

EXCAVATIONS AT ST PETER'S STREET, NORWICH, 2001

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SUMMARY

In 2001 the Norfolk Archaeological Unit conducted an excavation beside St Peter Mancroft church in Norwich. This was in advance of a new building, 2 Millennium Plain, designed to complete the urban space in front of The Forum, a landmark public building completed in 2001. The site of The Forum was itself subject to large-scale excavations in 1998–9, and the archaeological sequence and material described below has been interpreted within the context of this larger body of work, to be published in due course in the East Anglian Archaeology monograph series.

The excavation uncovered evidence, in the form of a ditch, a road and at least one structure, for the use of the site in the late Anglo-Saxon and post-Conquest periods. By the 13th century a series of plots had been laid out beside St Peter's Street. These supported a variety of uses, including mineral extraction, and acted as yards, roads or lanes. A number of buildings, both stone-built and of more ephemeral construction, were also identified. By the start of the 20th century, much of the site lay within the yard of the White Hart Inn which formed the northern edge of the excavation. This report presents the archaeological evidence for this sequence of use, and summarises the finds recovered from the area.

Introduction

(Plate 1; Figs 1 and 2)

During October 2001 the Norfolk Archaeological Unit (NAU) conducted an excavation between St Peter Mancroft church, The Forum and the former C&A building (currently Next) on Haymarket, Norwich, Norfolk Historical and Environment Record (HER) Site 26594, centred at NGR TG 2287 0841. The work formed a condition of planning permission being granted to The Forum Trust Ltd for the construction of an office and retail block, 2 Millennium Plain. This company funded the excavation, and the preparation and publication of this report.

Topographical and historical background

(Fig. 2)

The site lay in a part of the city where Norwich Crag overlies the Upper Chalk. This area is situated on the 25m OD contour line, above the western slope of the Great Cockey valley, with a plateau to the west. It lies close to the centre of the city of Norwich and within the parish of St Peter Mancroft, an area of the city with a rich and varied history. The site was dominated by the parish church of St Peter Mancroft, largely rebuilt in the 15th century, and The Forum (completed in 2001).

A human presence here can be traced back into prehistory. During excavations in advance of the construction of The Forum in 1998–9 (Site 26437; Percival and Hutcheson in prep. throughout this report) a number of heavily truncated features were excavated which appeared to date to between the Early Neolithic and Early Bronze Age. Traces of a possible relict prehistoric system were also apparent in this earlier excavation work. In common, however, with the situation in most other parts of the city there is little evidence of permanent occupation before the Saxon period.



Fig. 1 Site location



Plate 1 Excavation underway, with City Hall, the Guildhall and St Peter Mancroft church in the background

In contrast with many other areas of the city where Late Saxon activity is well attested, the area may have remained relatively open until the Norman Conquest. The sinuous arrangement of parallel Saxon roadside ditches excavated at The Forum, and the distinctive reverse-‘S’ pattern of part of the street alignment in this area (Andrew Rogerson, *pers. comm.*) may reflect an agricultural origin. The name Mancroft, first recorded in 1141–6 (Sandred and Lindström 1989, 71), is derived from the Old English words for common land, (ge)mæne and croft. Domesday Book (1086) records 36 burgesses and six other men by the 1060s, suggesting a burgeoning suburban community (Rutledge in prep.).

Following the Norman Conquest Ralph Guader granted land for the founding of a new borough ‘between himself and the king’ (Campbell 2004, 40). This had its own market and an associated church, St Peter Mancroft. The church would then, as now, have visually complemented the great castle keep on the opposing side of the Cockey valley. This new borough may, in part, have been a regularisation of the Saxon suburb, and must in any case have acted as an encouragement to its development. By 1086 the area, sometimes referred to as the French Borough (eg. Hudson and Tingey 1906–10, I, vii–x), housed up to 105 burgesses (Campbell 2004, 40). As far as can be determined the excavation lay within this ‘new’ borough, on the west side of ‘*le Omanseterowe*’ (St Peter’s Street), a name which reflects the importance of cloth manufacturing to the area (Rutledge in prep.). (‘*Oman(nes)sete*’ derives from the Middle English for ‘cloth made on a loom worked by one man’: Sandred and Lindström 1989, 77.)

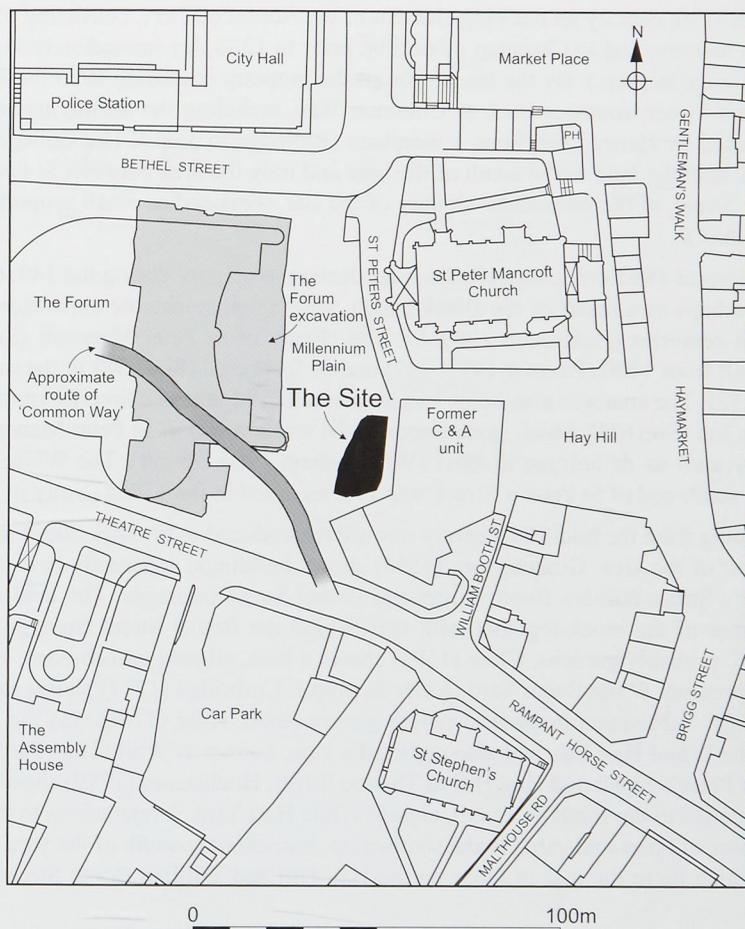


Fig. 2 The site, showing surrounding buildings and streets and the approximate route of the medieval 'Common Way'

The new borough was an affluent area. Its three churches (St Peter Mancroft, St Giles and St Stephen) were rich by Norwich standards (Campbell 1975, 9). Excavations against the Bethel Street frontage uncovered the foundations of two substantial medieval stone buildings (Hutcherson 2000, 6) which may have housed the wealthy inhabitants or institutions upon which such churches depended. At this time most of the land on the street frontages surrounding the site was divided into small properties, generally in separate ownership (Rutledge in prep.), although large areas behind the streets remained fields and pasture until the early 12th century. These were crossed by a number of minor lanes. Medieval documents indicate that one of these, 'a common way', passed immediately to the south-west of this site (Rutledge in prep.). St Peter's Street is first mentioned in 1269 (Sandred and Lindström 1989, 139) although its present name only appears on the 1885 Ordnance Survey map.

Land to the south-west of the site was eventually dominated by the Hospital (later Chapel or College) of St Mary in the Fields, founded a little before 1248 (Rawcliffe 1995, 96) and surrendered to the King in 1544. Parts survive below the 18th-century Assembly House (Site 618).

In the mid-13th century an outlying element of the Norwich Jewry, consisting of three properties which had reverted to Christian ownership prior to 1286, lay immediately to the south of the site (Rutledge in prep.). By the late 1300s all the property stretching from the Bethel Street and St Peter's Street frontages back to Common Way, including the northernmost part of the site, was owned by Henry Lomynour, a merchant (Rutledge in prep.). The College of St Mary in the Fields held the land to the south of the lane and only the area between St Peter Mancroft and Theatre Street, in the immediate vicinity of the site, remained as small properties in single ownership (*ibid.*).

Excavations at The Forum suggested a local decline in activity during the 14th to early 15th centuries, perhaps as a result of the Black Death, with a commensurate expansion in the later 15th to 16th centuries (Hutcheson 2000, 9). The church of St Peter Mancroft (Site 257) was wholly rebuilt from 1430 (Pevsner 1997, 247) and St Stephen's (Site 598) in the mid-16th century (*ibid.* 252). The area was also home to a large number of inns and taverns, most notably the White Swan Inn (Site 611) which stood opposite the western end of St Peter Mancroft from the 14th century until its demolition in 1961 (Whittingham 1984, 38–50). The White Hart, which stood at the south end of St Peter's Street, was first recorded in the 1500s (Kelly in prep.).

Maps dating from the mid-16th century onward (reproduced in Frostick 2002) show the general character of the area. Cunningham (1558) shows buildings, apparently two-storied, along the St Peter's Street/William Booth Street and Bethel Street frontages. The land at the south-western corner of the block together with that behind the Bethel Street frontage is shown as open ground, probably gardens. Cleer (1696) shows a lane, aligned east-to-west, which almost certainly represents White Swan Yard (Kelly in prep.). Corbridge (1727) shows this lane lined with buildings. Subsequent maps incorporate greater detail. King (1766) was the first to mark the site of the White Hart Inn, and also depicted a lane, known as White Hart Yard, joining the corner of St Peter's Street and Hay Hill to Theatre Street. Hochstetter (1789) showed the White Hart Inn bounded to the south by a yard, clearly White Hart Yard. A rear access to the yard leads into a complex of lanes and yards to the south-west. Immediately south of the yard is a range of buildings which lie to the rear of those on the Hay Hill and William Booth Street (Gun Lane) frontages.

On the 1885 Ordnance Survey 1:500 map the area to the east of the site, on the Hay Hill and Haymarket frontages, was occupied by a brush manufactory, later known as Lambert's Warehouse. An 1862 watercolour by Victoria Colkett depicts the demolition of buildings fronting onto the Haymarket (Cotman and Hawcroft 1961, 94), an event perhaps associated with the construction of the brush factory.

An insurance map of 1908 shows the White Hart projecting back from St Peter's Street, with a stable on its west side. The lane and contracted yard to the south are marked as 'White Hart Hotel Yard', whilst the building over the southern part of the yard is described as a carriage shed. Late 19th-century photographs held by Norfolk Library Services provide a record of the northern part of the site, and specifically The White Hart. One, by Mason and Co., shows the southern side of the White Hart, a paved yard to its south and the passageway entrance leading into this yard from St Peter's Street. A second looks west into White Hart Yard from St Peter's Street. An open-fronted shed, probably the carriage shed, is visible in the yard; a second building behind this is probably the stables. A photograph from almost exactly the same position, dated 1915, shows the White Hart sign repainted with a sign above which reads 'Borrow's Haunt', a reference to the fact that the 19th-century writer George Borrow, author of *Lavengro*, had been a frequent customer.

