Chapter 3: The 'Oxenford': Detailed Studies of the Thames Crossing in St Aldate's

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SUMMARY

Numerous excavations have been carried out in the area immediately south of the medieval walled town, where the southern entry route to Oxford crosses the floodplain of the river Thames. These have recovered evidence for the formation of the floodplain, for its development into multiple channels and islands, for river crossings, and for the progressive reclamation and settlement of the floodplain in the medieval period. A synthesis of the palaeoenvironmental evidence is presented at the beginning of this chapter, and draws on both published and previously unpublished work. This is followed by a review of the documentary sources for the area, and then by reports on six previously unpublished excavations undertaken by Oxford Archaeological Unit between 1982 and 1994 in advance of redevelopment and services works. In order of location, from north to south, these excavations are 89-91 St Aldate's (the Trill Mill Stream), 1982-5; 24-6 St Aldate's (the Police Station), 1987-9; 30-31 St Aldate's (Land adjoining the Police Station), 1987; 56-60 St Aldate's, 1988-9; a detailed watching brief on the British Telecom Tunnel at the junction of Thames Street and St Aldate's, 1991; 42-3 St Aldate's (the Head of the River), 1994.

INTRODUCTION (FIGS 3.1 AND 3.2)

The study area

The detailed study area (Fig. 3.1) comprises the first 400 m of the Thames floodplain south of Oxford city centre, extending from the foot of the Second Gravel Terrace (Brewer Street) to the modern navigation channel (flowing beneath Folly Bridge). The whole area has been extensively redeveloped during the last 150 years, and today retains few visible traces of its medieval form. The topography of the area is still dominated, however, by the north-south route of the river crossing. The origins of the crossing are considered in detail elsewhere in this volume, but the modern route appears substantially to follow the line of the Grandpont, the stone causeway whose construction is attributed to Robert d'Oilly in the 1090s. The fabric of the stone causeway survives within and beneath modern St Aldate's and the Abingdon Road, and the name Grandpont remains in use today. Figure 3.2 is a 16th-century drawing of the Grandpont running south from the town across the floodplain.

The six previously unpublished sites reported in this chapter are shown on Figure 3.1 and are, in orde of

location from north to south: 89–91 St Aldate's (the Trill Mill Stream), 1982–5; 24–6 St Aldate's (the Police Station), 1987–9; 30–31 St Aldate's (Land adjoining the Police Station), 1987; 56–60 St Aldate's, 1988–9; a detailed watching brief on the British Telecom (BT) Tunnel at the junction of Thames Street and St Aldate's, 1991; and 42–3 St Aldate's (the Head of the River public house), 1994.

These excavations were undertaken following a series of very significant discoveries in St Aldate's during the 1970s. Excavations at 79–80 St Aldate's, by Oxford Archaeological Excavation Committee in 1970–71 (Gaz No. 94), had provided the first substantial material evidence of Saxon settlement at Oxford before the 11th century. Evidence had been found for consolidation of river banks, possibly datable to the 9th century, and for reclamation and settlement on the site from the 10th century onwards. The earliest feature seen was a blue clay bank that had been artificially heightened, and was interpreted as part of a causeway across the flood-plain in the mid to late Saxon period.

Further important results had been obtained between 1979 and 1981, when the former Morris Garages at 65 St Aldate's was redeveloped as the Crown Court (Gaz No. 93), and land on the opposite side of the road, at 33 St Aldate's, was redeveloped for blocks of flats (Gaz No. 91). At 65 St Aldate's the excavations had identified a late Saxon ford and late Saxon timber waterfront revetments for what appeared to be the north bank of a river channel. Salvage recording at 33 St Aldate's had suggested the presence of an early, deep river channel that silted up on its north side to form an alluvial island. The island was occupied by the late 11th century, possibly by a building fronting onto the Norman Grandpont. The structure of the Grandpont itself was recorded in section.

The excavations reported in this chapter were designed to expand and elucidate these earlier results. Further information about the nature and development of the river crossing was sought, and excavations aimed specifically to obtain further sightings of the late Saxon ford seen at 65 St Aldate's, of the Grandpont, and of the blue clay bank in order to investigate its origins. New evidence was sought for the development of permanent occupation along the crossing line. The excavations were also designed to recover further data on the form and development of river channels and waterlaid deposits, to refine the developing model of the palaeohydrology and palaeoenvironment of the area. Finally, further Oxford Before the University







Figure 3.2 16th-century map of the Grandpont in the archives of Brasenose College, Oxford. Reproduced by kind permission of Brasenose College.

data were sought to improve the absolute and relative dating frameworks for Oxford, using radiocarbon, dendrochronological and artefact dating, with particular reference to the Saxon and Norman periods.

The research objectives of individual excavations are considered in more detail in the individual reports. In general, the presence of standing buildings at most sites during the excavation campaigns, and the relatively limited time and resources available, meant that a pragmatic approach had to be taken. In practice, this usually meant several trenches at each site which were placed where they might be expected to yield the best information, and which were kept small enough to be both achievable (with the available resources) and easily shored to depths of over three metres. Trenches normally began with removal of the overburden by mechanical excavator (post-medieval deposits were sometimes also removed when time was very limited) followed by hand-excavation and recording. Regular site visits to advise on interpretation and sampling strategy were made by the environmental specialist, Mark Robinson.

Full details of the radiocarbon and dendrochronological dates of samples from Thames Crossing sites are given in Appendix 2, below.

THE DEVELOPMENT OF THE THAMES CROSSING STUDY AREA

An idealised cross-section of the study area (Fig. 3.3) by Mark Robinson, David R P Wilkinson and Paul Hughes

The surface of the Pleistocene gravel of the First (or Floodplain) Terrace has been shown to be at 55 to 55.2 m OD at Whitehouse Rd, 200 m south of the detailed study area (Gaz. No. 116). The surface of this gravel island is higher than any point to the north until the Second Gravel Terrace is reached at Brewer St. Moving into the study area, the gravel surface drops to 54 m OD at Head of the River Trench 2, and then more steeply to 52.8-53 m OD at Trenches 1 and 3 of the same site. The relatively steep fall continues to the BT Tunnel (Manhole 1: lower than 52.3 m OD) and it may well have been lower at the latter site than at 56-60 St Aldate's (52.1 m OD); another low measurement comes from 33 St Aldate's Trench 1 (lower than 52.2 m). It is important to note that a rise in the level of the gravel to the west of Manhole 1 at the BT Tunnel site is implied by later stratification, although not observed. Continuing northwards, an increase in level is already apparent at the north end of the 56-60 St Aldate's site (52.95 m OD), continuing



Figure 3.3 St Aldate's: idealised section of Thames Crossing study area, based on archaeological excavations.

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to the site at Land adjoining the Police Station (53.5 m OD). Very similar heights at 65 St Aldate's Trench 3 (53.45 m OD) and the Police Station Trench 3 (53.5 m OD) show the gravel levelling off, and it remains around this height at 79-80 St Aldate's (53.65 m OD) and Linacre College (53.8 m OD). If these last five measurements are genuinely representative of the Pleistocene gravel surface, it therefore remains level for a distance of some 120 m. The next observations of the gravel are from the Trill Mill Stream site (89-91 St Aldate's) showing a fall to 52.55 m OD (Trench 7) and 53 m (Trench 6). Trenches I, II and VI at the Trill Mill Stream site form a staggered north-south section 24 m long, at the north end of which the gravel had risen again to 53.8 m OD. Present evidence therefore suggests that the deepest area lies at the south end of the study area, with a long, shallower stretch to the north before the gravel dips again. The channel system of the Thames gradually became more deeply incised in the late Devensian, and it would have been then that the deep channel to the south was formed, and probably also a channel around the foot of the gravel terrace, the forerunner of the Trill Mill Stream.

The earliest known deposits that formed within the study area were silts or sandy clays with some gravel content, and/or peat, followed by different phases of alluviation. The heights and positions of these deposits appear on Figure 3.3, and it is clear that the sequence of deposition over the gravel shows great variation in time and space. Their formation is considered in detail below.

Land reclamation over and around the alluvial islands of the floodplain has been extensive, particularly during the later medieval and post-medieval periods. Excavation results suggest an average depth of 2.5 to 3 m of dump and reclamation deposits below the modern ground surface at the south end of the study area, and 1 to 1.5 m at the north. This process has considerably disguised the underlying topography of the area. The drop in level from the Second Gravel Terrace to the floodplain registers today only as a moderate and steady slope; in medieval times, however, it must have been much more marked, and the town's position at the edge of a gravel promontory overlooking the river must have been strikingly apparent.

Figure 3.3 also shows the relative levels of a sample of excavated structures and features.

The palaeohydrology of the St Aldate's area of Oxford in relation to archaeology and the Thames crossing (Figs 3.4–3.10) by Mark Robinson

The palaeohydrology and alluvial history of the Upper Thames basin have already been considered in some detail in relation to archaeology. The initial model of regional developments was advanced on the basis of nine sites spread throughout the Upper Thames Valley (Robinson and Lambrick 1984). Indeed some of the earlier results of work on the Thames floodplain south of Oxford were included. Much subsequent work has served to confirm and extend the model (Lambrick 1992; Robinson 1992). Current excavations by the Oxford Archaeological Unit at Yarnton show the full sedimentary sequence with many similarities between a low-lying area of floodplain there and the floodplain at St Aldate's.

The following sequence has been established (Fig. 3.4 shows the sequence from the late Bronze Age onwards in diagrammatic form). Towards the end of the Late Devensian, a system of minor and rapidly shifting braided channels reworked part of the First Terrace and lowered it to create an undulating gravel surface which survives beneath the alluvial clays of the modern floodplain. Shortly before the start of the Holocene, there was a transition of river regime to one of multiple, broad incised channels. These channels have largely remained stable throughout the Holocene and a simplification of the multiple channel system occurred as channels became redundant through silting. However, the work at Yarnton has shown that a rise in floodplain water table in the late Bronze Age re-activated a broad, flat Late Devensian channel which had been dry, with trees growing on the bed in or just before the Neolithic period. An oak timber from a platform in the Yarnton palaeochannel gave a radiocarbon date of 900–520 BC (OxA-3644, cal 2σ).

During the early and mid Holocene, pedological processes predominated on the floodplain. Although limited flooding could have occurred, the water table was seasonally low. During the late Bronze Age there was a rise in the water table and flooding had started by the middle Iron Age. Clay alluviation was underway by the late Iron Age and continued throughout the Roman period. Sedimentation slowed down or perhaps even ceased in the early Saxon period. However, alluviation had certainly resumed by the late Saxon period and extended throughout most of the medieval period, reaching some sites for the first time. Alluviation had declined before the end of the medieval period although flooding has continued to the present day. As a result of the uneven nature of the floodplain surface, the onset of flooding and alluviation was by no means synchronous between all sites. The causes of change were mainly related to human activity in the catchment from the late Bronze Age onwards, particularly woodland clearance and changes in the ratio of grassland to arable.

Oxford is centred on a promontory of Second Gravel Terrace extending southwards, with the river Cherwell to the east and the river Thames to the west. The Thames sweeps eastwards in front of the promontory to join the Cherwell, and its channels occupy a broad floodplain 2.5 km wide. The main channels of the Thames are now the navigation channel and the Seacourt/Hinksey stream but there are still numerous cross-linking and minor channels, some of which such as the Trill Mill Stream have now been culverted. The detailed part of this study is concerned with the first 400 m of the route south across the floodplain from Oxford, from the Trill Mill





Stream to the modern navigation channel. Thereafter, the route continues across some minor channels to a relatively high area of floodplain at Whitehouse Road, over the Eastwyke Farm ditch, up onto an island of First Gravel Terrace at New Hinksey and finally across the Hinksey Stream group of channels at Redbridge.

A series of six plans (Figs 3.5-3.10) illustrate the development of the channels in the study area

throughout the Post-Glacial period. The information has mostly been derived from the excavations described in Durham 1977 (79–80 St Aldate's, 83 St Aldate's, Linacre), Durham 1984a (33 St Aldate's, 56 St Aldate's, 65 St Aldate's), this chapter (Trill Mill, Police Station, Land adjoining the Police Station, 56–60 St Aldate's, BT Tunnel, Head of the River), Lambrick and Woods 1976 (Blackfriars) and Lambrick 1985 (Blackfriars). Use has also been made of various cartographic information quoted elsewhere in this volume especially for Figure 3.10, the post-Conquest map.

The excavated evidence was obtained from well over 50 separate trenches, some of them dug under very difficult conditions. It is a credit to the excavators that there is so much consistency between the results that it is possible to combine them to give an overall picture. Inevitably there are many gaps in the evidence and, especially for the earlier periods, it has been necessary to speculate using what is known from the general hydrological trends for the region. Radiocarbon dates have been expressed calibrated to the two sigma (ie 95%) level of confidence. Full details of the dates are given either in Appendix 2 of this volume, or in the publications cited.

Final Devensian (Fig. 3.5)

The level of the top of the Pleistocene gravel in the different trenches was by no means constant. High areas of gravel were recorded at the Head of the River Trench 2 (54.00 m OD) and at the western part of the Blackfriars (Lambrick 1985, 135, fig. 5, 54.21 m OD) whereas the level at the Police Station and at 65 St Aldate's was lower (53.40 m OD). As the channel system of the Thames became more deeply incised, so the early deep channel at 33 St Aldate's Trench 1b (Durham 1984a, fig. 6) probably became established. Channel incision at Farmoor occurred before the climatic amelioration of the Holocene (Lambrick and Robinson 1979, 141-2). Elsewhere in the Upper Thames, it has been observed that there tends to be a palaeochannel, if not an extant channel, along either edge of the floodplain. Possible evidence of an early predecessor to the Trill Mill Stream eroding into the edge of the Second Terrace was given by the level of gravel in Trill Mill Trench I dropping from 53.60 to 53.25 m OD at the north end of the trench, where it was overlain by inorganic sandy and gravelly clays.

Early Holocene to Mid Bronze Age (Fig. 3.6)

The only active channel known from this period was the early deep channel recorded at 33 St Aldate's Trench 1b. Augering to a depth of 52.18 m OD failed to reach the bottom but found it to be peat-filled below 52.50 m OD (Durham 1984a, fiche 89). Early but undated peat was found from 53.00 to 52.40 m OD, at which depth it rested on Pleistocene gravel at 56–60 St Aldate's Trench 1. It possibly Chapter Three





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Figure 3.6 The development of channels in the Thames Crossing study area: early Holocene to middle Bronze Age.

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Figure 3.7 The development of channels in the Thames Crossing study area: late Bronze Age and Iron Age.

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Figure 3.8 The development of channels in the Thames Crossing study area: Roman and early Saxon.

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Figure 3.9 The development of channels in the Thames Crossing study area: mid to late Saxon.

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Figure 3.10 The development of channels in the Thames Crossing study area: post Conquest.

represented a continuation of the peat from 33 St Aldate's. A sample of this peat (Sample SA 316) showed preservation to be poor and that it contained many rootlets, suggesting that it formed slowly in shallow water. A radiocarbon date of 7530-6700 cal BC (OxA-4354) was obtained on wood from gravelly sediments sealed beneath a layer of limestone rubble interpreted as an early ford in BT Manhole 1, while other biological remains from under the ford (Sample OXSAM 3) were appropriate to a flowing channel of this date. The top of the ford was at a level of 52.50 m OD. Assuming the top of the apparently shallow water peat in 56-60 St Aldate's Trench 1 was at or near the mean summer water level of the channel, this would give a depth of 0.50 m of water over the ford in summer which is a possible, although rather great, depth at which a ford could function. If the rise in water level (see below) was already under way during the formation of this peat, the initial depth of water over the ford need have been no more than 0.25 m. Unfortunately, the relative dates of the peat and the ford are uncertain.

The banks of the early channel were not found, but the level of gravel at the Land adjoining the Police Station, 65 St Aldate's Trench 3 (Durham 1984a, fig. 5) and Head of the River Trench 2 was sufficiently high to suggest an eastward-flowing channel confined between these sites.

The status of the Trill Mill Stream, or for that matter any of the channels south of the Head of the River, remains unknown and it is possible that the water level was sufficiently low that some of them were dry. The height recorded for the bed of the possible early channel of the Trill Mill Stream would probably have been above summer river level. By analogy with sites elsewhere, it is possible that little or no seasonal flooding was occurring on the floodplain.

Late Bronze Age and Iron Age (Figs 3.7, 3.11a)

By the late Bronze Age or early Iron Age there had been a rise in permanent water table to at least 0.80 m above the river level argued for the earlier Holocene. This would presumably have rendered the early ford unusable. Even if the shallow water peat at 56-60 St Aldate's had developed in water 0.40 m deep (and therefore post-dated any ford), there would still need to have been a rise in water level of 0.40 m. A radiocarbon date of 1010-400 cal BC (HAR-209) was obtained from organic silt above the Pleistocene gravel and sealed beneath clay at Linacre (Durham 1977, 174). A more detailed study was made of this deposit at 79-80 St Aldate's where the gravel was at 53.70 m OD. Although the bottom of the clay was at 54.00 m OD, it is possible that the top of organic preservation in the sediment was at 53.90 m OD since a differentiation is shown on the section drawing (Durham 1977, fig. 9). The organic remains included, in addition to seeds of aquatic plants, numerous seeds of plants of seasonally exposed mud including *Polygonum lapathifolium* (pale persicaria) and *Rumex maritimus* (golden dock) (Brown in Durham 1977, 169–172). The mollusc shells from the deposit included flowing water aquatic species and the valves of some specimens of *Pisidium* sp. were articulated, suggesting that they had died *in situ* (Robinson in Durham 1977, 172–3). Subsequently, rhizomes of *Phragmites australis* (common reed) had grown through the sediment.

Somewhat similar evidence came from the Trill Mill excavations. Organic silt which contained flowing water aquatic and marsh taxa overlay a possible palaeosol (Samples OXTMS 82/5, 85/2). It gave a radiocarbon date of 800-260 cal BC (HAR-5342). Above the silt at 53.75 m OD was reedswamp peat dated to 760-50 cal BC (HAR-8361; Sample OXTMS 85/3), which was in turn sealed by clay from 54.00 m OD. Both the biological remains and the good condition of organic preservation suggest that they were not overbank deposits subject to long periods of seasonal desiccation but that they accumulated in shallow water. While the surface of the sediments could have been exposed at times of low river level, they never dried sufficiently to become fully aerobic.

The botanical evidence can be interpreted as showing that initially as the water table rose, annual plants colonised the areas of seasonal mud so created. However, once ordinary summer river level reached at least 53.80 m OD, but perhaps as high as 53.90 m OD, reedswamp became established in shallow water. Not all the floodplain was drowned; the level of gravel suggests areas of higher ground at Blackfriars (Lambrick 1985, 135) and at the Head of the River Trench 2. It is likely that there were other high areas not encountered by trenching. The area of floodplain at St Aldate's must have been very low-lying to become drowned by the rise in water level and was perhaps the equivalent of the broad, flat-bedded palaeochannel at Yarnton, which was reactivated in the late Bronze Age. The more usual pattern for the Upper Thames Valley was shown by the Blackfriars site, with the onset of seasonal inundation.

An Iron Age settlement at Whitehouse Road on a high area of floodplain where the average height of gravel was 55.20 m OD, although there would have been a covering of perhaps 0.20 m of soil, was apparently above seasonal flood levels (Robinson in Mudd 1993, 73). It is almost certain that the channels further south including the Hinksey Stream would have been re-activated in this period if they were not flowing earlier.

It does not seem plausible that such a substantial rise in water level, 0.8 m or more, could have been the result of increased river flow alone; there must also have been sedimentation within the channels. Organic sand (Sample SA 315) sealed the peat at 56–60 St Aldate's Trench 1 and clay filled the early channel at 33 St Aldate's Trench 1b.



Figure 3.11a Artist's impression of how the river Thames south of Oxford may have looked in the late Bronze Age and Iron Age.

An artist's impression of the area during the late Bronze Age and Iron Age has been produced on the basis of the above results (Fig. 3.11a).

Roman and Early Saxon (Fig. 3.8)

The configuration of the drowned floodplain at Oxford would have resulted in large areas of shallow water with little flow to them, and their transformation to reedswamp followed the usual pattern of the hydrosere under such circumstances. The conditions of low suspended sediment load in the waters of the Thames which prevailed during the Bronze Age and throughout most of the Iron Age resulted in the formation of organic sediments or peat on the bed of the shallow areas. This process would have been expected to continue until the height of the peat was around the ordinary summer water level.

However, as a result of increasing arable agriculture on the slopes of the catchment from the late Iron Age onwards, the waters of the Thames began to carry a greatly increased load of suspended fine sediment. Extensive alluviation followed seasonal inundation of the floodplain of the Upper Thames Valley (Robinson and Lambrick 1984; Robinson 1992). Substantial bodies of inorganic alluvial clay were deposited at St Aldate's filling much of the drowned floodplain. At 79-80 St Aldate's clay was deposited up to a level of 54.75 m OD (Durham 1977, fig. 9); at the Trill Mill the top of the clay was at 54.55 m OD. A large area of clay was also deposited at Blackfriars (Lambrick and Woods 1976, 173; Lambrick 1985, 133-7). Alluvial clay at Police Station Trench III could also belong to this episode. During the winter floods, sedimentation would probably have been greatest where dead stems of the reeds provided some impediment to water movement, flow becoming concentrated in open areas of deeper water. This created seasonally flooded islands and began to define as areas of permanent water what were to become the Trill Mill Stream, the Blackfriars Mill Stream and the Shire Lake channel.

