

EXCAVATIONS IN NORWICH – 1977/8
THE NORWICH SURVEY – SEVENTH INTERIM REPORT

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with an appendix by A. Carter and
illustrations by R. Smith

Two main sites were excavated between June 1977 and March 1978, with limited investigation on three smaller sites. These were made available through the courtesy of Jarrold and Sons Limited, R. E. Thorns and Company, and Norwich City Council. The work was financed by grants from the Department of the Environment and Norwich City Council. Valuable help in kind was received from the University of East Anglia, Jarrold and Sons Limited, Norfolk County Council and Norwich City Council. The dig hostel was kindly provided by the Broadland Housing Association Limited. Our grateful thanks are due to all our supervisors and volunteers, but especially to Phil Andrews, who acted as Assistant Director on 351N, and to Mary Karshner and Gill Bussell, for their work on the finds and for administering the excavation and the dig hostel. Particular thanks are also due to Mr. A. B. Whittingham, M.A., A.R.I.B.A., F.S.A., for his advice on site 36N, Whitefriars. The two buildings described in the appendix were kindly made available for inspection by Mr. G. F. Nobbs of Garveston and Mrs. E. Poyntz of Marlingford, both of whom encouraged our investigation.

This was the final year of excavation by the Norwich Survey, for work must now concentrate on the preparation of final excavation reports before the termination of the survey in 1982. These reports will be published in future volumes of the serial publication *East Anglian Archaeology*. A summary by Alan Carter of the work achieved to date on the problems of the late Saxon town will appear during 1978 as an article in the periodical *Anglo-Saxon England*, and other interim summaries are expected to appear in journals such as *Vernacular Architecture*.

SUMMARY

A brief account of the excavation of part of the Whitefriars complex is followed by detailed archaeological and historical accounts of the development of a site in the north of the city from the late 13th century to the 18th century. Occupation on 351N (Oak Street) began at the end of the 13th century, although earlier material, including Roman and Middle Saxon was found scattered in later contexts. The excavation clearly lay outside the limits of the Saxon town. The site consisted of six main tenements, which were occupied by people of widely different backgrounds. The analysis of the documentary evidence has been particularly important in establishing the social context of the buildings. The excavated structures ranged from single-roomed cottages up to the town house of an Abbey. Evidence for the modernisation of buildings by the insertion of floors and chimneys is discussed in the context of urban affluence and population.

An appendix examines evidence surviving in two late medieval rural Norfolk buildings of the type of conversion that the excavated buildings are likely to have undergone during the 16th to 18th centuries, and concludes with an explanation of the reconstruction drawings offered for this and the previous year's excavation site (351 and 302N).

308N. 26 COSLANY STREET (HOPPER'S YARD, DUKE STREET),
TG 2283 0893

It was suggested in 1972¹ that the present line of Oak Street/Coslany Street represents a diversion from an original route of possible Roman origin crossing the river by Charing Cross. Doubt was cast on this hypothesis in 1975,² and preliminary work on the records of supposed Roman finds around Norwich in 1976 eliminated the coin evidence for Roman activity along the Ber Street – Oak Street line.³ This did not, however, finally invalidate the possibility of an earlier line for Oak Street, across which a 2 by 10 m. trench was machine-dug in 1977. No evidence for any road surfaces was in fact found and this hypothesis can now be abandoned. The earliest features found were a series of late Saxon pits cutting natural sand and gravel. There was no sign of any possible marsh deposits, such as had been seen to the south on 166N.⁴

The excavated pits and an occupation surface overlying them both contained large quantities of iron tap-slag: a clear suggestion of iron smelting in their vicinity. The discovery of late Saxon iron-working in the Coslany/Colegate area is particularly interesting as on 302N (Alms Lane) the waste from a similar industry was found in the 11th/12th century fill of the Saxon defence ditch running along St. Georges Street.⁵ With the evidence of medieval and 16th century iron-working from 284N,⁶ 302N⁷ and 351N this suggests the continuous presence of the industry in the area north of the river from the 11th to the 16th century. The evidence for smelting however is restricted to the period before *c.* 1300, while that for later periods is unequivocally for smithing. The change may be due to an increasing specialisation in the industry; but also to the impracticality within a developing city of continuing to dig the large pits needed to extract iron-pan or ores from the gravel.

336N. 5 LOBSTER LANE, TG 2297 0867 AND 355N
22 EXCHANGE STREET/LOBSTER LANE, TG 2296 0864

The opportunity arose during the course of commercial development in 1977 to excavate small areas to the north and south of Lobster Lane. It was hoped that this might reveal further evidence of the late Saxon pottery-making industry located on Pottergate and Bedford Street.⁸ South of the lane, on 355N, a series of late Saxon pits was excavated *c.* 4 m. behind the street frontage in an area of *c.* 3 by 1.5 m., with further observations over an area of *c.* 8 by 5 m. There was no evidence of any kiln. On the other side of the lane, however, and almost directly opposite, part of a late Saxon kiln was discovered together with a considerable quantity of 10th/11th century wasters (336N). It was, unfortunately, impossible to recover the complete plan of the kiln but it appeared to be of the long, oval, single flue type. The kiln had itself sealed a pit filled with wasters from an earlier kiln.

36N. THE CARMELITE FRIARY, WHITEFRIARS, TG 2341 0926
(Fig. 1)

The Carmelite friary (Whitefriars) was established on the site in 1256 on land granted by Philip Cowgate. It soon prospered and by 1343 the friars had been able to complete part of a new, more magnificent church, although this was not consecrated until 1382. The friary was dissolved in 1542.⁹ Although an important site, little is known of the detail of the layout of the friary. William Worcestre¹⁰ recorded the dimensions of the 14th-century church and cloisters, and the founda-

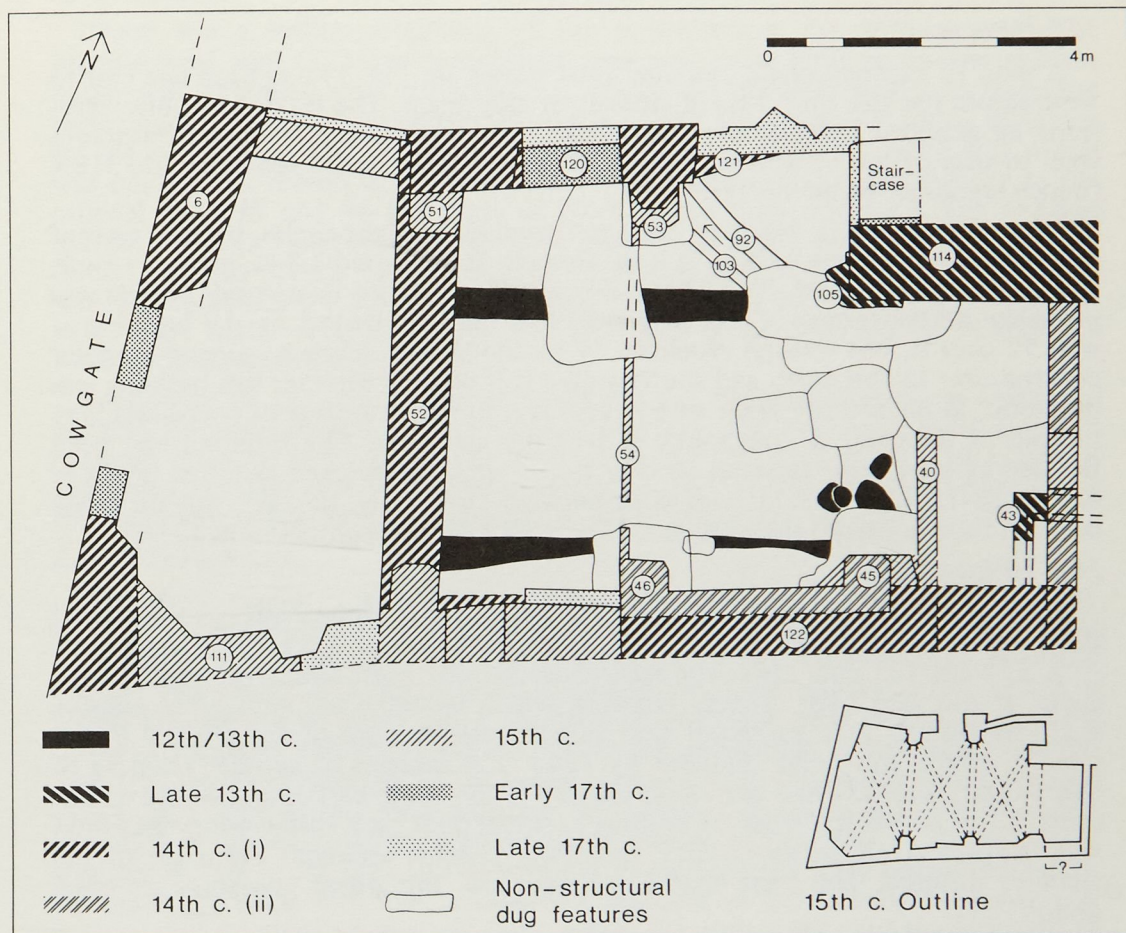


Fig. 1
Site 36N. Detailed plan, with 15th century vaulting arrangement inset.

tions of the former were discovered in 1904. We rely, however, for much of our information on odd sections of walls recorded in commercial excavations and hurried archaeological rescue work. Therefore the opportunity in 1978 to excavate inside the surviving undercroft (*ex* 133 Cowgate) before its conversion to a printing museum was particularly valuable – not only for determining the history of the undercroft itself but also for the possibility of recovering some evidence for the form of the pre-friary occupation on the site.

The constraints of working within a standing building meant that it was not possible to excavate the site down to natural. The interior of the undercroft was stripped down to the level of the 12th/13th century occupation. Below this excavation had to be confined to a series of trenches to establish that this was indeed the earliest occupation on the site, although natural itself was not reached. The undercroft is encased by modern building to its south and east sides and the north-east corner has been destroyed. Therefore its extent in these directions is hypothetical only. Fig. 1 omits 19th-century alterations.

12th/13th century

A path of rammed chalk and clay (not shown on Fig. 1) had been laid east to west across the site over a thick deposit of clay loam. The latter probably represents an artificial build-up over the marsh. It approximates in terms of absolute level to that of the earliest yard surfaces overlying the marsh found on site 318N (which lay 20 m. to the north).¹¹

Soon afterwards a building was constructed at right-angles to the present street frontage and set back *c.* 3.5 m. from it. It measured 2.8 m. north to south and *c.* 5 m. east to west. It had been clay-walled on all but its east side, which was probably timber-framed. (The west wall had been destroyed by the building of wall 52 over it, but enough remained of its foundation levels to suggest a similar construction to the north and south walls.) It is unclear whether this building was domestic, as no definite trace of a hearth was found. A setting of post-holes may indicate a doorway at the south end of the east wall. The building had been flooded at least three times as its clay floors were sandwiched between layers of silt up to 12 cm. thick. It was then allowed to become derelict; this probably occurred shortly before the acquisition of the site by the Carmelites in 1256.

Late 13th century

Possibly whilst the clay building was still standing to some degree, a substantial flint-walled building was constructed to the north-east of the present undercroft (Fig. 1, walls 105 and 114). The latter had actually been built over a south-west angle of this late 13th century building, which included the remains of massive angle buttresses. It is suggested that this is possibly part of the original Friary church, which was being replaced by 1343. The remains of another building of this period (wall 43) had been incorporated in the south-east corner of the undercroft, but it is not clear what the relation between these two 13th-century buildings was. Both had chamfered oolitic limestone plinths, although the angle of the chamfer differed. The yard level associated with this phase contained an open drain (103).

14th century

The undercroft in its original form was built during this century, incorporating part of the abandoned (? and now adapted) ?church in its north-east corner. It originally extended as far west as the wall 52 built of flint-and-brick-rubble, with a yard beyond that to wall 6 which may have served as the precinct wall of the Friary. There was an entry in the east wall and the north wall was angled to incorporate a stair-case within the south-west corner of what had been the ?church. The walls had been built from the level of the collapsed clay-walled building and the ground surface on the south side was built up by *c.* 20 cm. to obtain a level floor. During construction work there appears to have been a change of plan to include vaulting. The south wall (122) had been built first and the ground made up around it, but it was then partially demolished to incorporate the Freestone-faced, semi-octagonal piers 45 and 46, and an entry inserted between wall 52 and pier 46. The north wall had not been completed when the plan was changed and pier 53 was bonded to wall 121. The mis-alignment of the foundation trench of wall 121 suggests that the decision to include the staircase may also have been of this plan revision. A closed drain (92), following the alignment of the drain of the previous phase (103) was built into the floor and debouched through wall 121.

15th century

There was a drastic rebuilding of the undercroft in the 15th century. The original west wall (52) was demolished, new piers were built on its line and the undercroft extended west up to wall 6, which was partially rebuilt to carry the springing for vaulting. The vaulting itself was rebuilt from the level of the springing on the south side. The new piers, and the existing pier on the north side which was completely rebuilt in this phase, were the same semi-octagonal shape as the original piers 45 and 46 but were of brick rather than freestone. The existing entries in the east and south walls were blocked. It could not be ascertained for certain (due to the presence of a 19th-century wall) whether the north-to-south wall 40 represents the screen of a passage cut through the south wall at the east end of the undercroft, or merely the west wall of a closet; but on balance the former interpretation is preferred.

Secondary to the above, but probably not far removed in date, an entry was inserted between piers 51 and 53 and a partition wall (54) built north-to-south between piers 46 and 53. As the north end of both walls 40 and 54 had been destroyed by later pits it is impossible to be certain whether there were doors through them at this end, although this is likely, especially for wall 40.

Early 17th century

The early post-medieval history of the undercroft is not known. No 16th-century floor surfaces survived and it is possible that the building was derelict until the early 17th-century, when it was converted into a smithy. A late 16th century bellarmine was found buried beneath the 17th-century floor. Although there was no direct proof of its purpose it may have been buried as a witch bottle in a derelict building whose earliest history was already shrouded in mystery. The 15th-century opening in the north wall was now converted into a window (120), and new entries were inserted in the bays to each side. The staircase remained in use as its south wall was being refaced at this time. A further entry was cut in the south wall (111), and the partition walls were now demolished. Although the floor level had considerable amounts of ash and smithing slag over it there was no evidence for any forge within the undercroft; and the insertion of the entries in the north wall suggest that the forge may have been built outside, but against, the building on that side.

Late 17th and 18th centuries

There was a change of use in the late 17th or 18th century. Both the entries in the north wall, the staircase, the window, and the entry through wall 111 were blocked, and a 20 – 25 cm. thick layer of building rubble was dumped in the building. The floor level had been destroyed by late 18th and 19th-century floors, and the building's function at this time is unknown.