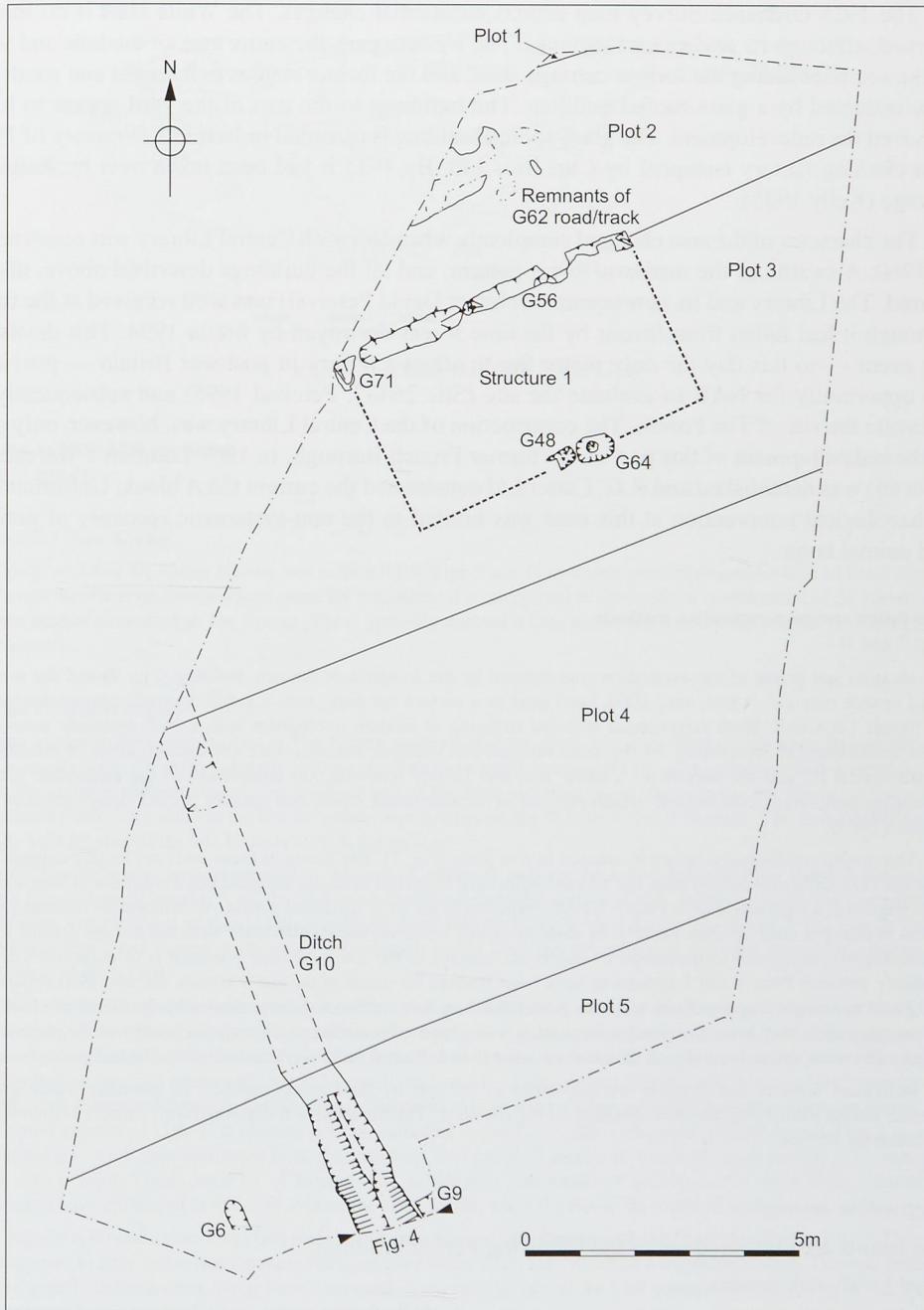


Fig. 3 The site during Period 1

The 1928 Ordnance Survey map depicts substantial changes. The White Hart is no longer marked, although its eastern part survives. The western part, the entire area of the lane and yard to the south including the former carriage shed, and the former stables to the west and south are now occupied by a glass-roofed building. The buildings to the east of the yard appear to have survived the redevelopment. The glass-roofed building is recorded in Jarrold's *Directory* of 1922 as a clothing factory occupied by Curl Bros Ltd. By 1935 it had been taken over by Reliance Garage (Kelly 1935).

The character of the area changed completely when Norwich Central Library was constructed in 1960. A swathe of the medieval street pattern, and all the buildings described above, disappeared. The Library and its new square (architect David Percival) was well received at the time, although it had fallen from favour by the time it was destroyed by fire in 1994. This devastating event — to this day the only major fire to affect a library in post-war Britain — provided the opportunity for NAU to evaluate the site (Site 26437; Percival 1995) and subsequently to excavate the site of The Forum. The construction of the Central Library was, however, only part of the redevelopment of this part of the former French Borough. In 1969 Lambert's Warehouse (Site 66) was demolished and R.G. Carter Ltd constructed the current C&A block. Unfortunately archaeological intervention at this time was limited to the non-systematic recovery of pottery and animal bone.

Excavation and post-excavation methods

(Figs 2 and 3)

The location and extent of the excavation was dictated by the footprint of the new building (Fig. 2) and the need to avoid service runs *etc.* It had, until 2000, been used as a surface car park, with a public footpath against the rear of the former C&A unit. Work commenced with the stripping of modern overburden with a 360° hydraulic excavator, under archaeological supervision. At the same time several machine trenches were cut through areas of intercutting archaeological fill and the backfill of a cellar was also largely removed. On completion of the excavation a post-excavation programme commenced, which resulted in an assessment report and updated project design (Shelley and Tremlett 2002).

The results are discussed below in relation to five plots (Fig. 3). The limits of these units are largely extrapolated from the 1885 Ordnance Survey map, but archaeological and historical evidence suggests that the pattern of long, narrow plots aligned at a right-angle to St Peter's Street originated in the early medieval period. All boundaries remained more or less unchanged until the 20th century. In absolute terms, however, these boundaries were not always defined in the archaeological record due to truncation of numerous features at the site, and their presence is often presumed. The boundary between Plots 4 and 5 appears to have been ignored for much of the site's history, the two plots apparently being held as a single property. Even when the postulated boundary appears to be represented by the extent of a building, the two properties may have continued to be used as a single plot. Nevertheless, the relative widths of the plots would suggest that when this pattern of land division was established, Plots 4 and 5 were laid out as individual plots.

Individual features and deposits are referenced in the text by their group number, an identifier which groups together unique identifying numbers allocated during site work. The site archive is deposited with Norfolk Museums and Archaeology Service.

Excavation results

The results are presented under the following Period headings.

Period 1: 10th–12th centuries

Period 1.1 (Late Saxon)

Period 1.2 (post-Conquest)

Period 2: 13th–early 15th centuries

Period 3: 15th–17th centuries

Period 4: 17th–18th centuries

Period 5: 19th century–2001

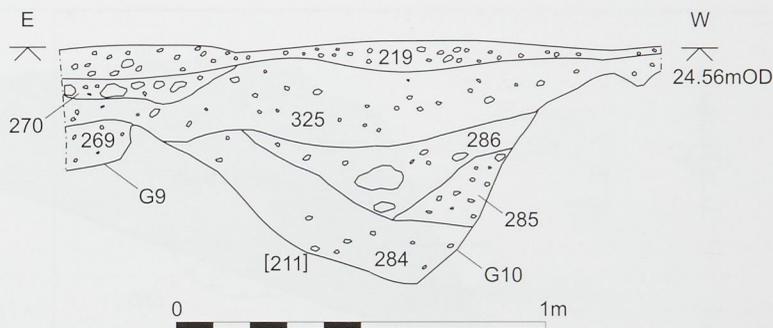


Fig. 4 Section through ditch G10

Period 1: 10th–12th centuries

(Figs 3 and 4)

Period 1.1 (Late Saxon)

The only evidence for Saxon activity was a ditch (G10, Figs 3 and 4) in almost parallel alignment with St Peter's Street. Although there was no *terminus post quem* for the feature it is interpreted as the southern continuation of the easternmost of two ditches excavated at The Forum. These probably drained a Late Saxon track (see Conclusions, p.651, for fuller discussion).

Period 1.2 (post-Conquest)

Dating evidence from excavations at The Forum suggests that the ditch was backfilled at this time. Faunal remains, macrofossils derived from low-density scatters of refuse and a small quantity of 11th–12th century pottery were recovered from the segment excavated here. The southern end of the ditch was then re-cut (the re-cut is not shown on Fig. 4) and presumably thereafter acted as the rear boundary to properties on the St Peter's Street frontage. The re-cut ditch was not finally backfilled until the late 12th century, at the earliest.

All five plots may have originated in this period, although only the boundary between Plots 2 and 3 was evident in the archaeological record. A patchy and much truncated metallated surface (G62), interpreted as a road or track and containing a single sherd of abraded Thetford-type ware, was probably formed during this period. It led from St Peter's Street into Plot 2 and thence south-westward, where it would have met 'the common way' and presumably interrupted the course of ditch G10.

A timber building of late 11th-century (and therefore probably post-Conquest) date, Structure 1, stood on Plot 3. This had been extensively truncated; only its northern side, represented by beam slots and post-holes (G56, G71), and parts of its southern side (G48, G64) survived. Nothing remained to suggest its function. Its plan and character are comparable with examples seen at a number of sites in Norwich, such as 51–55 King Street (Shelley and Brennand forthcoming) and Castle Mall (Shepherd Popescu forthcoming). The north side of the building created a boundary between Plots 2 and 3. A small amount of 11th–12th century pottery, including a sherd of c. 9th–11th century North French/Low Countries Beauvais-type ware, was recovered from the structure. Two small fragments of tile, both small enough to be intrusive, were also present. These could be of Roman date, although a post-medieval provenance is more likely. Structure 1 appears to have continued in use until at least the early 1200s, when the line of its southern wall was cut by pits.

A gully (G6) and a post-hole (G9) were found either side of and aligned with the boundary ditch in Plot 5. The post-hole appears to have fallen into disuse at the same time as the ditch and contained a fragment of daub. Ceramic evidence from the gully indicates that it may have continued in use until as late as the 14th century, but the dating of this feature was extremely tenuous with a high risk of intrusive finds.

Period 2 (13th–early 15th centuries)

(Figs 5, 6 and 7)

The gravelled road or track on Plot 2 probably continued in use throughout the 1200s. (Indeed, from the fact that it was never cut by anything other than relatively modern services, it appears to have persisted up until the 1950s, albeit being periodically resurfaced.) In Plot 3 only four features dating to Period 2 were identified. The lack of structural evidence,

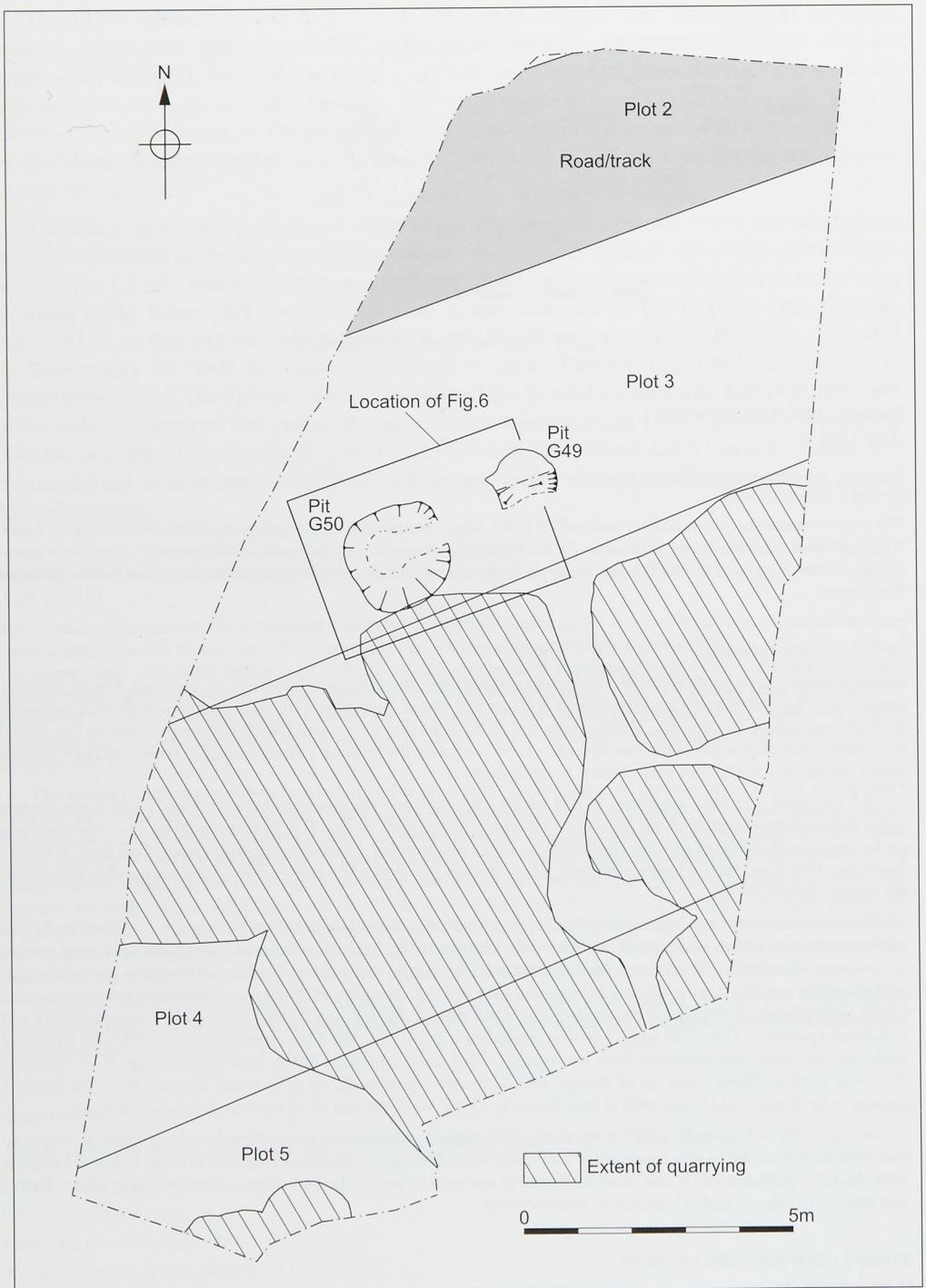


Fig. 5 The site during the early part of Period 2

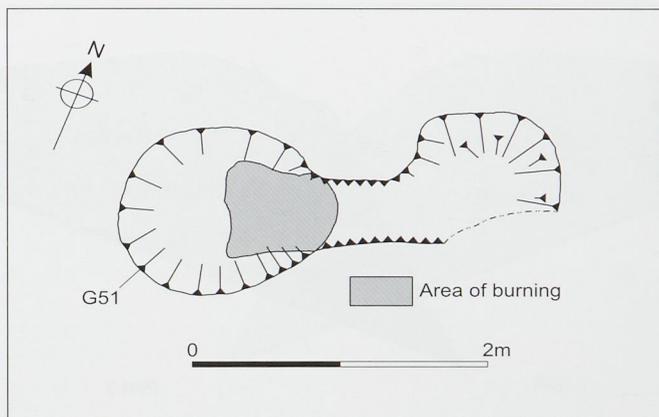


Fig. 6 Period 2 oven G51. For figure location see Fig. 5

and the type of features identified, suggests that this part of the plot acted as a yard. The earliest features were two pits located towards the southern edge of the plot. The easternmost (G49) was probably a rubbish pit and contained a substantial quantity of 12th–14th-century pottery. The fills were characterised by peat ashes, organic materials and clay. Pit G50 may have been a small quarry.