The dates obtained on sediments sealed by the clay have all been late Bronze Age or Iron Age. The radiocarbon dates for wattle fences above the clay at 79–80 St Aldate's and the Trill Mill were mid Saxon (Appendix 2). The clay alluvium at Blackfriars cannot be dated so closely but had mostly been deposited by the 13th century AD. It has already been argued that the clay alluvium at 79–80 St Aldate's and much of the clay alluvium at Blackfriars represents the major episode of Roman alluviation (Lambrick and Robinson in Durham 1984a, 78–80) and this interpretation remains entirely consistent with the additional evidence. Durham (1984a, 80–1, 85–6) has argued that the clay at 79–80 St Aldate's represents deliberately dumped material, part of a causeway raised by King Offa. His arguments are still not accepted by the present author; for example a 'lumpy' fracture pattern is also characteristic of *in situ* clay alluvium in the region. However, the additional radiocarbon dates regarded as desirable for the preclay surface have been obtained and do agree with a late prehistoric rather than Saxon date for it.

Inorganic blue/grey alluvial clay similar to the alluvial clay elsewhere in St Aldate's and the Upper Thames Valley was recorded in BT Tunnel 1. It did not extend eastwards into the middle Saxon channel sediments which overlay the early ford (11) in BT Manhole 1, therefore suggesting an edge to the alluvial island. It possibly represents a point-bar accumulation, that is the deposition of curved bars of sediment on the inside of the bend where the current is weakest, extending from the island of higher ground at Head of the River Trench 2 into the earlier Holocene channel. It might be continuous with the clay recorded in 33 St Aldate's Trench 1b and 56-60 St Aldate's Trench I at a greater depth. An obstruction in the form of an early ford or causeway structure would have greatly facilitated the sedimentation. (A point-bar is only likely to have formed if the channel shown as of uncertain status on Figure 3.8 was of later date.)

Micromorphological examination of the clay confirmed it to be *in situ* alluvium. It showed there had been vegetation rooted into it and suggested seasonal exposure. However the top of this clay was at 53.78 m OD, the level of the organic sediments beneath the alluvial clay at 79-80 St Aldate's, and below the postulated Iron Age summer river level of at least 53.80 m OD. Perhaps compaction of peat in the channel beneath the clay resulted in slight subsidence. It is also likely that following the cessation of Roman alluviation, there was a brief fall in water table in the early Saxon period and the organic material survived at 79-80 St Aldate's because it was sealed beneath alluvium. Evidence for at least a fall in flood levels during the Saxon period comes from Yarnton, where there was a brief resumption of cultivation on part of the floodplain where Roman ploughing had ceased following alluviation. Subsequently, medieval alluviation brought cultivation to a halt again.

Above the clay in BT Tunnel 1 was a rubble track or causeway. A piece of oak from the surface gave a dendrochronological date of AD 577–619. The evidence of biological remains from the surface of the track (Sample OXSAM 13) suggested that it was only seasonally under water, which is not inconsistent with its height of 53.95 m OD.

Mid to later Saxon (Fig. 3.9)

Evidence for human activity around St Aldate's up until the mid Saxon period was restricted to the early ford, the early Saxon track surface and botanical remains from a cleared landscape. From perhaps as early as the mid Saxon period onwards, there was evidence for human activity along most of the length of St Aldate's. The date range for mid Saxon wattles along the edge of the Trill Mill Stream and fences defining gullies along the edge of the clay island at 79-80 St Aldate's was centred around cal AD 880 and the dates are not statistically different (see Appendix 2, below). There was a further wattle fence just beyond the clay island in the Speedwell Street Sewer Realignment (Durham 1977, 107) and a date of cal AD 770-1160 (HAR-5341) was given by wattle revetting to the bank in 65 St Aldate's Trench 4 (Durham 1984a, 81-2). 65 St Aldate's Trench 2 and Police Station Trench V were in later channel sediments beyond the edge of the island but a 10th-century return of the bank was picked up in Police Station Trench III.

It has been suggested that a point-bar deposit formed in the earlier Holocene channel where the flow of water curved around the northern edge of an island of higher ground which included Head of the River Trench 2. A wattle revetment associated with 10th-century pot sherds was traced running for 4 m along the western side of this promontory at 56–60 St Aldate's and fallen hurdling was also found in the channel. The eastern bank of the promontory was between BT Tunnel 1 and BT Manhole 1, a radiocarbon date of cal AD 560-890 (OxA-4353) being obtained on wood from channel sediments in BT Manhole 1 which formed under slowly flowing conditions (Sample OXSAM 3). 33 St Aldate's Trench 1b was situated to the east of the promontory, in the channel. However, a reedswamp deposit at 33 St Aldate's (Sample 33 L11) containing a wattle hurdle which pre-dated any of the late Saxon activity on the site is suggestive of the proximity of the middle Saxon channel bank (Durham 1984a, 77-8, fiche B09). Thus reinforced and perhaps exaggerated, the promontory would have formed a useful element in the crossing.

The middle Saxon and initial late Saxon activity seems primarily to have been concerned with revetting the banks of islands of alluvium and so creating more definite edges to the channels, which remained very broad, rather than land reclamation by dumping. Such riverwork would seem entirely consistent with the construction and maintenance of a middle Saxon timber bridge along St Aldate's, an oak pile of which recovered from BT Tunnel 1 gave a radiocarbon date of cal AD 660–900 (GU-5333). This date shows much overlap at two standard deviations with the dates for the St Aldate's and Trill Mill wattle fences. It is possible that the first revetment of the islands and the bridge construction were part of the same civil engineering event.

It is difficult to estimate the summer water level at the crossing. The top of the Saxon wattles at 33 St Aldate's Trench 1b was at 53.85 m OD but the top of the channel-side fence which still stood at 56-60 St Aldate's Trench 1 was at 54.18 m OD. It is thought most likely that the middle Saxon summer river level was around 54 m OD with the late Saxon level perhaps 0.10 m higher. A rising water table combined with rapid burial of some of the structures resulted in preservation of wood to an even higher level. A further complication would have been the construction of what became the Blackfriars Mill and the Trill Mill, which would have served to raise the water level upstream. The top of one of the mid Saxon wattle fences at 79–80 St Aldate's was as high as 54.63 m OD (Durham 1977, fig. 9), but it lined a gully cut into the alluvial clay, which perhaps created a local perched water table.

Human activity around St Aldate's was not just concerned with the maintenance of the crossing. There was widespread evidence for flax retting (the soaking of bundles of flax stems so that they rot to free the fibres) which began in the mid Saxon period. A wattle-lined gully in which retting was occurring was found at 79-80 St Aldate's (Brown in Durham 1977, 170-2), but middle Saxon waterlogged flax remains were also found in the Trill Mill Sample (Sample OXTMS 85/1) and in the channel at BT Manhole 1 (Sample OXSAM 3). Flax capsule fragments were also found from the bottom of Head of the River Trench 3, suggesting that this part of the channel stayed open at least into the mid Saxon period. Cereal bran, perhaps derived from sewage, was identified from the reedswamp deposit at 33

St Aldate's (Sample 33 L11) suggesting human habitation nearby (Robinson in Durham 1984a, 77–8).

An artist's impression of the river crossing during the mid Saxon period has been produced on the basis of the above evidence (Fig. 3.11b).

Late Saxon (Fig. 3.9)

Following the consolidation of the channel banks, the late Saxon period was characterised by increased human activity, including settlement, on the floodplain in the St Aldate's area. Sedimentation was occurring along the edges of the channels and, in the case of Land adjoining the Police Station, on the bed of a channel itself. Organic sediments, primarily of alluvial origin, accumulated alongside the Trill Mill Stream, although various small gullies containing domestic refuse interstratified within them attest to activity on the site. Similar sediments formed alongside the edge of the clay island at 79-80 St Aldate's (Durham 1977, 100-1). However, the level of part of this site was raised by dumping in the mid 10th century and a building was erected on the site by the late 10th century. At the Police Station Trench III, various vertical stakes were inserted along the bank of the island as organic sediments containing 11thcentury artefacts were being laid down.

Further wattle structures were interstratified with 11th-century organic sediments along the western



Figure 3.11b Artist's reconstruction of the Thames crossing south of Oxford in the mid Saxon period.

edge of the promontory at 56–60 St Aldate's Trench I. Land was reclaimed from the channel at 33 St Aldate's Trench Ib by the dumping of clay and other material containing late 10th- to early 11thcentury artefacts (Durham 1984a, Fiche B09-10). Flax processing continued, with finds of late Saxon date being made from the Trill Mill Stream (Sample OXTMS 82/4) and the Police Station Trench III (Sample PS 202). There was also flax debris from an undated minor channel within the alluvium beneath the Blackfriars Priory (Robinson in Lambrick 1985, 194–6).

A major feature of this phase was a rubble ford 0.40 m thick resting directly on the gravel bed of what was probably the original Shire Lake channel (Durham 1984a, 82–5). Wattle fragments sealed within the structure gave a radiocarbon date of cal AD 880–1190 (HAR-5340) and it was overlain by sediments containing late Saxon pottery (Mellor in Durham 1984a, 68) but the excavator suggested that what was found may have represented the widening of an earlier structure. The top of the ford was at 53.78 m OD which, given the considerations made above about river level, might suggest a summer water level of about 0.30 m over the ford.

Post Conquest (Fig. 3.10)

The post-Conquest period saw the reclamation of much land and settlement along the remainder of St Aldate's following the construction of the stone causeway and bridges of Grandpont at the end of the 11th century. The archaeology of the Grandpont and some of the tenements is given in detail elsewhere (Durham 1977; 1984a; various authors, this volume). However, certain aspects of the excavated evidence that relate to the development of the channel system at the crossing are considered here.

Further dumping along the Trill Mill raised most of the excavated area above the water table and encroached on the channel. 83 St Aldate's, 79–80 St Aldate's and Linacre were also raised above ordinary flood levels with imported sediment.

The late Saxon and post-Conquest periods were a time when the intensity of arable agriculture on the slopes of the Thames catchment had again resulted in the river carrying a high suspended sediment load (Robinson and Lambrick 1984; Robinson 1992). This would have facilitated rapid sedimentation in what at the time of construction of the Grandpont were still broad, sluggish channels. The causeway itself would have created bodies of slack water particularly susceptible to silting.

During the early 12th century, silts were being deposited over the ford at 65 St Aldate's Trench 3 (Durham 1984a, 87, fig. 5, fig. 14). By the late 12th century, 0.9 m of silt had been deposited and at the end of the century the ground level was raised by a further 0.50 m of dumped material to form a building platform. Sedimentation was probably initiated by the obstruction created by the causeway. The alluvial sediments showed the typical fining upwards and the invertebrates showed a transition from a riverine flowing water fauna to a marsh fauna (Robinson in Durham 1984a, fiche G02-03). Even the lower silts contained a typical urban faunal and floral element. The river was divided into two very much narrower channels around an island, the northern being the original Shire Lake channel, and the southern flowing under the Denchworth Bow. The upstream tip of the island was detected during the Blackfriars excavations (Lambrick 1985, fig. 1) and an early to mid 13th-century stone revetment at 65 St Aldate's Trench 1 defined the northern bank of the island with the Shire Lake channel (Durham 1984a, 96, fig. 4). The opposing bank of the Shire Lake channel was detected in 65 St Aldate's Trench 2.

Downstream of the causeway, fine sediments had already begun to accumulate over the gravel at the Land adjoining the Police Station perhaps as early as the 10th century. Emergent reedswamp vegetation had become established in peaty sediment and there was some sort of timber structure. From the late 11th century onwards, alluvial sedimentation became more rapid and by the 12th century, conditions were sufficiently terrestrial for pits to be cut into these sediments. At this date, sediments apparently sloped southwards, perhaps towards the Denchworth Bow channel.

What was perhaps a late medieval northern bank of the island with the Shire Lake was noted in Police Station Trench I while a 13th-century river wall in Police Station Trench V marked the opposing bank, but at an earlier date.

The bottom of the Denchworth Bow channel was not reached in any of the excavations, but the trenches at 56–60 St Aldate's showed a 12th-century stave and plank waterfront which had replaced the Saxon wattles along the western edge of the promontory. This had soon been sealed by a mixed dumped deposit which had extended westwards and northwards from the site, confining the channel and serving as a platform for a late 12th- to mid 13thcentury building. There was, however, some evidence that a flood-relief channel ran eastwards across the northern part of Trench I to an arch in the causeway.

Early medieval land reclamation extended eastwards across 33 St Aldate's Trench 1b. Crop processing, represented by charred pea and bean threshing debris was taking place adjacent to the late 11th-century stone causeway almost as soon as it had been constructed (Robinson in Durham 1984a, 78–9). It is argued that the sloping layers found both in BT Tunnel II and the north-south section of 33 St Aldate's Trench 1b (Durham 1984a, Fig. 6) were related to reclamation on an individual tenement basis between flood arches rather than that they reflected channels which pre-dated the Grandpont.

The sediments sequence in BT Manhole 1 shows how the channel became filled firstly with alluvial and then dumped sediments. Head of the River Trench 3 gave a similar sequence. Head of the River Trench 1 initially had horizontally-bedded sediments across its entire area, but the pattern of flow changed as the channel filled eastwards from the Grandpont, and a mid 14th-century timber embankment for the western edge of the Trill Mill Stream ran through the trench. In contrast to the general pattern of sedimentation and reclamation, what had been an area of high ground at Head of the River Trench 2 became drowned by the rising water table at some stage. Possibly as a result of a concentration of flow along the Trill Mill Stream as the channel became narrower, any soil was eroded from above the gravel, and the surface of the gravel became cemented with calcium carbonate. Sedimentation only began in Trench 2 in the 12th/13th century.

The western end of BT Tunnel 1 extended into the recent backfill of a channel which ran obliquely to Folly Bridge in a south-east direction. It is possible that this channel was deliberately dug as part of the construction of the Grandpont to take more of the flow of water under Folly Bridge. While it is possible that it was the medieval navigation channel, there might have been problems with negotiating the Folly Bridge arches if there were much flow on the river, given the turn required, and the possibility that the navigation channel originally ran under the Denchworth Bow cannot be eliminated.

Alluviation continued on the site of the Blackfriars Priory up until the date of its construction in 1236 when clay from its construction trenches and imported soil were used to raise the ground level. The low-lying nature of the site was emphasised by the discovery of a waterlogged wattle fence, radiocarbon dated to ad 1220 ± 100 , in the alluvium, which had in turn been sealed by further alluvial clay and then dumped construction deposits of the Priory (Lambrick and Woods 1976, 173, fig. 3). The documentary and molluscan evidence shows that the site was seasonally flooded hay meadow when the Priory was founded, and alluvium had been deposited up to a height of about 55.20 m OD (Lambrick and Woods 1976, fig. 3; Robinson 1988, 109). Flooding deposited riverine aquatic mollusc shells in medieval features at a similar height at Whitehouse Road (Robinson in Mudd 1993, 73). The top of waterlogged timbers at various sites in St Aldate's below the Blackfriars Mill and the Trill Mill, for example 55–60 St Aldate's, was around 54.40 m OD and it is possible that this level, below which medieval organic material is preserved, represented the summer river level in the medieval period. The gravel river bed at the bottom of Head of the River Trench 2 was at 54.00 m OD.

Floodplain reclamation by dumping and the encroachment into channels continued throughout the late medieval period into recent times, such that most of the area shown in Figure 3.10 is now safe even from severe floods and little survives above ground of the channel system apart from the modern navigation channel and the length of the Trill Mill Stream that flows into it.

A REVIEW OF DOCUMENTARY SOURCES FOR THE SOUTH SUBURB (FIGS 3.12–3.14) by Julian Munby

'This street was in antient times meadow and plashy ground [and the] bridge without [doubt came] up to the South Gate.' (Wood *City*, i.296 n.2)

General topography and water resources

The main southern exit road from Oxford, St Aldate's (earlier Fish Street), slopes down from Carfax and crosses the line of the town wall at the south gate by the south-west corner tower of Christ Church. Passing the culverted line of the Trill Mill Stream at Rose Place, it enters the lower part of St Aldate's, known as Grandpont after the great stone causeway which went from here to Hinksey. Just before Folly Bridge another former stream bed is passed at 'Denchworth Bow' on the Shire Lake. The origins and development of these streams, the Trill Mill and Shire Lake, and their connections to the main course of the Thames, are an essential part of the history of the south suburb, if poorly documented in written sources.

The Trill Mill stream originates from the river Thames near the castle, runs east towards St Aldate's and turns south; now culverted, it formerly served two mills, the Blackfriars' Mill on the west, and Trill Mill to the east of Grandpont. A possible eastward extension of the stream linking with the many early watercourses running east to the river Cherwell was found in 1863 when Christ Church Meadow Buildings were built (Gaz. No. 17a). That these streams were of much greater width has long been known; Hurst noted traces of a stream bed south of Brewer Street in the building of the Christ Church Cathedral School, and suggested the possibility of Trill Mill Stream as having a defensive origin (Gaz. No. 5). The lower stream across the road at Denchworth Bow also had an eastward continuation in the Shire Lake, the former Berkshire/ Oxfordshire county boundary that still crosses Christ Church Meadow as a small stream.

The existence of a boundary stream suggests a former precedence over the present navigation channel of the Thames at Folly Bridge, and such comprehensive changes in the main course of the river have indeed been documented on the west side of Oxford (Prior 1976). Quite how the Thames acquired its broad and straight run (so suitable for rowing) between Folly Bridge and Donnington Bridge is unknown and possibly undocumented, while the curious upstream confluence with the old cut of the Cherwell suggests a changed regime.

Within this network of watercourses the south suburb of medieval Oxford, in the form first known to us from late medieval documentation and the earliest maps (see Fig. 3.12), has an appearance of regularity that prompts speculation about planned origins. A regular block of properties under the town wall backs onto the Trill Mill Stream, and for almost



Figure 3.12 Loggan's bird's-eye view of Oxford, 1675; St Aldates, looking south.

the full length of St Aldate's there are long regular tenements backing onto the millstreams that run down to the Thames. The archaeological evidence for the origins of the suburb is the subject of the present study; the contribution of documentary evidence will now be examined.

Medieval documentation

There is little contemporary material of direct relevance for the earliest period under discussion, though a review of the sources indicated by Salter's *Survey* is instructive (OHS n.s. 14, 1960, for southeast ward, and 20, 1969, for south-west ward; references are given to the tenement numbers of the *Survey*, where sources are given in full).

As with the rest of Oxford, most of the charter evidence starts in the early 13th century, and continues sporadically through the 14th and 15th centuries with less for the 16th century (at any rate less published). The relative scarcity of continuouslyheld corporate property makes the medieval topography of the area difficult to reconstruct with certainty, and it is difficult to link the medieval and early modern documentation. Many of the tenements contain more than one house, and thus more than one street number, which adds to the problems of identifying historic properties. It is consequently hard even to locate the many names given in published sources for the 17th century (S&T for taxations and 1772 Survey; Toynbee and Young 1973 for Civil War households; Hobson 1938 for 1696 Window Tax). The mass of post-medieval deeds for St Aldate's properties (many acquired by the City in the course of slum-clearance in the 20th century) have scarcely been studied and neither has this been attempted here; it would be a lengthy task, but would perhaps make only minor differences to Salter's arrangement of properties, which are clearly given in the correct relative order, though their absolute location may shift as a result of further investigation. However, two revisions of Salter's Survey can be proposed. On the west side of the road it has been suggested, on the basis of archaeological evidence (Durham 1984a, 60-3), that properties SW(7-10) should be redistributed, whilst on the east side there is an inconsistency between the text and the mapping of the Survey, which can be resolved by relocating properties SE(161-8) (see below).

The immediate extramural area (Fig. 3.13)

Outside the south gate on the west was a series of long tenements at right angles to St Aldate's, between Brewer Street and the Trill Mill stream. These were all in existence in 1279, the year of the Hundred Rolls survey, though it is no doubt significant that the southernmost (*Survey* SW(26)) was known as Water Hall in the 14th century, and encroached on the bank of the stream in 1585 (*OCP*, 109). Excavations described below took place in the next two properties to the north, 89 St Aldate's (*Survey* SW(27)), and 90–91 St Aldate's (*Survey* SW(28–9)), and these are poorly documented between 1279 and the 16th century.

From the back of these tenements, along Brewer Street, were long tenements extending southwards from the road below the town wall to the Trill Mill stream (*Survey* SW(32–46)). Again, these were all in existence in 1279, and some can be traced earlier: SW(37) was described as being 'under the wall' (*sub muro*) in *c*1250 (*CSF* i, 170); SW(41) as 'under the wall' possibly as early as *c* 1215 (*GEC*, 514).

The topography of the east side of the road outside the wall is less certain, but from the 13th century there were at least two tenements under the wall and a row of four facing onto the lane leading to Trill Mill (*Survey* SE(146–50)). These last were described as being at or next 'Shelvyngstole', which seems to have been the name of the town's land (*Survey* SE(151)) on the south side of the lane next the mill stream (*P* N *Oxon*, 23). Although Salter's *Map* places this lane near to the modern course of the Trill Mill stream, it is not impossible that it was much further north, on the line of the present back entrance to Christ Church, as shown on Loggan's map of 1675 (Fig. 3.12).

