Archaeological Investigations in 2001 at the Abbey Church of St. Peter and St. Paul, Dorchester-on-Thames, Oxfordshire

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SUMMARY

Successive phases of archaeological evaluation, excavation and watching brief were carried out by the Keevill Heritage Consultancy at Dorchester Abbey, Oxfordshire, from March to December 2001. These revealed the first significant archaeological evidence for the Anglo-Saxon cathedral established by St. Birinus in AD 635/6. The cathedral church itself remains elusive, but a succession of one sunken-featured and two timber-framed buildings were found in the Cloister Garden to the north of the abbey. Other features included a ditch and a well. Artefact evidence pointed towards domestic occupation, though possibly with some industrial processes (including glass manufacture, presumably for windows). Four sherds from a single very high quality, clearly imported pot were found securely stratified in a mid-Saxon context. The vessel is believed to be of Eastern Mediterranean, possibly Byzantine origin. The archaeological work also revealed important evidence for the medieval abbey, including elements of the 12th-century church hidden by later expansion and alteration. Much of the south side of the cloister (to the north of the church) was also revealed, including burials within the canons' cemetery. One of these, in a solid stone sarcophagus, was either a senior member of the abbey community or an important benefactor. Unusually, a majority of artefacts recovered were Romano-British but no Roman contexts were encountered. It is argued that the finds derive from midden deposits accumulating outside the Roman town's eastern defences, the line of which has been the subject of much debate in the past.

The abbey church of Sts. Peter and Paul, Dorchester-on-Thames (Fig. 1), is one of Oxfordshire's most important historic buildings. Indeed it is one of only two essentially complete medieval monastic churches surviving within the county, the other being Christ Church cathedral, Oxford. Both buildings have been the subject of post-monastic alterations to the fabric, fixtures and fittings, but this does not alter the fact that they are nationally significant. This is recognised in their status as Grade I Listed Buildings. In fact most of the alterations occurred because the churches continued in Christian use, as they still do today. Dorchester Abbey has a particularly strong focus on worship and mission, allied to a clear and firmly rooted appreciation of the long history of this crucially important church.

This is not the place for a detailed overview of the abbey's history, not least because the author is currently collaborating with others on the publication of just such a work.[1] It is important, however, that a brief outline of the church's historical development should be provided. Dorchester-on-Thames was a major regional centre throughout prehistoric and Roman times,[2] and the Roman town continues to exert a powerful influence on the town's

[1] K. Tiller (ed.), *Dorchester Abbey: Church and People 635-2000* (forthcoming).
[2] See J. Cook and T. Rowley (eds.), *Dorchester through the Ages* (1985), 8-20.

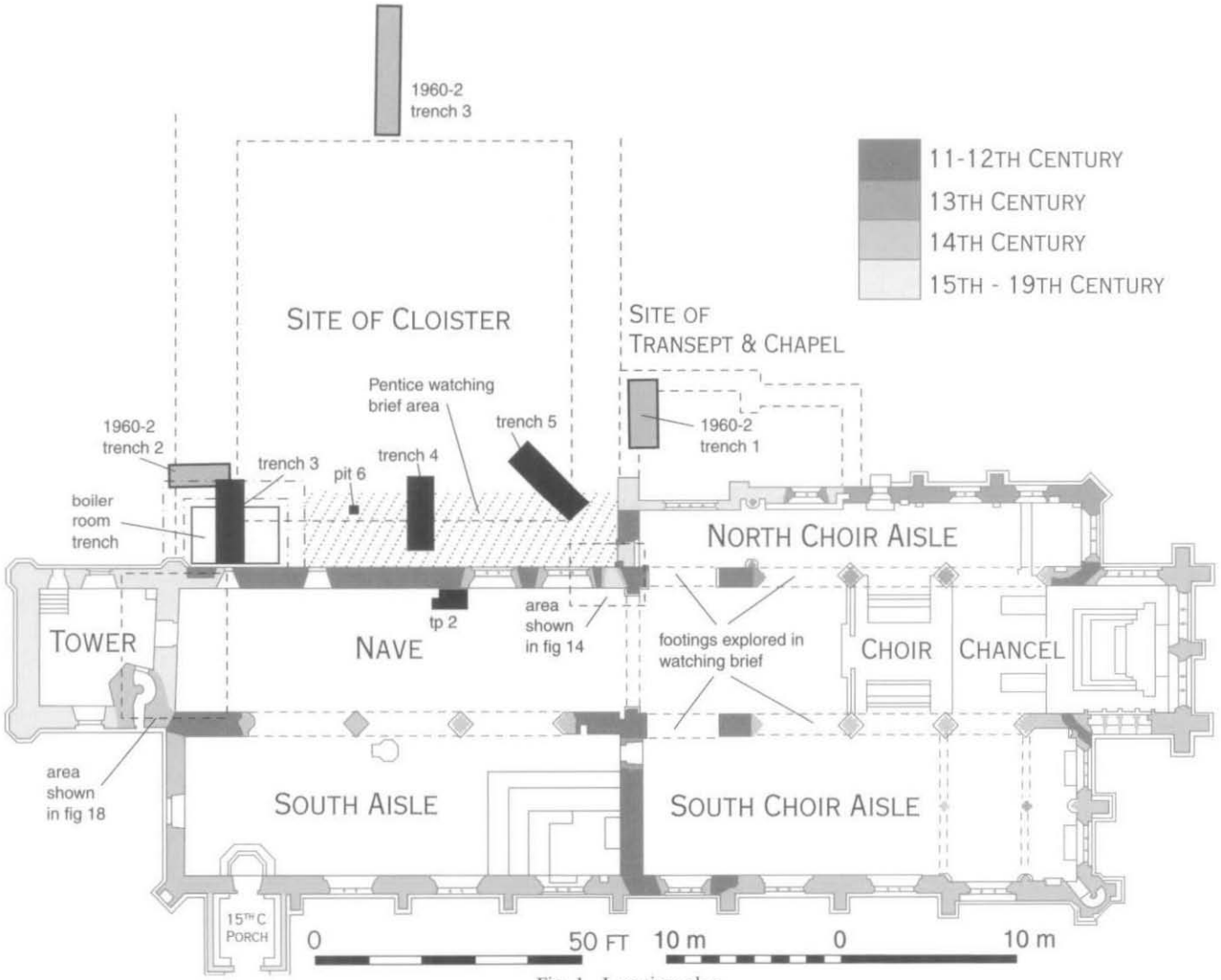


Fig. 1. Location plan.

topography to this day. Unfortunately we do not know whether there was a Christian church in the late Roman town, but as Trevor Rowley noted in 1985, it is 'tempting... to speculate on a similar [i.e. late Roman] origin for the [abbey] church at Dorchester'.[3] This possibility may be corroborated by the presence of 4th- and early 5th-century burials on east-west alignments and with no grave goods in the Queenford Mill and Church Piece extra-mural cemeteries.[4] These have been generally been interpreted as Christian, although this cannot be regarded as proven.

The political and religious situation in and around Dorchester in the 200 years after the end of Roman rule remains a matter of some conjecture, but in 635/6 Cynegils, king of the Gewisse, invited an Italian bishop, Birinus, to establish a diocese based in the town.[5] By this time there may well have been little left to see of its Roman buildings, and presumably there would have been little pressure on space. Birinus could choose where he liked to establish his cathedral. Despite various setbacks in subsequent centuries when the episcopal centre had to be removed to other locations (e.g. Leicester), Dorchester controlled a vast diocese that, by 1000, extended through most of the midland English counties up to the Lincolnshire coast and the Humber estuary. The 'town' barely deserved such a title, and there would have been little to say for it during the Anglo-Saxon period but for the cathedral.

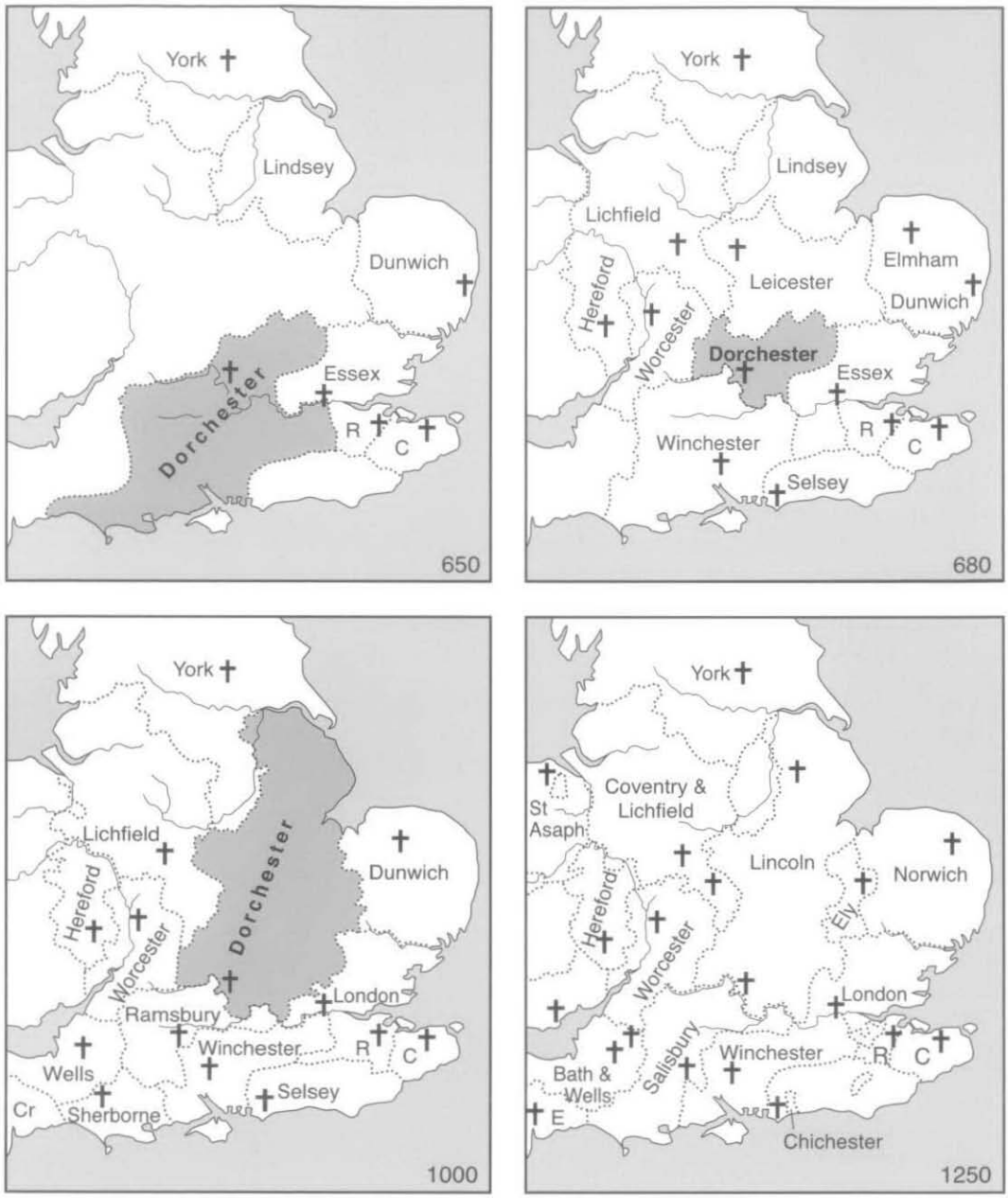
Dorchester was located in the extreme south-western corner of the diocese at its fullest extent (see Fig. 2), though it had been more central within the earlier Wessex-based bishopric. The isolated and inconvenient position made Dorchester vulnerable to the major changes that the Normans effected on the Anglo-Saxon church in the later 11th century. Rural episcopal centres such as North Elmham, Selsey and Sherborne with Ramsey were abandoned in favour of new urban sites – Norwich, Chichester and Old Sarum (Salisbury) respectively. It must have seemed obvious to Remigius, the new Norman bishop at Dorchester in the 1070s, that his diocese too should have a new, more appropriate centre, and Lincoln was duly chosen. The magnificent cathedral there was consecrated in 1092, and the former cathedral in a sleepy Oxfordshire town was reduced to the status of a church served by secular canons (priests).

This did not last for long, however, for Bishop Alexander decided that the church should become a monastic establishment. This happened in or around 1140, when a community of Arrouasian canons was founded. This was a branch of the Augustinian order, renowned for strict observance of its austere Rule of monastic life. The community must have flourished if the exquisite 13th- and (especially) 14th-century alterations and additions to the abbey church are anything to go by. The Augustinians and their branches were notable for being less closed off from local communities than many other monastic orders, and many of their houses also served as parish churches. Normally part of the nave or an aisle would be dedicated for this purpose. Such was the case at Dorchester, where the south aisle served this function. This would save the church when Henry VIII ordered the dissolution of the monasteries – the community of canons was expelled, but the church was purchased by Sir Richard Beauforest so that it could continue in parochial use. That is still its primary function almost 500 years later.

[3] Ibid. 28.

[4] B. Durham and T. Rowley, 'A Cemetery Site at Queenford Mill, Dorchester', *Oxoniensia*, xxxvii (1972), 32-7.

[5] See J. Blair, *Anglo-Saxon Oxfordshire* (1998), especially 39-41.



C Canterbury
Cr Crediton
E Exeter
R Rochester

Fig. 2. The development of the Anglo-Saxon and Norman diocese (after Cook and Rowley 1985).

THE DORCHESTER ABBEY APPEAL

The vast majority of historic churches contain significant amounts of important built fabric inherently worthy of long-term preservation. Many of them also retain evidence below ground of the centuries-long process of addition, retraction and alteration. Such is the case with Dorchester Abbey, not least because the monastic buildings were much more extensive than what survives today. The abbey church, however, is not a historical curiosity to be retained unchanged for the future. It is the home to a vibrant, active Christian community that can boast one of the longest continuous (or nearly so) ministries of any church in England, with regular and ongoing observance of services and prayers. Furthermore Dorchester Abbey is regularly used for large community and artistic events such as concerts and the annual St. Birinus Pilgrimage. Congregations, audiences and other users have legitimate needs for access, comfort and enjoyment even in the most venerable historic buildings, and in many respects Dorchester Abbey was not living up to expectations as the end of the second Christian millennium approached. Disabled access was very difficult, for instance, with no dedicated toilet facilities. The biggest issue was undoubtedly temperature: for much of the year (and not just the winter months) the abbey could be ferociously cold, and when entering the building it was often advisable to wear more layers of clothing than was necessary outdoors. The reason for this was apparent as soon as one stepped over the threshold into the church. The interior is a massive vessel, and keeping it warm had taxed the imagination and ingenuity of generations of churchgoers.

Improvements in thermal engineering and design meant that a new scheme of mixed underfloor heating ducts and wall-mounted radiators could be installed to provide a constant, comfortable background temperature all year round. This would have significant conservation benefits as well, by reducing temperature changes, condensation and other climatic problems. Furthermore the scheme offered important opportunities to address various unsatisfactory aspects of the church's internal arrangements and its decoration. Listed Building consent would be required for all the work, and keeping the church interior as clear as possible of intrusive equipment was a major guiding principle for the planning authorities, the Diocesan Advisory Board and English Heritage. The main consequence of this was that the boiler for the new heating system had to be housed outside the church, in an area known as the Cloister Garden on the N. side of the nave. As the name suggests the monastic cloister had stood in this area, and so it was archaeologically sensitive. Indeed the only previous archaeological investigation of the abbey had taken place in this area from 1960-2, when three small trenches had been excavated. These showed that medieval levels survived across much of the area, although they had been affected to a greater or lesser degree by post-dissolution activity.[6] The recovery of large amounts of Roman pottery and other finds of that date appeared to be more significant from the point of view of the new boiler house. The latter had to be sunk into the ground by almost 2 m. from the existing surface level – a depth that implied considerable disturbance of potentially important archaeological deposits.

The archaeological impact of the scheme was greatest in the boiler room area, but it was by no means confined to it. The room was due to occupy the west end of a new Pentice, a bold but traditionally-styled building consciously referring to the form and architecture of the medieval cloister. The Pentice would also house a disabled toilet, as well as a display of the medieval architectural fragments derived from the former abbey that had been

[6] C.J.K. Cunningham and J.W. Banks, 'Excavations at Dorchester Abbey', *Oxoniensia*, xxxvii (1972), 158-64.

recovered from around the site from the 19th century onwards. The building would have relatively slight foundations, but various deeper excavations for drainage and other mains services would be needed, and all of these would require careful archaeological attention. Furthermore there would be extensive new heating ducts within the church, and even though these were kept as shallow beneath the existing floors as possible it seemed inevitable that there would be some intrusion into previously undisturbed areas of stratigraphy. The likelihood of encountering medieval and later burials was also a significant concern, while it was impossible to rule out (to say the least) the potential for finding evidence of the Saxon cathedral. The project was therefore as much an opportunity to learn more of this great building's long past as it was a threat to it.

Needless to say the whole project was the subject of careful scrutiny by Oxfordshire's County Archaeologist, South Oxfordshire's Conservation Officer, and the Diocesan Archaeological Advisor for Oxford. Broadly speaking the County Archaeologist dealt with below-ground matters, while the Conservation Officer and Diocesan Archaeological Advisor took care of above-ground impacts. The archaeological works consisted of an evaluation (March-April 2001), excavation of the boiler room area (May-July 2001), and a subsequent watching brief during the main building contract (August-December 2001). These stages were carried out by the Keevill Heritage Consultancy on behalf of the Parochial Church Council. Each successive stage was covered by a Written Scheme of Investigation, approved in advance by the authorities. A post-excavation assessment was prepared on completion of the fieldwork, and the subsequent analysis has been carried out in accordance with that assessment. This report presents the results of the archaeological fieldwork, as well as three separate but related pieces of work. These were two ground-probing radar surveys carried out in 1999-2000,[7] an orthophotographic survey of the nave north wall in 2001 (external face only),[8] and remote sensing by photographic means on the interior face of the nave west wall, also in 2001.[9] The methods and results of these surveys are described briefly below.

THE RADAR SURVEY

Ground-probing radar surveys of the proposed pentice site and the nave were carried out by Stratascan in November 1999 and February 2000 respectively. The external survey focussed on the upper 1 m. or so of soil horizons. It located a number of distinct linear anomalies crossing the pentice area, and these were interpreted as service runs, probably drains, likely to be of modern origin. Several areas of complex responses were also noted, especially at the E. end of the pentice. These were interpreted as archaeological levels or features, perhaps representing post-dissolution demolition rubble spreads. One anomaly towards the W. end of the pentice was suggestive of a large void, and this was tentatively interpreted as a cistern or soak-away. The evaluation trenches, boiler room excavation and subsequent watching briefs confirmed that the linear anomalies were modern ceramic drain pipes as expected, with several associated manholes. Patches of rubble (largely modern rather than monastic in origin) were noted in the overburden removed by machine (see below), and these may correlate with the survey results. Alternatively the anomalies may have been beneath the level of impact at the E. end of the pentice. This seems unlikely given the relatively shallow depth of signal penetration. Finally the void anomaly coincided with an area of broken ceramic drainpipes packed in under the W. end of the surface drain that ran along the external face of the nave north wall until the pentice was built. These clearly acted as a soak-away for the drain, as suggested by the survey.

[7] Stratascan, 'A Report for Martin Ashley Architects on a Ground-Probing Radar Survey carried out at Dorchester Abbey Church' (1999); Stratascan, 'A Report for Martin Ashley Architects on a Ground-Probing Radar Survey carried out at Dorchester Abbey Church (Interior)' (2000).

[8] By the Downland Partnership.

[9] C.J. Brooke, 'Dorchester Abbey, Oxfordshire: a Ground-Based Remote Sensing Survey of the West Wall'.

The nave survey suggested that numerous graves or vaults and several areas of foundations underlie the current floor. The position of at least one foundation did not conform to the existing layout of the church, and it might therefore be of pre-Norman date. This will be returned to when discussing the overall results of the project.

THE ORTHOPHOTOGRAPHY

The Downland Partnership recorded the external faces of the nave N. wall and the NE. aisle (W. face) immediately before construction work started in August 2001. The survey covered the entire lower face of the wall, and an additional 1 m. (approximately) above the string course under the windows. The faces are largely blank, though a door from the aisle is still in use. A blocked door at the E. end of the nave wall was unblocked as part of the building works. The survey was required because construction of the new pentice would cover up these areas of masonry. The planning authorities therefore specified that the walls should be recorded photographically. Accordingly stereographic pairs of photographs were taken of the wall faces, and these were processed to produce rectified photomontages. Elements of the wall faces and their foundations that were exposed during the construction programme were recorded subsequently, in manual drawings and by standard 35 mm. photography. An extract from the survey of the N. wall is reproduced in Fig. 3, and an interpretative version of this is provided in Fig. 4.

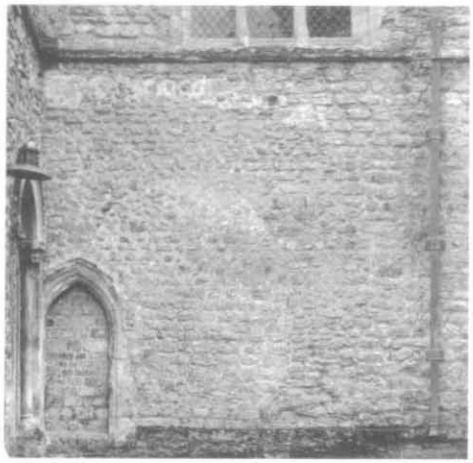


Fig. 3. Photogrammetric survey of the nave north wall, east end.

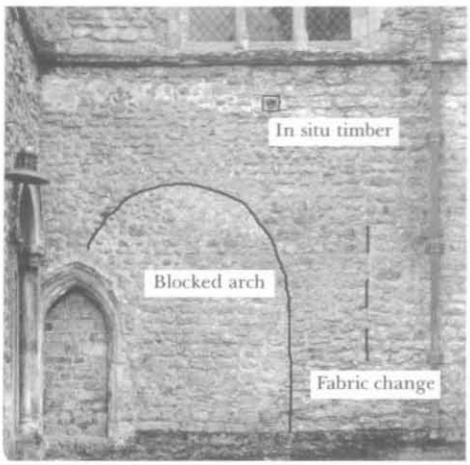


Fig. 4. Interpretation of the photogrammetric survey of the nave north wall, showing the large blocked 'arch' with the door from the nave into the medieval cloister inserted into it.