Conclusions

No documentary references have yet been found that directly relate to this building, and which might give an idea of its medieval function. The only period for which we have direct archaeological evidence is in the early 17th century. Archaeologically, our understanding of the medieval building is hampered by two main factors. Firstly the actual floors (presumably tiled) were removed at each rebuilding, which makes it difficult to judge the internal character of the building. Secondly we are unable to place the undercroft in the context of the buildings around it, and to which it obviously relates. This makes it virtually impossible to compare the undercroft with any similarly positioned building in other friaries.

The undercroft lies to the north of what was probably the original cloister complex, (replaced sometime after 1343) and it was thought that the undercroft might have served as the entrance parlour to this. The position is, for instance, similar to that occupied by the entrance parlour to the Norwich Blackfriars. This hypothesis demands an entry in wall 52 above the level to which it was demolished and so cannot be satisfactorily proved. There is also no evidence for an entry through wall 6 at this point until the 17th century. For similar reasons no function(s) can be suggested for the two, or three rooms into which the building was divided in the 15th century.

M. W. A.

351N. 70 – 78 OAK STREET, TG 2270 0920
(Figs. 2, 3 and 6)

The site lay north of 67-69 St. Martin's Lane at its junction with Oak Street (Fig. 6F). The aim of the 1977 excavation was to try to establish the date and manner in which settlement first spread outside the suggested Middle Saxon nucleus of Coslany (whose Late Saxon defences had been suggested as possibly running along St. Martin's Lane)^{1 2} and how it developed thereafter. The documentary evidence relating to the site is discussed in detail on pp. 37-44.

The dating sequence is provisional, not least because the basis of the dating of many of the types of pottery is currently under revision as part of the production of a catalogue of medieval and post-medieval pottery from Norwich. Also, because of the frequency of rebuilding at short intervals, the pottery associated with successive phases frequently showed little change and much of the dating has had to be built up on the relative sequence of the buildings determined from stratigraphic relationships.

The site consisted of three main tenements on the Oak Street frontage and three on St. Martin's Lane. (Tenement is used here to mean a block of property with physical boundaries recognisable in excavation; these archaeological tenements may, in fact, represent legal or documentary sub-tenements). These have been lettered as *A – D*, *F* and *H*. The buildings on the tenements are shown as *A – H*, with the addition of buildings *E* and *G* within tenements *D* and *C*. Building phases are numbered within the tenements so that, for instance, *C1* and *D1* are not contemporary. The rooms within a building are referred to by italicised lower-case letters.

The frontage of *A* and *H* could not be excavated, nor was it possible to conduct a detailed survey of the building that still stands there. However, because of the effect of their yards on the tenements that abutt them they have been included in the discussion. Much of this can only be speculative and future work on *A* and *H* may modify suggestions made as to the development of this part of the site. The houses of Tenements *A* and *H* are shown lying parallel to St. Martin's Lane on the basis that whilst probably of a similar size to others of the period they did not extend into the excavated area: they could not therefore have been at right angles to the St. Martin's Lane frontage.

Fig. 2 shows the general sequence of redevelopment over the site from the 14th century; Fig. 3 shows the detailed development of Building *C*, while Fig. 6 is an attempt to reconstruct visually the development of the site from the late 15th century onwards. It is hoped that this will give a clearer idea of the general changes of appearance over the site that occurred. For comparison a similar reconstruction of the development of site 302N (Alms Lane) is shown in Fig. 7. These two reconstruction drawings are commented on in the appendix on pp. 50-53.

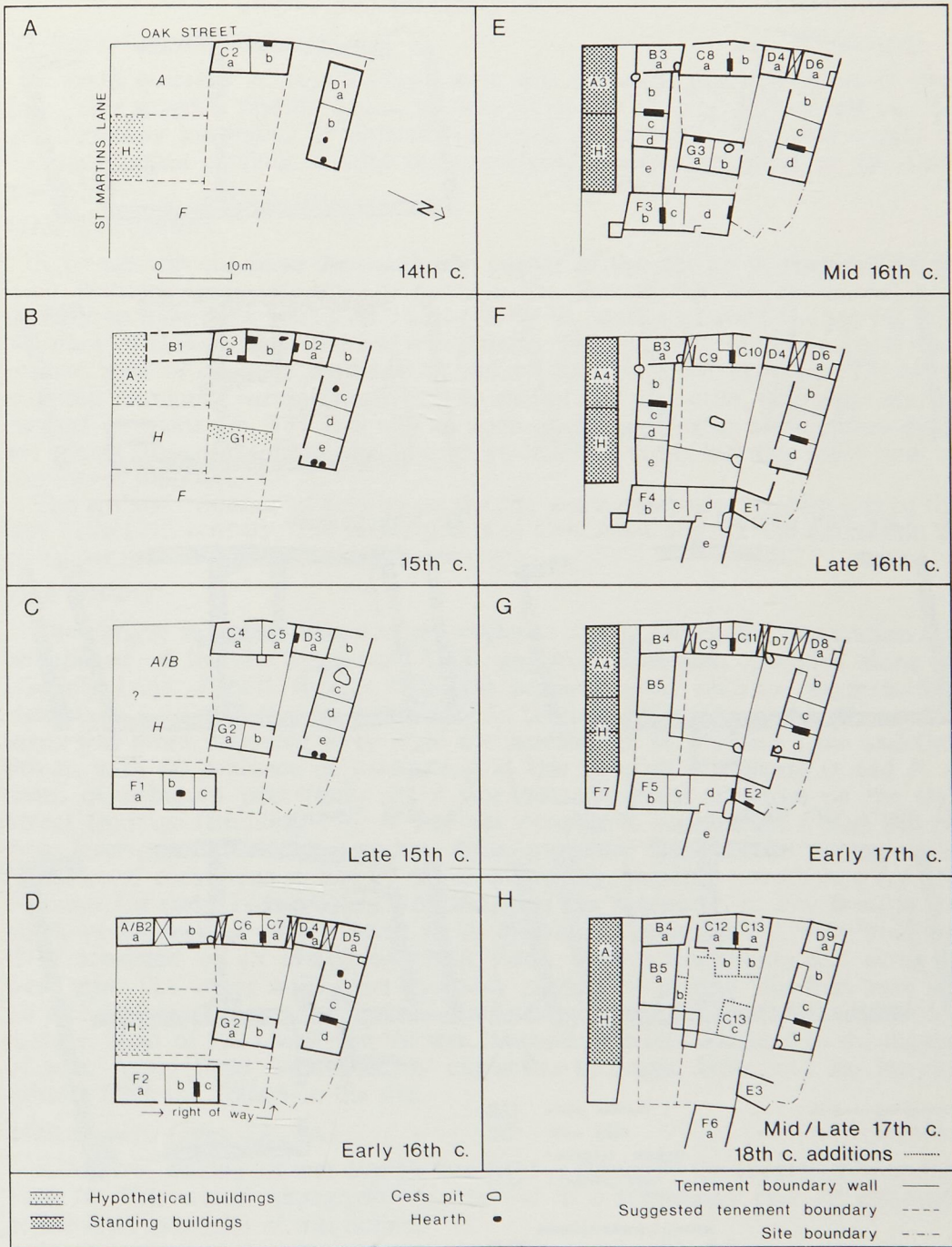


Fig. 2
Site 351N. Block plans of site development. For location see Fig. 6.

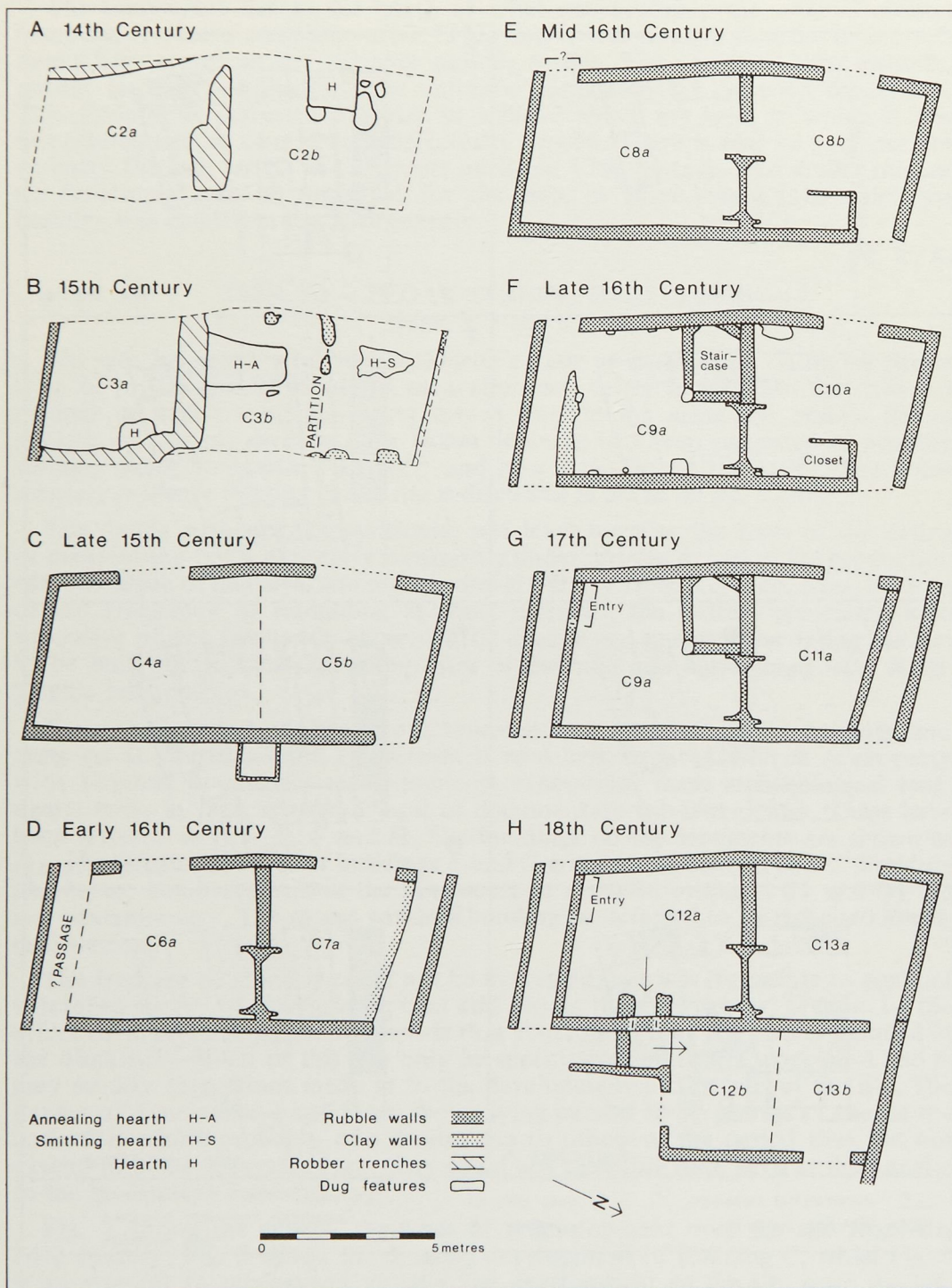


Fig. 3
Site 351N. Detailed plans of building C's development.

DESCRIPTION

8th/9th century and earlier

A small quantity of Ipswich-type ware was found in pits and layers of later date. This suggests Middle Saxon settlement in the vicinity of, but not on, the site. Similarly a number of isolated fragments of Roman pottery add weight to the distribution of finds around the postulated Roman farmstead on the Dalimund.^{1 3}

11th/12th century

A trench was cut from the south-east corner of the site up to the St. Martin's Lane frontage in an attempt to confirm the line of the late Saxon defences thought to have been found on 161N (49-59 St. Martin's Lane)^{1 4} – see Fig. 6F. No trace of these were found and it is possible that the ditch found on 161N was, in fact, part of an early medieval boundary ditch of the Gildencroft (or other enclosed farmland) turning north just to east of this year's site. Given the etymology of its name (p. 37) it is still an open question whether any defence ditch lies sealed directly beneath the line of St. Martin's Lane, but this must now be considered unlikely.

The earliest evidence of activity on the site was a number of rubbish pits of the late 11th/12th century. The larger pits may have been dug for the extraction of gravel for road metalling or sand for mortar.

13th century

The earliest surviving documentary evidence clearly shows that occupation was established on the site by at least 1300, and that settlement extended along St. Martin's Lane. Partial though it is, the archaeological evidence suggests that tenements *A*, *C*, and *H* were established in the late 13th century, but that settlement was more dispersed away from the junction of St. Martin's Lane and Oak Street, with no evidence of occupation at this date on tenements *D* and *F*. A series of nebulous post holes and a slot indicated some structure on the Oak Street frontage (Building C1). It was not possible to reconstruct a plan and no floor levels survived, but it may have been domestic. The evidence for the establishment of tenements *A* and *H* lies in a building, possibly a workshop (*cf.* the evidence for early 14th-century workshops on the tenement, p. 39) built in the north-west corner of what is taken to be the yard of tenement *H*. This 'building' (H1) consisted of an ill-defined chalk floor, with a foundation slot along its west side. The other walls were probably carried on ground sills that have left no archaeological trace. The floor was associated with a heavily burnt occupation surface. Most of the activity on the site, however, was still confined to the digging of pits. Again these were possibly extractive in origin, later used for burying rubbish from the houses on the site.

14th century (Figs. 2A, 3A)

A narrow, oblong pit was dug on tenement *A* alongside the suggested boundary with *H*. This would appear to have served as a temporary cess pit although, unlike later examples, it was unlined.

A building was constructed on the Oak Street frontage on tenement *C*. This was a two-roomed house with a thin chalk floor; on this a hearth was set against the west wall of room C2*b*. The only evidence of walling to survive later rebuilding was a possible foundation slot along the west side of C2*a* and the robber trench of a substantial partition wall. A wide yard separated this building from

that erected on tenement *D*. D1 was a two-roomed house, set back just over 2 m. from the street frontage and at right angles to it. What little remained of its walling showed that it was of clay construction. There was a central, open, hearth in D1*b* and another against the east wall of that room. This is probably to be equated with the house built on the site by the abbot of Creake *c.* 1332.

15th century (Figs. 2B, 3B)

Only slight evidence survived for the clay-walled building B1, which has been shown only partially reconstructed on Fig. 2. It seems possible, however, that this formed the rear range of a building fronting onto St. Martin's Lane; but the absence of documentation and the fact that the corner was unexcavated leaves the situation unresolved. The ambiguity is expressed in Fig. 2B by showing the building (or buildings) as A and B.