The pits were sealed by a dumb-bell shaped oven (G51, Fig. 6). This clay-lined feature was scorched at its western end, suggesting that the circular pit at this end was the stoking pit. It was connected to the eastern heating chamber by a narrow, vertical-sided flue. The base of the oven sloped up towards the east. Thin patches of ashy residue survived within the eastern chamber, macrofossils from which indicated an abundance of heathland plants (presumably used as fuel) and a low density of cereal grain. A brown clay/silt and patches of pure clay within the backfill of the feature presumably represented the collapsed or demolished superstructure. This material contained ten sherds of 13th–15th-century pottery and two very worn fragments of Flemish floor tile.

The distinctive shape of the oven was common and long-lived. Ovens of similar shape have been identified at The Forum and at Alms Lane (Atkin, M., 1985, 152 and 173), the latter being interpreted as a malting oven. In the 14th or 15th centuries the oven was superseded by a clay-filled hearth (G52, Fig. 7). Surrounding post-holes (G53) may have supported a protective screen or hood. It is presumed that the oven and hearth were remote features which served a building on the St Peter's Street frontage.

13th-century quarrying (Fig. 5)

A sherd of Grimston ware pottery from its latest fill suggests that the Period 1 boundary ditch was backfilled during the later 12th or early 13th centuries. The southern half of the site was thereafter quarried intensively (Fig. 5). The northern extent of this activity reflects the postulated boundary between Plots 3 and 4. No division between Plots 4 and 5 was apparent during this period. The boundary defined by the earlier ditch was also ignored by this phase of activity.

Thirteen quarry pits were identified in plan and several more identified in section. The majority of these had an irregular shape, and they were often large and extremely deep (the base of the features was frequently only identified by auguring). The largest pit (G11) was perhaps as much as 9.8m long, had a maximum width of 6.5m and survived to a depth of at least 2.3m. Only a minority were left open for any time; one of those that had been, G15, was used to dispose of organic waste, the intermittent nature of this disposal being indicated by interleaved natural and organic fills. Pottery was recovered from the majority of the pits, none post-dating the 14th century. Much of the pottery was locally-made unglazed ware or Grimston ware, but products from (or copies of products from) Ely, Lincolnshire, London and the Low Countries were present.

Quarry pits were an ubiquitous feature of the medieval and post-medieval landscape of Norwich, especially in this area. As excavations to the south of Norwich Castle have shown (Shepherd Popescu forthcoming), such quarrying rarely created an especially large pit and the largest pit described here (G11) perhaps reflects an unusual building project. The piecemeal nature of the process is demonstrated by the fact that quarry pits are frequently observed to have cut the fills of earlier features.

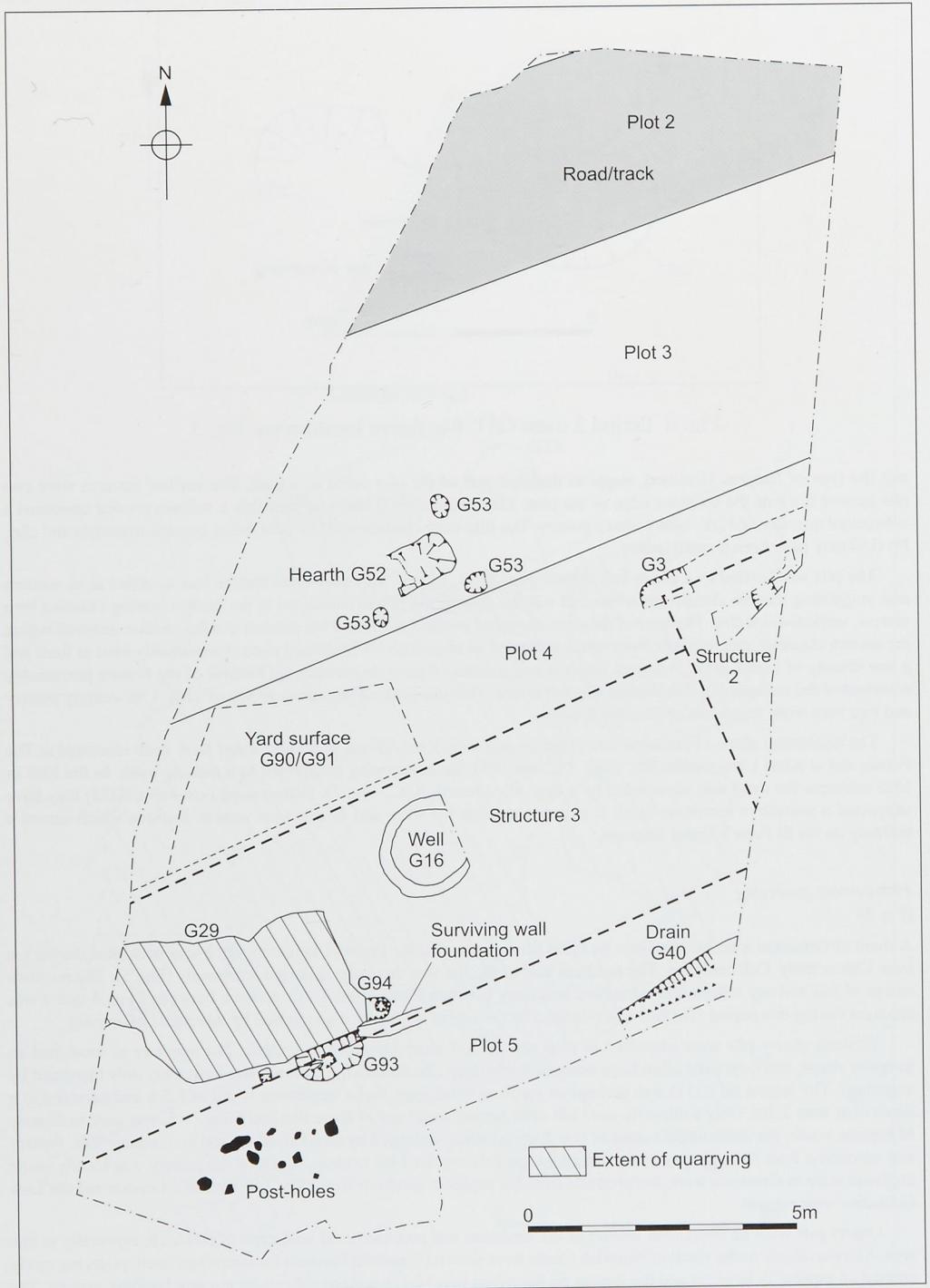


Fig. 7 The site during the later part of Period 2

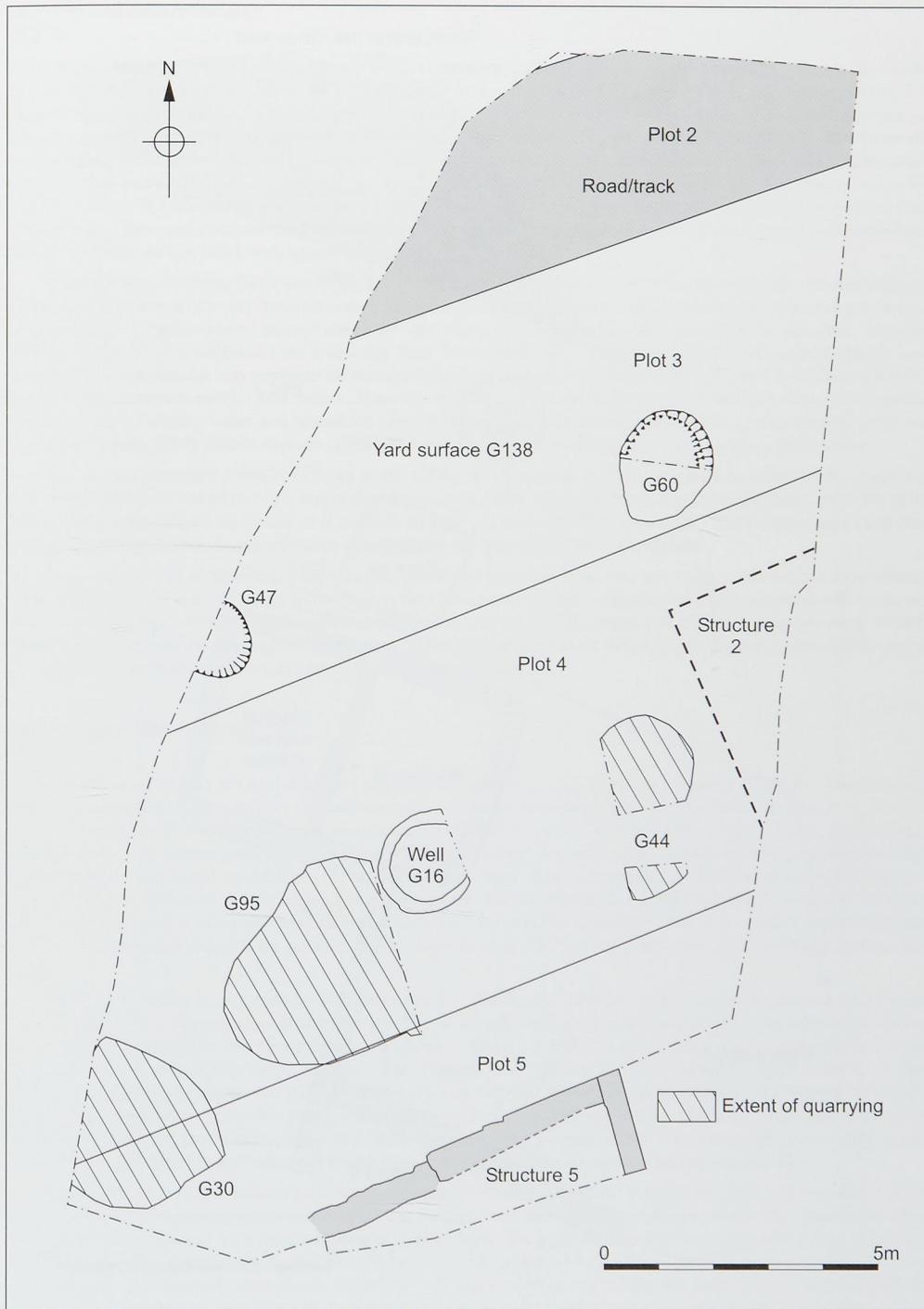


Fig. 8 The site during the later 16th century (Period 3)

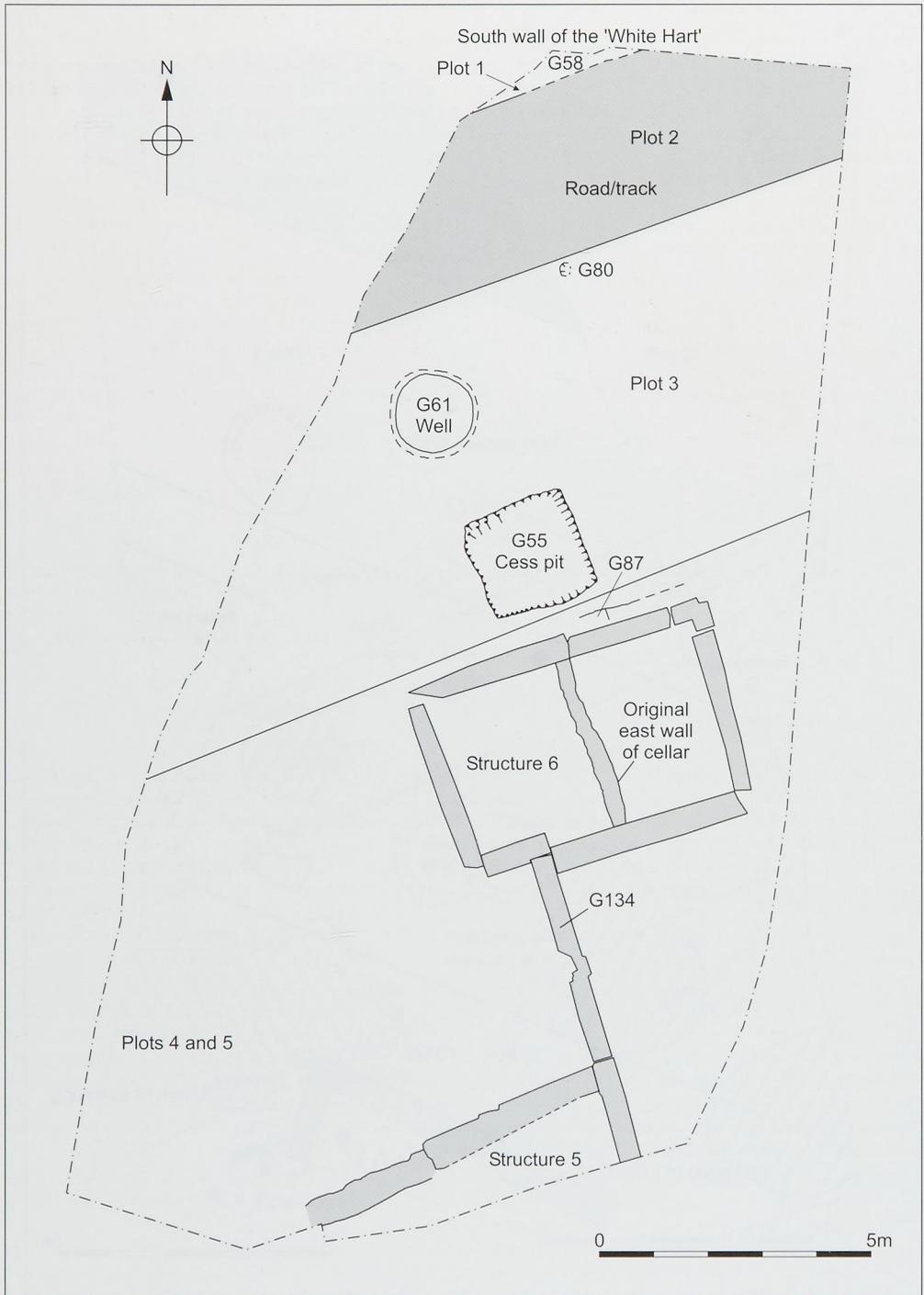


Fig. 9 The site during Period 4

Late 13th–14th-century buildings

(Fig. 7)

