly ornate polychrome wall tiles recovered from Trench 1. These were probably used to decorate the walls around the eastern end of the Late Anglo-Saxon church (Structure 1), perhaps in the area around the *in-situ* altar, along with elements of ornamental stucco and white/pale pink plaster walls. They could also have been used to adorn the altar face itself. The tiles themselves form part of a recognisable group which have

hitherto been found mainly associated with a significant number of pre-Conquest Saxon ecclesiastical buildings in the south of England such as Bury St Edmunds Abbey, St Albans Abbey, and Westminster Abbey in London. The chemical analysis undertaken on the Court Knoll tiles has revealed a complex pattern which shows links with some of the tiles from Bury Abbey, and other important sites at Canterbury and Winchester. The analysis indicates that overall, the tiles are likely to belong to a single production group, suggesting that they were made in the same place and perhaps at the same time. Based on both stylistic and chemical comparisons, it is likely that the Court Knoll tiles date to between the final quarter of the tenth and the second quarter of the eleventh centuries.

- 6.5. Much of the mortar and plaster associated with this building showed evidence of surface burning, which is also visible on other types of finds. Contexts 0131 and 0165 also contained fragments of burnt oak wood charcoal, some of which had been carved, perhaps from a roof or internal structure within the church.
- 6.6. A large quantity of mortar was recovered, which is not only likely to represent evidence of the internal wall surfaces within Structure 1 but includes material which could also be the remnants of floor surfaces. Other mortar types identified could be evidence from the later phase of structural evidence.
- 6.7. The small assemblage of window glass associated with the church also provides us with faint hints of further colour adding to the overall complexity and richness of the internal decoration of the church. Although heavily deteriorated due to the composition of the potash-based glass, as well as having been affected by heat through burning, analysis suggests that the decorative scheme may have included glass quarries of different shapes, and that some pieces were coloured with pale blue and pale pink, as well as the more typical pale green. Comparative material for this type of glass within late Anglo-Saxon Britain is very hard to find. Potash glass was used in Edward the Confessor's cathedral at Westminster in the mid 11th century, and probably in the glazing of the Old Minster in Winchester dated from the stratigraphy to the early to mid 11th century (Tyson, this volume).
- 6.8. The combination of the polychrome tiles, coloured window glass, fragments of carved wood and the range of ornamental stucco fragments which can be associated closely with the *in-situ* remains of a high-status building which is ecclesiastical in its character is exceptional.

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- 6.9. The metalwork belonging to this period is sparse and for the most part poorly stratified. An incomplete possible chape decorated in ring and dot motifs made from copper alloy cannot be fully identified but the surviving remains are likely to date to the middle to late Saxon period. A copper alloy hooked tag from the topsoil in Trench 2 is likely to date to c. 900-1100. Part of an iron balance found in a test pit in Trench 1 could also be dated from the early Saxon through to the Late Saxon period. Other metal finds which date to this period include two whittle-tanged knife blades, both from Trench 2.
- 6.10. The most notable feature of the ceramic assemblage (by its absence) is the puzzling lack of Saxo-Norman pottery. Not a single sherd of Thetford-type ware was identified in these excavations, or any other pottery dating to this period. This gap in the ceramic record contrasts greatly with the presence of the Late Saxon polychrome tiles which are believed to date, from stylistic parallels, to around the early part of the eleventh century. Although the hand-made early medieval wares from the site can be dated in general from the 11th century, the form and rim types of these fabrics appear to be more likely to date to the 12th century-13th century rather than belonging to the eleventh century contemporary with the second phase of structure.
- 6.11. Over a hundred sherds of early medieval pottery were recovered from Period 3 contexts with a substantial quantity found in the latest modern phase 9, indicating just how much disturbance had taken place in the later part of the post-medieval period.
- 6.12. The finds assemblage includes a quantity of pottery of medieval date, broadly attributable to the period of 12th- early 14th century which is likely to reflect the lifetime of the manorial estate when it was at its most prosperous. The ceramics are unremarkable in their range with the proportion of glazed wares at 4.8% (MNV) being typical of rural sites in East Anglia. There does appear to be a specific gap in the ceramic record with little evidence of pottery dating to the later 13th to early 14th century and this may be indicative of the decline of settlement on the site itself and its relocation elsewhere in the village. Quantities of medieval roofing tile were also identified, some of which showed evidence of burning.
- 6.13. There were few metal finds attributed to the medieval period, the most notable consisting of two silver coins. A fourteenth century clipped coin identified to Robert III of Béthune (1249-1322), Count of Nevers (1273-1322) and Flanders (1305-1322)

is a rare find. In addition, a complete King John penny of voided short cross type, dating to c. 1194 - 1204/5 was recovered. The remainder of the metalwork of this date includes horse fittings and the remains of an iron arrowhead, as well as a buckle, a mount and several knife blades.

- 6.14. Much late medieval pottery was recovered from topsoil and it is possible that most of it may not relate to activity actually going on at the site, but rather that it represents material bought in from the nearby settlement in the village (perhaps through manuring or deliberate dumping), where late medieval pottery had been recovered from previous test pit investigations in some quantity. Amongst the assemblage of ceramic building material there was a large amount of late medieval and early post-medieval roofing tiles, recovered mostly from Trench 4 and Trench 6.
- 6.15. Other finds of this date from the site at Court Knoll include a small number of late medieval items of metalwork consisting of copper alloy lace tags and a French jetton dating to the fifteenth century.
- 6.16. Post-medieval ceramics were recovered as well as post-medieval ceramic building material which was most prevalent in Trench 4 and 6. The small find assemblage includes a silver Elizabethan halfgroat. There was in addition, a large quantity of later, modern pottery.
- 6.17. Table 3 shows the quantification of the bulk finds recovered from the excavation. Certain categories, notably the ceramic building material, fired clay and building stone, are only represented by weight due to the enormous quantity of material recovered. Large quantities of ragstone and septaria were present on site; these were sampled rather than routinely retained. In addition, a number of other material types were quantified but not subject to analysis; these include the clay tobacco pipe, post-medieval glass, slag, fired clay, slate, flint, bulk iron and shell. These finds remain in the archive but were not fully recorded due to the constraints of a community excavation which generated so much significant artefactual material. A full breakdown of the finds by context is shown in Appendix B Table B1.

Finds Type	T1No.	T1wt. (g)	T2No.	T2wt. (g)	T3No.	T3wt. (g)	T4No.	T4wt. (g)	T5No.	T5wt. (g)	T6No.	T6wt. (g)	T7No.	T7wt. (g)	No.	Wt. (g)
Pottery	95	839	332	2463	51	464	416	3873	13	105	185	1773	323	2713	1490	13260
CBM		1536526	-	495927	8	2346		49464				112558		175396	-	2811935
Ragstone		164184	-	42265				22517				1871			-	209655
Septaria		20370	-	6526		234						500		257	-	27887
Medieval window glass	60	-													60	-
Clay tobacco pipe	13	18	4	3	1	-	6	9	4	9	1	-			30	39
Post-medieval bottle glass	6	56	12	76	12	62	15	104	2	13			1	13	49	324
Post-medieval window glass	5	2	2	-	5	6	6	9	1	2	6	1	1	-	324	-
Slag	1	70	5	2973							74	-	1	27	84	1421
Mortar/plaster		62787	-	75136		354		43693				7931		15015	4928	13394
Iron Nails	13	98	5	16			3	17			29	204	34	213	84	558
Fired clay	-	22	2	41			-	405							82	468
Slate															457	5428
Worked flint					1	8									1	8
Burnt flint	1	14	14	333			7	59			23	66	1	20	48	492
Animal bone	253	1424	588	1324	14	108	319	2795	5	65	72	583	183	1179	1441	9549
Oyster shell	177	963	428	2523	4	16	853	5151			75	504	57	481	1595	9644
Other shell	138	236	272	463	3	3	50	74			42	81	11	10	516	867

Table 3. Quantification of bulk materials and other finds (total includes unstratified finds not attributed to a trench).

Pottery

Sue Anderson

Introduction

6.18. Pottery totalling 1490 sherds (13,260g) was collected from seventy-five contexts in seven trenches during the excavation. Table 4 provides a quantification by period group.

Description	No	Wt/g	Eve	MNV	ASW
Roman	4	33	0.15	4	8.3
Early medieval	542	4444	2.03	432	8.2
Medieval	319	2692	2.43	252	8.4
Late medieval	375	4240	1.84	359	11.3
Post-medieval	144	1364	1.75	134	9.5
Modern	104	483	0.79	98	4.6
Unidentified	2	4		2	2.0
Total	1490	13260	8.99	1281	8.9

Table 4. Pottery quantification by period.

6.19. Average sherd weights (ASW) were all relatively high, with the exception of the modern group which included small sherds of factory-made whitewares. There was also a relatively low rate of abrasion of many sherds.

Methodology

- 6.20. Quantification was carried out using sherd count, weight and estimated vessel equivalent (eve). The minimum number of vessels (MNV) within each context was also recorded, but cross-fitting was not attempted unless particularly distinctive vessels were observed in more than one context. A full quantification by fabric, context and feature is available in Appendix B Table B2. All fabric codes were assigned from the author's fabric series. A x20 microscope was used for fabric identification and characterisation. Essex rim forms and fabrics are based on Cotter (2000) and Drury (1993a). Form terminology for medieval pottery is based on MPRG (1998). Recording uses a system of letters for fabric codes together with number codes for ease of sorting in database format. The results were input directly onto an Access database, which forms the archive catalogue.

Pottery by period

Roman

- 6.21. There were a few small fragments of heavily abraded Roman sherds, but these were residual and probably brought to site along with the large quantity of Roman tile. They comprised three sherds of greywares, including a cavetto rim sherd from a jar, and a fragment of a coarse grog-tempered jar with a thickened everted rim.

Early medieval

- 6.22. Early medieval wares are generally defined as handmade wares which first appeared in the 11th century and continued to be made into the 13th century in rural parts of East Anglia. Sometimes pots were finished on a turntable and many have wheelmade rims luted onto handmade bodies; rim forms suggest that this technique probably started in the 12th century in most areas. These handmade wares can be considered transitional between the Late Saxon and medieval wheelmade traditions, and their use overlaps with both period groups. However, the lack of Thetford-type ware in this group may indicate a later start date.

Fabrics

- 6.23. The fabrics, listed below, were distinguished largely on the basis of coarseness and abundance of inclusions. Table 5 shows the quantities of early medieval wares by fabric.

EMW	Early medieval ware. Handmade, fine to medium sandy with few other inclusions, generally thin-walled. Hard. Dark grey-black, or oxidised. 11th–12th c.
EMW1	Essex-type early medieval wares. Slightly coarser than the typical EMW, generally at least partly oxidised and thicker walled vessels. 11th–13th c. Essex fabric 13.

EMWG	A grittier version of EMW1.
EMWS	Essex fabric 12A (Cotter 2000).
EMWSS	Early medieval ware sparse shelly, south-east Suffolk-type. A fairly soft brownish fabric containing sparse to moderate shell in a fine sandy, frequently micaceous, fabric often with reddish clay pellets.
EMWSG	Essex fabric 12B/12C (Cotter 2000).
EMWSD	Essex fabric 13S (Cotter 2000).
STND	Developed St Neots-type ware (see Spoerry 2016)
ANDN	Andenne ware (see Jennings 1981).

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Early medieval ware	EMW	11th-12th c.	39	251	0.21	20
Essex-type early medieval sandy ware	EMW1	11th-13th c.	291	2160	1.06	267
Early medieval ware gritty	EMWG	11th-12th c.	13	261	0.12	11
Early medieval ware shelly	EMWS	11th-12th c.	3	30		3
Early medieval sparse shelly ware	EMWSS	11th-13th c.	45	392	0.35	42
Early medieval gritty with shell	EMWSG	11th-13th c.	8	97	0.12	8
EMW shell-dusted	EMWSD	11th-13th c.	142	1248	0.13	80
St. Neot's Ware Developed	STND	11th-13th c.	1	5	0.04	1
<i>Total early medieval</i>			<i>542</i>	<i>4444</i>	<i>2.03</i>	<i>432</i>

Table 5. Early medieval wares.

6.24. The early medieval wares were dominated by Essex types, as described by Cotter (2000). Only a few shelly wares were present, some in the finer softer fabrics found around Ipswich, but more commonly in the harder sandy types found to the south. Shell-dusted wares were more frequent, as seen in Colchester.

Forms

6.25. Table 6 shows the quantities of identifiable forms by fabric. Most identifiable vessel forms were jars, but there were also a few bowls and two or possibly three spouted pitchers. The majority of identifiable forms of all types were in EMW1, which is not surprising given that it was the most frequent fabric in the assemblage. However, the second most frequent early medieval ware (EMWSD) was only represented by three jar rims.

Fabric	JR	JRH	SP	SP?	SP/BL	BL	BL?
EMW	2					1	1
EMW1	15		1	1	1	1	
EMWG		1					
EMWSD	3						
EMWSG	2						
EMWSS	5					2	
STND	1						
<i>Totals</i>	<i>28</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>4</i>	<i>1</i>

Table 6. Early medieval form type by fabric (MNV). (Key: JR – jar; JRH – handled jar; SP – spouted pitcher; BL – bowl)

6.26. Table 7 shows the distribution of rim types by vessel form.

Rim	Code	JR	JRH	SP?	SP/BL	BL	Suggested date
Everted	EV	2	1				11th-12th c.
Inturned	INT					1	11th-12th c.
Inturned flat-topped	INTFT					1	11th-12th c.
Upright thickened	UPTR	1					11th-13th c.
Upright beaded	UPBD	2					L.11th-12th c.
Everted beaded	EVBD	3					12th-13th c.
Flat-topped everted	FTEV	2			1	2	12th-13th c.
T-shaped everted	T	2					12th-13th c.
Thickened everted	THEV	1		1			12th-13th c.
Tapered everted	Essex B4	2					L.12th-13th c.
Squared, sloping top	Essex H2	13					(?E-M.)13th c.
Flat-topped squared	Essex H1					1	(?M-L.)13th c.

Table 7. Early medieval rim type by form (MNV). (Key: JR – jar; JRH – handled jar; SP – spouted pitcher; BL – bowl)

6.27. It is likely that this group is broadly dated to the 12th/13th centuries, rather than earlier, given the high proportion of later rim types.

6.28. A few vessels were decorated with incised wavy lines or cross-hatching, similar to examples from Colchester and the Middleborough kiln site (Cotter 2000). The only other decoration comprised shell-dusting.

Distribution

6.29. Early medieval wares occurred in fifty-four contexts, throughout the assemblages from Trenches 1–7, but were most frequent in Trenches 6 and 7. By site phase, apart from the high proportion recovered from Phase 9 contexts, they were most frequent in contemporary Phase 3 but occurred in most other phases, being residual from Phase 5 onwards. Only nine contexts produced more than ten sherds. The largest single groups of these wares were found in layer 0164 in Trench 6 (109 sherds) and topsoil 0169 in Trench 7 (127 sherds).

Medieval wares

6.30. Medieval coarsewares are wheelmade wares which are broadly of 12th to 14th-century date. This group was dominated by coarsewares, the majority of which were comparable with Essex types. These wheelmade wares overlap in their date range with the early medieval wares and are probably broadly contemporary in this group; certainly none of the later Essex rim types were present (see below).

Fabrics

6.31. The following fabric groups were present:

MCW	Broad category for wheelmade medieval sandy coarsewares. Equivalent to Fabric 20 in Essex but probably includes Suffolk-made wares as well.
MCWG	Grittier version of MCW.
MCWSD	Medieval coarsewares (i.e. wheelmade) with shell-dusting externally.
HCW/HFW1	Hedingham coarseware and fineware (see Walker 2012)
MESCW:	Medieval East Suffolk coarseware – sandy wares similar to Hollesley ware but with coarser sand grains visible in the surface.
COLC	Colchester-type ware (see Cotter 2000).
ESOW	Essex sandy orange wares (Essex fabric 21).
IPSG	Ipswich glazed ware

6.32. Table 8 shows the quantifications of high medieval pottery.

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Medieval coarseware	MCW	L.12th-14th c.	216	1820	1.66	187
Medieval coarseware gritty	MCWG	L.11th-13th c?	15	181	0.10	13
Medieval coarseware, shell-dusted	MCWSD	12th-13th c.	39	399	0.26	7
Hedingham coarseware	HCW	L.12th-13th c.	2	12	0.05	2
Medieval E Suffolk coarseware	MESCW	L.13th-14th c.	1	5		1
Colchester Ware	COLC	L.13th-M.16th c.	39	215	0.36	35
Essex sandy orange wares	ESOW	L.12th-14th c.	1	4		1
Hedingham glazed ware	HFW1	M.12th-M.13th c.	3	7		3
Ipswich glazed ware	IPSG	L.13th-E.14th c.	1	3		1
Andenne Ware	ANDN	12th-13th c.	1	10		1
Unprovenanced glazed	UPG	L.12th-14th c.	1	36		1
<i>Total medieval</i>			319	2692	2.43	252

Table 8. High medieval pottery.

6.33. High medieval wares were frequent and were in fine and medium sandy fabrics, mostly fully reduced. No attempt was made to separate the general MCW group into fabrics as this was beyond the scope of the project, and only minor variations were present. It is likely that a high proportion of this material would have come from the nearby kilns at Great Horkesley (Drury and Petchey 1975). Glazed wares were infrequent, although some Colchester ware sherds were sparsely glazed.

Forms

Coarsewares

6.34. This group was also dominated by jars, with only a few bowls and jugs present, the latter all in Colchester ware. The range of forms present in the high medieval group comprised jars, jugs, bowls and a possible lid (Table 9), identified from rims or other distinguishing features. In total there were thirty-three rims (based on MNVs) in the medieval coarseware group (Table 10).

Fabric	JR	JR?	JG	BL	LD?
COLC	2		2		
HCW	1				
MCW	19	1		2	1
MCWG	2				
MCWSD	3				
<i>Totals</i>	<i>27</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>1</i>

Table 9. Forms by fabric in the medieval group (MNV).

Rim	Code	JR	JG	BL	LD?	Suggested date
Everted	EV				1	12th-14th c.
Flaring	FLAR		1	2		12th-14th c.
Inturned	INT	1				12th-14th c.
Everted rounded	EVRO	1				12th-13th c.?
Hooked	HOOK	1				12th-13th c.?
Squared, sloping top	Essex H2	7				(?E-M.)13th c.
Flat-topped squared	Essex H1	9				(?M-L.)13th c.
Cavetto	CAV	1				13th c.?
Flat-topped everted	FTEV	5	1			13th c.?
Upright with everted tip	UPEV	2				13th c.?
Square beaded	SQBD	1				13th-14th c.
Flat-topped, no neck	Essex H3	1				L.13th-M.14th c.

Table 10. Medieval coarseware rim types and forms (MNV).(Key: JR – jar; JG – jug; BL – bowl; LD - lid)

6.35. The rim forms indicate that the assemblage is largely of 13th-century date and contemporary with the latest handmade wares. Only two rims were of later Suffolk square-beaded and Essex H3 types.

6.36. The majority of vessels were jars, varying in rim diameter between 140–320mm, the majority between 180–200mm and 260mm. The bowls varied between 400–440mm. The jug rims were 80–150mm in diameter. Bases were generally sagging types and handles were wide or medium straps. Decoration was rare and comprised one MCW vessel with combed wavy lines, one with an applied thumbled strip at the base angle, one with incised horizontal lines and one with finger-tip impressions.

Glazed wares

6.37. Glazed wares (including six of the COLC vessels) formed c.4.8% of the high medieval group, based on MNV. This proportion is fairly typical of rural sites in East Anglia. Small fragments of Hedingham glazed ware, Ipswich glazed ware and an Essex sandy orange ware were recovered, along with a yellow glazed whiteware which is likely to be from Andenne, Belgium. Two sherds of Hedingham ware had applied strip decoration. Some of the Colchester-type wares and the sherd of Sandy

orange ware were decorated with painted white slip lines, but the sherds were too small to determine the form of the decoration.

Distribution

- 6.38. Medieval wares occurred in forty-nine contexts, with at least one sherd each from Trenches 1–7, but were most frequent in Trenches 4 and 7. By site phase, they occurred in all phases from 2 onwards in small quantities, but were most frequent in Phase 9 where they were residual. Only nine contexts produced more than ten sherds. The largest single group was from topsoil 0169 in Trench 7 (67 sherds).

Late medieval

- 6.39. The late medieval group includes wares which are transitional between the medieval and early post-medieval periods. Some forms and fabrics could be contemporary with the latest high medieval wares or the earliest post-medieval types and some have date ranges which span both periods.

Fabrics

- 6.40. Table 11 shows the quantities of late medieval wares in the assemblage.

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Cistercian type Ware	CTW	14th-16th c.	3	6		3
Late medieval and transitional	LMT	15th-16th c.	72	732	0.11	63
Late Essex-type Wares	LMTE	15th-16th c.	1	77	0	1
Late Colchester-type Ware	COLL	15th-16th c.	259	3043	1.31	255
Siegburg Stoneware	GSW1	E.14th-17th c.	2	24	0.05	2
Raeran/Aachen Stoneware	GSW3	L.15th-16th c.	38	358	0.37	35
<i>Total late medieval</i>			<i>375</i>	<i>4240</i>	<i>1.84</i>	<i>359</i>

Table 11. Late medieval pottery.

- 6.41. Late medieval and transitional wares (LMT) were made across East Anglia, with known production sites near Norwich, in the Waveney Valley, in the Wattisfield area and near Woodbridge (Jennings 1981; Anderson *et al.* 1996) and are often the most frequent late medieval ware in Suffolk. However, in this group the late medieval assemblage was dominated by Colchester-type wares (Cotter 2000), with a few non-local additions such as Cistercian-type ware, Siegburg and Raeren stonewares.

Forms

- 6.42. Identifiable vessels included jars, jugs, bowls, pipkins and cisterns. Fragments of Siegburg and Raeren mugs also belong to this period. Table 12 shows the identifiable forms by fabric.

Fabric	JR	JR/JG	JR?	CS	CS?	PK?	JG	JG?	MG	BL	BL?	?
COLL	1	1	1	6	1	1	14	1		2	1	
LMT			1			1				1		1
GSW1									2			
GSW3									3			
Totals	1	1	2	6	1	2	14	1	5	3	1	1

Table 12. Late medieval forms by fabric (MNV).

(Key: JR – jar; JG – jug; CS – cistern; PK – pipkin; MG – mug; BL – bowl)

- 6.43. Jugs were the most frequent form in this period, followed by cisterns and mugs, suggesting that much of the pottery from this assemblage related to serving and consuming liquids, rather than food preparation and storage.

Distribution

- 6.44. Late medieval pottery was recovered from twenty-six contexts, and occurred in all trenches except Trench 5. It was present in small quantities (one to four sherds) in phases 2 to 5 but, apart from the large quantity of residual material in Phase 9, was most frequent in Phase 6/6+. However the largest groups were from topsoil in Trenches 2 and 4 (170 and 62 sherds respectively).

Post-medieval

- 6.45. Table 13 shows the quantities of post-medieval and modern pottery from the site. Fabrics follow Jennings (1981).

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Glazed red earthenware	GRE	16th-18th c.	64	667	1.11	55
Iron-glazed blackwares	IGBW	16th-18th c.	3	16	0	3
Post-medieval redwares	PMRW	16th-18th c.	67	619	0.53	66
Tin glazed earthenwares	TGE	16th-18th c.	1	4	0	1
Cologne/Frechen Stoneware	GSW4	16th-17th c.	4	34	0.11	4
Post-medieval slipwares	PMSW	17th-19th c.	2	11		2
Staffordshire-type Slipware	STAF	L.17th-18th c.	2	6		2
Staffordshire-type manganese glazed	STMG	L.17th-18th c.	1	7		1
<i>Total post-medieval</i>			144	1364	1.75	134

Table 13. Post-medieval pottery.

- 6.46. The post-medieval period was largely represented by red earthenwares, some glazed and some unglazed. Only one sherd of tin-glazed earthenware was recovered and there were only two pieces of red earthenware slipwares and two pieces of Staffordshire-type slipwares. The few imported wares of this period comprised Cologne and Frechen stonewares.

6.47. A similar range of vessel types was present to that of the late medieval group (Table 14). However, in this group there was a much higher proportion of cooking vessels (pipkins, cauldrons) and food preparation vessels (bowls, pancheons). It is not clear, given the slight overlap in the use of late and post-medieval types, whether this group forms a complementary one to the late medieval range of forms during the 16th century, or whether it is a slightly later group representing a change in pottery use.

Fabric	JR	JR?	PK	PK?	CA?	JG	MG	MG?	BL	BL?	PN	?
GRE		1	4	3	3	2	2		3		1	1
PMRW	1	1							2	3	1	2
IGBW												1
STAF								1				
GSW4							2					
Totals	1	2	4	3	3	2	4	1	5	3	2	4

Table 14. Post-medieval forms by fabric (MNV).

(Key: JR – jar; JG – jug; CA – cauldron; PK – pipkin; MG – mug; BL – bowl; PN – pancheon)

6.48. Post-medieval wares were collected from twenty-two contexts in all trenches apart from Trench 5. A few sherds were intrusive in phases 2 and 3, but otherwise they did not occur on the site until Phase 6 and were most frequent as residual material in Phase 9. The largest groups were from topsoil in Trenches 2 and 4 (28 and 33 sherds respectively).

Modern

6.49. Early modern wares are shown in Table 15. Some of this material overlaps in date range with the previous period group, the main difference being that these wares were more likely to be factory-produced.