THE REMOTE SENSING SURVEY ON THE NAVE WEST WALL

Dr. Christopher J. Brooke carried out a remote sensing survey in the abbey church on the evening of 3 December 2001. This time was chosen to minimise distortion and contamination from daylight background lighting. The intention was to investigate the internal (E.-facing) elevation of the W. wall of the nave, and a short stretch of the adjoining internal face of the N. wall immediately to the E. Both faces are entirely covered by plaster, obscuring any detail in the masonry behind the render. Two methods were used for the survey: Contrast/Contour Enhancing Illumination (CEI) and Laser Contour Profiling (LCP). These systems are used routinely for survey of historic building fabric where archaeological details are poorly defined or not visible to the unaided eye.[10] Plaster applied to the surface of masonry walls tends to settle around the profile formed

[10] C.J. Brooke, *Ground-Based Remote Sensing* (IFA Technical Paper 7, 1989); C.J. Brooke, 'Ground-Based Remote Sensing of Buildings and Archaeological Sites: Ten Years Research and Operation', *Archaeol. Prospection*, 1 pt.2 (1994), 105-19.

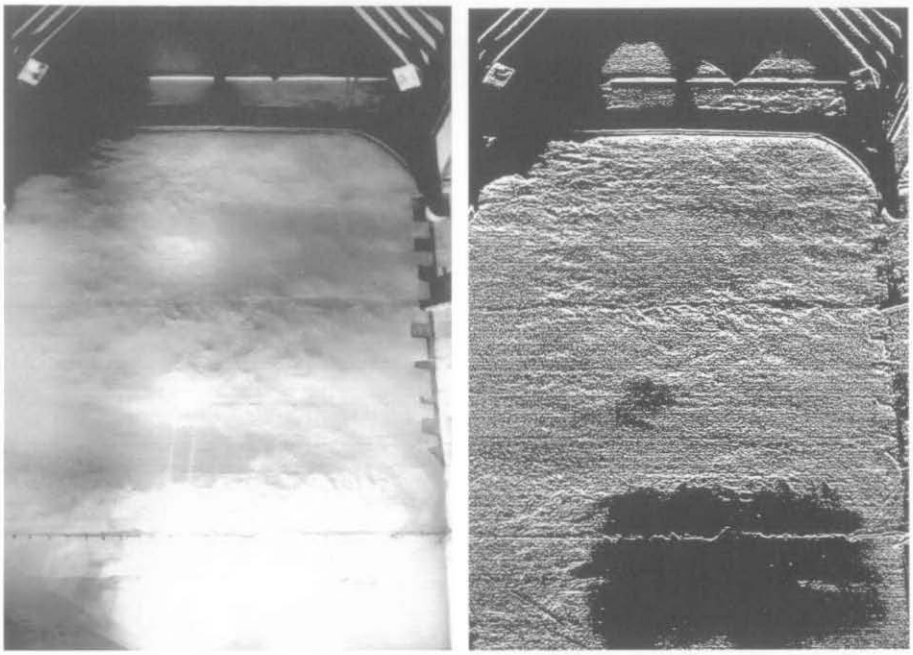


Fig. 5. Contrast/Contour Enhancing Illumination (CEI) photographs of the west wall (internal face), using 2415 film – left-hand image unfiltered, right-hand using Sobel filtration in X-direction.

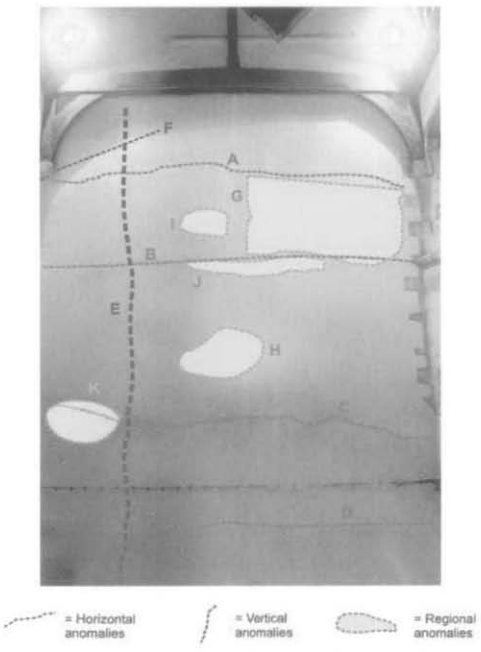


Fig. 6. Interpretation of principal anomalies in the nave west wall.

by the underlying structure, albeit in very shallow relief. This generally results in the appearance of a uniform, flat surface, often accentuated by a white-painted finish. Features such as blockings, alterations and constructional aspects such as shallow offsets or lifts will often project or lie back from this seemingly flat surface, however, and the CEI and LCP techniques aim to detect and demonstrate these. Both traditional film and digital photographs were taken. Dr. Brooke's report (available at the Oxfordshire Sites and Monuments Record) describes the methods employed in detail, including off-site digital image processing and enhancement. An abridged and simplified version of the results is presented here, while further consideration is provided in the discussion section below.

The best results were derived from the CEI image using Kodak 2415 film. The high level of contrast and edge enhancement combined to yield the greatest level of information. The digital CEI image was also successful, but did not capture more subtle anomalies as well. LCP was not as successful, largely due to far background light levels. Nevertheless some useful results were obtained. Fig. 5 provides the basic and filtered versions of the CEI film-based image for the west wall, while Fig. 6 presents an interpretation of the results from these and other images. Fig. 7 covers the adjacent part of the N. wall, providing both the basic CEI film image and the interpretation of it.

The west wall

Anomalies A-D all appear to be sharply defined linear features that cross the entire width of the W. wall. They probably relate to the construction of the wall, perhaps representing the boundaries between 'lifts' or phases of the construction operation. Anomaly E, by contrast, is a very broad vertical feature that appears to coincide with the position of the stair turret on the W. side of this wall. It probably relates to a constructional feature causing the plaster to dip slightly below the normal surface level at the junction between the W. wall and the turret. The horizontal anomalies continue across this vertical feature, suggesting that it does not represent a break in the building sequence.

Anomaly F is a very sharp, thin diagonal feature that may represent an earlier roof line. The lack of a parallel anomaly on the N. (right) side of the wall perhaps contradicts this, however, and the line may be a relatively minor constructional feature. The broad area marked G, in contrast, seems considerably rougher in texture than the rest of the wall, and has marked local slope variations in the images. It would be tempting to interpret this as a blocked feature, but the irregular off-centre positioning surely argues against this. The anomaly is noticeably confined between horizontal 'lifts' A and B, and probably reflects little more than the use of a different type of rubble fabric, with a thinner layer of plaster over it. Anomaly J is similar, and lies immediately below horizontal feature B. Large pieces of rough rubble appear to have been used locally here.

Anomalies H and I appear as elliptical projections of smoother plaster, rising just above the average surface. These probably reflect areas of unconformity in the wall construction, though they may not contain the irregular rough rubble indicated elsewhere. Anomaly K may be similar in nature, but it is recessed rather than raised from the surface.

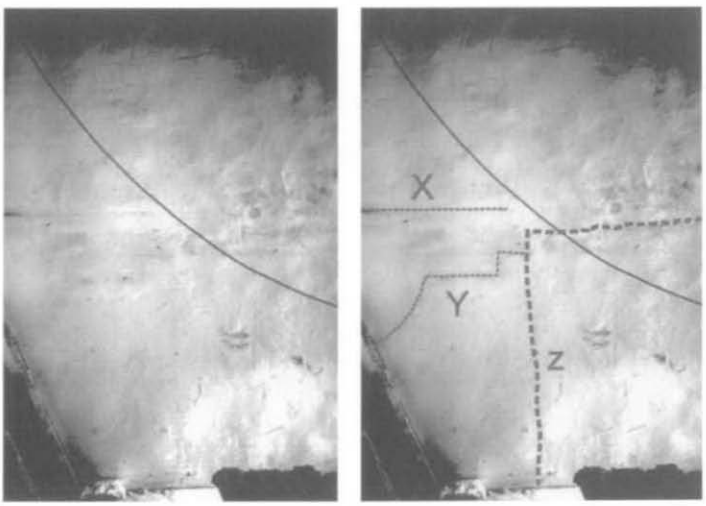


Fig. 7. Contrast/Contour Enhancing Illumination (CEI) photographs of the nave north wall, west end (internal face), using 2415 film – left-hand image unfiltered, right-hand interpretation.

The north wall

Features X and Y are predominantly horizontal linear anomalies of unclear, but presumably constructional origin. Feature Z consists of distinct but conjoining horizontal and vertical elements. It may represent the position of a blocked doorway.

EXCAVATION AND RECORDING STRATEGY

The first stage of the specifically archaeological works was an evaluation, during which one test pit (2, 1.8 m. maximum E.-W. x 1.4 m.) was excavated within the church, along with three trial trenches (3-5, each 5 m. long and 1.6 m. wide) and one spade pit (6, 0.5 m. sq.) outside in the Cloister Garden. A second test pit (1) had been specified in the nave, but the impact it was intended to assess was designed out of the scheme and accordingly the pit was not excavated. Otherwise the pit and trench layout was designed to respond to the County Archaeological Officer's requirements in terms of examining anomalies noted in the radar surveys. Trial trench 3 lay within the footprint of the intended boiler room, and was also intended to intersect one of the 1960s trenches. The evaluation suggested that archaeologically significant horizons lay at a level of approximately 48.8 m. above Ordnance Datum (AOD), and this formed the basis for devising the subsequent excavation and watching brief strategy.

Initially attention concentrated on trench 3, which was expanded to cover the whole of the boiler room footprint with a 1 m. allowance for working room on three sides (Fig. 1). The extended trench thus measured 6 m. (E.-W.) by 4 m., and was a little less than 2 m. deep from the average pre-excavation surface level.[11] The subsequent watching brief covered the reduced level excavation for the remainder of the pentice foundation slab, all associated trenching for new or re-routed mains services, and all below-ground works within the church. Initially the building contractor's work was monitored carefully by the archaeological team, who then took over the excavation whenever significant archaeological deposits could not be avoided. Some work on the above-ground fabric was also monitored, especially the re-opening of the blocked door at the E. end of the nave north wall.

The test and spade pits were wholly excavated by hand. Topsoil and modern overburden were removed mechanically from the three trial trenches and the boiler room excavation under archaeological control. The same processes of manual and mechanical work were used as necessary during the watching brief. Exposed surfaces were then hand cleaned, and all archaeological deposits were hand excavated. The only exception to this occurred in one narrow and deep new drainage run and an associated manhole in the Cloister Garden, when safety requirements precluded access to the excavations. In these instances observation and recording had to be done from surface level, with artefacts recovered from the machine-excavated soil. This was far from ideal archaeologically, but fortunately the extent of impact (and thus lost information) was limited in extent. All structures, features and deposits were given unique context numbers, generally related to the specific area or trench being excavated. For example context numbers in the 2000s relate to test pit 2, while numbers in the 3000s always related to trench 3 and its extension as the boiler room excavation. Context numbers 4500 onwards were used for the watching brief. All of the excavations were fully recorded in writing on standard pro-forma data sheets, graphically (plan, section and elevation), and photographically. In the latter case both black and white (negative) and colour (slide) photographs were used, while some digital images were also taken for use in regularly updated information panels.

THE NATURE OF THE STRATIGRAPHY, AND THE CONSEQUENT STRUCTURE OF THE REPORT AND ARCHIVE

The evaluation had been necessarily restricted in terms of depth. It sought to determine the level at which archaeologically significant deposits commenced (generally around 48.8 m. AOD), so that the potential impact of the building works could be determined and mitigated. The finds from the trial trenches were predominantly of Roman date, but it was recognised that this was not necessarily an accurate guide to the dating of the stratigraphy that would be encountered in the boiler room excavation. As the latter progressed, it became increasingly clear that the stratigraphy and finds were somewhat divergent in character. All finds

[11] The site slopes slightly from the W. down to the E., so the precise depth of excavation varied according to the topographical detail. The precise base level of the boiler room was established by the engineering and mechanical requirements both of the room itself structurally, and of the plant that was to be housed within it.

categories were dominated by Romano-British material, in terms of number and weight. For example approximately 30 kg. of Roman pottery was recovered (from all stages of the work), whereas the Anglo-Saxon, medieval and later pottery amounted to only 5.5 kg. Despite this not a single *in situ* Roman feature or deposit was encountered in the boiler room excavation, and no contexts demonstrably of this date were observed at any time during the watching brief either. This obviously has considerable ramifications for interpretation of the historical development of both the abbey site and Dorchester as a whole, but it also had a significant bearing on the post-excavation assessment and subsequent analysis. The Roman material had to be treated as, in effect, unstratified. It had little or no value in interpreting the site's stratigraphy, where the Anglo-Saxon and medieval sequence were clearly of paramount importance. Thus post-excavation analysis has concentrated heavily on these periods, and much lower emphasis has been placed on the Roman and post-medieval eras. The latter was surprisingly poorly represented in the stratigraphic record at all stages of fieldwork, apparently because of the extensive 19th-century restoration work on and around the abbey church.

Geologically and topographically, Dorchester-on-Thames occupies a gravel terrace in a bend of the river Thames as it sweeps eastwards to the confluence with its tributary, the Thame. The town lies immediately to the north of this confluence. The terrace gravels are overlain locally by brickearth, a thick riverine clay-silt deposit varying from reddish to yellowish brown in colour. This was found towards the bottom of the boiler room excavation, sloping downwards gradually from E. to W. (i.e. contrary to the slope direction of the current ground surface). The exposure of the brickearth (3073) across the whole of the boiler room (except where deeply cut Saxon and medieval features continued beyond the limit of excavation) proved beyond doubt that Roman contexts were absent here. Brickearth was also noted at various locations in the watching brief, though not in the drainage trench running eastwards to the current terrace edge immediately beyond the E. end of the abbey church. This suggests that there was an earlier terrace edge somewhat to the W. of the current (artificial) one, though little more can be said of this on the basis of the limited evidence from the watching brief.

A small quantity of prehistoric flintwork and an Iron Age gold coin were recovered from the excavations. As with the Roman material these finds were obviously not *in situ*. The flints do not warrant further consideration, but the gold coin is described below. Some thought is given to its potential significance in the discussion section.

STRATIGRAPHIC DESCRIPTION

Much of the following description derives from the boiler room excavation and the watching brief on the remainder of the pentice. Significant discoveries elsewhere both externally and internally are included as necessary. Four broad phases of activity have been identified across the whole project, and the description is broken down into these. In all cases fully detailed 'Level III' descriptions will be found in the site archive. For ease of reference site-based compass points are used throughout, but it should be noted that the church (which dictated the site grid) is slightly skewed from a standard E.-W. alignment. This has potentially important ramifications for the Phase 1b and 1c buildings described below, as their timber slots are actually aligned more or less precisely N.-S., in contrast to all other structures noted on the site. The implications of this will be returned to in the discussion below.

PHASE 1: ANGLO-SAXON BUILDINGS AND LAYERS

Phase 1a: Structure 3144

Sunken floored building 3144 was cut into the natural brickearth 3073 (Fig. 8). Only the E. edge lay within the excavation area, comprising a straight and sharply-defined N.-S. cut at least 3.7 m. long. The N. end continued beyond the edge of the trench, while the foundations of the abbey nave had truncated (but not totally removed) the S. end. The W. end also lay beyond the limits of excavation, so the building measured at least 4.7 m. wide E.-W. (the W. end had also been truncated by later features). Cut 3144 was 0.18 m. deep, with a flat base. Several parallel, shallow U-profiled N.-S. beam slots had been cut into the base of the building. Slot 3147 was at least 2.25 m. long (continuing S. beyond the edge of the trench), 0.16-0.2 m. wide, and 0.1 m. deep. Slot 3151, 1.6 m. W. of 3147, was a minimum of 3.6 m. long (both ends continued beyond the trench margins), 0.29 m. wide and 90 mm. deep. The terminal of an E.-W. aligned slot (4567) met 3151 at a right-angle near the S. edge of the trench. This slot survived for a length of 0.65 m. long before it was truncated by Phase 1e well 3101, and was 0.2 m. wide and 0.1 m. deep. A further short N.-S. slot (3149) lay 40 mm. W. of the N. terminal of 3147, being 0.34 m. long, 0.12 m. wide and 0.1 m. deep. These slots may have supported elements of suspended flooring within the building.

A circular area of the base had been deepened slightly beyond the prevailing surface to create a shallow pit (3154) within the structure. Cut 3154 was a circular depression 1.4 m. in diameter, situated in the angle

between slots 3131 and 4567. The scoop contained two superimposed fills (3155 and 3153) separated by a horizontal charcoal lens, jointly 0.18 m. thick. The filled circular hollow was sealed a greyish green, charcoal-flecked granular sandy clay silt that occupied the whole area of building 3144 (contexts 3143, 3145, 3146 and 3047 separated by later features that had cut through the base of the building). Slot fills 3148 (in 3147), 3152 (in 3151) and 4568 (in 4567) were visible as separate entities from the occupation material, but fill 3150 (in slot 3149) was not.

A thin elongated N.-S. patch of pure charcoal and charcoal staining directly overlay the occupation material (3143 etc). The 2.9 m.-long, 10 mm.-thick charcoal patch was embedded within the base of clay layer 3137 (Fig. 8). The charcoal appears to be the burnt remains of either floor planking or a burnt fallen wall plate. Its position next to and parallel with wall slot 3147 on a N.-S. axis suggests that burnt floor planking over an infilled floor void is the most likely interpretation. Clearance and levelling layer 3137 was laid over the charcoal staining to create a level platform for a new solid floor. This was a distinct, very compact layer (3114, 3115, 3135, 3074) of granular mortar and chalk 40-50 mm. thick. This had been cut away by various intrusions but had formerly extended over the whole area of structure 3144 but did not continue beyond its E. edge to any significant degree. It is thus considered to represent continued use of the structure.

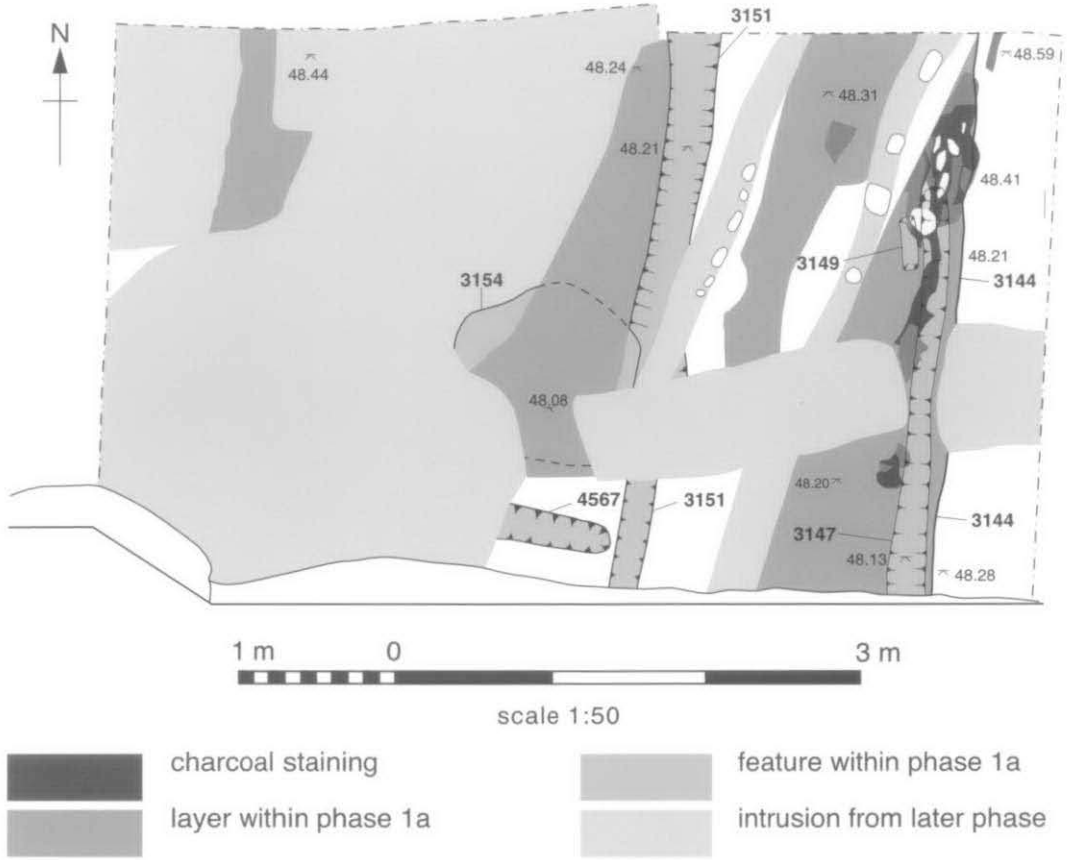


Fig. 8. Plan of Phase 1a sunken-featured building 3144, showing the location of charcoal staining within layer 3137.

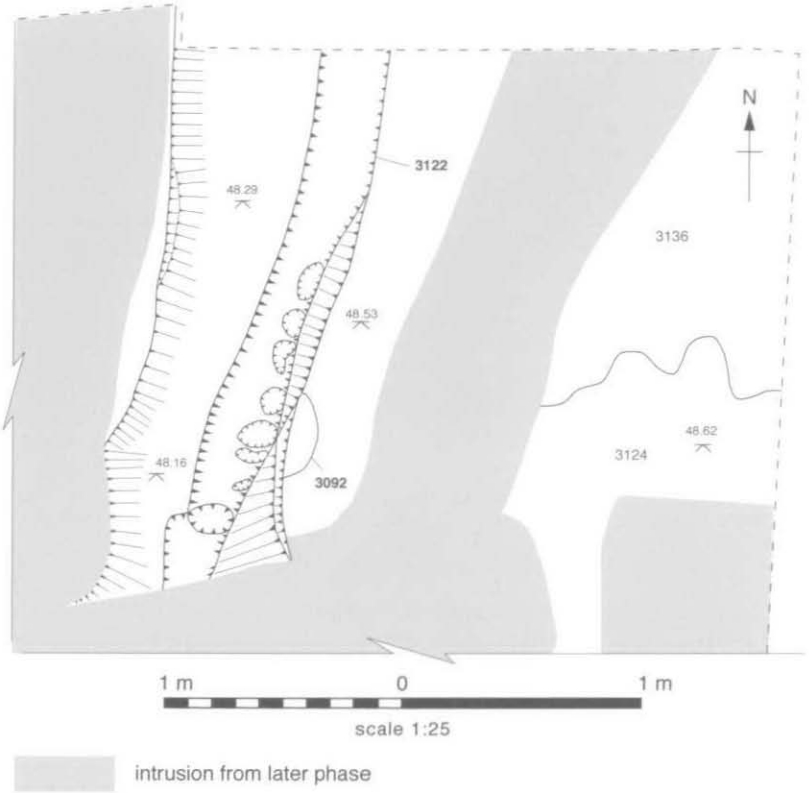


Fig. 9. Plan of Phase 1b structure 3140.

Fig. 10. Phase 1b structure 3140 (right) and Phase 1d structure 3113 (left) viewed from the north, with the nave foundations in the background.