The uncertainty about this area arises from theownership of the entire block from here to Blue Boar Street by Christ Church, and the former



Figure 3.13 Medieval tenements from St Aldate's Church to the Trill Mill Stream (after Salter).



Figure 3.14 Medieval tenements from the Trill Mill Stream to Folly Bridge (after Salter).

ownership of much of it by the Augustinian Priory of St Frideswide. Even the extent of the precinct of St Frideswide's is not known, and both the lack of adequate late medieval priory records, and the means employed by Wolsey to obtain land for his foundation of Cardinal College (now Christ Church), leave little from which to establish any firm lines (Pantin 1964a). For example, the exact site of the Trill Mill, a property of St Frideswide's Priory from foundation (CSF i, 154-7), is not known, but it must have stood immediately south of the garden that is next to the existing open stretch of the stream at the entrance to Christ Church Meadow. Loggan shows an indentation in the stream bank which is likely to mark the site of the mill, and the first property south of the stream, Nos 10-12 St Aldate's, was known as Trill Mill Hall (Survey SE(152)).

Grandpont, or Southbridge Street (Fig. 3.14)

The first Ordnance plans agree with earlier maps as far back as Loggan in showing the lower part of St Aldate's having a series of long narrow tenements between the road and the two back streams on either side; below Denchworth Bow the layout is less regular. The varied size of the tenements indicates subdivision, though their straight sides would normally suggest the regular and contemporaneous layout of a planned suburb.

The first overall view of the suburb, which was mostly in the parish of St Michael at the Southgate, is provided by the survey in the Hundred Rolls of 1279 on the basis of which some of the deeds prior to that date can be plotted (*Rot. Hund.*, 44–50). The mapping on the west side is made easier by the survey for the south-west ward being in topographical order, but on the other side of the road the survey of south-east ward is initially arranged by major landholders, though it follows an approximate topographical order for the minor landholders listed at the end, and in any case identifies all properties by parish (*Rot. Hund.* 789a–b (nos 146 ff) for south-west ward; *Rot. Hund.* 802b–803a (nos 887–904) lists tenements SE(163–142)).

Several features of interest are revealed by a study of the Hundred Rolls and early deeds. Firstly there is the grouping of properties owing rents to religious houses: the holding of Abingdon and Eynsham on the west side, and those of St Frideswide's and Godstow on the east. Prominent townsmen also had interests in groups of properties, Geoffrey Aurifaber (Goldsmith), and Guy the Armourer (Geoffrey Aurifaber Survey SE(168–9), (171) and SW(1–5); Guy the Armourer SE(160-161?)). Although such holdings might accumulate by chance, it may equally be no coincidence, and may reflect the origins of the suburb. Secondly, there is a lack of early documentation for the southern end of the street beyond Denchworth Bow, at least on the east side, implying that the appearance of tenements here was a later feature. Thirdly, on both sides of the street in the vicinity of the Shire Lake there is a

hiatus in the documentation and a noticeable degree of irregularity in the tenement layout (*Survey* SE(163–6) and SW(8–9)). Confusingly, this is in each case associated with the estate of Leigh and his donations to the Crutched Friars and later holdings of the Tailors' Gild, though the coincidence may be significant if there was some change in the profile of the Shire Lake in the early 14th century.

One feature noted by Wood, and apparent from many of the early deeds, is the description of properties as being 'super magnum pontem', ie 'on Grandpont' (and not 'in' Grandpont), even for properties so far north as Trill Mill (CSF i, 154-7). The English name for the street was 'Southbridge street' (see, for example, CO ii, 183 (736) of c 1225), and it may be suggested that the descriptions lend weight to the proposition that the Grandpont began somewhere near the Trill Mill stream. Another notable feature of all the deeds is that (except at Denchworth Bow) water was not generally used in descriptive bounds, but as elsewhere in Oxford the tenements were delineated by named neighbours. This may imply that any existing minor streams could not be recognisably named, or that the streams lay within tenements. The importance of water is, however, abundantly clear, and in any case every tenement reached back to the streams running parallel to the road. The range of occupations includes fishermen, dyers, weavers, tanners, butchers, brewers, millers and a fuller, and although some may have not lived or worked in the houses they owned, the frequency of such bynames in Grandpont must be significant.

There were mills on each of the back streams, Trill Mill of St Frideswide's on the east stream, and the Blackfriars' Mill on the west stream, and indeed the very creation of the mills and their streams, together with the associated weir and fishery of Aldwere, may have been the occasion of the regularisation of the water regime in the suburb. But as such, this event is not documented, and must have taken place at an earlier period. Trill Mill appears in the charter of Stephen to St Frideswide's of c 1139 (molendino super pontem), and a second mill is mentioned about 1200 (CSF i, 19, 21 and 154; corresponds to Denholm-Young 1931, No. F34); the Friars' mill was also a double mill, and referred to in 1091 as 'erected long ago' (CE; Survey ii, 18-20). Aldwere may be mentioned in Domesday, but is first referred to by name in 1141 when it was granted to Oseney by the Empress Matilda (CO ii, 178-82; iv, 84). The implication of this would be that if the mills and their streams existed from before the Conquest, then the tenements in St Aldate's may also have existed in something like their present form.

Buildings and frontages

If the Grandpont reached as far as the Trill Mill stream it is not certain how the causeway related to the built frontage, for the archaeological evidence for occupation immediately adjacent to the causeway

contrasts with the later documentary record and the known location of medieval houses which were set back from it. No ancient houses now survive south of Littlemore Hall (82-3 St Aldate's, now 'Alice's Shop'), although 81 St Aldate's and the row at 31-4 St Aldate's were recorded prior to demolition (Dawson 1961/2, 323-6; Richmond 1977, 201-3). But an examination of old photographs and topographical drawings has identified a number of houses dating to at least the 17th century that both respect the apparent tenement divisions, and confirm the width of the road as shown on the 19th-century Ordnance plans (Photographic collection in Centre for Oxfordshire Studies, Westgate Library, Oxford). The only frontage that changed was at the southern end where there was comprehensive redevelopment following the rebuilding of Folly Bridge in the 1820s, but otherwise the road remained the same width until extensive slum clearance in the 20th century. One detail of interest is that the frontages of the recognisable 17th-century houses are often irregular, indicating that they were not being built or rebuilt to a fixed line. Whether the earliest medieval houses were also built to the same frontage, which gave a width of over ten metres to the street, or were at some time drawn back from the edge of the Grandpont (itself under five metres wide) is not revealed by documentary sources, and can only be determined by archaeology. In the case of 79 St Aldate's, excavations revealed foundations below the modern street frontage suggesting no change at all (Durham 1977). It might be suggested, however, that it would have been just as convenient to leave a gap on either side of the stone causeway for ease of access as it would have been to build up against the narrow roadway, which must have had a parapet, and whose surface was at least a metre higher than the floor level of the first houses (Durham 1984a, fig. 14). (A ford, used for driving stock into market, existed on the north side of Pettypont, the precursor of Magdalen Bridge, until its demolition in the 18th century; VCH iv, pl. opp. p 60.) It would have been a major effort to make all landowners rebuild their houses back from an existing line, and, together with the evidence considered above, this may suggest a phase of comprehensive reorganisation, perhaps contemporary with the creation of mill streams, when the tenement boundaries were established and the frontage onto the crossing was fixed. If this event took place before the Conquest it would have preceded the creation of the stone causeway.

The development of Grandpont

The development of the south suburb as told in documentary sources can conveniently be summarised here. The regularisation of the water regime for the mill streams may have been contemporary with a reorganisation of the tenements to produce the layout known from medieval sources; less is known of the division of property south of the Shire Lake, and beyond the beginning of the bridge proper there

were only meadows. From the 17th century there was a growth of population in the parish, crowding small houses into the long yards behind the buildings on the street; at the same time buildings associated with brewing and other trades requiring water grew up along the banks of the back streams. On the bridge the Gate tower was fitted out as the city waterworks (Salter, OCP), and on the north bank the built-up area moved towards the river. The 'Folly' was finally demolished in 1779 by the Hinksey Turnpike Trustees (VCH iv). From 1815 when an act for rebuilding the bridge was passed, there were great changes; the bridge was rebuilt in 1825, and the nearby houses were rebuilt, together with the wharfs. The rebuilding spread back up St Aldate's with the making of Thames and Isis Streets, while in St Ebbe's a whole new quarter of the town was built, and in 1844 the Great Western Railway station opened just south of the bridge at the junction of Western and Marlborough Roads (VCH iv).

The final chapter has resulted in wholesale change, transforming the appearance of the southern approaches to the town; slum clearance of the yards in St Aldate's resulted in the widening of the street in the 1930s and was followed by the building of the Morris Garages and the Police Station. In the 1960s the whole of St Ebbe's was demolished, Speedwell Street was rebuilt on a new alignment, and the making of Oxpens Road swept away the former Thames and Isis Streets. After some delay the final phase has seen the rebuilding of derelict land, and the remaking of the street frontage which occasioned the excavations reported here. Only fragments now remain of the historic street front and its buildings.

EXCAVATION REPORTS

Excavations at 89–91 St Aldate's (the Trill Mill Stream) 1982–5 (TMS) (Fig. 3.15) by David R P Wilkinson

Introduction and strategy

The excavations were undertaken in response to a proposal by Christ Church to create a new quadrangle on the site of Nos 89–91 St Aldate's. A total of seven trenches were excavated between 1982 and 1985. Trenches I and II preceded the first phase of the development, which included the W range of the new quad, and this was followed by a watching brief on the conversion of No. 90 St Aldate's (Trench III) and on sewerage works (Trenches IV and V). Trenches VI and VII were excavated prior to the second phase of construction, which replaced No. 89 St Aldate's with a building which wrapped round behind the preserved frontage of No. 90. The building at 89 St Aldate's dated from the 17th century, and was recorded prior to demolition.

The excavations were designed to investigate the origins and any former alignments of the Trill Mill Stream, which is now culverted below, and on the



Figure 3.15 89–91 St Aldate's (Trill Mill Stream): location of trenches.

line of, Rose Place, an east-west street south of the site. It was also intended to examine the development of occupation and buildings relative to the stream in this area, which lies at the foot of the Second Gravel Terrace and just outside the south gate of the medieval town. The order of description below reflects the trench positions in that Trenches I, II and VI form a useful, if staggered, north-south section across the study area. Trench VII is then described separately, since it relates to the street frontage and investigated stratification within and below No. 89 St Aldate's; a summary description of the standing building at this site is also presented, for which full details are available in archive. Finally, the results of the three watching brief trenches are summarised. The excavation reports are preceded by a brief review of the documentary background of the site.

Documentary background to 89-91 St Aldate's

Rather than attempt to give complete tenement histories, which cannot be done without detailed examination of post-medieval sources, there follow some selective notes by Julian Munby on relevant material from the sources (illustrated in Fig. 3.13).

No deeds earlier than 1279, the year of the Hundred Rolls survey, can be associated with these holdings (Survey SW(27-9)). At that date the southernmost, No. 89, was a tenement of Geoffrey Aurifaber (goldsmith) paying rent to St Michael's Church; No. 90 was a tenement of Henry Pistor (baker) paying rents to Abingdon Abbey as chief lord and St Frideswide's Priory, and No. 91 was a tenement of Richard Waldri paying rent to St Frideswide's Priory as chief lord (Rot. Hund. ii, 790 (172-4)). St Frideswide's recovered the last two of these in the 14th century for non-payment of rent, and by 1415 they were leased as a single garden, 122 x 58 ft with a lane leading down to the Trill Mill stream, with a stone-roofed latrine, presumably over the stream (CO ii, 184). The garden on the site of Nos 90-1 remained until at least the 17th century.

No. 89 St Aldate's has only one medieval connection of any relevance, when it was acquired in 1478 by the leading Oxford mason, William Orchard. It is thought that he lived elsewhere in Oxford, but it is worth noting that on his death in 1504 he left this property to his wife with a reversion to St Frideswide's, and that the will includes no other property in Oxford itself (Harvey 1984). The urban property of St Frideswide's was disposed of after the Dissolution, and like the adjoining garden this property may have been sold to the Taverner family, who purchased much of the priory's land. At some date prior to 1620 it belonged to John Singleton, chandler, and one of that name occurs in the 1544 subsidy (*S&T*, 157).

The tenant from about 1620 was John Cantwell, a London surgeon, who was licensed by the University in 1620 and listed as a privileged person in St Aldate's in 1624/5. He died in 1633 but his widow lived until 1644, and her son was the tenant of Oliver Smyth when he settled the house on his wife in 1648. This is the first known deed referring to the post-medieval property, and it is not known when the Smyth family acquired it (Toynbee and Young 1973, 136-7). Oliver Smyth was the son of Thomas Smyth (1604-46) who had built the Old Palace just down the road in the 1620s, and the third generation of the great family of brewers who owned most of the eastern end of Brewer Street (and also the garden at Nos 90-1). Oliver Smyth senior (1584-1637) lived in the existing house at the east end of Brewer Street, behind which were extensive malthouses and brewhouses which can be seen on Loggan's map of 1675 (Toynbee and Young 1973, 122, 138). It is likely that the Smyths, or their tenant Cantwell, built the substantial stone and timber house at 89 St Aldate's which was demolished in 1985.

The subsequent history of the property cannot easily be traced, though a widow Thomasine Jones occurs north of No. 88 in late 17th-century taxation lists, paying for three hearths in 1665 (S&T, 192, 260), and she died in 1685. Her will does not mention any real estate, nor does her inventory give any location to her house; it lists the meagre contents of the 'great room', 'lodging room', 'little kitchin' 'great kitchin', and 'room by the cellar', all of which could be accommodated within a two-part plan with rear extension (ORO Archdeaconry Wills 91.431; 38/2/1). The deeds held by Christ Church only go back to 1813, when Edward Rushbridge cordwainer left the property to his nephew, who sold it in 1842 to William Baxter, the tenant of a 'lately erected' printing office behind the house and garden occupied by the Reverend William Richards. The buildings of the Baxter Press were demolished at the same time as No. 89. William Baxter died in 1865, leaving the property to his four daughters, and the executors of the last one sold in 1892 to William Vincent, printer and publisher, whose descendants sold to Christ Church in 1920 (Ch Ch Treasury Deeds 3/1).

The excavations

The radiocarbon dates quoted in this report are given at the 2 sigma (95%) confidence level. Full details of the radiocarbon dates and their probability distributions can be found in Appendix 2, below. A report on the dendrochronological dates can be found in Chapter 7, below, and the dates are summarised in Appendix 2.

Trenches I, II and VI

Phase 1 (Figs 3.16–18)

Dating

The dating of this phase is not entirely straightforward. The arguments relating to this are set out below, together with specific dating points; the early natural layers are discussed in more detail in Robinson's review of the palaeohydrology of the area (see above).

Description

The surface of the natural gravel was at 53.25 m OD at the N end of Trench I, and at 53.3 m at the S end of Trench VI, though with some undulations in between. In particular, Figure 3.16 shows how the gravel may have been shelving away at the north end of Trench I, possibly indicating the presence of an early channel beyond the trench. The gravel surface was concreted in Trench I, and above it were deposits of grey or brown organic silts with a high gravel content: 19/2, 19/1, 19/5, 19/4 and (Trench VI) 657/1, 682/1. A radiocarbon date of 800-260 cal BC (HAR-5342) was obtained from layer 19/2, and two of these deposits, 657/1 and 19/2 provided useful environmental evidence, indicating well-oxygenated flowing water. The quality of organic preservation suggested that the area was permanently under water, and did not

trench I



Figure 3.16 89–91 St Aldate's: Trench I, section.

dry out seasonally (Robinson, this volume, Sample Nos TMS 85/2, 82/5).

Above the gravelly silts already described were deposits of peat: 19, 682, 681, 681/1, 657, all of which were at the same level. A radiocarbon date of 760–50 cal BC (HAR-8361) was obtained from layer 657, while analysis of the same deposit (Sample No. TMS 85/3) showed that the peat had formed in reed-swamp conditions, on a channel bed or in marginal marsh. Wet grassland or grazed marsh probably bordered the water, and the insects present show a strong presence of domestic animals. A radiocarbon date of cal AD 680–1020 (HAR-8363) was obtained from a piece of wood assigned to layer 681/1 but the site notes suggest the wood was actually on top of the layer near a later cut and should be considered as

part of a later phase (see below, Phase 2). Over the peat was some 0.5 m of blue-grey clay with no organic preservation, 654, 680, 18, 18/1.

Wilkinson and Robinson interpret this deposit as alluvium formed during the Iron Age and Roman periods (Sample No. TMS 85/7); clearly this interpretation would not be consistent with the date of cal AD 680–1020 being from layer 681/1. The interpretation preferred by the excavator is that the reedswamp peat 681 was cut just north of the undated wooden stake 681/3 and that further reedswamp peat 681/1 then formed in the cut, accounting for the radiocarbon date. The alluvium 680 is interpreted as having been cut at the same time, but later washing out over the cut edge, and obscuring it.

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trench VI west section (reversed)

S



Figure 3.17 89-91 St Aldate's: Trench VI.

Phase 2 (Figs 3.16-18; Plate 3.1)

Dating

Ν

Radiocarbon dates from this phase suggest some activity in the 9th century AD, and possibly earlier. The only reasonable assemblage of pottery comes from slightly higher in the sequence (context 15) and is indicative of a 10th-century date. Discussion of the dating is expanded in the description below.

Description

In Trench VI brown or black organic silts 678, 665, formed over the top of the Phase 1 alluvial clay.



Figure 3.18 89–91 St Aldate's: Trenches I and II, plans.



Plate 3.1 89–91 St Aldate's (Trill Mill Stream) Trench VI: Phase 2 wattle fences, looking W.

Similar layers, 16, 16/2, were found in the same stratigraphic position in Trench I, the former containing a single sherd of Roman pottery. Analysis of samples from 16/2 and 665 (Sample Nos TMS 82/8, 85/1) showed organic sediments were being laid down as the water table rose. The plants represented in the sample suggest emergent or waterside vegetation but not the tall reedswamp encountered previously (see Phase 1). Less evidence was present for wet pasture, and more plants from disturbed ground were found.

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Layer 665 was partially removed by a shallowsloping cut on an ENE-WSW alignment. The same cut also appears to have removed parts of layers 680 and 681/1. Three separate wattle fences, 664/1-3, apparently represented successive revetments of the edge of the cut, moving gradually southwards (Fig. 3.17; Plate 3.1). All were damaged and fragmentary, with 664/1 being the earliest and furthest north, and 664/3 the latest. A radiocarbon date of cal AD 660-990 (HAR-8364) was obtained from 664/1 and a second determination of cal AD 680-1020 (HAR-8363), recorded on site as from wood within layer 681/1 (see Phase 1, above), is thought to come from wattles just behind 664/3. The probability distributions of these two dates are strikingly similar, and in both cases there is a reasonable probability that the dates lie before AD 900 (see Fig. A2.1, Appendix 2).

Moving northwards, in Trench I, a narrow, shallow east-west gully, 17, was cut into layer 16 (see above) and had two identified fills of humic silt. The lower fill, 17/1, was radiocarbon dated to cal AD 890-1290 (HAR-5344); taken in conjunction with the other dates, this shows that Phase 2 almost certainly spanned the periods before and after AD 900. A garment hook (Fig. 6.1 No. 1) of mid to late Saxon type was also found in fill 17/1. Analysis of samples from both fills of the gully (Sample Nos TMS 82/3, 82/4) indicated a flora of seasonally exposed mud with stagnant, temporary pools of water, with disturbed or waste ground nearby. Flax seeds and capsule fragments from 17/1 show that flax was being processed either in the gully or nearby, while other seeds from the same deposit suggest that hay or hay waste was present on site. The fills of gully 17 were covered by layers of silt, 15/1, 15/2 associated with some very fragmentary wattles, 24 (not illustrated). The original orientation of the wattles could not be reconstructed. In Trench II, a small part of a cut feature 35/1, perhaps a north-east/south-west gully, was cut into the same level as layer 16 in Trench I. Lastly, a hint as to the nature of activity in the area at this time is provided by the quantity and type of bone recovered from Phase 2 contexts, which does not suggest nearby occupation — certainly there does not seem to have been much dumping of rubbish along the edge of the channel (Wilson, Chapter 7).

Phase 3 (Figs 3.16-18; Plates 3.2, 3.3)

Dating

The quantities of pottery from contexts in this phase were sufficient to show a 10th-century date. Two radiocarbon dates are discussed below, one probably being 10th century, but the other is more likely to be later.