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Staffordshire white salt-glazed stonewares	SWSW	18th c.	5	16	0.10	5
Creamwares	CRW	1730-1760	5	10	0	5
English stonewares	ESW	17th-19th c.	9	168	0.11	9
Late blackwares	LBW	18th-E.20th c.	1	2	0.08	1
Late post-medieval unglazed earthenwares	LPME	18th-20th c.	4	21	0.11	4
Late red ware	LRW	L.18th-19th c.	1	6	0	1
Late slipped redware	LSRW	18th-19th c.	10	86	0.05	9
Pearlware	PEW	L.18th-M.19th c.	4	8	0	3
European porcelain	PORC	18th-20th c.	6	7	0	5
Refined white earthenwares	REFW	L.18th-20th c.	54	131	0.34	51
Yellow Ware	YELW	L.18th-19th c.	5	28		5
Total modern			104	483	0.79	98

Table 15. Modern pottery.

6.50. Modern wares comprised small pieces of white table wares, stoneware storage vessels and drinking vessels, and redware kitchen bowls. Much of this group was heavily abraded and many fragments were flakes with only one surface surviving. This is typical of material distributed across fields with 'night soil', the rubbish collected from nearby towns and used for agricultural manuring. The small assemblage is therefore unlikely to relate directly to activity on the site.

6.51. Sherds were recovered from sixteen contexts spread across all seven trenches, occurring in contexts assigned to phases 8 and 9 only. The majority were from Trench 4 topsoil (40 sherds).

Pottery distribution

6.52. Table 16 shows the distribution of the pottery by trench and period. The largest quantities of pottery were recovered from Trenches 2, 4 and 7. In Trenches 2 and 4 this material was dominated by late medieval wares. However, the largest quantities of early and high medieval wares came from Trenches 6 and 7, where little late medieval material was recovered.

Trench	Rom	EMed	Med	LMed	PMed	Mod	Un	Totals
1		10	22	26	22	25		105
2		78	53	129	46	14	1	321
3	1	10	19	3	6	16	1	59
4	1	60	72	202	53	40		432
5	1	8	1			3		18
6		128	40	11	9	2		190
7		203	101	2	4	4		314
?	1	45	11	2	4			63
Totals	4	542	319	375	144	104	2	1490

Table 16. Distribution of pottery by trench and period (sherd count).

6.53. All pottery from Trenches 3 and 5 was recovered from topsoil/subsoil. Trench 1 pottery was very mixed, with much of it recovered from the upper layers and medieval wares appearing to be largely redeposited. The medieval material in Trenches 2, 4, 6 and possibly 7, however, does appear to come from the lower levels of the site and is associated with some cut features.

6.54. A summary of the pottery by site phase is provided in Table 17. The largest group was from modern Phase 9, with none of the earlier phases containing more than 180 sherds. The high proportion of early sherds in the Phase 9 contexts suggests a high degree of disturbance of earlier layers in the 19th/20th centuries.

Period	1/1+	2/2-3	3/3?	3+	4	4+	5	5+	6/6+	8	8/9	9	Un
Roman	1						1		1			1	
EMed	2	5	73	138	11	83	24	16	19			167	4
Med		2	28	32	1	47	6	29	37	9		124	3
LMed		1	1				5	5	66			295	2
PMed			1	2			1		26	2		110	1
Modern										6	1	97	
Un		1										1	
Totals	3	9	103	172	12	130	37	50	149	17	1	795	11

Table 17. Pottery quantities by period and site phase.

- 6.55. The majority of sherds were recovered from demolition and make-up layers, with few coming from identifiable features. Few sherds were recovered from the earliest Phases 1 and 2.
- 6.56. Pottery from contexts from Phase 3 in Trench 2 contained a range of early medieval wares, together with a few high medieval wares including Colchester types. Potentially this group could date to the 12th century, but it is more likely to be of 13th-century date.
- 6.57. The two layers also of this phase in Trench 6 contained early medieval shell-dusted wares, a few fragments of Colchester ware, and 0164 contained both early and high medieval coarsewares, along with two fragments of a post-medieval GRE vessel which are presumed to be intrusive. The range of rims and fabrics in 0164 suggests that this layer can be dated to the 12th/13th century.
- 6.58. Finds from Phase 4 in Trench 7 (0183, 0184) included early and high medieval coarsewares with the majority of rims being Essex type H1, of 13th-century date. Those phased as 4+ contexts in Trench 4 were from ditch 0168 and included early and high medieval wares including some Colchester-type, but no rims were found.
- 6.59. Trench 2 produced thirty-five sherds from Phase 5 layers 0015, 0029, 0045, 0053, 0055 and 0070 and 0079. Apart from four body sherds of COLL found in layer 0029, a sherd of Roman greyware and a sherd of LMT from 0045, all sherds were residual early and high medieval coarsewares (including rims of two jars and a bowl).
- 6.60. In Trench 6, context 0170, phase 5, contained a Cistercian-type ware handle and a small sherd of iron-glazed blackware, suggesting a 16th-century date.
- 6.61. Fills of ditch 0007 (Phase 6+) produced forty-six sherds, including a few residual sherds, but mainly of late medieval and early post-medieval date and including

Colchester-type redwares and Raeren stonewares. Identifiable forms included jugs, a cistern, two mugs, a pipkin and a bowl.

6.62. Other sherds from contexts phase to 6 and 6+ were largely from layers in Trench 4 (0072, 0073, 0075, 0076, 0091, 0124). Forty-eight sherds were residual Roman, early and high medieval wares. Contemporary fabrics comprised LMT, late Colchester ware, post-medieval redwares and Raeren and Frechen stonewares. Identifiable forms in this group included two late Colchester-type jugs and a GRE ?cauldron.

6.63. No pottery was recovered from feature phased to the post-medieval period (Phase 7).

6.64. Only seventeen sherds were recovered from contexts relating to the backfill of the 1924 excavation, of which at least eleven were residual medieval and early post-medieval types. The contemporary wares included a few pieces of late slipped redware bowls, a piece of plantpot and a small fragment of refined whiteware.

6.65. By far the largest group in the phased assemblage was recovered from this phase, much of which comprised topsoil layers and layers immediately below, in all seven trenches. As shown in Table 14 above, the great majority of material recovered from these layers was residual and redeposited, possibly through later ploughing. Table 18 shows the sherd counts of contemporary pottery by fabric and trench.

Fabric	Tr. 1	2	3	4	5	6	7	Totals
LSRW	1	1		4	1			7
LBW				1				1
SWSW	2	1		2				5
CRW		1		3		1		5
ESW	2	1	2	3		1		9
LPME			1	2				3
PEW		2		2				4
PORC	1			4	1			6
REFW	11	8	12	17	1		4	53
YELW	2		1	2				5
Totals	19	14	16	40	3	2	4	98

Table 18. Distribution of modern pottery from Phase 9 across the trenches.

6.66. The largest group of sherds was recovered from Trench 4, and other relatively large groups came from Trenches 1, 2 and 3. Refined whitewares were the most common find of this period and phase.

Summary and discussion

- 6.67. A few sherds of Roman pottery were recovered, but these were residual in later contexts. Their presence may relate to the large quantity of Roman tile recovered from the site (Anderson this volume), and they may have been brought here accidentally with that.
- 6.68. A large group of early medieval wares were recovered from the site, but as this type continued to be made into the 13th century in rural areas it is likely to be contemporary with the high medieval wares which form a smaller part of the assemblage. The medieval wares present were largely of Essex type, with few that could be positively identified as Suffolk products. This is not surprising given the proximity of the Mile End and Great Horkesley kiln sites, which are thought to have supplied Colchester and its environs. Whether the people of Nayland purchased direct from the potters or bought from middlemen in the market at Colchester is a matter for speculation. The range of vessel forms in the early and high medieval periods was relatively limited, and the majority of identifiable vessels were jars with very few bowls and jugs. Rural sites often produce a higher proportion of bowls in this period, thought to be due to their use in dairying and bread-making. It is not clear how this pottery would have been used at the site if the main purpose of the excavated areas was to function as a church, but sooting on many sherds indicates that they had been used for cooking. Although some of the medieval pottery appears to relate to the appropriate phases on the site, much of it was found in dump layers associated with the demolition of the church, or was redeposited in topsoil.
- 6.69. A very high proportion of late medieval pottery has been recovered from the village during a test-pitting survey (Lewis *et al.* 2012, 74–5), suggesting expansion of the settlement at this time. Much of the late medieval pottery from Court Knoll was recovered from topsoil. Potentially the material recovered from this site may represent dumping of rubbish in this area following demolition of the structures on the site, and it would therefore related to late medieval activity within the village rather than at the site. Against this interpretation is the relatively high proportion of later medieval and early post-medieval roof tile recovered from the site, which may represent the final roofing of the earlier medieval structure(s), suggesting that it was still in use in this period. However, roof tile is notoriously difficult to date with accuracy and some of this material could be medieval.

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- 6.70. The range of vessel forms in the late medieval period is slightly unusual in that it appears to be dominated by vessels which would have been used for serving and consuming liquids. This may suggest that some of the rubbish came from a nearby ale house. However, as noted above, some of the early post-medieval wares, which included a high proportion of cooking vessels, could be contemporary with the latest late medieval wares and together they made up the range of vessels which would be in use in a typical household of the 16th century.
- 6.71. This large assemblage is comparable with a similarly sized group recovered from fieldwalking at the Court Knoll site (Anderson 2002). Both contained high proportions of early/high and late medieval pottery, and both appear to show a hiatus between these two groups. Based on the pottery evidence, it seems that significant activity ended at the site during the 13th century or early 14th century – little high medieval Colchester ware is present in the group and there are very few later 13th/14th-century forms in the medieval coarseware group. There is also little medieval glazed ware.
- 6.72. Together with the pottery recovered from fieldwalking, this assemblage represents a very large quantity of material from a medieval rural site, albeit one of known high status. It is one of few such sites to have been excavated in this part of the county in recent years, and it is of significance in adding to our knowledge of the fabrics and forms in use in this part of Suffolk in the medieval period. It is clear that the majority of the pottery from this site has parallels in the corpus for Colchester and the surrounding district (Cotter 2000) and that much of the pottery was sourced from kilns in Essex, with little material from the known kiln sites in Suffolk appearing in this assemblage. Again, this may in part be due to the period of activity, as the Hollesley and Ipswich potteries are currently dated to the later 13th and 14th centuries. However, Nayland is closer to Colchester than Ipswich and presumably this has been the market of choice for the inhabitants for centuries.

Ceramic Building Material (CBM)

Sue Anderson

Introduction

- 6.73. Approximately 2.8 metric tonnes of CBM were excavated from 104 contexts in Trenches 1, 2, 3, 4, 6, 7 and 11. In view of this enormous quantity, a strategy was developed to facilitate the recording of the material. A total of 14,284 fragments (1096.829kg) of tile was subject to basic recording by SACIC staff and was

discarded on site, and a representative sample was retained for specialist analysis. A full database of these records is available in the archive.

- 6.74. Of the retained material, 540 fragments (130.960kg) from seventy-three contexts were recorded by the author. Material from forty-four contexts was seen by both the present author and SACIC staff, but in general it appears that most of the retained material was not recorded in the site database, although a small overlap is possible.

Methodology

- 6.75. The retained CBM was quantified by context, fabric and type, using fragment count and weight in grams. Forms were identified with the aid of Brodribb (1987). The presence of burning, combing, finger marks and other surface treatments was recorded. Roman tile thicknesses were measured and for flanged *tegulae*, the form of flange was noted and its width and external/internal heights were measured. Data was input into an MS Access database, and a full catalogue is available in archive. Further material was extracted for discard during the analysis (noted in the catalogue).

The assemblage

Roman

- 6.76. Table 19 shows the quantities of Roman tile in both assemblages by form.

Function	Form	Code	No	Wt (g)	No	Wt (g)
Roofing	Flanged <i>tegula</i>	FLT	15	4075	9	2552
	Flanged <i>tegula</i> ?	FLT?			5	305
	<i>Imbrex</i>	IMB	11	1262	2	47
	<i>Imbrex</i> ?	IMB?	3	135	6	283
Flue tiles	Box flue tile	BOX	20	2300	4	284
	Box flue tile?	BOX?	3	285	5	447
Bricks and flooring	<i>Lydion</i>	LYD	1	2365		
	<i>Lydion</i> ?	LYD?	4	13600		
	<i>Bipedalis</i>	BIP	1	610		
	<i>Bipedalis</i> ?	BIP?	2	2165		
	<i>Tessera</i>	TESS	2	70		
	Brick	RBRICK			95	7790
Unknown	Roman tile	RBT	445	102560	6986	848481
	Roman tile?	RBT?	22	1100	19	495
	Unidentified	UN	11	433	3	3675
Total			540	130960	7134	864359

Table 19. Quantities of Roman CBM by form.

- 6.77. Approximately 58% of the retained assemblage and 49% of the site-recorded assemblage comprised CBM of Roman date. Much of this appeared to have been

re-used in the medieval period, but it nevertheless represents the remains of one or more substantial structures of the Roman period, which were presumably located somewhere in the vicinity. Only a relatively small quantity of tile was identifiable to type, but this included the typical range of roofing, flue and wall/floor tiles.

6.78. Fabrics were recorded for the retained assemblage and for a few of the site-recorded fragments. Eleven fabric groups were recorded in the Roman assemblage, but the majority of fragments were in fine sandy fabrics with few other inclusions. A small proportion of the assemblage was in white-firing fabrics. Table 20 shows the quantities by fabric and form (fragment count).

Fabric	code	FLT	IMB	BOX	LYD	BIP	TESS	RBT	Total
fine sandy	fs	10	3	18	5	3	1	367	407
fs with chalk	fsc	1		2				3	6
fs with clay pellets	fscp		2	1				3	6
fs with coarse quartz	fscq							3	3
fs with flint	fsf							1	1
fs with grog	fsg							2	2
fs with voids	fsv	2	6	2				5	15
medium sandy	ms							1	1
ms with voids	msv		1						1
white-firing fine sandy	wfs		1				1	25	27
wfs with voids	wfv		1						1

Table 20. Roman CBM quantities by fabric and form. (Fragment count; certain and possible forms combined, unidentified not included).

6.79. Only a small quantity of the retained sample, and a very small proportion of the material recorded on site, could be identified as roofing tile. Of the fifteen flanged *tegulae*, only nine had intact flanges, most of which were square in section with a few having more curved inner edges. They varied in height between 40–60mm, and in width between 29–41mm. Tile thicknesses were between 17–30mm. One fragment had an upper cutaway which had removed the flange, and one had a partial underside cutaway. One piece had a double curving line ‘signature’. *Imbrices* varied between 14–18mm thick.

6.80. Box flue tiles were also rare in the assemblage. Of those recorded in detail, thicknesses varied between 11–22mm, and one large piece showed the tile to be >140mm wide. Sixteen tiles were combed and one had a knife-cut lattice. Fragments were generally too small to determine combing patterns, but most of the marks were vertical or diagonal straight lines, with only four tiles having curving or wavy line designs. Five others in the site group were recorded as ‘scored’, one with

a wavy line and one 'criss-cross'. The combs had between four and ten teeth. Four tiles had side cut-outs, all apparently rectangular in form. Thin traces of mortar, sometimes pozzolanic, were found on nine tiles.

- 6.81. Five tiles were probably *lydions*, although none was complete. One fragment from 0075 was 280mm wide. The fragments were between 26–46mm thick and all had patches of mortar on one or both surfaces.
- 6.82. Three fragments of *bipedales* were found, two measuring 58mm thick and the third 75mm thick. One fragment had curving finger marks, possibly in the form of a parabola. The thickness and fabric type meant that this type of tile was difficult to distinguish from post-medieval brick and it is possible that the unmarked pieces could be later.
- 6.83. Two *tesserae* were identified. One, from ditch fill 0133, was in a fine sandy red fabric and measured 35 x 27 x 18mm. The other, from layer 0160, was white and measured 31 x 31 x 19mm. Both appeared to have a whitewashed or slipped surface, and both had patches of pozzolanic (containing siliceous and aluminous substances that react with calcium hydroxide to form cement) mortar adhering.
- 6.84. A very high proportion of the tile from this site comprised undiagnostic fragments. Thickness measurements were recorded for 143 of the uncertain tiles, varying between 11–55mm and probably including further *imbrices*, flanged *tegulae* and some wall or floor bricks. Table 21 shows the distribution of fragments by size with suggested function.

Thickness	No.	Possible type
11-14mm	1	<i>Imbrex</i> or box flue
15-19mm	7	<i>Imbrex</i> , box flue or flanged <i>tegula</i>
20-24mm	3	<i>Imbrex</i> , box flue or flanged <i>tegula</i>
25-29mm	8	Flanged <i>tegula</i> or wall/floor tile?
30-34mm	34	Flanged <i>tegula</i> or wall/floor tile
35-39mm	59	Wall/floor tile
40-44mm	24	Wall/floor tile
45-49mm	7	Wall/floor tile
50-55mm	2	Wall/floor tile

Table 21. Thicknesses of RBT and possible types.

- 6.85. Eighteen fragments in the retained group of RBT had 'signature' marks, the majority of which were single or double curving lines. Four were straight/diagonal lines, and one piece had wavy, straight and diagonal lines. While many of these tiles could be flanged *tegulae*, as these commonly have curving marks at the lower edge, four tiles

were 40–45mm thick and more likely to be floor or wall tiles. At least eighteen fragments were recorded as having marks in the site record, some of which may be the same as fragments recorded in the retained group.

6.86. A total of 102 tile fragments, the majority of which were recorded on site only, had signs of burning, and a further fourteen (including a flanged *tegula*) were overfired. Several of the latter were blown or cracked. This may suggest that the tiles were used in a hypocaust system, or that they were re-used in a fire-related feature. Some, however, may have been wasters which had been used as hardcore. Many fragments in the discarded assemblage were recorded as having mortar on the surfaces.

6.87. Two tiles had traces of animal pawprints which were made while the tiles were drying prior to firing. On a tile from 0057 there was an impression identified as a bear pawprint (see note below, para 6.114 cont., Fig.28) and one a fragment from 0005 there was a double impression of a cat pawprint (see 6.93).

Post-Roman

6.88. Table 22 shows the quantities of medieval and later CBM in both assemblages by form, and Table 23 shows the distribution of forms by fabric group. Seventeen main fabric groups were identified on the basis of major inclusions, and in contrast to the Roman tiles, most of this group were medium sandy types, the medium sand with coarse quartz fabric (mscq) being the most frequent.

Function	Form	Code	Retained		Site record	
			No	Wt (g)	No	Wt (g)
Roofing	Plain roof tile	RT	48	1730	7020	227428
	Plain roof tile?	RT?	1	65	48	1929
	Plain roof tile: med	RTM	151	6791	30	655
	Plain roof tile: med?	RTM?	6	265		
	Plain roof tile: post-med	RTP	66	2938		
	Plain roof tile: post-med?	RTP?	5	255		
	Hip tile	HIP	3	685		
	Ridge tile	RID	26	1237		
	Ridge tile?	RID?	1	50		
Walling	Early brick	EB	1	35		
	Early brick?	EB?	1	30		
	Later brick	LB	23	4530	48	2233
	Later brick?	LB?	6	445	4	225
Flooring	Floor tile	FT	1	4		
Miscellaneous	Drain pipe	DP	1	90		
Total			340	19150	7150	232470

Table 22. Quantities of post-Roman CBM by form.

Fabric	code	RTM	RTP	RT	RID	HIP	EB	LB	FT	DP	Total
coarse sandy	Cs	2									2
estuarine clay	Est						2				2
fine sandy	Fs	13	26	1	9			3			42
fs with clay pellets	Fscp	3	9					2			14
fs with coarse quartz	Fscq	1	2					4			7
fs with flint	Fsf		2			2					4
fs micaceous	Fsm								1		1
fs with voids	Fsv							8			8
fsv with clay pellets	fsvcp							1			1
fsv with flint	Fsvf							1			1
medium sandy	Ms	15	23		1			8			47
ms with clay pellets	mscp	18	7		6			2			33
ms with coarse quartz	mscq	99	1	3	3	1					107
ms with flint	Msf	1									1
ms with grog	Msg	5									5
msg with flint	msgf		1								1
compressed grog?	comp									1	1
Unidentified	Un			45	8						53

Table 23. Post-Roman CBM quantities by fabric and form. (Fragment count; certain and possible forms combined).

6.89. Plain roofing tile made up a large proportion of this assemblage. Thirty-two fragments in the retained assemblage had square or circular holes, showing that these tiles at least were peg tiles; no nibs were identified. One hundred and eighty-seven were examples of medieval roof tiles in fine and medium sandy fabrics, many with reduced cores, but only two had spots of glaze (one green, one uncoloured). At least seventy-one fragments were likely to be post-medieval, but the majority of fragments in the site-recorded group were thought to be late or post-medieval in date. Twenty-seven fragments of ridge tile were identified, but most were unglazed and there is a possibility that some could be Roman *imbrices*; however, they were generally in coarser fabrics typical of medieval or late medieval date. Six fragments of ridge tiles with orange-brown glaze from topsoil 0056 included two pieces with partial stepped crests. The apex fragments of two post-medieval hip tiles with square peg holes were recovered from layer 0076, and a fragment in a coarser ?medieval fabric was found in layer 0124.

6.90. Only two small fragments of ‘early brick’ in an estuarine fabric were present, recovered from topsoil 0002 and layer 0073. This type has a broad date range of late 13th–15th centuries (Drury 1993b).

6.91. Up to eighty-one fragments of ‘late brick’ were present, although it is possible that some of the more abraded and uncertain fragments could be Roman. Several bricks

were in fine and medium sandy fabrics typical of the area, but there were also white-firing examples (in the site-recorded assemblage) which may have derived from the northern part of the county. A few could be measured in one or two dimensions and may be of late medieval or early post-medieval date. A fragment from ditch 0037 was 119mm wide and 50mm thick, two pieces from topsoil 0056 were 48mm and 50mm thick, and a fragment from wall 0074 measured 122mm wide and 55mm thick.

6.92. One tiny fragment of a Late Saxon floor tile with light green glaze on the surface and edge was included in the retained sample (0085). More of these tiles have been collected and will be reported on elsewhere (Drury this volume).

6.93. A modern brown-glazed drainpipe fragment in a compressed fabric came from topsoil 0056.

Distribution and phasing

6.94. Table 24 shows the quantities of the entire assemblage by period across the excavated trenches.

CBM period	Tr1	Tr2	Tr3	Tr4	Tr6	Tr7
Roman	2639	2372	2	813	1135	645
Med	61	20	5	90	12	1
med/pmed	2			26		
lmed/pmed	397	54	1	4910	1261	575
pmed	16	34		18	7	
un	7	3		1	3	
Totals	3122	2483	8	5858	2418	1221

Table 24. Distribution of CBM across the trenches by period.

6.95. This shows that the Roman tile was particularly concentrated in Trenches 1, 2 and 6, and was also common in Trenches 4 and 7, whilst the majority of the late and post-medieval material was found in Trenches 4 and 6, the latter mainly comprising roof tile. Trench 3 produced only very small quantities of CBM and none was recovered from Trench 5.

6.96. Table 25 shows the distribution of CBM forms by site phase, based on fragment count of the retained sample. Totals from the on-site recording are also provided.

form	1	2/2-3	3/3?	3+	4	4+	5/5?	5+	6	6+	7+	8	8/9	9	
FLT		2	2			1	3	4						1	
IMB			1	1				1	4					6	
BOX				1	3	1	2	3	2					5	
LYD							1		2			1			
BIP			1											2	

form	1	2/2-3	3/3?	3+	4	4+	5/5?	5+	6	6+	7+	8	8/9	9	
TESS				1				1							
RBT		11	8	3	11	4	59	15	18		22	25	2	67	
RT												5		13	
RTM		8	1			3	1	4	56		8	5	2	53	
RTP		7	2		2				6			2		17	
RID									10					17	
HIP									3						
EB									1					1	
LB							1		3	1				10	
FT						1									
DP														1	
UN			1					3		1				5	
Totals	0	28	16	6	43	10	67	31	112	1	30	33	4	207	
On-site	49	1075	598	123	327	975	963	1168	5015	90	341	1061	54	2385	

Table 25. CBM quantities by site period (fragment count).

6.97. The vast majority of fragments were found in layers, with smaller quantities from ditches/gullies, and a few from a pit and an oven, with very little from structural features. A summary of the CBM by phase is provided below.

6.98. A small quantity of mainly Roman CBM was recovered from Phase 1, all from layer 0185 in Trench 6. None of this was retained.

6.99. In Late Saxon Phase 2 (and contexts phased as 2-3), a small quantity of CBM was retained, but this included some medieval and post-medieval roof tile in both the retained and the site-recorded assemblages, which is presumably intrusive in layers 0057 and 0186.

6.100. Phase 3/3? comprised largely Roman tile, but there were two possible fragments of post-Roman roof tile. a few fragments of later roof tile. A number of fragments in this group showed evidence of burning, relating to the putative burning down of the early medieval church in this phase. Further burnt tiles were found in all subsequent phases and were presumably redeposited following this episode. The fragments from Phase 3+ were largely Roman tile, with the possible exception of a small piece of post-medieval roof tile in the retained sample.

6.101. Phase 4 represents the construction of Structure 2 in the early medieval to medieval period. Again, Roman tile dominates the site-recorded group but at least one medieval roof tile was found, in 0183 (Phase 4+) and a fragment of post-medieval brick in a white-firing fabric was noted in the site-recorded group in layer 0154. The finds from Phase 4+ were mostly from layers (with particularly high numbers from

0183 and 0184) and the later fills of ditch 0168 and were predominantly Roman tile with a few fragments of medieval/post-medieval roof tile. and 0170, and

6.102. The demolition Phase 5, not surprisingly, also produced a high proportion of Roman tile, mainly recovered from layers but also oven 0177. A fragment of post-medieval brick in a white-firing fabric was noted in layer 0170, and a small quantity of post-Roman roof tile was noted in the site-recorded assemblage, and the same is true of Phase 5+ layer 0146.

6.103. The largest group of CBM was recovered from Phase 6, dated to the late post-medieval period. The retained sample included a higher proportion of post-Roman than Roman material, and on-site recording also noted a very large quantity of post-Roman roof tile (4559 fragments).