Phase 1b: Structure 3140

Slot 3122 represented the W. wall of a new building on a slightly different alignment to 3144 (Figs. 9-10). The surviving elements of slot 3122 measured 3.6 m. N.-S. by 0.3 m. wide and 0.26 m. deep. The N. and S. ends lay beyond the edge of excavation. The slot had eight post or stake holes along its base. The impressions of these timbers were sealed below the basal fill (3138) in the slot, which occupied its narrow and deeper E. side. Fill 3138 consisted of lumps of reddish brown redeposited brickearth packed around the bottom 0.12 m. of the post/stakes. The remaining backfill or packing (3121) was a dark greyish brown, compact silty sand with some gravel.

A wedge of occupation debris (3124) lay to the E. of the foundation slot. This material deepened from a thickness of only 15 mm. adjacent to slot 3122 to 0.24 m. at the E. edge of the boiler room excavation. It comprised inter-bedded pale yellowish-brown silty sand and mottled grey, green and black lenses of clayey silt. At one point 18 separate sub-units could be distinguished, sloping down slightly to the E. edge of the excavation. A 60 mm.-thick charcoal-flecked pale grey green to brown granular sand (3136) was contiguous with and to the N. of layer 3124. This material may be the deposit from which much of 3124 was derived by weathering. These deposits appear to be the local debris of considerable industrial and/or pyrotechnic activity within structure 3140. The weathering and decay material derived from this building became spread over its foundation slot (presumably resting against the wall timbers themselves), and was cut by the replacement wall slot 3113.

Phase 1c: Layers 3082 and 3123

A medium grey-brown silty gravel layer (3082, 3123) up to 0.15 m. thick sealed the upper fill of slot 3122 as well as layers 3124 and 3136. Context 3123 clearly extended beyond the W. edge of slot 3122. It is therefore unlikely that the building continued in use unless it had been extended to the W., but no associated structural remains were found within the excavation area and 3123 was not observed anywhere along the W. edge of the boiler room excavation. It is possible that the gravel represents an external yard surface, thus reflecting a period when no buildings stood on this part of the site.

Phase 1d: Structure 3113

Slot 3113 lay 1.4 m. E. of ditch 3117 and on a parallel axis to it; the two features cut phase 1c layer 3123, and so were stratigraphically contemporary. The slot marks the former position of an external wall to a timber building, the majority of which lies beyond the E. edge of the trench. Feature 3113 measured 3.8 m. long, passing below the nave wall to the S. and beyond the N. edge of the trench (Figs. 10-11). It was 0.6 m. deep and 0.47 m. wide, narrowing to 0.23 m. near its base. The imprints of at least five post/stake holes were identified in the base. The slot fill (3112) consisted of light orange to greyish green sandy silt gravel above greyish silt. Occupation layer 3118 was a brownish grey sandy silt with some gravel and thin clay lenses. It lay to the E. of the slot, having been deposited over Phase 1c layer 3082.

Ditch 3117 survived for a 2.7 m. length from the N. edge of the excavation, and was 2.2 m. wide by 1.25 m. deep, with near-vertical upper slopes and a U-shaped lower profile (Fig. 11). The ditch base fell slightly from NE. to SW., presumably to assist drainage, and appeared to define a plot boundary. The ditch edges appeared to be starting to curve inwards at the point where the phase 1e well (3101) cut them away, suggesting that the ditch was close to its terminus (and perhaps therefore an entrance). A 0.35 m.-thick gravel deposit (3130) was seen in section to the S. of the well where the ditch would have been had it continued. The presence of this surface-like gravel suggests that the ditch had indeed terminated, and that a gravel yard or road occupied the area S. of it. The primary fill of the ditch was a 0.56 m.-thick grey-green charcoal-flecked sandy silt (3126). This was sealed by a red/orange-flecked granular silty sand (3125) with distinctive particles of burnt clay, up to 0.25 m. deep. Most of the orange burnt material appeared to have entered the ditch from the E. side. Finds from fill 3125 included glassy slag, crucible sherds with glass sintered to them, yellow glass shards, fine possibly Byzantine glazed pottery, and a gold Iron Age coin. Fill 3125 was sealed by layer 3116, a dark greyish brown sandy silt with flint and daub lumps and much animal bone. This layer was 0.39 m. thick. The upper fill (3120) was a 0.1 m.-thick gravelly silty sand with many white mortar flecks.

Phase 1e: Well 3101

A large roughly circular construction pit 3101 measured 2.9 m. in diameter (Figs. 12-13) and was at least 1.52 m. deep (minimum, proven by augering) from a level of 48.79 m. AOD (and so barely concealed by medieval deposits). The S. side of the pit had been cut by the nave north wall foundations, and so obviously pre-dated them. A cylindrical stone lined shaft (context 3100) had been constructed within the construction pit, somewhat off-centre to the NE.; the stone lining was 1.4 m. in external diameter, with a bore (internal diameter) of 0.6 m. The upper 0.9 m. was excavated by hand, and augering penetrated a further 0.65 m. before a hard (stone?) base was encountered three times. It was not possible to determine whether this was a solid base (in which case the feature is more likely to have been a cistern) or capping within a well. The

sandstone, flint, ceramic building material and mortar blocks making up the stone lining all appeared to be re-used material, often showing clear signs of previous structural use. The lining was bonded with orange-brown flaky granular clay. The shaft fills (3103 over 3104) were light and dark brown/orange sandy silts respectively. The construction pit had been backfilled around stone lining 3100 with a mixture of gravel, sand silt and brickearth with some rubble (3099). One stone had fallen or been robbed from the S. side of the shaft, and the stone void had been replaced with fill 3108, a dark grey granular loam very similar to the overlying medieval layer 3067/3099.

Fig. 11. Plan of Phase 1d structure 3113.

Unphased Saxon deposits found during the watching brief

A N.-S. wall (4592) was seen in a new drainage trench and 1.8 m. NE. of the N. chancel aisle's NE. buttress. The straight length of wall was two courses thick and included re-used Roman *tegulae* (roof tile) in its construction. The wall was of otherwise of drystone limestone rubble, 0.25 m. wide and 1.4 m. below the modern ground surface. A Norman or later medieval (monastic) date is thought to be unlikely on the basis of materials, quality and depth below ground. The re-used Roman tile suggest a Saxon rather than later Roman date, but this cannot be proved on the basis of the available evidence.

Limited areas of *in situ* Saxon deposits (4533 and 4562) were recognised during the external watching brief, sealed by medieval deposits and overlying brickearth. Layer 4533 was a grey-green sandy silt with some clay, located within the central area of the pentice ground slab excavation where it was cut by several graves. Layer 4562 was a fairly compact darkish grey-green sandy silt to the N. of the W. tower, exposed by excavation for the boiler flue duct. Both layers were similar in character to, and at roughly the same horizontal position as, phase 1b context 3124. Soils of the same overall character, and probably of the same date, were noted occasionally in the deep drain trenches to the N. of the pentice and the NE. aisle, and in the manhole pit NW. of the N. transept. Safety concerns precluded detailed recording of these.

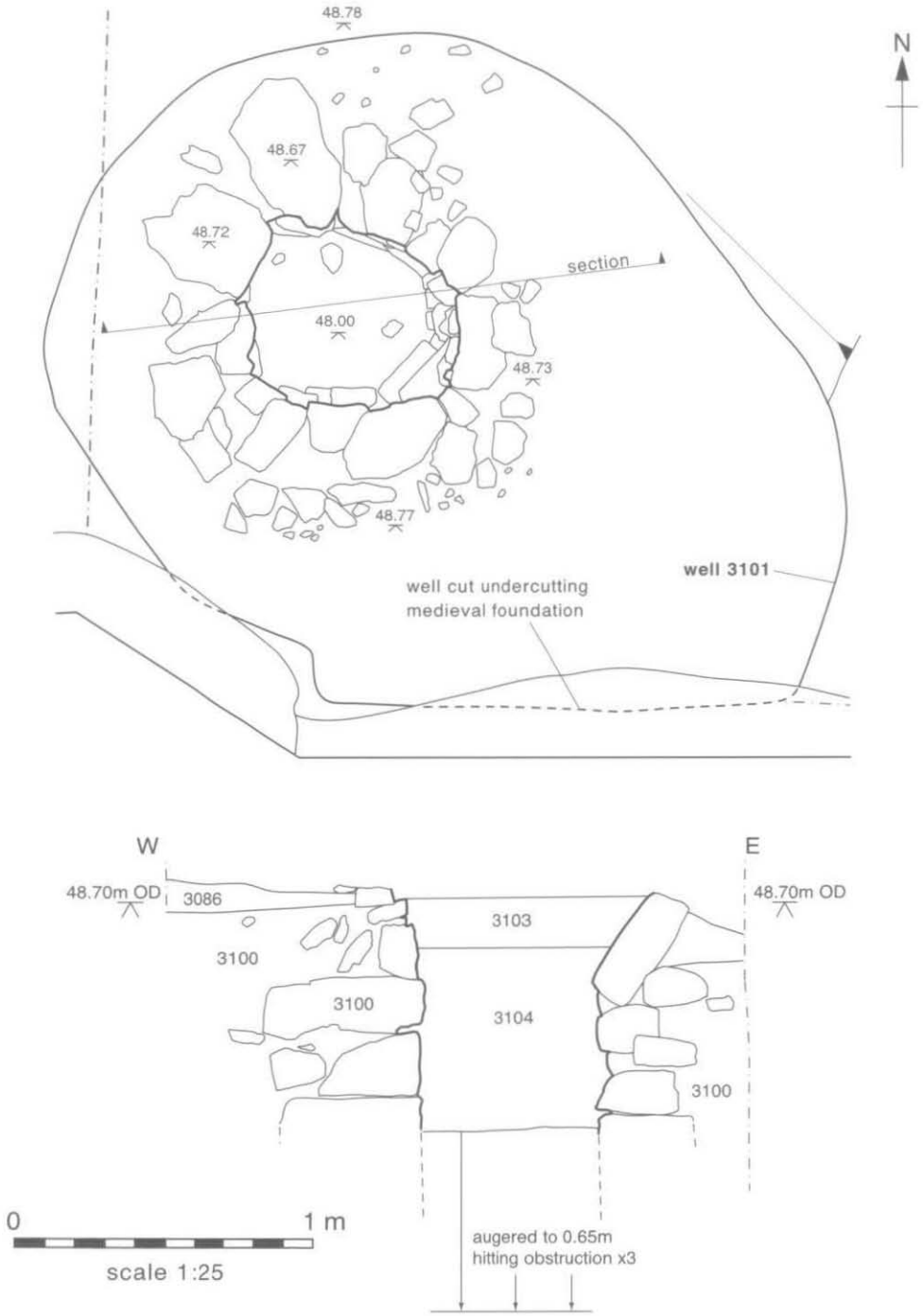


Fig. 12. Plan and section of Phase 1e well 3101.

Fig. 13. Phase 1e well 3101 during excavation, seen from the north-west.

The N.-S. heating duct trench at the W. end of the nave aisle was the only area where Anglo-Saxon deposits were exposed within the church. These were found on both sides of the central passage between the pews immediately E. of the step down from the baptistery into the nave. Layered deposits of wood charcoal and ash were interbedded with redeposited, heat-affected brickearth floor surfaces (context 4586). The deposit was 0.15 m. thick and lay above brickearth 4589. Layer 4586 was very similar to the Phase 1a and 1b floors and occupation horizons seen in the boiler pit excavation and in the manhole pit NW. of the N. transept. The top of the surviving Saxon material lay 0.35 m. below the modern floor surface, at around 48.6 m. AOD.

At the NW. corner of the nave the 12th-century W. wall appeared to butt against earlier masonry 4580. This was seen both to the E. and W. of the W. wall and was of inferior quality, random rubble limestone masonry. The footings of wall 4580 were also seen S. of the 17th-century tower's N. wall, running W. for 0.48 m. The footings of nave N. wall 3129 also appeared to butt against masonry 4580 externally. Wall 4580 therefore probably represents a survival from the Anglo-Saxon cathedral or the subsequent church of secular canons established when the diocesan centre was moved to Lincoln.

PHASE 2: THE MEDIEVAL PRIORY

The foundations of the nave north wall

The S. side of the boiler room and pentice excavations were formed by the external face of the nave N. wall (see Fig. 10). The foundations of this were revealed in the excavations, occupying a straight sided vertical trench (3127) 2.4 m. wide and 1.05 m. deep. Foundation trench 3127 cut through all the pre-Norman deposits into the top of the natural brickearth 3073. The bottom two courses (footing 3128) consisted of two irregular courses of rough flattish limestone rubble pitched to the W. at 45°. The foundation had further lumps of limestone rammed randomly within it, and was offset by 0.57 m. outwards from the face of the wall above. Two further courses of foundation (3129) constructed of rough ashlars had been built off 3127 with a 0.07 m. offset, thus gradually narrowing the width of the foundations. A further 0.24 m. offset occurred in the next foundation course, 3131. The nave N. wall (3132) rose directly off this foundation. The N. wall has a measured thickness 1.3 m.-1.5 m. and rises for approximately 5 m. high to the string course below the windows.

Structural features associated with the cloister

Medieval levels had been removed over much of the pentice and boiler room, apparently during the 19th century (see below), but two controlling levels were identified during the excavations and watching brief. Firstly an external offset of the nave north wall lay at 49.2 m.-49.3 m. AOD (i.e. roughly the same level as the current internal floor level at the W. end of the nave). Secondly, the threshold in the door from the nave into the cloister was revealed when this was unblocked as part of the construction work. Later medieval floor tiles and stone slabs were found *in situ* here, establishing that the 14th/15th-century floor level had been at around 49.2 m. AOD (Fig. 14). It may have been a little lower in the 12th century – evidence from the watching brief at the W. end of the nave and in the chancel suggests that the original internal floor would have been at around 49 m. AOD.

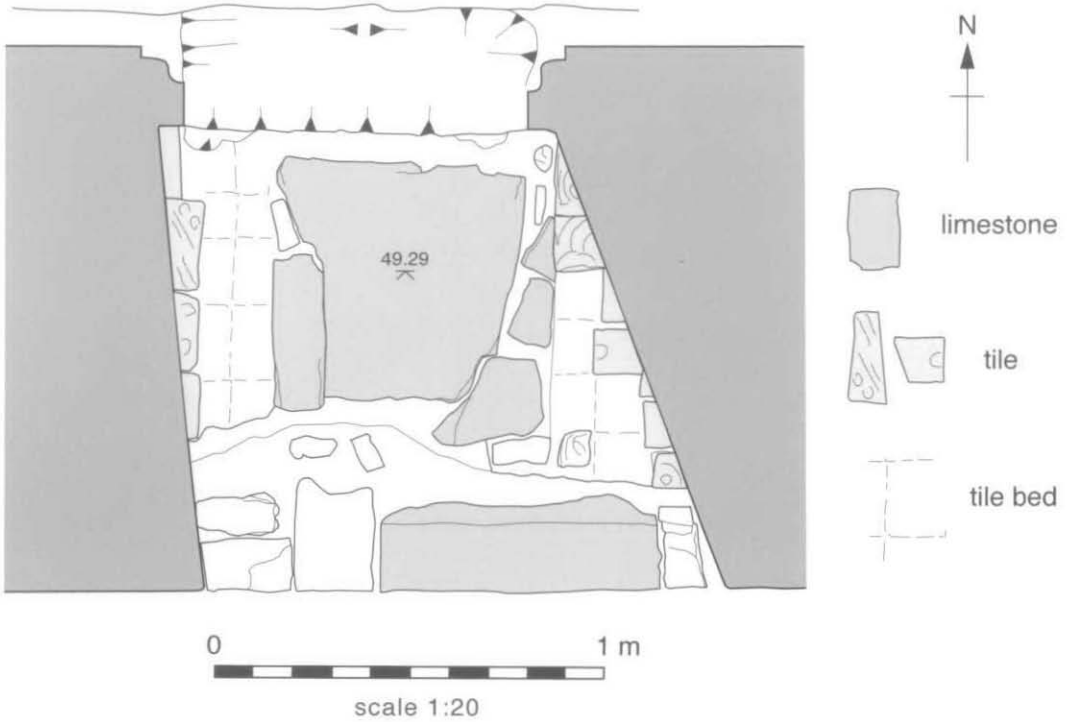


Fig. 14. Plan of the door from the nave into the medieval cloister, with the medieval floor tiles and paving slabs surviving *in situ*.

The blocked door 23 m. E. of the nave's NW. corner originally afforded access from the E. end of the nave and the crossing to the SE. corner of the cloister (see Figs. 1, 3 and 14). This door was reinstated as part of the abbey project. After photographic recording, the external skin of limestone rubble blocking was removed to reveal the jambs. The rendered internal blocking was also removed from the south side and found to be built of a single skin of 18th-century brick. The brick blocking was built upon an unmortared mass of limestone blocks set in brickearth which filled the lower 0.40 m. of the door passage. The late medieval floor surface of the passage was exposed under this material.

The passage through the 1.5 m. thickness of the wall was angled from NW.-SE. and was 1.1 m. wide at the N. (external) end, widening to 1.35 m. internally (S. end). Worn threshold slabs were present on both the N. and S. sides. A worn trapezoidal limestone slab occupied the central area with smaller slabs set around it to create a roughly paved 0.7 m.-square area. The mortar bedding for square ceramic tiles remained between the angled walls and the central slabbed area. The impressions of 15 tiles could be seen clearly as upstands in the mortar bed. Eleven cut triangular tiles remained at the margins of the passage, some sealed at the outside edge by the wall plaster on the passage walls. The tiles that remained *in situ* were of a 14th/15th-century inlaid glazed type, probably of the `Wessex Stabbed' tradition. All were worn to some extent and presumably had

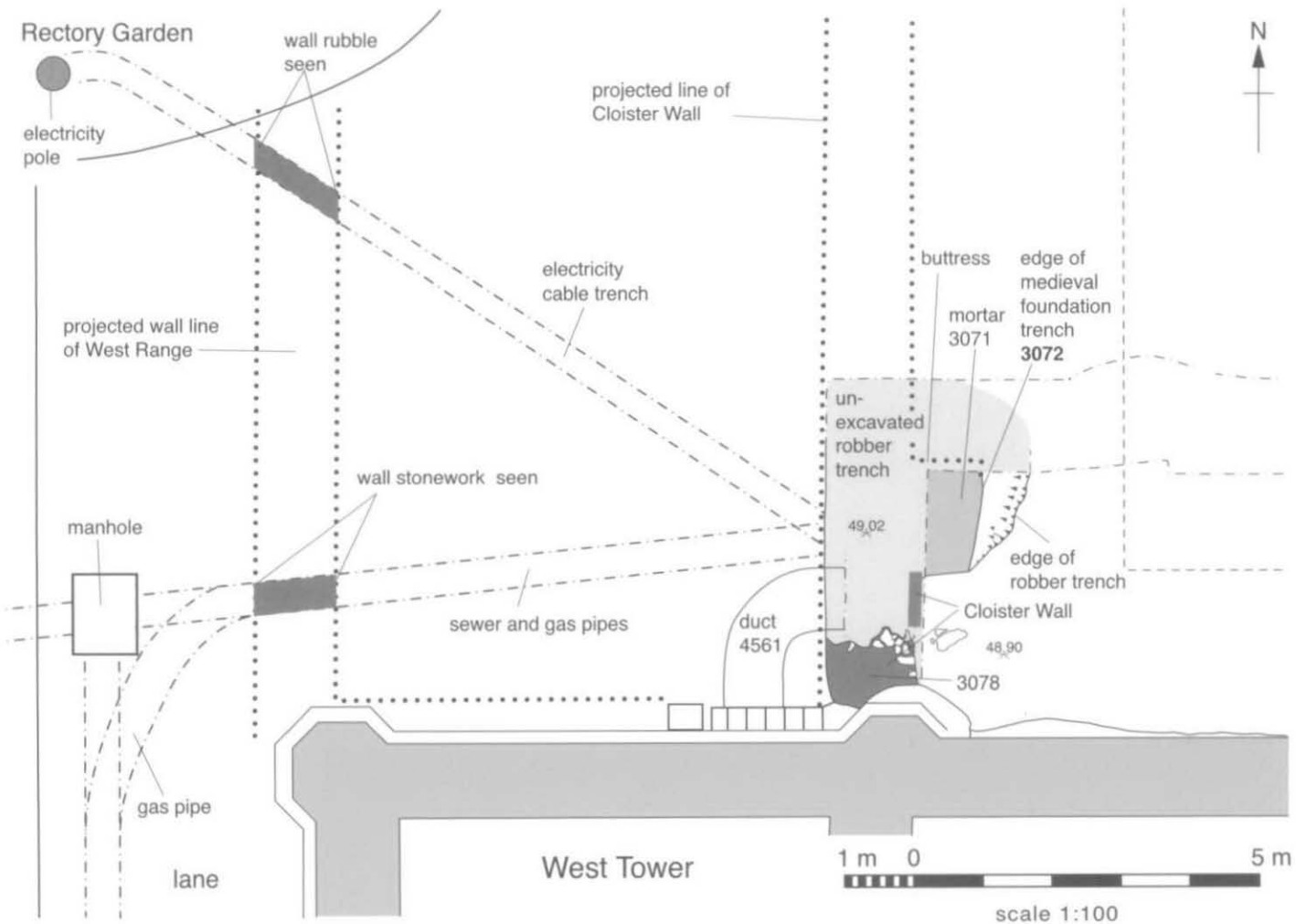


Fig. 15. Schematic plan of features associated with the medieval cloister, and post-medieval robbing of them.

been abandoned as not worth recycling, unlike the 15 whole tiles which had been removed (presumably for re-use) before the door was blocked. The passage floor was divided from the inner threshold by a deep, straight, narrow void. It is assumed that the void had been occupied by a wooden door frame sealing the passage from the nave. The exterior opening had clearly been occupied by a door as three pintle holes remained at the W. side, while a bolt chute remained in the E. jamb. The late 13th/14th-century pointed Gothic stone arch of the external door frame is at odds with the symmetrical round-headed profile of the passage, and is likely to have been inserted later in the life of the passage. The passage walls and ceiling were plastered and limewashed. Graffiti in the form of compass-drawn circles and 'petals' as well as elements of script remained on the plaster of the E. passage wall.

Structure 3079 was a fragmentary survival of the E. wall (or its foundation) of the W. cloister range (Figs. 15-16). It had been heavily robbed to the N. and S. by post-dissolution features 3052 and 3081 respectively (see below). The surviving fragment was 1.08 m. wide (E.-W.) and only 0.6 m. long, with a maximum height of 1.01 m. (topping out at *c.* 49.3 m. AOD). Ten courses of mortar bonded limestone rubble were present, with no surface treatment on the E. face, suggesting that it was not designed to be seen. Given the presumed medieval floor level here and the poor finish of the E. face, it seems likely all 10 courses were foundation rather than above ground masonry. A weathering layer of soil (3156) had accumulated in the construction trench base (3072/3141) before the wall was constructed over it. The masonry itself was sealed by layer 3078, a thin brown clay layer perhaps for damp-proofing of the foundations. Post-medieval robber trench 3052 widened considerably N. of the surviving masonry, suggesting the former presence of a buttress against the cloister wall. Robber trenches of this wall and the W. cloister walk were also recognised in 1960s excavation II, along with some tile impressions from a floor.[12]

Wall 4561 was recorded in a new service trench immediately to the N. of the W. tower and was probably the W. wall of the monastic W. range. The wall was constructed of roughly hewn limestone blocks and the surviving fragment was 0.2 m. deep, 1.8 m. wide E.-W., by 0.3 m. wide.