Description

In Trench I, at the northern end of the site (Plate 3.2), a narrow, east-west gully was excavated, 13/1—it was cut into layer 15 (Phase 2) and was on the same line as the Phase 2 gully, 17. 0.7 m south of gully 13/1 was a low bank of gravel, 14, which was 0.7 to 0.9 m wide. The space between bank and gully was filled by a flattened wattle fence, 13, the base of which was probably originally within the gully. The flattened fence was overlain by a thin skim of mortar, 11/3. The south edge of the gravel bank, 14, was defined by a low wattle fence, 10, in front of which was a parallel line of three larger stakes, 10/1–3; one of these, 10/2, gave a radiocarbon date of cal AD 890–1220 (HAR-5346), with a strong probability that the date lies after AD 1000 (see Fig. A2.1, Appendix 2). Around the stakes, and extending further south, was a layer of irregularly pitched limestone pieces in a matrix of silt, 12. All of the above-described features were covered by a layer of silt, 11, 11/1, 11/2, up to 0.15 m thick. A sample (No. TMS 82/1) from layer 11/1 was analysed, and is discussed by Robinson (Palaeohydrology, above) together with other samples from this phase (82/ 1–5, 82/13); he shows that what would appear to have been a waterside area of damp, disturbed ground was notable for plant and invertebrate remains related to domestic activity. This could have resulted from habitation in the immediate area, or from dumping of organic refuse.

In Trench II, a north-east/south-west gully, 34/1, was partially lined with small fragments of limestone (Fig. 3.18, Phase 3a). The flattened remains of a wattle fence, 34, lay within the gully (see Plate 3.3) and these gave a radiocarbon date of cal AD 770– 1160 (HAR-5343), for which the balance of probability is in favour of a 10th-century date (see Fig. A2.1, Appendix 2). A wedge of silt, 32/1, overlay the wattles and was under a layer of limestone, 31, perhaps the equivalent of the stone layer 12 in Trench I. Layers above this in Trench II had unfortunately to be hurriedly machine-excavated, and are not described here.

At the south end of the staggered transect, in Trench VI, the large ENE-WSW cut described in Phase 2 was filled by silt 660/1—above this were further silts, 660, 656, 651 (not illustrated), which extended northwards beyond the cut. Analysis of a



Plate 3.2 89–91 St Aldate's (Trill Mill Stream) Trench I: excavation of Phase 3 gravel bank and wattle fence, from the S.



Plate 3.3 89–91 St Aldate's (Trill Mill Stream) Trench II: excavation of Phase 3 wattle fence and gully, from the W.

sample from layer 651 (No. TMS 85/5) confirmed the picture described for Sample No. TMS 82/1, above.

In summary, Phase 3 saw silting within the large cut in Trench VI, which was probably the N edge of a channel. North of this, a number of small gullies associated with wattle fences attest, as does the environmental evidence, to human activity. The gullies probably conducted water from the springline of the Second Gravel Terrace, though the environmental evidence shows that they were at times stagnant; they may also have been used for flax retting. The presence of mortar may indicate building activity nearby. It is also clear that at times the water overflowed the channel and deposited silt over the bankside area. More animal bone was recovered from this phase than from Phase 2, perhaps suggesting some dumping of rubbish, but there was no indication from the bone of any industrial activity.

Phase 4 (Figs 3.16-18)

Dating

A late 10th- to early 11th-century date is suggested for this phase on the basis of the pottery recovered, with the early 11th century probably being more likely given Phase 3 radiocarbon dates which are discussed above. A single radiocarbon date of cal AD 770–1160 (HAR-8362) was obtained from Phase 4, and is discussed below.

Description

X

In Trench I a spread of gravelly clay, 8/2 (not illustrated), was probably a deliberately dumped deposit. It was overlain by thin, level layers of brown organic silt.

In Trench VI, the Phase 3 silt, 656, was overlain by organic silt, 655. This layer had formed in a narrower band than the Phase 3 silts, suggesting that the water level was temporarily lower. Further N, a band of silt 637 (not illustrated) was deposited on the higher bank area, while beyond this again were two small gullies, 639, 646, cutting 651 (Phase 2) and cut by a third gully, 641. All these features were overlain by silt 675, and the silts were overlain by organic silt 647.

To the S of these features, organic silt 647 was cut away on an E-W alignment (Fig. 3.17). The edge thus created was lined by two wattle fences, 652/1, 652/2 some 0.6 m apart. These were not demonstrated stratigraphically to have been successive, and could have been contemporary. A radiocarbon date of cal AD 770–1160 (HAR-8362) was obtained from fence 652/2; the balance of probability is in favour of this date being before AD 1000 (see Fig. A2.1, Appendix 2), which would not fit particularly well with the suggested dating for this phase (see above). However, it is possible that the wood was re-used from elsewhere, or simply that this date shows up the fairly crude nature of phase dating (particularly when using pottery) on a site of this kind.

The fences were covered by silt 645 which filled the E-W cut, and lay below two (probably equivalent) layers of compressed vegetation, 636/1, 636/2, which also contained a bundle of wood lengths, one of them roughly squared. Further organic silt above, 635, 633 = 634, 632 suggested that a relatively dry period, during which the area was colonised by plants, was interrupted by an episode or episodes of flooding. Layer 633 = 634 contained a whittle-tang knife of a late 10th- to early 11th-century type (Fig. 6.2 No. 17). The organic preservation was notably poorer in the uppermost silt, 632, suggesting that the site was becoming dryer at this time. Finally, the animal bone recovered from Phase 4 contexts shows that the dumping of rubbish was beginning to increase (Wilson, Chapter 7).

Phase 5 (Figs 3.16, 3.18)

Dating

The pottery assemblage from this phase, which included distinctive imported wares from the Pas de Calais and the Rhineland, suggests a date in the second quarter of the 11th century.

Description

The earliest context excavated from this phase, in Trench I, was a spread of irregular limestone pieces, 7 (not on plan), overlain by a thick (0.5 m) layer of gravelly clay, 5/4 with much animal bone. Two small gullies, 5/5 and 9, were cut into 5/4 and both ran ESE-WNW. The fills, 5/3 and 9 respectively, of these gullies consisted of gravelly loam. No contexts dating to this phase were recovered from either Trench II or Trench VI.

It is clear that the character of the excavated deposits has changed fundamentally in this phase. Silts have given way to clay and loam, and it is likely that these deposits were deliberately dumped here in order to raise and reclaim the area. The gullies may have been intended to improve drainage, or were perhaps garden features, such as bedding trenches.

Phase 6a (Figs 3.16-17)

Dating

The original Phase 6 has been divided, following analysis of the pottery, into Phases 6a and 6b. Phase 6a has been dated to the late 12th to early 13th centuries, showing that there had been a hiatus in recognisable activity since Phase 5.

Description

The same three layers of gravelly loam, 5/2, 5/1 and 5 in order of deposition, were identified in both

Trenches I and II (only seen in section in the latter), representing a total depth of 0.5 to 0.8 m. This would certainly suggest a garden, and the loam was probably deliberately imported.

In Trench VI, it was clear that the picture was quite different despite the layers having to be machined away and recorded in section. An E-W stone wall, 617, of which only a low stub remained, overlay a levelling layer of clay (626) and formed the northern boundary of a series of thin clay and loam layers some of which, 618–21, were clearly floors with overlying skims of occupation material. North of this was a stone-built well, 607. A layer of loam, 612, formed above wall 617 and the associated floors, following their abandonment and collapse.

Phase 6b (Figs 3.16, 3.18)

Dating

A date range from the early 13th century to about 1375 is suggested for this phase, on the basis of the recovered pottery.

Description

A series of pits and other features were cut into the gravelly loam layers described above in Phase 6a (Trenches I and II). These included a large, shallow pit 21 = 22, a stone-lined gully, 6, with fills 6/2, 6/1, which drained into a large, irregular pit, 2/4. Another pit, 20, of which only one squared corner was within the trench, contained a very rich brown/ green organic fill, 20/2, over a thin primary silty fill, 20/3. It was capped with loam, 20. The character of this feature and its fills strongly suggest a cess or privy pit into which an unfortunate citizen seems to have dropped a padlock key (Fig. 6.1 No. 10). No Phase 6b contexts were recognised from Trench VI.

Phase 7 (Fig. 3.17)

Dating

Residual medieval pottery was mixed in the contexts of this phase with Rhenish stonewares and red earthenwares of the 17th century.

Description

The surface of loam layer 612 was hard-packed and appeared to have been used as a floor of a cellar bounded by two E-W walls, 601/2 to the north and 628 to the south. The very deep foundations of 628 may indicate that it was a re-used wall from an earlier (medieval) building, perhaps part of the same structure as the Phase 6a wall, 617 (see above). The cellar was filled with brick and stone rubble, 601. Wall 628 formed the southern wall of No. 89 St Aldate's, the standing building on the street frontage which was demolished during the course of redevelopment. Trench VII was excavated within the area of this building, and is described below; the description incorporates a summary account of the standing building.

Trench VII (Plate 3.4)

Phase 1 (Fig. 3.19)

Dating

Only two sherds of pottery (fabric *B*) were recovered from this phase. A single radiocarbon date of cal AD 880–1190 (HAR-8360) was also obtained from layer 815, and the highest probability for this date centres around AD 1000 (Fig. A2.1, Appendix 2). However, later phases (see Phase 4 below) are dated by pottery to the 10th century, suggesting that the real date of Phase 1 may be closer to the early end of the radiocarbon date range.

Description

Natural gravel was not reached in Trench VII. The lowest excavated layers were within a small



Plate 3.4 89–91 St Aldate's (Trill Mill Stream) Trench VII: the frontage after the demolition of No. 89, looking E across St Aldate's to Christ Church.

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sondage at the west end of the trench, beginning with a grey sandy silt, 816, the surface of which (at 53.75 m OD) was concreted. Leather scraps and some wattles were preserved within the top of 816, so it is not likely to have been the natural alluvium, although alluvium was encountered at this height in Trench VI (see above). Above 816 was a shallow deposit of brown sandy silt, 815, which produced the only two pottery sherds.

Phase 2 (Figs 3.19, 3.20)

Dating

Five sherds of pottery were found in Phase 2 contexts, four of fabric BM and one of fabric B. A 10th-century date is likely, given the suggested dates for Phase 1 (see above) and Phase 4.

Description

Two thick layers of sandy gravel, 811/1, 811/2 were separated by a thin layer of brown silt containing compacted vegetation. The total thickness of these layers was 0.85 m, suggesting deliberate reclamation by dumping the gravel, or possibly the creation of a gravel bank. A number of large, flat stones, 812, overlay the gravel along the west edge of the trench, perhaps the remnant of a stone surface for which gravel 811 was the foundation layer. A second thin layer of gravel, 810, overlay gravel 811 and the stones 812.

A line of 4 wooden stakes (813) 0.08 to 0.1 m thick ran NE to SW across the trench—this was just south of an E-W plank, 814, which had upright stakes on each side of its west end, where there was also some wattle. Phase 3 (Fig. 3.19)

Dating

No dating evidence was recovered from the two contexts in this phase.

Description

A layer of fine grey-brown silt with black streaks, 799, overlay gravel 810 (Phase 2). The layer sloped slightly from east to west and had a concreted surface. It was overlain by a thin layer of similar silt, 798, but containing wood chips and twigs. An iron blade, possibly a saw or slicker (Fig. 6.1 No. 12), was found in context 799.

Phase 4a (Figs 3.19, 3.20; Plates 3.5, 3.6)

Dating

The pottery from contexts in this phase suggests a 10th-century date; three later sherds (Fabrics OXY (2) and OXL) are thought to be intrusive. Two dendrochronological dates were obtained, as follows:

Context 790	Sample TMS 721A/B	Felled 864+
Context 794	Sample TMS 708	Felled 890+

An early 10th-century date for Phase 4a is most likely, as there is good evidence that the next phase (4b) is early to mid 10th century (see below).

Description

A thin layer of concreted silt and gravel, 788/2, was overlain by more silt, 796, and then by a deposit



Figure 3.19 89-91 St Aldate's: Trench VII, section.



Figure 3.20 89–91 St Aldate's: Trench VII, plans.

of gravel and greenish clay, 788/1. The latter covered the northern two-thirds of the trench area. On the east side of the trench 788/1 was cut by a north-south gully, 793, lined on both sides with wattle fences (Plates 3.5, 3.6). Just west of the gully was a narrow N-S slot, 792, with a butt end to the south; it contained a horizontal timber 792/1 which was roughly square in section, and tapered towards either end. A number of stakes (also square in section) on either side of the timber held it in place. It was observed that at its south end the timber went under layer 788/1-it was not clear whether it had been driven horizontally into this position, or actually belonged to an earlier phase (perhaps relating to timber 814 in Phase 2). If the latter is the case, the slot might relate to later robbing-the position of the slot and timber seems too coincidental for them to be unconnected. West of the slot 792 were four rectangular postholes, two with timbers still in situ (789-91, 794) and another apparently driven vertical timber, 795, for which no posthole

was visible. All three surviving timbers were roughly rectangular in section, and broken at the top. The five elements just described are arranged into two N-S rows. A number of different interpretations are possible from such limited evidence, and no reliable plan can be reconstructed, but it is fairly certain that some kind of wooden structure existed, with a gravel and clay floor, and an external gully, probably for drainage.

The contexts described above were covered by a layer of brown sandy silt, 786 (not illustrated), suggesting the area had flooded. A small area of stone paving, 787 (not illustrated), overlay the silt in the NW corner of the trench.

Phase 4b (Figs 3.19, 3.20)

Dating

The early part of Phase 4b (timber structures) produced only four sherds of pottery (Fabric OXB)

Context	Sample No.	Felled	
781	TMS 718	AD 867+	
783	TMS 725	AD 878+	
782/2	TMS 704	AD 893+	
782/1	TMS 703	AD 897+	
785	TMS 710	AD 918-63	
780	TMS 702	AD 925-65	

but six dendrochronological dates, as follows:

A date in the second quarter of the 10th century is therefore most likely for the timber structure, provided that the timbers were not re-used. The silt over the timbers contained St Neot's-type pottery, perhaps indicating a date in the second half of the 10th century. A timber dated to AD 1011–?1056 (Sample TMS 701) may have come from this silt, but the context cannot be regarded as secure.

Description

A thick layer of yellow gravel, 777, covered much of the excavated area; all of the features described below were cut through this layer.

A narrow, regular slot, 778, ran N-S across the trench - it had a single driven post, 781, on its west

edge. Two postholes, 782/1, 782/2 lay west of the slot, both with surviving timbers which were roughly rectangular in section, and broken at the top. The two timbers touched and slightly over-lapped each other, and were probably contemporary. Narrow (0.05 m) marks on the face of one of the timbers (from 782/1) may have been from wedges used to cleave the boards from a log, or from the subsequent hewing of the board to shape it with an adze or thin-bladed axe (Goodburn 1992, 111–113).

East of slot 778, and parallel to it, was a line formed by two driven timber posts, 780, 785, again roughly rectangular in section, with a small posthole, 784, between them. At the east edge of the trench was a posthole, 779, containing a similar timber to those just described.

As with the previous phase, there can be little doubt that a gravel-floored timber structure existed here, but it is again not possible to reconstruct a reliable plan. A layer of brown, sandy silt (776) covered the trench and contained the St Neot's-type ware mentioned above (17 sherds) and an iron knife (Fig. 6.2 No. 18). At least one of the timbers (785) protruded above the silt, and it is possible that the structure continued in use during or after the silting (see also Phase 4c, below).



Plate 3.5 89–91 St Aldate's (Trill Mill Stream) Trench VII: Phase 4a building, looking S.



Plate 3.6 89–91 St Aldate's (Trill Mill Stream) Trench VII: Phase 4a building, detail of timber-lined gully 793, looking S.

Phase 4*c* (not illustrated)

Dating

The pottery from this phase consisted only of two sherds of St Neot's-type ware and one of fabric *B*. No other dating evidence was recovered and the phase can therefore only be placed somewhere between Phase 4a and Phase 5, which could represent a range of some 250 years. Given the lack of later fabric types (abundant in Phase 5), a date near the early end of the range is perhaps more likely.

Description

Two successive regular slots 774/2, 774/1, ran N-S down the centre of the trench. Layers of tan/yellow clay lay west (772) and east (773) of the slot; both appeared to be deliberately laid surfaces. Some difference was discernible between the two layers, suggesting that the slot formed a division or partition. Over the infilled slot was an area of burnt sand and charcoal, 771, probably a hearth.

Phase 5 (Fig. 3.19)

Dating

A substantial assemblage of pottery (*c* 100 sherds) indicated a date in the late 12th or first half of the 13th centuries. There was thus a considerable gap from Phase 4b, with only a small amount of intervening activity represented by Phase 4c.

Description

Following the excavation and infilling of a small pit, 775, in the SW corner of the trench, a series of silt layers, 767, /1, /2, 770 was deposited over the whole trench. Layer 767/2 contained a stone lamp (Fig. 6.3 No. 30).

Phase 6a (Figs 3.19, 3.20)

Dating

This phase can be divided into two parts, the first being before the construction of a stone building (walls 706, 707). Pottery from this part of the phase is generally 13th-century in date, but a trend can be discerned towards the dominance of fabrics *AM* and *AW*. By the second half of the phase (after the construction of the stone building), these fabrics are firmly established, indicating a date in the second half of the 13th century (Mellor, this volume).

Description

An area of sand, ash and charcoal, 768, probably a hearth, was overlain by layers of clay, stone fragments and some charcoal, 762, 765–6, possibly representing crude floors. Above this was a mixed clay layer, 759, to the east of the trench, succeeded by four layers of silt, 756, 755, 757, 750 = 752, giving a total depth of 0.2 m.

The large stone foundations for walls 706 and 707, to the east and north of the trench respectively, were inserted from this level, and were apparently trenchbuilt. They were offset by up to 0.15 m from the inside face of the standing walls of No. 89 St Aldate's. This is the first evidence for a stone building on the site of No. 89 St Aldate's, 707 being the north wall of the building, and 706 the east (frontage) wall. As the exact form of the standing walls in the medieval period is not known, individual features are described as they become relevant, and the description of the walls as found is completed in Phase 7.

Butting the stone walls was a layer of reddish sandy silt, 751, overlain by purple ash and charcoal, 744, and a patchy deposit of mortar, 743. These deposits may well have been related to the construction of the stone building, but a series of loam and silt layers above them: 745, 746, 749, 737, 732 are less easy to explain in the context of a building interior. The first probable floor layer identified was a clay deposit, 740–747, which was cut by two postholes, 741–2, each 0.4 m in diameter. The stone packing survived within 742, with a central space for a post which was 0.10 m in diameter. The clay floor was later replaced over the top of these postholes which probably therefore had a very short life, and may have been connected with construction work.

Phase 6b (Figs 3.19, 3.20)

Dating

The pottery assemblage from this phase could not be distinguished from Phase 6a and a date within the same range—the second half of the 13th century, is therefore proposed.

Description

The clay floor (Phase 6a) was cut by a narrow E-W slot, 719/4, with near-vertical sides, which butt-ended near the west side of the trench. A stone drain, 736, was inserted into a construction trench 736/4 just south of and against wall 707. The space between the drain and the slot was filled by a clay surface, 720. South of the slot was a patch of mortar floor, covered by three layers, 726, 733, 803, of clay and ash with fine lenses of grey loam. Context 733 contained a copper alloy dress pin (Fig. 6.1 No. 2). These three deposits would seem to represent occupation levels within the building, presumably south of a partition, as 719/4 is likely to have originally contained a timber baseplate. The stone drain was filled with two layers of gritty silt, 736/2 under 736/1, and was overlain by a layer of clean orange-brown gravel, 711.

Phase 6c (Figs 3.19, 3.20)

Dating

An assemblage of c 50 sherds of pottery indicates a 14th- to 15th-century date for this phase.

Description

The E-W slot 719/4 (Phase 6b) was recut, 719, and packed with small- to medium-sized unshaped stone fragments, 719/3, over which were two layers of clay packing, 719/1, 719/2. A much narrower slot, 725, ran southwards from the centre of 719 to the edge of the trench, and was carefully packed with a line of medium-sized stone pieces. Within the small area thus defined in the south-east corner of the trench was a mortar surface, 713, with a row of red tiles along the north edge. The tiles were 0.15 m square when complete, but some broken pieces were also used.

West of the stone-packed slot, 725, was a clay surface, 716, which was cut by another narrow N-S slot, 731, running up to 719. Part of a small pit, 724 (fill 724/1), was excavated in the south-west corner of the trench — this also cut 716. A patch of ash, 718, overlay 716.

The gravel surface 711, to the north of the partition 719, remained open from Phase 6b. To summarise, this phase saw further sub-division of this part of the building, and timber baseplates were apparently replaced by stone foundations, probably because of the tendency of a timber baseplate to rot.

Phase 7 (Figs 3.21, 3.22)

The final phase of activity in Trench VII was represented by the standing building at No. 89 St Aldate's. A summary report is given here, and full details can be consulted in the archive which is currently held by Oxford Archaeological Unit.

The Grade II Listed Building at 89 St Aldate's was demolished in April 1985 (Plate 3.4). The building was at first proposed by Christ Church to be kept as part of the new development, but the superficial structural problems were felt to make restoration prohibitively expensive, a view endorsed by the Inspector at a Public Inquiry and the Secretary of State in granting consent. Proper investigation of the fabric was only undertaken during demolition and, as might be expected, this revealed both structural problems (in the facade) and a very substantial building behind which could easily have been

Plan



Figure 3.21 89–91 St Aldate's: building survey, plan.



Figure 3.22 89–91 St Aldate's: building survey, elevation.

preserved. A period of one month was allowed for investigation prior to demolition, and a small grant was made available by English Heritage.