6.104. Phase 8 relates to the excavation in 1924, and in these contexts Roman tile again predominated. However, in modern Phase 9 contexts the proportion of post-medieval tile was double that of Roman in the site-recorded assemblage, although this is not reflected in the retained sample.

Discussion

6.105. Roman, medieval and post-medieval tile and brick form the bulk of this assemblage and provide some evidence for the types of structures present on or near the site during these periods. However, there is evidence that the Roman material had been re-used in later structures and it is thought to have been imported to the site specifically for this purpose. Reuse of Roman material, reflected by the presence of mortar on breaks and other surfaces, sometimes forming a second layer over the pink pozzolanic mortar of the Roman period, was common practice during the Late Saxon and early medieval periods, and standing examples can be seen in Colchester (e.g. the Castle, St Botolph's Priory, and Holy Trinity Church).

6.106. Unfortunately, there are few local assemblages of Roman CBM which have been reported on in full in the local area, but brief reports from the Roman villa sites at Little Oakley and Chignall in Essex appear to contain a similar range of forms to those found at Court Knoll (Williams 2002; Clarke and Black 1998). Information on Roman CBM from Colchester is also limited (e.g. Crummy 1984), but it does suggest that mainly red-firing and a few white-firing ('yellow') tiles were present there, with *tegulae* and flat tiles being the most common forms.

6.107. The presence of so much Roman tile suggests that there was probably a high status Roman structure in the vicinity. The large quantity of flat tile, some of which is certainly floor or wall tile rather than roofing tile, suggests that the structure had masonry walls, most likely of flint with tile coursing. It also appears to have had at least one tessellated floor. The presence of box flue tiles and traces of *opus signinum* (some fragments of which were recorded in the site-recorded assemblage) suggests that it may have been, or incorporated, a bath-house or at least a hypocaust system. However, despite there being over a tonne of material from the excavations, for perspective, the average weight of a Roman flanged *tegula* is around 6kg (based on work at Itter Crescent Roman villa, Peterborough, Anderson forthcoming), so the total weight of the excavated assemblage could represent as few as 183 whole tiles. At Itter Crescent, the entire excavated CBM assemblage was approximately 2 metric tonnes, which by the same principle might represent only 300 tiles, but it is likely that many more tiles were present in the assemblage – few joining fragments were identifiable in the retained sample there, or at Court Knoll.

6.108. It is immediately clear from the site recording, and to some extent from the recording of the retained sample, that fragments of flat Roman tiles were far more plentiful on this site than curving, flanged or box tiles. This is presumably a result of deliberate selection of the most useful forms for re-use in the early medieval structure. Evidence for the early church having burnt down can be seen in some of the CBM, which showed signs of distortion, cracking and reduction. It appears that this material may have been re-used a second time to construct the later building, perhaps with the addition of contemporary ceramic roofing tiles, although medieval examples of these are less frequent than late/post-medieval ones in the assemblage, perhaps suggesting that the structure was re-roofed at some point before its final demolition.

Note on the Roman Tile Paw Print

Julie Curl

6.109. A fragment of Roman tile was recovered from context 0057 in Trench 1 which showed clear evidence of animal prints (Fig. 28)

6.110. The features of the print that are visible are four very clear toes and one less clear toe, which are arranged in a slightly curving row. There is an irregular, almost kidney-shaped pad, longer on one side. The pad and toes have a shape around them that suggests quite thick fur. To the rear of the pad and toes the tile is broken,

so it is possible that part of the print is missing. In front of the toes the clay is in good condition, but there are no visible claw marks.

6.111. The shape overall resembles the front paw of a badger or bear, which are quite similar. The size is that of an adult badger, but a badger has very long robust claws for digging and they should be clearly visible as long lines from the toes in all prints. The absence of any claws would rule out a badger.

6.112. The most likely animal to have left these prints would be a juvenile Brown Bear (*Ursus arctos*). The Brown bear produces cubs in January to February and these start to leave the den to follow the mother on hunting trips at approximately 70 to 80 days old and this would coincide with the typical spring/early summertime period that tiles were made in. The young bear would not have fully developed claws at that age, which would account for the lack of claw marks on this bear-type print. At approximately three months old, when leaving the den in spring, the bear cub is around 8kg, so around the lower end of a badger weight range and they would still be feeding from the mother while starting to learn to forage.

6.113. Brown bears were native to Britain but they were actively hunted for fur and used in sports from at least the Roman period; they were in decline until the Late Saxon to medieval period. There are archaeological finds of bones of bear, but they are rare. Sparse remains have been found in Colchester (Curl, 2002; Luff 1992). Bears were used for bear-baiting, using dogs to provoke them. A cub could be evidence of the breeding of wild bears in the area in the Roman period. However, a cub might have been a caught bear, perhaps to be trained for entertainment or sport.

As far as it is known, this would be the first bear print recorded on an archaeological fragment of CBM. While rare, it is possible that others may exist but have been overlooked or incorrectly identified and, until recently, there has been little recording of wild species prints on CBM.

The Eleventh Century Wall Tiles

Paul Drury

Introduction

6.114. A small quantity of polychrome tiles was recovered from Trench 1 (Fig. 29). These were allocated small find numbers and are reported on separately from the remainder of the ceramic building material. A list by context is shown below (Table 26).

Context	SF No.	Type	Tile description and Fig. No.
0002	1008	Tile	Fragment of redware tile with remains of polychrome relief two linked roundels. Figs 29, 5 and 31, 2.
0004	1007	Tile	Fragment of light red tile with remains of polychrome relief petal-shaped decoration, slightly chamfered. Figs 29,1 and 30.1
0033	1095	Tile	Fragment of lead glazed relief tile, light red fine fabric, geometric design. Figs 29,6 and 32, 1.
0131	1042	Tile	Fragments of polychrome relief tile, two linked roundels, redware fabric, slightly chamfered Figs 29, 4 and 31, 1.
0131	1044	Tile	Small fragment of glazed tile, part of polychrome relief dec. Geometric design with raised border. Fig. 33, 2
0131	1045	Tile	Fragment of redware tile with remains of polychrome relief petal shaped decoration, glaze on more than one face Fig. 29, 3
0153	1046	Tile	Small fragment of polychrome relief tile, red fabric, linked roundels, abraded. Figs 30, 3 and 31, 2.
0131	1048	Tile	Fragment of redware tile with remains of polychrome relief petal shaped decoration Figs 29,1 and 30, 1
0131	1049	Tile	Fragment of redware tile with remains of polychrome relief petal-shaped decoration, glaze on more than one face. Fig. 30, 2.
0131	1050	Tile	Fragment of fine light red tile with remains of polychrome relief petal-shaped decoration. Figs 29, 2 and 30, 3.
0165	1054	Tile	Fragment of redware tile with remains of polychrome relief geometric decoration. Fig 32, 1

Table 26. Ceramic wall tiles.

Fabric, form and designs

6.115. The tiles are all in a well-fired orange silty fabric, with a few small voids. The measurable face dimension of one (SF 1048, Figs 29,1 and 30, 1) is about 110mm, and all the fragments are consistent with being from tiles of approximately this size except one fragment (1054) of design 3 from a larger tile. The tiles are 15-18mm thick, one (1048) with a complete flange projecting downwards from one edge to an overall depth of about 60mm. Others of the same design retain evidence of similar flanges but never on adjacent sides, so flanges were either confined to one side or two opposed sides. All the edges are knife-trimmed to a slight undercut, and some have a second 45° bevel across the bottom angle. The designs are raised in relief, more likely moulded rather than stamped.

6.116. The glazed surfaces have variously suffered from failure fully to fuse, resulting in an opaque white appearance (Fig. 29, 5: 1008) and heat damage post-firing resulting in some uncertainty about the intended original colours, compounded by mortar probably from re-use in rubble walling. A plain lead glaze over the orange fabric fires a light brown colour. It is visible particularly in sporadic accidental glazing on the edges, but only occasionally appears on the faces, in the case of Fig. 29,1:1048 probably accidentally, where it appears in patches in the field as well as the ribs. Two other colours were used, an olive green, either on the field (designs 1 and 2)

or overall (design 3), and a dark brown in the compartments of designs 1 and 2 and, on Fig 31, 1:1042, also on the ribs, which normally match the field. This suggests that in making polychrome tiles, materials to produce the colours were applied prior to the overall coating with lead oxide to produce the glaze. The green presumably derives from copper and the dark brown from iron, but scientific analysis would be worthwhile to better understand the materials and processes involved.

6.117. The glaze mixture has in two instances extensively run from the side down the back of the tile. If this happened during firing, it suggests that the tiles were fired on edge, rather than flat as is often suggested.

6.118. Figure 30. Design 01. Four petal design, the field and ribs normally green, but on 1:1048 merging (probably accidentally) into patches of light brown, but the ribs seem consistently light brown. The cells are dark brown except on 3:1050. Five fragments (1:1007, 3:1045, 1:1048, 2:1049, and 3:1050) enable a tentative reconstruction of the design, which is a simplified version of examples published from London and Westminster (Betts *et al.* 1995, 166). All the fragments had flanges, except 1045 which, being a corner piece with no trace of a flange, came from a tile without them.

6.119. Figure 31. Design 02. Four linked roundels, on (1:1042 the field green, the cells dark brown, but the others seem to be plain green (2:1046) or light brown (2:1008, so far as the glaze is fused). Fragments, 2:1008, 1:1042, 1:1046 enable a tentative reconstruction of the design. The links between the roundels are about the same length as the links between the roundels and the edges, so if multiple tiles of this design were laid together, the repeating pattern would be of groups of four closely linked roundels. Fragment SF 1042 probably comes from a tile with flanges, broken off.

6.120. Figure 32. Design 03. Geometric design, seemingly based on a poised square divided into four quadrants and framing a circle, the cells defined by double bands in low relief; olive green glaze becoming brownish where the fabric below is fully oxidised. The truncation of the corners of the poised square in 1:1095 suggests that the design was intended for larger tiles, c.135mm square, confirmed by the corner fragment 1:1054 from a full-size example. Fragment 1095 shows a second bevel on the side.

6.121. Figure 32. Design 04. Fragment with a raised border, 2:1044, the ground glazed greenish-brown, the side double bevelled. A raised border like this is otherwise

recorded only in the single Canterbury design, from which the reconstructed outline is taken (Kjølbye-Biddle 1997, fig 80).

6.122. Figure 32.3 shows a previously unpublished fragment of a frame tile from Bury Abbey, in Bury fabric 2, consistent with the Court Knoll tiles, with a lustrous dark brown glaze on what would have been the visible faces (and more). The meeting edge of the tile is undercut by c. 2mm, to ensure a tight joint in the visible face.

Chemical characterisation and comparison with material from other locations

6.123. Chemical characterisation of the Court Knoll tiles by plasma spectrometry, by Mike Hughes (Appendix D1), facilitated comparison both within the Court Knoll assemblage, and with similar tiles from other locations in southern England, particularly the closest, Bury Abbey (Gem and Keen 1981). The Court Knoll tiles were all made from chemically consistent clay with a low iron content and therefore belong to a single production group, indicating that they were made in the same place and approximately the same time. The Court Knoll tiles are chemically very close to a similar tile from Canterbury (see above), and sufficiently close to fabric 2 tiles at Bury Abbey and fabric 3 tiles at Winchester to suggest that the variations are within the range that would be expected of the products of different kilns in the same geographical and geological area. The composition of the Winchester fabric 3 tiles is comparable analytically to that of Saxo-Norman stamped wares made at Michelmersh, Hampshire, some 14km WSW of Winchester, suggesting that all these tiles were made in the same general location, using low-iron clay from the Reading Beds which outcrop along the foot of the South Downs, as Biddle and Barclay long ago predicted (1974, 152).

Discussion

The tiles

6.124. The Court Knoll tiles belong to a widely, if sparsely, distributed category of pre-conquest glazed relief tiles, often polychrome and mostly associated with major ecclesiastical buildings. The tiles from Court Knoll are in the same fabric as the minority of pre-conquest tiles from Bury Abbey, which as noted above is a close chemical match for similar tiles found in Canterbury and particularly in Winchester (fabric 3), where they were manufactured nearby. The link between Suffolk and Winchester is reinforced by most of the pre-conquest tiles from Bury Abbey, although in a different fabric (fabric 1, white, gritty; not present at Court Knoll) also being a very close chemical match for other glazed tiles from Winchester (fabric 1).

At Bury Abbey, the same design (Gem & Keen 1981, fig 15.6) appears in both Bury fabrics. Winchester/ Michelmersh is emerging as the source of the glazed tiles so far characterised from southern English sites, although those from London, Westminster Abbey (Betts *et al.* 1995), St Albans Abbey, Peterborough Cathedral (Gem & Keen (1981) and Oxford (Biddle & Kjølbye-Biddle 1988) have yet to be comparably analysed. However, it is evident that those from York and Coventry are rather different in fabric from the Winchester tiles, although some designs at All Saints, Pavement, York are similar.

6.125. The location of the southern English source of this rather exotic material near Winchester is unsurprising, given its then status as *de facto* capital of England, nor that there were, from the two fabrics present, at least two supplies of it to Bury Abbey. None of the designs present at Bury Abbey are a precise match for those at Court Knoll, although two at least are generically similar (Gem & Keen 1981, fig 15.7, 9). Nonetheless, it seems likely that the connection between Court Knoll and the makers near Winchester in some way involved the abbey.

6.126. At Winchester similar tiles are associated with the Old Minster, reconstructed before 980x994, but circumstantially at least, the Bury Abbey tiles should date between *c.* 1020, when the pre-conquest masonry churches were completed, and *c.* 1080, when its great Romanesque successor was begun (Gem & Keen 1981, 20). Gem and Keen (1981, 1) concluded that it is likely that within that bracket, the tiles belong around the second quarter of the eleventh century. The tiles at Court Knoll seem likely to have arrived within the same timeframe.

Their use in the building

6.127. These tiles, like those from Bury Abbey, show no sign of wear, even on their highest points, indicating that they were used vertically rather than horizontally, consistent with a significant proportion showing evidence of flanges to hold them in place. The fragment of a border tile from Bury Abbey (Fig. 32 3) provides confirmation of the intended use of such tiles on vertical faces there, probably in slightly recessed panels, as suggested on Fig. 32, 3, which emphasises their similarity to the flanged flat tiles. Lack of surface wear at some other sites leads to the same conclusion, of use on walls, while yet others, including those from Canterbury Cathedral and St Frideswide's, Oxford were, given their notable wear, certainly used on floors.

6.128. The Court Knoll tiles were spatially associated with a rubble-built altar base against the east wall of the chancel of the primary church. The plaster of the east wall was

carried unbroken across the ends of the altar base. On the north side it terminated in a straight vertical line, but short of the front, while on the front itself (only partially uncovered, and damaged) there were fragments of plaster adhering near the base, as on the south. The associated polychrome tiles could have been used on the altar front, or in panels on the east wall. Tile fragments of design 1, particularly SF 1048, show the cream/ white mortar used generally in the primary building phase on the flange, but also a pink mortar containing crushed brick between the tiles, shown on Fig 30, 1. This might suggest that while some flanged tiles were built into the structure as it was carried up, the tiling was completed subsequently, using the pink mortar.

6.129. The pink plaster appears to be a form of *opus signinum*, containing crushed brick or tile, here presumably from reused Roman material which was used extensively in the fabric of the building. In Winchester similar mortar is associated with the Old Minster and referred to as Saxon Old Minster Plaster, also recorded in the eleventh century Nether Wallop church (Kjølbye-Biddle 1997, 197). Some of the tile fragments also have traces of mortar on their faces, probably from secondary incorporation in rubble walling.

Conclusions

6.130. These tiles are of exceptional importance because they are associated, spatially if not stratigraphically, with a specific architectural context. Their association with an altar base in the centre of the east wall of an ambitious pre-conquest church provides the first clear and reasonably direct evidence of how some of these rare objects were intended to be used.

6.131. Most of these tiles are associated with high-status monastic establishments, raising questions about whether finds associated with churches (All Saints Pavement, York and St Lawrence Jewry, London) represent recycled or stray material. Court Knoll provides a primary association with a church, albeit one whose patronal status is unclear. The tiles are themselves an indicator of elite status or patronage but were clearly not confined to major monastic houses and cathedrals. The pink plaster is a form of *opus signinum*, containing crushed brick or tile, here presumably reused Roman material which was used extensively in the fabric of the building. In Winchester similar mortar is associated with the Old Minster and referred to as Saxon Old Minster Plaster, also recorded in the 11th century Nether Wallop church (Kjølbye-Biddle 1997, 197).

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Mortar analytical report

Richenda Goffin

Introduction

6.134. A very large assemblage of mortar was recovered from the excavation. The report below provides a basic description of the main mortar types identified, together with quantification, which is shown in Appendix B Table B4. The assemblage is discussed by individual trench and includes a brief discussion of individual mortar mouldings which are more fully described elsewhere in this report. In addition, eight mortar samples, some of which were taken from *in-situ* walling were sent for mortar analysis, with the results shown as a separate report in Appendix D2.

6.135. A total of 4928 fragments with an overall weight of 133,940kg was recovered from five of the seven trenches. These figures are approximate but provide an idea of the sheer quantity of this material. The totals incorporate the overall weights of bags of mortar samples taken from walls which consist of loose mortar powder, rather than actual solid mortar fragments. Also, some of the bags contained so many small pieces that they have not been fully counted for this report.

6.136. The assemblage is varied in terms of condition, ranging from powdery remains through to individual fragments consisting of one mortar layer or more, and a number of pieces featuring the same mortar which have a flat limewashed surface. In addition, some fragments of moulded mortar or stucco were present, which form elements of the décor likely to be associated with the Late Saxon polychrome tiles.

These moulded fragments are described more fully in a separate part of this report but are briefly mentioned below.

Methodology

6.137. The mortar was sorted into different fabric types initially by visual inspection with the naked eye. The assemblage was quantified by context by fabric weight and mostly by count. Individual features were recorded including whether fragments were burnt or sooted, and/or whether they had flat surfaces or limewash. Selected samples were sent for composition analysis (Appendix D2). Matches were also sought for the mortar associated with the Late Saxon polychrome tiles.

6.138. The quantification was entered onto an Excel spreadsheet, which is available in the archive for the project.

Distribution of the mortar

6.139. Initial scanning suggests that the main mortar fabrics were found in all the five trenches which had mortar finds. Trenches 1, 2, 4, 6 and 7, all of which were located towards the eastern side of the site, close to the buildings. Tables 27 and 28 show the main fabric types represented, with a very brief fabric description.

Fabric types	Trench 1		Trench 2		Trench 4		Trench 6		Trench 7	
	No frags	Wt (g, kg)	No frags	Wt (g, kg)	No frags	Wt (g, kg)	No frags	Wt (g, kg)	No frags	Wt (g, kg)
A	2902	40,516	407	20,848	30	1007	166	4318	127	7897
B	70	3095	48	1676	10	116	24	827	17	2239
C/C?	52	3462	11	2870	10	360	0	0	12	1365
H/H?	217	5942	144	7324	28	1128	16	1769	1	235
D	1	90	Many	5210	2	305	0	0	15	1000
G	3	210	0	0	0	0	0	0	0	0
M	26	4242	4	272	3	545	9	1980	2	125
R	5	315	2	95	0	0	0	0	0	0
Z	11	373	26	1188	51	650	0	0	0	0
Un-assigned	46	1528	295	3384	9	48	1	268	0	0
A/H both fabs	0	0	106	4124	0	0	0	0	0	0
X	0	0	Many	305	6	390	0	0	13	219
Totals	3333	59,853	1043	47,296	149	4,549	216	9,162	187	13080

Table 27. Breakdown of mortar fabrics by trench.

Fabric name	Brief description and comments	Cliveden mortar sample no and Court Knoll context no
Fabric A	Buff-coloured to gingery fine sandy mortar with moderate chalk inclusions. Many fragments are pink in colour presumably through contact with heat. Some surfaces are blackened through burning. Many pieces have a flat surface, often covered with plain limewash. (Plate * No. 1 from 0131).	PO532 Context 0131 with limewash
Fabric B	Fine pink lime-rich matrix with frequent small/medium crushed brick and tile frags. <i>Opus signinum</i> type and considered to be Roman.	
Fabric C	Like Fab A but with bigger lumps of chalk and slightly coarser. Possibly contemporaneous with fabric A?	PO528 Context 0060; ?PO529 Context 0127
Fabric D	Hard cream fabric with large pebbles, more like floor level mortar, possible with floor surface?	
Fabric G	Fine pink mortar with moderate chalk inclusions, can have a flat surface, could be burnt Fabric A.	
Fabric H	Hard cream fab with large pebbles, some frags have dark bivalve shell. More like floor level make-up material or surface.	PO535 Context 0128
Fabric R	Name given to mortar on the reverse of flint facing for walls, as present in context 0153 in Trench 1.	
Fabric M	Sandy gingery hard fabric, possibly flooring.	
Fabric Z	Hard white mortar with white surface.	
Fabric X	Miscellaneous fabrics not fully described in the catalogue.	
Unassigned	Mainly mortar samples taken from walls.	

Table 28. Fabric descriptions of main mortar types.

6.140. A large proportion of the mortar present is made in Fabric A, a type that is often discoloured pink through an episode of overheating/burning.

6.141. Preliminary investigation shows another fabric group (H/D/Z) which is made of much harder, coarser cream mortar and contains medium to large pebbles. The composition is more suitable to make up the initial construction layer of a mortar wall, or to make up a hard floor surface.

6.142. Fabric M appears to bear some physical similarity to Fabric 1 and may be associated with it. It may be from flooring rather than walls as it is particularly hard and tends to contain coarser lumps.

6.143. Fragments of pink *opus signinum* mortar (Fabric B, Fig. 33.1) were consistently found across the site. This material, which accompanies the very large assemblage of Roman ceramic building material recovered from the site, has not been studied in any detail.

6.144. A small group of a discrete mortar type was identified as Fabric R. This was mainly found in 0154 (Trench 2 Phase 4) and consists of mortar adhering to flints, showing that it is the remains of flint walling.

6.145. Fabric X is a title given to fabrics of a miscellaneous nature that did not seem to re-occur elsewhere. These were not studied in detail.

The mortar from Trench 1

6.146. A minimum of 3333 fragments of mortar and faced mortar with an overall weight of 59,853kg was recorded from Trench 1. A breakdown of the main fabrics from the trench are shown in Table 28.

6.147. Fabric A describes the principal mortar type which is considered to have been applied to the face of the internal walls of Structure 1. It is made of a relatively fine sandy matrix suitable to make up an upper layer of facing mortar rather than representing part of the structural core of a wall or floor (Fig. 33.2). Many of the fragments have a flat surface, and some of these have been covered with a plain whitewash (Fig. 33.3). In some cases, the fragments show evidence of sooting on their external faces, indicative of scorching or direct contact with heat. Many pieces were recorded as being pink in colour, through exposure to heat or fire. This corresponds well with reddening at the base of the walls themselves which was observed by the excavators.

6.148. It also seems likely that one of the other main fabric types, mortar C, may have adhered to the underside of Fabric A, forming the first layer of mortar which would have been applied directly to the wall. It is much coarser and harder and less affected by heat. This fabric is present in fragments on its own, but also there are a few pieces which appear to be both layers of the *arriccio*, that is both A and C within the same fragment, confirming that C is the underlying mortar layer, and of the same phase as A. Figure 33.4 shows both fabrics together.

6.149. A second grouping of two different mortar types was recorded, Fabric D and Fabric H. These were made in a hard off-white matrix, less sandy than Fabrics A/C; some of them had a flat surface. Their hardness and the coarseness of the inclusions suggest that this material might represent a floor surface and make-up deposits. Burning or reddening was not observed on any of the fragments, perhaps indicating that they were not part of Structure 1.

6.150. All the Late Saxon polychrome tiles were recovered from this trench, as discussed above.

6.151. Patches of mortar adhering to the wall of 0107 (Structure 1) were shown to have been rendered. The rectangular stone structure 0162 was added to the wall once it had been built, but both appear to have been covered with the same mortar and limewash surface at the same.

6.152. A bag of mortar from the later Structure 2, represented by a curving wall, was submitted as a mortar sample (Appendix D2, Cliveden PO530 Context 0059 Sample 3). The mortar composition is similar to a sample submitted from a heavily robbed wall in Trench 6 (Appendix D2, Cliveden PO531, Context 0205 Sample 4) so it may be the same phase of building.

6.153. The presence of a few fragments of mortar which still have the remains of flint facing on them (Fabric R) is significant. These were present in Trench 1 in layer 0135 and Trench 2 in layer 0154. Both of these layers are associated with the demolition of Structure 1, which may indicate that some elements of this first building had flint faced walls.

The mortar from Trench 2

6.154. A total of 1043 fragments of mortar weighing 47,296kg was collected from this trench. A breakdown by count and weight and broad fabric type is shown in Table 28.

6.155. Trench 2 was located to the south-west of Trench 1. It contained a robber trench 0063 which may have had a solid mortared footing at the base, and a rammed chalk floor 0112 which was of a similar level to the chalk floors in Trench 1. A large chunk of fallen masonry consisting of a number of mortared tiles forming part of an arch was probably attached to this wall 0149, and mortar from this (possibly Fabric type C) was submitted for fabric analysis. Appendix D2, Cliveden PO529, Sample 2 Group 0127.

6.156. It is noticeable that this trench also contained many fragments of the finer Fabric A-type mouldings and flat fragments with limewash, and that many of these had also been affected by heat.

The mortar from Trench 4

6.157. Trench 4 was located to the south-west of Trench 2. The remains of several structural features were recorded in the trench. Relatively small quantities of mortar were recovered from this trench and the material has not been studied in detail.

6.158. A total of 149 fragments weighing 4.549kg was recovered from this trench. No fragments of moulded mortar or decorated tiles were found. A breakdown by count and weight and broad fabric type is shown in Table 28.