The walls of Building C2 were completely rebuilt, although parts of the original floor remained in use. The south wall of C3*a* was of flint-and-brick rubble and the north, east and west walls were probably similar, although they were only represented by their robber trenches. This was probably a domestic room as it had a hearth set against the east wall. C3*b* had a flint-and-brick rubble north gable wall but the side walls were of timber set on clay pads. This room was used as a smithy, probably for the manufacture of knife blades. In it were a small smithing hearth and a possible annealing hearth divided by a partition. (Fig. 3b). A number of knife-handle blanks made from sheep tibia were found in various stages of manufacture, together with fragments of blades. The absence of tap-slag or other smelting slags and the presence of smithing slag confirms the suggestion made in 1976¹⁵ that the later medieval iron working industry of this area was a manufacturing industry relying on imported bloom, with no smelting on site. At the rear of tenement C fragmentary traces (a robber trench and an occupation level) remained of an ?outhouse (G1).

Building D1 was rebuilt as D2 and again this featured the use of mixed walling materials. A two-roomed range (D2*a* and *b*) was built up to the Oak Street frontage with a three-roomed range (D2*c* - *e*) built at right-angles behind it. D2*a* - *c* were built of flint-and-brick rubble while D2*d* and *e* again used clay walling. The different techniques might suggest that, unlike the front range, D2*d* and *e* were only single-storey, for the fact that D2*c* was rubble-walled despite being single-storied (it had an open hearth) is probably to be explained in terms of its status - as an open hall. Two ovens were built into the rear wall of D2*e* (kitchen) while, apart from the hearth in D2*c*, there was a side hearth (probably hooded) against the south wall of D2*a*.

Late 15th century (Figs. 2C, 3C, 6A)

By the end of the 15th century Building B1 had been demolished and the property left vacant prior to its rebuilding in the early 16th century. Whether or not A had been built on at this date is not known. C3 was rebuilt in flint-and-brick rubble to form C4 and C5. Each consisted of a single room with a wide entry on the street frontage; they were probably some kind of workshop. They seem to have still been under one ownership as they were clearly built as one unit, with a screen dividing wall and a common cess pit on the back of the east wall (Fig. 3C). There was no evidence of any form of heating. Alterations to Building D at this time appear to have been part of an abortive scheme of rebuilding finalised in the early 16th century as D4 and D5. A number of large pits were dug in D3*b* and a cess pit dug in the middle of D3*c*. This was soon backfilled and the open hearth replaced in its original position in that room.

Settlement was now becoming more intense off the main street frontage. Building F1 fronted onto St. Martin's Lane south of tenement *H*. It was of three rooms (F1*a* – *c*), was built of flint rubble and had a central, open, hearth in F1*b*. There was an entry in the east wall of F1*a*. Building G2 was built over the remains of G1 at the rear of tenement *C*. It was of comparatively humble construction. The west wall of G2*a* was of timber set on flint pads and had a simple beaten earth floor. The west wall of G2*b* was of flint-and-rubble; but the east wall of both G2*a* and *b* was probably carried on a ground sill as nothing survived except the edge of the clay floor of room *b*. There was no evidence for heating in the house. There were entrances into the yards of both tenements *C* and *D*. It is suggested that G was under the same ownership as tenement *C* but that there must have been a right of way via *D* (on the Oak Street frontage of which there was no through-passage) into an alley on the east side of *F*.

Early 16th century (Figs. 2D, 3D, 6B)

The site of B1 (and, we believe, A1) was now rebuilt as Building A/B2. It was only possible to excavate room *b* but this is presumed (on the basis of slight but suggestive archaeological evidence) to have been rebuilt as one room of a two-storied house, having a ground plan of two rooms with a central passageway, which extended up to the junction of Oak Street and St. Martin's Lane. A/B2*b* contained an internal cess pit and had a side-wall, semi-external, chimney stack.

The cess pit of C4 and C5 was now backfilled and a back-to-back fireplace inserted on the partition, which was rebuilt in flint-and-brick rubble (phases C6 and C7). A through passage was inserted at the north end of C7. There was possibly a similar passage at the south end of C6.

The rebuilding of *D* anticipated in the previous period was now completed. The evidence strongly suggests that room *a* was subdivided from the rest of the building to become D4. A through-passage was inserted between rooms D4*a* and D5*a*, and D4*a* become a small smithy (but manufacturing what is not known). In D5 the temporary cess pit in D3*c* was replaced by one in D5*a*. This had a light screen built around it. The walls of D5*c* and *d* were rebuilt in flint rubble and a fireplace was inserted between the two, incorporating a staircase.

A back-to-back fireplace was also inserted in building *F* at this time, between rooms F2*b* and *c*.

Mid 16th century (Figs. 2E, 3E and 6C)

Tenements *A/B* and *H* were amalgamated and then re-formed (perhaps only nominally) with the axis of sub-division turned 90° (*cf.* Figs. 2D and E). Building A/B2 was rebuilt to form the front ranges of two separate houses (A3 and B3). The entrance which had led from the through-passage into A/B2*b* was blocked and a four-roomed range was added behind B3*a* and at right-angles to it. The 'hall' and 'kitchen' (B3*b* and *c*) were heated by a back-to-back fireplace with a staircase on its north side. A drain led out through the south wall of B3*c*. B3*d* and *e* probably represent a storeroom and a ?dairy, the latter with a large storage tank in its centre, presumed to have been used for the cooling of milk. The fireplace in B3*a* was blocked, thus converting the street frontage room into an unheated ?workshop. It was probably at this period that the south parts of what had been tenements *A* and *H* were rebuilt as 67-69 St. Martin's Lane which, in a heavily mutilated form, survive as standing buildings.

The close relationships between the development of *B* and *A/H* is paralleled by that between *H* and *F* in this and the following periods. The demolition of *F2a*, for instance, was occasioned by the need to accommodate a stair-turret on the south-east corner of *F3b*, built to serve a newly introduced upper floor, but it also allowed access to be maintained from the east into the passage between tenements *H* and *B*. *F3d* was at semi-basement level and contained the foundations for a gable-end chimney stack serving the room above.

Building *C* was now converted into a single house (*C8*). The documentary evidence suggests that this took place in or shortly before 1570 when the property was acquired by William Brewster (p. 41). The partition wall was breached and a new clay floor laid across both rooms. The workshop entry to *C6* was blocked and that to *C7* narrowed. Both possible passageways of the previous phase were blocked. There was probably an entry against the south wall of *C8a* but the evidence for this had been destroyed by later disturbance. A 'closet' was built next to the rear entry in *C8b*.

In *D6a* a new brick-lined, barrel vaulted cess pit replaced the pit of the previous phase.

The west wall of Building *G* was rebuilt completely in flint rubble, just outside the line of the earlier wall. This was almost certainly associated with the introduction of a first floor as a cess pit was also inserted in *G3b* to serve an upper room.

Late 16th century (Figs. 2F, 3F)

There was a considerable contraction in the scale of building on much of the site in the late 16th and 17th centuries. This, however, would seem to reflect the falling social status of the site's inhabitants rather than any local decline of population. Building *C* was again subdivided in the late 16th century. An upper floor was inserted, supported on an internal frame represented by a line of posts and post-pads along each side wall. A staircase was built next to the chimney stack in room *C9a* which blocked the door into *C10a*. Thus house *C10* consisted only of a single ground-floor room, entered from the street, whereas *C9* consisted of one ground-floor room and two rooms on the first floor. Access into *C9a* was via a through-passage partitioned off from its south end.

A possibly three-roomed range (*E1*) was added at the rear of *D6* around this time. Remains were slight and it may originally have been no more than a block of store rooms or, perhaps, workshops.

Building *F* was extended by the construction of an east-to-west range at least 11 m. long. This involved the rebuilding of the north wall of room *d* and included the insertion of an internal cess pit in that room.

The beginnings of major changes in the site were foreshadowed by the dereliction and collapse of Building *G3*. This was in marked contrast to the clean sweep of debris from the succeeding phases of demolition, and the generally tidy nature of the floor and yard levels of the site. A new rear boundary wall to tenement *C* was constructed over the debris of *G*. This incorporated a cess pit at its north end to serve a 'privy' set in the north-east corner of the yard. No evidence for the superstructure of this survived.

Early 17th century (Figs. 2G, 3G and 6D)

The process of change continued in the 17th century. Building *B* was reduced in size but, significantly, it was the non-domestic rooms *B3d* and *e* that were

demolished before the house was divided into two units (B4 and B5). The entry from B3a was blocked and B3b and c were converted into one (unheated) room. An external cess pit was added at the rear, north-east, angle of B5. On tenement C a new passage, mirroring that in C9 (which was rebuilt) was inserted in C11.

There were substantial alterations on tenement D. A cess pit was dug outside the east wall of Building D7a. The south wall of D8 was completely rebuilt, incorporating a well in the south-east corner of D8d (kitchen). The back-to-back fireplace was rebuilt to incorporate a staircase and a bread oven on its south side. A closet was also built along the south wall of D8b. The east wall of E was rebuilt around this time. It incorporated a side-wall fireplace and so may indicate a conversion to a domestic use as a cottage (E2) at the rear of tenement D.

Room F7 was added to the east of building H (which at this time may have been subdivided to form two houses) and the stair-turret of F3 was demolished to clear a passage at its rear. F7 may well have consisted of a house with a single room on two floors. No evidence was found for a replacement staircase in this range and so it is presumed that, unless this range had already become derelict (for it was demolished in the succeeding phase) its upper floor was now reached from a staircase serving F5e. The construction of F7 may therefore represent an investment venture, built when the need to occupy the space with a stair-turret was no longer necessary.

Mid to Late 17th century (Fig. 2H)

Building E3 was rebuilt at this time as a brick-walled cottage, probably of two rooms. This was the first extensive use of brick on the site. All but room e of building F5 was now demolished. In the later 17th century the tenement was served by one of a complex of cess pits built up to the tenement boundary outside B5.

18th century (Figs. 2H, 3H and 4E)

Rebuilding and the adaptation of houses rather than demolition marks this period. Unheated rooms were added behind B5 and behind C9 and C11. These latter, probably of two storeys, served two houses (C12 and C13) although they were clearly of one build. This suggests that although in divided occupancy, the building was still under one ownership. A large shed was also built in the yard of C13 (room c). Building D was rebuilt and reduced in size to form a single east-to-west range (D9), with an open access from the street frontage into the yard.

DISCUSSION

An understanding of the development of the tenements is critical to the appreciation of the site and of its documentary evidence (p. 37) but only the boundary between C and D, which was marked from the 15th century by a wall, could definitely be proved on the ground. The rest have been suggested largely by extrapolation from later building lines, and the suggestion of earlier constraints. A full consideration of these must be left for the final report, but some examples can be given (with reference to Fig. 2). The development of building B, for instance, was unrelated to that of C. This implies at least a sub-tenement boundary, while the narrow width of B5b in the 18th century suggested a limit to the extent of tenement B along its east-to-west line. In the 13th century H1 had also abutted north on this east-to-west line and the west edge of this building has been taken to represent the north-to-south boundary between A and H. This is supported by the position of the 14th-century cess pit along this line on A, and it also matches the

suggested division of *A* and *H* based on the likely size of their houses. However, it should be remembered that not all of *A* and *H* could be excavated. The evidence therefore is incomplete and more tenuous than on other parts of the site. The east boundary of *H* and *C* was suggested by the fact that when *F* was extended in the late 16th century it was done to the north and east: a clear suggestion of a boundary along its west side. Building *G* had an entry into the yards of both tenements *C* and *D*, with a small yard to its east. It is suggested that this property was owned by the owner of *C* and that there was a right of way through the yard of *D* into an alleyway running along the east side of *F*1-3. The desertion of *G* after *c.* 1550 may, therefore, have been caused by the extension of *F*4 to the east blocking the presumed right of way.

The general development of the site is dealt with by Helen Sutermeister (pp.37-8); two points, however, require stressing here to set the scene for what follows. The dense settlement of the site from the late 15th century, represented by the construction of *G* in the yard of *C* was unexpected, but the intensification of settlement in this area at this time was possibly stimulated by the movement north of the river of the weaving and dyeing industries from Westwick. A further period of prosperity is suggested in the mid 16th century, with the division and expansion of tenements *A* and *B*, the change in status of *C* from two workshops into a house, and the extension of *F*.

The demolition of *G*3 in the late 16th century, followed by the contraction of *B*3 and *F*4 in the 17th century, although an indication of dereliction on the site and possibly a lowering of social status should not be taken as indicating a fall in population on the site at this time. This would have been remarkable at a time of tremendous population growth in the city. (Campbell cites evidence for the population trebling from around 10,000 in the later 16th century to nearly 29,000 in the late 17th century.)¹⁶ Although the only new building that occurred was the construction of *E*2 and *F*7, tenements *B* and *C* (and possibly *A* and *H*) were subdivided so that the number of households on the excavated site increased from seven in the early 16th century to at least nine in the early 17th century. This process of sub-division is now well recorded from excavations in the city, although there are few surviving examples.¹⁷

What cannot be established from the excavation is whether the sub-divisions were accompanied by an increased use of first floor and attic space, thus restoring some of the lost ground floor area (see Appendix p. 49) but there is certainly evidence in the 18th century for expansion into small rear ranges. That attached to *B*5*b* was probably a single-storey lean-to serving as a pantry or scullery while those of *C*12*b* and *C*13*b* were two-storied blocks with accommodation over pantries or sculleries (Fig. 4E). A fireplace and oven were added to each of the latter in the 19th century.

Despite the wide social range that the houses represent at all periods it is noticeable that even the poorest (*G*2) in the late 15th century is considerably larger (with a ground floor area of *c.* 33 sq.m.) than contemporary buildings on 302N, Alms Lane (average of *c.* 25 sq.m.)¹⁸, or on 149N, Pottergate (average of *c.* 19 sq.m.)¹⁹. This would seem to indicate a decreasing pressure on land, with a commensurate increase in house size away from the centre of the city. Increasing population pressure in the Oak Street area from the late 15th century was confined within the pre-existing boundaries of the large tenements, whose owners completed the build-up of the street frontage (*B*1), and began to build within the yards. Although one can see the same trends in building development occurring as a

response to population pressure they appear here in a more expansive form. However, as the pattern of settlement develops in the city, the differences in scale become less apparent. On other sites where there was room to expand we see, in the later 16th century, an increasing specialisation in room use, frequently marked by the addition of an extra room. This increased the average size of the houses on 302N (Alms Lane) to *c.* 50 sq.m. As the frontage of 351N had already been built-up by this stage this could not occur, but one can see the trend reflected in the insertion of upper floors and possibly in the increased use of roof space as indicated on the hypothetical reconstructions by the insertion of dormers.

