

Chapter 2 The Medieval Period

INTRODUCTION

This chapter describes the evidence for the development of this area of central Reading up to the turn of the 17th century, Project Phases 1-6. An overview of the very earliest evidence for the form of the floodplain is given first. This is followed by the evidence for the development of the northern edge of the site and the Holy Brook and Minster Mill streams (site 29, the Oracle, and site 150, the Minster Mill), the evidence for the development of the floodplain (site 12, the Yield Hall, and site 101, the Back Brook), and finally the evidence for the development of St Giles Mill (site 300). Chapter 3 presents the evidence from the 17th century onwards.

PROJECT PHASE 1: THE EARLY VALLEY FLOOR AND RIVER CHANNELS (Figs 2.1, 2.2) (site sub-phases 1200; 1201; 2900; 10101a; 15000 and 3000)

The majority of the area covered by the project is situated on the floodplain of the river Kennet. Its northern limits extended just beyond the northern edge of the valley floor, but its southern limits did not extend as far as the southern edge of the valley floor. Chalk bedrock overlain by gravel was encountered at the extreme northern limits of the project area where it rose from the valley floor. The gravels of the floodplain (or first) gravel terrace were seen on the valley floor during the excavations, although much of it had been eroded. The second terrace was observed at the north edge of the project area and its southern edge runs parallel to, and some 20 m to the south of, the current line of Minster Street. Much of the floodplain gravel terrace was covered by large units of alluvial silt, which had been deposited by the river during seasonal floods. A number of river channels crossed the valley floor, running broadly from south-west to north-east, and this made the area prone to seasonal flooding. Evidence was encountered to suggest that many of the archaeologically recorded west-east channels were aligned on the ancient courses of relict natural channels that probably flowed seasonally.

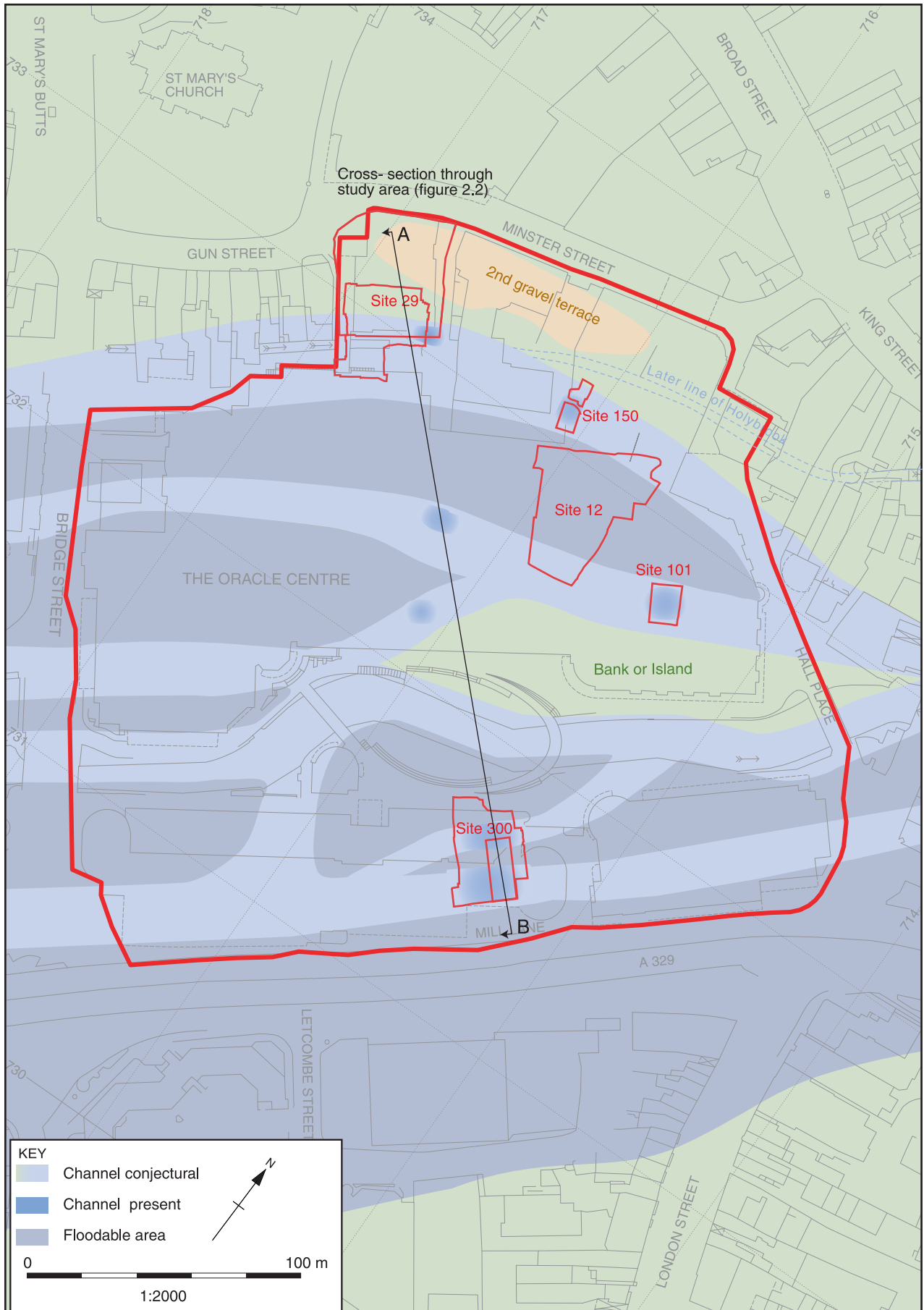
Early channel and valley floor deposits were sampled and studied by Mark Robinson as part of two separate evaluation exercises, 1996 (Tr 1-10) (OAU 1996), and 1997 (Tr 14-17 and 20) (OAU 1997). The results suggested that although useful information might be obtained, the comprehensive study of early natural deposits would be beyond the scope of the excavation programme, and priority was therefore given to the understanding of human intervention in the landscape. Some information, however,