The mortar from Trench 6

6.159. A total of 216 fragments of mortar were recorded from this trench, with an overall weight of 9.162kg. A breakdown by count and weight and broad fabric type is shown in Table 28.

6.160. Only a few pieces were recovered from the robber trench infill (0170). Six fragments of very hard yellow buff mortar with large pebbles, like a floor surface were collected from 0146 (fabric H(Z)). A relatively large quantity of the Fabric A type mortar was identified, including 135 fragments from layer 0160. A simple convex moulded fragment was found in 0184, which was a layer directly under wall 0191. It has not been burnt and may not have been limewashed originally.

The mortar from Trench 7

6.161. Some 187 fragments weighing with 13,080g were recovered from this trench which lay to the north of Trenches 1 and 6. The assemblage consisted mainly of Fabric A type mortar fragments, as shown in Table 28.

Conclusions

6.162. A large quantity of mortar and moulded fragments was recovered from the site, which has been briefly surveyed above. One fabric (B) is considered to be Roman, as it is made in classic *opus signinum* and it is possible that some of the other mortar may belong to this period as well. This material may have been brought into the site along with the Roman brick and tile. Other mortar types studied were robust and coarse in terms of their construction, and these include some fabrics which may have been used as the make-up of probable post-Roman floor surfaces.

6.163. The assemblage and the *in-situ* structural remains show that Structure 1 was at least partially faced with mortar with a limewashed surface and that this covered the altar base projecting from the east wall. The sheer number of different types of mortar mouldings, some of which were also limewashed, suggest some elaborate

internal decoration from within this building and which is discussed in more detail below.

The Plaster Mouldings

Paul Drury

Material and technique

6.164. The walls of the church were largely made of recycled rubble from a Romano-British building, including many recycled bonding tiles used for roughly quoining openings and to form the projecting grounds for plaster mouldings. Surviving impressions of tile edges on the backs of the moulding fragments are indicated on the sectional drawings (Figs 36-40? check). These impressions have been consistently used to guide the vertical orientation of the drawings and in the orientation of the diagrammatic sectional reconstructions in Fig. 37. Fragments aligned using two more or less consistent impressions, like 1035, are more reliable than those presenting only one (like 0046, which does not look comfortable), since tiles could have presented an edge broken at an angle.

6.165. Some of the plasterwork fragments are clearly from the arrises of openings. Three (Fig. 35, 1047, 0121, 0153) are likely to be from the splays of small windows. They show angles ranging from 148° to 153°, suggesting that the intended angle of the internal splay was 150°/ 60°. The excavated head of a fallen window arch (Fig. 14.3 and 14.4) shows thick plaster on a soffit roughly formed with tile fragments; Fig 38, 0049c is from a similar situation, tiles being used to form a rough arch. The larger radius soffit of Fig 38: 0049d may be from the rere-arch of a larger opening, presumably a doorway. The fragment is from the internal arris of the opening, with the plaster continuing up the interior face of the wall. The interior of the building was evidently thickly plastered, as would be expected, in two coats, clearly visible in 0049d, the first achieving a plane surface over the rough walling, the second, of consistent thickness, the finish. Both are in Goffin's Fabric A, creamy white in colour.

6.166. The plaster mouldings are built up in a similar way, to achieve the basic profile. Fragment 1044 (Fig 37.5) shows clearly how projecting tile courses formed ledges on which the profile was built up, with a small patch of pink mortar as the lowest surviving layer of the build-up on the tile ledge. over the roughly built structure (see reconstructed section, 1044, Fig 39:). Fragments 0049b (Fig 37.3) and: 1064 (Fig. 38.1) show that the salient edges of underlying tiles would in some cases have been visible through the surface of the base coats. The finishing coat, least 5mm deep,

might differ in colour, usually being darker than the base layer. Some well-preserved elements indicate a final surface burnished as it was setting, with short horizontal strokes visible on the finished surface. Occasionally this appears to be on a very thin layer, a fraction of a millimetre, probably laitance created by re-wetting the surface in the finishing process. Irregularities of line make it clear that the mouldings were formed by hand, not using a profile run on a straight edge. Both plain and moulded plasterwork was limewashed, sometimes at least two coats being identifiable. There is no sign of coloured paintwork.

The mouldings

6.167. The surviving moulding fragments seem to be mostly variants of a similar profile, with a fillet whose face is often canted back, and has slightly rounded edges on the longest surviving profile, flanking a double curve, as reconstructed in Fig 39.1. However, the width of the fillets varies, tending towards c.12 mm (Fig 37.1, 0046, Fig. 37.5, 1044) and c.20mm wide (Figs 37.3, 0049b, 38.5, 1053). Fragment 1044 (Fig 39.1) has a slight ridge at the back edge of the flat top, showing that (ignoring the rounding of the top corner) the fillet projected about 37mm from the wall face above; 0046 (Fig. 37.1), with a narrower fillet, had a similar projection, about 35mm. In the absence of any other distinctive moulding shape, or pieces showing the curve dying into the wall, there seem to be two potential interpretations of the evidence for the complete section. First, that the fragments with fillets flanked two broad sizes of similar, symmetrical, bulbous mouldings; or second, that the wide and narrow fillets framed the top and bottom respectively of the same bulbous moulding. However, the symmetrical curve of the best surviving moulding, 1044, points strongly to an essentially symmetrical profile (Fig. 37.5). The other two substantial fragments of the bulbous moulding itself, 1053 (Fig. 38.5) and 0184 (Fig. 37.4, are consistent with this (Fig. 39). Reconstruction on the basis of symmetry suggests that 1044 was about 115mm deep overall; with much less accuracy, 1053 could be part of a moulding about 105mm deep. These, however, represent the smaller end of the range; the larger fillet fragments 0049b and 0153, suggest much wider and deeper mouldings, perhaps around 200mm deep, with what may be a square projection from the wall of the larger, 049b (Fig. 37.3), being twice the depth of 1044, while two other fragments, 1064, 1066 (Figs 38.1 and 38.4) have a similar projection, but with uncertainty whether they belong to the same broad group of bulbous mouldings framed by fillets. The three recognisable fragments of the bulbous moulding itself, in context, are compared in partial reconstruction in Fig 39.

6.168. The fragment 1035 (Fig. 40) was part of an impost, projecting a variable 50-60mm from the base of the presumed arch around which it was formed. The dashed line in plan represents the outline of the arc of a block, probably of an engaged column, around which the moulding was formed. The impost profile probably continued beyond the opening as a string course. Two small-scale mouldings, 0049 and 1065, are different from the others, and suggest smaller-scale work.

Discussion

6.169. The responds of the tower arch at St Bene't, Cambridge (Taylor and Taylor 1965-78, I, 129-32, fig 59; iii, 905-8), which continue across the east face of the west wall, include similar bulbous mouldings between fillets, closer to a true half roll, easier to achieve in stone than plaster. Fernie (1983, 151-2, 178) dates St Bene't to the second quarter of the eleventh century or later, arguing that curved profiles in general indicate an eleventh century date (ibid, 138). More distantly, at St Swithun, Headbourne Worthy, the stone string course has a convex moulding framed between two fillets, a harder-edged version of the bulbous moulding 1035 at Court Knoll (Taylor and Taylor 1965-78, I, 287-91; iii, 908 and fig 907). Hence, it is not the form of the mouldings from Court Knoll that is unusual for the late pre-conquest period, but the material of which they are made, lime plaster formed around and supported by rough grounds in masonry. In the absence of suitable local stone it is a logical substitute, extensively employed in this way from at least the 16th century onwards, but save for Court Knoll, seemingly otherwise undocumented in the late pre-conquest period.

6.170. The tower of the church of Holy Trinity, Colchester, has rectangular profile architectural mouldings executed wholly in recycled Roman tiles (Taylor and Taylor 1965-78, I, 162-4; RCHM 1922, 33-5). The details are abstracted to sections that could be made with whole tiles, carefully laid, most likely intended, internally and externally, to contrast with plastered rubble walls. This is an earlier tradition than curved profiles but not necessarily indicating an earlier date. Its relevance here is that Holy Trinity shares with Court Knoll the concept of making projecting string courses and abaci using Roman tiles, but at the latter the courses were rough grounds to support plaster mouldings, similar to profiles executed in stonework at St Bene't, Cambridge. That Court Knoll is the only recorded example of this technique may at least in part be due to its fragility. Internal plaster is prone to loss through damp, interventions, and 19th century 'restoration', while externally loss through weathering would be almost inevitable in the intervening centuries. The

Court Knoll material probably owes its albeit fragmentary survival to the early destruction of the building, combined with modern excavation protocols which enabled its recovery.

Summary of the chemical analysis of the mortar.

6.171. Eight samples were sent to Cliveden conservation for analysis of the composition of mortar samples. This laboratory provides information on mortar mixes for heritage conservation and provided a breakdown of the composition of the eight samples sent. The full report is held in Appendix D2, but a summary of the basic make-up of the samples is included in the table below.

Context no.	Cliveden sample no.	Lime, sand, ash proportion
0060	P0528	Lime binder and an aggregate of sand with a small portion of ash (possibly lime ash*) in the approximate proportions of 1:1 with $\frac{1}{8}$ ash.
0127	P0529	Lime binder and an aggregate of sand with a small portion of ash (possibly lime ash*) in the approximate proportions of 1:1 with $\frac{1}{4}$ part ash.
0059	P0530	Lime binder and an aggregate of sand with a small portion of pozzolanic material, (judging by the insoluble aggregate to be a combination of brick or terracotta particles/dust and ash – possibly lime ash*) in the approximate proportions of $1\frac{1}{2}$: $2\frac{1}{2}$ with $\frac{1}{4}$ part pozzolan.
0205	P0531	Lime binder and an aggregate of sand in the approximate proportions of $1\frac{1}{2}$: $2\frac{1}{2}$.
0131	P0532	Lime binder and an aggregate blend of sand and pozzolanic material, such as brick/terracotta dust, in the approximate proportions of $1\frac{1}{4}$: $1\frac{3}{4}$:1.
0191	P0533	Lime binder and an aggregate blend of sand and ash (possibly lime ash*) in the approximate proportions of $1\frac{3}{4}$: $1\frac{1}{2}$: $\frac{3}{4}$.
0049	P0534	Lime binder and an aggregate blend of sand and ash (possibly lime ash*) in the approximate proportions of 2: $1\frac{1}{2}$: $\frac{3}{4}$.
0128	P0535	Lime binder and an aggregate blend of sand and ash (possibly lime ash*) in the approximate proportions of 1:3: $\frac{1}{4}$.

Table 29. Summary of results of analysis of the composition of the mortar.

6.172. This shows two broadly distinct mortars, Mortar A that has an approximately equal mix of lime and sand, and Mortar B with a lower proportion of lime to sand. Mortar A occurs in context 0060, 0127, 0049 and 0191. Mortar B occurs in 0059, 0205 and 0128.

The Window Glass

Rachel Tyson

Introduction

6.173. Approximately sixty fragments were recovered from two contexts in Trench 1. Following assessment, samples were analysed by Sarah Paynter for their chemical

composition to investigate whether this could throw any light on their origin or date, and the fragments were consolidated in a conservation laboratory, before being re-examined by a glass specialist. The individual fragments of glass were recorded in an Excel database, available in the site archive. Overall, the fragments were highly fragmented and in poor condition. The original colour of the glass could not be seen as the entire thickness of the glass had decomposed to opaque flaky layers in shades of cream, white, grey and blue internally, with opaque brown surface weathering, and sometimes a little iridescence. Very few original grozed edges, the characteristic result of the medieval glaziers controlled ‘nibbling’ of the glass quarry to the correct shape with an iron tool, could be identified.

The assemblage

6.174. One fragment clearly showed original grozed edges on opposite edges of the fragment, suggesting it may have come from a possible rectangular quarry c. 20mm in width. This is a common shape and size in medieval window glass of the 13th and 14th centuries, both as a border strip surrounding a window, and as part of an abstract geometric pattern (Graves 2000, 447, 419–20, for example, no. 377). A maximum of only nine fragments from Court Knoll showed any surviving grozing, and most of those, all from context 0131, comprised only short single edges; consequently, the original quarry shapes cannot be determined. The fragments from context 0165 were more deteriorated than those from 0131, and no clear grozed edges were preserved, but some fragments showed edges that were ‘less damaged’, and it is possible that these were the original edges, which would have been grozed. If this is the case, they included a fragment with a curved ‘arch’ over one section of the fragment, and another with three adjacent edges, the angles between both greater than a right angle. The approximate area of each fragment was recorded, and the total area from both contexts was 99cm²: if all combined, the equivalent of a pane of glass measuring just under 10cm by 10cm (Table 30).

Context no.	Number of fragments	Area represented	Number of possibly grozed edges
0131	33–34	70 cm ²	<9
0165	26–27	29cm ²	0
Total	59–61	99cm ²	<9

Table 30. Quantification of glass by context.

6.175. A number of fragments from 0131 were bent and distorted, some severely, with some edges appearing rounded. This is likely to be heat damage from a fire, causing the glass to partially melt. One fragment from 0165 appears to have molten lead

over the glass surface, but with crystallised glass layers internally. This may be lead came that has been melted in the heat of a fire while still attached to the glass.

6.176. The Court Knoll glass has survived particularly poorly, with no transparent glass of the original colour visible throughout the thickness of the fragments. Compositional analysis by Sarah Paynter has detected chemicals in the glass that suggest that pale pink/colourless, and pale blue glass may have been present (Paynter, Appendix D), in addition to the pale green/colourless glass that was characteristic of every medieval glazing scheme. No trace of painted decoration could be detected, but the condition of the surfaces was so altered that it cannot be ruled out completely (*ibid.*).

6.177. Dating the glass is problematic, owing partly to the absence of closely datable features on the fragments, but also to the lack of comparable excavated glass that can be dated, particularly prior to the 13th century. However, it is clear from its appearance and condition that it is a potash or 'forest' glass, using potassium-rich plant ashes as the alkali component of the glass recipe. Roman and earlier medieval glass was by contrast 'soda' glass, using sodium-rich plant ash from especially around the eastern Mediterranean, which was much more durable when buried. From the 8th century, potash began to be used in much northern European glass. While soda glass continued to be recycled to some extent, it was not long until most northern European glass was the characteristic potash 'forest' glass that decomposes severely during burial, especially familiar from the 13th to 16th century.

6.178. The thickness of the Court Knoll glass fragments, ranging from c.2.3 to 4.7mm, but mostly between 3 to 4mm, is typical of finds of window glass at other sites dating to the 13th century; for example, 13th-century glass at St Andrew's Priory, York was in the range 3 to 6mm thick (Graves 2000, 374), while 14th-century patterned quarries from the same site were 1 to 2mm thick (*ibid.*, 379). At the abbey of Holme Cultram in Cumbria, the early to mid 13th-century opaque-decayed fragments were c.3mm thick, and the late 13th to 14th-century better-preserved fragments generally less than 2mm thick (Tyson 2013, 59). Likewise, glass from excavations at Bayham Abbey in Kent records 13th-century glass as typically 4mm thick, and 15th-century glass as 2mm thick (Kerr 1983, 58). The thickness of potash glass fragments prior to the 13th century is not published.

6.179. Archaeological examples of potash glass are scarce before the 13th century. Potash window glass was being cut, grozed and glazed in Edward the Confessor's

Westminster cathedral in the mid 11th century (Mortimer 1993), although we do not know where it was made. An opaque-weathered painted fragment found in the Old Minster excavations in Winchester was dated stratigraphically to the early to mid 11th century (CG RF 4834, Marks 1993, 107). Excavations at Fountains Abbey uncovered fragments of opaque and badly decayed window glass thought to have come from the first stone church, built between 1135 and 1146/7 (Marks 1993, 111). Many excavated examples are known dating to the 13th century (see above). There is documentary evidence that potash glass was made in English glasshouses from the 13th century (Marks 1993, 30), and in Germany by the 12th century, where the monk Theophilus describes how to make it from raw materials, as well as how to make windows and vessels (Hawthorne and Stanley Smith 1979). It is thought that coloured window glass was imported from France or Germany throughout the medieval period (Marks 1993, 30–1).

Conclusion

6.180. In conclusion, despite the small quantity of poorly preserved glass, we are certainly able to say that a building at Court Knoll had glazed windows in the medieval period; the appearance suggests they probably date to the 13th century or earlier. The compositional type does not have an exact match with any comparators, but it has some similarities with 12th/13th-century or earlier glass (Paynter 2019). Potash window glass was being used certainly by the 11th century in England. It is possible that the glazing scheme included differently shaped quarries, and that some quarries were coloured glass (*ibid.*). No painted decoration can be seen, but the poor condition of the glass means that this cannot be ruled out. Any building glazed at this period was of high status.

Note on nails associated with glazing

6.181. The possibility that the nails with lozenge-shaped heads recovered as small finds from the site could have been used for securing the windows is discussed below.

6.182. Closing or ‘cloring’ nails were used to secure the lead comes in place during the construction of the window with quarries and lead comes – described by the 12th-century monk Theophilus writing on glassmaking in Germany in the treatise *On Divers Arts*: ‘You should also have forty nails, a finger long, slender and round at one end and at the other square and bent well outward so that a hole appears in the middle’ (‘Chapter 27. Assembling Windows and Soldering Them’, in Hawthorne and Stanley Smith 1979, 70–1). Hawthorne and Stanley Smith comment: ‘We believe

these nails had a square upper shank and a wide, flat, square head made by punching a hole and turning out the sides to make four wings. Others have supposed, with perhaps equal justification, that a simple round loop of square-sectioned iron was meant' (ibid.). A 14th-century glaziers' table found at Gerona Cathedral on Spain, with a window design drawn on it, shows the holes from where nails held each lead came in place while the window was being made up (Brown 1994, 18–19). On 1 August 1351, 250 'clozyngnaill' costing 18d were purchased for St Stephen's Chapel, Westminster, during glazing (Marks 1993, 36). Pam Graves (Graves 2000, 346) says 'Medieval representations of glaziers' nails show them to be broad- perhaps flat-headed (see the Gild of Glass-Painters' Arms in the Bowet window (nX), and in the Martyrdom window (Sx) of York Minster. Medieval glaziers' nails may have been excavated at the Augustinian hospital at Soutra, Lothian, possibly dating to the 14th century (A. Chisholm, pers. comm.). Nowadays farriers' nails are often used.'

- 6.183. Theophilus suggests that the finished window should be fixed in place in a wooden frame strengthened with nails (On Divers Arts Chapter 29: Hawthorne and Stanley Smith 1979, 72). Graves states that, in a stone building such as a church, wooden frames were often used in the 12th and early 13th centuries, but they were subsequently inserted directly into the window stonework (Graves 2000, 347).

Technological Analysis of the window glass

Sarah Paynter – See Appendix D3 for complete report

Introduction

- 6.184. Approximately sixty fragments of window glass were recovered during excavations at Court Knoll during 2016 and assessed by glass specialist Rachel Tyson (see above). Some were deformed through heat and all were in poor condition, delaminating quickly when handled, and an opaque dark colour, where they would originally have been transparent and lightly tinted.
- 6.185. The glass was found associated with tiles of the Late Saxon period and the condition of the glass suggested that it was forest glass of the type introduced towards the end of the 1st millennium AD and used through the first half of the 2nd millennium AD. The majority of fragments are from context 0131, with small quantities from several other contexts. No decoration was discernible to aid dating. Rachel Tyson records the thickness as around 3mm, typical of glass from c. 12th to 14th centuries.

Background

- 6.186. In the 1st millennium AD, glass was imported to England, and often re-melted, recycled and worked, but there is no evidence that glass was actually made in Britain from the raw materials until after the Norman Conquest. Documents refer to the French craftsmen who brought their expertise to the glazing of celestial buildings in Britain in the 8th century (Cramp 2005). The glass used was a soda-lime-silica type, sometimes known as natron glass, which survives very well in archaeological contexts.
- 6.187. In continental Europe at about the same time, a new type of glass was developed. It was made from the ashes of plants and sometimes called forest glass or potash glass because it contains high concentrations of potassium from the plant ashes (Wedepohl 1997). This potassium-lime-silica glass started to replace the earlier natron glass, although recycled natron glass was still used to make dark blue windows. Well preserved fragments of this dark blue glass have been found at UK sites, including York Minster, Eynsham Abbey and Winchester Cathedral, into the 12th century (Cox *et al.* 1979; Paynter and Doonan 2002).
- 6.188. Over time, changes to the proportions of ash to sand, and the species and parts of the plants being ashed, resulted in a wide range of forest glass compositions being made across continental Europe and in the UK. These forest or wood ash glass types continued to be used well into the post-medieval period.

The English glass industry

- 6.189. The English glass industry developed mainly in the wooded areas of the Weald, of Surrey and Sussex, and in Cannock Chase, Staffordshire (Kenyon 1967; Linford and Welch 2004; Mortimer 1997; Crossley 1994). The wood was important as the furnaces were heavy consumers of fuel and the ashes of plants were also used as a raw material for the glass. The glassmakers in these areas are linked, via records of the time, to glazing schemes in notable buildings, including York Minster for Staffordshire and the Palace of Westminster and Windsor Castle for the Weald (see Kenyon 1967).
- 6.190. In the Weald, the earliest possible indications of a glass industry are records of a Frenchman Lawrence Vitrearius of Normandy who was granted land in Sussex in AD 1220, and in 1240 Henry III commissioned the glass for Westminster Abbey from him (although it is not always clear whether the person named only procured the glass or actually made it) (Kenyon 1967; Crossley 1994). No archaeological

evidence for glassmaking in the 13th century has been found yet for the Weald but the furnace at Blunden's Wood, Surrey, had a final firing around AD 1330 (Dungworth and Paynter 2010). There are also furnace remains dated to the 13th century in Staffordshire (Linford and Welch 2004).

6.191. Glassmaking continued sporadically in both regions and glass was also obtained from continental Europe, especially in specialised colours (Freestone *et al.* 2010; Brill and Pongracz 2004; Spencer *et al.* 2018). In the 1560s, another influx of glassworkers from Lorraine and Normandy transformed the English industry (Kenyon 1967), which was thriving by this time (Crossley 1972). Although the glass was still made using plant ashes, it is likely that different species were used, and the glass composition changes to match contemporary glass in Europe, which by this time contains a lot more calcium. The resulting glass is far more resistant to weathering than the glass made by the earlier English industry.

Glass types

6.192. For the glass made in Britain, so far known, there is a fairly clear distinction between the earlier potash glass (of the 14th to the later 16th century), and the glass made after the 1560s, which has been established by analysing the glass waste found at glass furnace sites (Dungworth and Paynter 2010). The situation on the continent is far more complicated however, and glass was often imported from far afield for high status glazing schemes, particularly if specialised colours were required. Studies of cathedral window glass tend to identify a mixture of glass types, some imported and some perhaps local (Spencer *et al.* 2018; Freestone *et al.* 2010; Brill and Pongracz 2004). Continental glasses, particularly the earlier ones, do not fit neatly into the categories familiar in England, and efforts to differentiate consistently between French, German and English glass have met with varying success. There have been attempts to establish a broad chronology for the different compositions (Wedepohl 1997; Brill 1999), although this chronology is still developing (Table 31).

Suggested date range	Known as	Composition	Durability
Until 8th century (until 12th century for dark blue glass)	Natron glass or soda-lime-silica glass	Na ₂ O >15wt%	Very good
Late 8th to 10th centuries	Early forest, potash or woodash glass	K ₂ O ~10wt%, SiO ₂ > 50wt% CaO/K ₂ O ~ 1-2	Poor
11th to 14th centuries (until ~1560s in England)	Forest, potash or woodash glass	K ₂ O >10wt%, as much as ~25wt% CaO/K ₂ O ~ 0.5-1.3 SiO ₂ variable, possibly lower in German glass	Poor
12th to 14th centuries	Experimental woodash lime glass	CaO/K ₂ O ~2 SiO ₂ ~50wt% or less	Very poor
15th century onwards (~1560s onwards in England)	Woodash lime glass, high lime low alkali (HLLA) glass	K ₂ O < 9wt% SiO ₂ > 50wt% CaO/K ₂ O > 3	Good

Table 31. Tentative overview of changing window glass compositions, using descriptions based on Wedepohl (1997).

Method

6.193. Medieval glass often survives very poorly but frequently a thin layer of unaltered glass is preserved, sandwiched between the outer weathering layers. In the Court Knoll glass, examination of most fragments failed to find surviving glass and the glass was soft and crumbled during sampling. One fragment (from context 0131B) was firmer during sampling but this was heat deformed and discoloured.

6.194. Some pieces were mounted in resin for examination by scanning electron microscopy, in case tiny areas of surviving glass might be found at high magnification. Fragments were selected from the major contexts. Polishing of the fragments was very difficult as they were so soft but incremental layers were ground away and inspected at intervals for surviving glass.

6.195. The electron microscope was an FEI Inspect operated at 25KeV with an Inca X-act energy dispersive spectrometer for analysis of the composition. Corning glass standards of known composition were analysed at the same time to ensure the precision and accuracy of the results, which are given in Table D4, Appendix D3.

Results

6.196. One small area of preserved glass, about a millimetre in diameter, was found in a sample from context 0131B. There were no microstructural signs of weathering in this area, the results came to a total of nearly 100%, and three analyses were undertaken, which all gave very similar results, so the analysis is thought to be representative of the original glass. The results are given in Table D5, Appendix D3.

6.197. The remaining samples of glass were entirely weathered to different degrees (Fig. 41). Unaltered glass should appear a uniform light grey in SEM images but instead many areas have devitrified, and the resulting crystals scatter light, causing the glass to appear milky and opaque. Minerals can be seen filling cracks in the glass, appearing as feathery black staining by eye. Some areas of glass looked intact at first, but on close inspection these areas contained weathering layers, and analysis showed that they were depleted in potassium, which is leached out in the early stages of the weathering process.