By the 17th century the tremendous population pressure of the time meant that local differences were possibly becoming ironed out. Much of the ordinary housing in the city was reduced to its lowest denominator – the single roomed (but not necessarily single-storied) plan. The single-room ground plan of the houses on 351N fall into the general size bracket of the type, ranging from *c.* 12 sq.m. to *c.* 20sq.m. with only B (at *c.* 35 sq.m.) significantly larger. The exact size of course was dependent on the size of the ‘parent’ building. Houses of this type on 302N averaged *c.* 15 sq.m. while the largest surviving example (2 and 4 Lion and Castle Yard) is of *c.* 18 sq.m.

Because of the freer availability of land when tenements were being established the sizes of the houses up to the late 16th century may therefore be considered as being disproportionately large for their class. Improvements in housing elsewhere in the city negated this advantage in the late 16th century; and the population pressure of the 17th century finally levelled the standing of housing to that seen elsewhere. The evidence is limited but the argument serves as a working hypothesis for future work.

In 1977 it was suggested that the pattern of rebuilding over a site could give an indication of the nature of tenure of the properties. On 302N (Alms Lane), development took place in well-defined periods. It was suggested that the houses were probably all rented and under one ownership until the 17th century so that the single landlord was able to redevelop the site as one operation. On 283N (Heigham Street), building C was rebuilt from the 14th to the 16th century in such a manner so that one room of the house could continue to be occupied throughout the rebuilding. This was suggested as being indicative of owner-occupancy on a relatively lowly scale.²⁰

The pattern is again different on 351N: with a wide variety in building plan types that indicates a commensurate diversity in the social range of occupancy. This was particularly true of the early 17th century. At this time C11 consisted of a single ground-floor room, while all other houses on the site were of two or more storeys. These, in turn ranged from the single room ground plan of B4, and 5, D7 and F7 through the three-roomed plan of C9 to the four-roomed range of D8. The impression is of a highly mixed socio-economic occupation, with a number of quite substantial tenancies on A, B and C. Tenements D and probably F were likely to have been owner-occupied (although not all of F could be excavated). The same may also be true of tenement C in phase C8 when the property was owned by William Brewster. The history of D is of special interest, probably having been the house of the abbot of Creake from *c.* 1332 to 1506. In the late 15th century it had a ground floor area of *c.* 107 sq.m. This compares favourably with the ground floor area of Pykerell’s House (St. Mary’s Plain) at *c.* 95 sq.m. which is known to have been built in the late 15th century by a wealthy mayor. The subdivision of the property in the early 16th century and the conversion of

D4a into a smithy is almost certainly connected with the re-use of the property following the dissolution of the abbey in 1506 after an outbreak of plague. This event must have interrupted the scheme of rebuilding planned by the abbey in the late 15th century but never completed. By 1540 the building had passed into the hands of a succession of quite prosperous worsted weavers and dornix weavers. The house was inadequate for their business needs and so storerooms or workshops (E1) were constructed at the rear of the house in the late 16th century and the hall modified by the insertion of a large internal closet in the 17th century (?for storing cloth). In the mid 16th century the owner of tenement *A/B* (Robert Green) would appear to have acquired tenement *H* and redeveloped his property, perhaps living himself in Building B3, whilst renting out the houses rebuilt on *A* and *H*. The owners took advantage of an influx of population in the late 15th century and of general population growth in the late 16th and 17th centuries by subdividing their investment properties into more than one unit, and also by building further houses in the yards of their tenements. (In the case of owner-occupied *D* this was done by the conversion of the store-/work-room E1 into the cottate E2.) In this period of intense pressure the non-compact, almost rural, plan of B3 was anachronistic and it was therefore demolished.

The excavation has again added considerably to our knowledge of methods of building construction. That D1, for instance, although probably built as the town house of an abbot (albeit from a poor house), was built of clay is a reminder that clay-walled houses should not automatically be assumed to be of poor status; they appear to have been a standard type of house, from perhaps as early as the late 12th century until the early 16th century. Work in 1976 had suggested a general change in the early 16th century from the use of clay sleeper walls to flint rubble, the latter associated with the introduction of built fireplaces. The results from 351N (and from 149N, Pottergate) suggest that more substantial houses were being rebuilt in flint-and-brick rubble from the later 15th century – at least on the street frontages and for more important rooms such as halls, e.g. building D2 where D2c and d continued to use clay walls until the early 16th century. The fact that building F1 and room *b* of D2 were walled in flint-and-brick rubble whilst being single-storied suggests that the critical factor was indeed status rather than the number of storeys.

The introduction of built fireplaces in the early 16th century seems to have been almost universal in Norwich. Before then heating was by an open, central, hearth or (as in D2a) by the technically more developed side hearth, which is assumed to have had a hood; a form that allows the insertion of an upper floor. As in D2 both types could be used contemporaneously, and the open hearth persisted up to the late 15th century (as in F1) in single-storey buildings. The back-to-back fireplace was frequently accompanied by a staircase built in the angle between it and a side wall. Often this, (or its alternative, the stair-turret) is, as in F3, the earliest definite indication of the presence of an upper floor. If the upper floor was inserted by the demolition of the side walls down to first-floor level, no trace of the operation need appear on the site. However, two other methods of inserting an upper floor were seen on 351N. In G3 the demolition of the west wall suggests that the joists were set into the east wall and then laid across the rebuilt west wall. In C9/10, to obviate the need for major structural alteration, an internal frame was constructed to support the floor, represented by a line of posts and post pads along the side walls. It should be stressed that the introduction of a back-to-back fireplace alone cannot be

taken as evidence for an upper floor. There is, for instance, no evidence for an upper floor in F before the introduction of the stair-turret in the mid 16th century. (Appendix 1 examines further the problems of interpretation raised by the insertion of fireplaces and floors.)

Because of the density of the number of houses on the site a large number of cess pits were excavated ranging in date from the late 15th to the late 17th century. We have very little evidence for the use of lined cess pits in the city before the 15th century, although this may be due to the small number of early houses that have been examined. A single unlined cess pit found in tenement A in the 13th/14th century phase may represent a more temporary arrangement than in use. The later pattern of development has confirmed that seen in part on other sites (e.g. 149N, 281N and 302N).²¹ Until the late 16th century the cess pits were either internal (D5a), internal but fed by an external chute from the first floor (A/B2b), or attached to the rear wall of the house (C4/C5). All were lined in flint-and-brick rubble, and the internal types had a brick dome over them. The earliest example of a 'privy' constructed in the yard of the tenement away from the house is of the late 16th century on tenement C. This type becomes standard in the 17th century, with the exception of the cess pit built against the rear wall of D7a in the early 17th century. A group of three were successively built at the junction of the yards of B, C and F, one to serve each of those tenements.

This excavation has shown once again that, although in terms of the development of the medieval and later city no one site is likely to be typical of more than its immediate locality, archaeology can throw considerable light on the general trends of e.g. population growth or of building history. The past seven years' excavation has demonstrated this most clearly for the period after c. 1450: for this is when the city's first great rebuilding occurred, destroying in the process most of the evidence for earlier structures. The extent of this 15th-century destruction means that we still know little of the form of e.g. 12th- or 14th-century houses in the town but because of it (and as a consequence of architectural as well as archaeological investigation) our knowledge of late medieval and early modern housing has been revolutionised.

It is to the final writing-up of our excavations that a large part of the Norwich Survey team will now turn, for the responsibility for whatever future excavation will take place has been passed, with relief, into others' hands. Theirs is the possibility of discovering areas of the city (such as the Cathedral Close) where the remains of pre-15th-century housing may remain; our certainty is that by 1982, with our publication complete, we will have written not just a new chapter in the history of Norwich but provided a completely new perspective on urban development in general.

M. W. A.

DOCUMENTARY RESEARCH AND THE OAK STREET SITE

Introduction

Over the last two years the Norwich Survey (financed by a generous grant from the Department of the Environment) has conducted a systematic programme of research into the voluminous documentary records of the medieval and post-medieval city, and this report is the first fruit of our work. Whereas notes on the history of previous sites published in *Norfolk Archaeology* have been based mainly

on random information gleaned from partial searches through the 10,000 surviving medieval deeds, we have now calendared the majority of these records. The Oak Street report is therefore drawn from indexed material and we can be reasonably confident that all the available information on the medieval ownership of these properties has been searched.

Oak Street lies in the parish of St. Martin at Oak in *Ultra Aquam*, a long, thin parish running from the bend of the river, where the city's first mills stood, to the City wall at St. Martin's Gate and some way beyond. Oak Street was the only road in the parish which merited the description 'King's Highway', and the houses were a linear development along it. The river formed the western boundary to the parish and it therefore attracted a number of quite prosperous craftsmen, especially dyers, tanners and fishermen, who owned waterside tenements in the late 13th and early 14th centuries. There were even a small group of country gentry. Sir Bartholomew Hauteyn and Robert de Borgywoin had properties in the south-east of the parish, and Sir William de Norwich, an official of the King's court with local connections, owned a stone-built house on the river. The parish was, however, on the fringes of the city, far from the market place, and the taxation records indicate that it was only moderately wealthy. In a subsidy on the value of the church taken in 1427-8 it paid the minimum sum, 20 shillings, and the surviving church fabric shows little sign of wealth. Its inhabitants, however, paid the respectable sum of £43 in a tax of 1472, which can be compared with the £106 paid by the city's wealthiest parish, Peter Mancroft. In the Subsidy of 1576, which covered the whole city and suburbs, St. Martin's came 18th on a list of 43 parishes.^{2 2}

St. Martin's, therefore, was a fairly typical parish: neither particularly rich, nor particularly poor; not in the city centre and not especially densely settled. Its documentation is also representative, and provides a good opportunity to take stock of the potentialities and problems of the topographical records of the city as a whole before we go on to discuss the excavated site in detail.

Contrary to normal expectation that the oldest periods must be the least well documented, the City's property records are much fuller for the years around 1300 than for those around 1500. This is a product of its constitutional development: the right to control transfers of burgess property and to hear the disputes arising from them was one of the most important rights ceded by the crown to major cities in the course of the 13th century. The recording of deeds on the City Court rolls was primarily a matter of civic pride, and only secondarily a safeguard for the purchaser who sought safe custody of the proof of his ownership. Before about 1300 the practice of enrollment seems to have been virtually universal and some 3,500 deeds survive before this date, an average of 250 per annum. Between 1300 and 1346 the number of deeds average only 60 per annum and in the later 14th century less than 50. The rolls are lost between 1347 and 1377; in part, perhaps a result of the years of plague, but in part certainly the fault of careless keepers of the city muniments in the late 18th and 19th centuries, for the early antiquary, John Kirkpatrick (died 1728) had access to some now lost.^{2 3}

The 15th century is very poorly covered by deed evidence (only about 1,000 survive) and topographical reconstruction for the later medieval and post-medieval periods depends on the landgable lists – the records of a minor tax on property owners which was collected by the City Chamberlains. The list which survives for 1570 is the most complete and useful, since the officials progressed up and down each street in a systematic manner and often cited the names of previous owners

– a considerable help in trying to trace the tenement back to the previous lists of 1541, c. 1490 and 1397.²⁴ Through these lists we can reconstruct the ownership of road frontages from some fixed point, such as the street corner, but they do not give the detailed information available from the deeds for the earlier period, which record both the description of the property actually sold, and the names of the owners of the adjoining properties or of topographical features (the abuttals).

The pattern of documentation is well illustrated on Oak Street, where we have very precise evidence of the first settlement of the area in the early 14th century, but very sparse information for the remainder of the medieval period. Two of the five properties can be traced through all the landgable lists, but the other three can be identified again only in the early 16th century and we cannot be so certain of the boundaries of these properties as of those in the records two centuries earlier. There is, however, much remaining work to be done on post-medieval deeds, leases and other documents, and more may yet be discovered about these tenements.

The most difficult problem in the interpretation of the topographical evidence lies in distinguishing owner-occupied properties from those which were rented out and is well exemplified on Oak Street. We know that several of the properties were owned by tanners in the early 14th century, but cannot be sure that they were used for tanning. This was a period of high population growth when many citizens acquired tenements as an investment and rented them out to others. If any property is the only one known in the possession of the tanner we can be fairly confident that it was his workplace and it is therefore important to build up a complete name index of property holders throughout the city. This is currently being undertaken by computer, but is not yet complete and we hope eventually to incorporate other sources of evidence: wills, taxes, lists of civic office holders and other municipal records which can help identify the property in which a man lived or worked.

The development of the excavated site (for locations, see inset to Fig. 6; for tenement layout, Fig. 2).

The site of the 1977 excavations occupied a plot of land on the east side of Oak Street on the corner of St. Martin's Lane, which runs across the north side of the churchyard of St. Martin's. It is clear that the east side of Oak Street was settled later and was less desirable or valuable than the west side, where the tenements all had river frontages. A large number of 13th-century deeds refer to the riverside properties, and one sold to a tanner in 1288 fetched 21 marks, a high price for the period.²⁵ By contrast the earliest deeds which deal with the excavated site are dated 1300 and, in view of the high survival rates of late 13th century records, it seems likely that the area was unoccupied until about this date. The reference to St. Martin's Lane also suggests that occupation was intensifying in the first decade of the 14th century. In 1300 it is known simply as 'the Common Lane by the Cemetery of St. Martin's', but in 1308 had gained an identity as 'Horlane'. There are two interpretations of this word, from the Anglo Saxon *har* for boundary, perhaps recording the southern edge of the open grazing land, or from *boru*, for filth or dirt, which might well reflect the activities of the tanners who, as we shall see, owned the newly established tenements.²⁶

It seems probable that, until the late 13th century the whole of the very large area between the city wall on the north, Oak Street on the east, Pitt Street

on the west and St. Martin's Lane on the south was still open land. The boundary ditch excavated in 1973 on the edge of this lane probably marks the southern limit of this land.²⁷ Most, if not all, belonged to the Great Hospital and was known as the Gildencroft, but there is no clear evidence that the Hospital's holdings extended as far south as the excavated site. The Gildencroft is not mentioned in the abuttals of early deeds relating to the site, nor did these properties pay any quit rent to the Hospital. (For a tentative reconstruction of the medieval extent of the Gildencroft see inset to Fig. 6.)