Substantial remains of a 'primary' phase of building were found, though this may have incorporated previous work, and certainly replaced an earlier building. The two-storey 17th-century house had stone walls at the front and sides, and a timber frame in the rear wall. Outlines of the windows were found in the front wall when render was removed, and in the course of demolition a large amount of moulded stone was recovered, including many window mullions; in the last moments of demolition a complete window mullion was found standing in situ in the front wall. This was from a large window in the main room (hall or parlour) at the S of the house, which was heated by a fireplace in the S wall. No certain evidence was found, but there was probably an entrance passage from the street and a separate room at the N end.

The first floor had three windows to the street and a fireplace in the S wall. The fireplaces on each floor had been blocked and replaced, but when opened out were found to have brick backs and moulded spandrels. The timber frame in the rear wall was substantial but featureless apart from a central door on each floor which led to a back wing that had been demolished a few months previously. The flooring, which had caused so much anxiety at the Public Inquiry, was found to be very substantial, and supported many tons of masonry during the course of demolition.

The roof only survived as tie beams buried in the floor and parts of one truss at the N end. This had interrupted collars and queen-posts, allowing through access to the attic, and two butt-purlins. The roof had been removed when another floor was added in the late 18th or early 19th century. Light softwood framing was taken up and a low roof was hidden behind a parapet to the street front.

The remodelling of the facade was the most complex part of the building's development, which could not entirely be unravelled owing to restrictions on stripping the front wall prior to demolition. The original stone mullioned windows were replaced by sashes in the 18th century, which cut variously through the window openings and the stone piers between them. For reasons that are not apparent, these were themselves replaced with a later fenestration (perhaps when the top floor was added) and these new openings were slightly narrower than the previous set. The final alteration was that for which the building was best known, a refacing of the ground floor facade with channelled Bath stone ashlar and a classical porch. It was the lack of support for this thin veneer that caused concern at the Inquiry. The disappearance of this well-known feature from the street scene is itself an instructive episode. The case was strongly argued at the Public Inquiry that the demolition of Listed Buildings and their replacement in replica was unacceptable, and that a new building was preferable. While the Inspector ruled that a replica could not be built (though panelling had to be replaced within the building), the college was unwilling to add a wholly new structure to the street, with the result that can now be seen.

Salvage trenches (Trenches III-V)

Description

The positions of these three contractors' trenches are shown on Figure 3.15. Trenches III and IV were the subject of watching briefs, while information on Trench V is derived from discussions at the time with the contractors who excavated it.

Trench III (February 1983)

A large watercourse existed behind the stone footings of No. 91 St Aldate's. The top of the waterlogged silts within the watercourse was at 55.9 m OD, considerably higher than waterlogged silts in Trench VI (see above) to the south. A N-S watercourse is therefore most likely. The only dating evidence recovered was a single sherd of Tudor Green Ware (*c* 16th century).

Trench IV (1984)

The quantity of stonework seen in this trench, which lay between Nos 90 and 91 St Aldate's, suggests that this space was originally occupied by a building. Below the stonework were organic silts containing wood, a single leather fragment and a sherd of St Neot's-type ware (10th to 11th century).

Trench V (1984)

The foreman of the contractors described the finding of very hard stonework below the modern road which had a face on the western side. This sounds similar to the stonework previously found along the line of the Grandpont (Durham 1984a, 87–95) although it cannot be definitely dated as Norman work.

Excavations at 24-6 St Aldate's (St Aldate's Police Station) 1987-9 (OXPS) by David R P Wilkinson

Introduction and strategy (Fig. 3.1)

Excavations were undertaken in advance of extensions to the Police Station. Two preliminary trial trenches were dug in November 1987 (Trenches I and II), followed by the main excavation (Trench III) in February 1988. A watching brief was carried out on pile-cap excavations for a lift shaft in September 1988 (Trench IV), and the final trench (Trench V) was excavated during the contractors' 1988/9 Christmas break. The limited results from Trenches I, II and V are summarised below, but not illustrated; the results of the main excavation are given in detail. No significant archaeological remains were revealed by Trench IV, which is therefore not discussed further. The trench descriptions are preceded by a brief review of the available documentary evidence. A report on the dendrochronological dates can be found in Chapter 7, below, and the dates are summarised in Appendix 2.

The excavations provided a valuable opportunity to carry out further investigations of a channel edge and crossing which had previously been observed in limited exposures on the opposite side of the road. Excavations in 1979–81 at No. 65 St Aldate's (Gaz No. 93) had shown part of a stone ford dated to the late 10th to early 11th century, which silted up rapidly in the first half of the 12th century (65 St Aldate's trench 3). To the north of this (65 St Aldate's trench 2) a series of silt levels, sloping from north to south and containing stakes and wattle, were excavated and interpreted as the north bank of an east-west channel.

Documentary background

Rather than attempt to give complete tenement histories, which cannot be done without detailed examination of post-medieval sources, there follow some selective notes by Julian Munby on relevant material from the sources for individual tenements (illustrated in Figure 3.14).

On the east side of St Aldate's the names written on Salter's *Map* were inconsistent with the text of the *Survey*, and consequently the numbers have been wrongly placed in Pantin's edition. (Salter 1934 *Map* has 'St. Frideswide's Hall' written on No. 25 St Aldate's, although the text locates it at '?23 St Aldate's, and 'Plomer Hall' on No. 26; consequently the Pantin numbering in the *Survey* is too far south from SE(161–7); the mapping of the Crutched Friars and the Tailors' Gild is similarly inconsistent.) The arrangement shown in Table 3.1 is a collation of the text and the suggested street numbering, and this has been followed on Figure 3.14.

The Police Station trenches are within the former Nos 24–6 St Aldate's, *Survey* SE(163–5). No. 24 had belonged to Alured the Fuller in c 1210, and became known as Plomer Hall, though it was not an academic hall. With the three next properties it belonged to Thomas Leigh at his death in 1345 and passed to the Tailors' Gild in 1454. By the 17th century No. 24 was the White Lyon (Toynbee and Young 1973, 204 (lxi)), and by the 19th century it was the Plough Inn, while No. 26 had become Sheppard's Row with a line of cottages on the north side of the yard as shown on the Ordnance plan.

The excavations

Trial trenches I and II

Not illustrated

The early trial trenches at the Police Station site were concentrated on an area at the rear of the site where a row of buildings was to be demolished ahead of the main contract. By this strategy it was hoped to gain an impression of the stratification at

Table 3.1 Revised street numbering of tenements SE(161–8) collating Salter's Survey and Map

Map Survey		Name	Street no	
	161	,	21–2 St Aldate's	
161	162	St Frideswide's Hall	23 St Aldate's	
161	163	Plomer Hall Tailors	24 St Aldate's	
162	164	Tailors	25 St Aldate's	
163	165	Tailors	26 St Aldate's	
164/5	166	Tailors	27 St Aldate's	
165/6	167	?Crutched Friars	28 St Aldate's	
167–8	168	Crutched Friars	29-30 St Aldate's	
		St Aldate's		
169	169	Godstow	31–2 St Aldate's	

an early point in the project, and to establish whether the N bank of the channel proposed from the earlier observations at 65 St Aldate's could be shown to continue.

The first trial trench to be excavated, Trench I, was machined to a depth of 1.6 m, with further hand excavation below this. The lowest deposits excavated were a series of gritty silts (6/1, 6, 5/1, 5 in order of deposition) sloping gently from S to N and containing two sherds of 10th- to 11th-century pottery. These silt layers were cut through by a stone wall, 4, of which only a short stretch, running ENE-WNW, was revealed in the NE corner of the trench. The wall, 0.6 m wide, was ragged on both faces and stood a maximum 3 courses high, suggesting it was no more than a foundation. Over the wall was a loam layer, 3 (13th century or later), covered by post-medieval loam and fill.

The S-N slope of the lower silt layers described above was interpreted on site as the fill of a minor channel within the fill of the larger E-W channel thought to exist here (see above). A second trial trench, Trench II, was therefore dug further N and again machined to c 1.6 m. The hand-excavated organic silts in this trench were, in order of deposition: 7/3, 7/2, 7/1 with the lower two containing 13th- to 15th-century pottery, and post-medieval pottery being recovered from 7/1. The maximum excavated depth in Trench II was 2.25 m.

With both trial trenches then felt to be within a main E-W river channel, the third and main trench, Trench III, was placed as far N as possible in order to try and cut the northern limit of this channel.

Main excavation (Trench III)

The main excavation trench at the Police Station site measured 6.5 m by 3.5 m.

Phase 3 (Fig. 3.23)

Dating

No independent dating evidence was recovered from this phase, which can therefore only be generally placed as before the late 10th century (see Phase 4, below). However, this phase does include early 'natural' deposits which are discussed by Robinson (Palaeohydrology discussion, above).

Description

The surface of the Pleistocene gravel was encountered at 53.5 m OD at the S end of the trench, overlain by a layer of gritty sand. Above this were two brown silt layers, 48 and 48/2, with 48 forming a bank-like profile in section. Against the N slope of 48, and interdigitating with it as if forming contemporarily, were three separate silt layers: 49/3, 49/2, 49/1. The middle deposit in the sequence (49/2) was analysed and shown to have accumulated under conditions of slow-moving water (Sample 205). On the S slope of 48, and apparently forming

after 48 had formed, were the organic silt layers 47/3, 47/2 and 47/1 (not on section). One of these, 47/2, sealed a set of nine oval imprints (47/11-19) in the surface of layer 48. These were examined on site by Mark Robinson, and found to be the hoof-prints of cattle.

Layer 47/1 was overlain by a grey silt, 47 (not on section), and then by a grey-green clay-silt deposit, 44, which clearly formed a low bank aligned NNE-SSW. Part of this bank was cut away by an irregular pit, 46, in the centre of the trench, possibly a tree hole.

Phase 4 (Fig. 3.23; Plates 3.7, 3.8)

Dating

The very few pottery sherds from this phase suggest a mid to late 11th-century date, but the dendrochronology points to the timber structure 41, or at least part of it, being constructed in the late 10th or early 11th century (see below). The latter date is, of course, only reliable if the timbers in question were not reused from elsewhere.

Description

The fill of the pit 46 (Phase 3) was a blue-green claysilt, 43/1, which also spread N and S beyond the confines of the pit. Layer 45, a light grey-green silt, may also have been forming at this time in a hollow in the bank, 40, at the N end of the trench. The same applies to a silt layer, 42, at the south end of the bank. A line of timbers (the 41-series) was then driven through the silt 43/1 (which may have been cut back at this stage) along the edge of the bank 44 (Plates 3.7, 3.8). There were 51 timber uprights in total—most were stakes, but a number of cut planks (41/1-8, 41/16) appear to reinforce the line of stakes in the NE corner of the trench. This coincides with a gap in the timbers opposite the hollow, 40, where there was also a single outlying post, 41/43, behind the line of timbers. No horizontals were found in association with any of the 41-series timbers.

Dendrochronological dates were obtained from three of the 41-series timbers, all from the row of cut planks, giving the following results: ì

Timber 41/2	Felled AD 973–1018 (Sample PS 214)
Timber 41/3	Felled AD 945+ (Sample PS 213)
Timber 41/8	Felled AD 919+ (Sample PS 218)

A dark-brown peaty silt, 43/2, formed on the E side of the timbers. This was also excavated in the SE corner of the trench where it was given the context number 43/3. Samples from both of these contexts were analysed (Sample Nos 201 and 202) with similar results to those obtained for earlier layers (Phase 3, above). This indicates that the slow-flowing water regime continued after the edge of the silt bank, 44, had been lined with the 41-series timbers.





Figure 3.23 24–6 St Aldate's (Police Station): Phase 4, plan and sections.



Plate 3.7 High-level view of excavations at the Police Station, Trench III, from the N.

Phase 6 (Figs 3.23, 3.24)

Dating

No deposits which could be dated to Phase 5 were found at the Police Station site, indicating a hiatus from the early/mid 11th century to the late 12th



Plate 3.8 Fully-excavated remains of the water's edge at the Police Station on a freezing morning, looking NW.

century, when Phase 6 begins, extending, on the basis of substantial quantities of pottery (particularly from layer 38) into the early 13th century.

Description

The silt to the S of the trench (42, Phase 4) was overlain by 42/1, a brown silt, covered by a dark, blue-grey shelly clay-silt, 38/3. Above these deposits and spreading into the hollow 40 (Phase 4) to the N, was 38/2, similar to 38/3 though containing less shell. A dark grey clay-loam, 38, then covered most of the trench area. Layer 38 was cut in the NW corner of the trench by a shallow-sided pit, 39, of which only a small portion was seen and excavated.

Phase 7 (Fig. 3.24)

Dating

Moderate quantities of pottery from the contexts in this phase are sufficient to give a general 13thcentury date.

Description

A linear feature, 37, was cut through layer 38 (Phase 6). It ran E-W, was 0.12 m deep and 0.95 m wide, and probably had a butt end just west of the later feature 33. In general, the regularity of 37 suggests either a trench for a sleeper beam, or a robber trench for a stone wall (the fill was fairly stony). Either kind of feature might originally have defined the S edge of the thick dark loamy fills, 35, which lay to the N. The situation revealed in section where 35/4 overlaps the edge of the cut could have arisen following robbing of 37 and the same may be true of the thin layer of green silt, 36, to the south. A lens of clay, 33/2, could be the upcast from the suggested robbing. Lastly, a narrower E-W trench, 35/3, was cut on the same alignment as 37/2, although it could only be clearly defined at the E end.

Phase 8/9 (Fig. 3.24)

Dating

More than 100 sherds of pottery were recovered from Phase 8/9 contexts, showing that activity from the 14th and 15th centuries was represented. The deep loam layer 31 (see below) was probably 15th century.

Description

A N-S slot, 33, was cut through layers 35 and 36 (Phase 7). The slot was regular and 0.45 m wide at the S end, and somewhat wider and less regular to the N where it appeared to butt end. The soft organic fill, 33/1, may have been a timber which rotted *in situ*, although the number of pottery sherds



Phases 7, 8 & 9



Figure 3.24 24–6 St Aldate's: Phases 7–9, plan and section.

recovered (28) is unusual for such a feature. At the N end of the trench, part of a large pit, 34, was seen.

The features described above were covered by a thick layer of silty loam excavated in two spits, 31/2 followed by 31 = 31/1. The layer was compacted, and contained much gravel and small stone rubble, as well as quantities of domestic debris (more than 60 sherds of pottery). It thickened considerably towards the S of the trench, as if levelling-up the sloping deposits underneath. The generally undifferentiated nature of the layer suggests a single phase of

dumping took place. Only one feature, a small pit, 32, was identified cutting the surface of these loam layers.

Trench V

The opportunity was taken for a hurried excavation of a further trench during the contractors' Christmas break in 1989. The trench lay some 10 m west of Trench III, ie considerably closer to the line of the crossing, and under the buildings which had been demolished. Unfortunately, the finds from this trench were mislaid, and no dating evidence is therefore available.

The lowest layer encountered, at a depth of 2.5 m, was a green-brown peaty silt, 516, in which a number of timbers were noted. A rough east-west wall, 512, may have cut this silt although the relationship was not clear; the wall was unmortared and unfaced, with a width of 0.67 to 0.9 m and a height of at least 0.8 m. Three deep layers of silty clay and clay-loam to the north of the wall (509, 515, 508 in order of deposition) probably contributed to its partial collapse southwards, although there may also have been some robbing at this time. A sequence of waterlain silts, 507, 505, 510 followed the wall collapse, and a number of small pits were cut into the silt, 514, 511, 504. Layers above this were gravel, 506, followed by clay rubble and loam (500–503).

Excavations at 30–31 St Aldate's (Land adjoining the Police Station) 1987 (OXLAPS) by David R P Wilkinson

Introduction and strategy (Fig. 3.1)

The site was excavated in 1987, in advance of redevelopment. The area closest to the road, probably containing the earliest deposits, was not available for excavation and work therefore concentrated on the backyard area of the medieval tenements. The house which stood on this site was previously published (Sturdy 1961/2b), and this is discussed further below (see After Phase 7). The main excavation, measuring 7×9.5 m, was preceded by a narrow trial trench. Deposits from the trial trench are here described together with those from the main excavation. In general, excavation was severely hampered by difficult conditions and a lack of time—where this has led to uncertainties in the stratigraphical record these are discussed below.

Documentary background

Rather than attempt to give complete tenement histories, which cannot be done without detailed examination of post-medieval sources, there follow some selective notes by Julian Munby on relevant material from the sources for individual tenements (illustrated in Fig. 3.14).

The excavations were within the former 30–31 St Aldate's, *Survey* SE(168–9); the placing of these tenements revises earlier accounts, and this is discussed under the documentary background for 24–6 St Aldate's, the Police Station (see above and Table 3.1). Few early deeds have been located in this area. SE(168) may have belonged to Geoffrey Aurifaber in 1279, as it did in 1295 (*Rot. Hund.* 801b (860); *CSF* i, 186); he also owned SE(169) in *c* 1257. Both were given to the Crutched Friars in 1349 by Richard Cary, and SE(169) was also a property of Godstow Nunnery. Little of their later history is known (Toynbee and Young 1973).

The excavations

Phase 4 (Figs 3.25-3.27)

Dating

The small quantity of pottery from the contexts in this phase would be consistent with a date in the early to mid 11th century.

Description

At the NW corner of the trench, in the area of the later pit 203, an organic silt 213/3 was the lowest context excavated. The point at which excavation ceased, 53.85 m OD, was established by probing to lie 0.45 m above the surface of a gravel layer, probably the underlying natural. A fragmentary wattle fence, 210, was within the silt, running NE-SW across the trench corner, and was overlain by clay silt (213/2, 213/1).

À pair of timber posts joined by a plank, 211, could have been a successor to the wattle fence but the stratigraphical relationships are not secure, either with 211, another timber post (212/1) to the south, or with the peaty silts (24, 24/1, 21, 22, 22/1) which were south of post 212/1. These latter deposits produced six sherds of pottery, the only dating evidence for this phase. The shape of contexts 22 and 24 in section suggests that they were probably dumped against some of the timbers. Further timber posts were found near the SW corner of the trench, 212/2-4.

The above evidence cannot be interpreted with any certainty. The timbers 210 and 212/1–2 as they appear in section may be indicating a progressive reclamation from north to south across the site, but this cannot be proved. It is also possible that the 212 timbers belong to a single phase, and that the progression was from west to east, moving outwards from the line of the river crossing. The only piece of deep excavation in the eastern two-thirds of the site showed that a pit and a possible ditch were cut here.

Phase 5 (Fig. 3.25)

Dating

More than 50 sherds were recovered from pit 106 and more than 100 from ditch 107. The vessel types present indicate an early 12th-century date for this phase.

Description

Two pits, 106 cutting 105, were cut into the area of a possible ditch, 107. These were also cut into a deposit, which was not further investigated, at the same level as the silt layer 21 excavated in the trial trench. The pits 105 and 106 were covered by a silt layer extending over most of the trench 103 = 20 = 157. This layer rose up over earlier timbers and their related deposits to create an E-W ridge across the site. The majority of the 295



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Figure 3.25 30–31 St Aldate's (Land adjoining the Police Station): Phases 4–5, plan.

fragments of animal bone from Phase 5 were recovered from this layer, but it is not clear whether the layer itself was a dump transported from elsewhere, or whether the bone was being discarded here. The shape of layer 20 in section is more that of a dump, but it is possible that the top surface of the silt was truncated, accentuating the central ridge.

Phases 6, 7 (Figs 3.26, 3.27)

Dating

These two phases have been combined, and probably cover a period from the late 12th to the late 13th century. Some of the dating, based on substantial quantities of pottery, is discussed further below.



Figure 3.26 30-31 St Aldate's: Phases 6-7, plan.

Description

Whatever the exact formation process involved (see Phase 5), at the beginning of this phase the site had two lower areas N and S of a narrow silt ridge. Both sides

were filled in with interleaved layers of silt and gravel with the dumping of the latter, in particular, presumably representing a deliberate effort to raise and dry out the area. A notable find from layer 205 was a single otter bone. These layers can be listed as follows:

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Figure 3.27 30-31 St Aldate's: section.

South	side	of	the	ridge:	Grav	rel-
				0	C:1.	10

North side of the ridge:

ravel—102

Silt—104, 13, 14, 15 Gravel—16, 51/5, 55, 205, 207, 204 Silt—51/3, 51/2, 158, 208 = 17, 213

The raised level formed by the above layers was then cut into by a number of pits, postholes and gullies, as follows:

South side of the ridge:	153 cutting 153/1
0	154, 155, 156, 156/1
North side of the ridge:	209, 56, 54, 19/1
On the ridge:	19

Apparently covering most of these was a layer of ash, loam and charcoal 51/1. Other similar layers across the site, some containing large quantities of pottery (50–100 sherds) were 51, 51/4, 101, 151, 201. The pottery from these deposits indicates generally a late 12th- to early 13th-century date, with the exception of one layer at this level, 151, which contained substantial quantities of mid to late 13thcentury pottery. The general character of these layers, and the quantity of finds points to either intensive occupation of this area, or, perhaps more likely, that it was used as a midden, there being a considerable quantity of animal bone (mostly table waste), and some leather.