6.198. Some fragments had distinct layers on the surface, but these were seen on both the inside and outside surface, as well as the edges of the fragments, which is not consistent with painted decoration. Analysis identified these layers as weathering products, rich in calcium, phosphorus, and sometimes manganese. A fragment of glass was also scanned for chemical traces of paint using X-ray fluorescence spectrometry, but no signs of surface decoration were found.

Discussion

6.199. Although there are many window glass analyses with which to compare, few of the assemblages are closely dated. Medieval window glass often comes from mixed archaeological deposits (Paynter and Doonan 2002) or museum collections (Brill 1999), and is dated to within a few centuries by its appearance and style of decoration, although there are occasional analyses of dated windows *in situ* (Freestone et al. 2010). Most analytical data pertains to windows from the 14th century and later or from the continent; 11th- to 14th-century glass is not as well represented, particularly from the UK.

6.200. The Court Knoll glass is a forest type glass, made from plant ashes, but it is unusual in several respects and no exact match has been found for it. The composition of the glass is dependent on when and where the glass was made, both of which are unknowns here. Without an exact match, neither of these questions can be answered with certainty, but some possibilities are more likely than others, and these are discussed below.

Original appearance of the glass

6.201. In the single successfully analysed fragment of glass, the low levels of iron combined with the high manganese have combined to produce a pale pink hue, which was just visible in the polished section. Analysis of another glass fragment, although weathered, detected copper and zinc at low levels. Similar levels of copper

and zinc have been found in light blue medieval window glass, as in the 13th-century glass from Elgin Cathedral (Spencer *et al.* 2018). (Copper and zinc may also be found in red flashed glass and dark blue, cobalt coloured glass, but both seem less likely here as no strong colours were visible by eye). Therefore the glazing scheme may have originally featured pale pink/colourless, pale blue and pale green. No traces of painted decoration were detected on the fragments analysed, by SEM, XRF or by visual examination, but the condition of the surfaces was very poor so it cannot be completely ruled out.

Origins and date of the glass

6.202. If glassmakers use local raw materials, it results in distinctive chemical characteristics for the glass from that particular region, because the local geology influences the chemistry of the plant ashes and sand. The Court Knoll glass shares some distinctive characteristics of English glass, particularly the high magnesium content, which is seen in glass from both the Wealden and Staffordshire industries, and in window glass in the UK, such as the late 13th-century windows from York; the levels in French, German and Belgian glass are rarely as high (Brill and Pongracz 2004; Brill 1999; Wedepohl 1997; Van Wersch *et al.* 2014; Dungworth and Paynter 2010). English glass can also have a low aluminium content, similar to the unusually low (0.8wt%) levels in the Court Knoll glass, so the glass maybe British-made but at an early date.

6.203. There are documentary accounts suggesting production in the Weald from the first half of the 13th century and some Staffordshire glass furnaces have been dated to the second half of the 13th century (Kenyon 1967; Linford and Welch 1997). We do not know the composition of the glass they were making there however, because there are no analyses for the glass from these earlier sites yet, only slightly later ones in the same area (Dungworth and Paynter 2010; Mortimer 1997).

6.204. The Court Knoll glass is unusual because silica makes up less than half of the composition (Appendix D3, Table D5). The glassmakers have added a larger proportion of lime-rich plant ashes to their batch, at the expense of silica, which has unfortunately made the glass inherently unstable. Most medieval glass contains at least 50wt% of silica (Table 1), and often a lot more (Brill 1999; Dungworth and Paynter 2010; Paynter and Doonan 2002; Wedepohl 1997).

6.205. A lot of medieval window glass was also imported. Some window glass with similarly low silica levels has been found, mostly in Germany, for example at Kloster Lorsch,

Oppenheim, Augsburg, Bramwald, Corvey and Brunshausen, and mainly from the 12th to the 13th centuries (Brill 1999; Wedepohl 1997). There are fewer examples from France, such as Avignon from the 14th century, and occasional finds from the UK, which are thought to be imported from Germany, including the 13th-century glass from Elgin Cathedral in Scotland (Spencer *et al.* 2018). Most forest glasses contain roughly equal amounts of calcium oxide (CaO) and potassium oxide (K₂O), however, whereas the Court Knoll glass contains around twice as much of the former. This combination of low silica and high ratio of calcium to potassium also seems more common in German glass, around AD 1300, including from Oppenheim, Cologne and Laudengrund (Brill 1999; Wedepohl 1997) (the experimental woodash lime glass in Table 31). Despite these similarities, the high levels of magnesium oxide (MgO) and sodium oxide (Na₂O) in the Court Knoll glass make it less likely to be a German import (Appendix D3).

Conclusion

- 6.206. The Court Knoll glass is very unusual and an exact match could not be found. The glass is inherently unstable, with its low silica content, and hasn't survived well, which may be part of the reason why there is nothing similar published to date.
- 6.207. The glass is a forest or woodash glass, made with an unusually high proportion of plant ashes and perhaps a clean sand. Although there are many analyses of window glass and glassworking waste, particularly from the 14th century onwards, the Court Knoll glass does not completely match any of these, so most likely predates them. There are some broadly similar analyses for glass from the 12th/13th century or earlier however, with the most similar being late 13th-century windows from York (Brill 1999). The unusual composition and the thickness of the glass are also consistent with a pre-14th century date (Tyson assessment). So, the glass is perhaps from the 13th century AD or slightly earlier, in which case this is a rare, early example of the use of forest glass windows in England. Glazing for the Palace of Westminster was procured at about this time, and any contemporary glazed buildings would also have been of significant status.
- 6.208. The Court Knoll glass shares the characteristics of English glass; theoretically it could be made by combining similar raw materials in slightly different proportions but, as it is slightly different from any English glass so far published, this can't be confirmed. The other possibility is that it was imported, perhaps from continental

Europe where some similar glass was made for a period in the 12th/ 13th centuries, although again there is no exact match amongst the examples analysed so far.

Small finds

Ruth Beveridge with contributions from Alex Bliss

Introduction

6.209. Seventy-five objects (plus five without individual small finds numbers) were catalogued on the database with the assistance of low powered magnification. Selected items were chosen for radiography and have been further examined using the x-rays. A complete listing is provided as Appendix B, Table B5. The objects were recovered from a total of thirty-two contexts across seven trenches. Thirty-seven objects were found in the topsoil layers, five from the backfills of the 1924 excavation, nineteen from stratified layers and the remaining fourteen being from the fills of pits and ditches.

6.210. The catalogue below does not include the ceramic wall tiles and mortar mouldings which were assigned small find numbers and reported on separately.

The assemblage

Middle to Late Saxon

6.211. Only a small quantity of metal finds from Court Knoll could be firmly attributed to the Middle - Late Saxon period, although it is likely that a number of additional objects, such as knife blades, lead comes and nails, and copper alloy waste may also belong to this period, in particular the period associated with the pre-Norman church.

Copper alloy

6.212. Incomplete object, possibly a chape. The artefact is made from a piece of sheet metal that has been rolled into a cone. The chape is damaged at the narrowest end where the remains of a bulbous fitting has been applied. A rivet is visible *in situ* across the top. The outer surface is decorated with impressed ring and dot motifs. The fragment could potentially be the socketed head from a bone hairpin, missing its hollow terminal, or a ferrule, or alternatively some kind of strap fitting/strap end. Another possibility, given the high status character of the site at Court Knoll, is that it represents part of a stylus fitting or other item associated with writing or literacy. The use of ring and dot decoration is suggestive of a later Middle Anglo-Saxon to earlier Late Anglo-Saxon date. Examples of ring and dot decorated tweezers from

Flixborough (Pestell 2009) date from c. 750 up to c. 950. SF1037, fill 0133 of ditch 0195, Trench 6. (Fig. 42.2)

6.213. Complete circular, flat hooked tag cut from sheet copper alloy. It has a small rearward hook. The front is decorated with ring and dot motifs and it has two holes at the apex for attachment. It has a further central perforation. This tag form is Read's (2008) Class A type 2, usually dated quite widely from the later Middle to Late Anglo-Saxon period. Examples of circular design seem to be a development of the later 8th century according to the Flixborough report (Pestell 2009), becoming more popular and increasingly common in contexts of the 10th-11th century. The Court Knoll example is likely to date to c. 750-1100 but with the caveat that it is most likely to be from c. 900-1100. Two virtually identical tags from Norwich (Margeson 1993) came from contexts of 1000-1050 and 1150-1300 respectively – the latter is almost certainly residual. SF1034, topsoil 0003, Trench 2. (Fig. 42.1)

Iron

6.214. Incomplete beam arm, circular in cross section, part of a hand-held rigid balance with central triangular pointer. Both terminals are truncated. The radiograph of the artefact reveals a rivet *in situ* above the central pointer. Examples of Late Saxon balances are usually copper alloy, with a 10th century iron example from Exeter (Kruse, 1992, 68) being an exception. In form SF1016 is comparable to an early copper alloy example known from a 9th century context in Ipswich (*ibid*, 70, fig. 2, no. c 63/4601). In East Anglia such balances are usually found within urban contexts and would most likely have been the property of merchants or craftsmen (*ibid*, 68), but they can also be found in funerary contexts. Another copper alloy balance which is similar came from Bedfield, ([Record ID: SF-A58107 - EARLY MEDIEVAL balance](#)). These objects appear to have a long lifespan from the early Anglo-saxon through to the Late Saxon period. SF1016, fill 0017 of test pit 0016, Trench 1.

6.215. Complete whittle tang knife blade with horizontal back and cutting edge that tapers up towards the tip (possibly an Evison Type 2). The small corroded whittle tanged knife could belong to Form A under Ottaway's York typology (Ottaway and Rogers 2002) with a back which might angle down to the tip (Fig. 43.6). This form is most common during the Mid/Late Saxon period from the 9th-11th centuries, but it is possible that it is later. SF1015, layer 0011, Trench 2.

6.216. Complete knife blade with shouldered tang centrally placed to the blade, which is rectangular in section and measures 19.6mm in length. Probably Form C1 under

Ottaway's York typology (Ottaway and Rogers 2002) with a generally straight back which curves down to the tip (Fig. 43.7). This form is known throughout the Anglo-Saxon period (and beyond) but a very similar knife was found at Bishopstone Manor, which had its floruit in the 10th-11th century (Thomas 2010). SF1061, fill 0029 of large feature 0028, Trench 2.

Medieval – Late Medieval

- 6.217. Fourteen objects have been identified as being of medieval date, although it is likely that other less recognisable artefacts may also belong to this period. The identifiable non-ferrous finds include two silver coins, a possible casket mount, a harness mount and a belt buckle. The ironwork includes an arrowhead, an early medieval horseshoe, and the blade from a pair of shears. Some lace tags of late medieval date were present in the assemblage, mainly dating to the fifteenth century.
- 6.218. Of particular note is a collection of lead nails with lozenge shaped heads; these have been recovered from contexts in Trench 4: two are from the topsoil, one is from ditch 0168 and two are from layer 0076. As yet, no direct comparisons have been found for these nails so their function remains uncertain. Mainman and Rogers (2000, 2556) discuss lead alloy nails found in early 10th to mid-11th century deposits from Coppergate, York that have square-shaped heads. Whilst there is no clear understanding of what the nails were for, Mainman and Rogers (2000, 2557) suggest that they could have been used on boxes and caskets, possibly in a decorative role in the same way that tin-plated iron nails were utilized. Mainman and Rogers (2000, 2556) also discuss lead clench bolts and roves from Anglo-Scandinavian levels at Coppergate, York and three examples from 11th to 13th century deposits; however, in contrast to the thin shanks of the Court Knoll lead nails, the shanks of the York examples are rounded.
- 6.219. It is possible, given the quantity of window glass recovered from the site and lead comes from nearby trenches, that the lozenge headed nails were set between quarries to assist with their joining or as decorative points in the lead window framework. Marks (1993, 36) notes that lead nails, known as closing or cloring nails, were used in this way. He describes how, after the individual glass panes were made they were leaded together and then secured by closing nails before being set in the window. A discussion on this possibility is included in the report relating to the early window glass associated with the Late Saxon church at Court Knoll.

Silver

Alex Bliss

6.220. Two coins date to the medieval period. SF 1027 (0073) is a relatively well preserved shortcross-type penny struck in the early reign of John (1199-1216). It can be attributed to class 4b (North 1994, 220, no. 968/2), which is usually assigned a date of circa 1200-1204 (Mass 2002, 31). The second medieval coin, SF 1030 (0078) dates to the early 14th century, comprising a highly worn and clipped Continental imitation of an Edwardian sterling penny. These foreign pieces, known variously by the terms 'crockards', 'pollards' or 'esterlings', were mostly minted in the Low Countries and Central Europe during the late 13th and early 14th centuries. Though officially proscribed by numerous pieces of legislation and frequently confiscated, both single-find and hoard evidence indicates that this was only partially effective. The example from Court Knoll, though heavily worn and clipped, can be identified to Robert III of Béthune (1249-1322), Count of Nevers (1273-1322) and Flanders (1305-1322). Struck c. 1317 at Ghent in modern-day Belgium, it belongs to a second 'wave' of imitations which began to be produced in the early 14th century. By contrast with their predecessors, these mimicked the appearance of contemporary English pence more closely. This coin is a rare type both generally and as a British discovery. The Portable Antiquities Scheme records only one example (Gilmore 2013) out of over 500 registered single finds.

Copper alloy

6.221. Incomplete gilded fragment of casket strip mount with circular, perforated terminal, comparable to a mount recovered from a 12th century context in London (Pritchard, 1991, 151, fig. 334, no. 104). SF1056, topsoil layer 0169, Trench 7.

6.222. Incomplete horse harness pendant. The object is tear-drop shaped and has an ovate, concavo-convex plate with an integral, suspension loop at the apex that has been truncated. The outer surface retains a large amount of gilding. Comparable harness pendants are recorded on the Portable Antiquities Database and dated to between 1250 and 1450 AD (Cox, 2019). SF1055, 0169, Trench 7.

6.223. Fragment of a gilded, copper alloy buckle. Single loop, D-shaped frame with expanded outer edge and narrowed, offset strap bar. The outer edge is decorated with stamped, radiating grooves; comparable to examples illustrated in Whitehead, (1996, no. 51) that dates to c. 1250 – 1500. SF 1031 topsoil 0056 Trench 4.

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- 6.224. Complete lace tag, slightly tapering along its length. The edges meet but do not overlap. No sign of rivet fitting; open at the base of the tag. Probably a Type 1; a form primarily dating to the 15th century (Margeson, 1993, 22). SF1010, topsoil layer 0005, Trench 2.
- 6.225. Complete lace tag, slightly tapering along its length. The edges meet but do not overlap. Perforations at the top of the tag for rivet fitting; open at the base of the tag. Probably a Type 1; a form primarily dating to the 15th century (Margeson, 1993, 22). SF1014, topsoil layer 0004, Trench 1.
- 6.226. Incomplete lace tag, slightly tapering along its length. The edges meet but do not overlap. No sign of rivet fitting; open at the base of the tag. Probably a Type 1; a form primarily dating to the 15th century (Margeson, 1993, 22). SF1023 from layer 0072, Trench 4.
- 6.227. Complete lace tag, slightly tapering along its length. The edges meet but do not overlap. No evidence for a rivet fitting; overlapping at the base of the tag. Probably a Type 1; a form primarily dating to the 15th century (Margeson, 1993, 22). SF1029, layer 0058, Trench 1.

Iron

- 6.228. Complete, possible hasp or perforated fitting with triangular plate and looped eye at narrowest end. From a chest or similar item. SF1022, topsoil layer 0004, Trench 1.
- 6.229. Near complete horseshoe with narrow arms that have a lobate outer profile. There are three sub-rectangular holes for nails on each arm. It is a Clark Type 2b that predominantly date to the 12th century. Examples of this date have been found at Castle Acre Castle; with later examples that continue into the 13th century being recovered from Exeter and Oxford (Clark, 1995, 95). SF1082, layer 0009, Trench 3.
- 6.230. Two near complete small, rectangular shaped staples are comparable to examples recovered in London from 11th to 12th century deposits (Pritchard, 1991, 141, fig. 3.21, nos. 71, 72, and 75). They are unremarkable and likely used as door or domestic furniture fittings. SF1086, topsoil layer, Trench 2.
- 6.231. Incomplete, corroded length of hooked wire, square in section; most likely a fishing hook, though a barbed tip is not evident. Fishhooks dating between the 11th and 12th century were found alongside the waterfront in London (Pritchard, 1991, 138,

fig. 3.17, no. 37 and 43) and provide comparisons for the example in this assemblage. SF1089, topsoil layer 0056, Trench 4.

6.232. Incomplete, arm and blade from a pair of iron shears. The blade is plain, lacking any recesses, comparable to an example from London of 12th century date (Cowgill, *et al.*, 1987, 107, fig. 70, no. 311) and also to examples from York that date between the 9th to 15th centuries. The blade is small, measuring 73.5mm in length; a small pair of shears collected from York was used for textiles as 'weavers snips' (Walton Rogers, 1997, 1780, fig. 829, no. 6622). SF1067, topsoil layer 0004, Trench 1.

6.233. Incomplete and highly corroded socketed arrowhead with one side of the blade broken away. The blade is leaf-shaped, which suggests that it belongs to Jessop's military form M10 – an armour-piercing type dating 1150-1500 but probably most common in the 13th-14th century (Jessop 1996). SF1083, layer 0009, Trench 3.

6.234. Fragment of a staple, rectangular in section and tapering in width. At one end is an incomplete arm, rectangular in section. Rectangular staples are common pieces of structural ironwork and were found from excavations in Norwich from contexts ranging in date between the 10th and 15th centuries (Margeson 1993). SF1087, layer 0078, Trench 4.

6.235. Strip of iron, curved along its length. Midway is a protruding lug for attachment, it is square in plan with a central, circular perforation. It is likely to be a rim binding for the top of a wooden bucket/container though no exact comparison has yet been found. SF1094, layer 0076, Trench 4. Fig. 43.7

6.236. Incomplete narrow, probable knife blade with horizontal back and parallel cutting edge. The cutting edge curves upwards towards the tip. If it is a blade, it dates from the Saxon to the medieval period. SF1057, topsoil layer 0116, Trench 6.

Lead

6.237. Strip of cast window came, H-shape in cross section, twisted at one end; following Knight's typology it is classified as Type C (King, 1987, 39, fig. 35). SF1017, fill 0055 of large feature 0028, in Trench 2.

6.238. Strip of cast window came, H-shape in cross section; following Knight's typology it is classified as Type C (King, 1987, 39, fig. 35). SF1040, fill 0133 of ditch 0195, Trench 6.

Stone

- 6.239. Elongated piece of smoothed fine-grained sandstone. Sub-square in cross section; all corners rounded. One face flattened through use, most likely a fragment of a whetstone, used for sharpening knife blades. SF1063, layer 0183, Trench 7.

Post-medieval

- 6.240. Seventeen objects have been identified as post-medieval in date; this later assemblage is dominated by dress accessories, including a hooked tag, SF1020; a drawn wire pin, and a buckle. Commercial activity is represented by a silver Elizabethan coin, SF1028 and two copper alloy jettons, SFs 1024 and 1039. A requirement for securing personal possessions is represented by an iron rotary key, SF1036; with the only additional iron items of this date being a knife with bolster, SF1068 and a tool of uncertain function, SF1069.

Organic

- 6.241. Small elongated piece of wood and a curved offcut of leather with stitching holes. Possibly a shoe fragment. SF1077, layer 0033, Trench 1.

Silver

Alex Bliss

- 6.242. A worn and clipped halfgroat (twopence) of Elizabeth I (1558-1603). Tower mint, third issue, initial mark: tun (1592-1595). Obverse: crowned bust left within inner border, two pellets behind, [E.D].G ROSA.SINE.SPIN[A]. Reverse: cross fourchée quartering Royal arms, CIVI/[TAS]/LON/DON. Use of the tun initial mark dates this coin to the third issue (1583-1603), specifically 1592-1595. However, it easily could have continued circulating well into the 17th century, perhaps even up till William III's Great Recoinage (1696-1698). Diameter: 16.5mm. Weight: 0.82g. Worn, clipped. North (1991), 137, no. 2016. SF1028, layer 0073, Trench 4.

Copper alloy

- 6.243. Jetton, anonymous issue of Nuremberg, rose-orb type. Obverse: orb in trilobe within outer circular border, BVE/BVENO:/VENOB etc. Reverse: lis and crowns alternating around central rose, BVE/B:VENO/VENOB etc. Worn, corroded, chipped. Diameter: 24.2mm. Weight: 1.25g. Compare Mitchiner (1988, 381-383) nos. 1227-1247. SF1024, layer 0072, Trench 4.

- 6.244. Jetton, issue of Tournai. Muling of 'crown' and 'arms of France' types. Obverse: crown containing rose flanked by two annulets within inner pelleted border,

cinquefoils in left and right fields, +AVE MARIA: GRACIA*. Reverse: arms of France (three lis in shield), acorn and two leaves projecting from upper edge, +AVE:MARIA.GRACIA*. Well-preserved. The jetton appears to be a muling of the 'crown' and 'arms of France' obverse types, a seemingly unlisted combination in the standard references. However, the side depicting the crown is extremely close to Mitchiner no. 664 (1988, 224), which he suggests is of late 15th century date. Diameter: 25.5mm. Weight: 2.88g. Mitchiner (1988) - , though no. 664 for 'crown' side. SF1039, fill 0133 of ditch 0195, Trench 6.

6.245. Both jettons recovered at Court Knoll are of types known widely from Britain, both as stray metal-detected finds and within medieval or post-medieval excavation assemblages.

6.246. Although officially intended for use as reckoning counters in commercial or financial contexts (Popescu 2006, 48), the widespread discovery of jettons as British site-finds in both urban and rural settings suggests they were frequently adopted for other purposes as well. Some may well have been used as local, informal small-change when need arose, others in the context of board games or gambling (Popescu 2006, 48). Such practices would explain their wide distribution, particularly in the countryside.

6.247. Complete lace tag, cylindrical; slightly tapering along length. The edges fold inwards to grip the lace; it is a Type 2 that dates to primarily the 16th and 17th centuries AD (Margeson, 1993, 22). SF1001, topsoil layer 0003, Trench 2.

6.248. Complete lace tag, roughly cylindrical, though now splayed and flattened. The edges meet along the length and taper to a splayed, half-moon shaped terminal. A similar example has been recorded on the Portable Antiquities Database from Berkshire (Byard, 2012). Lace tags with globular terminals are of c. 14th to 17th century date; SF1003 may be of comparable date. SF1003, topsoil layer 0003, Trench 2.

6.249. Complete cast, one-piece hooked tag with circular/oval plate and trapezoidal shaped loop. The plate is decorated with a classical human profile mask left, in convex moulded relief. There is a ridged collar between plate and hook. It is a Read (2008) Class E, Type 3 of early post-medieval date. SF1020, topsoil 0056, Trench 4. Fig. 42.3

6.250. Incomplete drawn wire pin with wound head, Type 1 of 15th to 16th century date (Margeson, 1993, 13). SF1038, layer 0120, Trench 1.

6.251. Fragment of a cast, double loop buckle frame, trapezoidal in plan. Pointed knob on outer edge. Dates to c. 1620 – 1680 AD (Whitehead, 1996, no. 519). SF1041, fill of 0182 posthole 0181, Trench 6.

6.252. Possible chape with two arms forming a V-shaped frame. It has an *in situ* circular headed rivet on one side. In cross section it is rectangular; convex on the front. SF1092, unstratified, Trench 5.

Iron

6.253. Complete rotary key. The bow is kidney-shaped and is possibly pelta-style, with the remnants of two curved projections inside at the point where the bow meets the stem. The stem is solid, oval in section and extends beyond the bit. Corrosion masks detail of the bit, however, an early x-ray reveals that it is symmetrical. A similar key from Norwich can be found in Margeson (1993, no. 1294) who notes that keys with stems that extend beyond the bit are mostly from post-medieval contexts (ibid, 159). Margeson adds that symmetrical keys may have been used to open locks that were designed to be used from two sides. Date: 16th century. SF1036, layer 0117, Trench 6. Fig. 42.4

6.254. Incomplete, whittle-tang knife blade with integral bolster between blade and tang. The back of the blade is horizontal and the cutting edge curves upwards towards the now missing tip. Knives of similar form were recovered from 17th century deposits in Norwich (Margeson, 1993, 131, fig. 96, nos. 873 and 875). Bolsters were an innovation in hafting introduced in the mid-16th century, becoming widespread by the 17th century. SF1068, topsoil layer 0003, Trench 2.

6.255. Elongated tool, horizontal back, opposite edge curving up and tapering to a point; rectangular in section; tanged. SF1069, topsoil layer 0003, Trench 2.

Stone

6.256. Two fragments of slate pencils, tapering at one end to a blunt point; broken at the other. Circular in section. SF1084, layer 0033, Trench 1 and SF1090, topsoil layer 0005, Trench 2.

Uncertain date

6.257. A total of twenty objects are of uncertain date or function. These include material from the mixed finds of layer 0033, below the topsoil, in Trench 1; undated pieces of copper alloy waste from Trenches 4, 6 and 7, and from layer 0131 in Trench 1, three iron objects, a stud SF 1051, a nail SF 1052, and an unidentifiable fragment, SF1058.

Worked animal bone

6.258. Undated bone working waste: three joining fragments of metapodial, where both ends had been cut. SF1033 was recovered from a backfill layer 0081 of the 1924 excavation in Trench 2.

6.259. Fragment of bone; possibly worked. Oval in section; elongated and tapering in length. Possible tooth for a tool/comb. SF1085, layer 0033, Trench 1.

Copper alloy

6.260. Amorphous piece of copper alloy slag with piece of silver sheet attached/corroded to one side. SF1002, topsoil layer 0002, Trench 1

6.261. Amorphous piece of copper alloy slag waste. Sub-triangular in plan. SF1004, unstratified.

6.262. Fragment of cast copper alloy ring that may have had a variety of functions. SF1012, topsoil layer 0005, Trench 5.