Fig. 16. View of wall fragment 3079 immediately to the north of the west tower's north-east corner.

[12] Cunningham and Banks, op. cit. note 6, pp. 160-1.

The E. cloister range would have extended directly from the N. transept (the existing structure here is a post-dissolution rebuild). Robber trenches probably belonging to the transept and the E. range were recognised in the early 1960s excavations.[13] It had been anticipated that similar traces would be seen in the drainage trench running W.-E. in front of the transept, but in the event nothing of note had survived the cutting of the original drain here. Possible elements of the E. and S. cloister walks (or their robbing) were noted in evaluation trenches 5 (foundation trench 5027 with *in situ* mortar bedding against the edges, and robber trench 5010) and 4 (robber trench 4020) respectively. These were partially excavated during the evaluation and appeared to be well defined. If the features were correctly interpreted the E. cloister walk would have been just over 3 m. wide, but the S. walk would only have been 1.7 m. wide. In retrospect 4020 seems more likely to have been a medieval grave, as numerous other burials were found here during the watching brief (see below). The N. side of the S. cloister walk could not be identified positively at any stage of this project, but the distribution of burials showed that it cannot have been less than 3 m. from the nave north wall. The remains of three roof timbers below the string course in the wall face seem likely to belong to a pent roof over such a cloister walk.

Layers 4504 and 4532 consisted of mixed yellow-brown flint gravel, chalk and mortar fragments. This material was not present in the boiler room excavation but was recognised over the central area of the pentice alongside the nave N. wall. The gravel layer did not extend as far as the N. transept, but it appeared to be the bedding for a floor in the S. cloister walk. It was cut by many medieval graves. The maximum dimensions for the two contexts were 10.2 m. (E.-W.) x 3.2 m., and the general thickness was *c.* 0.15 m. The upper level of the layer varied because of truncation, but its highest level was just above 49 m. AOD. This would imply a finished floor level of around 49.1 m. AOD or slightly higher if paving slabs or tiles were used.

Features 4546 and 4548 lay on a N.-S. axis in an area clear of burials 8.2 m. W. of the N. transept. Neither was excavated as they lay below the zone of disturbance caused by the pentice foundation slab. The S. feature, 4546, measured 1.65 m. E.-W. by 2.75 m. Augering suggested that the feature was 0.57 m. deep. It contained a distinctive creamy white mortar lining (4545) 180-200 mm. wide around all four sides of the feature, with grey sandy silt loam 4544 within this. Feature 4548 lay immediately to the N. and represented the S. end of a similar feature measuring 1.64 m. E.-W. by a minimum of 0.6 m. This feature contained brown clayey sandy silt fill 4547. The function of these features is unknown but they could be charnel pits, robbed crypts/vaults, or mortar mixing tanks. Wall stub 4555 was 3.2 m. E. of pit 4546 and seemed to be bonded with the masonry of the nave N. wall. Wall 4555 was at least 1.5 m. long on its N.-S. alignment, 0.58 m. wide, and was composed of angular flint and limestone blocks bonded with a creamy white mortar. The wall was truncated by grave 4542 0.82 m. N. of the nave wall, suggesting that it went out of use during the medieval period.

The cloister cemetery, and other burials

A total of 26 medieval graves were excavated in the boiler room excavation and the pentice watching brief (Fig. 17). Two more were not bottomed to skeleton level and one body was left in its stone coffin below the pentice floor level. Thus a total of 29 full or partial skeletons were excavated. The cemetery was largely within the S. cloister walk, spreading N. into the cloister garth where several graves were observed (but not excavated) in drain trenches. Some high status burials such as an individual in a stone sarcophagus (SK 4554) were buried as close as possible to the N. wall of the nave. The burials in the boiler room were associated with a dark brownish grey topsoil-like layer (3067, 3089, 3090, 3099 and 3102), and grave cuts were not always easy to discern within this until skeletal remains were exposed. The lower parts of the graves cut through Saxon levels, however, and were therefore easily definable. The cemetery soil included SK 3102, which was a pair of semi-articulated mid and lower legs with some foot bones and SK3090 a pair of ankles. The graves in the pentice area were more readily identifiable as they had been cut through the gravel bed (4504, 4532) described above. Further consideration of the graves in the external cemetery, and their contents, is provided in the skeletal report below.

A second medieval stone sarcophagus (4570) was found within the church, buried alongside the S. transept S. wall. Only the eastern 0.48 m. was exposed, the E. end being 2.6 m. from the SW. corner of the transept. The cover slab was traced to within 0.94 m. of the W. wall. The mortared-on cover slab overlay a one-piece limestone coffin with sides 30 mm. thick and measuring 440 mm. wide. The remainder of the sarcophagus was not exposed. Both it and its occupant were left undisturbed *in situ*. Possible grave cuts were also revealed within the church, in test pit 2 and during the watching brief, but in no case did excavation reach skeletal remains. Scattered pieces of human bone were collected at various points internally, especially within the S. transept. The only other graves seen within the church were post-medieval brick vaults, again left undisturbed and not considered further here.

[13] Ibid. 159-60.

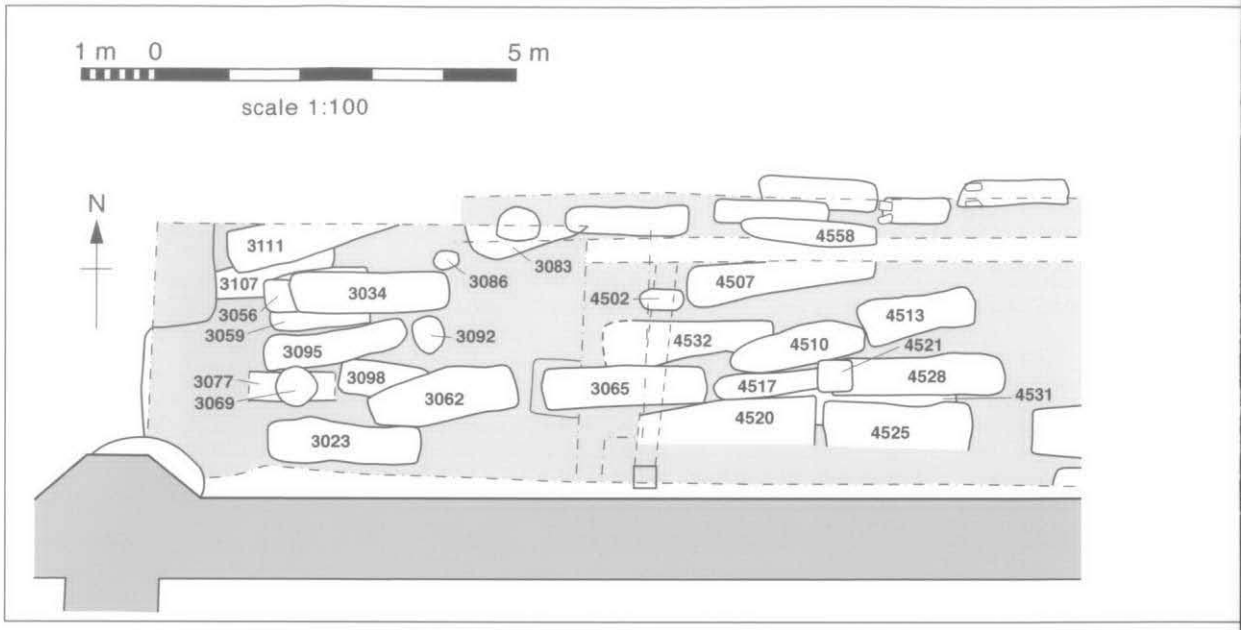


Fig. 17. Schematic plan of the cemetery in the medieval cloister.

The wider monastic precinct

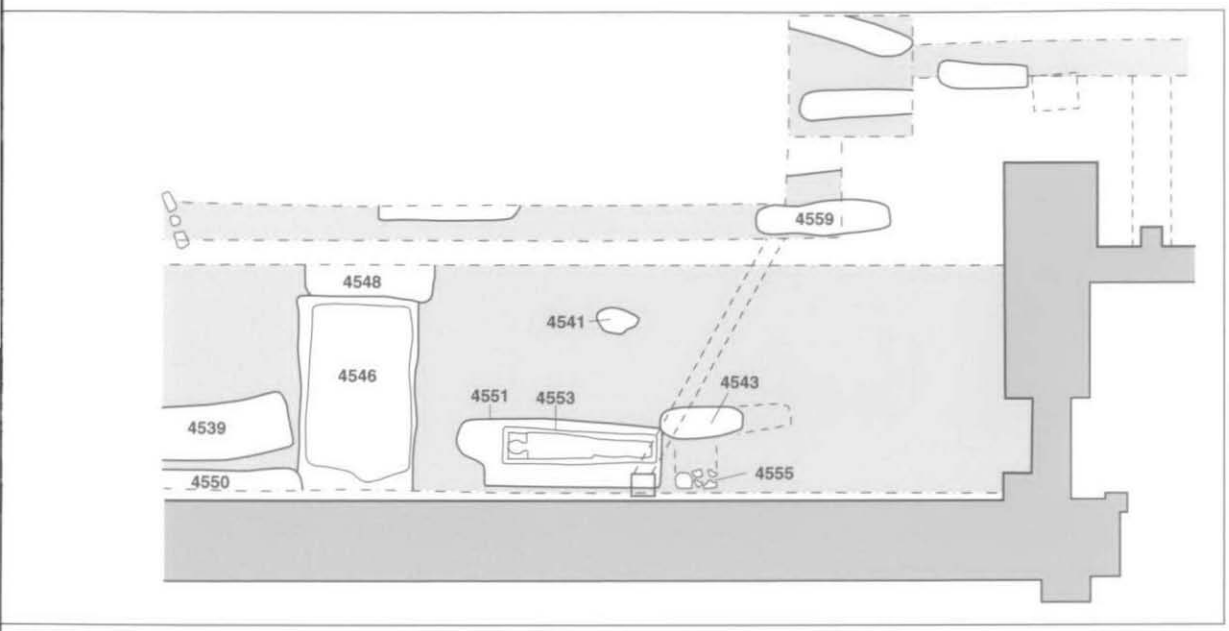
A 57 m.-long gas supply pipe trench was excavated from the High Street frontage through the abbey lych gate, past the Guest House, around the tower and into the boiler house. The 50 mm.-thick modern tarmac lay on 100 mm.-thick brick rubble hardcore. This sealed a 0.8 m.-thick layer of dark greyish brown sandy silt containing a sparse scattering of Roman, Saxon and medieval pottery sherds and a few animal bones. A N.-S. close-set flint cobble surface two cobbles or 0.15 m. thick was noted 1.5 m. E. of the lych gate, extending 6.5 m. E. towards the abbey. This was the only feature of note seen in the trench.

The interior of the church

The standing walls of Dorchester Abbey have a core of late 11th/early 12th-century fabric, largely in the nave and south transept, from an elongated cruciform church. Aisles were subsequently added to the N. and S. of the choir and chancel (13th and 14th centuries respectively; the chancel was also extended slightly to the E. in the 14th century), and to the S. of the nave as well (also in the 14th century). There is one surviving early Norman window (probably restored or repaired in the 19th or 20th century), but the majority of windows are also of 13th- and 14th-century date. It was always anticipated that elements of the early Norman fabric would be seen below ground in the heating duct trenches, and this proved to be the case. These exposures will be described briefly below, starting from the W. end of the nave before proceeding to the choir/chancel and S. transept.

The abbey W. wall (4576) was 1.5 m. wide, constructed of mortared limestone ashlars with a large-block rubble core (Fig. 18). The wall was built over a 1.78 m.-wide footing course, again of mortared ashlars with a rubble core. The footing was offset to both E. and W. symmetrically and had been constructed on a trench-built rubble foundation. The foundation projected 0.22 m. to the E. but was not seen to the W., but if it was also symmetrical it would have measured 2.22 m. wide. The existing door into the post-medieval W. tower is evidently in an original medieval (probably Norman) location, and the threshold exposed here has been worn down by 100 mm. to 49.09 m. A paved limestone surface (4581) was found within the tower to the W. of the wall. The paved surface projected a minimum of 2 m. W. of the W. wall, and comprised two layers of thin limestone slabs *c.* 50 mm. thick with the upper surface at 48.78 m. (maximum height). The floor underlay the foundations of the 14th-century SW. stair turret and is therefore likely to belong to the Norman abbey building.

A portion of the Norman nave S. wall survives to the W. of the first (W.-most) pier for the SW. aisle (Fig. 18). The current floor runs directly up to the wall, but this may not have been the medieval arrangement. Excavation of the heating duct against the N. face of this wall within the then-existing choir vestry revealed a



1.5 m.-long offset footing (4574) projecting 0.13 m. from the wall face, 70 mm. below the existing floor. The exposed face of the 270 mm. high offset was very well finished with a smooth ashlar face, suggesting that it was meant to be seen above a contemporary floor level. The top of the offset lay at 49.16 m. AOD, with the bottom at 48.89 m. This might imply an original floor level at about 49 m. here. The offset terminated abruptly 2.7 m. east of the nave's SW. corner. The 1.38 m. length W. of this point had no offset; instead the standing wall was constructed on loose rubble infill of random stonework set in coarse cream granular mortar (4575). The ashlar offset resumed for the remaining 1.3 m. length of wall into the SW. corner of the nave, and returned N. onto/under the W. wall. The blocking clearly closed off a significant architectural feature, and the most likely candidate in this location would be the Norman SW. door into the nave. This would have become redundant once the SW. aisle had been added in the 14th century.

The heating duct passed along the S. face of the choir and chancel N. wall below the 14th-century arcade, and consequently 18.8 m. of the Norman chancel N. wall's internal face was observed (4572 – see Fig. 19). The arcade had been erected over the stump of the demolished chancel wall (generally lying at 48.9 m.-49 m. AOD). The S. face consisted of ashlar facing on a rubble core. An offset footing projected between 0.22 m. and 0.28 m. S. of the wall face, which survives at the W. and E. ends of the choir and chancel. Almost all of the S. face of the wall was seen, but there were no exposures of the N. face and so no determination of thickness could be made. The maximum thickness across the wall top to the centre of the aisle piers was 0.70 m., suggesting a total width of *c.* 1.4 m. if the piers had been placed symmetrically over the wall. This tallies well with the known thickness of Norman walls elsewhere in the church. The reduced Norman S. wall (4564) of the choir and chancel was also exposed in duct runs over a length of 13.5 m. alongside and between the S. aisle piers, and was essentially identical in character (and level of reduction) to the N. wall. Unfortunately no evidence for the original position of the E. end of the Norman church was exposed in any of the excavations.

The W. wall of the Norman S. transept still survives, separating it off from the nave S. aisle, and original fabric of the transept's S. wall can also be seen on the external wall face. A vertical scar in the plaster rendering over the internal face of the same wall appears to mark the N. return of the former E. wall, presumably demolished in the 14th century when the chancel S. aisle was built. The E. wall would then line up with the SE. pier of the crossing. When the suspended wooden floor to the S. of the pier was removed, an uneven 1.2 m.-wide area of masonry (4565) was observed projecting 0.15 m. from the S. side of the pier base. The masonry had clearly been hacked back to this point and level when the E. wall of the transept was demolished. Unfortunately no more of the wall was exposed.

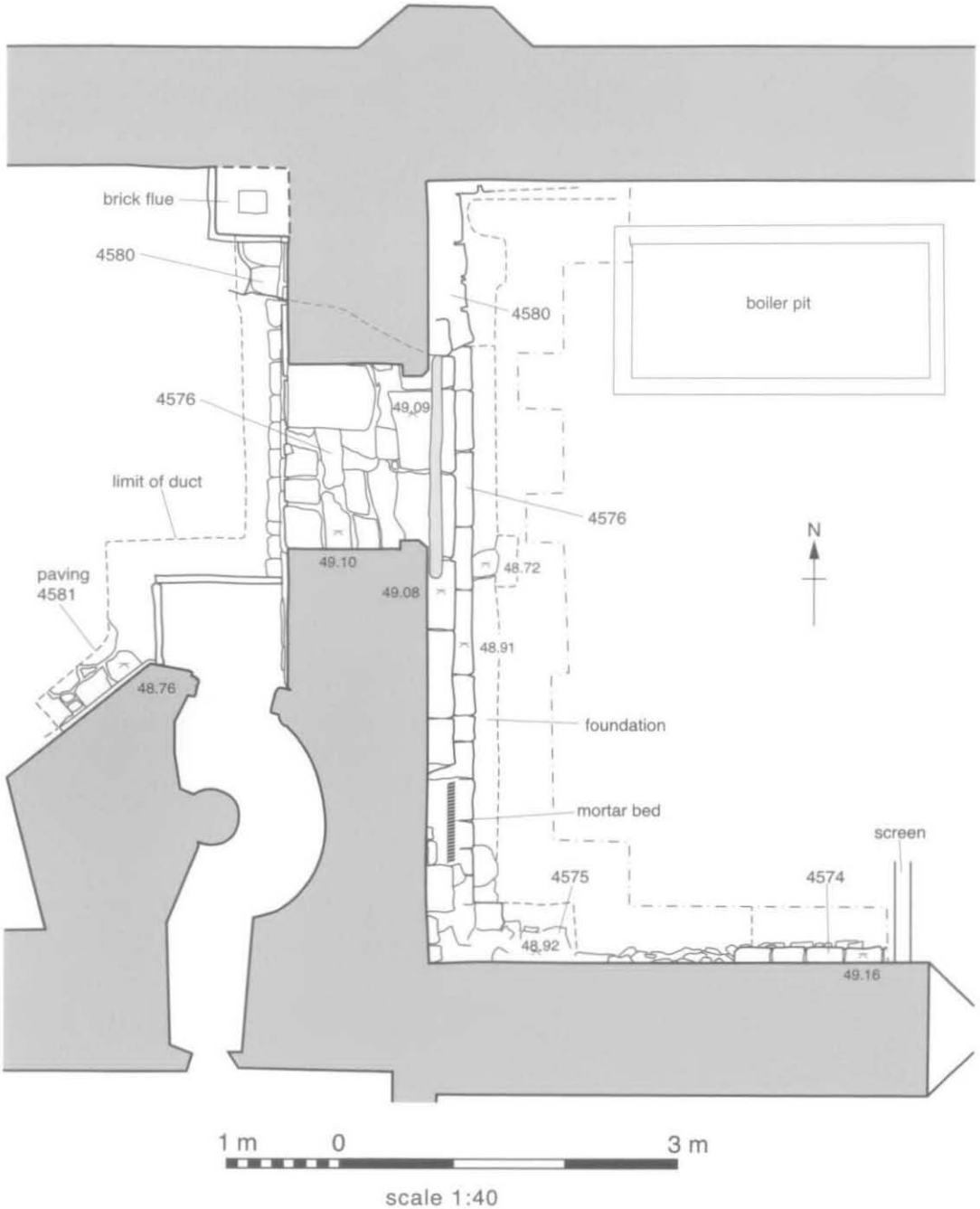


Fig. 18. Plan of medieval structural features revealed during the internal watching brief at the west end of the nave.

Fig. 19. Footings (4572) of the 12th-century chancel north wall exposed beneath the later arcade piers, seen from the west.

PHASE 3: POST-DISSOLUTION FEATURES

Much of the post-medieval stratigraphy across the whole site had been truncated by large-scale activity, apparently during the Victorian era. In some areas this had also removed the uppermost medieval horizons as well. The *in situ* medieval threshold exposed when the east door through the nave north wall, for instance, lay at 49.29 m. AOD, whereas medieval horizons generally lay at or below 48.8 m. AOD in the boiler room and pentice. Despite this some post-medieval features were seen in plan and section. The more important ones are described briefly here (see also Fig. 15).

Linear feature 3052 ran N.-S. from the NE. corner of the tower along the W. edge of the boiler room, commencing at the north end of *in situ* wall fragment 3079 (above) and continuing N. beyond the limits of excavation. The feature was generally *c.* 0.7 m. wide, and 1.1 m. deep where it was exposed in the W. edge of the trench, but it flared out at the NW. corner of the boiler room where a buttress had once supported the cloister range. It clearly represented post-dissolution robbing of the east side of the west cloister range. Feature 3081 was the construction trench cut for the NE. buttress of the W. tower (built *c.* 1600) and may have been broadly contemporary with 3052. It was 1.6 m. wide and its full depth was not exposed, but it contained mortared rubble foundation 3080. The tower wall (4560) rose directly from these foundations.

Pit 3050 was largely recorded in the N. section of the boiler room and appeared to be a post-medieval rubbish pit. The finds were mostly of 18th-century date, with some residual earlier material. No modern artefacts were found. The exposed edge suggests a pit of 1.7 m. diameter with a minimum depth of 0.8 m.

Two circular postholes were found in the boiler room excavation (3069, 0.56 m. diameter x 0.16 m. deep; 3092, 0.5 m. diameter, 0.35 m. deep). These appeared to be post-medieval in date. They are interpreted as the bases for scaffolding poles erected during piecemeal or more extensive demolition of the monastic cloister. A shallow ovate pit (3086), 0.26 m. N.-S. x 0.38 m., was superficially similar to the postholes but contained a dog skull and jaw. This feature had been cut from above the first significant archaeological horizon, and so its original depth could not be determined. It is possible that the remainder of the skeleton was removed during the mechanical excavation of overburden.

Three E./W.-oriented grave-like features within the boiler room and pentice excavations had also been cut from a high level and are therefore likely to be post-medieval in date (though this is not certain given the

comments above about truncation). Feature 3083 measured 1.7 m. x 1.4 m., with a depth of 0.23 m. It contained disarticulated human bone and is probably a charnel pit for the reburial of skeletal material disturbed during excavations in the vicinity. Grave 4502 was 0.48 m. long, 0.27 m. wide and only 0.05 m. deep. It contained the skeleton (SK 4500) of a child. Feature 4541 was oval in plan, measuring 0.55 m. by 0.4 m. and 0.1 m. deep. It contained bones of an adult female with a neonatal infant. This scarcely represented a proper burial but seemed more like a collection of semi-articulated body parts buried hastily, perhaps in a sack, and with the neonate included almost by accident.

Internally, an 18th-century E.-W. stone footing one course thick and 0.25 m. wide was noted below the floor slabs and above the chancel S. wall, 0.75 m. west of the present chancel step. The base or footing could have been the remains of a former chancel step, or a screen base. The demolition surfaces of the Norman chancel walls, meanwhile, were sealed by a 50 to 300 mm.-thick bedding gravel laid in the 18th century for the present floor slabs.