was collected regarding the natural landscape and this is briefly reviewed in the present section and illustrated in Figures 2.1 and 2.2. Figure 2.1 shows a conjectural reconstruction of the floodplain as it may have appeared prior to the first major human interventions recorded in the excavations. Figure 2.2 shows a cross-section through this landscape. Information for these illustrations was taken from archaeological and engineering results.

Starting at the northern limits of the project area, the Oracle and Minster Mill sites (site 29 and site 150 TP 27) revealed the edge of the second gravel terrace and its interface with the floodplain. Chalk bedrock and the overlying gravel were observed at both locations. Chalk and gravel were observed at a height of 39.8 m OD immediately south of Minster St on site 29, and at 39.7 m OD in TP 167 (60 m to the east). After an initial limited drop in height, the gravel sloped gently down to the south, forming a relatively level *c* 20 m-wide shelf at a height between 39.40 and 39.20 m OD, at which point the gravel was up to 2 m thick. Just to the north of the present line of the Holy Brook, the chalk and gravel gave way to a boundary with the riverine alluvium at a height of 36.8m OD. This gravel/alluvium boundary was also observed for a short distance east-west across TP 183, and at site 150 TP 27 to the east. Here the slope of the chalk bedrock was again revealed. It was seen to slope downwards to the south at a gradient of approximately 1:10, from a height of 36.70 m OD to 36.30 m OD, before dropping more steeply at a break of slope to 35.90 m OD. This corresponds to the level at which the break of slope in the underlying chalk was observed on site 29 to the west.

The evidence from both sites suggests that this was the edge of the valley floor. The evidence for a possible early channel system around this edge suggests that an early watercourse may have existed here, which was later developed into two discrete channels, the Holy Brook and the Minster Mill Stream. The channel edge observed on site 29 corresponds with the position of the later Holy Brook, and the channel edge observed on site 150 corresponds to the position of the later northern edge of the Minster Mill Stream. This implies that the medieval and present alignment of the Holy Brook east of site 29 may have been an artificial construction, to take water off from this system to power the mill at the abbey (see Chapter 6, below).

South of these channels, on the floor of the floodplain itself, a very large number of Test Pits were observed and recorded. A principal aim of this work was to map the base of the floodplain and identify the



course of early river channels by observation of the underlying gravel, and the river silts deposited over the top of it. Many of the Test Pits revealed a sequence of alluvial silts (deposited by the river channels during floods), and some encountered the first gravel terrace, although none was deep enough to reveal the chalk bedrock beneath. The floodplain has an uneven floor and the horizon between the gravel and the overlying alluvial silts varied across the site as a result of the changing water flow in past watercourses.

The level of the gravel/alluvial interface fell across the floodplain with the direction of water flow through the valley floor (engineering studies of the water table showed that this also falls in the

same direction). A gravel bank or island was identified to the north of the current main course of the canalised Kennet. This suggests that the river in the past split into two broad areas to the north and south of this bank or island. Later, the river became established in the main course it occupies today. Figure 2.2 shows the alluvium and later made ground rising either side of this channel, indicating that this had been the river's main course before canalisation in the 18th and early 19th centuries. The periodic flooding of the valley floor formed broad and higher banks of alluvium, while lower-lying land carried numerous smaller channels, both north and south of the Kennet, and continued to be liable to flood.