6.263. Amorphous piece of copper alloy casting waste. Sub-rectangular in plan. SF1013, topsoil layer 0002, Trench 1.

6.264. Folded strip of copper alloy sheet. Possibly modern. SF1026 backfill 0071 from the 1924 excavation, Trench 1.

6.265. Three amorphous lumps of copper alloy casting waste. SF1070, layer 0117, Trench 6.

6.266. Fragments of corroded copper alloy; one piece appears to be a sheet object - such as a buckle plate. The other fragments are amorphous. SF1071 and SF1072, layer 0033, Trench 1.

6.267. Curved fragment of copper alloy sheet with lug attached. The lug is circular in profile and double ridged with a central gully. Possible brooch? SF1073 backfill layer 0084 of 1924 excavation trench, Trench 1

6.268. Elongated copper alloy object with shank and circular head, perforated. Heavily corroded. Possibly a pin. SF1075, backfill 0071 from the 1924 excavation, Trench 1.

6.269. Twenty-two pieces of amorphous lumps of copper alloy waste and fragments of sheet. SF1076, backfill layer 0071 of 1924 excavation trench, Trench 1.

6.270. Ring and strip copper alloy waste fragments. SF1080 and SF1081 topsoil in Trench 4.

Iron

6.271. Corroded and truncated, elongate shanks, flattened at one terminal, rectangular in section. SF 1005 and 1009 both from topsoil layer 0003, Trench 2

6.272. Undiagnostic fragment of sheet; V-shaped in section so possibly a piece from a blade. SF1058, layer 0131, Trench 1.

6.273. Irregular piece of iron, possibly part of a strip fitting. Recovered from an early medieval phased layer and may relate to debris from the building. SF 1059, layer 0054, Trench 2.

6.274. Co-joining fragments of a sheet iron object; sub-rectangular in plan with a curved outer edge. Possibly part of a strap end or strip fitting. SF1088, layer 0078, Trench 4.

6.275. Nails weighing a total of 5158g were collected from across the site, primarily from topsoil and subsoil layers. Forged nails are difficult to date as they alter little over time. Those retrieved from Court Knoll are dominated by nails with flat, rectangular heads and square sectioned shanks that could have been used both on the structural timber aspects of the site as well as joined furniture. Few nails were recovered from within building 0107, with only one being collected from the internal deposit 0131.

6.276. A small number of nails have heads above 30mm, such as one from layer 0076 in Trench 4, that are of a type that may have been used for strengthening doors and chests (Goodall, 1993, 146).

Bulk metalwork of modern date

6.277. Assorted metalwork of modern date was recorded as bulk finds. These included iron horseshoe fragments, iron strip fittings, possibly from farm machinery, copper alloy buttons, copper alloy wire fragments and lead waste. There were also possible iron fiddle key nails and lead shot that could be of post-medieval date. However, as the majority of this material was recovered from the topsoil layers it is recommended that no further work is carried out on it and that it is not retained for the archive.

Discussion

6.278. The small finds assemblage reflects activity on the site of Court Knoll from the Saxon period through to the post-medieval and later periods. The artefacts that date to the late Saxon/Norman period are few, and the dating of these objects within the Saxon period is wide; certain items such as the decorated chape and the hooked tag span a period from the mid 8th century through to the eleventh. It is also possible that a number of more modest finds, consisting of lead nails and lead came fragments may represent further structural evidence of Structure 1 or the subsequent Structure 2, but they are not intrinsically datable.

6.279. Artefacts from the medieval phases are dominated by structural objects, primarily from Trench 4; these include the lead nails, window comes and iron staples and strip fittings; large numbers of iron nails were also recovered from Trench 4 (1331g) that may have been associated with the structure at this time. These are an indication of the diversity of building materials utilised during the medieval period. In addition to the structural items, two silver coins, SF1030 and SF1027 were collected; a horse harness pendant, SF1055, and three functional iron objects: two knife blades, SF1057 and SF1083, and a shears blade from a pair of weavers snips, SF1067.

6.280. The post-medieval assemblage contains a larger number of dress accessories than found in earlier phases, including lace tags, a drawn wire pin and a decorative hooked tag; reflecting the fashions of the 16th century that saw an increase in the demand for such items. They were collected from Trenches 1, 2, 4 and 6 and are a reflection of the range of dress accessories, in addition to household objects, discarded as rubbish amongst demolition layers and the backfill layers of the 1924 excavation.

6.281. The greatest concentration of finds in the assemblage were retrieved from Trenches 1 and 2 and were associated with activity in and around the excavated structural

remains. It is worth noting that amongst the finds from Trench 1 were significant numbers of amorphous copper alloy waste material primarily collected from the topsoil or the backfill layers of the 1924 trench, and which may be discarded waste as the result of craft and manufacture in the vicinity. Few finds were recovered from Trench 3; the most notable was a lobate medieval horseshoe, SF1082. The finds from Trench 4 which include a medieval jetton, medieval silver pennies, a bucket binding and iron fixtures and fittings reflect casual losses and the discard of debris that occurred in and around the 'hearth' and moat area of the site.

7. THE ENVIRONMENTAL EVIDENCE

Human Skeletal Remains

- 7.1. The inhumation burial found in Trench 7 (*Skeleton 0201 in grave 0199, Figs 25-27*) was not excavated, but a sample of a (disturbed) metatarsal bone was radiocarbon dated to 942 (79.3%)-1023calAD, SUERC-70733 (GU42514). (Appendix E). It is not possible to say any more about the burial other than that it was west-east aligned, supine and probably adult or sub-adult. It was found outside Building 1 near the NE corner of the Northern portico.

Animal bone

Julie Curl

Methodology

- 7.2. The summary assessment was carried out following a modified version of guidelines by English Heritage (Davis, 1992) and Baker and Worley, 2014. All of the bone was examined to determine range of species and elements present. A record was also made of butchering and any indications of skinning, hornworking and other modifications. When possible, ages were estimated along with any other relevant information, such as pathologies. Measurements were considered following Von Den Driesch, 1976, but so few were available and those that were taken were included in the catalogue and only provided a general indication of breeds. Counts and weights were noted for each context and counts made for each species. Material from sieved samples were weighed and counted separately. Where bone could not be identified to species, they were grouped as, for example, 'large mammal' or 'small mammal'. Information was recorded into an Excel database and a summary of this information is in Appendix 1.

The bone assemblage

- 7.3. A total of 9549g of bone, consisting of 1124 elements, was recovered from this site. Bone was recovered from a variety of fills including pits, ditches, layers and a hearth, with additional material from topsoil and test pits. Most of the bone in this assemblage was hand-collected, with a small quantity from sieved samples, the latter producing additional small species. Much of the assemblage was found with Medieval ceramic material, with some Post-medieval pottery discovered with part of the assemblage.
- 7.4. The remains are in good condition, although many bones quite heavily fragmented from butchering and wear. Little variation was seen with the condition of the bone, suggesting most was deposited within a relatively short time. No invertebrate damage was seen, which would suggest the bone was rapidly buried. Canid gnawing was seen on a few bones, suggesting some meat waste was given to domestic or working dogs.
- 7.5. Butchering was regularly noted on the cattle and sheep/goat, with fine cuts from the initial skinning

Species range and modifications and other observations

- 7.6. In total 23 species were identified in the faunal assemblage. These are quantified in Table 32.

Species	Total NISP
Bird - Fowl	63
Bird - ?Fowl	2
Bird - Duck	2
Bird - Goose	14
Bird - misc	16
Bird - Pigeon	1
Bird - Robin	2
Bird - Snipe	1
Bird - Wader sp.	2
Bird - Woodcock	8
Cattle	72
Deer - Fallow	2
Equid	15
Fish - Herring	7
Fish - Misc	4
Fish - Pike	4
Fish - Salmon	3
Fish - Trout	4
Herpetofauna - Frog	1
Herpetofauna - Toad	3
Mammal	748

Species	Total NISP
Pig	59
Sheep/goat	89
SM - Cat	1
SM - Hare	7
SM - Polecat	1
SM - Stoat	1
SM - unidentified	1
Total count/NISP	1133

Table 32. Quantification of the species identified.

Domestic mammals

- 7.7. The domestic mammals produced six species. these are dominated by the remains of cattle, sheep/goat and pig (each found in similar numbers), with small numbers of equids and a cat pelvis from Ditch fill 0008.
- 7.8. Sheep/goat were the most frequent and represented mostly by adults, with a few juvenile bones present; no neonates were present which suggests they were not bred on site. The elements suggest a range of meat, with little suggestion of processing on site, so they were probably brought to site as cuts of meat.
- 7.9. Cattle were the second most frequent and largely represented by adult remains, with a few juvenile bones seen. A range of cuts of meat were consumed including the main meat-bearing bones and lesser cuts including those for jelly and marrow. One bone was measurable to provide an estimate of shoulder height, with a bone from Layer 0079 indicating an animal of just over 1.03m, which would be in the range for a larger Dexter type or the typical Celtic Short-Horn breed.
- 7.10. Some of the cattle bone showed health issues. Heavy deposits of dental calculus were seen on some molars, suggesting a lot of dry diet which is richer in sugars. Teeth were generally well worn, suggesting animals kept for many years. One femur from 0169 showed eburnation, a polishing of areas of bone from wear of the cartilage, often seen with arthritis and strain on the limbs. Overall, this suggests that animals were kept for several years and probably involved in traction (cart and plough pulling), which often necessitates feeding dry foods away from the field.
- 7.11. Pig were represented only by juvenile animals, with some of these of a neonatal age (less than one month old and some possibly prenatal) which would suggest some were bred on site or they were brought in unborn with the carcass of the mother. A range of meats were seen and, notably, very little butchering. The lack of much butchering with the porcine remains suggest they were probably cooked whole

(roasted) and these cooked remains require little butchering as the meat can usually be pulled from the bone.

7.12. Equid were seen in five fills and represented by teeth and lower leg and foot bones, suggesting some skinning waste. Main limb bones and a pelvis was seen from 0184, which suggest perhaps a disturbed burial as there was not butchering seen. Measurable bone from 0146 produced a metacarpal measurement that suggests an equid of around 14 Hands High, which is the maximum height for a pony or the minimum height for a small horse.

7.13. Polecat/ferret was seen in 0005 with a combined tibia/fibula. Such an animal might be a wild specimen, but from the medieval period onwards, these mustelids were often kept for hunting rabbits, with the rabbit holes netted and the polecat put down one hole to work the burrows and drive the rabbits out into the nets.

Wild mammals

7.14. Deer were recovered from deposits 0029 and 0155, both identified as Fallow Deer and both limb bones seen had been butchered, confirming meat use. Some canid gnawing was seen on the tibia from 0155, which suggests the meat was given to a domestic or working dog. Given that the Fallow Deer was seen as a high-status meat in the Medieval period, it might suggest the bone was given to a favourite and loved dog or the successful hunter of the deer.

7.15. Hare was found in five deposits with a range of limb bones, pelvic and sacrum elements and foot bones. Knife cuts were seen on some of these bones, showing use for pelts and meat. Commonly hunted, these animals may suggest some sport, but they would have been available at local markets.

7.16. Stoat was recorded with a femur from 0058. These animals might have been used for their pelts for trimming coats and hats, but they were also kept as pets in Medieval times (Reeves, 1997) and well known for the tamed individual in the Leonardo da Vinci painting 'The Lady with an Ermine', with the pet stoat in its winter (white) coat. However, these animals can be found in a variety of habitats and may be a wild animal, although they are less often seen around human habitation.

Bird bones

7.17. A total of eight species of birds was seen.

-
- 7.18. The vast majority of bird bones were from fowl (chicken/guinea fowl/pheasant) which were seen from fifteen fills, with one larger group of fowl bones from 0081, which suggested a whole bird. Even if roasted whole the bird would be divided for consumption, so this bird from 0081 might represent a stolen carcass or live bird by a fox or dog and buried for the canids consumption but forgotten. The fowl would be kept for a supply of eggs on site and for meat.
- 7.19. Goose were recovered from eight contexts with remains suggesting the larger domestic goose. As with the fowl, the geese are kept for eggs and meat. Geese also have a use for feathers, for quills, fletching and down for bedding.
- 7.20. Wild birds also included Woodcock (three contexts), Snipe, and at least one Wader species, with Snipe and waders found on inland and coastal marshes. Woodcock are usually found in wet woodland, but large numbers migrate and over-winter here from Scandinavia, many are easy to catch with a range of methods, including falconry. Another wetland bird, a Duck species, was found in 0014.
- 7.21. Additional wild species includes Pigeon (although a captive dove is possible) and may have been used for food. Two bones from a Robin were found from 0130, this bird may have been eaten, or a natural death of a bird on site, but a pet kept for its singing and bonding with humans is quite possible.

Fish

- 7.22. Fish were represented by four species. Salmon can be found in marine and freshwater environments. Herring are of marine origin, while the Pike and Trout would be found in larger rivers and lakes.
- 7.23. Fish would be available in the Medieval and later periods, although some local fishing cannot be ruled out. Fish were popular in the Medieval period as it could be included in the fasting meals in the religious diet.

Herpetofauna

- 7.24. The amphibians represented on this site were Common Frog (*Rana temporaria*) from context 0119. Common Toad (*Bufo bufo*) was seen in fills 0081 (Sample 5001) and from 0105. Frogs are common in a wide range of environments and often are happy spawning and breeding in very small bodies of water, including ditches and small ponds. Toads will spend non-breeding time (April to March) away from water, but they require larger ponds and lakes with reeds for breeding.

Discussion and conclusions

- 7.25. This is a fairly small assemblage that largely consists of the main domestic food mammals and bird bone, but the assemblage is rich in supplementary species for the diet, including a range of birds, fish and deer. The assemblage is dominated by sheep and cattle, with both producing adult and juvenile remains, with ages suggesting a cull of stock for meat. The cattle would have provided breeding, milk and traction, while the sheep would provide years of fleeces for the wool trade, milk and dung for fertiliser. The pigs were culled at less than a year old, which is typical for pigs as they have little use in life, unlike the cattle and sheep; many neonatal piglet remains were seen, suggesting these pigs were bred on or close to site or arriving at site as prenatales with their culled mothers. The few juveniles of the cattle and sheep may have been from calves and lambs taken away to allow for milking of the mothers.
- 7.26. Some hunting might be suggested by the Polecat/Ferret, an animal commonly kept in the Medieval and Post-medieval periods for hunting rabbits. Dogs are present in the assemblage only with evidence of gnawing, with the meat bones suggesting the presence of domestic
- 7.27. The chicken bones in the assemblage show little butchering, but it is common to roast these birds whole and little effort is required to remove the meat once cooked. The chicken would have probably been kept for a couple of years for production of eggs prior to culling for meat.
- 7.28. The fish in the assemblage clearly indicates some consumption of both marine and freshwater species, all of which would have been available at local markets. The range of birds includes wetland species, which are resident on coastal and inland marshes and it is possible some may have been caught through hunting or sport, perhaps even falconry.
- 7.29. Overall, the assemblage is typical of a medieval urban assemblage that relies largely on domestic stock for the bulk of the meat and supplementing with wild caught or purchased foods. The age of the sheep suggests provision of wool for the demanding wool trade in the Medieval period. The range of species, which includes higher status wild bird consumption, fish and deer, suggests high status foods.

Oyster and other shell

- 7.30. A large quantity of oyster shell was recovered, 1595 fragments weighing 9.644g. In addition, other types of shell were collected, 516 fragments with a total weight of 9.644g (see project archive).

Charcoal

Dana Challinor

Introduction and Methodology

- 7.31. Four charcoal samples were examined: comprising three rich assemblages from burnt layers associated with building 0107, the late Anglo-Saxon/early Medieval church; and a later, 13th century AD, deposit relating to the internal moat of a possible hall structure. The material offered the opportunity to examine probable burnt structural timbers from the church. Suitability for radiocarbon dating was also assessed.
- 7.32. The charcoal was sieved (through a series of graduating sieves from 8mm to 2mm) and scanned at low magnification (up to X45) for the presence of non-charcoal charred plant remains and to assess charcoal diversity. A subsample of 50 fragments per sample was then identified in full, with preference given to the larger >4mm fractions which offer greater potential for maturity data. Charcoal was fractured and examined in transverse section at X7 to X45 magnifications, with additional longitudinal features examined, where necessary, using Meiji incident-light microscope at up to X400 magnification. Identifications were made by comparison with identification keys (Hather 2000, Schweingruber 1990) and modern reference material. Classification and nomenclature follow Stace 1997.

Results

- 7.33. With the exception of the sample from context (0155), the samples were extremely rich in charcoal, with tens of thousands of fragments, well preserved and in good, clean condition. Large sized fragments were preserved, with pieces of ≤38mm. All of the samples associated with the burnt building were composed of *Quercus* sp. (oak), with a single fragment of *Ilex aquifolium* (holly) roundwood (2 years' growth) in context 0096. Several pieces of oak, in all three contexts associated with building 0107, exhibited curved and shaped surfaces indicative of deliberate wood carving. High fragmentation meant that it was not possible to determine the original features, nor how extensive such worked elements were in the assemblage. Heartwood (identified by the presence of multiple tyloses) was common in contexts 0131 and

0165 while sapwood and wide roundwood were commonly recorded in 0096. With the exception of the holly, no complete roundwood stems were present. Growth rate was generally quite fast with significant late wood pores observed and no more than 12 rings recorded in any single fragment >15mm in radius. One fast grown fragment from context 0131 (20mm radius, 5 rings) gave an average ring width of 4mm.

7.34. The assemblage from the moat deposit (0155) was notably poor, in both quantity and condition. Vivianite staining, associated with deposition in waterlain conditions, was frequent. Nonetheless, a range of taxa were present including *Quercus* sp. (oak), *Alnus glutinosa* (alder), *Corylus avellana* (hazel), cf. Maloideae (hawthorn, apple, whitebeam/rowan), *Ilex aquifolium* (holly) and *Fraxinus excelsior* (ash). Much of the charcoal derived from oak, but this may be a biased representation as oak is more readily recognisable in poor and small material.

7.35. No non-wood charred plant remains were observed, although the very fine fractions were not scanned except superficially.

Feature type	Building 0107			Moat
Context no.	0096	0131	0165	0155
Sample no.	5003	5006	5007	5008
<i>Quercus</i> sp. oak	49 wrs	50 wh(s)	50 wh	38 rsh
<i>Alnus glutinosa</i> Gaertn. alder				6r
<i>Corylus avellana</i> L. hazel				1r
cf. Maloideae hawthorn group				1
<i>Ilex aquifolium</i> L. holly	1r			1
<i>Fraxinus excelsior</i> ash				1r
Bark	x			

h=heartwood; w=worked; r=roundwood, s=sapwood; x=present; bold=dominant

Table 33. Charcoal results (showing fragment count).

Discussion

Building 1 (0107)

7.36. The charcoal came from two deposits (0131 and 0165) located to the north of the altar (0162), containing heat-damaged window glass, decorative plaster and glazed tiles, and a charcoal layer (0096) over-lying rammed chalk floor (0112) in the southern part of the building. The evidence from the burnt layers indicates structural elements in the church building were made of oak. This is unsurprising as oak was

commonly used in construction in churches (Hooke 2010, 157). The use of fast grown wood (with small late wood pores) provides better structural strength than slow grown wood (which consists of large early wood pores). Using heartwood, where the large pores are reinforced with tyloses, would also provide strength, as well as being less susceptible to insect attack. The absence of evidence for beetle tunnels in the charcoal examined (including the sapwood from context 0096) indicates that the wood was not heavily decayed at the time of burning; implying that the church was not deliberately demolished due to age or poor condition. There is a contrast between the predominantly oak heartwood found in contexts 0131 and 0165, and the oak sapwood/roundwood found in 0096, suggesting that some different construction elements are represented.

- 7.37. The presence of worked wood in the assemblages is of particular interest (Figure 1). Although the original form could not be ascertained, the small size and shape of the pieces suggest some form of decoration or carving detail, rather than (or in addition to) larger structural components. Taking into account that charring causes significant shrinkage (by some estimate up to 40%), the original size of the curved pieces might have been 2-5cm. The fact that these elements were preserved in all three of the burnt layers suggests that carved motifs, or something similar, extended around the church. Arguably, any fine decorated carvings might have been removed prior to destruction, if the church had been deliberately demolished.

Moat

- 7.38. The sample from context 0155 derived from an internal moat located to the south-west of the church. Pottery of 13th century AD was recovered. The charcoal assemblage was sparse, with small fragment size, indicating that it did not represent *in situ* burning and is unlikely to be a deliberate dump. It may represent wind-blown, accumulated material or background residual waste. The latter could include some residual remains from the burning of building 0107, but the diversity of taxa suggests it also comprised general domestic type fuel waste (or a mix of both). The poor condition of the charcoal and the evidence of vivianite staining are consistent with deposition in moist or damp soil conditions (not permanently waterlogged), as might be expected from a moat, which was subsequently dried up or infilled.

Charred plant macrofossils and other remains

Anna West

Introduction and methods

- 7.39. Eight bulk samples were taken from layers and a single ditch fill during this excavation. The features sampled date from the medieval period, although a small number remain undated at the time of writing. The samples were all processed in full in order to assess the preservation of any plant remains present and their potential to provide useful data as part of the archaeological investigations.
- 7.40. The samples were processed using manual water flotation/washover and the flots were collected in a 300µm mesh sieve. The dried flots were scanned using a binocular microscope at x10 magnification and the presence of any plant remains or artefacts are noted in Table 13. Identification of plant remains is with reference to *New Flora of the British Isles* (Stace, 1997).
- 7.41. The non-floating residues were collected in a 1mm mesh and sorted when dry. All artefacts/ecofacts were retained for inclusion in the finds total. The residues were scanned with a magnet to retrieve any hammer scale or ferrous spheroids present.

Quantification

- 7.42. For the purpose of this initial assessment, items such as seeds, cereal grains and small animal bones have been scanned and recorded quantitatively according to the following categories:

= 1-10, ## = 11-50, ### = 51+ specimens

Items that cannot be easily quantified such as charcoal, magnetic residues and fragmented bone have been scored for abundance:

+ = rare, ++ = moderate, +++ = abundant

Results

- 7.43. The plant macrofossils and other remains from the samples are shown below:

SS no	Context no	Feature/cut no	Feature type	Approx date of deposit	Flot contents
5001	0081		layer	E/H Med	charred cereal grains #, uncharred seeds #, charcoal +++, fish scale #, animal bone frags #, small mammal/amphibian bones #, snails ++, earthworm eggs ++, rootlets +
5002	0064		layer	E/H Med	charred cereal grains #, charred seeds #, un-charred seeds #, charcoal +++, animal bone frags #, small

SS no	Context no	Feature/ cut no	Feature type	Approx date of deposit	Flot contents
					mammal/amphibian bones #, glass frags #
5003	0096		layer	Med	charred cereal grains #, charred seeds #, charcoal +++, snails +
5004	0129		layer	Undated	charred cereal grains ##, charred legumes #, charred seeds #, charcoal +++, fish bones #, animal bone frags #, small mammal/amphibian bones #, snails +++, rootlets +
5005	0153		layer	E/H Med	charred cereal grains #, charcoal +++, snails +, rootlets +
5006	0131		layer	E/H Med	charred legume #, charcoal +++, small mammal/amphibian bones #
5007	0165		layer	E/H Med	charcoal +++, snails +, rootlets +
5008	0155	0168	ditch	E/H Med	charred cereal grains #, charred legumes #, charred seeds #, charcoal ++, animal bone frags #, small mammal/amphibian bones #, snails ++

Table 34. Plant macrofossils and other remains recovered from bulk sample flots.

7.44. The majority of the flot volume was made up of wood charcoal, being particularly common in a number of the samples. The volumes varied from 20ml to 3300ml, a 200ml sub-sample of the larger flots being examined for the purposes of this report. Modern rootlets were rare but where present they are considered intrusive within the archaeological contexts sampled. Larger root fragments were removed, prior to examination of the remaining flot.

7.45. Terrestrial snail shells were recovered from many of the samples; no attempt to identify these has been made within this report.

7.46. Preservation of the plant macrofossils present was through charring and is generally poor. Wood charcoal fragments were extremely common and in a number of the samples it was the sole material recovered. Within many of the samples the fragments were large enough to be suitable for species identification or radiocarbon dating, but no attempt at identification has been made beyond saying that ring porous species were observed.

7.47. Cereal grains were present in a many of the samples in small numbers or as single specimens. The majority were puffed and fragmented, as though they had been exposed to combustion at high temperatures, the fragmented condition of many caryopses made identification beyond broad species level difficult or impossible. Both barley (*Hordeum* sp.) and a free threshing bread wheat (*Triticum* sp.) were

observed, with wheat perhaps being dominant. Charred legumes, in the form of peas (*Pisum* sp.) were also present in a few of the samples either in small numbers or as single examples.

- 7.48. Charred grass family (Poaceae) caryopses and bedstraw (*Galium* sp.) seeds were also present within five of the samples in small numbers and may represent crop contaminants.
- 7.49. Uncharred weed seeds were rare, only being present in Sample 5001, layer 0081. elderberry (*Sambucus nigra* L.), bramble (*Rubus* sp.), speedwell (*Veronica* sp.) and deadnettle (*Lanum* sp.) were present but as fewer than five specimens at a time. As none of these were either charred or abraded they most likely represent material from the background soil seed bank, being intrusive within the archaeological context sampled.
- 7.50. Fragments of animal bone along with fish vertebra and scales were present in a few of the samples; these suggest domestic waste as a source for the majority of the material recovered.
- 7.51. Small, rather degraded fragments of window glass were recovered from the float of Sample 5002, layer 0064 and the non-floating residue of Sample 5005, layer 0153. These are most likely demolition material as recorded in the bulk finds.