After large-scale quarrying ceased in the early 1300s a gravelled surface was laid over the backfilled quarry at the eastern end of Plot 4. This was subsequently cut by the footings of a substantial building (Structure 2, G3). These consisted of banded layers of clay, mortar, loam, gravel and flints in a deep cut (the method was common in medieval Norwich, as elsewhere, and was designed to carry stone-built walls). Internally Structure 2 was floored with chalk; a clay-filled beam slot and an adjacent flint-and-mortar wall presumably acted as successive internal north-to-south partitions. Occupation debris over the floor and the beam-slot contained two sherds of decorated 13th–14th-century Grimston-type pottery. A brown-glazed relief tile of 14th-century date was recovered from demolition debris associated with the building. It is unfortunate that so little of Structure 2 had survived the construction of the C&A building since the evidence suggests a relatively high-status stone-built service block with screens passage.

A second, larger building (Structure 3) projected from the rear of Structure 2, and although it may have been constructed at the same time it was of a very different nature. Where seen, this was built on shallow, masonry foundations, presumably with a timber or timber-framed superstructure (*cf.* late 13th–early 14th-century Building 15 at Dragon Hall, Norwich, Shelley 2005). It had a compacted chalk and clay floor from which twelve fragments of 13th–14th-century pottery were recovered. Two stakeholes may represent the remains of an internal partition; a little to the east a masonry-lined well (G16) was possibly a contemporary internal feature. There was no evidence to indicate the use of the building, although its location to the rear of the slightly wider and stone-built street-fronting block (Structure 2) is suggestive of the typical urban hall house plan (Smith 2005). Gravel deposits (G90, G91) to the north of the building may have formed a yard surface.

The floor of Structure 3 was resurfaced in the 1300s, at which time at least one post was added to the south wall (G93) and the former staked partition was replaced (post-hole G94). The excavation of a quarry pit (G29), probably in the 14th century, may indicate the disuse of at least the western end of the building at this time. The building appears to have remained standing, however, and was subsequently re-floored, probably in the 15th century.

The southern wall of Structure 3 respected the postulated boundary between Plots 4 and 5, but it is not clear whether these continued to form a single plot, as they had in the 13th century. Features identified on Plot 5 suggest that this area was used as a yard. Two consecutive and much truncated sandy clay and chalk surfaces (not figured) were apparent, whilst a cluster of post- and stakeholes suggests that the area had once supported minor structures. To the east, a drain (G40) aligned at a right-angle to St Peter's Street extended some way into the plot.

Period 3 (15th–17th centuries)

(Fig. 8)

Plot 2 continued to be used as a road and Plot 3 as a yard, the latter now surfaced with a compact chalky clay surface (G138). The yard was occupied by a number of small slots and post-holes (not illustrated); two pits were situated on its southern edge. A deep, near-circular pit (G47) may have been used for the disposal of cess and other domestic waste; it contained a sherd of 15th–16th-century pottery amongst an assemblage of earlier material. A 16th-century rubbish pit (G60) contained large artefactual and faunal assemblages, including part of a copper alloy skimmer (SF19), Late Medieval and Transitional ware and Raeren stoneware pottery, also a sherd from a small globular money box in Surrey/Hampshire Border ware. It is likely that this object is of a post-medieval type which had a moulded knob (Pearce 1992, 37). A small Cologne/Frechen decorated drinking jug dating to the period 1500–1550 (Hurst et al. 1986, 208–9) and a lava millstone fragment were also present.

Plot 4 continued to be occupied by Structures 2 and 3. The former appears to have remained unaltered until the late 16th or early 17th centuries, when it was destroyed by a fire and subsequently demolished (G4), its walls being robbed out. Structure 3 had fallen into disuse by the 16th century when a number of quarry pits were excavated within it (*eg.* G95) and, in one case (G30), across the line of its southern wall. Quarry pit G44 contained a large quantity of daub and some fire-damaged mortar and plaster, perhaps derived from the demolition of Structure 2. The internal well (G16) was probably backfilled during this period. Finds recovered from its upper fills include sherds of 15th–16th-century Late Medieval Transitional ware and fragments of Raeren stoneware pottery vessels of late 15th–early 16th-century date, an iron key (SF42), seven fragments of ceramic Flemish floor tile and two pieces of possible Roman ceramic tile.

During the 16th century Structure 3 was at least partially rebuilt as Structure 4 (not illustrated), in the course of which the north wall of the earlier structure was re-used. The southern wall was rebuilt on a shallow, chalk-filled foundation which was subsequently replaced by a mortar footing of similar depth. The building was surfaced with pebbly clay. Structure 4 appears to have fallen into disuse by the late 16th or early 17th century. A large quarry pit (G33, not illus.) was excavated at its western end, and was subsequently backfilled with organic waste and rubble, the latter perhaps derived from the demolition of the building. Together with local pottery this pit contained a fragment of an undecorated Low Countries bowl of late 16th–17th-century date (Jennings 1981, 90), a small sherd of a 16th-century bartmann bottle or jug and fragments of Raeren stoneware. A build-up of soil developed after the demolition of Structure 4. Pottery indicates that it accumulated between 1550 and 1700.

A building (Structure 5) was also erected on Plot 5, possibly during the 16th century. Like Structures 3 and 4, this was probably a timber or timber-framed building constructed on shallow masonry footings. A chalk surface (not figured) may have represented a yard on its northern side. The relatively insubstantial nature of the structure suggests that it acted as an ancillary building such as a store. It is not known whether the Period 3 features on Plot 5 were associated with the range of buildings on Plot 4 but the fact that the G30 quarry pit straddled the boundary suggests these properties were in common ownership during this period.

Period 4 (17th–18th centuries)

(Plate 2; Fig. 9)

A flint and mortar wall (G58) on the southern boundary of Plot 1, which survived to a height of 0.6m, can be identified as a footing to the south wall of The White Hart. Plot 2 continued to be occupied by a road.

The use of Plot 3 as a yard also continued, and by this date it may already have been in the ownership of The White Hart. Three features in the yard are datable to this period: a post-hole beside the northern boundary (G80), a well (G61) and a probable cess pit (G55). The well was circular and lined with flint and brick. It was backfilled in the 18th century when it was also capped with bricks. The cess pit was located against the southern boundary. This contained a range of ceramics, including white Tin-glazed earthenware and a sherd from a Westerwald tankard which usually date to the second half of the 1600s.

There appears to have been no division between Plots 4 and 5 during this period. A 17th-century or later flint and brick wall (G134), aligned parallel to St Peter's Street, had been bonded to the north-eastern corner of Structure 5, which remained standing throughout this period. This wall possibly formed part of Structure 6 (see below), or instead acted as a partition between yards. It is notable that a possible rebuild was located directly above the postulated boundary between Plots 4 and 5.

Structure 6 and its cellar

Sometime after the demolition of the earlier structures, a new building (Structure 6) was constructed on Plot 4. Only its cellar survived. The precise construction date is not known but its fabric appeared to be 17th-century (Stephen Heywood and Robert Smith *pers. comm.*) and ceramic finds give a date range of *c.* 1550-1700. The original cellar was rectangular, and was formed from a large quantity of re-used late medieval limestone blocks and architectural fragments within a brick, flint and mortar build (Plate 2). The number of re-used decorative building materials suggested that the stone was taken from a single building, probably ecclesiastical (Stephen Heywood *pers. comm.*). The origin of this stone may have been the college of St Mary in the Fields, which was progressively demolished following the Dissolution or, rather, the



Plate 2 East-facing elevation of the Structure 6 cellar

large heap of stone in front of the remaining collegiate buildings which is shown on Cuninghame's map of 1558. The cellar was extended to the east in two subsequent phases of construction. Niches or windows were added to the southern wall which were subsequently infilled. Remains of a superstructure were largely confined to small patches of masonry in the vicinity of the cellar (G87).

The cellar had been backfilled by the early 18th century when Structure 6 was presumably demolished. The nature of this fill is of some interest. The earliest materials (G117, G118) contained 363 sherds of pottery, with 17th- to early 18th-century ceramics being present, together with fragments of earlier vessels which were presumably residual. A wide range of fabrics were represented, but Glazed red earthenwares made up a large proportion of the assemblage. A wide variety of domestic wares, which were primarily utilitarian in their function, were recovered, although an unusual Speckle-glazed ware vessel, apparently some kind of bowl or cup with a horizontal handle, was also present. This Glazed Red earthenware variant dates to the late 17th or early 18th centuries (Jennings 1981, 155). Other non-local wares included a Yellow-glazed Border ware porringer or small bowl, a product of the post-medieval Surrey whiteware industries (Pearce 1992, 15-17). Several vessels produced in Staffordshire were also present, including two manganese-glazed tankards of late 17th- to early 18th-century date.

Other finds from the initial backfill of the cellar include a large quantity of clay tobacco pipes, together with kiln debris from their manufacture, two padlocks (SF57 and SF62), a variety of vessel glass fragments, a millstone fragment (SF23), four William III halfpennies dating to 1695-8 (SF6-SF9), an ivory comb (SF1), a bone handle (SF2), eighty-three cast copper alloy studs (SF4), a slate pencil (SF21) and a writing lead (SF22). The faunal remains were also of interest. A wide range of species, including fallow deer, dog, cattle, sheep/goat, pig, plover, goose, duck and puffin, were identified. Many bones, including those of the dogs, showed evidence of skinning. The range of species present, and the commercial activity indicated, perhaps points to the manufacture of items using pelts and horn.

This period was still dominated by early bricks and roof tiles, but in smaller quantities than previously. It also saw the introduction of pantiles, wall tiles, floor bricks and grog-tempered unglazed floor tiles. Several early bricks (EB1, EB4 and EB7 types) were collected from Structure 6, either indicating that the wall was built on earlier foundations or that these bricks were being re-used in the post-medieval period.

Period 5 (19th century-2001)

The road in Plot 2 remained in use until the 1950s. As in preceding periods, Plot 3 was used as a yard. A halfpenny of George III dating to 1806 or 1807 was retrieved from the backfill of an oval-profiled brick drain or culvert under this yard, which was sealed by a gravel yard surface. The boundary between Plots 3 and 4 was marked by a line of posts and a brick pillar, probably parts of the carriage shed shown on the 1908 insurance map. Again no boundary between Plots 4 and 5 was evident, and both seem to have formed a yard indistinguishable from that on Plot 3. The southern part of the site appears to have been levelled prior to this surface being laid; Structure 5, which is not visible on the 1885 Ordnance Survey map, may have been demolished at this time. Clearance of the area in the late 1950s resulted in a uniform layer of demolition debris sealing the yard surfaces, which was in turn sealed by layers of asphalt.

Finds

Metal, bone, ivory and slate objects

by Julia Huddle

(Fig. 10)

Sixty-six objects were recovered. The copper alloy objects include personal items, such as the strap-fastener, and household items, including a socket for a skimmer handle and 87 cast studs. The ironwork includes structural fittings from demolished buildings, lock furniture and buckles. A bone whittle-tang handle, an ivory comb, a writing lead and a probable slate pencil were also recovered. A discussion of select categories of object is given below. The categories used follow those in Margeson (1993). A detailed catalogue of the material is available in the archive.

Dress and personal possessions

Belt fittings

Simple rectangular-framed iron buckles with a pin secured to one side of the frame, such as the five recovered here, are well known from post-medieval deposits and some, such as SF47 (G117, Period 4), also had sheet rollers which helped

the passage of the belt. A strap-fastener (SF20, G33) was recovered from a Period 3 quarry pit. These are similar in form and function to buckles although they lack a pin and have a plate which, when closed, holds the belt or strap in position. A similar item to SF20 was recovered from a 15th–mid-16th century context at Pottergate, Norwich (Margeson 1993, 38, fig. 21, no. 253).

Pins

Fifteen drawn wire copper alloy pins were found. Those with spiral wound heads, such as SF3 (G4, Period 3), are known from medieval contexts elsewhere (Margeson 1993, 11–13). The remaining pins are from Period 4 and 5 deposits.