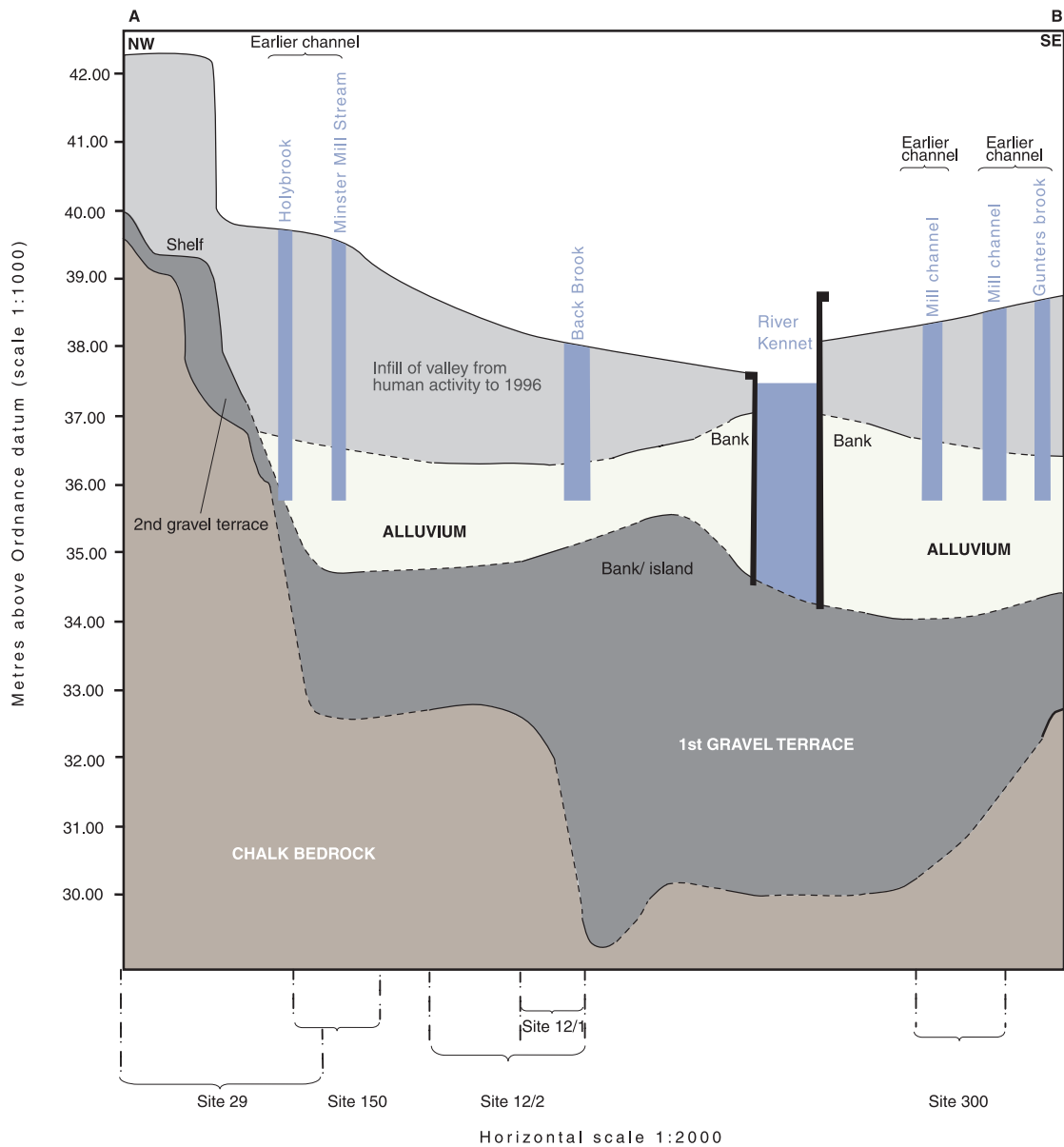


Fig. 2.2 Conjectural north-south cross-section A-B through the floodplain within the project area

Fig. 2.1 (opposite) Conjectural plan of the floodplain water regime prior to evidence for human activity, with location of the principal area excavations and cross-section A-B, Fig. 2.2 (Project Phase 1)

Only limited studies of the deposits within the river channels themselves could be carried out, and most of this work was undertaken during the preliminary evaluation of the site (TPs 4/5 and 6/7, TPs 14, 15, 17, and 20). A common sequence was revealed, with the latest stages of channel sedimentation represented by sterile inorganic deposits (at a height of 35.88m OD in TP 14). This was followed by overbank alluviation (upper height of 36.28 m OD in TP 14) as a result of periodic flooding in a floodplain environment that would have remained dry for most of the year. Mark Robinson (OAU 1997) suggests this transition could be of Saxon or earlier date, but is unlikely to be as early as the start of the Holocene, 11,500 BP. The silt/clay/sand sequences observed over the valley floor during the main phase of fieldwork in 1997 and 1998 are likely to reflect this transition.