During the last decade of the 13th century, at a time of high population pressure, encroachment began on this open land with the settlement of tenements fronting onto Oak Street. The first to be built up were those north of the excavation site which were clearly carved out of the Gildencroft and paid quit rents to the Great Hospital. The tenement immediately north of our site, a 'messuage with buildings' sold for 60 shillings in 1290 and abutted east on the Gildencroft. A deed for the same property in 1577 gave the width between the road and the Gildencroft as 52 yards and examination of the large-scale Ordnance Survey plans of 1885 suggests that this was the average length of encroachment between St. Martin's Lane and Jenkins Lane. Further north the new properties were very much smaller: one measured in 1310 was only 20 feet wide along Oak Street and 21 feet deep.²⁸

In the late 16th and early 17th centuries there was a second wave of encroachment which roughly doubled the depth of settlement and established Quakers Lane (first mentioned in 1615) and its eastern boundary. This too reflected a period of population explosion when immigrants from the county and refugees from the Low Countries were pouring into the city.²⁹

It is evident, however, from Cleer's *c. 1696 New Mapp . . . of Norwich* that only the north side of St. Martin's Lane and the north end of the west side of Quakers Lane was built up immediately. The north side of St. Martin's Lane beyond its junction with Quakers Lane and the east side of the latter were still lying open in 1746, even though building had occurred between 1727 and 1746 to the west and south of the two lanes (evidence from maps published by Corbridge and Blomefield). Such archaeological evidence as there is supports this pattern of expansion well: the earliest occupation on site 161N was one of the 17th century,²⁷ while a standing building on the junction of the two lanes is probably of *c. 1650*.

The excavation site probably comprised the major part of a close measuring the standard 52 yards in width from east to west and approximately 37 yards north to south along the Oak Street frontage, sizeable enough to be useful as a private paddock or orchard. By the turn of the 13th century the documentary evidence suggests that it had been split up for development into five or six separate properties (the sixth remains hypothetical as it would have lain outside the excavated area, to the east). The archaeological evidence agrees, with the establishment of property boundaries and the earliest evidence of occupation about 1300. There were two long tenements (*C* and *D*) fronting onto Oak Street and stretching back as far as tenement *F*, which fronted south onto St. Martin's Lane. The other two properties facing onto the lane (*A/B* and *H*) were more compact, a point clearly proved by the abuttals of their neighbour, tenement *C*, which had a southern boundary with all three: *A/B*, *H* and part of *F*.³⁰ This is the sort of development one would normally expect around cross streets.

The archaeological evidence shows that the Oak Street frontages were solidly

built up by the early 16th century; but it may have been that the properties along the lane were less densely settled, for the amalgamation of *A/B* and *H* in the mid 16th century led to redevelopment along St. Martin's Lane and there was large scale rebuilding of *F*.

The St. Martin's Lane frontage from the 14th to the 17th Centuries (tenements A/B, H and F)

The corner tenement *A/B* is first mentioned in 1300 as the property of Henry de Wroxham the tanner, who was then selling, or more probably mortgaging, the property to Ralph de Keswyk, citizen and cobbler, for four months later the same Ralph transferred the property back to Henry. It is not clear, however, whether there were buildings on the site, for Ralph described it only as a piece of land with appurtenances and an abuttal of 1310 referred simply to 'land', still in the possession of Henry de Wroxham. He, or perhaps his son, was still in the parish in 1332, when a taxpayer of the same name was rated for the substantial sum of 4 shillings.^{3 1}

The next property to the west, which can be equated with *H*, was certainly built up by 1300, when it was described as a messuage with buildings belonging to Thomas de Lincoln. He was probably a second generation immigrant to the city, being the son of Richard de Stalham, and was also a tanner.^{3 2} By 1308 this property had passed to Ralph Reymund, who had married Thomas' daughter Christiana, and comprised a messuage with two shops along the St. Martin's Lane frontage. The eastern shop was sold that year to Simon de Tacolneston the baker and 18 months later Ralph sold the remainder of the messuage and its buildings, probably including the other shop, to Simon.^{3 3}

The third property along St. Martin's Lane (*F*) is known only from the abutments of other properties, and probably extended outside the area excavated, so we cannot be sure of its eastern limits. It might have continued to the full 52 yard width of the enclosed block already discussed, but more probably the lane frontage was about the same length as in *A/B* and *H*, leaving room for another tenement to the east of our site. It is, however, clear that *F* extended north in a dog-leg shape and formed the eastern abuttal to *C*, (cf. Figs. 2A and C, remembering that house G is on tenement *C*). Its owner, from at least 1306 to 1313 was Arnold le Clerk of Staunford, although Simon de Tacolneston had an interest in it, perhaps as tenant, early in 1310.^{3 4}

Although we know the names and trades of their owners, it is more difficult to establish how the properties along the lane were used. The three leather workers who held *A/B* and *H* were all fairly prosperous men who had other tenements in the city and were not necessarily living or working on these. At this period in the history of Norwich men concerned with the primary production of leather, the tanners, enjoyed great wealth and prestige and some served as City Bailiffs. We find tanners owning shops in parts of the market reserved for the sale of finished goods: in the Shoemakers' Row, for example, or in the White Leather Market, where leather clothing was sold. Clearly the wealthier tanners were also involved in the secondary production of ready-made goods from the hides cured in their tanning pits.

In the case of Thomas de Lincoln for example, he had a waterside property in the same parish, which was probably his tannery.^{3 5} The messuage with shops on St. Martin's Lane had, as far as we know, no water supply, and may well have been used as accommodation and workshops for Thomas' employees making

any of the multitude of goods for which leather might be used. Alternatively Thomas might have rented this property to a craftsman of some entirely different trade. The sale of this tenement to a baker, Simon de Tacolneston, might suggest that it was rental property, for Simon is known to have had several other holdings and it is unlikely that he established a bakery on this site. Bread was sold by law only in the market and most ovens were situated very much closer to the market square: along Pottergate and St. Stephen's Street.

Only one of the properties along St. Martin's Lane can be traced through the next two centuries. By working back from the landgable of 1541 it seems almost certain that *H* was converted into a textile working tenement by the mid 14th century; a change which reflected the overall movement of the civic economy from leather to textiles as the most important manufacturing industry. Robert de Bromholme held it before 1397, but in the landgable list of that year it was owned by one John Hockam and described as a piece of land with 'tenteys', probably cloth-drying racks or poles, for one John Hockham (probably a son) was enrolled as a fuller in 1424-5. During the third quarter of the century it passed into the possession of a very much more important member of the civic community, Gregory Clerk the Mercer, who served as Sheriff in 1477. He was an outstandingly wealthy man, who began the construction of the south aisle of the church of St. Michael Coslany, the most splendid chantry chapel in the city.^{3 6}

There is no question that Clerk lived in this property, for his house in Dial yard on Coslany Street is well known from illustrations, and was luxuriously appointed. The Oak Street site suggests, however, that even a merchant of this importance was concerned with the production of cloth, for it still contained tenters in the landgable list of *c.* 1490. Clerk had died in 1479-80 and this tenement went to his wife Agnes, who married Robert Thorpe, alderman and mercer. It is known that they lived in the adjoining parish of St. Michael's, probably in the same house as Gregory Clerk – for Agnes Thorpe, who survived her second husband, bequeathed her 'dwelling place' to the son of her first marriage, another Gregory Clerke 'on payment of 40 marks' and the St. Martin's Lane property went with it. The younger Gregory became Mayor in 1505 and died in 1516, and the landgable of *c.* 1541 records that this tenement 'formerly Gregory Clerke' paid nothing because it was amalgamated with that on the corner. The archaeological evidence for the mid-16th century suggests the amalgamation of *A/B* with *H* and their nominal sub-division on a different axis, whereby *B* was developed as a long range running backwards from Oak Street and the remainder of *A* and *H* were rebuilt to survive as 67-69 St. Martin's Lane. These cottages were perhaps built for renting out and, if so were probably constructed after the death of Gregory Clerke the younger.^{3 7}

The owners of the corner tenement *A/B* in the early 16th century do not appear to have been sufficiently substantial to have undertaken this redevelopment. Richard Calff, who held it *c.* 1541, was not an enfranchised citizen and nothing is known of him, while his predecessor, Hugh Dodman, was a tailor enrolled in 1506-7. The most likely developer was Robert Green, who owned it sometime before the landgable list of 1570. He was enrolled as a mason in 1533-4 and described variously as a mason and bricklayer; we know that he owned at least one other tenement in the parish (one of the valuable riverside properties) and he was recorded as the third largest taxpayer in the subsidy of 1576. He would probably have had the funds and the practical expertise to rebuild the property, and may well have done so with his own hands.^{3 8}

The landgable lists record no separate payments for *A* and *B* after their re-development so it may be that they continued in the same ownership with the dwelling house on *B* and rented property on *A/H*. The next owner was one Richard Fitt, a carrier enrolled in 1571-2, who held it in the landgable of 1570. He, too was a reasonably wealthy man and among the top tax payers of the parish in 1576. By 1590 ownership of *B* had passed to Robert Claphamson, and it was described as two tenements, including that formerly of the Clerke family, but excluding Robert Green's development on the south, which was now separated. Little is known of the new owner, for he was not enrolled and may well have been a Dutch immigrant, but he was wealthy enough to own other properties. In 1612 he sold out to one Charles Rawling, but the history of the property cannot be traced any further. Neither do we know who owned *F*, nor how its development related to that of the other properties along St. Martin's Lane, but the final sale by Claphamson of *B* mentioned 'various tenements' to its east, suggesting multiple ownership by the early 17th century. This conflicts with the present interpretation of the archaeological evidence, but the point may yet be clarified by further evidence from the 17th century documents.³⁹

The Oak Street frontage after 1300 (tenements C and D)

Returning again to the early 14th century we can consider the less complex history of the property known as *C*, which contains the earliest buildings excavated on the site. The first identifiable owner of this property, Cecily Thirken, is known only from an abuttal in 1300. Seven years later Nicholas Thurbern, probably her son, and his wife Alice transferred it to John de Fuldone, who in turn sold it to Galfrid Jaumbel of Drayton and Heylesdon in 1310. He transferred it to Edmund de Derham in 1312, the first owner whose trade we know: he was a *lanator* or wool dealer. The next year it was sold again, to Nichola, the widow of Adam Berney of Southreppes, Egidia her daughter and John Qwyt. After these rapid transfers of ownership in a brief period of 13 years the tenement is not mentioned again in any of the deeds extant before the break in the record in 1346. This suggests a period of property speculation in newly enclosed land, which fits well with other evidence that the early 14th century was a time of rapidly increasing urban population. It is remarkable how many of these owners have surnames drawn from rural villages and who were probably first generation immigrants.⁴⁰

No owners of the later middle ages have yet been identified. When the records resume in the early 16th century this tenement had been divided into two parts on which houses *C6* and *C7* stood. One of them belonged to John Wright before 1541, but had passed to Steven Rogers by the time of the landgable that year. The other belonged to John Parson in 1541 and to Thomas Rose shortly afterwards. None of these men appear to have been of any importance and none can be securely identified in the franchise record; but they were probably small craftsmen using *C6* and *C7* as workshops. At some time between 1541 and 1570, however, the two properties were bought by a wealthy mercer, William Brewster, and were combined again into one dwelling house (*C8*). His activities are easily identified in the archaeological record by the blocking of an external door, the creation of an internal one and the laying of a single floor through the building.

By the time of the landgable of 1570 this property belonged to Richard Bange, a citizen and tanner of substantial wealth. His goods were assessed at £16 in the tax of 1576, the highest sum recorded in this parish. In view of the humble scale

of the buildings, however, it seems unlikely that Bange actually occupied this tenement while the archaeological evidence for redivision and the addition of an upper storey during this period suggest conversion back into rental property (C9 and C10). By 1626 the tenement had passed to Mr. Garnesham and nothing thereafter is yet known of it.

The remaining area of the site, that known as *D*, is in many ways the most interesting. Archaeologically it produced the richest and most substantial buildings on the site and the documents confirm that its owners were men, or women, of importance. The earliest who can be identified is Sabine de Kyrkeby, a member of a family which occurs frequently in the early deeds, who was mentioned in an abuttal of 1290. Other probable owners or tenants include William Curtesy the fisherman in 1301, and William de Hardingham in 1314, but from 1310 to 1320 there are frequent references to Sir William de Alderford, the chaplain.^{4 1} In the landgable of 1397, however, the property clearly belonged to the Abbot of Creake.

No deeds preserve the date at which this property passed into ecclesiastical hands, for the Abbey no doubt preferred its own cartularies to the City Courts for recording its title. One cartulary does indeed survive, but is not complete and makes no mention of the Norwich property. We do, however, know that the Abbey acquired a city tenement about 1331 and it seems unlikely that they had more than one in Norwich. No other has been found in the records searched so far and the value of their holdings in the city as assessed in an ecclesiastical taxation of about 1400 was only 7 shillings and 7 pence. The property was first mentioned in an account roll of 1331 when it was evidently the subject of some legal dispute; the Abbey spent at least 31 shillings in legal fees at Norwich and the Prior was forced to undertake a journey to London on its account. The problem was finally settled in March of 1332, when William Quarles and Laurence Hemmyng paid a fine for the licence for alienation in mortmain of one tenement in Norwich and some land in the county to finance a daily mass for their own souls. Both men had previously been patrons of the Abbey but nothing is known of them in Norwich. It is doubtful if either were citizens and, if the property they gave was that in Oak Street, they had probably bought it for the purpose.^{4 2}

Creake was a small, poor and ill fated house situated about 30 miles north-west of Norwich. It had been founded as a hospital during the reign of Henry II by Robert de Nerford, governor of Dover Castle, but was converted to an Augustinian Priory about 1206. Patronage passed to the king in 1231 and he increased its endowments and elevated the house to the status of an Abbey, but it was never rich and rarely well administered. The three surviving accounts for 1331, 1346 and 1361 show income between £130 and £140 per annum and expenditure somewhat higher. Discipline was equally poor: twice in the 14th century the Abbot or his canons were sued for assault and theft and once even for forgery, and the number of brethren by the end of that century was only seven.^{4 3}

In 1484 a fire broke out. A manuscript describes the Abbey as 'petuously brent,'^{4 4} and most of the buildings were destroyed. Despite donations from the King and Sir William de Calthorp the house was so poor that it had to abandon the nave, and repairs to the east end of the church were finished off in wood. In 1506 the final disaster struck: the Abbot and all his canons died of the 'sweating sickness'. As there was no chapter to elect a new Abbot the house was dissolved and reverted to the Crown. Most of its lands went to the endowment of Christ's College, Cambridge, but the tenement in Oak Street was still 'in the hands of the king' in the landgable list of 1541.

The tenement was probably used as a town house for the Abbey rather than as a source of income. At least 42 ecclesiastical houses, most of them in the Diocese of Norwich, had some property in the city and most of these properties were small. The ward of *Ultra Aquam* was especially popular: the Abbey of Walsingham had a house just to the north of the excavated site on Oak Street and the Prior of Coxford had another on St. Martin's Lane.⁴⁵ There was a constant need to house monastic officials visiting the centre of the Diocese on business; in the account of 1331 alone, the Cellarer of Creake visited the city six times, the Abbot at least once and the novices were sent for confirmation.