Combs

Double-sided ivory combs with fine teeth on one side and coarse on the other are characteristic of the 16th and 17th centuries. One was recovered (SF1, G117, Period 4).

Writing equipment

Writing leads of a similar size and shape to SF22 (G117, Period 4) have a wide date range (Biddle and Brown 1990, 744, fig. 212, nos 2296–300). A small piece of slate (SF21, G117, Period 4) appears to have been deliberately shaped to form a rounded pointed implement and is probably part of a slate pencil.

Furnishings and household equipment

Implements

Skimmers used to remove items from stew pots are known from late medieval and post-medieval contexts and a socket for a skimmer handle (SF19, G60) was recovered from a refuse pit of 16th-century date. It is, apart from the rivets, almost identical to one shown in Egan (1998, 157, fig. 126, no. 90.45), which is thought to date to the early post-medieval period (based on the rivets made from rolled sheeting). A bone whittle-tang handle (SF2, G117) from the Structure 6 cellar was probably part of a knife. It is rather crudely made and the diagonal lines on the surface are probably file-marks.

Buildings

Structural ironwork

Two hinges hung on a separate pivot were found (SF28, G118, Period 4), one of which is a T-shaped hinge (SF58, G117, Period 4) with a tripartite, pinned junction.

Sub-oval loops such as SF29 (G118, Period 4), have been identified as hasps used for securing doors, gates and chest lids in Thetford, Norfolk (Goodall 1984, 89, fig. 131, nos 162–7) although the figure-of-eight shape is more common.

Lock furniture

A dished circular object with a centrally placed circular aperture and round-ended arm (SF62, G117, Period 4, Fig. 10)

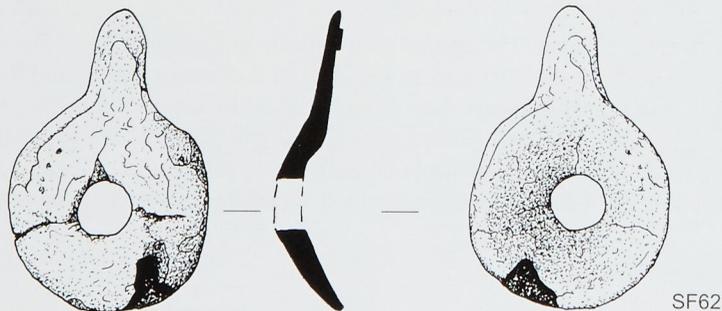


Fig. 10 Possible padlock end plate (SF62). Scale 1:2

is very similar to the end plates shown on cylindrical padlock cases worked by sliding keys from medieval deposits in London (Egan 1998, 95, fig. 69, no. 248). Less complete examples are illustrated in Margeson (1993, 155, fig. 115, nos 1230–1).

Padlocks with hinged shackles and mechanisms mounted within the case were developed in the late-medieval period. These are box-shaped, and one of the earliest known examples is from a 1507 fire deposit at Pottergate, Norwich (Margeson 1993, 157, fig. 115, no. 1240). By the 17th and 18th centuries other shapes had come into fashion (Goodall 1990, 1003), including globular, triangular, half-heart and bagged-shapes as in the example here (SF57, G117, Period 4).

A key with a kidney-shaped bow (SF42, G16, Period 3) was recovered from a 15th- to 17th-century well. This type was introduced at the end of the medieval period although it became more common subsequently (Margeson 1993, 159).

Numismatic items

by Adrian Popescu

Five coins, comprising four William III halfpennies (1695–8) and a George III halfpenny (1806–7), were recovered and are catalogued in an archive report. This small assemblage is not unusual for a site in Norwich.

Clay tobacco pipes and kiln debris

by John Ames

The presence of kiln debris, the makers' initials and the high proportion of unsmoked pipes suggest the origin of manufacture for the clay pipe assemblage is likely to have been Norwich. It is known that during the 17th century most clay pipe makers in Norwich were located on the edges of market areas (Atkin, S., 1985, 122). It seems likely, therefore, that the waste came from a nearby pipemaking site. To date, however, no kilns have been archaeologically recorded in Norwich.

Clay tobacco pipes

The assemblage consists of 1252 fragments (9.236kg) of bowls, stems and mouthpieces from thirteen deposits. The datable bowls were made in the period *c.* 1680–1720. The pipes from two deposits, both lower fills of the Structure 6 cellar, are of particular interest.

Deposit 134 (G118, Period 4)

A total of 153 upright bowls with a variation of heel types. The clay matrix is very fine with no inclusions. Five of the bowls are blackened, showing signs of being smoked. Two upright bowls are marked with the maker's initials incorporated into the heels. One bears the initials [IM], usually assigned to Jane Morgan *c.* 1693, a local maker (Oswald 1975). The other is marked with the initials [RS] uncrowned; Richard Skipper (a local maker apprenticed in 1699) is usually suggested as the maker (Oswald 1975).

Deposit 135 (G117, Period 4)

Sixty-eight upright bowls, 194 stem fragments and seventeen heel fragments were recovered. Sixty-four upright bowls with a variation of heel types are present. The clay matrix is very fine with no inclusions. Five of the bowls are blackened, showing signs of being smoked. Four marked upright bowls with the makers' initials incorporated into the heels were identified. One is marked with the initials [?SN]; no maker with these possible initials has been recorded previously in Norfolk. Two others bear the initials [IM], again possibly Jane Morgan. The fourth displays the initials [RS].

Kiln debris

A total of 194 fragments of redeposited kiln wall and base lining or muffle (Peacey 1996) was recovered from deposits 134 and 135. The material consists of clay tobacco pipe stem fragments embedded in a parallel arrangement in chunks of clay. Only the stems and mouthpieces survive and, as no bowls remain *in situ*, it is not possible to determine a date more specific than the late 17th–early 18th centuries.

Similar muffle material was recovered from excavations at Norwich Castle (Site 777, Atkin forthcoming) and at 63–65 The Close, Norwich (Site 26581, Ames 2001). It was not uncommon for muffle material to be re-used as a bedding material for floors.

Lavastone objects

by Richenda Goffin

Five fragments of lavastone were recovered, all of which have been clearly worked and made into fully-dressed grinding stones. They form a small but interesting group since some of the dressed grinding surfaces are well preserved and they are comparatively well-dated. A full catalogue is included in the archive.

The lavastone is almost certainly of Rhenish origin, and imported from the Mayen-Neidermendig area of Germany (Hörter *et al* 1951). All the fragments were recovered from post-medieval deposits, apart from SF24 (G12, Period 2) which was found in a medieval quarry pit and was so fragmentary that it had lost most of its original features. No part of the external diameter of any of the fragments survived, so it was not possible to indicate the size of the complete stones. The internal diameter of SF23 (G117, Period 4), however, is large enough to suggest that it was part of a millstone.

Vessel glass

by Richenda Goffin

A small quantity of post-medieval bottle and vessel glass was recovered, a catalogue of which is included in the archive. The vast majority of the vessel glass was recovered from the lower fills of the Structure 6 cellar (G117) and can be dated to between 1650 and 1700. Additionally, the lower part of a mid-late 18th-century dark olive green cylindrical wine bottle was recovered from the fill of Period 4 cesspit G55.

Lithics

by Sarah Bates

The seven pieces of struck flint recovered were all unmodified flakes. None had been utilised or retouched. A few pieces were clearly struck by hard hammer suggesting a later Neolithic to Iron Age date. The flint is almost certainly residual. Its presence reinforces the recent evidence for prehistoric activity found elsewhere in the vicinity (Bates in prep.).

Pottery

by Richenda Goffin

A total of 1,086 sherds (14.177kg) of mainly medieval and post-medieval pottery was recovered, with several large groups dating to the later part of the post-medieval period. Details of the methods employed in their analysis are available in the archive.

Pottery by site period

A breakdown of the percentages of pottery by weight by each chronological period is given in Fig. 11.

Period 1 (10th–12th centuries)

Thirteen fragments (0.087kg) of pottery were recovered. All but one are body sherds, several of them abraded or laminated. The small quantity of pottery is associated mainly with structural features.

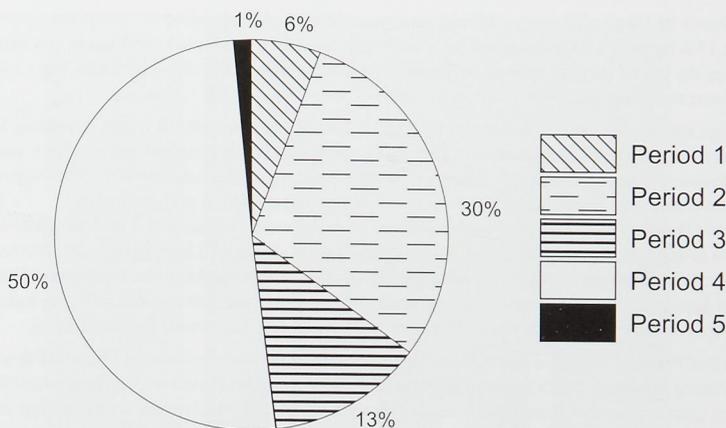


Fig. 11 Breakdown of pottery by weight and period

The striking feature here is the small quantity of Late Saxon wares. This follows a pattern seen at The Forum, and perhaps emphasises that this part of the city was not intensively settled until the French Borough was established. Only one abraded sherd of Thetford-type ware (usually the dominant fabric during the 10th and 11th centuries in Norwich) came from a Period 1 deposit, the G62 road surface, and only eight fragments were recovered in total (making up less than 1% by weight of the total assemblage). This compares with *c.* 1.3% of the overall assemblage by weight at The Forum (Goffin in prep.). By contrast, at Dragon Hall, King Street, the Late Saxon pottery from deposits dating to the mid-9th–11th centuries made up 6.3% by weight of the total site assemblage (Anderson 2005a). At Greyfriars, Late Saxon wares made up 19.6% of the overall assemblage, a large quantity of these being residual (Lentowicz in prep.).

In addition to Thetford-type ware, the pottery attributed to Period 1 consists of Early Medieval ware (EMW) and Local Medieval Unglazed ware (LMU), with one fragment of Early Medieval Sandwich ware, and a fragment of Glazed Grimston ware. The only import is a small fragment of a grey hard-fired ware of Northern French/Low Countries Beauvais type which dates broadly to the 9th–11th centuries (Jennings 1981, 32).

Period 2 (13th–early 15th centuries)

Four hundred and sixty sherds (4.42kg) were recovered, of which 65% (by weight) was recovered from extraction pits or from pits which served other functions. In many cases the pottery itself is made up of small groups of small to medium-sized sherds, some of which are abraded. The lack of pits containing large sherds belonging to one particular vessel, or partially complete vessels, suggests that much of the material deposited into the fills had been dispersed elsewhere before final burial. Additional pottery appears to have been deposited as part of the process of levelling up hollows and consolidating the ground surface. There are exceptions, however, such as refuse pit G49 which contained several large sherds of a possible glazed Grimston jug and LMU.

The chief characteristic of this assemblage is the predominance of the fine to medium sandy wheel-thrown greyware known as Local Medieval Unglazed ware (LMU). This fabric is found in large quantities on excavations in Norwich, but is often 'masked' by the number of Thetford-type wares which are found with it. This excavation and that at The Forum provide an opportunity to view the assemblage without this element of 'background noise' or distortion. The prevalence of LMU from the site is striking, despite the fact that it forms the main local coarseware on other sites of this date in central Norwich.

LMU makes up 70.7% by sherd count and 60% by weight of the Period 2 assemblage. Period 2 is roughly equivalent to Periods 4 and 5 at Dragon Hall (Shelley 2005), where LMU made up 41.5% of the assemblage. At Greyfriars, LMU made up 11.3% of the entire assemblage (Lentowicz forthcoming a). The vessels represented here are mainly cooking vessels and jars with the full range of rims, both the simple everted types characteristic of the 11th–13th centuries and the more developed rims of 13th–14th century date. No specialised forms such as lamps or curfews are present. Decorated LMU is rare and seems to have been restricted to thumbing around the inside of rims, and the occasional use of stabbing on the outside of the neck or rim.

The remainder of the coarsewares consists of fragments of Grimston unglazed ware, and small quantities of shelly unglazed ware identified as Ely-type ware. In addition, some EMW and Yarmouth-type wares were present, in small quantities.

Fifty-two sherds (0.72kg) of Grimston glazed ware were identified, making up 11.3% of the period assemblage by sherd count and 17% by weight. Apart from those jugs which have an overall plain lead glaze, the most common form of decoration was the use of vertical applied strips with a covering iron oxide slip. There was one example of a highly decorated Grimston ware face jug.

The local/regional wares were supplemented by a small quantity of other glazed wares, including Yarmouth Glazed wares (previously East Norfolk Glazed ware). This sandy and sometimes oxidised ware, which usually has a poor covering of yellowish glaze, is consistently present in Norwich assemblages. Additionally a Developed Stamford ware vessel from Lincolnshire, an unprovenanced redware with horizontal combing, perhaps a product of a Lincolnshire kiln site (McCarthy and Brooks 1988, 410), and a London-type ware jug were also present. Two fragments of glazed redware are likely to have originated in the Waveney Valley area; two further sherds of a fine, slightly micaceous redware remain unidentified. The medieval imported wares are restricted to small quantities of Andenne-type wares, Dutch redwares and a sherd of North French glazed whiteware. No fragments of Pingsdorf type ware or Paffrath greyware were identified, although generally present in small quantities elsewhere in Norwich (eg. Lentowicz forthcoming b).