In addition to the early precursor of the Holy Brook and Minster Mill Stream (see above) a number of other potential water courses predating identifiable human activity were recognised further into the valley floor (Fig. 2.1). None of these channels was fully revealed in width or length, and they could not be comprehensively sampled. They all ran in a characteristic south-west to north-east direction, and were later developed into more formalised channels and mill leats. An early channel was apparent on site 101 (7091) predating the historical Back Brook, and two channels were identified running through sites 300-304, that later became Mill Water/Gunters Brook and Mill Tail, carrying water to and from St Giles Mill.

A general picture emerges that two, possibly extensive, water courses once ran through the valley floor within the project area. Over time these large channels silted up and became a number of smaller channels, some of which then themselves silted up and ceased to flow. These were in turn buried beneath the seasonal overbank flood deposits laid down by the channels that did survive. It is likely that by the late prehistoric to Saxon period a true floodplain landscape had developed and that the valley floor was seasonally flooded. It has been suggested that overbank alluvial deposition increased with increasing rainfall during the late Saxon period (c AD 850-1066) and continued to worsen until around 1300 (Hawkes and Fasham 1997).

SITE 29 (THE ORACLE SITE)

Project Phase 2: mid 11th to mid 12th century
(site sub-phases 2901; 2902a-d; 2903a-d; 2904 a and b); 15001a-d; 15002a-c; 3001a)

Quarrying and latrine pits on the Minster Street frontage (Fig. 2.3)

The northern slopes of the valley floor were the highest, and therefore the driest, area investigated. The area north of the Holy Brook (site 29, TP 167) was located on the edge of the second gravel terrace

with its south-facing slope down to the floodplain (see above), and would have been above the level affected by seasonal flooding. This area is likely to have been on the southern edge of the existing late Saxon settlement, although its nature and extent remain very unclear (Chapter 6, below). The excavated area lay to the south of Minster St, which is likely to have existed in some form during this period but is first documented in 1250–1275 (discussed further in Chapter 6, below).

The earliest evidence for human activity in the area was consistent with a marginal location, on the edge of the contemporary settlement to the north. Two distinctly different groups of pits were found on site 29 (Fig. 2.3; Plate 2.1). Those located on the southern half of the site were very large, up to 1.4 m deep with irregularly shaped plans, and possibly up to 10 m across in some cases (pits 6827=11326 and 6849=11337), although none was fully revealed. Their fills mainly consisted of homogeneous sandy gravel loams with very few finds, as if the unwanted soil from each newly excavated pit had simply been thrown into the disused adjacent pit. Single sherds of Roman pottery (fill 6898, pit 6849) and Anglo-Saxon pottery (primary fill 6822 in pit 6827) that were found in the pit fills are not thought to be contemporary with the digging of the pits, and were probably redeposited from pre-existing activity. The remainder of the pottery from these pits is datable to the late 11th century or later, suggesting that they were initially excavated during, or shortly after, this time. The location of the pits over the southern half of the area corresponds to where the underlying gravel formed a thick natural shelf (see above) suggesting they were excavated to extract gravel and chalk probably for construction in the adjacent settlement. The density of these pits suggests extensive quarrying in the area, and further quarry pits from this phase were observed 60 to 70 m to the east in site 150, TPs 27 and 167 and indicate that the area in between may have been exploited in the same manner (see Fig. 2.11).

North of the quarry holes were three distinctly different pits which were very large, sub-rectangular in plan, and deep (11047, 11060 and 11038). They were equally spaced, 7 m between centres, and aligned south-east to north-west, parallel and immediately adjacent to the current line of Minster Street. The central pit (11060) was the largest, measuring 3 by 3.5 by over 3.8 m deep, with two only slightly smaller flanking pits, 11047 (2 by 2.5 by over 2.3 m deep) and 11038 (2 by 2.5 by over 4.0 m deep). All three were half-sectioned using a mechanical excavator and the resulting spoil was monitored for finds, which were also taken from individual contexts revealed in the sections. Each pit had vertical or undercutting sides; in pit 11038 this undercutting was probably a result of collapse due to the instability of the unretained sides (Fig. 2.3). The fills of each pit were similar, with a mixture of greenish silts characteristic of cess, and more loamy deposits mixed with distinctive tips of ash and