It seems, therefore, highly likely that the earliest, 14th-century building excavated on the site represents that put up by the Abbey shortly after 1332, but the Abbey may not have kept the property throughout the medieval period. In the landgable of 1490 it is said to have been held by Katherine Aleyn, formerly John Prentys the chaplain and 'previously the prior of Creyk'. Perhaps the canons had become so impoverished that they had been forced to mortgage their city property (a tenant would not normally be recorded on the list). If so, it had been redeemed by the time of the dissolution and thus came into the king's hands. We have no documentary evidence for the period between 1506 and 1541, but the property was probably rented out by the royal officials, and the use of D4 as a smithy doubtless dates from this time.

The crown passed the property to one William Norton soon after 1541, who can probably be identified with the worsted weaver who enrolled in 1531-2 and thenceforward it remained the property of textile weavers, the most affluent and influential craftsmen in the Tudor city. Edmund Stokes, worsted weaver, had it around 1570 and it may have been he who added the three-roomed range (E1) at the rear of the property. By the landgable of 1626 it was the property of Nicholas Palmer junior, dornix weaver, and may well represent the property bequeathed him by his father Nicholas, who died in 1612; the 'messuage and tenement wherein I dwell with all the houses, yards, gardens, and grounds'. The elder Nicholas, however, had bought another property immediately to the north in 1609 so the identification is not certain.⁴⁶ The father described himself as a dornix weaver and was an extremely rich man; he left £100 to Nicholas and £60 to his son Joseph, £60 to an unmarried daughter, £20 to a married daughter and donations to charity beside the landed property.

Conclusion

In general the archaeological and documentary work on this site have proved happily complementary. By comparing the two we have been able to work out how and when the land was first converted from open grazing into built up messuages, and how their boundaries were arranged. We have explained why tenement *D* should have been the most solidly constructed on the site by tracing its ownership from the Abbey of Creake to the wealthy worsted producers of Tudor times. In at least one case it has been possible to pin a single archaeological stratum to a specific name and date: the floor level spread through the buildings of tenement *C* when William Brewster the mercer combined two smaller holdings shortly before 1570. Neither excavation nor historical research alone could produce this sort of detailed interpretation; it is possible only when they are combined.

It is remarkable, too, how much of the general economic development of the city is reflected in the development of one small site on the unfashionable side of an outlying street. The periods of growing population at the turn of the 13th century and the end of the 16th are shown in the settlement and redevelopment

of the area; building methods and materials illustrate the improving standards of living; while even the changing industrial base of Norwich is reflected, as the tanners who first owned much of the site give way to the masters of the booming textile industry.

There is, of course, much more information to be gleaned from the documents. In particular, little work had been done on those after 1500 and we may well discover more about the owners of this date. It is also frustrating that the 15th century deed material is so sparse that we have been unable, for example, to identify the interesting bladesmiths' shop then established on C. The chance preservation of a single deed, however, can often provide the vital link between the landgable lists of the 16th century via that of 1490 to the list of 1397. It is to be hoped that such a clue may yet be found in the early 16th century deeds or other material not yet explored.

H. S.

APPENDIX

Introduction

The last two years' excavations, particularly those on Heigham Street, Alms Lane and Oak Street, have raised as many problems about the nature of housing in Norwich between the 15th and 17th centuries as they have solved. Foremost among these unanswered problems are those relating to the validity of reconstructions based on excavated evidence (e.g. Figs. 6 and 7), particularly where questions of the adaptation of late medieval buildings to early modern forms have been raised. The essence of these problems (compounded by considerations of walling materials and heating methods) is whether, on the archaeological evidence alone, it can be stated with reasonable certainty what the form of a building was: for in attempting to understand the physical mechanisms by which the city adjusted to its often rapidly growing population it is essential to know whether the building was storied or not and, if so, what its total floor area rather than its ground floor area was.

That no illumination has so far been forthcoming from a parallel study of standing buildings in the town is not altogether surprising. There is, admittedly, evidence of large-scale rebuilding in the town between *c.* 1470 and 1530 (the period when 'modernisation' was under way)⁴⁷ but the surviving buildings are invariably of the wealthier classes and are, almost equally invariably, built in the innovatory form i.e. storied throughout and heated by chimneys. Equally it is almost in vain that one looks for architectural evidence of what Mercer⁴⁸ has described for the countryside as the

very important difference between vernacular buildings [of *c.* 1400 – 1550] and of later periods. Many vernacular houses of the late 16th century onwards incorporate parts and even whole skeletons of late medieval dwellings because these parts were sufficiently well-built to be worth keeping and adapting. Late medieval vernacular houses on the other hand, rarely if ever incorporate anything of an earlier building, and one must suppose that older buildings standing when these were put up were not worth preserving.

This is, however, precisely what *has* been demonstrated on a number of occasions on recent excavations (particularly where more durable walling materials were used) but, without parallels to argue from, the interpretation of those

excavated features has sometimes been in doubt. The question is not 'did adaptation occur' but of 'from what into what, and by which means'. The answer was obviously not forthcoming from the standing buildings of Norwich and so it was decided to examine a number of rural buildings in central Norfolk in the hope that they would provide evidence on which inferential arguments could be based. This comparative sample is, as yet, small but the two buildings discussed below seem to be typical of it in the light they have thrown on what could, all too easily, have been considered exclusively within the restrictive context of 'below-ground' urban archaeology.

A description of the two buildings (Barford Road cottages, Marlingford; and Street Farm, Garveston) is followed by an analysis of those features which seem to help most in our understanding of the archaeological manifestations of building adaptation. The appendix concludes with a gloss on the site reconstructions (Figs. 6 and 7) offered for this and the previous year's excavations.

Street Farm, Garveston (Fig. 4)

This three-cell building was extensively modernised in the late 18th or early 19th century to give it, but for its central chimney stack, the external appearance of an 'enclosure' cottage. This process involved the re-roofing of the building, re-facing, or partial rebuilding of its walls in brick, and the insertion of new doors and windows. Of the original building the central and southern cells (hall and service) survive; evidence for the existence of a third (parlour) cell to the north is provided by scarf joints in the wall plate to either side of the chimney. That the chimney belongs to this phase is shown by it being framed within a short stack-bay of which the two east wall posts survive.⁴⁹ The hall and (demolished) parlour were clearly unstoried, for there are no mortices for bridging joists in these wall-posts. It seems unlikely in this case that the service end was storied, but the evidence could have been obscured. There were, however, no mortices for joists in the south face of the mid-wall rail capping the service door partition (Fig. 4D). The upper surface of the same rail could not be examined but it need not necessarily have been morticed for studs: half-height partitions are, for example, well-known from late medieval Devon.⁵⁰ A combination of features suggest an early to mid 16th-century date for the building. On the one hand it is clearly not earlier than *c.* 1470 – 1530 (the absence of a crown-post mortice on the tie beam at BB¹ shows that the building had either a queen-post or side-purlin roof, the latter being far more likely, but neither type occurring before *c.* 1470 in Norfolk). On the other hand are a number of features which suggest a date not far into the 16th century. These are the screens-passage plan (note the opposed doors at the lower end of the hall) with an open, but stack-heated, hall; and constructional details such as the arch-braced tie-beam on truss BB¹ (Fig. 4C) and the long, curved wall-braces in the south gable wall (not illustrated). It seems unlikely, then, that the building dates from much later than *c.* 1550, and it could well be of *c.* 1500. The walls of this first phase building were timber-framed on a low brick plinth (Fig. 4C) and seem to have been infilled with either cob, clay-lump or brick (no evidence was found for wattling, which requires 'springing' into the timber uprights).

For how long the building survived in its original form is not known, but a period of between 30 and 100 years seems (in the absence of clear dating evidence) probable. Loose parallels with better-dated buildings might suggest an early 17th-century reconstruction. The parlour (north) end of the building was, with the exception of its west wall, completely rebuilt as a two-storied block somewhat

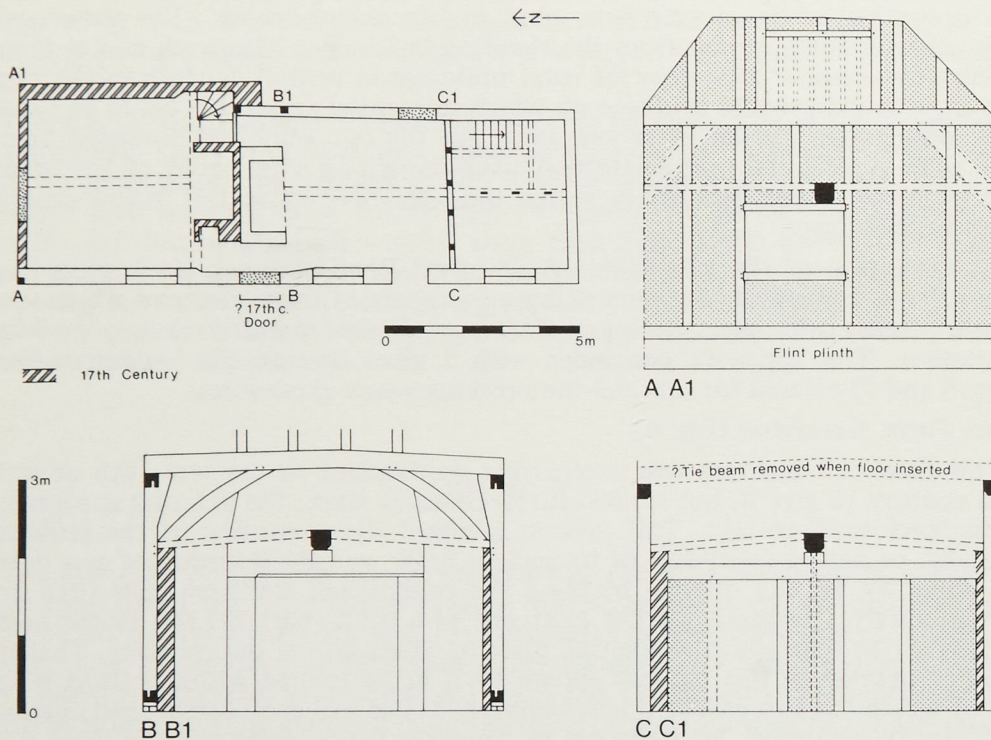


Fig. 4

Street Farm, Garveston. Ground floor plan and internal elevations/sections.

wider than it had previously been. This was served by an isolated chimney stack and stack-side staircase. The floor of this was framed into an axial bridging joist, itself morticed into a transverse bridging joist running across the face of the chimney stack. The south end of the building was modernised by having floors inserted, but this was achieved without demolishing the older walls. The bearings for the bridging joists were obtained by cutting small holes in the chimney stack and the gable wall, and by placing a wooden pad on the service partition wall. The common joists were lapped over, or cogged into, the bridging joist and had their outer ends supported on an internally thickened wall (Figs. 4C and D). Blocks beneath the bearing ends of the bridging joist presumably allowed a greater degree of manoeuvrability than otherwise could have been achieved. Mortices on the under side of the bridging joist in the service end provided evidence of a mud-and-stud partition, while the presence above the S.E. room thus formed, of a trimmer joist associated with unpegged common joists demonstrated the former existence of a staircase. The survival either side of the chimney stack, within the first floor chambers now formed, of arch-braced tie-beams (Fig. 4C) meant that there was no access between the parlour and hall/kitchen chambers — a clear example of the segregation within buildings recently discussed by Cary Carson.⁵¹ For these chambers to have functioned all tie-beams other than those by the stack would have had to be removed (Fig. 4D), but no clear evidence for this survived. The walls of the second-phase building were timber framed on a low flint-and-rubble plinth and infilled with wattle and daub. Unusually, studs were dowelled into the frame at top and bottom; in the older part of the building only the tops of the studs were dowelled.

Barford Road Cottages, Marlingford (Fig. 5; bracketed lowercase letters in the text refer to Figs. 5B and C.)

Only the unoccupied east range of this building was investigated: the outline ground plan (Fig. 5A) is based on external measurement and observation so that the sizes, but not the positions, of the western chimney stack have had to be estimated. A brief inspection of the west (or north-to-south) range suggested that it was a three-bay lobby-entrance house of the 17th century. Its south gable had been rebuilt in the 18th century so that a datestone of 1673 reset in a garden wall could well have come from it.

The history of the east range is both longer and more complicated, not least because the original nature of the building was obscured by extensive 18th and 19th-century alterations. It is, however, clear that it started as a building open to its roof for a length of at least 12 m. from the present east gable (the remainder was inaccessible). Evidence for only two windows survived (opposite each other in the north and south walls) and these had to be reconstructed from mortices in the wall-plate for mullions (a). As the studs to either side of them had been removed^{5 2} it was impossible to say where their sills had been, but their location high under the eaves seems excessively high for windows in a house. On the other hand it is almost impossible to think of a type of agricultural building with windows in this position and so, on balance, a domestic origin for the building is preferred.^{5 3} The building had no chimney stack and, as the wall

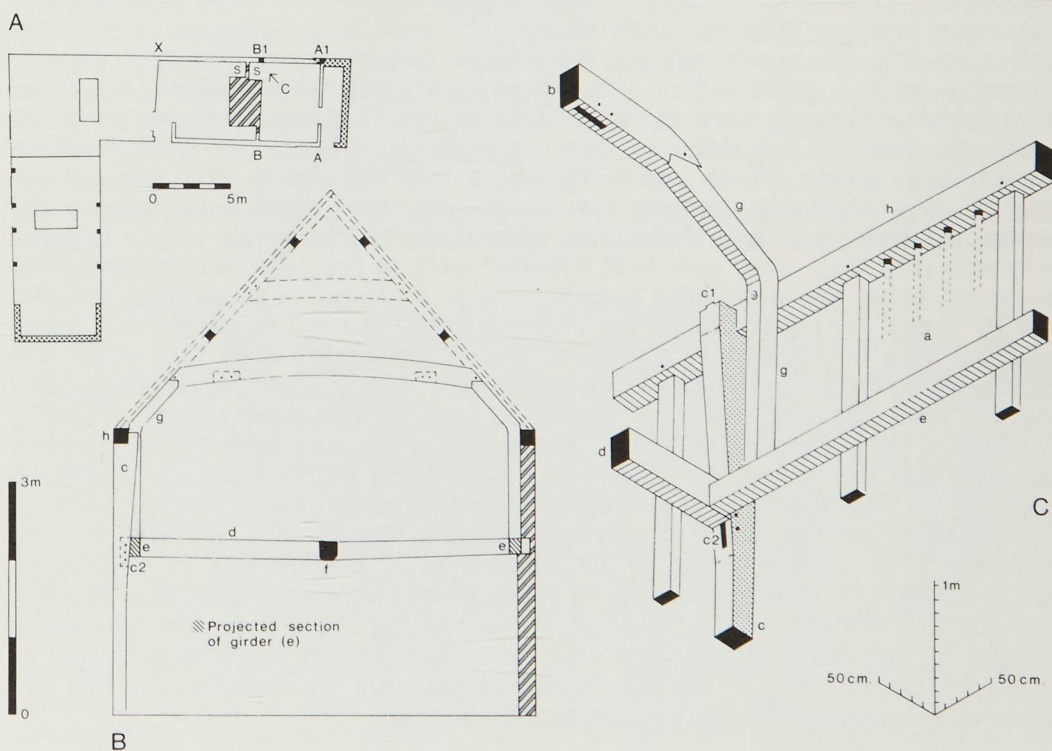


Fig. 5

Barford Road Cottages, Marlingford. A) Outline ground-floor plan, orientation of isometric view shown by C (17th c. walls keyed as Fig. 4); B) West elevation of truss BB¹, with section of upper part of roof superimposed, C) Isometric reconstruction of the junction of truss BB¹ with the building's north wall, for orientation see ground plan.

posts were at least 4 m. apart, there was no possibility of a smoke-bay.⁵⁴ Those parts of the building surviving *in situ* consisted of the greater parts of the north wall, including its wall plate between points xx on Fig. 5A and the wall-plate of a similar length of south wall. Apparently of the original building, but re-used in the early 18th century, were two tie-beams with mortices (b) for arch-braces but none for crown or queen posts, and parts of one or more reduced principal rafter trusses.⁵⁵ The tie-beams could be linked to the original structure by the existence on its wall posts (c) of sawn-off tenons (c¹) and re-used mortices (c² — see also Fig. 5B). A date of no later than c. 1525 for the building is suggested (if it was domestic) by the absence of a chimney, by the form of the wall-posts and arch-braces, and by the form of its, admittedly reconstructed, roof.