Finally, a layer of grey, silty loam, 12, ran right across the site, sealing the original ridge of silt 157 and indicating that the intensive phase of use described above had apparently ceased.

After Phase 7 (Figs 3.26, 3.27)

In general, with the exception of Trial Trench I (see below), contexts later than layer 12 (Phase 7) were removed by machine, and only a few can be commented on here. A large, square pit, 203, contained within it a narrower and deeper cut 203/1. The latter contained two sherds of 12th-century pottery, while pottery from the former ranged from the 14th to the early 16th century in date. The most likely explanation is that this feature was a well (probably in use for a considerable period of time), with 203/1 being the well shaft and 203 the construction pit.

More enigmatic in terms of dating were two stone features 202, 202/1. It is possible that these, together with wall 6 in the trial trench (see below), formed the discontinuous foundations for a building. The excavator noted the presence of large stones thought to have been part of supporting arches which joined these foundations.

Trial Trench I

Above layer 12 (Phase 7) was another loam layer, 11, cut by the foundation trench for a short section of stone wall or foundation, 6. This was butted on the north side by two successive loam layers, 10 and 5, and on the south side by three successive loam deposits, 9, 8 and 7 in order of deposition. The loams were covered by a layer of sand, mortar and rubble, 4, which also overlay the wall, 6, and provided the

base for a patch of knuckle-bone floor, 3. The latest pottery from the layers below the floor dated to the 15th century.

The presence of a relatively high-quality floor shows that a building, which was not defined by the excavations described here, must have superseded the stone walls 6, 202, 202/1 described above. The excavated area lay c 7 m to the rear of No. 31 St Aldate's, also extending behind No. 30. Previous survey has shown that No. 31 was built probably in the early 17th century, as a small house of one room on each of two floors (Sturdy 1961–2b, 324). It is therefore quite feasible that the knucklebone floor lay within a timber extension or outbuilding behind this house.

EXCAVATIONS AT 56–60 ST ALDATE'S 1988–9 (OXSASL)

by David R P Wilkinson

Introduction and strategy (Fig. 3.1; Plates 3.9, 3.10)

The excavations (see Plates 3.9, 3.10) took place in advance of redevelopment of the site. Three trenches were excavated, although the smallest, Trench III, was a sewer construction trench on which only a watching brief was carried out. Trench I was positioned in order to examine the development of the south bank of the wide central channel dividing two alluvial islands, which was in existence by the late Roman period (Fig. 3.8). Placement of the trench depended on the evidence from earlier excavations at 33 St Aldate's (Gaz No. 91), and it was also hoped to confirm the area of mid-Saxon habitation on the channel edge proposed from the results of that work (Durham 1984a, 77–8, fiche B9–11). The smaller Trench II was designed to be more easily shored at depth, and therefore suitable for placement as close as possible to any surviving bridge or ford remains on the line of the existing road.

Documentary background

Rather than attempt to give complete tenement histories, which cannot be done without detailed examination of post-medieval sources, there follow some selective notes by Julian Munby on relevant material from the sources for individual tenements (illustrated in Fig. 3.14).

The site of the excavations lay on the narrow island between Denchworth Bow and the main bridge over the Thames, all of which was eventually acquired by New College, whose later rearrangement



Plate 3.9 View of early stage of excavations at 56–60 St Aldate's, looking E across St Aldate's.



Plate 3.10 View of excavation of deeper levels at 56–60 St Aldate's, from the S.

of the property has obscured the original layout of the medieval tenements, Survey SW(1-4), which is uncertain. The northernmost tenement, SW(4), belonged in part to Geoffrey Aurifaber, and was held from him by John of Hinksey, butcher in the 1260s, and from St Frideswide's in 1279; in 1269 it was bounded on the north by a 'fossatum' (CSF i, 182 (237) corresponding to Denholm-Young 1931, F39). Aurifaber also owned the land on the north of the stream, SW(5). An entry in the Hundred Rolls between SW(4) and (5) is of particular interest: 'Item there is found in the tenement of John of Hinksey a blocked ditch (fossa stuppata) to the width of 7 feet and length of 40 feet or more in which used to be the course of the water from the Thames to the Cherwell' (Rot. Hund. 789a (149)). It is not clear whether an encroachment on the edge of a stream is meant, or the complete blocking of one, but the description of the stream suggests that it is the Shire Lake that is being referred to. In 1401 the tenement south of the stream was inhabited by Margaret widow of Wibard Fissher, and in 1483/4 Richard Eton, dyer was here.

A plan at New College dated 1818 shows the contemporary divisions: a timber yard at the north

end and a dwelling taking up the northern half, and the National School (a former malthouse/ brewhouse) occupying the rest, with a small Public House of the City at the southernmost tip (New College Archives 2411; S&T, 22; OCP, 104). These buildings are shown on early views of the bridge, and on the series of drawings made by Buckler prior to their removal for the rebuilding of the bridge in 1825 (MS Don. a 2-3). The whole island was then reorganised, by filling up the stream at the back and laying out Thames Street and Isis Street across the newly enlarged island, with a large basin being dug to the south of it next the new bridge (Centre for Oxfordshire Studies, OCL plan 22913, c 1831). The old buildings on St Aldate's were swept away, and the terraces of Thames Street were continued round the corner onto the main road, the opportunity also being taken of setting them back to provide a wider approach to the bridge. These buildings stood until a few years ago, but were in turn demolished for the creation of the new Thames Street leading to Oxpens Road, after which Folly Bridge Court was built on the corner. All that now remains is the turnpike toll house, moved here from the south end of Grandpont after the opening of the first Great Western Railway Station in Western Road in 1844 (Survey, SE(172-3)).

The excavations

The results of Trench III can be briefly dealt with in that it proved to be on the line of the 19th-century culvert of the Shire Lake Channel, spanned by a brick arch; no earlier deposits were found. The following description thus refers only to Trenches I and II.

Phase 1 (Figs 3.28, 3.31)

Dating

No datable material was recovered from Phase 1 contexts but by analogy with other sites these deposits can be shown to be Roman and earlier. These layers are discussed by Robinson (Palaeo-hydrology discussion, above).

Description

The surface of a gravel layer, probably the Pleistocene river gravel, was shown by augering to lie at 52.1 m OD in the south part of the site. It rose to 52.96 m in Trench 2, at the north end of the site, where some concretion of the gravel surface was observed. The gravel was overlain, in the south part of the site, by a layer of brown sandy peat, 59, up to 0.7 m thick. This peat appeared to fill the hollow created by the slope in the underlying gravel; analysis showed it to be a reedswamp deposit which had accumulated in shallow water, possibly over a long period at a slow rate (Sample SA 316). A layer



Figure 3.28 56–60 St Aldate's: Phases 2, 3 and 4, plans and section.

of buff organic sand (58) overlay the peat; its surface sloped slightly upwards to the south. This context was also analysed, showing that there had been a change in channel conditions. The sand (Sample SA 315) represented the bed of a well-oxygenated, flowing water habitat, and it is possible that the partially concreted gravel in Trench II was the bed of a faster-flowing section of the same channel.

A buff to grey-green silt layer, 57, possibly equivalent to layer 60 = 60/1, was the next context deposited, accentuating the upward slope begun by the underlying sand, 58. More silt (62) at the

southern end of the trench may have been in a cut 60/2, but this was not definitely proven.

Phase 2 (Figs 3.28, 3.31; Plate 3.11)

Dating

The only datable material recovered was a single Roman sherd from context 515. The phase can thus only be dated as before the mid 10th century (see Phase 3, below).

Description

A thin black peaty layer, 54/1, had formed over some parts of the surface of layer 57, possibly as a result of rotting vegetation. This was then covered by a gritty silt deposit, 54, which existed only in the east and south-east of the trench, being limited by the earliest timber structures, the 54-series (see below). The manner in which layer 54 slopes down to the timber edging (Fig. 3.31) may well indicate that it pre-existed the timbers as a silt bank. Some distance north of the 54 timbers silt also formed, 56, in the hollow or channel in front of layer 57 (see Phase 1), and the equivalent layer in Trench II was 515.

The 54-series timbers

The timbers, which appear as a fairly crude form of wattling, form a flattened S-shape aligned N-S (Plate 3.11). Uprights, consisting of vertical and leaning posts, were placed at approximately 3 per metre, with multiple strands of interwoven horizontals; no clear weave pattern was visible, perhaps because several stages of repair were represented. A second fence-line, 54/30, had clearly been added later, at right-angles to the south end of the original, and of similar build. The fact that there were two lines of fencing suggest that repair or replacement had taken place.

Phase 3 (Figs 3.28, 3.31)

Dating

Two almost complete pots dating to the mid 10th century were recovered from layer 52/3.

Description

Several wattle hurdles (61/1, 61/2, 61/3) were partially revealed lying flat on the western side of Trench I. Their relationship to the Phase 2 timber is



Plate 3.11 View of Phase 2 and 3 revetments at 56–60 St Aldate's, from the SW.

unclear, and it is possible that 61/3, at least, was earlier than Phase 3, perhaps even preceding the 54-series timbers.

To the west and north of the 54-series timber structure, silts 52/3, 52/2, 52 and 52/1 = 53 formed (in that order) on what was therefore clearly the wet side of the revetment. Much bone and leather was recovered from the deposits and from 61/4, another silt which overlay the flat hurdles described above. This quantity of material would suggest dumping was taking place from the dry side of the revetment into the water's edge. At the north end of Trench I far less silt was found, and only the part of 49/1 below hurdle 49/2 (Phase 4) may have belonged to this phase. The lack of any depth of silt may be explained by Phase 4 events (see below).

Phase 4 (Figs 3.28, 3.31; Plate 3.12)

Dating

The pottery from this phase, which includes assemblages of over 30 sherds from contexts 47/2 and 50, indicates a late 10th- or early 11th-century date.

Description

A line of wattle, 50/1, was constructed on a NW-SE alignment, at the northern end of Trench I. This had the effect of revetting the silt 52 (see Phase 3), which must have been cut back for this operation. Further silty material (50 = 30/3, 47/2, 47/3) containing much animal bone was dumped behind the revetment and over layer 52.

The revetment itself consisted of a single line of wattle, 50/1, 0.5 m high. In front of it was a horizontal hurdle, 49/2 (Plate 3.12), at an angle to the revetment, and covered by two successive silt layers, 49/1 followed by a much thicker deposit, 49. The latter contained only 8 offcuts of leather, so that the scale of dumping seems to have reduced from Phase 3. No western revetment was found, and if one existed it must have been beyond the confines of the trench.

Phase 5 (Figs 3.29, 3.31)

Dating

Considerable quantities of pottery were recovered from this phase, with over 50 sherds coming from layer 47 alone. A general date of 12th century or slightly later can be assigned, which also allows for a single dendrochronological date from timber 55/4, showing that it was felled after AD 1099. A report on dendrochronological dates is presented in Chapter 7, below; dendrochronological dates are summarised in Table A2.1, Appendix 2.

Description

In Trench I, a N-S alignment of timbers, the 55-series, was constructed, probably preceded by the cutting

away of part of the existing deposits, such as layer 50. The alignment consisted of four substantial vertical posts, rectangular in section, with the two southernmost (55/2, 55/6) being joined by a horizontal plank set on edge into slots cut into the top of the posts. The next post to the north was also provided with a slot. Three angled timbers (55/10– 12) were inserted into the deposits behind the alignment, possibly lacing the revetment into the ground. The angle of these timbers accounts for the low level at which they appear on the section.

To the west of the revetment two dark brown silt layers were deposited, 55/7 covered by 55. Further dumped material was placed behind the timbers, 47 = 30/2 and 48, a dark silty deposit containing much pottery.

In Trench II, to the north, was a complex and badly damaged set of timber structures comprising a line of stakes (508-series) and a wattle fence (509/1) on a NE/ SW alignment. At the same level were some untrimmed logs (510) and more stakes and wattle 512. The associated deposits were: 509 and 509/2, behind the timberwork; 508/1, a silt mainly north of the timberwork; and 507, the uppermost silt in this phase.



Plate 3.12 The Phase 4 hurdle laid flat, and a fenced water's edge, at 56–60 St Aldate's, from the N.





Figure 3.29 56-60 St Aldate's: Phases 5-6, plans and section.

Phase 6 (Figs 3.29, 3.31)

Dating

This phase dates generally to the 12th to 13th centuries on the basis of the pottery recovered; some more specific points regarding the dating are discussed in the descriptions below.

Description

A deep deposit of brown silt (30/1 = 46), possibly dumped, was apparently the earliest context, and was cut for the construction of a north-south stone wall, 31, surviving three courses high. On the east side of the wall were three dumped deposits, 45/2, 45/1 and 30 = 45, laid down in that order, with



Figure 3.30 56–60 St Aldate's: Phases 7–8, plans and section.

the first two being of gravel and the last of sandy loam. A dark floor layer, 35, overlay these deposits. To the west of the wall were layers of gravel, clay and small rubble (in order of deposition 40/2, 40/1, 44, 43, 40) underlying a floor level of dark silt and charcoal, 39. A return (2) was built at the north end of wall 31, over layer 40, and running east. In Trench II, two silt layers (505, 506) were deposited. Problems with the dating in this phase arise from the pottery in layer 30/1 at the bottom of the sequence, which was 13th- or possibly 14th-century in date, while the dumped layers either side of wall 31 produced only 12th-century pottery. It remains unclear as to whether this is a fault in the understanding of the stratification, or is due to earlier pottery being imported with the dumped material—in general, the former seems more likely,

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Figure 3.31 56–60 St Aldate's: Trench I, E-W section.

although the 12th-century pottery could have been residual.

Phase 7 (Figs 3.30, 3.31)

Dating

Pottery dating to the 13th–14th centuries was recovered from this phase, including more than 30 sherds from layer 24. A fragment of a 13th-century coin came from stone surface 12 (SF SA.10 not illustrated; see Chapter 6).

Description

Built over the floor layer 39 (Phase 6) were two stone walls joining at right-angles: wall 7 running N-S, and wall 3 running E-W, the latter replacing wall 2 from Phase 6. Within the space thus defined was a sequence of clay floors (29/2, 27), gravel make-up layers (28, 29/1, 34) and an uppermost floor of yellow mortar, 29.

To the west of wall 7 was a large, stone oven with a base made from a single circular flat stone, and walls built of small, round stones, 41. A lining of burnt yellow clay was covered by burnt red sand, and then by a fill of charcoal, silty loam and burnt stone.

The link between the stratified sequences N and S of wall 3 was removed by a later robber trench, 6, and some deposits N of 3 could potentially precede Phase 7. This is particularly likely for the lowest levels, three silt layers (24, 23, 22) which seem to fill a shallow E-W channel. The northern limit of layer 22 was marked by three wooden stakes and some rotted horizontal wattles, showing that it was once a revetted edge. More silt, 8, built up or was possibly dumped over this revetment. In general, the relatively large quantities of finds from these

deposits—such as the 120 sherds of early 14thcentury pottery from layer 8—mean that if the layers themselves were not dumps, then considerable amounts of rubbish were being thrown into the silt and water. In Trench II, silt layers at the same level (505, 506; see Phase 6) contained 12th-century pottery, so that the channel filled by silts 22, 23, 24 did not appear to have extended this far.

Over the silts described above were two dumps of small rubble (13, 14) presumably intended to raise the area and dry it out before a crude, paved stone surface (12) was laid.

In Trench II, a layer of gravel (503) had its upper surface at the same height as the stone surface, 12. This gravel layer was crossed from north to south by a stone-built drain (504). The drain was 0.45 m wide and constructed of stones averaging 0.2×0.2 m set in a matrix of clay. The fill was a gravelly silt 504/2, which contained two sherds of 13th- to 14th-century pottery. This was the only direct dating evidence for Phase 7 contexts in Trench 2, although the equivalent levels (see above) may also be significant.

Phase 8 (Figs 3.30, 3.31)

Dating

Contexts assigned to this phase contained pottery from the second half of the 14th century and later, including 15th-century sherds from contexts 6 and 41/1, and some from context 19 which could be as late as the 16th century.

Description

Three sides of a stone building, 7 m wide, were recognised mainly from robber trenches 6 to the north, 17 = 18 to the west and 19 to the south. On the

north side a short length of walling (11) survived to 3 courses, being constructed of rough stone in a matrix of clay. Inside the structure two successive areas of burnt sand and stones, 36 over 32, marked the site of a central hearth. To the south, against the inside of wall 19, was a pit 16/1-6, filled with loam, yellow clay and small stones.

North of the building described above was an E-W stone wall (26) built of irregular stone, and at least 0.65 m wide. This probably formed the south wall of a building found in Trench II where its west (502) and north (501) walls were revealed. The north wall was heavily robbed, but the west wall was of well-coursed squared blocks. Within the building was a floor, 500, of dark ash containing some stone.

A watching brief on the British Telecom Tunnel, at the junction of Thames Street and St Aldate's, 1991 by Gregory Campbell

Introduction (Fig. 3.1; Plate 3.13)

A detailed watching brief was undertaken by the author and other staff of Oxford Archaeological Unit in February and March 1991, during the tunnelling and manhole excavation at the junction of Thames Street and St Aldate's, Oxford (SP 51430 05645) necessitated by British Telecom's Oxford Node Diversity Duct project.

The Ducting project included the digging of a pair of manholes (Manholes One and Two) on either side of St Aldate's which were connected by a timbershored tunnel (Tunnel One) approximately 1.2 m high, 0.8 m wide and 40 m in length, approximately 3.5 m below the modern road surface. Another tunnel (Tunnel Two) of the same construction and cross-section was excavated to the N, parallel to St Aldate's, from the eastern manhole (Manhole One) to connect with an existing set of telecommunications ducts. The watching brief was informally known as the BT Tunnel—the prefix BT is used as shorthand and as a prefix throughout this volume.

Deposits of considerable importance were to be damaged by the excavations of Tunnels One and Two. The depth of the tunnels meant that all deposits would be below the water table, where organic materials would be very well preserved.

Method of Recording

Each tunnel was excavated and shored as a number of consecutive bays, each about 1.2 m long, separated by roof-props 0.25 m wide. The sequence of deposition was recorded by making a detailed scale drawing of one face of each bay with descriptions of the soil types noted directly onto the drawing (Plate 3.13). Each small drawing was related to a datum line which was maintained as far as was practicable at a constant level down the entire length of each tunnel. Outside the tunnel these small drawings were assembled into an overall section drawing for each tunnel, and archaeological contexts were then identified and numbered by tracing layers of similar soil description along the sections. The descriptions of layers were not absolutely consistent from bay to bay, due to difficult conditions of examination.

Where timber uprights had survived the tunnelling, they were recorded *in situ* before removal and kept for examination. Stratified artefacts were rare, and their locations were recorded on the small section drawings; the majority of the artefacts were recovered from the tunnellers' spoil and can be assigned only to a particular bay.

Description (Figs 3.32, 3.33)

The BT Tunnel, because of its depth and location, revealed some of the most significant archaeological features recorded in the area to date, which have both extended and expanded the known archaeological sequence of the Thames crossing. The following account is an abbreviated version of the full stratigraphic sequence, describing the most important features seen and discussing their interpretation. The full stratigraphic description is available in archive. The radiocarbon dates quoted in this report are given at the 2 sigma (95%) confidence level and are set out in full in Appendix 2 to this



Plate 3.13 Recording underway at the BT Tunnel.

volume, with a brief discussion at the end of this report. A report on dendrochronological dates can be found in Chapter 7; the dates are summarised in Table A2.1, Appendix 2.

The nature of the investigation placed some limits on the interpretation. The recording of a weeping wet tunnel face bay by bay in artificial light meant that the continuations of layers from one bay to the next and the edges of one or two critical cuts were not always certain. The sections were assembled to produce Figures 3.32 and 3.33 but numerous uncertainties remain, and it has not always been possible to identify layers consistently. This applies particularly to the complex alluviation and dumping deposits in Tunnel 2. The recording in section meant that the edges and orientation of features (with the exception of the trestle 121 and revetment 239) were not recovered. The same reservations apply to the interpretation of the finds: a handful of 'stratified' potsherds from the face of a tunnel dug out by compressed-air hammers was unlikely to agree exactly with the recorded stratigraphy. Where it is believed that these sherds were intrusive or residual, this is noted below. Despite the attendant problems, a reasonable sequence can be outlined.

The earliest deposits

Channel fill 10 was a grey gravelly clay in the base of Manhole 1. It was the earliest deposit observed, radiocarbon-dated to the Mesolithic (OxA 4354). The preserved plant tissues and mollusca indicate a wellvegetated channel containing slow flowing water, with a small component of bank-side or disturbed ground. This picture is disrupted by the single domesticated flax capsule, which was probably washed into the sample from higher up the profile (perhaps from layer 9; see 'middle to late Saxon' below).

The surface of the 'gravel' has been located by augering or excavation in several nearby sites and was not level, demonstrating that the topography of the ground S of what was to become Oxford clearly consisted of islands and channels. The top of layer 10 in the BT tunnel at 52.5 m OD is virtually the same as that of the gravel at two neighbouring sites, 33 St Aldate's Trench IB (Gaz No. 91) and 56-60 St Aldate's (this volume, above). At the Head of the River (this volume, below), gravel was found at 52.8 m OD in Trench 1, 53.10 m OD in Trench 3, and 54 m OD in Trench 2. Gravel was found at 53.8 m OD at the Blackfriars priory to the W of the BT watching brief (Gaz No. 2), and at 53.6 m OD at 79-80 St Aldate's to the N (Gaz No. 94). The Thames flood plain S of the city of Oxford is discussed in detail by Robinson (this chapter, above).