Sections through cess pits on Minster Street frontage

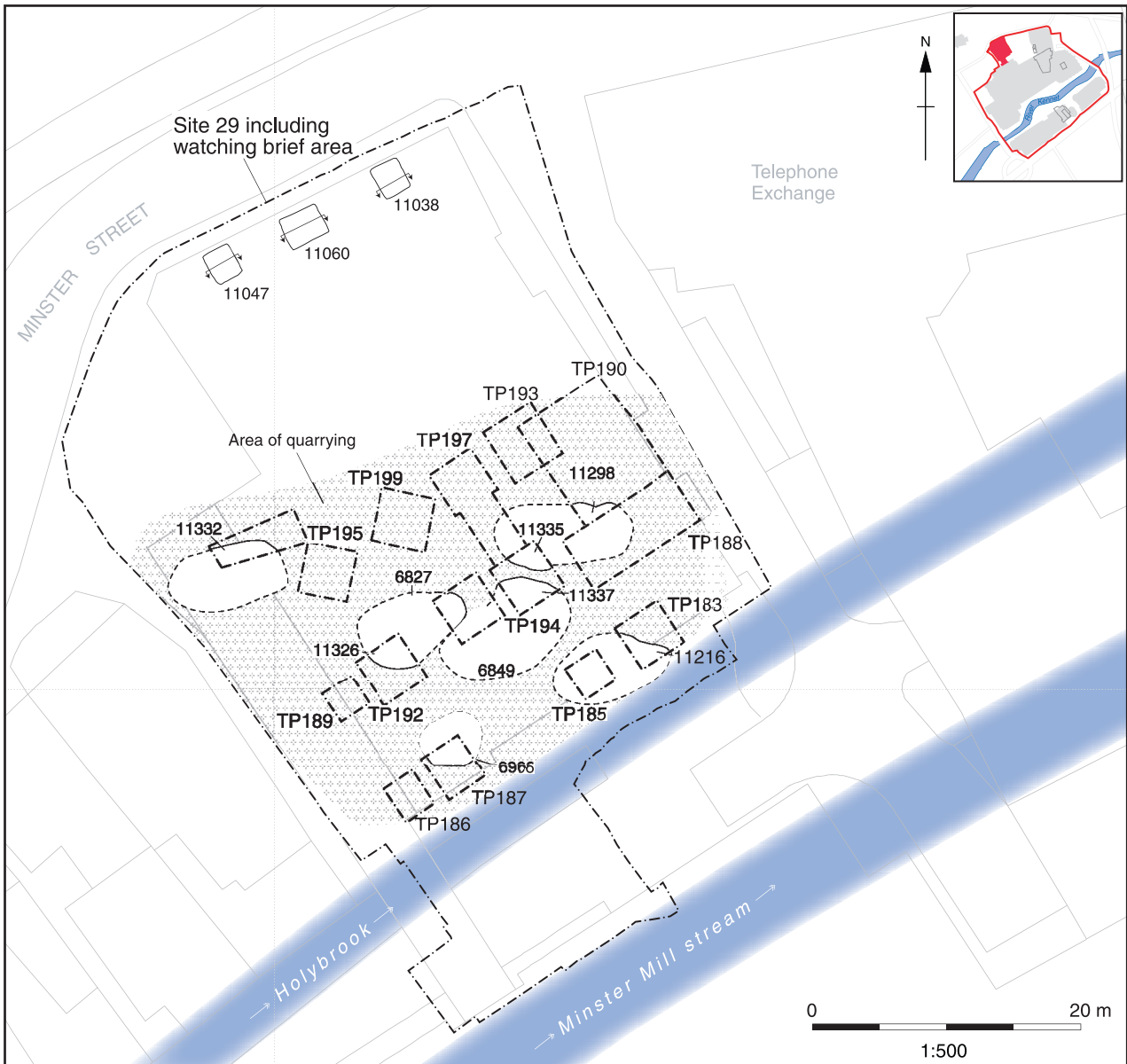
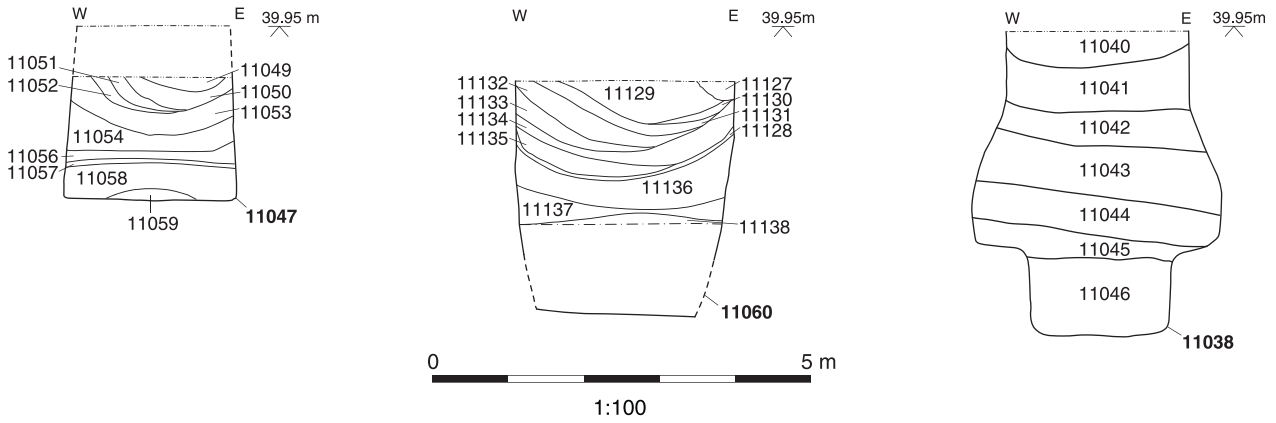