The quantity of Period 2 imported wares is not large, in spite of the site's position within the French Borough, only 1.6% by weight being imported. The number of imports identified from The Forum is also comparatively low during this period, and is no greater than that from other sites in Norwich which historically had fewer foreign influences (Goffin in prep.).

Period 3 (15th–17th centuries)

A total of 118 pottery sherds (1.88kg) were recovered, of which 93% (by weight) was recovered from pits and a small element of the assemblage provided dating evidence for the late phases of particular structures.

Much of this assemblage dates to the 15th to 16th centuries, and this has affected the statistical analysis of the fabrics and attempts at comparison with other sites. The assemblage is dominated by the presence of Late Medieval and Transitional wares (LMT), which make up 35% by weight of the total period collection. This local industry supplied many of the utilitarian wares such as bowls, panchions, jars and pipkins, and some of the jugs, although many of the drinking jugs and larger jugs were imported from the Rhineland. The combination of LMT and Rhenish stoneware is a typical feature of Norwich assemblages of this period (eg. Alms Lane: Atkin, M., 1985, 188–90).

One specialised form — a moneybox in a green-glazed Border ware fabric from Surrey/Hampshire — is present. Similar vessels were made in local LMT, an example of which was recovered from excavations at Golden Ball Street, Norwich (Goffin forthcoming).

The overall quantity of imported wares rises dramatically during Period 3 to 73.5% by weight, the majority consisting of Rhenish stonewares (54% by weight) with small quantities of Dutch redwares and a single large fragment of a Low Countries slipware bowl. Rhineland stonewares often form the largest individual category of continental imports in British archaeological post-medieval assemblages and this site is no exception. The increase in stoneware imports reflects the growth in trade with the Rhineland stimulated by the signing of the Treaty of Utrecht in 1474 (Gaimster 1997, 80).

A particularly well-preserved Cologne/Frechen drinking jug with rose decoration and a fragment of a Raeren jug were present in refuse pit G60. Significantly, no Siegburg or Langerwehe stoneware of 14th–15th century date was present in deposits of this period, although 16th-century Cologne/Frechen and Raeren wares were common. This may be in part due to a lack of 14th–15th century activity.

Very little of the Period 3 pottery is clearly residual, apart from some of the LMU and Grimston wares. However, the LMU industry was long-lived, and some of the pottery here may well have been used into the 15th century. At 31–51 Pottergate, for example, LMU cooking vessels and jugs were found in an early 15th-century pit group (Evans 1985, 38). Small quantities of Glazed Red Earthenwares and a fragment of an Iron-Glazed Blackware vessel were also present in the Period 3 assemblage.

At Dragon Hall (equivalent Periods 6/7), LMT made up 19.6% of the assemblage by weight (Anderson 2005a). Langerwehe, Raeren and Frechen stonewares formed only 5.4% by weight of the assemblages from these two periods, the figure being lower mainly because of the presence of a much larger group of 17th-century material. Although the quantity of stonewares may be proportionally lower, however, a much greater range of imports was again present at Dragon Hall. From Greyfriars the percentage of LMT from the early 16th to the mid-18th centuries was 21.7% by weight, with stonewares comprising Langerwehe and Raeren making up 11.5% by weight (Lentowicz forthcoming a). At Castle Mall, 31.45% by weight of the mid 14th–late 16th century assemblage comprised LMT, with a further 8.2% made up of German stonewares (Lentowicz forthcoming b).

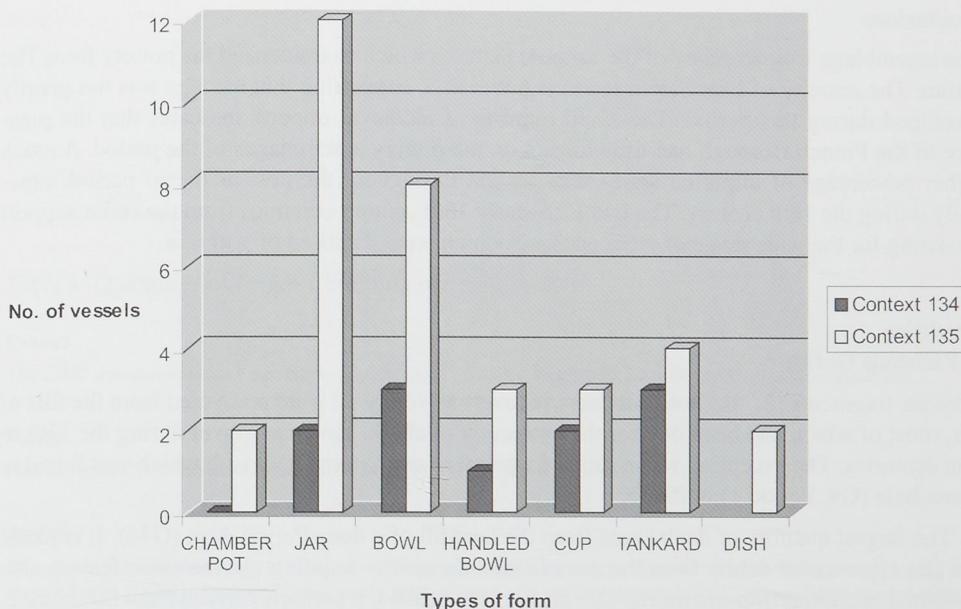


Fig. 12 Breakdown of main forms of pottery in the Structure 6 cellar

Period 4 (17th–18th centuries)

A total of 459 fragments (7.59kg) of pottery was recovered, nearly all associated with different phases of the cellar of Structure 6. In addition to a small quantity of medieval wares, it is likely that some of the Glazed Red Earthenwares may also be residual 16th-century wares. However, the lack of LMT, and the small quantities of 16th-century German stoneware suggest that very little pottery is of this date-range. The group consists mainly of pottery dating to the 17th century, with some fabrics which are clearly of late 17th- or early 18th-century date. These comprise late tin-glazed wares, Chinese porcelain, Staffordshire manganese-glazed tankards and Staffordshire-type brown salt-glazed tankards, which in Norwich date to the first two decades of the 18th century (Jennings 1981, 219). Significantly, there was no evidence of any Staffordshire white salt-glazed stoneware, which began to be produced c. 1720.

A yellow-glazed Border ware porringer also appears to be of a late type: in London these are found in late 17th- and 18th-century contexts (Pearce 1992, 16). The range of vessels present in the cellar deposits is wide and includes basic kitchenwares, tablewares and drinking vessels, fineware teabowls and sanitary wares. Although several Staffordshire tankards were present, there were too few to indicate anything other than a domestic context, and certainly too few to suggest that they originated from a tavern clearance, as discussed and defined by Pearce (2000, 144–86). Fig. 12 summarises the different form types present in the cellar, although the number of chamberpots is likely to be underestimated due to difficulty in distinguishing them from jars.

The cellar deposits are comparable to a similarly dated feature from The Forum. There a larger assemblage of pottery was recovered from a brick-lined cesspit associated with a possible tavern (Goffin in prep.). This contained many of the fabrics present in the cellar assemblage. A second comparable assemblage of mid–late 18th-century date was found at Dragon Hall (Anderson 2005a) where pottery within the demolished remnants of Structure 25 included glazed red earthenwares, Staffordshire slipwares and manganese-glazed wares, tin-glazed wares, English stonewares and a late slipped redware bowl.

Period 5 (19th century to 2001)

Thirty-six fragments (0.2kg) of pottery were recovered from five different groups, but the majority of the sherds came from G18, the upper fills of the robber cut for a well. The small quantity of pottery displayed a comparatively high degree of residuality (66% by weight of the assemblage). Otherwise the pottery consisted of 19th-century transfer printed ware, pearlware, creamware and mocha-type ware, with small quantities of English stoneware.

Conclusions

This assemblage follows many of the ceramic patterns which characterised the pottery from The Forum. The scarcity of Late Saxon wares is noticeable, suggesting that the area was not greatly developed during this period. The small number of medieval imports indicates that the presence of the French Borough had little impact on the pottery assemblages of the period. A much higher percentage of imported wares was present throughout the post-medieval period, especially during the 16th century. The late 17th–early 18th century ceramics from the cellar support the dating for the wide range of other artefacts which were disposed of within it.

Fired clay

by Richenda Goffin

Fifty-six fragments (2.74kg) of daub were recovered. Nearly all were recovered from the fills of pits, most of which had been dug for the extraction of chalk, sand and gravel during the 13th to 16th centuries. The exception was a single fragment of chalk-tempered daub which was found in a post-hole (G9, Period 1) in Plot 5.

The largest quantity of daub came from the backfill of a deep Period 4 pit (G44). It is likely that this represented debris from the demolition of a nearby building. As the same feature also contained quantities of burnt mortar and plaster (see below), it perhaps derived from Structure 2, which was destroyed by fire and subsequently demolished in the late 16th or early 17th century. The limewashed daub from this pit may have come from an internal wattled wall within the building (at least one internal beam slot was evident inside the structure). Such earthfast walls, made of a screening of wattles with more substantial timber or masonry elements, are part of a long tradition of building techniques.

Wall plaster and mortar

by Richenda Goffin

Thirty-seven fragments (2.55kg) of mortar, some with plastered surfaces, were recovered, generally from secondary deposits which could not easily be associated with particular structures. The largest quantity of daub, mortar and plaster, however, was found in pit G44 (Period 4) and this possibly derived from the demolition of Structure 2. The relationship between the roughcast or limewashed daub (discussed above) and the limewashed mortar from this deposit is unclear. The daub clearly originated from a clay and timber structure. A large unlimewashed mortar fragment with structural impressions was not made of the same fabric as the limewashed plaster from this context. Both types of building material, however, had been partially affected by fire.

Ceramic building material

by Sue Anderson

A total of 343 fragments of ceramic building material (CBM), weighing 57.986kg, were analysed. The material was quantified by fabric and form. Fabrics were identified on the basis of macroscopic appearance and main inclusions. The width, length and thickness of bricks and floor tiles were measured, but roof tile thicknesses were only measured when another dimension was available. Forms were identified from previous work in Norwich (Drury 1993), based on measurements. Other form terminology follows Brunskill (1990). The full results of the analysis are detailed in an archive report, a synthesis of which is presented here.

<i>Form</i>	<i>Number</i>	<i>Weight (kg)</i>
Brick	155	41.976
Roof tile	162	9.931
Floor tile/brick	18	4.804
Wall tile	1	0.032
Roman tile	7	1.243
Total	343	57.986

Table 1 Quantities of ceramic building material by form.

Fabrics

The CBM was divided into basic fabric groups based on major inclusions; 21 different fabrics were identified.

Forms

Five different CBM forms were recorded (Table 1).

Roof tiles

These included 135 plain (peg) tile fragments, 23 pantile fragments, and four possible pieces of ridge tile (9.931kg). The majority of roof tiles were in red-firing sandy fabrics, most of which were probably of high medieval to post-medieval date. However, some medieval tiles in calcareous/estuarine fabrics were also present. Many fragments were glazed green or brown, usually in patches on the lower half of the tile. Several thicker tiles in fine sandy fabrics had thicker and more even glazing, and these may have been fragments of ridge tiles. Only twelve plain tiles had peg holes (8 round, 4 square). No nibbed tiles were identified.

Early bricks

A total of 126 fragments (35.51kg) were identified as early bricks. The majority were in estuarine fabrics, but there were three pieces with large voids indicating organic temper. The key characteristics of early bricks have been described by Drury (1993), and the estuarine clay bricks from this site exhibited the same range of colours, forms and manufacturing techniques. Many of these bricks were overfired, partially vitrified, cracked and poorly formed. Form numbers were assigned to measurable bricks whenever possible, and the results of this are shown in Table 2. Group A bricks are broadly dated by Drury to the late 13th–14th centuries and Group B to the 14th–15th centuries. However, evidence from Dragon Hall (Anderson 2005b) indicates that the use of Group B bricks could also have started in the 13th century.

One brick, an EB4A from Structure 2, was chamfered on one stretcher, and another, from a 16th-century refuse pit (G60, Period 3), was rubbed on the stretcher, both being post-firing treatments.

Late bricks

Out of 25 fragments (6.201kg) of 'late' bricks three could be assigned a form, in each case LB5. All were in red medium or coarse sandy fabrics, except one possible LB5 which was in a white coarse grog and ferrous fabric. Four had vitrified surfaces, and several were abraded. Two pieces from a Period 4 cess pit (G55) were heavily eroded on one surface, and there were signs of sooting and burning.

<i>Form</i>	<i>Group A (sanded base)</i>		<i>Group B (strawed base)</i>	
	<i>Quantity</i>		<i>Form</i>	<i>Quantity</i>
EB1	3		EB6	2
EB3	2		EB7	5
EB4	4		EB8?	1
EB4?	1		EB9	1
EB4A	2			
Total	12			9

Table 2 Early brick quantities by form

Wall tiles

A fragment of undecorated tin-glazed earthenware wall tile was found in the infill of Structure 6's cellar (G117, 135, Period 4).