Discussion

- 7.52. In general, the samples were poor in terms of identifiable material; the presence of charred cereal grains, legumes and animal bone fragments suggest that this material was sourced from domestic waste.
- 7.53. Pulses provided an important source of protein within the diet and as a fodder crop during the medieval period and their presence within these samples suggests horticultural activities may have been taking place in the vicinity.

Radiocarbon dating (with information from Alistair Barclay and John Hines)

- 7.54. Five samples were sent for radiocarbon dating (see Appendix E), three from the burnt timbers, one from the human burial, one from a holly twig found amongst the charcoal in Trench 2. The dates straddle a period of a few centuries where there are a series of plateaux and zig-zags in the calibration curve which means that these have generated broad ranges of calibrated radiocarbon date.

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- 7.55. The dates for the structural timbers all agree statistically and narrow down to a combined age of 1170+/-15 BP which provides a calibrated range that runs from the late 8th to the middle of the 10th century. The greatest likelihood looks to be in the 9th century: e.g. cal AD 822-895 (66.7%) but cal AD 770-900 having 87.9% probability. There is a possibility of up to 60 years offset aging as the samples were taken from the interface of sapwood and heartwood, which could perhaps suggest a date into the 10th century.
- 7.56. The grave can probably be dated to the period cal AD 975-1030 (at around 75% probability); it certainly indicates a functioning church here at that time. The radiocarbon dating allows a small possibility of it being a bit earlier but unlikely to be later.
- 7.57. The burnt holly twig provides a broad date range between cal AD 1035 and 1225 (99.7% probability) but is most likely to be in the century 1120-1220 (around 66.5% probability).

8. DISCUSSION

Introduction

- 8.1. The information gained from the trenched investigation at Court Knoll has produced a wealth of evidence for the character and date of the activity taking place within the enclosure. It challenges some of the assumptions made about the site prior to the work and has allowed some secure structural and chronological conclusions to be arrived at. It has allowed new assumptions to be suggested and competing interpretations to be presented. Inevitably the small size of the trenches means that not all the evidence leads to conclusions about which it is possible to be confident. Some questions remain unanswered and new questions have been posed.
- 8.2. The core driver for the project was to investigate the interpretation of exceptional geophysical results produced by NWWCS under the direction of Dr Tim Dennis. This identified a cruciform structure which appeared to have an apse at both the east and west ends; this was interpreted as a church, with a plan form unusual for England. Churches of this style were being constructed on the continent (for example the Late Antiquity Churches at Perigord or Conques) but not really in Britain at this time (E. Martin pers comm), early English examples with some similar elements such as the early Christian Church at Silchester (English Heritage website) are Roman in date. At the start of the excavations, therefore, it was

assumed that Robert fitz Wimarc had commissioned this building some time after 1042 (assuming he was brought into the country by Edward the Confessor).

Addressing the research objectives

- 8.3. In addition to investigating the putative church, another important objective for the fieldwork was to assess the damage from the agricultural activity of the 20th century. It seems probable that the site was only under the plough for between 100 and 150 years, as various documentary records from the 16th-19th centuries describe it as pasture (Breen 2001). The fieldwalking survey of 2001 (Everett 2018) identified a lot of rubble on the surface which could be assumed to have come at least in part from upstanding walls and in 2016 there was some evidence of damage from ploughing to the surface of the rubble deposits, particularly in Trench 6. Comparison of the same piece of wall from the photograph taken in 1924 and that of 2016 (Appendix G) however suggests that the agricultural activity had only a minimal impact – perhaps the ploughing was deliberately shallow to avoid bringing the demolition material to the surface.
- 8.4. The post-excavation analysis has been focused on addressing the Revised Research Objectives (RRA) set out in the post-excavation assessment (see paragraphs 3.5-3.18 and a summary of how the investigation has addressed these in presented below and in the following discussion.
- 8.5. RRAs 1-3 were concerned with improving the interpretation of the structural details. The discussion below brings together all the detailed work done on the stratigraphic, finds and environmental work to address these questions. Whilst questions still remain about elements of the sequential buildings and alternatives are presented, the work has resulted in a good understanding of the potential form, function and dating of the site and its development.
- 8.6. RRAs 4-5 were focused on the exceptional evidence for the decorative schemes associated with the earlier church; the polychrome relief tiles, the moulded plaster and the window glass. Analytical work on these has included typological and aesthetic examination as well as detailed scientific analysis of the fabrics. This has confirmed the significance and early date of these elements and provided clues as to the appearance and visual impact of the building.

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- 8.7. RRA 9 was to consider evidence for craft working on site. With the exception of the two ovens, which are assumed to have a domestic function, there are no structures or sufficient working debris to suggest significant craft-working on the site.
- 8.8. RRAs 6 and 10 were concerned with the role of the site. The discussions below bring together documentary and archaeological evidence to attempt to understand what Court Knoll represented, particularly in its earliest phases.
- 8.9. RRAs 7-8 addressed the evidence for the site sequence and the pottery analysis in particular has identified apparent evidence for absence of and change in the character of the occupation during different periods of the use of the site.
- 8.10. The source of the Roman building material is still considered likely to be Colchester (RRA 11), this is addressed below.
- 8.11. The excavations identified sterile layers that may have been deliberately deposited at the foundation of the site. Further paleoenvironmental surveys (RRA 12) could shed light on the balance between the man-made and natural form of the site. This has not been done as part of these works
- 8.12. No further information about the 1924 investigations could be tracked down (RRA 13), and whilst further documentary material no doubt exists in various repositories (RRA 14), none was readily available that could enhance the detailed work carried out by A.M. Breen (2001) and Pam Walker. There is still the potential for resources to be held in national and private archives.
- 8.13. The discussion therefore will focus on the structural evidence and its interpretation, the artefactual evidence and dating, the topography, the reuse of Roman material and the historical context.

Original topography and evidence for land manipulation

- 8.14. The geophysical survey had identified what appeared to be a large ditch partitioning the northeastern part of the enclosure and to the west an area of low resistance was interpreted as an underlying level.
- 8.15. The presence of this large ditch was confirmed by excavations in Trench 4 and is interpreted as a man-made moat that was most likely designed to enclose the church – possibly even to protect it from flooding from the west? Very little of the

moat has been excavated but pottery from the top fills is medieval, so it is possible that this was largely filled by the end of the 14th century.

- 8.16. A review of the levels recorded during the excavation works has shown that ground level of the eastern area defined within the internal moat sits at between 12.20m aOD and 12.80m aOD and that the interior of the enclosure stands up above the surrounding flood plain by about 0.5-1m. The River Stour splits to the east of the site, with its course to both the north and the south of Court Knoll and thus this would have formed a low island in the floodplain.
- 8.17. The raised 'knoll' of Court Knoll containing the covered remains of wall footings and demolition debris stood up to c.12.80m aOD. It is notable that the ground drops away moderately sharply (1m over 8m) at approximately the point of the internal moat. In the western part of the enclosure, the internal ground level outside the moat is at 12.25m aOD in Trenches 4 and 5 and 11.70m aOD in Trench 3. This shows some considerable internal variation and that the western part of the enclosure is very close to the level of the valley floor.
- 8.18. Where natural sand was identified it was recorded at levels of between 10.30m aOD and 11.80m aOD (Fig. 44). It is notable that it was found at 0.3m Below Ground Level (BGL) in Trench 5, the highest point of the excavations, and the trench closest to the current settlement, but at more than 1.5m in Trench 2 the southernmost trench. The overlying soil layers that make up the current ground level therefore are of a variable depth.
- 8.19. Evidence from the excavations shows that these were not only made up of demolition debris but that the lowest levels were a sterile homogenous material, a dark orange-brown sandy silt, stony in places, which varied in depth from 0.3m to 0.9m. The top of the lowest layer (Layer 1) within the internal enclosure was broadly level at 11.65-11.68m aOD. Examination of the footings for the masonry indicate that they were constructed onto this material. The origins and date of deposition of this it is unclear, but it provides a level platform onto which the church could be constructed raising it 0.5m above the surrounding floodplain. The limits of this deposit and/or an overlying similar deposit (Layer 2) were not constrained to the area inside the internal moat and it was seen in the external trenches (although at a slightly higher level (c. 11.80m in Trench 4, where it could also be seen to be cut by the moat).

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- 8.20. The material making up Layer 1 could have been redeposited as a result of flooding events but it did not particularly have the character of alluvium. An alternative explanation is that it was upcast from the ditch digging – both the outer enclosure and internal moat partitions, creating a habitable enclosure in the ‘island’ flood plain, and a raised platform in one corner, on which the church was built. Or perhaps it was a combination of sporadic flood events prior to the occupation of the site and the initial upcast material.
- 8.21. The subsoil level in Trench 3 dropped steeply to the west, although this was not reflected in the current ground level and the origins of the upper fill are unclear. An undated ditch was observed on the edge of this drop. There is no evidence to indicate whether this could have been deliberate manipulation of island or the result of natural accumulation into a low spot.
- 8.22. Further information about the origins of the island could be obtained by more detailed paleoenvironmental boreholes survey.

Structural evidence

- 8.23. The three trenches positioned to examine the structural evidence for the possible church all produced evidence of masonry structures, and two successive phases of building can be confirmed:
- **Structure 1**, the earlier E-W aligned building with a square east end, the walls of which were cut through (and probably dismantled) to enable the second building to be constructed. This earlier building can be confidently interpreted as a church from the structural detail and artefactual evidence.
 - **Structure 2**, either a replacement apsidal wall representing a modification to Structure 1 in the form of a replacement east end or a circular building (a tower?), interpreted from the combined plan evidence from 1924 and 2016 and the size and wall construction.
 - **Possible Structure 3**. It is not possible to determine from the evidence whether the second phase of wall identified in Trench 6, represents architectural detail of a larger structure associated with Structure 2 or a stand-alone building. It does however appear to have been contemporary with Structure 2.
- 8.24. The mortar used in the wall construction has been scientifically tested (Appendix D2) and identified two distinct mortars. The first was a lime rich mortar, used in

contexts associated with Structure 1 in Trenches 1 and 2 (0060, 0049 and 0127), but also in wall 191 in Trench 6. The mortar forming part of the demolition layer 0131 in Trench 1 (which also contained the window glass and charcoal), was also a lime rich mix comparable to the mortar in Structure 1. In contrast, the second, mortar B has a lower lime to sand ratio and is found in wall 0059 of Structure 2, but is also associated with wall 0205 in Trench 6. This adds weight to the interpretation of the plan form of Structure 1 as extending to the western edge of the inner enclosure, and suggests contemporaneity of construction of Structures 2 and 3.

- 8.25. The following section heavily references the work by H.M Taylor (1978) as still one of the main sources of a corpus of information about Anglo-Saxon architecture to provide comparable information for interpreting the Court Knoll site.

Structure 1

- 8.26. Evidence from Trenches 1 and 2 identified structural elements that could be confirmed as belonging to the same building, most notably the continuation of a rammed chalky-mortar surface at the same level in the interior of the building in both trenches. Thus, the evidence from Trench 2 confirmed the presence of the southern cell as indicated by the geophysical survey.
- 8.27. The evidence from Trench 6 which was placed to examine the junction between two probable walls indicated by the geophysics, identified both wall lines, each having been largely robbed. The evidence of similarity of building technique, wall dimensions (the wall thickness of most Anglo-Saxon buildings is less than 3ft/0.91m (Taylor 1978, 760)), mortar comparability (see Appendix D2) and stratigraphy confirms that the outer (straight) E-W wall belonged to the earlier building.
- 8.28. In conjunction with the information provided by the geophysical survey it is possible to suggest a multi-celled floor plan for Building 1 (Fig. 45) with a square east end, two pairs of porticus on each side (or side chapel and portico) and a long aisleless nave. This building would have been 35m in length, and 19m, 13m and 6m in width. The nave appears (from the interpreted geophysics) to have been the same width as the chancel and of the many plans illustrated by H.M Taylor, possibly only Deerhurst Phase i (1978, Fig 724), Dunham (1978, Fig. 725) and possibly Heysham, (1978, Fig. 726) have this feature but all have simpler plans than appears to be the case at Court Knoll. Taylor does note however that this is much more common in continental churches where only very few have the chancel markedly narrower than the nave (1978, 1026).

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- 8.29. The west end of the building would have been close (<5m) to the internal moat, thus filling most of the E-W space within that enclosure.
- 8.30. The complex building plan is unusual for the period, most have fairly simple plans of individual cells laid out in a line or crossing at right angles (Taylor, 1978, 967 and see Fasham and Keevil, 1995, Boddington 1996). The use of a square-east end rather than apsidal is consistent with an Anglo-Saxon date, where both designs are commonly found, but it is interesting to note that at Deerhurst St Mary an apsidal east end was added to a square end, when the building was extended in Phase ii of the construction (Taylor 1978, 982).
- 8.31. The evidence for the wall construction was best seen in Trench 1 where the walls were faced with Kentish Ragstone laid in courses interspersed with Roman tile. The pattern seemed to be two courses of Ragstone followed by one or two courses of tiles, but so little survived it cannot be confirmed whether this pattern was repeated higher up the wall.
- 8.32. The quoins at the corners were almost exclusively constructed of tile and appeared to be externally rendered. There is no evidence for the characteristic Anglo-Saxon long and short quoining in the way they are laid (Taylor, 1978, 6). The wall core was a mix of rubble, including Ragstone and Septaria.
- 8.33. Where they could be seen, the footings consisted of a single plinth barely below the floor level, apparently stood on loose rubble and then onto Layer 1 (orange-brown sandy soil) that was seen across the area. There was no evidence of a cut footing trench, this is not unusual for small medieval churches where walls often have minimal footings (D. Gill pers comm) but the limited evidence provided from excavations on other sites suggests that in many cases Anglo-Saxon churches had trenched footings under the wall plinth filled with rammed gravel, stone and rubble (Taylor 1978, 761, Boddington 1996, 16, Fig 13).
- 8.34. The fragment of arch recorded in Trench 2 was also made of re-used tiles with evidence for render forming the inside of the curve. It is not possible to estimate the size of the arch, but the curvature appears steep and may suggest a single centred (round-headed) arch. This could be for a window or side entrance to the church through the porticus.
- 8.35. The small rectangular masonry structure in the centre of the east wall is interpreted as the base for an altar. Although built as a separate structure, the plaster on its

sides was contiguous with that of the east wall of the building and both are almost certainly contemporary in their construction. Surviving altars from the pre-conquest period are rare; when Taylor and Taylor compiled their three volume corpus of Anglo-Saxon architecture, no surviving altars had been identified although a small number of literary records demonstrate that pre-conquest altars 'were richly adorned with gold and silver objects which included crosses, chalices, patens, basins and other dishes as well as images of saints' (Taylor 1978, 1066). These would have been stood on the altar, but it makes the point of the decorative focus on the altar.

- 8.36. Three readings on the GPR survey at the entrance to the chancel are likely to indicate the survival of lumps of actual masonry which may represent the location of column bases, this can be compared to the triple chancel arch at Reculver in Kent (destroyed in the 19th century, English Heritage information board) but there is some evidence for this arrangement in other early churches also in Kent (Lyminge, Canterbury and Rochester) although the arches don't survive (Taylor 1978, 785). At Court Knoll, however, the three readings, if column bases, would be suggesting four arches and it cannot be confirmed without further investigative fieldwork. (It should also be noted that if Structure 2 was a full circle the projected western line of this structure could overlap with the suggested position of the column bases and may offer an alternative interpretation).
- 8.37. An alternative interpretation could be that these provide supports for a central tower.
- 8.38. The floor was constructed of hard chalky mortar with occasional tiny stone inclusions, where cut through it was no more than 3-4 cm thick and was sat on loose large stones (Ragstone where seen). A hard red plaster/cement floor was seen at St Augustine's abbey in Canterbury and provides a parallel (Taylor, 1978 762), a sequence of surfaces excavated within the 9th-10th century phase of the church at Raunds Furnell suggests a possible plaster floor (latest in the sequence) in the chancel and a stone floor in the Nave (Boddington 1996, 21).
- 8.39. Narrow openings between the building elements are typical of this period, unlike the wider/full-width openings in Romanesque buildings (Taylor, 1978) but it is not possible to identify these from the geophysical survey and although it doesn't indicate any wide openings, it may be unlikely that these would appear on the survey as the wall footing would be expected to be continuous.

Internal decorative scheme

- 8.40. Evidence recovered from the demolition debris and backfilled excavations produced considerable information about the internal decorative scheme of Structure 1, largely from decorative tiles, mortar mouldings and burnt structural elements.
- 8.41. Plaster found on the internal faces and the altar base make it likely that the whole interior was plastered and limewashed, this would be common for the interior of churches of the period (Taylor 1978, 1063).
- 8.42. Significant quantities of moulded mortar with impressions of the tiles to which they have been adhered, and evidence of layering of the mortar indicate that window reveals, and elaborate column and string mouldings were built up on a tile rubble structure. Reconstructions of these possible string mouldings have been presented within this report (Figs 37-39). Structure 1 dates to a period before the routine use of carved limestone in East Anglian churches and poses the question as to whether the builders here may have been copying design examples seen elsewhere (locally or on the continent?) using what material they had available.
- 8.43. The polychrome relief tiles recovered from the rubble are exceptional items associated with the highest ecclesiastical status. The sumptuous adornment of Anglo-Saxon altars cited above supports the suggestion that it is likely that these were mounted vertically onto the front face of the altar, with the raised patterns and green and brown glazes adding to the exotic appearance of the building.
- 8.44. These are items of elite ecclesiastical association and the evidence that they represent the primary use of tile from a single batch implies these were acquired direct from manufacture and not salvaged from elsewhere, which is intriguing for what it says about the status of this church and the people who had it built.
- 8.45. Examination of the wood charcoal found both oak heartwood and oak sapwood with signs of carving. This suggests different elements of carved wood, the small size of the recovered fragments suggesting perhaps decorative wooden screens or panels within the chancel area rather than large structural elements.
- 8.46. Although very poorly preserved it is also possible to confirm that the building had glazed windows, possibly some of it coloured glass. This is not uncommon for churches of the period and earlier, for example the 8th century Church at Brandon (Tester *et al.*, 2014). The suggestion that this may be an early example of potash glass, possibly 11th-12th century is significant, especially given the possible

historical links to Edward the Confessor (see below). As the building was probably constructed in the late 10th or early 11th century (see below), it seems most likely (but not certain) that the window glass was a later addition to the primary structure. The evidence of the destruction of Structure 1 before 1200 however, does support the interpretation of the glass as unusually early.

- 8.47. It is appears from the radiocarbon dating evidence that there may have been a wooden predecessor to Structure 1 (see below) but there is no stratigraphic evidence for this.

Parallels

- 8.48. The closest parallel found so far for the putative layout of Structure 1 may be the ruined church at North Elmham in Norfolk. This building offers a very close comparison in size and plan form (Fig. 45). It was long identified as the pre-Conquest cathedral for East Anglia when the Bishopric was at North Elmham (from the 8th century to 1071). It was reinterpreted in 1982 by Stephen Heywood as being a post-conquest private chapel for Bishop Losinga on the site of the timber cathedral, constructed c.1100. Recent re-evaluation of the structural evidence by Peter Wade-Martins however has reinstated the interpretation of it as the pre-Conquest Cathedral (notwithstanding that the first building was timber), his full analysis of this is due for publication in 2025 (Wade-Martins 2024, 108-110). The details of the plan of North Elmham are better elucidated than at Court Knoll and it includes a tower and stairs at the west end; this is considered a unique plan (English Heritage guide). All of these are a possibility for Court Knoll, but such level of detail cannot be extracted from the geophysical survey. North Elmham is also contained within a small enclosure in a larger one but the larger enclosure, as well as being square, certainly dates to the 14th century and cannot be compared with Court Knoll.
- 8.49. Other churches with a pre-Conquest foundation include Deerhurst in Gloucestershire, which is multi-phased with an apsidal east end but includes porticus/transepts (Taylor and Taylor, 1965, ii, Fig. 194) and Hadstock in Essex (possibly the church built by Cnut in 1020 after the Battle of Assandun, Taylor and Taylor 1965, ii, 273). Deerhurst has similar form to Court Knoll but is geographically distant, Hadstock is local but not so similar in form; neither displays the striking similarity of North Elmham.

End of Structure 1

- 8.50. There is considerable evidence for a catastrophic fire that destroyed Structure 1 sufficiently for its east end at least to be demolished. Mortar and masonry were heat-reddened in places, the charcoal represented elaborately carved architectural details in oak that was in good condition and would certainly have been salvaged if possible and the window glass was almost completely burnt.
- 8.51. The evidence from the trenches, the absence of much worked masonry and the fine mortar suggests dismantling and reuse of material where possible and the relatively shallow depth of demolition rubble suggests a site that was cleared for continued use (Bury Abbey has up to 1.5m in places even though the ashlar was sold, D. Gill pers. Comm.).
- 8.52. It cannot be confirmed whether the whole building was demolished at the same time and new structure(s) erected on the site or whether it is possible that a reduced size version of the original building was modified and retained. Evidence for burning on the material from Trench 6 is limited perhaps suggesting that the fire damage was localised to the east end.

Structure 2

- 8.53. This structure appears to be circular/semi circular c. 5.2m in diameter with substantial walls 1.3m thick. It was built of Kentish ragstone presumably salvaged from Structure 1, but it was notable that there was a lower occurrence of Roman tile. The rubble core was similar to Structure 1, including some Septaria. The evidence suggests that it was probably constructed in the 12th century (see below).
- 8.54. Evidence associated with Structure 2 is minimal, it may have been externally rendered but there was no evidence for internal details, if it had a floor it appears to have reused that of Structure 1.
- 8.55. The evidence that this represents more than half the circuit of a circular structure is contained in the plan from the 1924 excavations (Appendix G) but whether this was stand alone or attached to surviving elements of Building 1 is unknown (round tower churches are common in Norfolk and North Suffolk but less so in South Suffolk and Essex). It would, however, be unusual to find a round tower at the east end of a church.
- 8.56. In his 2001 documentary report Breen translates the account rolls from 1280 as suggesting that there was a bell tower in 1280. If Structure 2 represents a tower

then it is quite possible, even likely, that this was still standing in 1280 and could be the bell-tower referred to. Later reviews however, cast doubt on the translation as a bell-tower so there is some doubt about its presence.

Pit 0209

- 8.57. On the immediate northern edge of both structures in Trench 1 there appeared to have been a large (possibly linear) pit. It cut down against the edge of the building and steep tip lines as well as building debris suggest that it was open when construction and/or demolition was taking place. A brown sand and rubble layer, 0128, seemed to represent a hiatus or period of stabilisation in the filling. A sample of the mortar from this layer appears to have the low lime mix of Structure 2, which may confirm that it was initially filled with the burnt debris from Structure 1, open perhaps during the construction of Structure 2 and then deliberately filled with a cleaner sand. It was noticeable that this upper fill looks to have probably extended over the top of the demolished walls of Structure 1 thus created a level surface (above that previously) around Structure 2. An ill defined feature outside the outer wall line in Trench 6 could represent something similar.

Structure 3

- 8.58. Structurally almost nothing survived of the wall in Trench 6 representing Structure 3, even confirming that it was curving as indicated by the geophysics was not possible in the small, robbed section seen. In addition it lay underneath an oven that was not excavated so the robbing trench was not fully exposed. However, analysis of the mortar associated with it, suggests that it was constructed using a mortar mix similar to that of Structure 2.
- 8.59. Careful examination of the GPR data could just suggest that this was also a tower, but the evidence is very slim. Further work is needed to understand this structure and whether it is an independent structure or part of the same building as Structure 2.

Trench 7

- 8.60. Although placed to target what was interpreted from the geophysical plot as further wall lines north of the main structure, Trench 7 did not reveal any evidence for structural remains.
- 8.61. It recorded a deposit almost certainly associated with a phase of demolition but this was largely finer mortar and with only limited masonry. There was no significant

evidence of burning in this material. The reduction in the spread of main demolition debris and the difference in character of the demolition deposits may be indicative of the fact that this trench did not directly cross any of the wall lines and lay c. 7m from the building. It may also indicate where stone and tile was cleaned of its mortar before either reusing on site or being removed for reuse elsewhere. This can be compared to Trench 2 where there was noticeable reduction in debris over 5m from the wall line. It is alternatively possible that this reflects construction rather than destruction material.

- 8.62. The base of the mortar spread indicates a likely ground level during that episode of re-ordering which seems to slope away slightly towards the east.
- 8.63. The geophysics suggested masonry at a depth of more than 1m, and it has been suggested that the trench was not deep enough to pick them up. This remains an outstanding question, although natural geology was seen in places. The possibility that the geophysics might have been detecting stone coffins may offer a possible explanation.

Dating and significance of the structural elements

- 8.64. The site sequence and associated dates can be established from the artefactual, stratigraphic, stylistic and scientific evidence.

Radiocarbon dating

- 8.65. Radiocarbon evidence from the timbers, a burnt holly twig and the burial provide a broad framework for the early period of occupation.
- 8.66. The dates on the wood are earlier than the artefactual evidence suggested by the tiles but they agree statistically and suggest a probably 9th century date, which even with the maximum possible age offset for the oak of 60 years, puts them c. 60-100 years earlier than the likely date of the stone building and its ceramic decorations. This may therefore suggest that the wooden details were transferred from another structure, either on the site (a predecessor building) or from elsewhere.
- 8.67. The grave can be more securely dated to the last quarter of the 10th or first quarter of the 11th century and must indicate the presence of a functioning church on the site by that time. The radiocarbon dating allows a small possibility of it being a bit earlier but unlikely to be later, but it just covers the likely period indicated by the tiles.

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- 8.68. The burnt holly twig is a short-lived sample (1-2 years maximum) and whilst this again provides a broad date range, it can be confidently interpreted as contemporary with the burning event and suggests the most likely date to be in the century 1120-1220 (around 66.5% probability).