Fig. 2.3 Site 29: plan of quarrying and latrine pits, showing sections above (Project Phase 2)



Plate 2.1 Site 29: view looking W of quarry pits at the base of the medieval sequence with St Mary's Church in the background (Project Phase 1)

charcoal resulting from the cleaning of hearths. Unlike the quarry pits, these fills produced larger quantities of finds. The small assemblage of animal bone recovered contained a significant proportion of cattle and sheep's jaws and skulls, and goat horncores. The goat bones along with a single horse bone showed cut marks characteristic of skin or hide craft working activity. One of the earliest horseshoes found on the site came from 11132 a fill of 11060.

A single sherd of pottery from pit 11060 dated to 750+ and is probably residual. All the pits contained pottery dating to 1050+, with slightly later material (1075+) also present in 11038 and 11060. The consistency of the group suggests the pits were contemporary but there is no evidence for the form of the buildings with which they were associated. It is possible that they were part of a single building set parallel to the street and divided into bays – perhaps a latrine block associated with the Minster complex suggested to be immediately to the north around St Mary's Church. A contemporary pit (10240) seen in TP 167 contained general refuse

including charcoal, bone and pottery of late 11th-century to 12th-century date. The latrine pits remained in use throughout Project Phase 2, although the quarried area to the south was soon redeveloped (see below).

The first timber structures (Fig. 2.4)
(site sub-phases 2902a-d)

Soils formed or were dumped over the northernmost infilled quarry holes, and the limited remains of two timber structures were identified cutting into them (site sub-phase 2902a – not illustrated). These were some distance apart, and no coherent building plan could be identified. Surviving elements included a beam slot (10521), and a posthole (6807). There was limited evidence for subsequent possible surfaces (chalky silt 6645 and sandy gravel 6520=6823) and a possible occupation deposit (6521). These were not associated with structural features, but do indicate further occupation activity. The use of this building was probably relatively short-lived because the area was then again overlain with deliberately dumped deposits of sand, gravel, chalk and silts, which raised the ground level in preparation for further construction work. Pit 6966 lay to the south-east of these structural remains and occupation deposits. This pit was only partly revealed but was probably at least 3 m across, 1.2 m deep, and very similar to the quarry pits (see above). Its fills contained artefacts including Roman tile, pottery, and animal bones that included sheep, goat, and cow, and a considerable quantity of charcoal. These finds are indicative of waste from domestic activity, and suggest that the associated structure to the north was probably a dwelling. It is probable that this was originally a quarry pit, which was left open and re-used as a convenient rubbish pit initially during the occupation of the structure described above and probably also during the life of the building that replaced it, described below (sub-phase 2902b).

A second earthfast structure was constructed on top of these dumps (site sub-phase 2902b) although only a very small area of the surviving remains could be excavated (Fig 2.4). Two partially revealed surfaces were seen, one of gravel (6896=6881) and one of a chalky mortar (6961=6897). There was a clear boundary between the two, on the line of which was posthole 6958; a possible internal division was indicated by a nearby posthole 6960 within floor 6961. This division was later replaced by a timber beam represented by beamslot 6975. It is probable that these were surfaces within a structure for which no further evidence was revealed. Part of surface 6896 was heavily scorched and overlain by a deposit of ash and charcoal (6882) which had resulted from *in situ* burning, and was probably a hearth. Within 6882 was a clear circular indentation that showed the position of an object – perhaps a

Fig. 2.4 (opposite) Site 29: plan showing occupation activity with contemporary ceramic cooking vessels and stone lamp (St. 815) below (Project Phase 2)