The stony surface 11 that covered the early channel fill was initially interpreted as a ford. It consisted of a single layer of small- to medium-sized pebbles of Corallian limestone, heavily encrusted with calcium carbonate. Only a small portion of the deposit was visible, so its alignment was not observed and natural deposition cannot be ruled

out, but the evidence tends to favour intentional placement. Stone of this size and type is rare in the gravel (P. Powell, pers. comm.), and it seems unlikely that stones rolled in situ by water action would have formed a single neat layer of large pebbles, rather than a less regular arrangment. A ford observed at 65 St Aldate's (Gaz No. 93) was considerably later, but was also constructed of rolled Corallian ragstone pieces. Ford 11 was not closely datable, radiocarbon dated to some time between the Mesolithic and middle Saxon periods (OxA 4354 and OxA 4353). The deposit shows that some time during or before the middle Saxon period, the Thames bed was probably made fordable here. It seems most likely that the ford was used during the Bronze Age (when the water table began to rise throughout the Upper Thames) or the early part of the Iron Age (when flooding was underway). The transport of limestone to settlements on the floodplain is wellattested in the middle Iron Age, such as to the settlement at Whitehouse Road on the floodplain to the S of Oxford (Gaz No. 116). Nevertheless, a note of caution should also be sounded. The arguments for the feature being artificial are given above, but the possibility of a natural rather than an artificial formation should not be completely discarded. The stone sits on a layer of sandy clay with some gravel, whereas a ford surface might be expected to be firmly founded on more stone, solid gravel, or directly onto the channel bed.

The earliest deposit in Tunnel 1 was grey clay 112, which was confirmed by thin sectioning to be formed from overbank alluvium on an island surface in what was now a true floodplain. Current research (see Robinson, above) indicates a slowing or hiatus in alluviation in the early post-Roman period, and further accumulation of alluvium with a coarser component by the late Saxon period.

The failure to expose a relationship between the early ford 11 and the alluvium 112 makes their relative age speculative, but the exclusive presence in Manhole One of channel fill 9 above this ford demonstrates that the island for which 112 was a surface must have had a bank somewhere in the 2.8 m immediately W of Manhole One.

Part of the island surface was cobbled by stones 111, probably to reinforce its surface for traffic. The W extent of this cobbling appears as a sparse spread beyond the W edge of a later ditch 137, making it approximately 4.5 m wide. The cobbling may be a late Roman deposit but it is perhaps more likely to have been laid in response to rising water levels in the Upper Thames during the mid Saxon period, as waterlogged preservation recommences in the silt 104 above the ford. Silt 104 contained a plank from a tree felled AD 577-619 (sample BT823).

In summary, alluvium accumulated on and around an island in the Thames to a level of 53.6– 53.8 m OD, probably during the Iron Age and Roman period; a seasonal ford was laid down on this island surface, and alluvium had again begun to accumulate by the early 7th century AD.







Figure 3.32a BT Tunnel: Manhole 1 (S face) and Tunnel 1, section.

The middle to late Saxon periods

In Manhole One, channel fill 9 above ford 11 was formed in a reed-swamp in silty slow-flowing water (Sample BT3). A calibrated radiocarbon date of cal AD 560–890 (OxA 4353) shows that this reed-swamp was present in the middle Saxon period. It is possible it began covering the ford 11 earlier, potentially during the alluviation which formed layers 104 or 112. The equivalent deposit at the Head of the River site is clay 327, which also formed in slow-flowing water (the gravel inclusions in 327 are from the underlying natural gravel).

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Figure 3.32b BT Tunnel: Tunnel 1, section (cont).

In Tunnel One, silting continued to raise the island surface, depositing layer 109 (in a bank-side environment, Sample BT13). The silt or silt/clay layers from 147 up to (but not including) 143 in Tunnel One bays 25–28 are similar in soil type and level, indicating that they are contemporary with 109; sherd 9 (fabric *AG*, 12th- to 13th-century) was intrusive in layer 147. The island increased in size to the W; layers 163, 164 and banks 170, 173 and 171 were seen in bays 20–24 at the same level as layer 109 (about 54.0—54.1 m OD), and these bays contained unstratified 10th-century pottery.

Nearby settlement became clearly apparent in this period. Flax was retted in channel 9 or further upstream. Rubbish from habitations (including the 10th-century pottery noted above) made its way to the island, and trampled-ground plants, dung beetles and bracken for bedding attest the presence of domestic animals there.

Timbers 821-2 and 824-6 were exposed by the tunnellers, who removed all adjacent deposits down to the surface of clay 112, unfortunately making it impossible to relate the timbers to these deposits. The timbers formed an E-W alignment, and were vertical, except for T822 which sloped at about 60 degrees to the E, driven into grey clay 112. A further timber, T838, was found by the tunnellers in bay 29, and the timbers are grouped as structure 121. Timber 825 produced a calibrated radiocarbon date of cal AD 660-900 (GU 5333), making it unlikely these timbers formed part of any Norman construction work. Previously, timbers have been recovered in watching briefs along the line of St Aldate's (notably a pair from Trench 4 at 33 St Aldate's) which led to speculation that a wooden bridge spanned the Thames S of Oxford in the Saxon period (Durham 1984a, 87), but 121 is the best evidence recovered so far. Decking and railing construction details were





Figure 3.33 BT Tunnel: Manhole 1 (E face) and Tunnel 2, section.

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absent, but 121 can be logically interpreted as a bridge trestle 3.2 m wide; the width would be greater if the beams supporting the deck projected beyond the trestle ends. While the deposits adjacent to the timbers were removed by the tunnellers down to layer 112, the absence of postholes in the alluvium means the bridge was erected on driven piles. An undated E-W row of stakes 239 (of which Timber 836 was the westernmost observed—the others are not illustrated), apparently in the silts below 143, continued the line of the trestle 121 to the W, although the stakes need not be contemporary with the trestle.

There was no ford or road contemporary with the late Saxon stone ford seen at 65 St Aldate's further N (Durham 1984a, 82). It is possible that a middle Saxon wooden bridge was maintained as the late Saxon crossing, and the 65 St Aldate's ford was built to take some traffic off the bridge.

The early Norman period

The 4 m wide structure of grey-mortared Corallian ragstone seen in the E part of Tunnel One is the Grandpont, the stone causeway observed elsewhere under the modern road leading S out of Oxford (Durham 1984a, 88). The BT tunnel revealed for the first time the construction details for the base of the Grandpont and the layers directly below. On the E, a deep footing (106) of large limestone slabs in poor clayey grey mortar with a rough E face was built up from a raft of large, unmortared stones 105 dumped on the surface of layer 109 and the base of a clear construction trench (234), but there was no footing on the upstream side. This showed that here the stone causeway was built along the E bank of an island with layer 109, at 54.0-54.1 m OD, as its surface.

The history of the Grandpont was reviewed by Durham (1984a, 87), who suggested that it must have existed by 1092. The Grandpont was shown as a stone causeway with occasional flood-relief arches on a 16th-century map in Brasenose College archives (Fig. 3.2). Arches of Corallian ragstone 3.9-4 m wide are still visible in arches in the stone causeway taking the Abingdon Road S from Folly Bridge (the bridge across the present navigation channel). These coincide with the arches on the Brasenose map (Durham 1984a, 87-8). A crosssection through the stone causeway was seen at 33 St Aldate's Trench 4, where its construction trench was dug through 11th-century clay 410 at 54.8 m OD and abutted by 11th-century deposits (Durham 1984a, 93).

A stagnant reed bed downstream from Grandpont formed organic clay 8 = 120 (Sample BT 18). A construction trench for Grandpont through this clay was very carefully sought, but was absent; it was quite clear that the clay conformed to the E face of the footing 106. The reed bed was extensive, spreading at the same level (53.5 m OD) N to Tunnel Two bay 1 (clay 311) and S to the Head of the River site (clay 326). Upstream from the stone causeway seasonal flooding probably laid down silt 143.

Downstream of Grandpont dumping contributed to the deposition of gravelly clay loam 7 = 119, which raised the ground high enough out of the reed bed for wet terrestrial conditions to prevail (Sample 17). Above the reed bed 311 in Tunnel Two bays 1-3were silts and peats of concave profile (layers 310 up to 304) which interdigitated with layers of convex profile in bays 3-7 (all layers below and including 327). The concave layers were thought to be floors during the on-site recording because of their burnt clay and charcoal content and their interleaving with ashy spreads, but it is equally possible that the concave and convex layers were caused by seasonal floodwater laying down silts and sorting dumps of settlement rubbish (possibly as part of land reclamation downstream of Grandpont). The underlying cause of the concavity was not seen in the excavation. While small pits (such as 318) and gullies (such as 321) were dug from the surfaces of these layers, no features which indicate structures were found on these surfaces.

The S bank to a channel was marked for the first time by the sloping N edge of deposit 329 in Tunnel Two Bay 7. No N bank for this channel was found in the remaining bays of Tunnel Two, making it over 7 m wide. This wide channel seems too far S to be the channel flowing round the revetments at 56–60 St Aldate's (see above). It could, however, be the channel whose N edge was postulated at 33 St Aldate's Trench 1b (Durham 1984a, fig. 6). Therefore, the early Norman surfaces at 33 St Aldate's may have been on an island separated from the BT area by a channel about 15 m wide, which ran broadly E-W, and therefore somewhere S of the 56–60 St Aldate's site.

Grandpont must have been constructed with a flood-relief arch for this channel to have been active, but such a wide channel could have been present when the stone causeway was built, forcing the engineers to locate a flood arch here, rather than the channel being dug or having eroded to meet a flood arch. The evidence from 33 St Aldate's Trench IB suggested the gradual narrowing of a channel beg-inning in the 10th to early 11th centuries with dumped building platform 9/1 (Durham 1984a, fiche B09).

Accumulation in this wide channel continued, forming layer 348 and channel 347. Structures appeared absent; the area around the BT tunnel seemed to be a dank uninhabited place edged with stagnant reed-swamp and fit only for refuse dumping, in contrast to the late 11th-century northern island at 33 St Aldate's, where houses were built against the stone causeway (Durham 1984a, 93).

The early 12th century

The proposed flood-arch channel 347 silted up fairly rapidly (judging by the horizontal nature of fills 360 and 361), probably while silts built up the upstream edge of the island (layers above 171 and below 156 in Tunnel One bays 19 & 20). Driftwood containing leatherworking debris then probably accumulated on the upstream bank (the woody peat 233 = 229/230). Ditch 137 was dug on the upstream side of Grandpont; water-pressure from the river in spate may have become strong enough to threaten to breach the causeway. It filled up as level layers of silt were deposited (layers up to 130 = 142). Further silts were deposited downstream of Grandpont (layers 313, 314, 315 in Tunnel Two bays 1–8 downstream; potsherd 14, fabric *B*, 10th-century from layer 313 was residual).

Dumping raised the ground downstream of Grandpont (layers above 360 up to 302). Channel 365 was dug through the fills of channel 347 from the dumped surface, showing that the flood-arch channel was cleaned out or eroded due to a considerable increase in flow. It is possible that the flood-arch cleaning spoil was cast up onto the surface downstream from the causeway, forming layer 302.

In Tunnel One, an asymmetric cut 150 limited silts 142, 143 and 149. This cut defined a strip 7.5 m wide W of Grandpont, and was the first definite sign of management of the upstream area. Silt 156 accumulated W from this ditch or revetment across the earlier silts.

The late 12th and early 13th centuries

Grandpont was partly reconstructed or extensively refaced. Clayey mortar and limestone fragments 301 = 12 = 101 (presumably construction debris) spread W across the dumped layers and across the grey-mortared portion 106 of the stone causeway; the debris had the core, 100, of the stone causeway built on it. Core 100 consisted of thick layers of large Wheatley Limestone blocks in pale yellow sandy mortar, with outer skins of faced stones (although the W face was badly damaged by a sewer trench). Diagonal tooling on the freestone from the upstream face (J. Blair, pers. comm.) indicates Romanesque workmanship, and the freestone face contrasts with the ragstone construction observed elsewhere (again, notably the cross-section at 33 St Aldate's Trench 4) and favours the possibility of comprehensive reconstruction. Construction debris 336 to the N was probably dumped as part of this Grandpont reconstruction.

Following the reconstruction work, organic gravelly loams 6, 113 and 115 were dumped downstream of Grandpont producing dry terrestrial conditions. This ground was occupied, with domestic rubbish and farm waste (including wheat and rye chaff) falling onto trampled ground on which poppies and nettles grew (Sample BT16). Extensive dumping (layers 175 and 155) expanded the upstream dry land to a strip over 16 m wide (sherd 4, Fabric *BM*, mid to late 13thcentury is intrusive in layer 175). Further N the proposed flood-arch channel 365 was not cleaned out, possibly becoming no more than a muddy backwater (see also Durham 1984a, fig. 6). This failure to maintain the channel, following the reconstruction work that created debris 301 = 12 = 101 and especially 336, suggests that the flood-arch for this channel may have collapsed in the 12th century, partly blocking the channel and necessitating repairs to the causeway. Intentional blocking as part of a causeway remodelling is also possible. V-shaped slot 349 and a broad, flat-based slot 324 containing roughly-coursed unbonded stone, were the earliest observed traces of structures, built downstream of Grandpont after the channel 365 had filled.

The later medieval period

The 13th-century pottery in dump 155 (Tunnel One) showed it was probably incorrectly interpreted in the salvage, and was in fact cut by the broad flat-based ditch 191 which contained a 14th-century sherd ('stratified' sherd 3; sherd 2 is intrusive). This ditch defined an expanded strip of land 16 m wide upstream from Grandpont. Organic silts 232 = 223and 224 accumulated on the upstream bank of this land as ditch 191 began to silt up. The wood in this deposit may have been driftwood, but this layer contained gorse, a material imported to the site and often used for oven tinder and fuel (Sample BT6). A small ditch or pit 126 was dug beside Grandpont and broad shallow pits or ditches 235-244 were filled with horse-dung. There are no clear parallels to this treatment of horse-dung, radiocarbon dated to the late medieval or early post-medieval period (cal AD 1400-1620: GU-5334). The dung seems to have been left standing only briefly (deduced from the very low insect numbers) and its small content of straw or other bedding makes it unlikely to be stable cleanings (Sample BT7); it seems that the dung is from street-cleanings.

The upstream boundary created by ditch 191 was recut frequently, in a more and more asymmetric and shallow way (ditches 186, 183), gradually creeping W and filling with increasingly organic deposits (ditches 206, 211, 214). Bay 15 produced several shoes and a spur, all consistent with a 15th-century date; these may come from organic layer 183 or the fill of feature 206.

The post-medieval period

Coarse gravel spill 217 in Tunnel One bays 7–13 contained architectural fragments of the 14th century or later, but was probably dumped in the post-medieval period to consolidate and expand the upstream ground. Timber 834 may have been a revetment for this dumping. The post-medieval gravelly dump layers 231 covering 217 filled all the tunnelling excavations to the W of bay 7 (Bays 1–6 and Manhole Two), which were therefore not recorded in detail. This post-medieval dumping probably filled this branch of the Thames as part of the remodelling of this part of Oxford in about AD 1825. Further late features are pit 195 in bay 16 (containing Tunnel One sherd 1 of the late 19th century) and sewer drains laid in the fabric of Grandpont and in Tunnel Two bay 12.

Acknowledgements

The BT evidence would have remained uninterpretable without the help of several people. Dr Gordon Cooke's team at the Scottish Universities Research and Reactor Centre produced the conventional radiocarbon dates, and Dr Rupert Housley at the Radiocarbon Accelerator Unit, Oxford University Research Laboratory for Archaeology and the History of Art, produced the accelerator radiocarbon date. Muriel Macleod of the Environmental Sciences Department of the University of Stirling prepared the micromorphology thin section. Mark Robinson's environmental analysis was funded by the Ancient Monuments Laboratory of English Heritage. Blanche Ellis catalogued the spur, Erica Hemming drew the artefacts, and Karen Nichols drew the archaeological figures despite my interference. Thanks are especially due to Roger Ainslie of the Abingdon Archaeological Society for bringing the tunnelling to the Unit's attention.

Comment on dendrochronology and radiocarbon dates

Dendrochronology results

Samples of wood which were potentially suitable for dendrochronology were selected and submitted for examination at the Department of Archaeology and Prehistory at Sheffield University along with material from previous Thames Crossing excavations (see Chapter 7 and Table A2.1, below).

Almost all the oak timbers forming the possible bridge trestle 121 were submitted, but none of these was datable; timber T824 had 55 rings but did not fit a sequence reliably. The flat oak board T823 from the dark organic material 104 = 109 above the ford 110 had 13 sapwood rings, the last one datable to AD 577, giving a felling date range of AD 577–619 (at 95% confidence).

Radiocarbon determinations

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Two samples were submitted to the Oxford Radiocarbon Accelerator for dating, and two samples were also submitted to the Scottish Universities Research and Reactor Centre in East Kilbride for conventional radiocarbon dating. The supplied dates were calibrated according the curve of Stuiver and Reimer (1993). The results are set out in full in Appendix 2, below.

The dates produced a clear succession in agreement with the site stratigraphy with no conflicts between dates. The small number of artefacts and especially stratified artefacts made the dates essential for constructing an absolute chronology for the site. The chief disappointment was the failure to bracket closely the ford 11 between the channel deposit 10 and the reedy peat 9. Individual results are discussed below in chronological order. OxA-4354: The Mesolithic date for the channel fill is compatible with the environmental evidence and indicates that the single flax capsule is likely to be intrusive. The lack of *Alnus* may mean that the true date of the deposit lies closer to the early end of the date-range.

OxA-4353: The middle Saxon date for the channel fill 9 containing flax capsules provides the only channel in the Thames Crossing area definitely dated to this period.

GU-5333: The date confirms this probable bridge pier as being middle or just possibly late Saxon, and very unlikely to be part of the construction of the Norman stone causeway (Grandpont).

GU-5334: This late medieval or early post-medieval date on dung gives a *terminus ante quem* for much of the site's deposits and was useful in clarifying the conflict between the stratigraphy and the artefact content of the later deposits.

Excavations at 42–43 St Aldate's (The Head of the River) 1994 (OXHOR) by Paul Booth

Introduction (Fig. 3.1; Plate 3.14)

The Head of the River site lies immediately east of the Abingdon Rd and on the north bank of the modern navigation channel of the river Thames (Plate 3.14). It is bounded to the east by the Trill Mill Stream which flows from north to south. The excavation was carried out by Oxford Archaeological Unit during June 1994, in advance of development of the site, and was funded by Hertford College. Planning permission for the main part of the site (the carpark area) had already been granted. The objectives of the excavation were to determine the character and state of preservation of archaeological remains on the site and to assess the impact of the proposed development upon them.



Plate 3.14 St Aldate's looking N from Folly Bridge, with the Head of the River on the right of the picture. Photo Mike Hallam.

Documentary background (Fig. 3.14)

Documentation for the lower end of St Aldate's is poor for the medieval period, and the two tenements identified by Salter, Survey SE(172-3), are first certainly referred to in the 15th century, the northernmost against the Denchworth Bow as the property of the City, and the southernmost towards the river as the property of Lincoln College (Survey, SE(172-3). How these became Nos 35 to 43 St Aldate's might be discovered from a discontinuous series of deeds of Lincoln College, Hall's Brewery, and Oxford City, which deserve further study (Lincoln College St Aldate's Leases (L/OSA/ 1-8); Oxfordshire Record Office MS DD Halls Brewery C.20; City Strongroom, old deeds for 'St Ebbe's Title'). The Lincoln holding, which probably included the wharf and the sites of 41 to 43 St Aldate's, was described as a 'garden ground adjacent to the South Bridge' in early 17th-century leases, being 'newly built' in 1642, and rebuilt as four messuages in 1720 (catalogue of Lincoln Archives). From that date the site was leased to the Commissioners for Thames Navigation, who seem to have purchased it outright in 1829 and then disposed of the newly rebuilt site. The well-known 18th-century views of Folly Bridge usually show the wharf on the right-hand side of the picture, with a large stone building on the road and another one behind it, and barges at the wharf. This usage is poorly documented, though the wharf was apparently rented from the City in the 17th century (Toynbee and Young 1973, 180, though this is not mentioned in OCP), and must have been the prime site for barges plying the lower Thames.

Following the rebuilding of Folly Bridge in 1825, there was a general redevelopment of the riverside facilities, and a new wharf was constructed on the east side. A plan for this was drawn up by Badcock in 1827, which shows in outline the existing buildings on the site, confirming early topographical views and maps, and demonstrating the diagonal alignment of the buildings (Copy of City Engineer's plan in Centre for Oxfordshire Studies, OCL 27316; original in Engineer's Strongroom Drawer 7 file 17257).

As rebuilt, the site consisted of warehouse and boathouses and the three surviving houses on St Aldate's of which the first was a public house called the Dolphin and Anchor. Behind this was later built one of the numerous rows of dwellings found in the yards off St Aldate's, King's Row.