PHASE 4: VICTORIAN AND MODERN FEATURES AND LAYERS

Various Victorian and modern features and layers were noted in the excavations, including ceramic drainpipes and brick manholes. None of these warrants description here, though full details are available in the archive. Reference has already been made to the effect of Victorian restoration and other work on the site's stratigraphy, especially externally. Some of this work appears to have comprised a consciously archaeological or antiquarian excavation of the Cloister Garden, in part at least, with the intention of recovering architectural fragments from the medieval cloister. There are suggestions of this in contemporary descriptions of the site, and of course a substantial assemblage of fragments is still retained on site as a result. Unfortunately it has not been possible to locate any documentation of the Victorian excavations during this project.

The only modern feature of any note seen inside the church was a 20th-century brick-lined boiler pit (4579), uncovered and partially excavated below a panel of five uninscribed grave slabs against the nave N. wall, 3 m. E. of the nave NW. corner. The pit measured 3.73 m. E.-W. by 1.5 m. and was 0.67 m. deep. It was constructed of London Brick Company stock, had a concrete floor and had contained a coal-fired boiler. This had been decommissioned during World War II when the system froze due to a wartime coal shortage. The boiler was later removed for scrap. The pit was chiefly of interest because it had been backfilled with building rubble, including several medieval architectural fragments.

THE FINDS

All finds are listed and described fully in the project archive. Details of archaeologically important artefacts only are published here. Otherwise the assemblages are summarised.

METALWORK INCLUDING COINS by KAREN IZZARD and CATHERINE UNDERWOOD, with a contribution on an Iron Age coin by PHILIP DE JERSEY

Non-ferrous metal and coins

The small selection of copper alloy finds mostly comprises personal objects from the medieval period – a strap end, chape, ring, buckle pins and a section of bracelet. A small mount has traces of relief decoration and is similar to one illustrated in *Dress Accessories*. A Roman sprung pin fibula brooch (SF 135, Saxon context 3126) is in poor condition. The only object of particular note is a possible book binding plate (SF 65, post-medieval pit 3069). This appears to bear the cross of St. Mark. The few lead objects include three pieces of came (the binding frame for medieval glazing) from post-dissolution contexts.

A late Iron Age gold stater (Fig. 20) was recovered from Phase Ic ditch 3117 (fill 3125). The stater is one of Cunobelin's issues from Camulodunum (Colchester), the closest match being Van Arsdell 1931-7.[14] The obverse die is of Allen's 'wild' type B.[15] There are a few minor differences, however, in the form and positioning of the inscription and the details of the corn ear. The letters CA and the left half of M lie to either side of the corn ear, and represent the normal CAMU for Camulodunum. The inscription is incomplete because the coin has been struck off-centre. At least four other coins have been identified from this same die since Allen's 1975 paper, but only one of these is provenanced (and then doubtfully) from Mildenhall,

[14] R.D. Van Arsdell, *Celtic Coinage of Britain* (1989).
[15] D.F. Allen, 'Cunobelin's Gold', *Britannia*, vi (1975), 1-19.

Wiltshire. The reverse die appears to be previously unrecorded. It bears a close resemblance to other dies of the type, but certain features single it out as unusual. The pellet-in-ring motif in front of the horse is unusual, as are the single tiny pellets on each side of the base of the 'branch' above the horse. The pellet in ring is probably a wheel, a highly debased derivation from the horse and chariot motif on the original Greek coin.

Seven copper alloy coins were recovered. A farthing of Charles II is the only non-Roman coin. Two coins were too debased to be identified yet are probably Roman being of similar size to identified Roman coins. The remainder include two 'barbarous radiate' antoniniani. Both are in poor condition and the legends are not legible. They probably date from 273-282. The final two coins are later. One is of the emperor Constantius, dating to 353-364. The reverse shows a soldier spearing a fallen horseman. The legend if legible would be FEL TEMP REPARATIO. The radiates and the 'fallen horseman' are relatively common coins. A shortage of legitimate coinage in both periods led to unofficial issues – thus these coins are local copies. Finally there is a Theodosian coin (379-395) minted in Gaul, one of the last issues of Roman coinage to reach Britain.

Fig. 20. Obverse and reverse of the coin of Cunobelin recovered from Phase 1d ditch 3117.

Iron

A total of 84 iron objects were recovered across the whole site, counting broken but largely complete objects as single finds. More than 50 of these were nails of various sizes, the largest being 90 mm. long. All are catalogued in the archive. They mostly represent building furniture. Most have a rectangular section, and identifiable head shapes are circular or rectangular. The larger nails generally have oval-shaped heads. In some examples the shaft is bent to angles of up to 90°. One U-shaped staple was found. There was one small knife blade (SF 193, Saxon floor layer 3124), and a possible example of horse furniture, a rod that may be part of a bit (SF 108, Saxon ditch fill 3116). A small hand tool – a pick with one side of the head downturned and sharply pointed – is possibly a farrier's tool (SF 2, unstratified). Three coffin handles came from later levels, two with pieces of the attachment plates still *in situ*. Several fragments of sheet coffin fittings were also recovered, again from late contexts.

Eleven pieces of ironworking slag were recovered from the excavations. Two fragments came from the watching brief within the church, two were from a medieval grave, and the rest were from Saxon contexts. These included the ditch and the well. Most were typically amorphous, but one piece was tap slag.

ROMAN POTTERY by SIMON J.N. TOMSON

Some 30 kg. of Roman pottery was recovered from the evaluation, excavation and watching brief. The archaeological deposits excavated all proved to be of Anglo-Saxon and medieval date but contained considerable amounts of residual Roman pottery. This material, though not of critical importance for interpreting the site's stratigraphy, is of some interest as an assemblage in its own right. Nevertheless this material was clearly a lower priority than other, later finds, and so it was subjected to a relatively low level of analysis. Accordingly a brief summary of the assemblage is published here, with full listings by context in the site archive.

Methodology

As all the Roman pottery is residual it could be considered as a single deposit group. Despite this, it was decided to record the material in the excavated context groups. All the Roman pottery was sorted and separated out during the finds processing stage. Each context group was laid out, examined and divided into fabrics. Sherd totals by fabric only were recorded, and full lists are in the archive. It was felt that weight and EVE (estimated vessel equivalent) calculations would give a false sense of accuracy to what is in effect an unstratified collection. Much of the Roman pottery is very fragmentary, partly due to the friability of some fabrics, e.g. Southern British ('Belgic') Grog tempered ware (SOB GT), and partly due to it having been redeposited by intensive post-Roman activity. In contrast several pot bases had been trimmed down after breakage for use as pot lids. In most cases the fabric code used is from the national Roman fabric reference collection published by the Museum of London in 1998. Reference has also been made to various other local, regional and national published collections.[16]

Description

Much of the Roman pottery examined is of 1st-century date. Almost all the Samian (with one exception) is South Gaulish, from La Graufesenque (LGF SA) and of forms current in the mid to late 1st century. Forms present include Dragendorff 29, 24/25, 15/17, 37, 27, 33 and Curle 11. The same is true of the Lyons fine ware cups (LYO CC) and North Gaulish (Gallo Belgic Sandy) White ware (NOG WH3), the characteristic fabric of Camulodunum form 113 butt beakers. The Verulamium region kilns appear to have supplied whiteware flagons and cooking pots (VER WH) in the 1st and early 2nd century, a market later dominated by the Oxfordshire kilns. The large volume of 'Belgic' Grog tempered coarse ware (SOB GT) also contributes to the generally early character of the collection. As might be expected the assemblage also contains a proportion of material from the Oxfordshire industry. Fine wares in the form of red colour coat (OXF RS), parchment (OXF PA) and reduced vessels (OXF FR) with colour coated and white slip mortaria (OXF WS) predominate to the exclusion of 2nd-century Samian of which there is only one specimen (LEZ SA2).

The Alice Holt/Farnham kilns appear to have provided the bulk of the grey coarsewares (ALH RE) until the mid 2nd century. Subsequently Black Burnished I (DOR BB1) cooking pots and bowls/platters appear to have replaced the Surrey/Hampshire products from the mid 2nd to the mid 4th century. These can be dated roughly by the angle of burnished line in the panels of lattice decoration on BB1, but the quantities are not large. No further conclusions can be drawn with any validity on this assemblage.

ANGLO-SAXON AND MEDIEVAL POTTERY by CATHERINE UNDERWOOD

An assemblage of 339 post-Roman pottery sherds (5.5 kg.) was recovered from 45 contexts within the Cloister Garden and abbey church excavations. The pottery was divided into fabric types on the basis of the common inclusions within the clay and compared with material from the area. The medieval fabric types have been divided and assigned fabric codes by comparison with the Oxford fabric series.[17] The post-medieval fabric types have common name fabric codes based on the Museum of London codes.[18]

The fabrics

The Saxon fabrics consisted mainly of quartz, sand and limestone tempered fabrics. The fabrics are described below with the vessel types and surface treatment for each type. The codes have been assigned with a prefix AS and the main inclusion types whether quartz, red stained clay or limestone inclusions (Q, G and L). The numerical suffix refers to the size of the main inclusions from fine (1) to fine-moderate (2) and moderate to coarse (3). The coding helps for ease of comparison and as a mental prompt.

[16] P.A. Booth, A. Boyle and G.D. Keevill, 'Lower Farm Nuneham Courtenay Kiln Site', *Oxoniensia*, lviii (1993); B. Davies, B. Richardson and R. Tomber, *A Dated Corpus of Early Roman Pottery from the City of London* (CBA Res. Rep. 98, 1994); K.R. Crouch and S.A. Shanks, *Excavations in Staines 1975-76: The Friends Burial Site* (LMAS & SAS Joint Publ. No. 2, 1984); P.T. Marney, *Roman and Belgic Pottery from Milton Keynes 1972-82* (Bucks. Arch. Soc. Monograph No. 2, 1989); P.V. Webster, *Roman Samian Pottery in Britain* (CBA Practical Handbook no. 13, 1996).

[17] R. Haldon and M. Mellor, 'The Saxon and Medieval Pottery', in B. Durham, 'Archaeological Investigations in St. Aldate's', *Oxoniensia*, xlii (1977), 83-203; M. Mellor, 'A Synthesis of Middle and Late Saxon, Medieval and Early Post-medieval Pottery in the Oxford Region', *Oxoniensia*, lix (1994), 17-217.

[18] Museum of London Specialist Services, *Pottery Codes for the Year 2000* (2000).

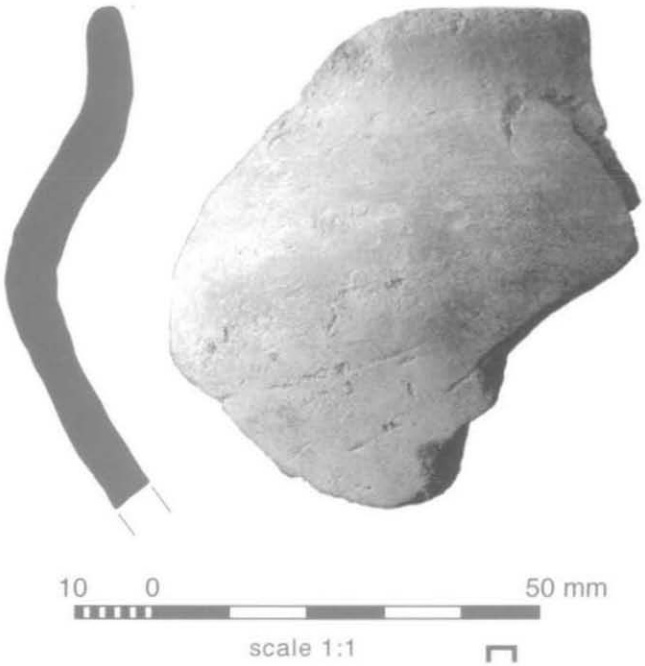


Fig. 21. Small, shouldered jar with simple out-turned rim in Fabric ASQ2. Phase 1e well 3101, fill 3104.

ASQ1 (39 sherds, weight 0.191 kg.), abundant very fine to fine clear quartz in dark grey to black matrix with occasionally red-brown margins. The fabric is fine and distinguished by burnishing on the interior and exterior. Vessel forms consist of rounded rim globular bowls.

ASQ2 (35 sherds, weight 0.31 kg.), fine-moderate clear and white quartz with occasional moderate-coarse white quartz. Patchy red-brown to black grey exterior. Burnished exterior. Vessel types include a shouldered small jar with simple out-turned rim (Fig. 21). This is similar to Barton Court Farm fabric 1 and Barrow Hills, Radley, fabric 24.[19]

ASQ3 (6 sherds, weight 0.059 kg.), a coarse gritted sandy ware.

ASQG1 (3 sherds, weight 0.014 kg.), fine white quartz and clear quartz, moderate-fine red-brown grog and occasional fine-moderate limestone. Thick bodysherds with trimmed exteriors and wiped interiors.

ASQG2 (46 sherds, weight 0.368 kg.), abundant moderate-fine ill-sorted clear quartz, occasional white quartz varying amounts of moderate well-rounded red iron ore and grog. This fabric may overlap and be related to late Roman grog-tempered ware. Exterior decoration is limited to rough scratch marking.

ASQL2 (61 sherds, weight 0.433 kg.), abundant fine clear quartz, fine-moderate limestone and voids. Smoothed surfaces and combed/rough wiped decoration.

ASQL3 (14 sherds, weight 0.19 kg.), abundant clear fine-moderate quartz, moderate-coarse white quartz and common ill-sorted moderate-coarse limestone.

ASL2 (8 sherds, weight 0.048 kg.), dense fine to moderate limestone and very fine clear quartz. Combed decoration.

[19] D. Miles, *Archaeology at Barton Court Farm, Abingdon, Oxon.* (CBA Res. Rep. 50, 1984), microfiche Ch. 5; S. Raven, 'The Early Saxon Pottery', in R.A. Chambers and E. McAdam, *Barrow Hills, Radley, Oxon.* (forthcoming).

ASL3 (4 sherds, weight 0.024 kg.), a coarse limestone tempered ware.

LSS (17 sherds, weight 0.135 kg.), moderate to coarse/very coarse shelly limestone. Everted rim jars. Similar to Oxford fabric B and London shelly types.

NEOT (14 sherds, weight 0.159 kg.), St. Neots-type ware, with dense fine-moderate shelly limestone.

BRIM (21 sherds, weight 0.306 kg.), Brill/Boarstall ware, Oxford fabric AM, buff-pink sandy ware with yellow-green glaze.

WARW (1 sherd, 0.017 kg.), Warwickshire white ware, Chilvers Coton/Nuneaton type Oxford fabric AH.

The following fabrics have been assigned the Oxford codes due to the very small amounts present and their local provenance.

OXBB (3 sherds, weight 0.01 kg.), Minety-type ware.

OXAQ (1 sherd, weight 0.012 kg.), early to late medieval east Wiltshire ware.

OXY (3 sherds, weight 0.025 kg.), Oxford medieval ware.

Post-medieval fabrics consisted of 18th- to 19th-century Staffordshire types **STBL** (Staffordshire black glazed ware) and **SWSG** (Staffordshire white salt-glazed ware), along with 19th-century factory produced wares and local kitchen wares **CREA** (Creamware) and **GREW** (glazed red earthenware).

Discussion

The Saxon pottery consists mainly of sandy fabrics with varying amounts of limestone and grog/ironstone additions. A total of 216 sherds weighing 1.63 kg. was recovered from the excavations. The range of sandy wares correlates with material from earlier excavations in Dorchester and Abingdon.[20] Similar sandy fabrics from the neighbouring towns of Berinsfield and Abingdon have been provisionally dated from the early to mid 5th century (for a carinated bowl from the Berinsfield cemetery) to the 6th century.[21] The distinctive element of this assemblage is the complete lack of organic-tempered wares. These have been provisionally attributed to the 6th century and later and tend to largely replace the sandy fabric types. Their absence here may have dating implications for the assemblage, although a dearth of organic tempered wares has been noted previously at other sites in Dorchester.[22] There are also no stamped decorated wares. Decoration is limited to fine burnishing on the exterior and interior edge of rims, scratch marking, rough wiping, fingernail-impressed rusticated ware. The best examples are in the fine sandy fabric ASQ1.

There is a small proportion of fine limestone tempered sherds (ASL2) that may be a later 6th- to 7th-century tradition. This evolves into the late Saxon shelly wares such as Oxford fabric B. The attributions of shelly wares to specific dates is problematic due to the physical similarity between late Roman shelly wares, the 5th- to 7th-century shelly ware tradition and late Saxon wares such as OXB. The only observable differences are manufacturing technique and diagnostic sherds if these are available.

The presence of St. Neots ware in small quantities and late Saxon shelly ware with these earlier sandy and limestone wares is paralleled at Dorchester Beech House[23] and at other sites in the area (e.g. Benson and North Stoke). At present there is very little evidence for middle Saxon pottery types in Oxfordshire, with the exception of imported Ipswich ware found at Yarnton and Eynsham to the west of Oxford. This lack of middle Saxon types is exacerbated by the dearth of decorated wares from the 6th century onwards and the conservative nature of the plain body sherds and fabrics. One explanation for the lack of a local middle Saxon

[20] T. Rowley, 'Early Saxon Settlement in Dorchester-on-Thames', in T. Rowley (ed.), *Anglo-Saxon Settlement and Landscape* (BAR 6, 1974), 42-50; R. Bradley, A. Grant and S. Sheridan, 'Rescue Excavations in Dorchester-on-Thames', *Oxoniensia*, xiiii (1978), 17-39; S. Frere, 'Excavations at Dorchester-on-Thames 1963', *Archaeol. Jnl.* 141 (1984), 91-174; C. Underwood-Keevill, 'The Pottery', in G.D. Keevill, 'An Anglo-Saxon Site at Audlett Drive, Abingdon, Oxfordshire', *Oxoniensia*, lvii (1992), 67-73.

[21] P.A. Booth, 'Roman Pottery', in A. Boyle, A. Dodd, D. Miles and A. Mudd, *Two Oxfordshire Anglo-Saxon Cemeteries: Berinsfield and Didcot* (Thames Valley Landscapes Monograph 8, 1995), 16-26; M. Avery and D. Brown, 'Saxon Features at Abingdon', *Oxoniensia*, xxxvii (1972), 66-81.

[22] F. Beresford, 'The Anglo-Saxon Pottery', in T. Rowley and L. Brown, 'Excavations at the Beech House Hotel, Dorchester-on-Thames 1972', *Oxoniensia*, liii (1981), 41.

[23] Ibid.

tradition is a hiatus in pottery production in that period.[24] This would lead to Saxon pottery types occurring throughout the period, in archaeological assemblages with later Saxon fabrics such as Late Saxon Shelly ware and St. Neots ware. This would not necessarily imply that these were continuously in use but that the residual nature of the pottery has to be assessed.

Medieval pottery is limited in quantity (29 sherds, weighing 0.37 kg.) and was recovered mainly from contexts within the church. The fabric types are 12th- to 14th-century in date and consist of Brill-Boarstall ware (OXAM), Warwickshire white ware (OXAH), east Wiltshire ware (OXAQ) and occasional sherds of Oxford medieval ware (OXY). The post-medieval pottery dates from the 17th to the 19th century and consists of local red earthenwares, probably from the Nettlebed kilns, and post-medieval Brill-Boarstall ware. There is also English tin-glazed ware and Staffordshire blackware dating to the 17th to 18th centuries, and early 19th-century and later Staffordshire white salt-glazed ware, Creamware and transfer-printed ware. An English stoneware storage jar has an Abingdon firm's imprint on it.

Conclusions

The importance of the assemblage lies in the presence of Saxon pottery in close proximity to the abbey building. No Saxon material has been recovered from sites near to the abbey at St. Birinus Primary School to the north-west and the former filling station on the High Street to the south-west, even though both had a wide range of Roman pottery dating from the 2nd to 4th century.[25] Excavations on sites within and around Dorchester (including cemeteries) suggest an early Saxon population that was scattered in rural hamlets around the town.[26] From the mid 6th century the town may have been reorganised, perhaps leading to the choice of Dorchester as the site of the first see of the West Saxons in 635. Most of the pottery cannot be closely dated typologically or by fabric type. The shouldered jar from context 3104 is probably of 5th- to 6th-century date, but the majority of the pottery is probably long-lived. It dates from the 6th to the 8th century, and could continue until replaced by the 9th- to 10th-century shelly types. This material was therefore deposited within the time period envisaged for the establishment of an episcopal centre at Dorchester.

FOUR SHERDS OF IMPORTED POTTERY FROM PHASE 3d DITCH 3117 by CATHERINE UNDERWOOD

Four sherds (weighing 10 g.) of a very fine white ware vessel with thick dark green glaze were recovered from context 3116 in Phase 3d ditch 3117. The sherds were from an exceptionally thin-walled (2 mm.) shouldered vessel, possibly a bowl or cup. This had standing arch decoration or circular swirls in a thick painted white slip on and below the shoulder, and an iron-rich brown slip curved design above the shoulder. The fabric has fine to very fine red and grey stained inclusions, probably iron-stained quartz. The good quality green glaze and white fabric are unusual, and these sherds have no obvious parallel in indigenous early-mid Saxon pottery. Neither are there any clear Roman comparisons, either from British or continental factories. The sherds were securely stratified in a Saxon context with no other intrusive material. We are unaware of any equivalent material having been reported from Saxon sites in the county.

The sherds have been shown to several national experts in Roman, Saxon and medieval ceramic and other artefacts, and on the basis of discussions with them they have been attributed to an eastern Mediterranean source, possibly Byzantine. Byzantine material has been recovered in the form of metalwork (e.g. the silver Anastasius dish) in the Sutton Hoo burial, dated to the late 5th to 6th century.[27] There is also glassware from Tintagel attributed to a Coptic, Egyptian origin. A wide range of imported pottery types are known such as a red slipped Class A ware from the eastern Mediterranean and North Africa dated to the late 5th century to 7th century, and the amphora or storage jar fabric (Class B ware) attributed to the E. Mediterranean and around the Black Sea.[28] The most obvious comparative material for these sherds is Constantinopolitan Whiteware, a fine white fabric produced in Constantinople, southern Greece and Iznik in western Anatolia

[24] P. Blinkhorn, 'Post-Roman Pottery from Eynsham Abbey', in A. Hardy, A. Dodd and G.D. Keevill, *Aelfric's Abbey: Excavations at Eynsham Abbey, Oxfordshire, 1989-92* (2003).

[25] L. Torrance and T. Durden, 'Roman and Medieval Finds from St. Birinus Primary School, Dorchester, Oxfordshire', *Oxoniensia*, lxiii (1998), 187-97; S. Coles, 'Former Filling Station, High Street, Dorchester-on-Thames, Oxfordshire. An Archaeological Evaluation' (Thames Valley Archaeol. Services Rep. 01/36, 2001).

[26] A. Boyle and A. Dodd, 'Discussion', in A. Boyle et al., op. cit. note 21, p. 143.

[27] R. Bruce Mitford, *The Sutton Hoo Ship-Burial* (1972), 66.