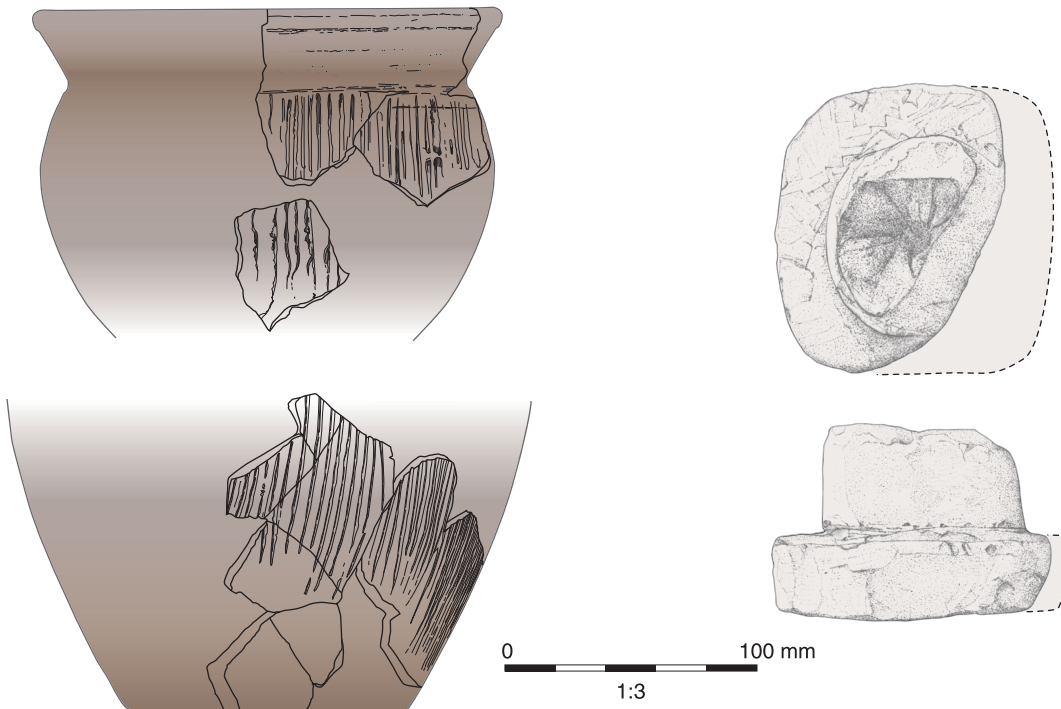




Plate 2.2 Site 29: circular indentation in hearth 6882 where a large cooking vessel had stood (Project Phase 2)

ceramic vessel (Plate 2.2). A large quantity of pottery was recovered from the occupation layer that surrounded the hearth (6883=6806=6992). Many pieces fitted together to form the rim and upper body and the base and lower body of two large jars. Both were made in the local fine sandy ware tradition (F1) and had deposits of soot on their outer surfaces, and either of them could have been the vessel that occupied the void in the hearth. A short distance from the hearth was a further scorched area, in the centre of which was part of a stone lamp (ST. 815; Fig. 2.4). This type of lamp is considered rare and is a relatively high status object (Shaffrey, Chapter 9). Two fragments of re-used Roman tegula (roofing tile) were also recovered from the occupation layers.

This evidence seems to represent a glimpse of life within a short-lived timber domestic dwelling. The hearth was probably used for cooking and heating; the fire on this hearth, combined with the stone lamp, would also have lit the structure. It would appear that this structure was abandoned, and given the evidence described above, this probably happened rather quickly, and potentially unexpectedly, perhaps because of an accidental fire caused by the stone lamp.

Once the building was abandoned the area may not have been immediately redeveloped. A series of silt and loam rich soils up to 0.20 m deep either formed, or were dumped, over the general area of the burnt-out building (site sub-phase 2902c; contexts 6509/6824, 6952, and 6955). This suggests the area

went through a period of time during which it was devoid of structures, although some form of activity may have continued, as it remains a possibility that these soils were cultivated. Pottery with a date range starting from the end of the 11th century was recovered from these deposits. Two pits (site sub-phase 2902d: contexts 6876 and 6904) cut these abandonment/cultivation layers. The fills of these pits were not fully excavated and although they yielded a limited amount of pot and bone their function was unclear. They do however confirm that limited activity was taking place on the site before a further building was constructed in the following phase.

Building 5830: a major timber-framed building
(Fig. 2.5)
(site sub-phases 2903a-d)

A number of structural elements for an extensive earthfast timber-framed building (site sub-phase 2903a, Building 5830) were identified in a series of sondages excavated across the area north of the Holy Brook (Fig. 2.5: Plate 2.3). The building was up to 12.5 m long and 9 m wide, enclosing an internal space of 112.5 m². Its long axis was orientated parallel to the later lane on the west side of site 29, which suggests that the lane itself may first have been laid out at this point. Surviving remains of the foundations showed that the building had been constructed using a combination of timber ground beams and vertical posts. The north wall was formed by beamslot 6465; the east wall comprised

posthole 6440 (at the north-east corner) and beam slot 6670/6666. Beam slots 6571 and 6640 formed the western extent. The south wall was not evident, although its foundations could have been the same structure of substantial flint nodules and chalk rubble that formed the lower element of the south wall of later building 5840 on the same plot (6674, part of Building 5840, see below). If this was the case it would have formed a retaining structure immediately adjacent to the Holy Brook.