The building survived in its original form until the 18th century, and it may well have been used as an open-halled house until the lobby-entrance building was constructed in (?) 1673. An approximate date of its conversion to a two-storied house and cottage is provided by the form of its roof (with unaligned or staggered butt-purlins, the chamfered ends of which pass right through the principal rafters)⁵⁶ and confirmed by the re-use of characteristically 17th-century detail such as a sawn-down window with ovolo mouldings. It was the east end of the building which provided most of the detailed evidence for conversion. The original building (as shown by the wall plate scarf-joints) was shortened by just under the length of one bay to a new flint-and-brick rubble gable wall. The tie-beams and arch-braces of the original north wall were removed and transverse bridging joists (d) inserted into the arch brace mortices (c²) of the wall posts (c). The south wall was demolished piecemeal and rebuilt to provide a bearing for the other end of the bridging joists into which girders (e) and an axial bridging joist (f) were morticed. One of the transverse bridging joists ran across the front of the chimney stack, beneath the other a clay lump partition was built to divide off an end-lobby and a ? service closet. The upper floor, reached by a stack-side staircase, was useable now only because the original tie-beams had been removed. If the long walls of the building were not to collapse outwards (for they were now held together only at the gable ends) some other means of tying the wall plates together had to be found. The solution adopted was to re-use, on either side of the chimney stack, the old tie-beams in a raised position. This was done with a piece of timber (g), curved at its top, which was morticed into the girder (e) and clench-bolted into the wall plate (h). It is suggested that the term 'elbowed principal' should be used for this member for it is clearly *not* derived from a cruck tradition.⁵⁷ The nature of the joint between the elbowed principal and the re-used tie could not be examined but superficially it appears weak for its function.⁵⁸ One would have expected some form of bracing between the principal and the raised tie and this indeed is exactly what is found in 16th and early 17th century houses in the province of N. Holland (e.g. in Amsterdam and Enkhuisen,⁵⁹ from the vicinity of which people were emigrating into Norfolk between c. 1580 and 1620). Apart from the bracing, these provide a reasonable parallel for the elbowed principals with raised ties (almost identical examples of which are known from E. Dereham and Scarning) and one wonders whether this provides an answer to Mercer's statement⁶⁰ that the:

Cruck-like forms . . . of eastern England do not prove the existence of a latent cruck tradition there, for which there is little other evidence, but they do perhaps suggest that tradition is not always necessary to the emergence of a particular form of roof construction.

The tradition, I would suggest, is there, but it is an imported and modified one, used specifically, as Mercer suggests, to overcome the problems of inserting floors into previously single-storied buildings. (The main roof, incidentally, of this Marlingford building, as mentioned above, is a side-purlin type which is framed entirely independently of the raised ties; the weight of this bears directly on the walls.)

Discussion

How, then (other than cautiously), are we to apply the lessons learnt from these buildings to a study of those excavated in Norwich? Firstly perhaps in an examination of the implications arising from excavated hearths, chimney stacks and, (because of their association with the latter) staircases. The Garveston building, with its reminder that smoke-bays or fire-hoods can frequently occur as an intermediate stage between hearth and chimney,^{6 1} suggests that our interpretation of central hearths should be less cautious for, to date, it is only with side-wall hearths that we have suggested either smoke-hoods or the possibility of upper floors. Conversely, there is no reason why, unless associated with a staircase, the introduction of a chimney stack should indicate the existence of a first floor. At Garveston, for instance, the insertion of a floor clearly post-dated the construction of a chimney, and the practise is well-paralleled elsewhere.^{6 2} Before looking at the indications that this, or any other sequence of stack and floor insertions, might produce in the excavated record, the significance of the second (service end) stair in the Garvestone building should be considered. It seems likely that, compared to the stack-side stair, this might well have left little excavatable evidence, and yet such stairs would frequently have been necessary in modernised buildings (principally those where not all the original tie beams were to be removed). In building D5 and B3 of this year's excavation, for instance, it seems unlikely that the single staircase excavated would have sufficed; and probate inventories certainly suggest that buildings of this size (whether new built or modernised) often had subsidiary stairs. Here then, is a potential gap in the archaeological record which would substantially affect any detailed reconstruction that we might offer.^{6 3}

Evidence of the insertion of floors seems altogether more clearly-cut. Because a joist, if it is to have any bearing, must be longer than the space it spans, one of three solutions will have to be adopted if modifications to an originally open building are to be undertaken. The most drastic involves total, or near-total, demolition and rebuilding, but would not necessarily be recognised in excavation as being associated with modernisation. If, however, it was confined to one end of the building (but without representing one stage of a piecemeal rebuilding)^{6 4} then widespread anaolgy^{6 5} might suggest that, like Garveston, this represented the modernisation of the parlour. The second alternative, demonstrated at Marlingford and represented on Oak Street by e.g. the rebuilding of G2 as G3, involves the demolition of one long wall only: holes are cut in the surviving long wall (or old holes utilised) to take one end of the joists while the other is lodged in the new wall. The final possibility, represented in one form in the hall/service end of Garveston and in another by buildings C9 and 10 on Oak Street, involves the construction within the standing walls of a frame on which both ends of the joists could lie. At Garveston the 'frame' was of brick rubble, on Oak Street of timber, but its function in both cases was the same. At first sight this appears to have been a rare method in Norwich, for while cases of the demolition of a single wall are relatively common, the Oak Street houses C9 and C10 are unique in the

excavated record. Alternatively one might suggest that, as most late medieval buildings in Norwich were probably timber-framed above their ground sills, and that in such cases joist-carrying girders could have been pegged to the timbers of the long walls, a variation of the 'internal framing' method need have left no archaeological evidence. Examples of this technique have been noted in East Dereham and Garveston and it is also well-known in West Cambridgeshire where, however, it is often used as a method of floor-framing in new-built, rather than adapted, houses.^{6 6}

It is still not clear why it should be in surviving rural rather than urban buildings that explanations can so easily be found for features of excavated *urban* buildings. The absence of evidence above-ground for the conversion of late medieval buildings is not, however, something which is peculiar to Norwich, for the picture is much the same in e.g. Ipswich or King's Lynn.^{6 7} A partial explanation was offered in the introduction to this appendix but an answer will probably not be forthcoming until a considerable amount of work has been done on the comparable distribution of wealth in town and country between c. 1470 and 1700. 'Country' is perhaps, here, an oversimplification, for, at the superficial level of analysis so far attempted, it is clear that high rates of survival for late medieval buildings can only be expected in the wood-pasture regions of the country. It is in the areas of sheep-corn farming and in the towns that one finds so few surviving examples of converted buildings, and it would be surprising if there was no connection between that and their relative wealth from the 17th century onwards. In Norwich the surviving buildings gave a misleading impression of marked peaks of building activity in the years between c. 1470 and 1530 and 1670 and 1730.^{6 8} The excavated evidence provides a valuable corrective by demonstrating (as have improved methods of dating standing buildings) that there was a continuum of building activity; that much of the effort before c. 1670 was devoted to modifying older buildings; and that it was only in the later 17th century that a clean sweep (other than of the greater merchant houses) was made of the residue of the late medieval housing stock.^{6 9}

The reconstruction drawings (Figs. 6 and 7 with cross-reference to Figs. 2 and 3; reference should also be made to Fig. 1 of last year's interim report).

The purpose of these drawings, within the constraints suggested by the excavated evidence, has been to show something of the variety of housing types at a particular period in a particular part of the city. (In terms of 'centrality' there is, in fact, little to choose between Oak Street and Alms Lane.) Where direct evidence on e.g. the number of storeys or the roof type was absent a range of possibilities has been shown on adjoining buildings. A group of reconstructed buildings, therefore, rather than an individual house should be considered as the paradigm, although on Alms Lane before c. 1670 rebuilding was taking place simultaneously with the whole site under the presumed landlord's direction.

At the risk of confusion the reconstructions will be dealt with chronologically rather than by site.

15th century (Figs. 6A and 7A). With the exception of house D2 on Oak Street the buildings are single-storied (and the high part of D's rear range is its open hall). Some buildings are unheated, while others are heated only by open hearths (a hole, representing a louvre, is shown in their roofs). The remainder have either end-wall hearths (Oak Street) or side-wall hearths (Alms Lane), both of which are presumed to have had fire-hoods and smoke-pots.

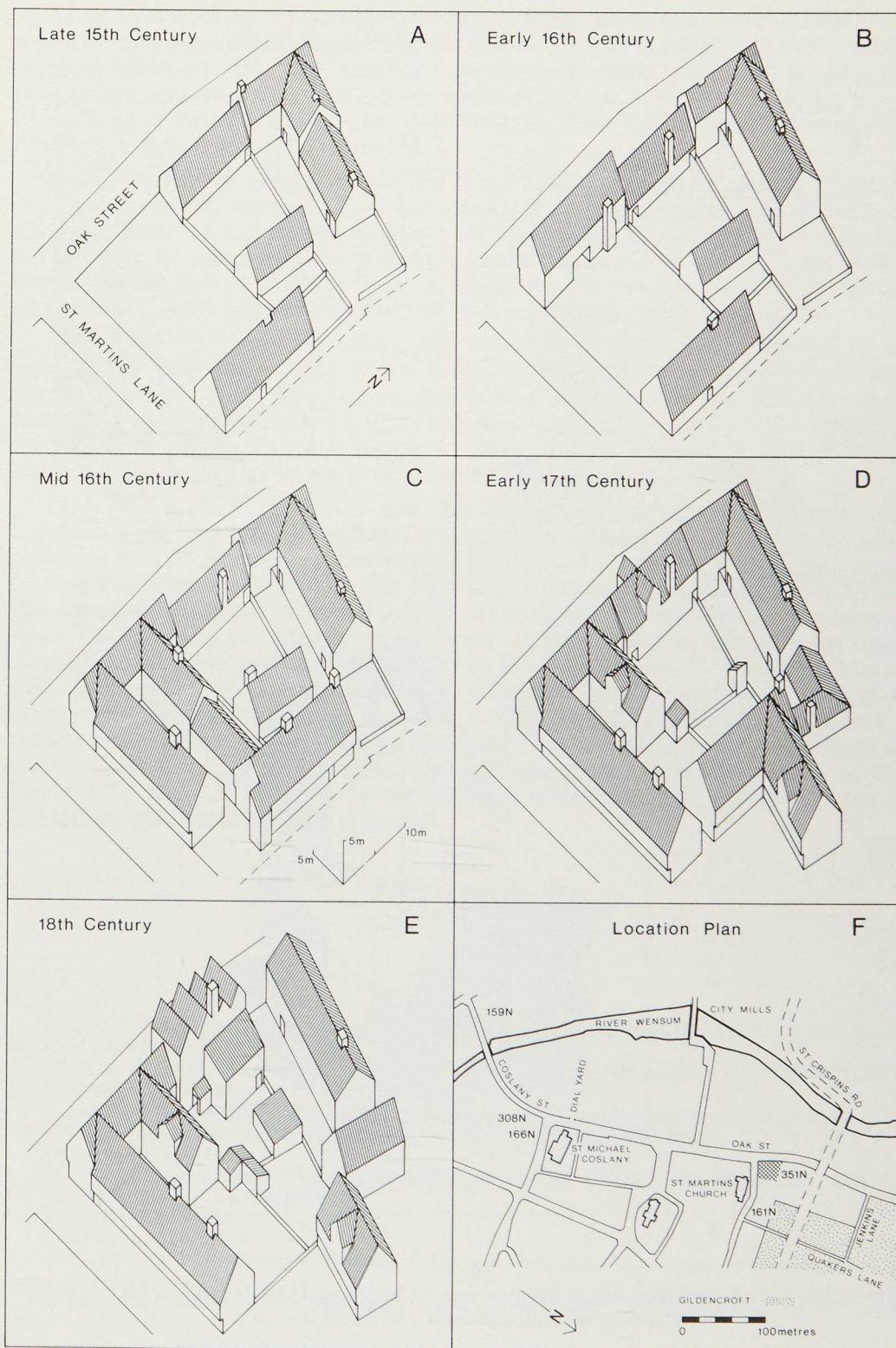


Fig. 6
Site 351N (Oak Street). Notional reconstructions of buildings and site location plan.