The excavation (Figs 3.1, 3.34, 3.35)

Three trenches were excavated (Fig. 3.1). Their siting was determined by the background historical and archaeological knowledge of the site and by practical considerations on the ground. Trenches 1 and 2 were located in the carpark area, respectively at right angles to the lines of the Trill Mill Stream (which forms the eastern boundary of the site) and the river Thames, in both cases approaching as close to the contemporary banks as was feasible. Trench 3 was sited in the front cellar of No. 42 St Aldate's. Trenches 1 and 2 were partly excavated by mechanical excavator, with deeper excavation by hand in limited areas. In both cases the limit of machine excavation was (coincidentally) broadly equivalent to the depth of post-medieval deposits. Trench 3 was excavated entirely by hand.

Description

Trench 1 (c 7.50 × 1.80 m, aligned E-W)

The E end of the trench lay some 6 m from the W edge of the Trill Mill Stream. It had been hoped to site the trench closer to the stream but this was not possible owing to the presence of a N-S sewer pipe. The trench was excavated by machine to a depth of from 1.30 m (E end) to 1.60 m (W end). A hand dug sondage 2 m in length was situated towards the E end of the trench. The total depth of excavation to the bottom of the sondage was 3.60 m.

Natural gravel (127) was encountered across the bottom of the sondage at a consistent depth of c 52.80 m OD. This was overlain by organic silty clay (126) and a layer of waterlogged organic fragments in dark grey sandy clay (125) with a total depth of 0.38 m. There were two sherds from 125, the later one dated 13th-14th century. Above these deposits were grey slightly organic silty sands and cleaner sand layers occasionally interleaved with lenses of sticky dark grey organic clay (124, 123, 119, 120). These deposits together produced 51 sherds, principally Brill/Boarstall products, mostly with a 13th- to 14thor 15th-century date range. A small number of sherds must have belonged to the later half of this range. Layer 120 also contained three shoe soles and other leather fragments. The top of these deposits was at 54.08 m OD, at which level there was a steep sided cut (128) for a timber construction (118). Parts of two sides of this construction extended a short distance into the NE corner of the sondage. In this cramped space excavation was very difficult, and interpretation of such limited remains was also extremely problematical.

The main parts of the structure consisted of a W side formed of two substantial planks (129, 137) set on edge with the E face held in position by vertical stakes. The total depth of the side as indicated by the planks was 0.56 m. Deposits to the E of the timbers and laid against them sloped down deeper than the planks themselves, so the construction cut was clearly not flat bottomed but sloped down to the E. At the S end of the planks was a timber upright (132) which formed an internal corner with 129 and a much slighter plank (131) set roughly at right angles to it and running to the E. This formed the S side of the structure and like the W side was held in place by stakes against its internal (N) face. Further stakes also occurred just S of 131 at its E end and just W of 129 at its S end. These are presumed to have been part of the same overall structure, perhaps





Figure 3.34 42–3 St Aldate's (Head of the River): Trench 1, detailed plan of timber structure 118; Trench 2, plan; Trench 3, detailed plan of stone foundation.

consolidating the sandy deposits to S and W, but there was no direct physical link between them and the planks. The line of the S side of the structure represented by 131 was continued eastwards by a fragmentary timber (150), only the extreme end of which was located within the trench.

The fills within structure 118 were very different from those through which it was cut. It is probable that the lowest fills were not encountered (because of the practical problems of excavation), but the lowest seen were lenses of dark brown organic silty clay and of grey sand (141, 140), sloping steeply down to the E. A similar organic clay deposit with sand lenses (139), up to 0.36 m deep in the slot excavated through these deposits, had a roughly level upper surface. It was overlain by a black organic clay layer (138), a further deposit with a very high matted vegetable content (136) and a mixed gritty organic silty clay (135). 135 was in turn overlain by a sticky dark grey organic clay (117) which extended across the top and just beyond the limits of structure 118. The lower fills of the structure produced no finds. The upper ones contained animal bone but no datable material.

The sequence of fills of structure 118 and the sandy layers through which it was cut were all overlain by three mixed clay layers (116, 115, 114) incorporating random limestone blocks, with a total depth of c 0.80 m. These are interpreted as dumping or levelling layers. All produced medieval pottery and 114 and 116 also contained a few sherds assignable to the 16th-17th century.

Above these layers was a further possible dump deposit (104) from 0.28–0.42 m thick, which contained almost entirely post-medieval material with a date range up to the 19th century. This in turn was overlain by a layer of mixed limestone rubble and sand and gravel (103), incorporating along its S edge (which ran E-W along the trench) very large limestone blocks. This is almost certain to have been the



Figure 3.35 42–3 St Aldate's: Trenches 1, 2 and 3, sections.

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foundation for the 19th-century King's Row, located on maps at precisely this point, but demolished in the mid 20th century. Deposits above this level are therefore of recent date, including the present carpark surface and make-up.

Trench 2 (c 12.50 m \times 1.80 m, aligned N-S)

The trench was excavated by machine to a depth of c 1.10–1.30 m. Deeper sondages 2 m long and situated 1 m from each end of the trench were then excavated by hand. The maximum depth of excavation in the N sondage was 2.40 m and in the S sondage 2 m.

Natural gravel was encountered in both sondages at about 54 m OD. In both cases the upper surface of the gravel was concreted with calcareous material, consistent with the gravel having been the bed of a steadily flowing watercourse. In the southern sondage this deposit (232) was overlain by a thin layer of looser gravel (231) stained dark grey by organic material in the overlying layer 227. This was of black sandy peat up to 0.16 m thick and contained small fragments of wood, other plant remains and leather. Above this a lens of fairly clean gravel (230) was overlain by a sequence of grey silty clays (229, 233, 228) with a total depth of 0.40-0.50 m. The only finds from these deposits were a few fragments of animal bone. Above 228 was a layer of bluish-grey clay (210) up to 0.30 m in thickness, which contained sherds perhaps of 15th-century date. All these deposits were approximately horizontally bedded.

In the northern sondage the natural gravel (222 with concreted surface 221) was overlain as in the S sondage by a loose layer of dirty gravel (220) 0.20 m thick, which contained a single sherd dated late 11thmid 13th century (Fabric Y). The earliest deposits above this layer appear to have been laid from the NW. The first of these, a brown silty sand (217), only extended c 0.38 m into the corner of the sondage. It was overlain by 234, a substantial layer of dark grey silty sand up to 0.34 m in depth which extended across the whole of the northern half of the sondage. Its edge sloped down considerably to the SSE. The edge was then overlain by deposits of dark grey silty clay (219) and brown-grey fine gravel (218) with a maximum combined depth of c 0.40 m. These sloped downwards from W to E, approximately at right angles to the line of slope of the earlier deposit 234, but 218 extended over and beyond 219. They were overlain by a blue-grey clay layer (225) up to c 0.20 m thick which also extended over the top of 234, still exposed to the N of the northern limit of 218 and 219. 225 sloped down from NW to SE. These deposits produced few finds, but the pottery was fairly consistently of 13th- to 15th-century date. Two sherds from 219 give a terminus post quem of at least the 14th century for this deposit.

The sloping edge consisting of 218 and 225 was then overlain by a lesser deposit (223) of dark grey silty sand, in turn overlain by a very compact, thin deposit of brown gritty clay (213), confined to the SW corner of the sondage. This layer, the top of which sloped down to the E and to a lesser extent to the N, was thought to represent a consolidated bank or possible watercourse edge.

The sloping deposits, laid initially from the N and then from the W, thus defined a roughly rightangled corner, the lower levels of which, to the SE, then filled in with 214, a mid grey fine gravel incorporating organic fragments. This deposit, up to 0.45 m deep, was cut by the insertion of four wooden stakes 0.04-0.05 m in diameter. Two of these (224 and 226) were observed in the S and E sections respectively, so their relationships with 214 were clear. Further stakes to the SW probably occupied a similar stratigraphic position. The tops of the stakes were within 215, a dark grey silty sand with occasional lenses of organic peat, which overlay them and layer 214. 214 and 215 contained pottery with an outside date range of 13th-15th century, but probably mainly falling within a late 13th- to early 14th-century bracket. They also produced leather fragments, including two shoe soles from 215. Above 215 was an extensive layer of blue-grey silty clay (216) with a maximum depth of 0.25 m. This filled all irregularities adjacent to the bank edge 213 and overlay the earlier (roughly E-W aligned) deposit 214. 216 was very similar and may have been equivalent to layer 210 at the S end of the trench, though the only sherd within it, dated 1150-1350, was probably residual, unless datable right to the end of its range. 216 was almost indistinguishable from a further clay layer (207), some 0.35 m deep, which probably completed the medieval sequence in the N part of the trench.

Layer 207 extended across the whole of the trench. It contained three sherds dated to the 13th–15th centuries and a further sherd dated 1350–1500. A date in the 15th century would fit quite well with the evidence from the earlier layers, though it is possible that layer 207, which may have accumulated over a considerable time, extended into the post-medieval period.

The character of the deposits changed considerably above 207, which was overlain by 206, an extensive, mixed layer of light greenish-grey clay silt on average some 0.25 m thick. This layer contained gravel and localised patches of limestone fragments. A horizontal wooden plank lay at the interface of 207 and 206, and the top of a vertical timber (212) some 0.15 m in diameter, apparently driven into 207, would probably have extended upwards into layer 206 (it was slightly damaged by machining, which removed evidence for the relationship). The only finds from 206 were fragments of tile and glass and an iron nail, none of which was closely datable. Above 206 at the S end of the trench were localised mid grey clay layers possibly of alluvial origin (209, 211). These were marginally overlain by a black silty clay layer (205) and further mixed dark grey silty clay layers (202, 204). These deposits terminated c 2 m N of the S end of the trench, but thickened steadily from that point to a maximum depth of c 0.95 m at the N end of the trench. These deposits are interpreted as possible dumping layers of relatively recent date. They were directly overlain by the hardcore beneath the present carpark surface.

Trench 3 (2 m × 1.50 m, aligned E-W)

This trench was situated in the front (W) cellar of No. 42 St Aldate's. Excavation was entirely by hand in cramped conditions and for the most part in artificial light (a little natural light entered the cellar from the top of the opening onto St Aldate's). Description of the deposits, particularly in relation to colour, was therefore less precise than would be considered ideal. Excavation of the lowest deposits in the trench was in a very narrow slot against the S baulk and reached a depth of 2.30 m below the floor level of the cellar.

The grey gravel subsoil (328) was encountered at c 53.10 m OD. It was overlain by grey clays (327, 326), the lower quite gravelly, the upper with a very little gravel and some organic fragments. These deposits, with a combined depth of c 0.42 m, both contained snails indicative of clean flowing water and insect and plant remains (Sample Nos HOR 11, 10). Significantly, the latter included flax capsules, indicative of human activity and suggestive of a Saxon date. These layers were overlain by a substantial deposit of brown organic silty clay (325) up to 0.68 m thick (its top was therefore at about 54.22 m OD). 325 was in turn overlain by a dark grey slightly gravelly silty clay (324) with a similar greenish grey layer (323) above. These deposits were horizontally laid and together some 0.18 m deep. They produced fragments of animal bone, the lowest layers in this sequence to contain anything except snails and waterlogged plant remains.

Above 323 was a further dark grey silty clay (321) up to 0.36 m thick. This was seen to extend across the whole trench. Like 323 and 324 it contained animal bone fragments. 321 lay beneath the lowest identified structural deposits, a series of probable floor layers (318, 317, 313) respectively of compact silty clay with patches of burning, a further silty clay and a coarse sandy gravel. 318 produced a small group of pottery with a terminus post quem of at least the late 12th century, and perhaps considerably later. Above 313 a roughly N-S aligned row of stones (316) might have formed a foundation. A possible continuation of this feature, also on a N-S alignment but offset some 0.35-0.40 m to the W, was represented by a straight sided and flat bottomed cut in 313 (319), 0.40 m wide and 0.24 m deep, which was better defined in section than in plan. Its fill (320) incorporated a few stones of similar character to those forming 316, but if it was a structural feature it is unclear if it represented a partly robbed wall line or a beam slot or similar feature. 316 was butted on its E side by 314, a patch of burnt red clay representing either a further (fragmentary) floor surface or possibly a hearth. To the W of 316 a similar burnt clay deposit (315) was broadly contemporary with 314 and may have constituted a further floor layer. A patch of 315

partly overlay 320, but could have been redeposited here.

These structural features were overlain by a layer of grey brown gravelly clay (312) some 0.30 m thick, which produced a small mixed group of pottery, with at least one sherd assignable to the late 15th-16th century. Above this was a similar but much less gravelly and fairly soft clay layer (310/311), also dated late 15th-century or later, into which was set a substantial stone foundation, the SE corner of which lay within the trench. The S and E faces (303 and 306 respectively) of the foundation were of large unmortared limestone blocks (up to $c 0.70 \times 0.35 \times$ 0.55 m) with roughly flat outer edges. The area within these faces was filled with more irregular blocks and the whole structure was sealed with a layer of clay (305) containing small limestone fragments. The clay was very similar in character to 310/311 beneath the foundation, and was presumably derived from this deposit. The level of the top of 310/311 to S and E of the foundation was up to c 0.30 m above the base of the foundation. While there was no evidence for a construction cut for the foundation it seems likely that such a cut must have existed, though it is just possible that the foundation was laid directly on top of 310/311 and was then pressed into it by the weight of the superstructure above. Part of a second layer of limestone blocks (302) survived above layer 305 in the NE corner of the trench, but had mostly been removed, presumably on the demolition of the structure (the removal was represented by a shallow cut (322) filled with loose mixed debris (304)). Butting the S face of the foundation (303) was the end of a N-S aligned brick feature (307). This was based on bricks measuring $c 205 \times 100 \times 55$ mm and was c 0.50 m wide. It was perhaps a wall which like the upper foundation layer had been largely removed by robbing (cut 308 filled by 309). The robbing deposits were directly overlain by a superficial layer of black loam with small brick fragments and coal dust which represented the floor of the cellar of the existing structure of 42 St Aldate's.

The finds

The principal finds from the site were animal bone (not reported on here), pottery (Whittingham, Chapter 6, below) and to a lesser extent ceramic building material. The waterlogged conditions in parts of Trenches 1 and 2 ensured good preservation of organic materials. The timber structure in Trench 1 was left *in situ*, but leather fragments, particularly of shoes, were recovered both here and in Trench 2 (shoes from contexts 120 (3), 215 (2) and 227, other fragments from contexts 120, 125, 214, 215, 227 and 230).

Discussion

These small scale excavations have enhanced our understanding of the development of the riverside

area of St Aldate's, and can be compared with information from adjacent sites, particularly the British Telecom (hereafter BT) tunnel, to draw up an outline of the sequence of land reclamation and use on the east side of St Aldate's.

The gravel subsoil was located in all three trenches, at 53.10 m OD in the NW part of the site (Trench 3), at 52.80 m in the NE (Trench 1) and at 54 m across the southern part of the site (at both ends of Trench 2). The height of the gravel in this last trench is noteworthy, suggesting an island of gravel lying S of a channel aligned roughly E-W, or perhaps ENE-WSW. The high gravel in Trench 2 had, however, the character of a fast-flowing watercourse bed. A watercourse at this level cannot have been contemporary with the much deeper channel immediately to the N, the earliest deposit in which (in the base of the BT manhole to the \overline{N}) is dated by radiocarbon to the Mesolithic period. Gravel levels to the N of the present site at 33 St Aldate's trench 1b and at 56-60 St Aldate's, and the top of the early channel fill (layer 10) at the BT tunnel, were all at about 52.50 m OD, consistent with other levels associated with the deep channel.

All trenches produced evidence of organic silty clays overlying the gravels, but these were much deeper in Trench 3 than elsewhere. Such deposits did not occur at the N end of Trench 2. The deposits in Trench 3 were almost 1 m thick. In terms of levels they were equivalent to layers 8 and 7 (brown silt clay and organic gravelly loam respectively) in manhole 1 of the BT excavation. The layer (9) of peaty silt beneath these deposits in the BT manhole does not have a real equivalent in the present site. The presence of flax capsules in the lowest deposits in Trench 3 suggests that these were of Saxon (rather than earlier) date.

A substantial part of the Trench 3 sequence is thus most probably dated to the late Saxon and Norman period. The first dated deposits in Trench 3, apparently floor surfaces, seem to represent the first use of this part of the site (no earlier than the late 12th century on limited pottery evidence) for occupation, which would have been sited immediately to the E of the Grandpont causeway (the layers underlying the lowest floor contained some animal bone, perhaps suggestive of rubbish disposal, but no other material). The lowest building level was at 54.72 m OD. At least two phases of floors seem to have been represented, associated with a possible hearth and poorly preserved fragments perhaps of a partition wall foundation. There is almost no dating evidence for this sequence, but domestic activity seems to have been discontinuous, because the floors were overlain by a gravelly clay ?levelling layer (312), perhaps of late medieval date, and the next structural evidence was certainly of post-medieval date.

On the eastern margin of the site the lowest archaeologically datable stratum (of the 13th century) in Trench 1 was at 53.15 m OD. This would have been contemporary with part of the occupation sequence in Trench 3 to the W, the difference in level reflecting the steady downslope of the site from W to E evident today. The organic peaty clays, here relatively shallow, were overlain by a sequence principally of silty sands, some at least of which seem to have been water laid. These consistently contained mid 13th- to 14th/15th-century pottery, and the cut for the insertion of the timber structure 118 is unlikely to have dated before about the mid 14th century at the earliest. The level from which this structure was cut was c 54.08 m OD. The nature of the structure is unclear. On its W side it consisted of substantial timbers, but these had a maximum depth of only 0.54 m, and there was no indication of any lower timbers offset to the E. The southern side was on present evidence very flimsy.

The character of the deposits within 118 was very different from that of those through which it was cut, and included more organic clays and towards the top a compact deposit of waterlogged organic fragments up to 0.08 m thick (135). These deposits suggest that the area E of the edges of 118 remained wet for a considerable period. This would be consistent with an interpretation of the structure as a slight reinforcement of the W edge of the N-S Trill Mill stream, now some 7 m further E, but the form of the structure, with a near right angle return to the E at its southern end, is difficult to explain in this context, unless there was some effort to provide a slight quay or landing stage. The scale of the timbers, however, seems in adequate for such a purpose. An alternative possibility is that structure 118 represented something much smaller in scale, perhaps a timber-lined pit, but in this case the water-deposited character of the fills has to be explained. On balance a slight stream edge structure seems the more likely interpretation.

Further S a rather different pattern of events is observed. In the northern end of Trench 2 the deposits above the gravel were not horizontally laid, so although they were typically silty they were presumably laid by human agency. The stratigraphy and the orientation of the deposits suggest that they represent a sequence of dumps, first from the N and then from the W, presumably laid as part of a process of consolidating the ground E of St Aldate's. At one stage the E-facing edge became consolidated as a bank, but this was probably only a short-lived feature. There was no significant difference in date between material below and above the bank. While the loose gravel over the river bed deposit at the N end of the trench produced a single sherd of pottery dating to the late 11th century or later (the earliest sherd from the whole site) this piece may have been residual and there is no doubt that the main part of the infilling process can be assigned broadly to the 13th and 14th centuries. At the S end of Trench 2 a rather different sequence of fills was unfortunately not dated.

All parts of the site showed evidence of late medieval to early post-medieval deposits. These were generally gravelly clays (312 in Trench 3, 116–114 in Trench 1 and perhaps 207, a cleaner clay, in Trench 2).

Except in Trench 2, where 207 may have been of alluvial origin, these deposits may be seen as part of a continuing process of dumping to consolidate ground levels across the site generally. Layer 206 above 207 in Trench 2 can certainly be seen in this way, but it is poorly dated (though certainly post-medieval) and may be later than 312 and 114, though in character it is quite similar to them, particularly to 114. The levels of these deposits are broadly comparable in all trenches at around 55 m OD.

Post-medieval structural evidence occurred in Trenches 1 and 3. The substantial stone foundation in Trench 3 is not closely dated, but the layer beneath it (312) and the layer in/onto which it seems to have been set (310) both contained sherds datable to the 15th–16th centuries, and possibly even a little later. It may be then that this foundation belongs to one of the buildings on the St Aldate's frontage evident in Loggan's 1675 view. The size of the foundation may indicate that it was the base for a chimney stack. The brick wall which butted the foundation may be later in date. It is uncertain how long this building stood, however, for the SE corner of the foundation in Trench 3 does not seem to correlate closely with the outline plans of buildings shown on the approximate site on plans of 1750 (Taylor) and 1827 (Badcock). Moreover it is not clear that the buildings shown on these two plans are the same (there are several significant differences of detail). It may be, therefore, that there were several phases of building on the site between that represented by the Trench 3 foundation and the present (early 19th-century) building. Evidence for these phases could have been completely removed by the excavation of the cellar for the present building.

There can be little doubt that the foundation located in Trench 1 was that of the SE corner of another 19th-century building, Kings Row. The documented location of this row of cottages correlates very closely with the archaeological evidence. These buildings were only demolished in relatively recent times.

There was no evidence in Trench 2 for any of the buildings shown on Taylor's 1750 map to have been located in this part of the site. It is assumed that like later structures in the same general area (cf 1875 OS 1:500 plan) these were perhaps mainly boathouses which may have been relatively slight structures.