[28] L. Laing, *Late Celtic Britain and Ireland c. 400-1200 AD* (1977), 267-71.

from the 7th century until the 12th century although it may be dated earlier.[29] Green-glazed wares were also produced in Ravenna (Italy) from the 5th century, and from central and southern Italy from the 6th to 7th century.[30] Connections of some sort with the eastern Mediterranean during the early to mid Saxon period at Dorchester Abbey are therefore a possibility, and undoubtedly of very considerable significance.

ROMAN AND MEDIEVAL BRICK AND TILE by KAREN IZZARD and CATHERINE UNDERWOOD

A substantial group (535 fragments, 30.3 kg.) of Roman tile was recovered from the excavations and watching brief. Ninety tile tesserae were also found. The tiles included standard types such as tegulae and imbreces, as well as a few pieces of box flue. In other circumstances the tile and fired clay would have been of some interest, but as with the Roman pottery the essentially unstratified nature of the assemblage meant that it was not a research priority. A simple table of incidence by number and weight per context is included in the archive. Eighty-eight fragments (1.283 kg.) of fired clay were also found, including possible loomweight fragments. The fragments were entirely undiagnostic and again have simply been quantified by context (details in the archive).

The medieval floor tile was more significant in research terms, and so was fully recorded. Six complete plain floor tiles and 92 fragments of 13th- to 14th-century tile were found mainly in contexts 4590, 4563 and the rubble that had been used to block the nave N. door. The tiles were sorted into three main fabric groups. Decorated examples were correlated where possible with designs recorded by Loyd Haberly at Dorchester in 1937 and also with the catalogue of medieval lead-glazed earthenware tiles in the British Museum by Elizabeth Eames. These are inlaid or encaustic tiles of red-firing clay with pipeclay slip inlay. Colour variations in the lead glaze were achieved by adding copper filings to give a green translucent effect.

The complete tiles, measuring *c.* 110 x 110 x 22 mm. were in Fabric GQ. This is hard with a granular feel and hackly fractures. Some complete tiles were glazed on the edges and back. One of the tiles was tapered, with its thickness measuring from 30 mm. to 20 mm. The six complete tiles and 17 further fragments weighed 5.844 kg. Most were mortared and glazed. The decorated examples were either inlaid with a white slip or decorated with a brown and yellow glaze. A fragment decorated with a small flower, similar in design to the flower on Haberly L/LI, has been scored diagonally. This fabric group contained two identified designs. The first is Haberly XXXI (Eames design 2639, catalogue no. 1717), one of a four-tile square panel with the bases of four fleurs de lys converging in the centre. They are surrounded by a quatrefoil border from which stylised foliage with trefoil heads and leaves point towards the outer corners. An example from Notley Abbey was dated to the 13th to 14th century. The second is again from a four-tile panel with stylised foliage in a decorated circular border. The design is Haberly's XXIX and is similar to Eames design 2826, catalogue nos. 8367-70 and 10075-7. An example of this design came from Chertsey Abbey and was dated to the 13th century.

The largest group of fragments (40, 3.328 kg.) were in Fabric QSG (Stabbed Wessex). Most fragments are glazed and just under half are decorated. The underside is randomly stabbed to key in mortar. Examples have been found from Gloucestershire to Leicestershire, with sites in Oxfordshire at Eynsham Abbey, Rewley Abbey, St. Frideswide's Priory and Godstow Abbey. The fabric is very hard with a sandy feel and hackly fracture. The colour is orange with a light grey core. Decorated examples have a flecked dark orange glaze and yellow slip. A similar fabric has a smooth fracture and decorated examples show two glazes, one thick dark green and one lighter. An unstabbed variant of this fabric is very sandy with laminated fractures. Some examples have a buff underslip that survives in better condition than a leaf green glaze. Others are decorated with a very dark brown-green glaze. The unstabbed fragments were not mortared.

Decorated Stabbed Wessex examples included a small flower in a square border. The fragment is one quarter of a full tile. Haberly noted this design at North Moreton church in Oxfordshire. It is Haberly L/LI and Eames design 2456, catalogue no. 770, dated to the 13th to 14th century. A similar flower with border was found at St Frideswide's Priory, Oxford. The Dorchester example came from the rubble in-fill of the blocked north door. Also found in the rubble fill was a tile depicting a lion and fleur de lys in a quatrefoil border with fleurs de lys at the corners. This was noted by Haberly as XLIII (Eames design 1800, catalogue no. 1158). An example of this design at Godstow Abbey was dated to the 13th to 14th century. A slightly different lion-in-border design is the reverse image of a design Haberly noted as XLIV (Eames design 1801, catalogue no. 11388). A fragment with concentric circles at the corner is likely to be Haberly XXV (Eames design 2777-82, catalogue no. 11392). Both are 13th- to 14th-century, with examples from Eynsham Abbey. Haberly XXV is also known at St. Frideswide's Priory. Other decorated fragments in this fabric may be from panels of four or more tiles. One fragment contains the front limbs of a lion or other animal and a florette border, while another shows a fleur de lys and trefoil foliage.

[29] K. Dark, *Byzantine Pottery* (2001), 120-1.
[30] Ibid. 60.

Fabric QGSG is soft with a sandy feel and has laminated fractures. There is a total weight of 3.58 kg. in this fabric. The colour ranges from a buff surface to an orange interior with a light grey core. The fragments have a dark green glaze in poor condition and some have been mortared over the glaze. These tiles were slightly thicker than other varieties and had well-finished edges. A variant of this fabric is hard and has a smooth fracture line. It is orange coloured with a dark grey core that is sometimes absent. A thin yellow slip is in poor condition when present.

WORKED STONE AND ARCHITECTURAL FRAGMENTS by JEREMY ASHBEE and GRAHAM D. KEEVILL

Fifty-eight pieces (1.538 kg.) of non-architectural stone were recovered, including 15 tesserae. The latter were in a mixture of white, cream and red-brown stones, and were typical of larger mosaic patterns, especially borders. The remaining stone fragments were featureless pieces, probably derived from the demolition of buildings. Those fragments found in Saxon and medieval deposits probably came from Roman buildings, but those from post-medieval contexts are more likely to come from demolition of monastic buildings, especially around the cloister.

Several groups of architectural fragments were recovered, virtually all from the internal watching brief. For example a panel of concrete floor slabs from an area 4.25 m. N.-S. by 2.3 m. E.-W. immediately to the W. of the 20th-century St. Birinus Shrine sealed a rubble fill (4570) containing 34 medieval fragments. In general, these are of considerably less interest than the main body of architectural pieces stored at the abbey, which have been collected over a long period of selective retention or discard. Several of this group of 34 pieces show evidence of working on one or more faces (though the tooling is generally unclear), but these have little or no potential for further analysis. A second category consists of plain chamfered blocks: there are several possible types of architectural element which could produce such a pattern (e.g. plinth mouldings, simple door jambs) and again, there is little to be said about them.

The assemblage did contain several small groups with more potential. These include several fragments of late medieval (mid 14th century onwards) window mullions of plain chamfer with frontal fillet. These have different profiles of chamfer and different forms of glazing groove, thus clearly representing parts of different windows. Two examples show evidence for the springing to either side of the mullion of cusped windows, as in the trefoil-headed two-light window(s) of the main assemblage. One fragment, badly damaged and possibly unfinished, bears a well-preserved keying-in groove in the joint.

Two large fragments originate from the polygonal moulded coping of a battlemented parapet, with sloping upper face, overhanging at the bottom and with a drip mould. One of these fragments has the return for a feature projecting upwards to one side, interpreted as another merlon. The pattern of the battlement is

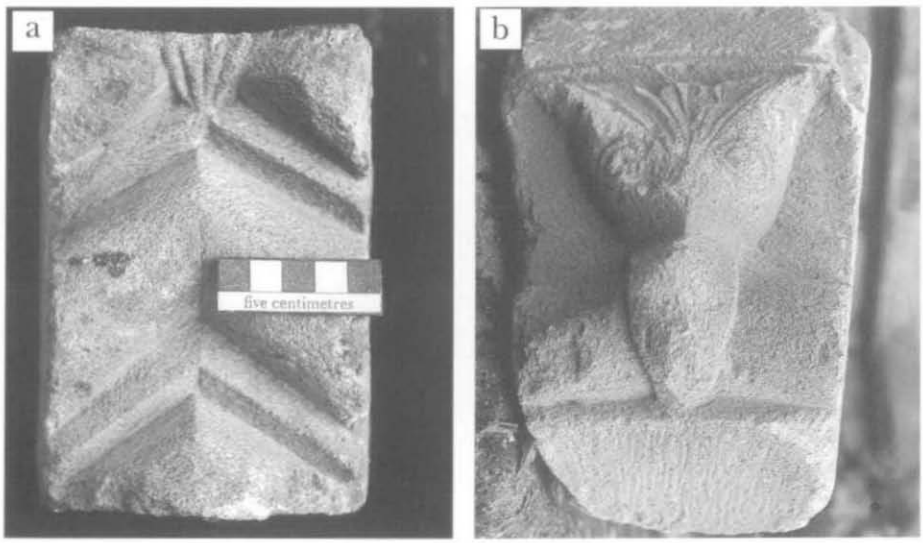


Fig. 22. Early to mid 12th-century architectural fragments recovered during the watching brief: a. chevron moulding with overlapping end of beak; b. complete beak head.

therefore with copings to both the merlons and the parapet within the embrasures themselves, in a 'two tier' pattern. This pattern is fairly common though not universal, but in the context of Dorchester, it may be significant that the (reconstructed) parapet of the west tower conforms to this pattern.

A large fragment in poor condition appears to originate from an ogee-shaped opening to a glazed window. Though not quite identical, this has some similarities to the windows in the sedilia (second quarter of the 14th century) and may well originate in the same period. This might suggest that the very lavish decoration of the east end of the chancel was also represented in other parts of the church. Unfortunately it is impossible to know where this fragment (or indeed the other 33) originally came from.

Two complete decorated voussoirs were recovered, one from a sleeper wall supporting the suspended timber floor in the pewed area of the nave and the other from the 20th-century boiler pit (4579). The former (Fig. 22a) is chevron-moulded with the end of a beak overlapping the outer roll. The latter (Fig. 22b) has a fine and complete beak head. These can be seen in the context of five other pieces in the abbey's main collection. These also contain the chevron (zig-zag) ornament, a classic decorative device of Norman Romanesque architecture. All of them are sufficiently small in scale to be interpreted as parts of windows or doors, and at least four of the others are clearly voussoirs (wedge-shaped stones forming an arch). Two voussoirs may have come from the same door/window but others are different in scale, suggesting the presence of at least three decorated openings.

Two of the voussoirs confirm that one of these openings was of very high ornamental quality indeed. It contained not merely chevron ornament, but an outer order (element of a door or window framing) of 'beak-head' decoration, a line of monstrous animal heads with long pointed beaks projecting inwards towards the opening. This demonstrates that one of the openings, almost certainly a door, was of extremely high quality, with several independent orders of decoration, and was comparable with some buildings of the highest architectural pretensions, including Lincoln cathedral and Iffley parish church, Oxfordshire. Similar pieces from Reading Abbey are on display in Reading Museum. These examples are all explicable as elements of doors, though other sites, such as Sherborne Castle, have the same pattern used on vaulting ribs, chancel arches and other features.

The assemblage also contains two other voussoirs with beak-head ornament, one virtually complete, the other (defaced) with more than one beak-head. These are of different dimensions to each other and to the chevron/beak-head openings described above, giving at least five Romanesque doors/windows, or separate orders within them. In terms of date and status, all of the fragments originated in a richly-decorated building probably of the second quarter of the 12th century, and show a quality comparable to known sites of royal or episcopal patronage. A context in the construction of the first house of regular canons *c.* 1140 is likely, and it gives some indication of the quality of the endowment of this house.

MISCELLANEOUS FINDS by KAREN IZZARD and GRAHAM D. KEEVILL

Clay pipes were relatively rare in the excavations. There were six pieces from the evaluation trenches, including two bowls. Only 12 fragments (two bowls and 10 stems) came from the boiler room excavation, all from post-dissolution contexts (layer 3002, and pit fills 3053 and 3088). A further three stem fragments were recovered during the watching brief, one of which included the spur. The pipes ranged in date from the late 17th to early 19th century. They are of little or no interest, either for interpretation of the site or, given the low numbers, in their own right.

A small group of artefacts relating to glass-making was found in the Phase 1c ditch 3117 and Phase 1e well 3101, and some are thought to represent contemporary operations rather than residual Roman work (though residual vessel fragments were recovered). The assemblage consisted of a piece of cullet (melted-down glass waste), several fragments of slag, and a crucible sherd with a vitrified inner surface. Blue and green glass had been formed by the vitrification process, and may reflect some of the colours being produced. This material was submitted for specialist analysis, but unfortunately the report was not received in time for inclusion within this publication. It was decided that the main report should not be delayed, and so a note on the glass will be published separately at a later date. The potential importance of the glass-making evidence is discussed further below.

Eighty-four fragments of medieval and post-medieval glass (total weight 6.061 kg.) were recovered from the excavations. Most of this is 18th-century dark green bottle glass with varying degrees of weathering. The majority were found in post-dissolution pit fills 3051 and 3053. All the glass was counted, weighed and described by context and cross-referenced to the type series established for St. Ebbes, Oxford.[31] Identifiable

[31] J. Haslam, 'Glass', in T.G. Hassall, C.E. Halpin and M. Mellor, 'Excavations in St. Ebbe's, Oxford, 1967-76, Part II: Post-medieval domestic tenements and the post-Dissolution site of the Greyfriars', *Oxoniensia*, xlix (1984), 232-43. The type series is based on I.N. Hume, 'The Glass Wine-bottle in Colonial Virginia', *Jnl. of Glass Studies*, iii (1961), 91-117.

pieces include fragments of 14 bases – these are of cylindrical, straight sided bottles (Hume type 19/20). There are also fragments from two examples of hand-blown octagonal bottles (Hume type 17). The only complete body recovered was a mallet-shaped Hume type 19 with asymmetrical shoulders. An associated neck has a very rough string rim. A possible example of a shaft and globe shaped bottle (Hume type 1) has a pitted surface. The two bases from context 3002 have misshapen basal kicks. One has a prominent pontil ring and indentation at the apex, the other has a protruding pontil in a high conical kick. In addition there are fragments of denatured thin-walled vessel glass. There are no identifying rim or base pieces, but these are likely to be from jars or phials. Other pieces of interest are a small blue cone, a small decorated fragment, and a small section of a base and stem in colourless glass.

THE HUMAN SKELETAL REMAINS by AMY GRAY JONES

The excavation and a watching brief in the Cloister Garden resulted in the recovery of 27 inhumation burials, and these are described here. The burials provide an insight into the burial practices of the medieval monastic community at Dorchester, and in particular some information about their general health and demography. A full skeletal catalogue is available in the archive. Disarticulated human bone was also recovered but this material was identified as a low research priority at assessment stage, and therefore was not subject to analysis.

The cemetery population

Skeletal preservation and completeness: The preservation of the skeletal material was assessed during recording and was defined as good, moderate to good, or poor. Overall levels of preservation were good, with 15 (55.6%) inhumations being in a very good state, 11 (40.7%) moderate to good, and only one (3.7%) being poorly preserved. Nevertheless only nine (33.4%) were over 70% complete, ten (37%) were between 40-70% complete and eight (29.6%) were less than 40% complete.

Burial practice: Six of the burials were in wooden coffins, evidence for which was limited to iron nails as no other coffin fittings survived. Five of these were sexed as male. The remaining burial (SK4543) was very poorly preserved and less than 40% complete, therefore it was only tentatively sexed as possibly female. The known coffined burials occurred across two age groups, young adults and young to middle-aged adults (20-40 years).

Fig. 23. Skeleton 4554 in sarcophagus 4553, viewed from the west.

One coffined burial (SK4554) was particularly distinctive in that it was the only individual buried in a stone sarcophagus (4553) within the Cloister Garden (a second example was seen in a duct run in the south transept, but this was left undisturbed and was not examined). The coffin and lid were trapezoidal in shape and measured 2.15 m. in length and between 0.38 m. and 0.54 m. in width. It was fashioned from yellow Cotswold limestone with a single slab lid, *c.* 0.14 m. thick, that had suffered one crack across the west (head) end. The lid was of rough dressed limestone with a straight western (head) end, a gently curving eastern (toe) end and chamfered edges. This is similar in design to the previously excavated sarcophagi kept in the church. The lid was mortared to the coffin stone and mortar had also been used to seal the crack in the lid. The human remains were held within a trapezoid hollow in the coffin stone (Fig. 23), carved with smoothly finished vertical sides and a chamfered head niche with raised shoulders to either side. Final adjustments had been made to make the occupant fit more comfortably by widening the interior of the coffin adjacent to the right shoulder and upper arm. The skeletal remains were planned and photographed but not disturbed, as it was possible to preserve the coffin *in situ*. Observation of the skeleton suggested that the coffin contained an older adult, possibly a male from the form of the pelvis and cranium. This individual had been afforded burial in a stone coffin and was therefore probably a high status member of the monastic community, for example an abbot or prior.

Information regarding the burial type of the remaining inhumations was limited to the fact that they were almost always buried in an extended supine position and orientated E.-W. with the head at the west (including both sexes and all ages). The one exception was burial SK4540, an adult female with a newborn child (neonate), whose remains were buried either tightly crouched or had been disturbed shortly after burial and reburied in this position. This burial may be parochial rather than monastic or relate to a later phase in the use of the cemetery.

Another noticeable special rite was the use of 'pillow' stones in two burials, that of a young adult male (SK4537) and a mature adult, possibly female (SK4556). The stones were generally placed either side of the mandible and/or cranium and in the former example were also placed directly behind the cranium in the grave cut.

Age determination: Standard physical anthropological methods were used for the assessment of age at death in adult skeletons.[32] Where preservation of sufficient elements of the skeleton was good a variety of techniques was used. Those used for adults were: morphology of the pubic symphysis,[33] auricular surface changes,[34] and tooth wear stages.[35] The age of sub-adult individuals was estimated using dental development, state of epiphyseal fusion, and long bone length.[36] When an estimated age was obtained the individual was assigned to one of the following age categories:

Infant	*<1 year old*
Sub adult/ juvenile	*<20 years old*
Young adult	*20-30 years*
Young/middle adult	*30-40 years*
Middle adult	*40-50 years*
Mature adult	*50+*
Older adult	*Appears very old but difficult to categorise*

The inhumation burials included a high proportion of adults, 24 of the burials (88.9%), although five of these could not be assigned to a specific age range other than adult. Five of the adults had died very young, between 20-30 years old (18.5%), six were young/middle-aged adults, 30-40 years, (22.2%), five were middle adults, 40-50 years (18.5%), and three were mature adults over 50 (11.1%). Only one infant was buried here (3.7%) and two juveniles (7.4%), one *c.* 2.5 years old and another *c.* 12 years old.

[32] E.g. W.M. Bass, *Human Osteology: a Laboratory and Field Manual* (Missouri Archaeol. Soc. 2, 4th edn. 1995); J.E. Buikstra and D.H. Ubelaker (eds.), *Standards for Data Collection from Human Skeletal Remains* (Arkansas Archaeol. Survey Res. Ser. 44, 1994).

[33] S.T. Brooks and J.M. Suchey, 'Skeletal Age Determination based on the *os pubis*: Comparison of the Ascàdi-Nemeskéri and Suchey-Brooks methods', *Jnl. Human Evolution*, 5 (1990), 227-38.

[34] C.O. Lovejoy, R.S. Meindl, T.R. Pryzbeck and R.P. Mensforth, 'Chronological Metamorphysis of the auricular surface of the ilium: a new method for the determination of adult skeletal age', *Amer. Jnl. Phys. Anthropol.* 68 (1985), 15-28.

[35] D.R. Brothwell, *Digging up Bones: the Excavation, Treatment and Study of Human Skeletal Remains* (3rd edn. 1981).

[36] S. Hillson, *Dental Anthropology* (1996); Bass, op. cit. note 32; Buikstra and Ubelaker, op. cit. note 32; D.H. Ubelaker, *Human Skeletal Remains: Excavation, Analysis, Interpretation* (1984).

Sex determination: Sex was estimated using skull and pelvic dimorphism. The features of the skull used were the occipital (nuchal) crest, mastoid process, supra-orbital margin, supra-orbital ridge and glabella, and the mental eminence of the mandible. Scores were awarded according to the criteria set out in Buikstra and Ubelaker.[37] The features of the pelvis that were considered in estimating sex were the ventral arc, sub-pubic concavity, ischiopubic ramus ridge, greater sciatic notch, and presence or absence of the preauricular sulcus, again as set out in Buikstra and Ubelaker. Other general characteristics of the pelvis were also considered such as the shape of the sacrum and the shape of the pubis. Complementary data for sex estimation was sought metrically. Perhaps not surprisingly the inhumation burials from this monastic site comprised a high proportion of males, with 13 burials sexed as either male or possibly male (48.1%), and only five sexed as possibly female (18.5%). Only one burial was insufficiently complete to be sexed. The presence of women and children in the Cloister Garden cemetery is probably due to the burial of neighbouring or associated lay people in the abbey.

Human variation

Height estimation: An estimation of height during life for each adult skeleton was obtained using the formula published by Trotter based on the length of the long bones.[38] Where possible the estimate was taken from the results for the lower limb as these have been found to be more reliable.[39] These measurements also have a range of error and this means that the height obtained may not be the true height of the individual.

The average height of the individuals in the sample from the Cloister Garden was found to be 173.81 cm. for males and 165.22 cm. for the possible females. The height of the majority of males ranged from 168.75 cm. to 178.66 cm., but one individual (SK4523) was very tall at 184.46 cm. (just over 6 ft.). The average male and female stature at the Dominican priory at Beverley was 172.0 cm. and 162.5 cm. respectively[40] showing that the sample from this site were slightly taller than the individuals from Beverley. In fact the average male height is only a little lower than the modern average height of 174 cm. for males.[41] Although interpretation of the data is difficult, the slightly greater height at the Dorchester burial ground may be due to better levels of health and nutrition experienced by these individuals.

Non-metric variation: Non-metric traits are features of the cranial and post-cranial skeleton, such as the presence of the metopic suture in adults, which can be recorded as either absent, present or unobservable. There are numerous cranial and post-cranial non-metric traits that can be observed.[42] In this study the skeletons were examined for 28 cranial traits and 17 post-cranial traits. However only the presence of those most often referred to in other skeletal samples are considered here. The cranial traits are metopism, wormian bones in the saggital, coronal and lambdoidal sutures, supra-orbital foramen, parietal foramen, parietal notch bone, torus mandibularis and torus maxillaris. A retained metopic suture was found in one adult, or 12.5% of possible cases. Supra-orbital foramina were recorded in five individuals (55.5%). Parietal foramen were present in seven skeletons (77.7%), and wormian bones at the parietal notch in one (14.3%). Lambda wormian bones were observed in three individuals (25.0%).