Flooring

One floor brick and seventeen fragments of floor tile were collected. The floor brick and four tile fragments were in coarse grog-tempered fabrics, some white-firing, and these were of post-medieval date. Twelve fragments in fine sandy fabrics were pieces of Flemish floor tiles with green or yellow glaze, the latter over white slip, of 14th- or 15th-century date. A brown-glazed relief tile of 14th-century date was also identified, in debris from the demolition of Structure 2 (G4, Period 3). Although the design was uncertain since most of the surface was covered in mortar, traces of a low-relief curvilinear border remained visible.

Roman tile

Four certain and three possible fragments of Roman tile were collected, although none was identifiable to form. One fragment (G34, Period 5) was sooted on the base, suggesting re-use in a hearth, and two uncertain fragments were burnt (G112, Period 4; G16, Period 2). Three fragments from one tile were covered in white mortar which had been applied over pink Roman mortar (G33, Period 3).

Three very small fragments of red sandy ?tile and a piece of sandy ?brick were not identifiable. Two were in Period 1 contexts and could be Roman tile.

Conclusions

The composition of this small assemblage is very similar to larger groups of CBM from Norwich. Excavations at Dragon Hall, for example, produced small quantities of Roman tile in the earliest phases, early brick and glazed roof tiles in the medieval period, and late brick and pantile in the post-medieval periods (Anderson 2005b). This latter site also had evidence for re-use of early bricks in post-medieval structures.

Roman tile may have been imported for use in hearths or structures during the Late Saxon and early medieval periods. However, it seems likely that some of the earliest post-Roman CBM on the site was brought in for use in Structure 2. The glazed roof tiles in particular may represent the original roofing material for this structure. Early bricks seem to have been used extensively in the city for the construction of vaulted cellars, but also for door and window jambs and string courses in flint buildings. A relief floor tile could be the sole survivor of an early tiled floor on the site, perhaps later covered by a chequerboard-design floor of Flemish green and yellow floor tiles in the 14th and 15th centuries.

In the later phases of site use, some of this building material was re-used in later structures. However, much of it was residual and may simply have been used for consolidation within make-up layers and to backfill redundant features and cellars.

Zoological and biological evidence*Faunal remains*

by Julie Curl

The faunal remains (which weighed 15.5kg) are dominated by the main domestic species and included evidence of ovicaprine hornworking. The remains from the Period 4 cellar (G117) were particularly interesting as they included skinned dogs, fallow deer antler, hornworking debris and a puffin. Details of the methods employed in the analysis of this assemblage are available in the archive.

Summary by period

Period 1 (10th–12th centuries)

Period 1 produced less than 1% of the assemblage. Sheep/goat (butchered) was recovered from a gully (G6); dog, cat and trout were identifiable in fills of the G10 ditch.

Period 2 (13th–early 15th centuries)

Over 40% of the assemblage came from these deposits. Butchering of cattle, sheep/goat and pig included evidence of skinning, tongue removal, marrow extraction and hornworking. The ages of the sheep (mostly adult) probably indicate a life of supplying wool before being killed for meat and horn. Galliformes and goose were identified, the primary use of which was probably egg production. Bones from adult and juvenile cats were recorded, most of which bore butchering marks suggesting skinning. Dog remains were also recovered although none bore butchering evidence. A single rabbit bone was identified. Small quantities of fish included two salmon vertebrae. Canid gnawing was observed on some bones suggesting that butchering waste was exposed before burial, or that it was part of the food provided for dogs.

Period 3 (15th–17th centuries)

Almost 30% of the faunal remains were recovered from these contexts. The most commonly recovered species was sheep/goat, suggesting a greater popularity of these animals during this time, possibly as a result of the burgeoning wool trade. Cattle and pig were also identified; the remains of pig included a neonatal bone, which could indicate on-site breeding. The bone from all the main domestic animals shows some degree of butchering and includes evidence of skinning, tongue removal and secondary butchering for meat production. These deposits yielded the only identifiable bone from an equid and two butchered bones from a rabbit. Birdbone was also recovered; small quantities of goose and galliformes were identified and included butchered bone. Few fish remains were identified.

Period 4 (17th–18th centuries)

This is the most interesting period in terms of variety of species and the evidence for butchery. The wide range of species present in the fill of the Structure 6 cellar includes fallow deer, dog, cattle, sheep/goat, pig, plover, goose, duck and puffin. Many bones, including those of dogs, showed marks from skinning. Horn debris and an antler were also present.

Period 5 (19th century–)

A little over 4% of the assemblage was derived from Period 5 contexts. The remains included butchered elements of cattle, sheep/goat and pig. A single juvenile rabbit vertebra was also found.

Species, ages, pathologies and butchering

Cattle

Both adult and juvenile bones were present. Bone fusion and tooth wear patterns suggest that although some animals were killed at less than six months old (with little wear on the deciduous pre-molar) most were killed at around four to six years and some were kept until they were approximately eight to ten years old. This wide range of ages suggests the many uses to which cattle may have been put.

Most of the bones exhibited some form of butchering, usually chop marks made with a cleaver-like instrument. Chops were more frequent on elements such as the humeri, femurs and scapulae and chopping was also recorded on several metapodials. This may have occurred during the primary butchering phase, or when bones were chopped for marrow extraction. Finer knife cuts were observed on many metapodials, several phalanges and other footbones, suggesting that cattle were skinned prior to dismemberment. Knife cuts were also frequently noted on the inside of mandibles which is indicative of the removal of the tongue for meat.

A high level of dental calculus was noted, particularly on older cattle mandibles, and this was usually found in association with periodontal disease. One case of enamel hypoplasia was recorded in a bone deposited in Period 3; it is usually an indicator of stress (environmental or dietary) on the animal. Arthritis was also noted on one proximal phalange.

Sheep/goat

The only clearly identifiable goat bone was a chopped horncore from a Period 2 quarry pit, which was found with a large chopped sheep horncore. Most of the sheep found were adult, their maturity suggesting that they were primarily used for wool.

Extensive butchering of these bones attests to their use for meat. Much of the bone had been butchered with cleaver chops or knife cuts, and sometimes both. Fine knife cuts were observed on metapodials and foot bones, which usually occur when the animal is skinned. Three chopped horncores were recovered from Period 2 deposits; a further chopped sheep horncore was recovered from the Period 4 cellar fill. These indicate hornworking.

Pig

No pig was identified in Period 1 deposits, and it was far less common than sheep/goat or cattle in Periods 2 and 3. Most of the remains were from meat-bearing bones, although some head, lower limb and foot bones were present and these could also have been used in cooking. Most of the bone bore butchery marks, in the form of chops. No mature animals were identified, which is consistent with most other medieval sites.

Canids

Although sparse remains of dog, including juveniles, were found in deposits dating to Periods 1 and 2 the most interesting bones were retrieved from the Period 4 cellar fill (Plate 3). These included the remains of at least two individuals. Both show knife cut marks on the outer mandibles and cuts were recorded on the top of a skull and on limb bones. Clearly the individuals had been skinned.

Cats

Although a single cat pelvis was recovered from a Period 1 deposit the bones from Period 2 deposits were of more interest, since it is probable that these animals were killed and skinned.

Deer

Seven fragments of a nearly complete fallow deer antler from a mature male were found in the Period 4 cellar fill (Plate 4). Chop and cut marks were present although no extensive working or preparation had taken place.

Birdbone

The most common remains were galliformes, mostly from Period 2. These bones are likely to be from domestic chickens and in some cases displayed cuts. Goose was recovered from Period 2 and 3 deposits and further butchered remains were found in the Structure 6 cellar. A single bone from a plover was also found in the cellar fill.

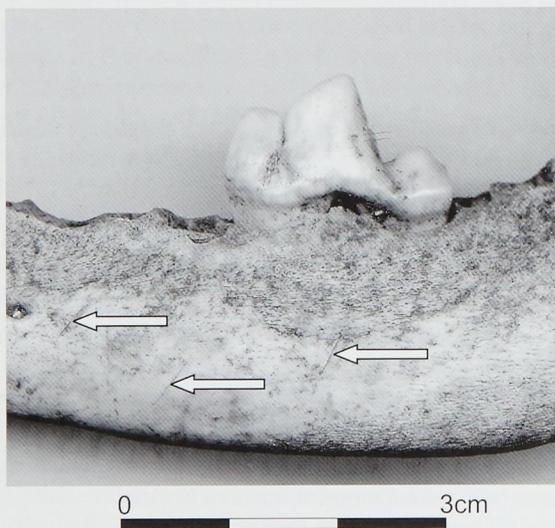


Plate 3 One of the mandibles from skinned dogs recovered from the Structure 6 cellar



Plate 4 Chopped and cut fallow deer antler from the Structure 6 cellar. Antler length 345mm

The most interesting birdbone was a single tarso-metatarsus from a puffin, found in the cellar. This appears to have been cut (although the mark was barely visible). The puffin is not normally found in Norfolk, the nearest populations probably being in Yorkshire, although it is possible that stray birds could have been brought in (alive or dead) during stormy weather. Its presence suggests trade (Dale Serjeantson, *pers.comm.*) and it is possible that the bird was collected or traded for its skin, especially as it was deposited with a group of other skinned animals.

Conclusions

Although a small assemblage, this still yielded interesting information on the use of animals in medieval and post-medieval Norwich. The bones from Period 2, which produced evidence of butchered cats and the use of sheep and goat horn for working, is of interest. The goat horn in particular provides further evidence of the trade in goat horn/skins (Albarella 1997). Also of interest was the bone recovered from the Structure 6 cellar. The range of species and the activity indicated makes this an interesting group, and possibly suggests the production of more unusual items involving the use of pelts and horn.

Plant macrofossils and other remains

by Val Fryer

Of the four samples submitted only that from a 14th-century oven fill (396, G51, Period 2) contained a sufficient density of material for further study, in this case the determination of the range of fuels used within the oven. Details of the methodology used and sample composition are given in the archive.

The sample from the oven is almost certainly derived from fuel waste. The principal fuel source appears to have been the heathland plants heather, ling, gorse and bracken. These would have been readily available from areas close to the city and were the preferred fuels for ovens throughout the medieval period (Rackham 1986, 295). Cereals, chaff and segetal weed seeds are likely to have derived from the use of processing debris as either kindling or fuel for the oven. The assemblage shows that both locally gathered materials and waste products from other processes were being utilised as fuel during the medieval period.

Conclusions

The location of this site, within the medieval New Borough and close to the former Jewry and great provision market, has provided a useful opportunity to investigate the development of this part of Norwich. The investigation is enhanced by the close proximity of the excavations undertaken at the site of The Forum, immediately to the west, which provide an archaeological context for its interpretation. While the detailed sequence and finds revealed at the site have already been discussed, a number of wider-ranging questions concerning the pre-urban and urban landscapes of the area remain to be addressed here.

The site's geological and topographical situation, on relatively free-draining soils at the crest of a valley slope, might be expected to have been attractive to communities in the prehistoric period. However, the recovery of a small quantity of worked flint from the site, whilst augmenting the prehistoric features discovered at The Forum (Percival and Hutcheson in prep.), does not provide substantive new evidence of prehistoric activity.

The presence of St Peter's Street was clearly a significant factor in the site's development. It has been suggested that the sinuous, reverse-'S' arrangement of this street implies urban absorption of an earlier agricultural boundary, such alignments being commonly indicative of the selions or strips found in open fields. This remains a possibility although, more prosaically, it should be

noted that the St Peter's Street alignment also approximates to the western break of slope into the Great Cockey Valley. It is therefore, at its simplest, a topographical marker. It similarly remains unclear whether this road pre-dated the establishment of the New Borough although, if it were Saxon, it certainly only assumed any degree of importance once the borough had been formed. From this time the break of slope it marked came to form the natural western limit to the huge market area which developed between St Peter's Street, Guildhall Hill, the Great Cockey and St Stephen's Church.

Parallel Saxon ditches seen in 1998–9 (at The Forum site) and 2001 (at St Peter's Street) probably drained a green lane which crossed the area in a north-west to south-east direction. There are two interesting points to note here. First, if the alignment of the postulated lane is projected southwards it would eventually meet Surrey Street (the first record of which appears in 1157: Sandred and Lindström 1989, 144), perhaps forming a route along the western edge of the Cockey Valley from the Bracondale area. Second, the lane seems likely to have been a precursor to the 'common way' mentioned in medieval documents (Rutledge in prep.), and which may have been the result of the original lane being pushed southwards as Anglo-Norman properties were established against the Bethel Street frontage (Percival and Hutcheson in prep.).

The proximity of the site to the market place would also have been a prominent factor in its development. Encroachment over the years makes it difficult to visualise the size and shape of the Norman market. By way of local comparison we might consider the vast market in Great Yarmouth — longer than it is wide, dominated by a parish church, and bounded on all sides by narrow burgrave plots.