Artefactual dating

- 8.69. The dating provided by the artefact assemblage is compromised by the fact that all was recovered from redeposited contexts (some probably several times), however the combination of elements associated with the physical structure of the building does allow some conclusions to be drawn.
- 8.70. The polychrome relief tiles were recovered from (mostly 20th century) backfill around the east end of the church and these can be securely dated stylistically to the first or second quarters of the 11th century. It is worth noting that as the 1924 excavations only removed soil at the east end of the building even if the artefacts were redeposited at that time, they were still originally in broadly this location of the building. This provides only a very limited period of overlap with the burial and must suggest either that the tiles were added to an existing building or that when this building was constructed it included items that were innovative at the time. The Court Knoll tiles were made as a single batch (in contrast to those from Bury), which suggests that they were bought from the manufacturer for this site and that they could therefore represent an early introduction of this style.
- 8.71. The curved profile plaster mouldings however can be compared with stone mouldings that are confidently dated to the early 11th century (see para 6.174 above). These must be primary to the building as their supports formed part of the structure and therefore a construction date early in the 11th century, consistent with both the polychrome tiles and plaster mouldings, seems fairly certain.
- 8.72. The pottery assemblage provides an interesting picture of the character of the occupation across the site phases; there is an absence of Late Saxon (9th-11th century) pottery that could have been attributed to the use of Structure 1. Early Medieval pottery (11th-13th century) is present but no sherds with typologically early rim forms were seen, suggesting it belongs to the later part of the period and potentially contemporary with Structure 2 (Phase 4 onwards). There is then a hiatus at the end of the 14th century which provides us with a broad window of domestic occupation from the late 12th-early 13th century to the end of the 14th century.

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- 8.73. The ceramic evidence picks up again in the late medieval/early post-medieval period, but the narrow range of vessel types looks more like the waste from an alehouse (the nearby pub The Anchor Inn dates to 19th century (LB1198688)). This may indicate that by the 16th century the site was pasture (as indicated by the documentary information) and waste being dumped on the site from the growing settlement in the current Nayland centre rather than direct habitation on Court Knoll.
- 8.74. The metalwork represents a mixed date assemblage much of which is medieval or later, but a small assemblage of 8th-11th century items represents the only other material from the site that could potentially be contemporary with the first use of the building. Interestingly these represent some of the best objects from the assemblage, including a hooked tag and a chape that could be part of a stylus. Two knives, a hasp perhaps from a chest and a balance arm could also be of this date.
- 8.75. The window glass is likely to be a very early example of potash glass, usually attributed to the 13th century but almost certain to pre-date that here. The earliest that this type of glass has been found in England is Edward the Confessor's 11th century Westminster Abbey, but the exact date of the Court Knoll glass cannot be established with any certainty. It must, however, have been in use before Structure 1 burnt down probably in the 12th century (possibly a new addition to the building, could the necessary lead working for its installation have been a contributory factor?) and therefore is one of the earliest examples of this type of glass in England. This again reflects this site having access to elite items at an early date.
- 8.76. The building itself, of early 11th century date, appears to represent an early example of stone church building which in East Anglia is generally associated with the Benedictine reform of the mid-11th century and most surviving stone buildings in England date from this period (Pestell, 2004, 25) although earlier masonry chapels like St Peter's at Bradwell also built of reused Roman building material in the 7th century do exist.

Settlement evidence

- 8.77. Excavated examples of churches of this date include at Wharram Percy (Yorks), Raunds Furnell (Northants) and Brighton-Hill-South (Hants). These are small two-celled early-mid 11th century stone churches, but in each case there is evidence that these sit within a village setting, with buildings and domestic waste. The excavations at Court Knoll were significantly smaller in scale than those at the open area excavations of the sites above and therefore the stratigraphic evidence cannot

be compared but the absence of late Saxon domestic waste from any of the interventions in this area and earlier fieldwalking (Everett 2001), nor commonly from the test pitting (Collins, Lewis and Prior 2012 rev 2014) provides no convincing evidence for associated settlement or domestic activity consistent with a manor complex on the site prior to c. 1150 (although the evidence of the metal work does suggest a passing presence at least, and potentially of high status).

8.78. As outlined above, the evidence from Domesday records that Nayland was a significant settlement in 1086, but that the bulk of this was in Essex, the Suffolk element was smaller. The 2012/2014 test pitting in Nayland suggested from limited artefactual evidence that the Saxo-Norman settlement was centred on the current church and medieval market place.

8.79. Alston Court (Alston undated), which is within 200m of Court Knoll, is 13th century in origin and it could be argued might occupy the site of an earlier manor house, which could relate to Court Knoll. The location of a church in an enclosure on the edge of the manorial complex is seen at Raunds Furnell (Boddington 1996 Fig. 3) but the earliest wing of Alston Court sits on the market place, not towards Court Knoll, appearing to support the conclusions from the test pitting that this was the focus for the Late Saxon occupation. Thus there is nothing at the moment to indicate that the church at Court Knoll directly related to a nearby settlement, it appears to sit in isolation.

8.80. In addition the Court Knoll church is of an unusually complex design in comparison to sites such as Raunds, Wharram Percy and Brighton Hill South and with exceptionally ornate decoration for the period. It therefore appears that initially the site may have had an ecclesiastical function separated from the secular settlement.

8.81. The complete absence of domestic waste and evidence for habitation on the site before the later 12th century however, also seems to rule out a monastic function as with even a very small foundation, monks would have been living on site.

8.82. The artefact assemblage however shows a quite different profile for the late 12th early 13th century onwards, broadly contemporary with the second phase of buildings (site phase 4) and suggests a change in use for the site, with habitation and domestic occupation from that date.

8.83. Thus, there is the implication that at the point of the destruction of Building 1, the use of the site changed. By 1280 (when Structure 2 was presumably upstanding,

having been constructed at the end of the 12th /early 13th century), accounts describe an actively occupied and prosperous site on which there is a great chapel with a shingle roof, and other buildings; a site that by that time can be confidently interpreted as a manor complex/domestic residence. This is consistent with the pottery dating.

- 8.84. The two ovens identified in Trenches 4 and 6 were not fully excavated and neither was independently dated, however stratigraphically, these appear to represent activity that may be contemporary with the end phase of the settlement (Phase 5) so later than Structure 3 at least (oven 0177 seals the robber trench in Trench 6). From Phase 5 onwards (14th-15th century) the character of the finds assemblage changes with finds of slag only being made in these later contexts, but also an increase in animal bone and shell, all consistent with domestic occupation.
- 8.85. After this period all features seem to represent structures with light and rough footings, and spreads of broken mixed Roman and post-medieval tile. There clearly were buildings on the site but the pottery suggests an end to the domestic settlement by Phase 6 (late 15th -16th century) and a change in the use of the site to pasture with some perhaps agricultural buildings and probably general neglect of the site. This is supported by the documentary evidence.
- 8.86. The evidence from Trenches 3 and 5, and the geophysical survey suggests that the occupation was confined to the eastern part of the enclosure. There appears to have been no occupation at any time of the western part, it was presumably always gardens, pasture or arable land.

Historical context and Interpretation

- 8.87. There is considerable documentary evidence for the local area that can be drawn upon to try to put the excavation results into their historical context.
- 8.88. Domesday records the owner of Nayland as Robert fitz Wimarc, a man moving in the highest levels of English society, but who was Breton born and probably entered the country in the 1040s after Edward the Confessor acceded to the throne (Williams 2013). It had been widely assumed that Court Knoll represented his manor and that the continental style of Church was constructed for him. The results of the excavations however challenge these previous assumptions about the builder of Court Knoll:

- The evidence (from the dating of the burial) points to construction earlier than the 1040s. Although stylistically the building is not inconsistent with a period between the 1040 and 1060s other evidence suggests an earlier date.
- The building is 'Anglo-Saxon' in its design and details which does not immediately appear consistent with construction by the Breton fitz Wimarc.
- There is no evidence to support domestic activity on the site until c. the late 12th century, apparently ruling out a Thegn's residence.
- Robert also held a manorial site at Clavering in Essex, and it was to here he and other Norman lords fled in 1052 (Williams, geni.com) suggesting that that was his primary landholding (caput).

8.89. Evidence of land ownership in East Anglia prior to Domesday is limited, although there is some evidence from the time of Edward the Confessor. Prior to that (and even during his reign) there was much disruption to royal succession with the monarchy passing between English and Danish Kings. This inevitably involved lands being redistributed (Pestell 2004, 74). The only documentary evidence for the Nayland area comes from the Wills of Aelfgar and his daughters, and although their will stipulated that specific property should be passed to Stoke, by the time of Domesday this property was in the hands of laymen (Foot 2014).

8.90. There is no record of owned Nayland before Robert fitz Wimarc, but all the evidence from the excavations suggests that Nayland was under the control of an elite family.

8.91. The period of the late 9th to early 11th century was a time of change and whether or not the Danish incursions were as destructive as previously thought (for example North Elmham continued as the Bishopric before and afterwards, Blair 2006 317) there was undoubtedly a loss of documentary evidence in East Anglia and a change to the organisation of ecclesiastical authority (Pestell, 2004 72-74).

8.92. The post-Viking period (mid 10th century) in East Anglia saw a proliferation of local churches some of which may have been undocumented continuations from earlier times (Blair 2006, 320, Gittos 2011, 831). Many of these were wooden structures in their earliest phase (Gittos 2011, 831, Wrathmell ed, 2012, 208), although those at Raunds Furnell and Brighton Hill South, both appear to have been stone churches at their inception. (Boddington 1996, 8, Fasham and Keeble, 1995, 77))

8.93. In 1014, possibly as a reaction to the increase in small local churches, Aethelred classified three grades of minster (Morris 1989, 129)

- Head Minsters (cathedrals)
- Old minsters (not necessarily old but to distinguish them from those with a lay foundation)
- Those even less significant, which probably largely consisted of churches in private ownership. This differentiated churches with a cemetery from 'field churches' without one.

The church at Court Knoll would presumably have come into the first part of this third category, a private church with a cemetery (and may explain why it doesn't appear in Domesday).

8.94. From the later 10th century there was further Danish disruption until the accession of Cnut in 1016. After the death of Harthacnut in 1042 and the accession of Edward the Confessor, tensions between the crown and the powerful Godwine family continued to lead to further unrest until they came to agreement in 1052 (Williams 2013). This is the historical context into which Court Knoll should be placed.

Court Knoll and the minster at Stoke by Nayland

8.95. The link with Aelfgar and the holy place at Stoke bears some consideration. Aelfgar and his family were very close to the top of society (he and his son-in-law Bryhtnoth were Ealdorman of Essex – a comparable status to Robert and his successors - and his daughter was second wife to King Edmund).

8.96. Aelfgar and his daughter mention Stoke (assumed to be Stoke by Nayland) in their wills (Foot, 2014), but the location of this religious settlement has never been securely identified. It is assumed to be on the site of the current church which is largely 14th-15th century in date but with some 13th-century fragments. A church is mentioned for Stoke by Nayland in Domesday (Williams and Martin, 1992, 2003 edn.) but there is none mentioned for Nayland. This could indicate either that the church had already replaced the minster by 1066/1086, or that the minster was somewhere else.

8.97. There is some, very limited, evidence (from the radiocarbon dating of the charcoal and the burial) that the stone church at Court Knoll may have been preceded by an earlier wooden structure, potentially dating as early as the late 8th or 9th centuries.

8.98. At Court Knoll in the early 11th century, we appear to have a high status ecclesiastical (admittedly small) building without an associated settlement. This early iteration of the site evidenced by the excavations bears some of the

characteristics of a monastic foundation; it is a circular enclosure in an isolated position close to running water, in the river flood plain. This can be compared with documented religious sites such as Ely, Horningsea and Iken set prominently within low-lying land, often marshy, as easily reached by boat as by causeways (Pestell 2014, 52); Court Knoll sits on a platform just above the flood plain (see above).

8.99. The growth of administrative centres, centralisation and the Benedictine reform of the early to mid-11th century inevitably meant that some places thrived whilst others failed (Blair, 2006, 337); in this case Stoke was up against Bury St Edmunds. The failure of the Stoke minster falls into a pattern of the mid-9th to 11th centuries whereby minsters have become “secular places containing residually important churches” by the end of the period (Blair 2006, 323). Could this also describe the progression of Court Knoll from a purely ecclesiastical site with no settlement in the 10th/11th century to a manorial complex in the 12th century?

8.100. There are too many obstacles to propose that Court Knoll represents that minster – not least the name. Stoke-by-Nayland was the main settlement, evidence from test pitting suggests that Nayland (on the Suffolk side) only flourished after the 12th century (Lewis *et al.* 2012). Whilst Court Knoll is ‘by’ Nayland, it is on the opposite side of the current village (although on the north (Stoke-by-Nayland) side of the Domesday village which was focused in Essex) and the absence of any domestic cultural material seems to discount the possibility of anyone living there, even a very small number of monks/nuns.

8.101. Could the church at Court Knoll reflect the increasing move to proprietary parish churches by the mid-10th century, (Pestell 2004, 101) did it serve the small local community at some distance from the church? This appears to be discounted by the fact that Nayland, did not have a church in Domesday, and in the 13th century (the likely date for the construction of the current church) it is described as a Chapel of Ease to Stoke by Nayland, which means that they were part of the same parish. It is unlikely that the church at Court Knoll was this Chapel of Ease prior to the new church (built not long after that at Court Knoll burnt down) as Chapels of Ease did not have burial grounds.

8.102. It is, however, of interest to note that Nayland was a Royal Free Chapel by the late 13th century and a study of South Staffordshire has identified that the majority of Free Chapels there originated as Middle Saxon minster churches (Jenkins 1988).

The medieval phases

8.103. As discussed above the historical evidence indicates a manorial site here in the medieval period, it also documents the forfeiting of the land in 1163 and its transfer in the reign of Henry III (1261-1272) to the de Burgh family at which point it was apparently an active and well-maintained manor. The detailed rolls of 1280 describe the buildings on the site and their maintenance. We have to assume that the buildings referred do not include Structure 1 and that the layout of the site had altered somewhat following the fire. There was most certainly a chapel on the site in the 13th century and thus Morant's comments of 1768 where he refers to the footings of the chapel must be of the later building (although earlier sale references merely call it pasture and make no mention of footings). In 1336 the site was sold to the absentee Scrope family.

8.104. These events can be compared with the archaeological evidence where the character of the site changes with the burning down of the church somewhere in the 12th century (1163 possibly?), followed by medieval settlement until the later 14th century (the grant to the de Burgh family in the early 13th century and their use of the site, and the account rolls of 1280) and finally the transfer to the Scrope family in 1336 perhaps coinciding with the decline of the site settlement after the late 14th century.

Reuse of Roman material

8.105. The *in situ* structural elements were composed entirely of reused Kentish ragstone and large Roman tiles and with Roman mortar still adhering in places. These must have originated in a substantial Roman building, but it is unclear from where it was salvaged.

8.106. Wherever possible stone used in Roman buildings was acquired from local quarries (La Bédoyère, 2001). Natural sources of building stone are rare (and of poor structural quality) in East Anglia e.g. Carstone from NW Norfolk, Clunch from the surface chalk beds, particularly in the west and Septaria from the estuary at Ipswich. Kentish ragstone is a hard limestone found in limestone beds in Kent and Surrey which in the Roman period was used extensively to build London. It is clear however that ragstone was being used in Roman structures beyond London and making its way from the Kent quarries to Colchester and beyond. There are records of examples of structures of Ragstone in Colchester from the Roman Theatre Gosbecks MCC 2831, and Roman Wall, Sheepen. MCC 1453 and although the

main town wall is constructed of Septaria and bricks, the more recently excavated Roman Circus was largely Ragstone (Nick Wickenden pers comm).

8.107. Colchester in particular provided a ready source of building stone in later periods (Jude Plouviez, per comm). H.M. Taylor notes that the builders of the time 'preferred to use materials that were to hand rather than to undertake the cutting of fresh stone' (1978, 760).

8.108. The Church of St Peter and St Paul in West Mersea, apparently with 11th century origins is also built of ragstone with Roman, and later brick. The lower part of the tower appears to be Late Saxon rather than Early Norman, and potentially dating to the establishment of the Benedictine Priory there in 1046. There is also a fragment of a 10th-11th century grave cover built into the wall of the south aisle. West Mersea has a number of sites with Roman remains and these may well have been plundered for the construction of their church.

8.109. Roman brick and tile has been observed in a number of churches along the Stour valley and there must either have been significant Roman structures or an active trade in recycling Roman building material in the early medieval period.

8.110. A substantial Roman site (HER refs NYW 008-010 – Fig. 2). is identified from field walking on the NW edge of Nayland, but so far no ragstone has been recorded from the field surface, the possibility that this provided the material for Court Knoll cannot be discounted (although had the building material been comprehensively reused it might not show as such an extensive surface spread now) but Colchester lies only c. 5 miles to the south, with a road link to Nayland and therefore until further information comes to light, this still seems to be the most likely source of material.

Outstanding questions

8.111. There are of course numerous unknowns that are significant to interpreting the story at Court Knoll and for which only further investigation offers the hope of an answer. Some of these key questions are listed below.

- When Structure 1 was destroyed, was it complete destruction, or did part of it survive to be rebuilt into a new church?
- Is Structure 2 a replacement apsidal east end or a free-standing tower?
- What does Structure 3 represent, is it the western end of a modified structure, and associated with Structure 2, or freestanding?

- Can we confirm the form of the earliest church?
- Is the platform the church stands on deliberately made-up ground or is it the result of natural alluviation?
- What was the status of the site before it became a manorial site in the 13th century? Why does it appear to be so elite and so isolated?
- Is the impression that the western part of the site was unoccupied correct, and if so why was occupation focused on the east side of the enclosure?

9. CONCLUSIONS

Synthetic analysis/interpretation

- 9.1. Whilst we are left with many questions about the development of the activity at Court Knoll, the surveys and excavation work carried out by the Nayland with Wissington Conservation Society in conjunction with SACIC, now Cotswold Archaeology and the many specialists who have devoted their time to the project, has shed light onto this site about which little was known and has challenged some of the interpretations that had been presented.
- 9.2. The masonry remains uncovered represent a church constructed probably at beginning of the 11th century. The evidence from the radiocarbon dating demonstrates the presence of a burial ground that is contemporary with or earlier than the masonry church but other radiocarbon dates on the wood hint at the possibility of an earlier wooden structure (predecessor church?) on the site (or nearby), probably from the late 9th century but possibly earlier.
- 9.3. The surviving fabric of the church is re-used Roman material, non-local ragstone and Roman tile, perhaps traded from nearby Colchester (five miles) but just possibly from nearer to Nayland, from the Roman site identified by building material in the fields to the NW of Court Knoll and Nayland.
- 9.4. Internally and externally the structural masonry was rendered (so not visible) and the internal plaster limewashed. It was adorned with carved wooden features, mortar mouldings that were created in elaborate forms and the small altar was decorated with polychrome relief tiles, a rare artefact, produced in a small number of sites around Winchester and usually used in the highest of ecclesiastical contexts. The stratigraphic evidence from the surrounding soil profiles seen particularly in pit 0209 in combination with the level of the splayed footing and possibly rendered finish suggests that once Structure 2 was under construction, the

pit was filled and the now redundant building elements were covered by a deposit of relatively clean sand.

Elucidating the plan of the building(s)

Paul Drury

- 9.5. The geophysical survey shows that the focus of the primary church plan is a central compartment some 9m square externally, with walls considerably thicker (and more deeply founded) than those of the flanking compartments, implying greater height. The centre of the west wall did not register well on the GPR survey, and the east wall appears as a broken line of high resistivity anomalies; both could reflect either the original openings in the walls or merely the extent of survival of masonry. The central structure was flanked to north, east and south by compartments of almost identical plan, inset from the corners of the central compartment. The outer extents of the east and south arms have been confirmed in the 2016 excavation (Trench 1, Trench 2), defined by masonry walls c. 0.85m thick, that on the east with an altar base against the east wall. The western arm appears to have been wider, only slightly narrower than the central compartment, the line of its north wall being found in Trench 6. The west wall is not as clearly defined on the GPR survey as the others, but traces suggest a length of about 17m. These compartments form a coherent plan, Structure 1.
- 9.6. A small structure clasping the east and south arms of the building shows particularly clearly on the GPR plot. Evidence for a potential counterpart on the north side is much more fugitive. If it was not answered on the north, it seems likely to be an addition or afterthought to Structure 1.
- 9.7. The excavation demonstrated that in rebuilding after a fire, the eastern arm was truncated by a curved foundation, cut down through demolition levels, for a structure with its floor level c. 0.6m above the structure 1 floor level. While irregular at foundation level, this curved foundation seems most easily explained as defining an apsidal sanctuary. The north face was traced further west in the 1924 intervention. Overall, the evidence suggests that the apse had a stilted plan, and that the stubs of the former chancel wall projecting from the central tower were thickened internally. The western arm was similarly truncated, its footprint clear on the GPR and physically located in T6. The western apse appears to have been a somewhat distorted semi-circle. The similarity and sequence of these interventions strongly suggests their contemporaneity. Following the fire which destroyed Structure 1, the

most substantial element, the central compartment, seems to have been retained and adapted as the core of Structure 2, with the elements to east and west rebuilt in truncated form with walls of a similar thickness to the central element. To the south of the western compartment, a strong anomaly may suggest a buttress, although more likely a section of fallen masonry like that found south of the south porticus of Structure 1.

A tentative interpretation

- 9.8. The Structure 1 plan, on the evidence available, points to its having been a five-cell cruciform church with a salient central tower. Regionally, it resembles St Botolph, Hadstock (although seemingly more regular in plan), dated by Fernie as late as c1050-80 based on the presence of angle rolls, for which there is no evidence at Court Knoll (Fernie 1983, 112-6), but the type had a long currency, from roughly the last quarter of the 10th century to the third quarter of the 11th (ibid, 169-71). The putative small inner porticus presumably opening from the transeptal porticus are, however, highly unusual, although Deerhurst (Glos.) phase iv provides a comparable example (Taylor 1978, 982-4). The 1924 plan suggests a clean end to the remains of the east wall of the transeptal porticus. If so, it might mark a doorway, in the expected position.
- 9.9. Substituting an apsidal for a square-ended sanctuary is not uncommon, but only St Giles, Langford (Essex), built in the late 11th or 12th century, is known to have had a western as well as an eastern apse (RCHM Essex II (1921), 145). The considerable rise in floor level between the two structures, with foundations for the eastern apse dug through the demolished remains of the former chancel yet clearly related to the central tower suggests that it alone was robust enough to adapt and incorporate into what was essentially a new building.
- 9.10. The D-shaped enclosure that forms the Scheduled Monument was probably created using already existing channels which were modified to create the enclosure. At the east end the ground was deliberately built-up prior to the construction of the building— perhaps using the upcast from digging the enclosure ditch, and the large enclosure was partitioned with a 7m wide 3m deep moat. The Church was placed within this exclusive area. The only other activity within here at that time seems to have been a burial ground on the north side of the Church.
- 9.11. There is the possibility for an early wooden church on the site, but no stratigraphic evidence was found. However, it remains a possibility that the clean deposit that the

stone church was built onto represented a mix of deliberate and alluvial deposits that sealed any evidence for an earlier structure (perhaps deliberately raising the ground level in response to problems encountered in the life of the earlier building).

- 9.12. There is no evidence from the results of the excavations or prior fieldwalking for settlement on the site in that period. The only finds of this date are a small number of metal objects representing casual loss from visitors to the site rather than habitation.
- 9.13. Sometime, in the 12th century a catastrophic fire destroyed the east end (and possibly all of the building). This appears to have signalled a change in use of the site and the east end was replaced with a stone tower or semi-circular apse constructed of salvaged masonry. Further construction at the same time some 15m to the west, may represent another tower or further remodelling of the damaged church. At this point the pottery indicates a change in use of the site to a more domestic function which is supported by the documentary evidence of a manor complex at Court Knoll in the 13th century.
- 9.14. Historical events tell us that the manor was forfeited by Robert's great grandson in 1163 for treason, and by the 13th century it was in the hands of the De Burghs. Is this coincidence, could the fire have been retribution for treachery – or for the forfeit of the lands? Was this what triggered the change of use?
- 9.15. There remains the tantalising link with the 'missing' Stoke-by-Nayland foundation. Is it feasible that this small site, away from any settlement and by the river is in fact that monastic site? By 1066 Stoke by Nayland had a church, Stoke by Nayland and Nayland are identified as different manors in Domesday but with no church attributed to Nayland. It is hard to present a convincing scenario whereby the Stoke of the mid-10th century could have become the Stoke-by-Nayland of the mid-11th century if the monastic foundation was on the opposite side of Nayland to Stoke by Nayland, unless the Domesday core of the Nayland manor was in Essex and the centre of Stoke by Nayland has migrated north since Domesday.

Remaining research questions and recommendations.

9.16. The big remaining questions that really do need to be resolved in order that Court Knoll can be better understood are:

- Is the eastern curved structure a complete free-standing tower or an remodelled east end for the church?
- What is the plan form of the west end?
- What does the western curving wall represent?
- Is the platform that the Church is stood on definitely man-made?
- How big is the cemetery? Who is buried there?
- What are the enigmatic GPR readings in the cemetery area? Could they be stone coffins?
- What is the pitting to the north side of the 'chancel'?

9.17. These could be answered with some further targeted trenching in the cemetery area, the possible eastern tower/apse, the west end of the building and the central area of the 'western apse'.

10. ACKNOWLEDGMENTS

10.1. This project has taken a little known nationally important Scheduled Monument whose history was a mix of documentary interpretation and assumption and provided sufficient evidence to change the story. Such projects have a significant impact on our communal history and are dependent for their success on many people giving their time, energy and expertise and charitable organisations providing funds for the elements that must be paid for.

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10.3. Historic England (Nick Carter) allowed the work to go ahead, issued the Scheduled Monument Consent, approved the WSI and monitored the fieldwork.

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