The post-cranial traits are medial and lateral tibial squatting facets, variations in the articular facets of the talus and calcaneus, the acromial articular facet, os acromiale, accessory sacral facets, lumbar sacralisation, level of open hiatus in the sacrum, septal aperture of the humerus, supra-condylar process and vastus notch of the patella. Examination of the post-cranial skeleton showed that four of the adults (33.3%) had squatting facets on the medial tibia, three of which occurred on both sides, and the same number had squatting facets on the lateral tibia, two occurring on both sides. One of these individuals had both medial and lateral squatting facets, and these occurred on both tibiae (SK3094). A double anterior calcaneal facet was present in seven adults (70%) and a double inferior anterior talar facet was present in two (16.6%). One of these had both traits present (SK4508). Three adults (27.2%) had an acromial articular facet and two (25.0%) had an accessory sacral facet(s). The sacralisation of the fifth lumbar vertebra was only recorded in one adult (SK4529), a male, and the vertebra was only half sacralised.

[37] Buikstra and Ubelaker, op. cit. note 32, p. 20.

[38] M. Trotter, 'Estimation of Stature from Intact Limb Bones', in T.D. Stewart (ed.), *Personal Identification in Mass Disasters* (Smithsonian Inst. 1970), 71-83.

[39] M. Trotter and G.C. Gleser, 'A Pre-evaluation of Estimation of Stature based on Measurements of Stature taken during life and of long bones after death', *Amer. Jnl. Phys. Anthropol.* 16 (1958), 79-123.

[40] J. Dawes, 'The Human Bones', in P. Armstrong and D.G. Tomlinson, *Excavations at the Dominican Priory, Beverley, 1960-1983* (Humberside Heritage Publication 13, 1987).

[41] M. Brickley, A. Miles and H. Stainer, *The Cross Bones Burial Ground, Redcross Way, Southwark, London: Archaeological excavations (1991-1998) for the London Underground Limited Jubilee Line Extension Project* (MoLAS Monograph 3, 1999).

[42] Buikstra and Ubelaker, op. cit. note 32.

Skeletal pathology

Dental health: There were 15 individuals where preservation of the maxilla, mandible and teeth was sufficient enough to allow an assessment of dental health to be carried out (four possible females, nine males, one juvenile (10-15 years) with permanent dentition, and one young adult of indeterminable sex). This would have given a total of 384 teeth for assessment if no teeth had been lost either ante- or post-mortem from the 15 individuals analysed (the maxilla was missing in six individuals). However only 254 (66.1%) were available for study; ten teeth (2.6%) had been lost ante-mortem, five teeth (1.3%) were congenitally absent (generally third molars), and up to 115 teeth (29.9%) may have been lost post-mortem.

Dental caries affected seven (46.7%) of the individuals available for study and had an overall prevalence rate in the sample of 5%, that is the number of carious teeth with respect to total teeth observed. Although dental caries affected nearly half of those with teeth the overall prevalence of caries in the sample was low. When carious lesions were present on the occlusal surfaces of the crown this was more often in the fissures of the molars. The most common site for a carious lesion was interproximally or at the cement-enamel junction, and all cases of caries were confined to the premolars and molars.

The presence of dental abscesses was determined by examination for fistulae, holes in the bone of the jaw through which pus would have passed. Six of the 15 individuals (40%) were found to have between one and three periapical abscesses, and nine abscesses were recorded in total (3.5%). The tooth was still present in eight of the cases, the majority of which had affected the molars, with only one premolar and one canine affected. Four of the observed abscesses were associated with large carious cavities in the corresponding tooth, primarily molars.

The level of dental hygiene in the sample population can be assessed by the accumulation of dental calculus or 'tartar' on the teeth. Due to the fact that calculus may become fragile in archaeological material and is easily lost during excavation and cleaning the figures for presence of calculus should be taken as the minimum that would have been present. Some degree of dental calculus was present in 13 of the 15 individuals (86.7%), and it also had a high overall prevalence, affecting 59% of the teeth observed.

Defects in the tooth enamel (hypoplasia) appearing as pits, lines or grooves around the crown of the tooth, are known to represent a disruption of the enamel formation process.[43] The possible causes for this disruption are numerous and as the enamel is formed during childhood these defects relate only to the events of childhood. Enamel defects were recorded in eight individuals, 66.7% (6) of adult males, 25% (1) of adult females, and one unsexed individual aged 10-15 years, in which relevant areas of dentition were present.

Ante-mortem tooth loss was seen in four individuals (26.6%) and accounted for 10 teeth. Most of these individuals, two possible females and a male, were in the middle/mature adult category and only one was a young adult male, only having lost one tooth ante-mortem.

Dietary deficiency: The condition *cribra orbitalia*, a common manifestation of iron-deficiency anaemia, was observed in one individual, a young male (20-30 years). This was accompanied by porotic hyperostosis of the occipital and left parietal bones of the cranium, lesions of the cranial vault also associated with this form of anaemia. This represents 10% of individuals with one or both orbits observable. The exact cause of this condition is unknown and apart from an iron-deficient diet it is thought that excessive blood loss through injury, parasitic infection of the gut, and infectious diseases may be aetiological factors in the development of this anaemia.[44] Physically, iron deficiency anaemia can result in tiredness, lack of stamina, breathlessness and palpitations.[45] It is unlikely that iron deficiency anaemia was the cause of death in this individual but studies have shown that there is an increased mortality rate in individuals with cribra orbitalia.[46] No other pathological changes of the bones were observed in this skeleton.

Spinal pathology: Schmorl's nodes are caused when the contents of the intervertebral disc exerts pressure on the vertebral body surfaces resulting in a smooth depression or node.[47] Their specific aetiology is unknown but they may be associated with age-related degeneration of the vertebral discs or as a result of heavy work undertaken around adolescence when the intervertebral disc is still soft.[48] The presence of Schmorl's nodes was recorded in five individuals, all males, four of which were between 30 and 40 years of age and the other

[43] Hillson, op. cit. note 36.

[44] C.A. Roberts and K. Manchester, *The Archaeology of Disease* (2nd edn. 1995).

[45] Ibid. 167; P. Stuart-Macadam, 'A Radiographic Study of Porotic Hyperostosis', *Amer. Jnl. Phys. Anthropol.* 74 (1987), 214.

[46] A.H. Huss-Ashmore, A.H. Goodman and G.J. Armelagos, 'Nutritional Inference from Palaeopathology', in M.B. Schiffer (ed.), *Advances in Archaeological Method and Theory*, vol. 5 (1982), 395-476.

[47] Roberts and Manchester, op. cit. note 44, p. 133.

[48] Brickley et al., op. cit. note 41, p. 38.

between 20 and 30 years. The highest levels of Schmorl's nodes occurred in the lower thoracic and lumbar spine, the most common distribution. It may be that these are associated with heavy tasks undertaken by young and middle adults that exert pressure on the spine rather than age-related degeneration alone.

Osteophytes are bony outgrowths that form at the margins of the joint to spread the load on it, usually as a response to mechanical stress. Osteophytes occurred in 11 (61.1%) of the 18 adult vertebral columns recovered. There was very little difference in the prevalence of osteophytes between the sexes; 66.6% of males compared to 60% of females were affected. The most common sites for formation were the lower thoracic vertebrae, T6 to T12, and the lumbar vertebrae, L1-3. Osteophytes on the cervical vertebrae were rare; only one individual was affected in this region. The incidence of osteophytes is normally seen to increase with age and this pattern was found in this sample. Prevalence rose from 20% of the individuals in the 20-30 age category, to 66.7% of the 30-40 category, until 100% of adult vertebral columns in the age categories 40-50 and 50+ showed osteophytic development. Osteophytes and degeneration of the vertebral discs are often associated Schmorl's nodes (above), and almost all those with Schmorl's nodes at Dorchester also had vertebral osteophytes.

Degenerative joint disease – osteoarthritis: Changes in the cartilage of the joint, whether caused by activity related stresses, trauma at the joint or one of many other aetiologies, eventually induce bony changes in the joint surface such as marginal lipping (osteophytes), exostoses, porosity and eventually eburnation (polishing) when no cartilage remains. Marginal lipping and exostoses may also occur as part of the normal ageing process. Therefore in the present study osteoarthritis was only recorded where eburnation of the bone surface was observed, as this is the only absolute indication of the condition.[49]

Osteoarthritis was observed in at least four individuals, three males and one female. In the three males the condition was recorded in three different locations, at the shoulder in a 40-50 year old male, and osteoarthritis of the hip and the neck occurred separately in two males aged 50+. An adult female aged 40-50 had osteoarthritis of both elbow joints. Osteoarthritis of the shoulder had a prevalence rate of 6.7% in the sample, only one individual recorded as having one shoulder affected of 15 people with one or both shoulder joints observable. One example each was noted at hip, neck and elbow. Those individuals where arthritis affected a joint of the upper body also had osteophytes around the margins of the vertebral bodies and articular surfaces of the thoracic and lumbar vertebrae. Osteophytes and porosity of the joint surface (probably osteoarthritis) were recorded in the shoulder joint of three other individuals. The medial clavicle and lateral clavicle were affected in a 40-50 year old female and female over 50 years of age respectively. The acromion process of the scapula, which articulates with the lateral clavicle, was affected in another 40-50 year old female.

Osteoarthritis is multifactorial in its aetiology; increasing age, a genetic predisposition, obesity (leading to stress on the joints), activity/lifestyle and environmental factors such as climate may all contribute to its development. Some joints of the body do however have characteristic epidemiologies. For example, osteoarthritis of the shoulder often follows severe trauma or is related to a specific activity.[50]

Trauma: Trauma can be defined as any bodily injury or wound,[51] and these are only detectable in skeletal populations where they affect the bone. Fractures were the only evidence for trauma in the sample from the Cloister Garden. One individual, a male aged 40-50, had suffered a fracture of the right ulna that was well healed and correctly aligned (6.7% of individuals with one or both ulnae observable, and an overall prevalence for ulna fractures of 4.2%). Skeleton 3024, a male aged 30-40, showed evidence of having sustained an injury to the right foot. The right fifth metatarsal had been fractured but healed well. The prevalence of fractures in this sample may be underestimated as some well-healed fractures will only be seen by radiographic analysis.

Non-specific infection: Periostitis is the term used to describe a sub-periostial inflammation, the periosteum being the sheath-like layer covering the bone, indicated by proliferative lesions on the compact outer surface of the bone formed as a reaction to infection or inflammation.[52] These areas of new bone formation are most commonly found on the bones of the lower leg, particularly the tibiae, as these bones are very close to the skin surface and more prone to injury.

[49] J. Rogers and T. Waldron, *A Field Guide to Joint Disease in Archaeology* (1995).
[50] Roberts and Manchester, op. cit. note 44, p. 106.
[51] Ibid. 65.
[52] J. Coughlan and M. Holst, 'The Human Remains: Health Status', in V. Fiorato, A. Boylston and C. Knüsel (eds.), *Blood Red Roses: The archaeology of a mass grave from the Battle of Towton AD 1461* (2000), 64.

Six individuals from the Cloister Garden showed evidence of periostitis on some of their bones (skeletons 3035, 3102, 3106, 4515, 4523, and 4540). Four of these individuals were males, one was possibly female (4540) and one was of indeterminate sex (3102). One of the males was over 50 years old (4515) and the remaining males and the female were all young/middle adults (30-40 years). In the older male and the female individual only the tibiae were affected, and in one of the males only the femur showed signs of periostitis. In the remaining individuals periostitis affected one or both of the femora, tibiae and fibulae, and occasionally the bones of the ankle or foot. Only one individual showed evidence for periostial lesions on the upper limb with one radius affected, a prevalence rate of 6.6% of individuals with one or both radii present. The overall prevalence of periostitis in the lower limb in the sample is highest for the tibiae, 38.5% of individuals, slightly less for the femora, 33.3% of individuals, and lowest in the fibulae, 21.4%. Prevalence here is high when compared to the medieval cemetery of St. Helen-on-the-Walls in York, where 22.4% of individuals showed periostial lesions on the tibiae.[53]

Congenital/developmental abnormalities: Spondylolysis is a defect of the vertebrae in which the spinous process is separated from the vertebral body, transverse processes and inferior articular processes, and usually occurs in the fourth or fifth lumbar vertebrae.[54] This condition affected the fifth lumbar vertebrae of a 20-30 year old male (SK4511). Spondylolysis may be caused by a genetic predisposition or repetitive stresses, is more common in males than females, and many, but not all, patients suffer from back pain.[55]

Extra bone growth: An enthesophyte is a bony outgrowth occurring at the site of attachment of tendons and ligaments to bone as a result of injury to the attachment site. They are more common in older people but may occur in younger individuals as a result of trauma to a joint.[56] Four of the adults were recorded as having one or more enthesopathies; three males, one aged 30-40, one aged 40-50, one aged 50+, and one unsexed adult. The enthesopathies were located on the patella, the patella and calcaneum, and the fibula and pelvis.

Cortical defects occur at the same sites as enthesopathies but they appear as depressions in the cortical bone (the outer layer of dense bone). These are more common in younger individuals, particularly on the proximal humerus, and they may result from mechanical stress exerted on the attachment site during muscular activity.[57] At Dorchester Abbey cortical defects occur in right and left proximal humeri and/or clavicles of four individuals, at the sites of attachment for *M. pectoralis major* and *M. teres major* on the proximal humerus (muscles that medially rotate the arm) and the costoclavicular ligament at the sternal end of the clavicle. These defects occur in four males, one aged 20-30 years and three aged 30-40 years. Two (11.8%) of the 17 individuals with one or both humeri observable had the defect at the proximal humerus, corresponding to an element frequency of 10.3% (three of 29 humeri). Two (15.4%) of 13 individuals with one or both clavicles observable had the defect at this site, corresponding to an element frequency of 8% (two of 25 clavicles). The prevalence of these defects is evidence that these males were involved in strenuous activity involving the musculature of both left and right upper limbs. Unfortunately the sample size was considered too small to determine whether this follows any pattern such as handedness.

Conclusion

Although the skeletal sample size is small compared with the total number probably buried in the abbey church cemetery, some general points can be made. Many of the pathologies affecting the bones of these individuals could be indicative of an active lifestyle. Osteoarthritis, vertebral osteophytes and Schmorl's nodes are all associated with normal age-related degeneration of the joints but may also be associated with heavy manual work, especially when they occur in young-middle adults as well as older adults, as they do here. Certainly some individuals were involved in strenuous muscular activity, as the cortical defects in the shoulders of four young-middle adults demonstrate. The dental health of the sample was low, and the prevalence of defects in dental enamel indicated that the health of these individuals as children was punctuated by episodes of poor health.

[53] A.L. Grauer, 'Patterns of Anaemia and Infection from Medieval York, England', *Amer. Jnl. Phys. Anthropol.* 91 (1993), 208.

[54] A.C. Aufderheide and C. Rodriguez-Martin, *The Cambridge Encyclopaedia of Human Palaeopathology* (1998), 63-4.

[55] Coughlan and Holst, op. cit. note 52, p. 61.

[56] C. Knüsel, 'Activity-related Skeletal Change', in Fiorato et al., op. cit. note 52, p. 113.

[57] Ibid.

ANIMAL BONE AND ENVIRONMENTAL EVIDENCE by KAREN IZZARD, GRAHAM D. KEEVILL and CATHERINE UNDERWOOD

A substantial assemblage of animal bone (3,224 fragments, including 69 from the evaluation trenches) was recovered from the site. The vast majority of this material is likely to be of Roman date, and therefore of little or no interpretative value in the site's overall research framework as described above. Therefore the assemblage was examined at a relatively superficial level, with each context group being scanned for any unusual species or individual bones. The main species were then broadly quantified and recorded. A catalogue by context is provided in the site archive, and a few comments are provided here.

Based on this rapid scan, approximately 70% of the assemblage was identified as cattle, with only a small percentage of these being immature at death. The most frequently represented body parts are the metapodials; the relatively low ratio of skull and horncore to these suggest that these remains are the product of secondary butchery processes. It might also be possible to construe something about status from the nature of the assemblage. The dominance of metapodials and the maturity of the animals contributes to a 'poor' rather than 'rich' feel for this assemblage. The remaining 30% of the assemblage is mostly sheep/goat again with only a small percentage slaughtered or dying immature. There are also a few examples of pig.

This site contained few features or deposits with obvious potential for palaeoenvironmental archaeology. The late Saxon well (3101) might have been of interest had its lower levels been exposed, as waterlogging could be expected, but excavation ceased within layers of backfill that had no environmental interest. Soil samples were taken from the mid-late Saxon ditch (3117), but these only contained a few fragments of charcoal and carbonised grains. These were not worth analysis and have been discarded. A column sample was taken from the micro-laminated floors in Saxon building 3139 in the hope that the micromorphology of the soil might indicate what activities had taken place within the structure. This sample was contaminated during storage in the contractor's compound on site, however, and it was not analysed because its integrity had been compromised.

DISCUSSION

THE IRON AGE STATER

Cunobelin's gold is not entirely unexpected at Dorchester-on-Thames given the close proximity of the regionally important oppidum (settlement) at Dyke Hills. The Oxfordshire Sites and Monuments Record contains numerous references to late Iron Age gold, silver and bronze coins from the Dorchester region. Most of these are mints of Cunobelin, but Verica, Tasciovanus and others are also represented. Many of the coins were found during the 19th century, several are not precisely provenanced, and some references appear to be double counts of single coins. Not surprisingly Dyke Hills dominates the overall distribution, having produced 'one of the densest concentrations of Iron Age coins in Britain',[58] but examples have also been found at Wittenham Clumps (probably) on the opposite bank of the Thames to the west, and at Overy Field to the south of the town. It is impossible to know how the stater came to be in ditch 3117. Perhaps its loss was purely accidental, but one has to ask how and why such a valuable – and already ancient – artefact was available to be deposited in a mid-late Saxon feature. Early Saxon burials have been found cut into the ramparts at Dyke Hills, while sunken featured buildings are known or suspected on and just to the north of the oppidum.[59] One cannot discount the possibility that the coin had always been on or around the abbey site, but it is tempting to see it as having been removed from the Dyke Hills and brought here as a result of the various Saxon diggings on the Iron Age site.

[58] J. Cook, 'Before the Roman Conquest', in Cook and Rowley, op. cit. note 2, pp. 16-18.
[59] J. Cook, 'Early Saxon Dorchester', in ibid., 30-2; T. Rowley, op. cit. note 20, pp. 44-5.

SO MANY ROMAN FINDS, SO FEW ROMANS: THE TOPOGRAPHY OF ROMAN DORCHESTER

The most recent summary of knowledge regarding Roman Dorchester notes the continuing uncertainty over the full extent of the area provided with defences in the later 2nd century AD.[60] A substantial portion of the earthwork defences (which were later re-built or at least faced in stone) survives along the west side of the town, in an area of allotments and gardens. The locations of the north and south defences are also well known, but the eastern extent of the walled town has not been established with certainty. Two alternative views exist. The first suggests that the bank and ditch (and later the wall) ran north-south a little to the west of the abbey site. It has been pointed out that this omits a significant promontory of higher ground jutting out into the Thames and Thame floodplain, leading to the suggestion that this area too was in the defences. The former hypothesis presents a relatively small elongated rectangular 'playing card' shape, while the latter provides a less regular but larger area.

The evidence from the Cloister Garden tends to support the alignment west of the church, as some *in situ* Roman archaeology would surely have been located if the site had lain within the walls. The large quantities of Roman finds recovered are likely to derive from sub-urban rubbish dumping. It is suggested that the similar preponderance of Roman material from the 1960-2 excavations in the Cloister Garden derived from the same activity rather than settlement.[61] In this context the discovery of a 3rd-century AD cremation burial in the Vicarage garden may be conclusive, as adult burial within town walls (or any significant settlement area) was strictly forbidden in Roman law. The precise location of the cremation is unclear, but if it was from a larger cemetery it would certainly have placed the greater part of the abbey site outside the Roman walls. The supposed discovery of a Roman building with a tessellated floor within the north chancel aisle during the 19th century does not necessarily contradict this. The building need not have been Roman at all – a Saxon date is not impossible (see below) – but even if it was Roman it could have been a bath or mortuary structure. The building found to the north-east of the north chancel aisle during the watching brief could have served a similar function, although the structure is more likely to have been of Saxon than Roman date. Admittedly no further evidence for a Roman cemetery in the Vicarage and Cloister Garden area has been found, including during this project, and so the definitive answer to the conundrum of Dorchester's east defences has yet to be found.

THE ANGLO-SAXON SEQUENCE: DORCHESTER AS A CATHEDRAL

Dating and sequence

The Saxon sequence at Dorchester Abbey was clearly defined stratigraphically, with individual contexts easily resolved into phased context groups. There was a clear development in building traditions across the phases from the SFB in Phase 1a to the post-built structures of phases 1b and 1d. Similar constructional sequences have been recognised in other contemporary sites in the region such as Eynsham Abbey and Barrow Hills, Radley.[62] In those cases the earliest buildings (the SFBs) have been dated largely to the 6th century (with a possible range of later 5th to mid-late 7th century at Eynsham), with the

60 M. Henig and P. Booth, *Roman Oxfordshire* (2000), 58-63, especially 59-61.
61 Cunningham and Banks, op. cit. note 6.
62 Hardy et al., op. cit. note 24, pp. 35-81; Chambers and McAdam, op. cit. note 19.

post-built structures ranging from the mid-late 7th into the 10th centuries. These dates rely heavily on ceramic phasing, though at Eynsham several coins in stratigraphically important contexts helped considerably in refining the phase dates.

The dating of the Dorchester sequence relies entirely on ceramic phasing, as no clearly datable material was present among the other Saxon artefacts. Anglo-Saxon pottery is notoriously difficult to date accurately, especially the earlier material, but a good degree of correlation between fabric types and the stratigraphic sequence was evident despite the relatively small quantities of pottery involved. The 63 sherds from Phase 1a structure 3144 were all in limestone-tempered fabrics, with a small number of sandy wares present as well. These date from the 6th century to as late as the 8th century. Most of the sherds from the SFB derived from the occupation or infill layer (3143, 3145 and 3146), with five sherds from beam slot 3151 (fill 3152) representing the only finds from primary structural contexts. On this basis it is suggested that the building was in use during the 6th and possibly 7th centuries but was then superseded by the post-built structures. This would place the SFB in the period before Birinus's mission, which commenced at Dorchester in 635. Other SFBs from Dorchester have also been dated to the 5th and 6th centuries.[63]

The dating of Phase 1b building 3140 is exceptionally difficult, as only a single gritty sherd was recovered from a context of this phase (3121). No pottery came from Phase 1c contexts 3082 and 3123. Fortunately substantial assemblages were recovered from Phases 1d (building 3113 and ditch 3117) and 1e (well 3101). Contexts in both phases contained some residual early Saxon material no doubt derived from the underlying SFB through which the features had been cut, but this can be discounted for dating purposes. The phase 1d ceramics were dateable to the 9th-10th centuries. A similar range of material was present in the Phase 1e well contexts, but this is stratigraphically later and so must be placed somewhat later in time as well. The suggested dates for the later Saxon phases are therefore 7th-8th centuries for Ib-1c, 9th-10th centuries for 1d, and late 10th-11th centuries for 1e. It is not possible to determine with certainty whether Phase 1e had ended before or after the Norman conquest, but this question will be returned to below. In essence, however, Phase 1a represents secular use of the site while Phases 1b-e all occur within the historical period of Dorchester's episcopal status (see Fig. 24).