It is noticeable that Norwich market place appears oddly shaped, principally to the north-east of St Peter Mancroft and more so as the market recedes southward (where it is today called Hay Hill). Many medieval market places were encroached upon, more often than not as temporary booths and stalls assumed permanence. Norwich's was no exception, and today the most obvious indication of this is the block of buildings to the east of St Peter Mancroft. Kirkpatrick (1686–1728) drew the market place (Hudson 1889, 93): his plan gives a good impression of its size and spaciousness, and depicts something of its ordered layout. It also shows how the area south of St Peter Mancroft had fossilised into a set of jagged property boundaries, possibly encroachment into what could otherwise have been a great rectangle of land ending at St Stephen's and flanked by St Peter's Street and Gentleman's Walk/Brigg Street.

It was in this area, in *c.* 1144 (Lipman 1967, 4) that the Jews settled, 'the proximity of the market centre [being] the primary consideration in choosing a place for Jewish settlement ...' (*ibid.*, 18). The disordered appearance of the street pattern here may imply that the Jewry was established and then encroached upon unused parts of the area originally marked out for the market. The Jews were expelled in 1290, Blomefield (1810, 64) recording that the Jewry was burned down when Edward I banished them. Documents record that the city granted land to the east of Plot 3 in 1307 (Rutledge in prep.), quite possibly as part of a re-distribution of the encroached settlement.

The date at which the plots investigated during this excavation were established has, sadly, proved elusive. However, it seems clear that the road in Plot 2 and an associated building (Structure 1) were in use by the 12th century, which would concord with a general development of the market perimeter during this period. It is equally clear, however, that not all of the site was exploited in this manner. For much of the 13th century Plots 4 and 5 were used to quarry sands and gravels, an activity which also occurred over much of the open ground to the west. Whether this was a municipal undertaking or the result of private endeavour, it demonstrates that these

properties were not settled at this time. Plots 2 and 3, on the other hand, almost certainly were. Although Structure 1 may have disappeared by the early 1200s the implication of the road being in existence in 1316, when Plot 2 was described as having a 'great entrance' to the east (Rutledge in prep.), suggests the plots continued in use throughout this period. By 1315 Plot 3 was the capital messuage of Henry, son of Robert de Hegham (*ibid.*).

Documentary evidence shows that Plots 2, 3 and 4 were in the same ownership by 1351 (Rutledge in prep.). The development of Plot 4 can have commenced only after the extensive quarrying which took place here had ceased in the early 1300s. It seems probable, therefore, that the construction of the relatively high-status Structure 2 — the first building at the site in which stone was utilised, and almost certainly constructed as a hall house — was part of the expansion eastward into the former Jewry during the early 14th century.

Consolidation of the encroachment is shown by the presence of a tavern on land to the east of Plot 3 in 1318 (Rutledge in prep.). As a consequence Plot 3 became increasingly remote from the street frontage, and developed instead as a backyard to what was still a tavern in 1393. The oven in this plot may have formed part of what appears to have been a wider provisioning exercise in the area, since bakehouses lay to the south of the site in 1286 and to the north of the site in 1352 (Rutledge in prep.; Percival and Hutcheson in prep.). By the 16th century the contents of pits on Plot 3 reflected the domestic nature of the occupation, with a money box, a skimmer and drinking cups being disposed of. In between times, significantly, no Siegburg or Langerwehe stoneware of 14th–15th century date appears to have been deposited, although 16th-century Cologne/Frechen and Raeren wares were common. This may reflect a lack of later medieval activity on the site, or a change in refuse disposal practices.

The archaeological evidence indicates that Structures 2 and 4 had been demolished by the later 16th century, and this accords with a document recording that Plots 3 and 4 were a garden in 1549 (Kelly in prep.). Structure 6 appears to have been constructed during the 1600s, and was probably demolished during the early years of the 18th century. The combination of clay tobacco pipe manufacturing debris, pottery, vessel glass and bones from skinned animals found in its backfill may suggest that the cellar, once exposed, provided a convenient means by which local trades and industries could dispose of their waste.

The later uses of the site are explained by their gradual incorporation into the White Hart property. Plot 4 appears to have passed into the ownership of the White Hart some time before 1802 (Kelly in prep.), and probably continued to form part of the inn until it ceased trading in 1915 (Wicks 1925, 38–9). Only Plot 5 was to remain in separate ownership.

April 2005

ACKNOWLEDGEMENTS

The archaeological work was generously funded by The Forum Trust Ltd. It was undertaken by Mick Boyle, Sandrine Etienne, Fred Garrett, Gef Parsons, Dave Robertson, Andy Shelley, Kate Stronnach, Sophie Tremlett, Danny Voisey and Dan White (all, with the exception of Gef Parsons, present or former Norfolk Archaeological Unit staff). Surveying was conducted by John Percival and Phil Thomas. Finds processing was by Lucy Talbot, Sandrine Etienne and Peter Warsop. John Percival provided information about the excavations at The Forum, Dale Serjeantson commented on the birdbone, Stephen Heywood and Robert Smith commented on the cellar, and Andrew Rogerson provided information about St Peter's Street. Figures are by Sandrine Whitmore, David Dobson and Maggie Footitt.

BIBLIOGRAPHY

- Albarella, U., 1997. *The Medieval Animal Bones Excavated in 1996 from Coslany Street, Norwich, Norfolk*, English Heritage, AML report 86/97
- Ames, J., 2001. 'Kiln debris and moulds', in Percival, J.W., *Archaeological Investigations at Nos 64 and 63/65 The Close, Norwich*, Norfolk Archaeological Unit report 631, 27–8
- Anderson, S., 2005a. 'The pottery', in Shelley, A., *Dragon Hall, King Street, Norwich: Excavation and Survey of a Late Medieval Merchant's Trading Complex*, E. Anglian Archaeol. 112, 129–51
- Anderson, S., 2005b. 'Ceramic building material', in Shelley, A., *Dragon Hall, King Street, Norwich: Excavation and Survey of a Late Medieval Merchant's Trading Complex*, E. Anglian Archaeol. 112, 89–97
- Atkin, M., 1985. 'Excavations on Alms Lane (Site 302N)', in Atkin, M., Carter, A. and Evans, D.H., *Excavations in Norwich 1971–1978 Part II*, E. Anglian Archaeol. 26
- Atkin, S., 1985. 'The clay pipe-making industry in Norfolk', *Norfolk Archaeol.* 39, 118–49
- Atkin, S., forthcoming. 'Clay pipes', in Shepherd Popescu, E., *Norwich Castle: Excavations and Historical Survey, 1987–98*, E. Anglian Archaeol.
- Bates, S., in prep. 'Lithics', in Percival, J.W. and Hutcheson, A.R.J., *Excavations within the French Borough (Between Theatre Street and Bethel Street), Norwich, 1998–1999*, E. Anglian Archaeol.
- Biddle, M. and Brown, D., 1990. 'Writing equipment and books', in Biddle, M. (ed.), *Object and Economy in Medieval Winchester*, Winchester Studies 7 (part 2), 729–59
- Blomefield, F., 1810. *An Essay Towards a Topographical History of the County of Norfolk* (London)
- Brunskill, R.W., 1990. *Brick Building in Britain* (London)
- Campbell, J., 1975. *Norwich* (Historic Towns Trust)
- Campbell, J., 2004. 'Norwich before 1300', in Rawcliffe, C. and Wilson, R., *Medieval Norwich* (Hambledon and London), 29–48
- Cotman, A.M. and Hawcroft, F.W., 1961. *Old Norwich. A Collection of Paintings, Prints and Drawings of an Ancient City* (Norwich)
- Drury, P., 1993. 'Ceramic building materials', in Margeson, S., 1993, *Norwich Households: The Medieval and Post-Medieval Finds from Norwich Survey Excavations 1971–1978*, E. Anglian Archaeol. 58, 163–8
- Egan, G., 1998. 'Skimmers' in *The Medieval Household Daily Living c. 1150–c.1450* (London), 155–7
- Evans, D.H., 1985. 'The pottery', in Atkin, M., Carter, A. and Evans, D.H., *Excavations in Norwich 1971–1978 Part II*, E. Anglian Archaeol. 26, 155–7
- Frostick, R., 2002. *The Printed Plans of Norwich 1558–1840* (Norwich)
- Gaimster, D., 1997. *German Stoneware 1200–1900, Archaeology and Cultural History* (London)
- Goffin, R., in prep. 'The post-Roman pottery', in Percival, J.W. and Hutcheson, A.R.J., *Excavations within the French Borough (Between Theatre Street and Bethel Street), Norwich, 1998–1999*, E. Anglian Archaeol.
- Goffin, R., forthcoming. 'The pottery', in Shepherd Popescu, E., *Norwich Castle: Excavations and Historical Survey, 1987–98*, E. Anglian Archaeol.
- Goodall, I.H., 1984. 'Iron objects', in Rogerson, A. and Dallas, C., *Excavations in Thetford 1948–59 and 1973–77*, E. Anglian Archaeol. 22, 76–106
- Goodall, I.H., 1990. 'Locks and keys', in Biddle, M. (ed.), *Object and Economy in Medieval Winchester*, Winchester Studies 7 (part 2), 1001–36
- Hudson, W. (ed.), 1889. *The Streets and Lanes of The City of Norwich: A Memoir by John Kirkpatrick* (Norwich)
- Hudson, W. and Tingey, J.C. (eds), 1906–10. *The Records of the City of Norwich*, I, vii–x
- Hutcheson, A.R.J., 2000. *Millennium Library, Norwich. Assessment Report and Updated Project Design*, Norfolk Archaeological Unit report
- Hurst, J., Neal, H. and van Beuningen, H., 1986. *Pottery Produced and Traded in North-West Europe 1350–1650*, Rotterdam Papers VI
- Jarrold, 1922. *Norwich Directory*
- Jennings, S., 1981. *Eighteen Centuries of Pottery in Norwich*, E. Anglian Archaeol. 13
- Kelly, G., in prep. 'Documentary evidence: 1397–1802', in Percival, J.W. and Hutcheson, A.R.J., *Excavations within the French Borough (Between Theatre Street and Bethel Street), Norwich, 1998–1999*, E. Anglian Archaeol.
- Kelly, 1935. *Directory of Norwich*
- Lentowicz, I., forthcoming a. 'The pottery', in Emery, P.A., *Norwich Greyfriars: Excavations at the Former Mann Egerton Site, Prince of Wales Road, Norwich 1992–5*, E. Anglian Archaeol.
- Lentowicz, I., forthcoming b. 'The pottery', in Shepherd Popescu, E., *Norwich Castle: Excavations and Historical Survey, 1987–98*, E. Anglian Archaeol.
- Lipman, V.D., 1967. *The Jews of Medieval Norwich* (London)
- Margeson, S., 1993. *Norwich Households: The Medieval and Post-Medieval Finds from Norwich Survey Excavations 1971–1978*, E. Anglian Archaeol. 58
- McCarthy, M. and Brooks, C., 1988. *Medieval Pottery in Britain AD 900–1600* (Leicester)
- Oswald, A., 1975. *Clay Pipes for the Archaeologist*, Brit. Archaeol. Rep. Brit. Ser. 14

- Peacey, A., 1996. 'The development of the clay tobacco pipe kiln in the British Isles', in Davey, P. (ed.), *The Archaeology of the Clay Tobacco Pipe*, Brit. Arch. Rep. Series. 246
- Pearce, J., 1992. *Post-Medieval Pottery in London, 1500–1700. Vol. 1, Border Wares* (London)
- Pearce, J., 2000. 'A late 18th century inn clearance assemblage from Uxbridge, Middlesex', *Post-Medieval Archaeol.* 34, 144–86
- Percival, J.W. and Hutcheson, A.R.J., in prep. *Excavations within the French Borough (between Theatre Street and Bethel Street), Norwich, 1998–1999*, E. Anglian Archaeol.
- Percival, S., 1995. *Evaluation Report, Bethel St Car Park, Norwich*, Norfolk Archaeological Unit report 160
- Pevsner, N. and Wilson, B., 1997. *The Buildings of England. Norfolk I. Norwich and North East* (Harmondsworth)
- Rackham, O., 1986. *The History of the Countryside* (London)
- Rawcliffe, C., 1995. *The Hospitals of Medieval Norwich* (Norwich)
- Rutledge, E., in prep.. 'Documentary evidence — pre-1397', in Percival, J.W. and Hutcheson, A.R.J., *Excavations within the French Borough (between Theatre Street and Bethel Street), Norwich, 1998–1999*, E. Anglian Archaeol.
- Sandred, K.I., and Lindström, B., 1989. *The Place-Names of Norfolk. Part 1: The Place-Names of the City of Norwich*, English Place-Name Society
- Shelley, A., 2005. *Dragon Hall, King Street, Norwich: Excavation and Survey of a Late Medieval Merchant's Trading Complex*, E. Anglian Archaeol. 112
- Shelley, A. and Tremlett, S., 2002. *Excavations at 2 Millennium Plain, St Peter's Street, Norwich: Assessment Report and Updated Project Design*, Norfolk Archaeological Unit report 700
- Shelley, A. and Brennand, M., forthcoming. 'Excavations on the site of a late medieval hall house at 51–55 King Street, Norwich', *Norfolk Archaeol.*
- Shepherd Popescu, E., forthcoming. *Norwich Castle: Excavations and Historical Survey, 1987–98*, E. Anglian Archaeol.
- Whittingham, A.B., 1984. 'The White Swan Inn, St Peter's Street, Norwich', *Norfolk Archaeol.* 34, 38–50
- Wicks, W., 1925. *Inns and Taverns of Old Norwich* (Norwich)