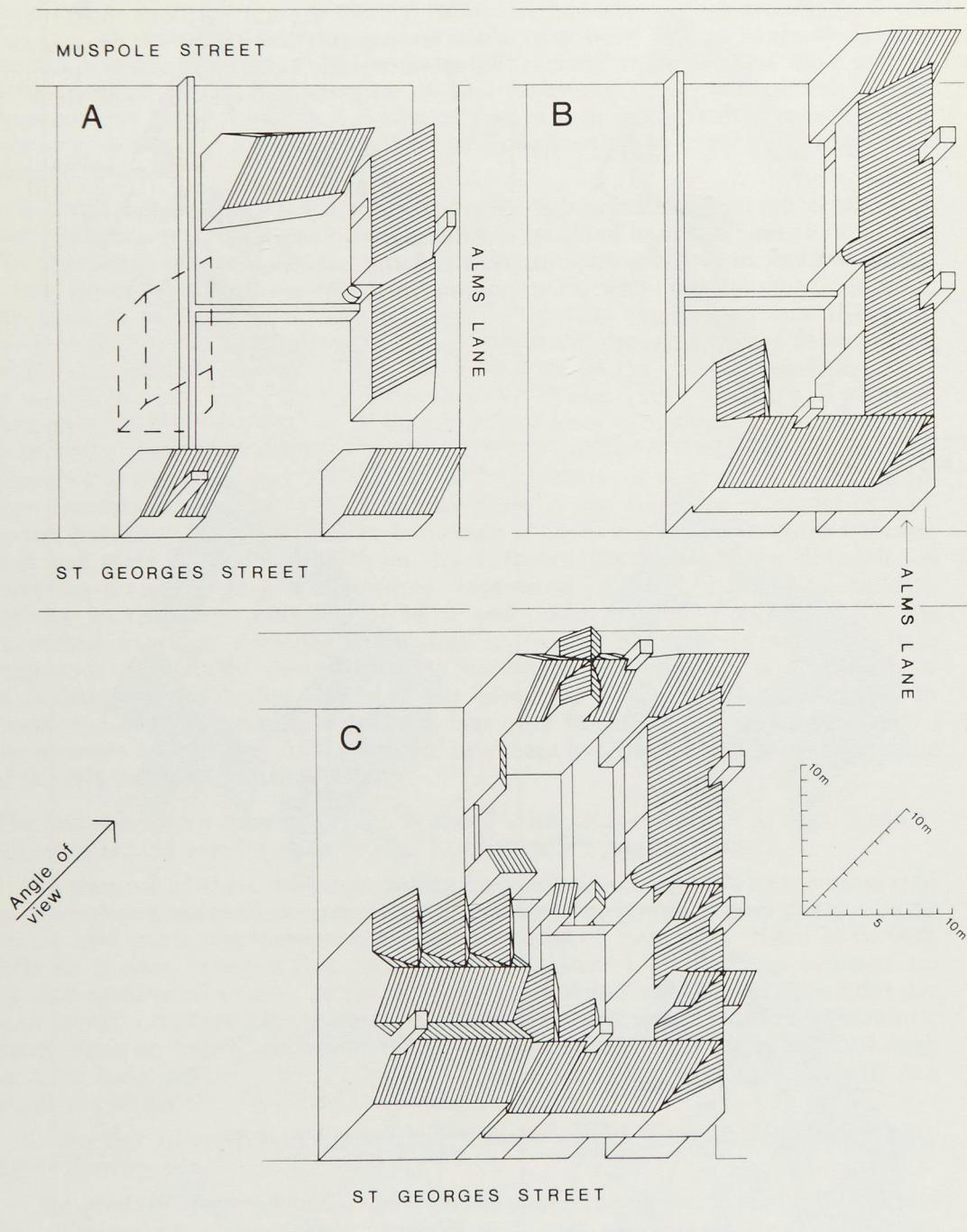


Fig. 7

Site 302N (Alms Lane). Notional reconstructions of buildings. (The drawings were originally prepared for publication in a different format).

Early 16th century (Fig. 6B) Oak Street only. There is a marked mixture of one- and two-storied buildings. Only the hall of D5 and the smithy partitioned off from it (D4) are left with louvres (the latter possibly contrived by breaking through or removing the floor of the no-longer-domestic building). A/B2, shown as having a jettied frontage, is the only building with the external rear-wall stack normally characteristic of this period.

Mid 16th century (Figs. 6C and 7B) It is from this period of marked expansion on Oak Street/St. Martin's that the jettied building H (with part of A3) still survives; most of the street frontage on both sides was also probably jettied. C continues as a single-storied building and the rear service rooms of B are built as such, but the hall of D has a floor inserted and the last open hearth on the site disappears. F is rebuilt as a two-storied building with a staircase turret.

Early 17th century (Fig. 6D). Oak Street only. With the exception of the 'workshops' behind building D all buildings are now of two or more storeys. Dormers are by now common in the town but the surviving building on St. Martin's Lane (H) had none; they are shown, therefore, on only a few buildings, among them those that are known to have been subdivided at this period or else newly-built. Privies in the yards have appeared since the 1580s.

17th/18th century (Figs. 6E and 7C) The period between *c.* 1680 and 1730 is represented. Parallels for the development on Oak Street are taken from standing buildings just to the north (96-100 Oak Street) and from Upper St. Giles, an area of contemporary development. On both sites a diversity of building types reflects the increasingly mixed nature of their occupation. The pattern of dormers on Alms Lane should be compared with that of Oak Street in the previous phase. Also on Alms Lane, building B6 has had its jetty underbuilt.⁷⁰ Most buildings are still built parallel to the street but Oak Street D9 is gable-end on. Buildings are being expanded in two ways: upwards – Oak Street C12 and 13 are shown as typical early 18th century three-storied block; or outwards – anything from the minor outshut of Alms Lane A6, through the scullery/chamber block of Oak Street C12 and 13,⁷¹ to the prototypical double-stack plan of Alms Lane C3 (on which, also, note the rear dormers).

A. C.

May 1978

¹ A. Carter *et al.*, 'Excavations in Norwich – 1972 . . .', *Norfolk Archaeology*, XXXV, iv (1973), 454, hereafter: Excavations 1972.

² M. W. Atkin *et al.*, 'Excavations in Norwich – 1975/6 . . .', *Norfolk Archaeology*, XXXVI, iii (1976), 192-3, hereafter: Excavations 1975.

³ A map showing a revised and weighted distribution map of Roman finds appears in, A. Carter, 'The origins of Anglo-Saxon Norwich: problems and approaches', *Anglo-Saxon England*, vol. 7 (1978), fig. 6.

⁴ Excavations 1972, 464.

⁵ M. W. Atkin and A. Carter, 'Excavations in Norwich – 1976/7 . . .', *Norfolk Archaeology*, XXXVI, iv (1977), 289, hereafter: Excavations 1976/7.

⁶ Excavations 1975, 199.

⁷ Excavations 1976/7, 289.

⁸ A. Carter *et al.*, 'Excavations in Norwich – 1973 . . .', *Norfolk Archaeology*, XXXVI, i (1974), 66, hereafter: Excavations 1973.

⁹ J. Kirkpatrick, *History of the Religious Orders . . . of Norwich*, ed. Dawson Turner (1845), 150-84, hereafter: Religious Orders.

¹⁰Quoted in, Religious Orders, 177-8.

¹¹Excavations 1976/7, 287.

¹²Excavations 1973, 58-9.

¹³Excavations 1975/6, 196.

¹⁴Excavations 1973, 58-9.

¹⁵Excavations 1976/7, 289.

¹⁶J. Campell, *Norwich* (1975), 18.

¹⁷Excavations 1976/7, 297.

¹⁸Excavations 1976/7, 296.

¹⁹Excavations 1973, 49.

²⁰Excavations 1976/7, 298.

²¹Excavations 1973, 45-7; 1975, 200.

Unless otherwise stated all documentary references are to MSS in the Norfolk Record Office. Public Record Office = P.R.O. Note that with the City Court Rolls where the reference is to an *abuttal* the names of the seller and buyer follow the reference in brackets.

²²Taxes of 1472 and 1576, Case 7i; P.R.O. E179/149/112.

²³The Court Rolls are in the N.R.O. Case I, hereafter: 'Court Roll'.

²⁴The Landgable of 1397 is recorded in the Norwich Domesday Book, fol.51d, Case 17c, that of c. 1490 in the Chamberlains' Book, 1470-90, fol. 155-6, Case 18a and those of 1541, 1570 and 1626 in booklets, Case 18c. Hereafter these lists will be referred to by date alone.

²⁵Court Roll 2, rot. 10 (Cole to Thurstan).

²⁶Information from Dr. K. I. Sandred, University of Uppsala, of the English Place-Names Society; Court Rolls 3, rot. 8 (Kesewyk to Wroxham), 5, rot. 10d (Reymund to Tacolneston).

²⁷*Norfolk Archaeology*, XXXVI, part I (1974), pp. 58-9.

²⁸Court Roll 2, rot. 32 (Dikleburgh to Greyne); 5, rot. 18d (Gypewyc to Holebeche); 18, rot. xviii (Beare to Palmer, Kirkpatrick's MSS Notes, Case 21f, no. 26.

²⁹J. Kirkpatrick, *Streets and Lanes of the City of Norwich*, p. 74.

³⁰Court Roll 5, rot. 21 (Fuyldon to Jaumbel).

³¹Court Rolls 3, rot. 7, 8, 5, rot. 21 (Fuyldon to Jaumbel); P.R.O. E179/149/9, rot. 80.

³²Court Roll 3, rot. 7 (Kesewyk to Wroxham); W. Rye, *A Short Calendar of Deeds relating to Norwich, 1285-1306*, p. 17, (hereafter: Rye, *Deeds*).

³³Court Rolls 5, rot. 10d, 19d. Rye, *Deeds*, p. 103.

³⁴Court Rolls 4, rot. 29d (Thurston to Fuldome); 5, rot. 10d (Reymund to Tacolneston); 5, rot. 19d (Reymund to Tacolneston); 6, rot. 14 (Derham to Beneye).

³⁵Court Roll 2, rot. 13 (Burs to Schuldham).

³⁶W. Rye, *A Calendar of the Freeman of Norwich, 1317-1603*, p. 74 (hereafter: Rye, *Freemen*); B. Cozens-Hardy and A. Kent, *The Mayors of Norwich*, pp. 38-9.

³⁷P.R.O. E149/187; Prerogative Court of Canterbury, 26 Blanye.

³⁸Rye, *Freemen*, pp. 44-63; Court Roll 26, rot. ii; Tax of 1576, Case 7i.

³⁹P. Milligan, *The Registers of the Freeman of Norwich, 1548-1713*, p. 32; Tax of 1576, Case 7i; Court Rolls 31, rot. xx; 32, rot. v, 34; rot. xxx.

⁴⁰Court Rolls 3, rot. 7 (Wroxham to Keswyke); 4, rot. 29d; 5, rot. 21; 6, rot. 4, 14.

⁴¹Court Rolls 2, rot. 32 (Dikleburgh to Greyne); 7, rot. 4d (Curteys to Hardingham); 5, rot. 21 (Fuylden to Jaumbel); 9, rot. 11d (Wolmer to Melthorp).

⁴²V. C. H. *Norfolk*, II, pp. 370-2; Norwich Dean and Chapter Records, The Domesday Book; G. A. Carthew, 'A Cellarers Account of Creake Abbey', *Norfolk Archaeology*, VI, (1864) pp. 317, 328; Patent Rolls, 1330-1334, p. 260.

⁴³A. L. Bedingfeld, ed. 'A Cartulary of Creake Abbey', *Norfolk Record Society XXXV* (1966), Introduction; G. A. Carthew 'North Creake Abbey', *Norfolk Archaeology*, VII, (1872) p. 158.

⁴⁴British Museum, Harleian MSS 433, fol. 153v; Cartulary, pp. xxi-xxii.

⁴⁵Landgable 1397, 1490, 1541; Court Roll 13, rot 11d (Gyney).

⁴⁶P.R.O. Prerogative Court of Canterbury, 113 Fenner; Court Roll 34, rot. ix.

⁴⁷Excavations 1973, 48-9.

⁴⁸E. Mercer, *English Vernacular Houses* (1975), 4, hereafter: Mercer.

⁴⁹The mortices on the tie-beam by the stack (Fig. 4) might indicate that a smoke-bay or hood had preceded the stack but the absence of sooting on the tie and the lack of side-framing militate against this. Mercer, 20, 62; or, J. Harding, *Four Centuries of Charwood Houses* (1977), 14-21.

⁵⁰N. W. Alcock and M. Laithwaite, 'Medieval houses in Devon and their modernisation', *Med. Archaeol.*, 17 (1973), 102-9.

⁵¹C. Carson, 'Segregation in vernacular buildings', *Vernacular Architecture* 7 (1976), 24, 29; (this includes an account of Dairy Farm, Tacolneston).

⁵²The spacing of the mortices for the missing studs showed that they were a primary feature i.e. *not* associated with the insertion of the floor.

⁵³A building at Fundenhall with windows in an identical position seems quite clearly to have been converted into a barn from a house.

⁵⁴See footnote 49.

⁵⁵For the type of this clasped purlin roof see Excavations 1976/7, Figs. 4C and 5.

⁵⁶For the type of which see Royal Commission on Historical Monuments, *Peterborough New Town*, (1969), Fig. 35 – a possibly late example of 1765. Dated examples nearer to hand are of pre-1737 (and probably c. 1700) at Mattishall and 1738 in Great Melton.

⁵⁷But see Mercer, 97, 106-9 (esp. 109) and Pl. 65 [309]. Note also that the clenched-bolt performs the same function as a cruck-spur in tying the truss to the walls. Here, however, (and in the Dutch buildings referred to below) the walls are load-bearing.

⁵⁸C. Hewett 'Understanding standing buildings', *World Archaeology* 9, 2 Oct. 1977, pp. 174-183

⁵⁹R. Meischke and H. J. Zantkuijl, *Het Nederlandse Woonhuis van 1300-1800*, (Haarlem, 1969) e.g. 258, 301, 312, 331, 337.

⁶⁰Mercer, 109.

⁶¹See references in footnote 49.

⁶²Mercer, 20-21.

⁶³See also Malcolm Atkin's comments on the problems of interpretation raised by the possible use of ladders, Excavations 1976/7, 296.

⁶⁴Excavations 1976/7, 294-5, 297.

⁶⁵Mercer, 69-70.

⁶⁶Personal information from Dr. P. Eden.

⁶⁷S. Coleman, 'The Timber-framed Buildings of Ipswich: A Preliminary Report', *East Anglian Archaeol.* 3 (1976), 141-54; V. Parker, *The Making of King's Lynn* (1971), hereafter, Parker.

⁶⁸Excavations 1973, 46-9.

⁶⁹The exact point within the late medieval period from which excavated buildings partially survive later rebuilding seems almost entirely dependent on their walling materials. The buildings that survive are those with flint rubble groundills *not* those of clay lump or cob. The date of transition from one material to the other, although sometimes earlier, is normally after c. 1500.

⁷⁰Parker, 44, 164.

⁷¹As with rural buildings (Mercer, 71) outshuts start to become common in Norwich in the late 17th century.

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