Phase 1a

Phase 1a structure 3144 falls within the general category of early-mid Saxon sunken-featured buildings (SFBs), but in some respects it is not typical. SFBs were often quite small, with dimensions of around 3 m. x 2 m. Larger structures have certainly been found, and the sunken pits identified at West Stow reached as much as 5.5 m. in length.[64] Those at Mucking ranged from 3.5 m. x 3 m. to as much as 6 m. x 4.5 m.[65] Two SFBs at Eynsham Abbey were at least 4 m. long by 3 m. wide (3153 and 3744), while a third (3534) was 4.6 m. long and at least 2.3 m. wide.[66] As these dimensions suggest, the buildings tended to be roughly rectangular (with rounded corners to the pits) or in some cases square. Pit depths vary considerably, though this is sometimes because of truncation through ploughing or other activity. They can reach depths of 0.75 m. or more, but around 0.25 m. (from the excavated ground surface) is more normal. Postholes were often inserted at either end of the long axis,

63 Rowley, op. cit. note 20, pp. 43-4.
64 S. West, *West Stow – the Anglo-Saxon Village* (E. Anglian Archaeol. 24, 1985), 115-16.
65 W. Jones and M.U. Jones, 'The Early Saxon Landscape at Mucking, Essex', in Rowley, op. cit. note 20, p. 23.
66 Hardy et al., op. cit. note 24, pp. 35-9.

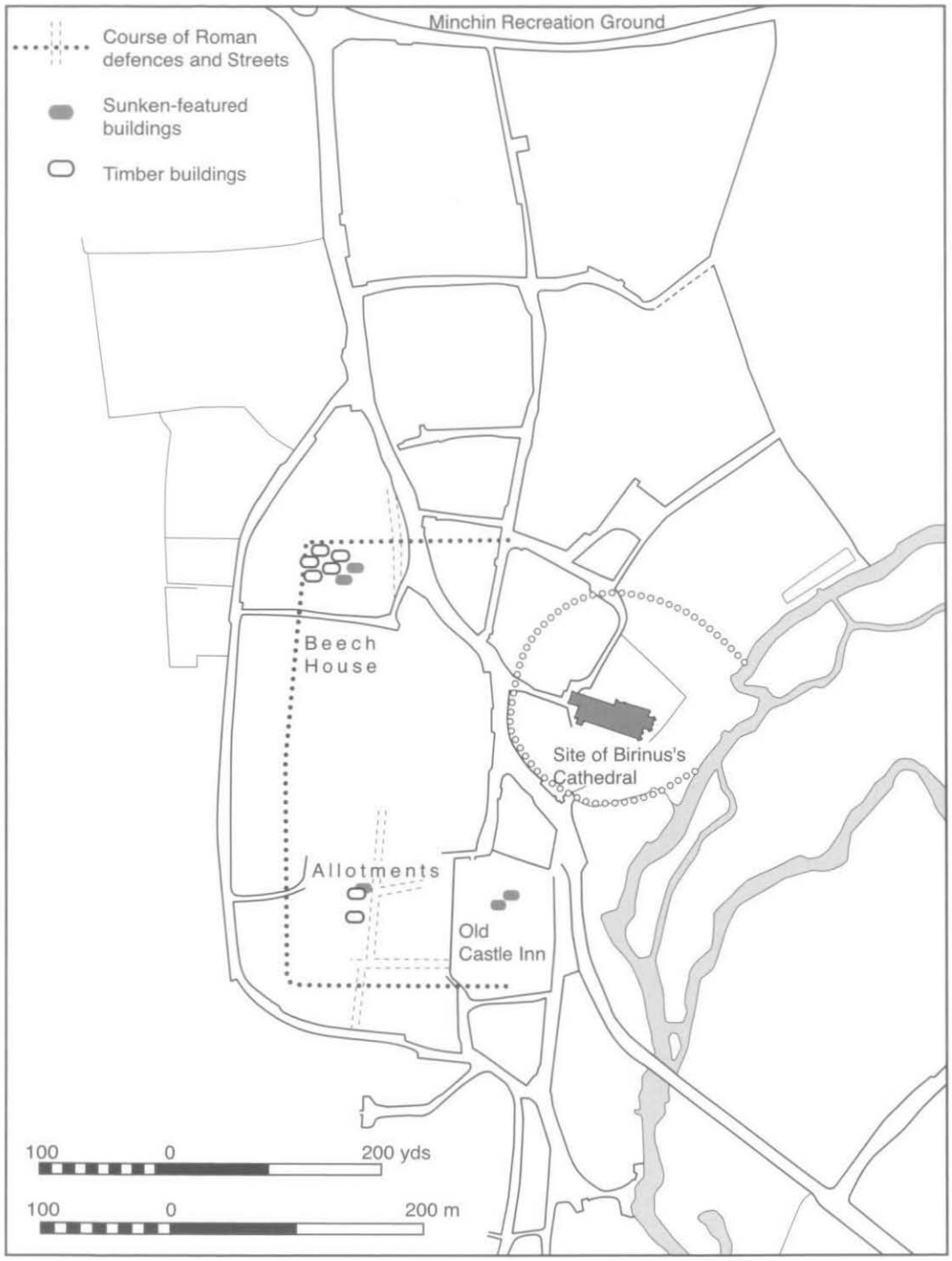


Fig. 24. Anglo-Saxon Dorchester-on-Thames, also showing the known course of the Roman defences (after Cook and Rowley 1985).

often lying at the edges of or just outside the pit. These posts are usually interpreted as the supports for a roof ridge pole. Some SFBs without postholes have been found, for example at West Stow and Mucking,[67] but they are rare.

SFB 3144 measured at least 3.7 m. N.-S. by at least 4.7 m. E.-W., with only the east side lying within the excavated area. Clearly this building was one of the larger examples of the type. The pit depth of 0.18 m. is quite shallow, though this may be due to truncation by later activity. The narrow beam slots cut into the bottom of the pit are unusual features, though again the well-known sites of West Stow and Mucking contained one or two examples, suggestive to the excavators of a pit lining (e.g. with wattle hurdles).[68] The presence of several slots running in parallel, and one at right-angles in the Dorchester building suggests a different function, with beams supporting a suspended floor being a likely explanation. The charcoal staining in the top of the pit fill is interpreted as burnt planking from just such a floor.

Phases 1b-e

Phases 1b and 1d appear to represent a broad continuum of building types and activity, though separated by a pause (Phase 1c) when buildings were presumably moved elsewhere. Structures 3140 and 3113 fall within a well-attested Anglo-Saxon building type, using trench-set timber uprights.[69] The structural elements located within the boiler room trench were extremely well preserved, partly because trench edges had remained very crisp where they cut into the brickearth, and so the fine detail of individual post positions were visible. This showed that the timbers were closely spaced in building 3140 but more widely distributed in 3113. In both cases the individual posts and stakes were set in line, in a basal slot that was narrower than the upper part of the trench. The staggered post or plank system seen at Cowdery's Down and elsewhere[70] was not used here. Given the excellent preservation, it was somewhat frustrating that only one wall of each building could be defined. Therefore little could be done to reconstruct either in any detail, although it seems likely that they would have been reasonably sophisticated architecturally. Equally the long axis of neither structure could be determined with certainty, though the axial focus on reasonably precise E.-W. and N.-S. lines was notable, in contrast to the slightly skewed alignment of the abbey church itself.

The partial exposure also makes it difficult to be certain of the two buildings' function(s), but in general terms it seems clear that they were domestic, perhaps with an element of craft/industrial use. The nature of the floors, and especially the micro-laminated occupation deposit 3124, certainly points in this direction. The finds (including those from Phase 1d ditch 3117) were also mostly domestic in character, though the apparent evidence for glass-making is particularly notable. This was largely confined to monastic sites such as Jarrow, Monkwearmouth and Winchester's Nunnaminster during the Anglo-Saxon period.[71] The possible presence of a small factory at Dorchester, presumably for making window glass, reflects the considerable importance of the cathedral here.

67 West, op. cit. note 65, p. 114; Jones and Jones, op. cit. note 66, p. 23.

68 West, op. cit. note 65, p. 114; Jones and Jones, op. cit. note 66, p. 24.

69 S. James, A. Marshall and M. Millett, 'An Early Medieval Building Tradition', *Archaeol. Jnl.* 141 (1984), 182-215; A. Marshall and G. Marshall, 'Differentiation, Change and Continuity in Anglo-Saxon Buildings', *Archaeol. Jnl.* 150 (1993), 366-402.

70 James et al., op. cit. note 69.

71 R.J. Cramp, 'Excavations at the Saxon Monastic Sites at Wearmouth and Jarrow, County Durham: an interim report', *Med. Arch.* xiii (1969), 21-66; Graham Scobie, pers. comm.

This has implications for the location of the cathedral, and the layout of its precinct. It is most improbable that the excavated buildings were specifically ecclesiastical in function, yet they clearly continued underneath the abbey nave's north wall. Indeed areas of Saxon stratigraphy suggestive of similar structures were found within the nave during the watching brief. Where then was the cathedral? The general assumption has been that it lay under the medieval monastic nave, or at least some part of the church. It now seems unlikely that it can have occupied the nave at least, and in this context the anomaly noted in the radar survey towards the west end of the nave must either belong to a Saxon domestic building (which seems unlikely) or some intermediate structure, perhaps of the secular canons (see below). The Normans often built slightly to one side of existing churches when refounding houses, presumably so that existing buildings could remain in use for as long as possible during the demolition and rebuilding process. This sometimes coincided with a change of alignment between the Saxon and Norman buildings. The situation and orientation of the Old Minster at Winchester is the classic example of this, while nearby Eynsham Abbey offers another analogue.[72] It may be that the Saxon cathedral, which doubtless went through several phases of development from 635 to the 1070s, would have been a little further to the south, perhaps under the south aisles or even beyond them. This would at least help to explain why the medieval cloister was built on the north side of the abbey church rather than the more typical south, though this may have been due to a lay or mixed cemetery being on the south side.

The topography of the cathedral precinct can be compared with contemporary monastic sites such as Eynsham, Jarrow/Monkwearmouth and Hartlepool.[73] The gradual development of a cloister-type plan has been documented at the first three at least, though as with Dorchester the precise location of the church (and therefore any potential cloister arrangement) at Hartlepool has not yet been established. The excavations at Hartlepool, however, showed that parts of the precinct there were occupied by a mixture of living and industrial quarters, the latter probably on a small scale. The industries included the manufacture of metal objects such as brooches. Buildings were quite densely packed, used post-in-slot techniques in some periods, some had been rebuilt on more or less the same spot, and there was evidence for the use of ditches and/or fences to create separate areas, perhaps individual properties.[74] A similar situation is evident at Eynsham in its minster phases, though there the structures were built with posts in individual holes rather than continuous slots and there is comparatively little evidence for industrial processes. Some buildings were also situated within ditched enclosures. Relatively little of the Dorchester precinct has been excavated compared to Eynsham and Hartlepool, but all three precincts apparently shared a number of distinctive traits in terms of building type, function and overall layout.

One building at Dorchester deserves separate comment, if only because it cannot be securely dated to either the Roman or the Saxon period. The masonry structure 4592 was only seen in a pipe trench north of the church's east end, and has been tentatively ascribed to the Saxon period on the basis of the re-use of Roman building materials, especially tile. If this date is correct, it would seem reasonable to associate the structure with the cathedral phase. The use of stone would mark the building out as being of considerable significance in its own right, and its location close to the edge of the terrace overlooking the Thame floodplain would also be notable. Unfortunately that is the limit of interpretation possible given the circumstances and limited extent of the building's exposure.

72 Hardy et al., op. cit. note 24, pp. 493-6.

73 Ibid.; Cramp, op. cit. note 72; R. Daniels, 'The Anglo-Saxon Monastery at Church Close, Hartlepool, Cleveland', *Archaeol. Jnl.* 145 (1988), 158-210.

74 Daniels, op. cit. note 74, especially 205-7.

The position of the well/cistern relative to other contemporary structures is unknown. It could have provided a domestic water supply to the late Saxon cathedral, or the post-conquest house of secular canons. The other possibility, given that the shaft was built from re-used masonry, is that water was required for building, either the Saxon cathedral or even the abbey footings of *c.* 1140. Admittedly the nave foundations cut the well's construction pit, so a pre-monastic origin seems clear enough. Finally one cannot preclude the possibility that the feature had some form of liturgical use related to water. It could have been a simple Lavatorium (or have been the supply for one) or, perhaps less likely, a baptistery.

The four fine whiteware sherds from ditch 3117 deserve some final comment here as well. They appear to be unparalleled in a mid-late Saxon context within Oxfordshire, and perhaps on a much wider regional to national scale. The implications of contact between Dorchester in its cathedral phase and the East Mediterranean (perhaps even Constantinople itself) resonate far beyond the site itself, though of course four sherds hardly demonstrate enormous trade. The simple fact of the sherds' presence is significant enough, however, and must be added to the list of high-quality prestige artefacts such as stained glass that have been found during excavations on top Saxon ecclesiastical sites such as Jarrow and Winchester, and, apparently, Dorchester itself. We intend to pursue the matter of these sherds and their significance further outside the developer-funded environment of this project, and will report any new findings as necessary.

INTERREGNUM: BETWEEN CATHEDRAL AND PRIORY

Few deposits or structures demonstrably belonged to the period between the removal of Dorchester's cathedral status and the establishment of the abbey. As noted above, the Phase 1e well could date from this phase, while wall 4580 pre-dated the west end of the Norman abbey. The floors (4581) seen within the tower may also be pre-monastic, though this seems less likely. The wall seems more likely to be post- rather than pre-conquest, but this is by no means proven. These are the only real candidates for inclusion in this period from the excavation and watching brief. The radar anomaly across the west end of the nave has already been discounted as a cathedral-period structure, and it seems equally unlikely that it belongs to the abbey. Therefore it is tentatively placed within the period of the secular canons, and perhaps it would have formed a corner with wall 4580. If so the resultant structure would certainly have been substantial, but it must be stressed that the radar anomaly has not been tested by excavation, and it might not be either structural in character or of this date. The possibility that some of the standing fabric might be of this transitional period will be considered below. For the time being, however, the period between *c.* 1070 and 1140 represents something of a blank as far as the site's history and archaeology is concerned.

THE LAYOUT, TOPOGRAPHY AND DEVELOPMENT OF THE PRIORY AND ITS PRECINCTS: THE EVIDENCE FOR THE ARCHAEOLOGICAL WORKS

The internal watching brief and the various external works afforded many opportunities to examine the fabric of the 12th-century abbey church, especially at the west end of the nave and in the chancel. The character of the base of the walls was remarkably consistent, with an offset footing course of ashlar (probably associated with the original floor level) rising off foundations that also included one or more offsets. There was little to suggest that the surviving parts of the 12th-century nave, chancel and transepts were anything other than the result of one constructional campaign. This may have lasted many years, even decades, but it evidently followed a single-minded and clear design. If this is correct, it would seem

fair to assume that no pre-12th-century masonry survives above ground. There have been many suggestions to the contrary, and one particular area of masonry has aroused special interest in this respect. The east end of the nave north wall's external face is distinctly different in constructional character to remaining masonry west of it. Furthermore the outline of a broad and tall circular-headed blocked arch is clearly visible within the distinctive area (Figs. 3-4). The external frame of the existing door through the north wall here is of later medieval date, but the passage itself may well be of 12th-century origin given its simple vaulted ceiling. This door had clearly been punched through the round-headed blocking, and so it is possible that this fabric is pre-monastic after all. The foundations below it are certainly Norman work, however, so it must have been underpinned then if it is earlier work.

The west wall of the nave displays subtle evidence for construction lifts, as demonstrated by Dr. Brooke's remote sensing. As already noted the footings here are medieval, and *in situ* medieval features survive within the tower as well. The tower itself, however, was re-built at the beginning of the 17th century. The question of the dating of these lifts therefore arises – they could be from the original 12th-century construction of the nave, or the 17th-century rebuilding. It is notable that the wall face is quite plain, with no obvious blocked windows or other features. There is always likely to have been a western tower, however, and indeed there is good reason to suppose that these would have been twinned, i.e. one at each of the north-west and south-west corners. This would have been the normal form of the period, and some of the walls seen both inside and outside the tower during the watching brief are more easily interpretable as being from twin towers than a single large one. The Guest House formerly continued eastwards by at least one bay (note the surviving jambs of a first-floor window and ground-level arch) and could well have run up to the west tower or front of the church. Taken on balance, therefore, the west wall of the nave, and the lifts within it, are considered to be 12th-century fabric.

This has implications for the 12th-century chevron and beak-head ornamented voussoirs recovered during the watching brief within the church, and other similar architectural fragments that have been found at the abbey over the last 200 years. It is impossible to be certain where these came from, but major features at or around the west end of the church seem overwhelmingly likely, either door(s) or window(s). The blocked opening of what is interpreted as the south-west door was discovered during the watching brief, and this is likely to be one location for such fine architectural detailing, though this does not preclude the possibility that some pieces derive from windows and/or a west door. The 12th-century (but restored) west front of the parish church at Iffley gives a good impression of how Dorchester Abbey might have looked in the 1150s, while on a rather larger scale Lincoln cathedral provides an important potential parallel or design source in the diocesan context.

The presumed oblique angle of the doorway through the east end of the nave north wall into the south cloister walk was proved when the blocking was removed. The door would have been one of a pair providing access from the nave to the cloister in a monastic church. The remains of the second door are probably embedded in the west end of the nave wall. Feature Z noted in the remote sensing survey of the nave north wall close to the north-west corner probably represents the position of this blocked doorway.

Fragments of the west cloister range were seen both in the boiler room excavation and subsequent watching briefs, while all of the south walk and the south end of the east walk were also exposed. It was common for cloister walls to be re-built and enclosed with windows in the bays during the 14th century due to a worsening climate and a growing demand for greater comfort among the monastic brethren. Little clear evidence for this was discovered during the excavations, though the robbed-out buttress against the east face of the west cloister range may imply reconstruction at this time. It is interesting in this context to note

that the 14th-century east wall of the extended chancel incorporates a number of re-used colonette shafts, probably of 12th-century date and very likely to derive from the open arcades of the cloister walks. One should also take into account the evidence found in 1960-2 for a tiled floor in the west cloister walk; this would be unlikely to predate the 13th/14th century. Finally many of the architectural fragments that have been collected at the abbey over the years clearly derive from 12th-century columns, colonettes and ribbed vaulting.

Otherwise it is clear that a significant part of the cloister was used as a (perhaps the only) cemetery for the canons. The area to the south of the church may have been a lay (or mixed) cemetery in the pre-conquest period, and probably remained so. Little space was available to the east of the church because the edge of the terrace lay only a short distance beyond the end of the chancel. The south walk and the garth contained numerous burials, including one in a sarcophagus likely to represent a senior member of the monastic community or one of its patrons. Another sarcophagus was observed within the south transept, while others have been recovered from the abbey in the past. The west cloister walk also seems to have contained burials on the basis of the 1960-2 excavations when three graves were exposed. These were interpreted as pre-conquest at the time,[75] but they are much more likely to be monastic. Elsewhere in the cloister, wall 4555 may have represented the base of a low screen or cross-wall defining a separate stall within the south cloister walk. This may have been the location for the scriptorium where manuscripts were produced, and separate stalls might be expected here. The location of the cloister on the north side of the church at Dorchester means that this walk would have been shaded (and therefore cold) for much of each day, however, so this interpretation may not be valid.

It was somewhat surprising that little of significance was seen in the watching brief to the west of the church, though admittedly excavations here were very limited in nature. The wide, cobbled track seen just inside the lych gate presumably represents an intramural road giving access around the margins of the outer precinct, but otherwise the area to the south of the Guest House may have been used for gardens. The current access to the abbey through the lych gate and past the south front of the Guest House is misleading, as it can now be shown that the medieval entrance would have been to the north of the Guest House. The monastic gatehouse would have been on the High Street frontage, probably in roughly the position of the current Post Office. The entrance road would have run east past the jettied north front of the Guest House (the significance of the jetty here can now be appreciated) towards the west front of the abbey. A branch ran north from here towards the area where a monastic barn survived into the middle of the 20th century, when most unfortunately it was demolished.[76]

AFTER THE DISSOLUTION: THE ARCHAEOLOGICAL EVIDENCE

The immediate aftermath of the dissolution often saw one or other of the monastic church and cloister continuing to be used. The former could be retained in parochial use, while it was easy enough to convert one or more of the cloister ranges for secular use. It is obvious enough that the church survived at Dorchester, the nave south aisle having already been in use for parish worship before the dissolution. Its continued use, and thus survival, was due to Sir Richard Beauforest, who bought the chancel when the monastery was closed, subsequently giving it to the parish. With the abbey safe, attention must have turned to the

[75] Cunningham and Banks, op. cit. note 6, p. 161.

[76] J. Bond, N. Doggett, J. Munby and J. Rhodes, 'The Abbey and its Buildings', in Cook and Rowley, op. cit. note 2, p. 47.

cloister and other monastic buildings. The evidence of the 1960s and the current excavations shows that robbing was remarkably thorough, not only removing most walls down to ground level but also taking out foundations and floors. The picture is slightly confused by subsequent truncation of original levels in the Cloister Garden during the 19th century, but it seems likely that little of monastic origin was left to truncate by then. Fortunately, however, the post-dissolution robbing and Victorian truncation left the monastic cemetery remarkably untouched.

New floor levels were created within the church during the 18th and 19th centuries. This involved the removal of existing floors (probably including areas of monastic decorative tiling), and re-laying many grave ledger slabs as paviours. At least two large fragments of Purbeck marble now on the nave floor probably derive from the medieval shrine of St. Birinus, probably broken up at the Reformation. Some medieval floor tiles were re-laid in a random manner in the nave south aisle during the 19th century, and they can still be seen there. Areas of fine Victorian ceramic tiles were laid in the same aisle (the People's Chapel), in the chancel and elsewhere. A scattering of medieval floor tiles (complete and fragmentary examples) were found during the internal watching brief, but very few pieces were recovered from the Cloister Garden. In this context we can echo the complaint of the 1960s excavators when, having described the bedding for a tiled floor in the west cloister, they stated their disappointment that 'so few fragments of tile were discovered'. The church interior may have been re-ordered with considerable care on more than one occasion, but the ruinous cloister and its surrounding buildings were apparently seen as little more than a quarry site to be stripped of any re-usable materials.

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