Stakeholes and beamslot alignments (6518 and 6742) within the floor surface suggest that the eastern side of the structure had been divided into three small rooms or bays. From north to south, these measured 2.0 by 4.5 m; 2.5 by 3 m; and 2.5 by over 4.0 m respectively. It is possible that the western side of the structure was a single space, although the area excavated was limited and any internal divisions could easily have been missed. Compacted chalk and mortar surfaces 6501 = 6770 measuring



Fig. 2.5 Site 29: plan of Building 5830 (Project Phase 2)



Plate 2.3 Site 29: view looking NE of partially revealed internal floor 6501 with hearth within Building 5830 (Project Phase 2)

between 0.04-0.08 m thick were noted throughout the internal area of the building, including the rooms/bays. A discrete scorched area, representing the position of a hearth, was located centrally in the southern half of the main internal space. To the south of this hearth, within an area where the floor surface became markedly rougher and more worn, was structure 6878. This was roughly oval in plan and comprised chalk lumps and flint nodules, a single course high, enclosing an area of 1 x 0.55 m. The stones had been scorched by fire suggesting the structure was a deliberately constructed hearth or small scale working hearth/furnace. Deposits within the structure had a rusty hue, perhaps representing iron-working activity.

To the rear (east) of the building the earlier abandonment deposits were sealed below a compacted gravel yard surface (6565 and 6465). A thin layer of silty sand (6993) that overlay this surface has been interpreted as an occupation layer, although it yielded no finds. The eastern extent of this yard was defined by a shallow linear feature 6657, a ditch or gully that may have marked a property boundary.

Evidence was recovered for the maintenance and repair of both internal and external surfaces. A series of intercutting postholes may have functioned as structural roof support posts, centrally placed close to the southern gable end of Building 5830. This indicates a potential weakness in this part of the structure, perhaps due to subsidence into earlier features and the soft, waterlogged conditions of the

underlying ground. The absence of other posts along the central spine of the structure is probably due to the limited nature of the excavation, as the roof in a building with a span of 9 m would surely have required such support. Very little occupation evidence was recovered suggesting the floors would have been kept clean. The function of the building therefore remains unclear although the presence of a possible metalworking hearth indicates that it may have had a mixed use with an element of craft production.

Like its predecessor, Building 5830 was probably destroyed by fire (site sub-phase 2903c). Beamslot 6670 contained a burnt timber *in situ*, and beam slot 6571 contained a thin charcoal layer. Fill 6519, of beamslot 6518, contained fragments of charcoal that suggest the beam was burnt *in situ*. Floor 6501 was covered by layers containing large amounts of charcoal, and a significant number of iron nails perhaps used in the building's construction (layers 6500 and 6507 respectively). However, although there was a high percentage of charcoal concentrated within the beamslots and over the floor, there was no evidence of significant quantities of burnt daub, which can be expected from a structure of this period that had burnt down. The absence of this type of deposit suggests that the area had been at least partly cleared prior to the next phase of activity.

The charcoal rich layer 6500 was sealed by a series of loamy soils which together measured up to 0.26m thick (site sub-phase 2903d: contexts 6444,

6095, 6353, 6591, 6623 and 6826). It is probable that these layers represent a period of abandonment but the soils could have been cultivated.

The first stone buildings (Fig. 2.6)
(site sub-phases 2904a-b)

This phase is characterised by a change from timber to flint nodules and chalk lumps for building construction. The buildings continue to front onto the lane to the west of site 29, and possibly for the first time there is evidence for distinct property divisions, orientated east-west, running at right-angles to the lane and parallel to the line of the Holy Brook to the south.

Immediately to the east of the lane were the remains of a rectangular building, Building 5820 (site sub-phase 2904a), that had been constructed on the abandonment/cultivation layers of the previous phase (Fig. 2.6). Its southern wall (6219) was built of chalk with a dressed flint external face. This also acted to retain a raised construction platform to the north, which was formed from dumps of chalk rubble, 6441 and general trample 6388. The eastern or back wall was formed by two beam slots 6224 and 6012 (with postholes set into the base of their cuts), the gap between these indicating the position of a rear, east-facing entrance. The north wall lay outside the excavated area, and the west wall was removed by later rebuilding. The interior probably measured *c* 4.0 by over 7.2 m long, and as no internal divisions were observed, it is considered to

have been a single-roomed building. Two successive internal floors were identified. The first (6387) consisted of rammed gravel, overlain by 6386, a silty occupation layer. The second (6136) was made of rammed chalk, and was also overlain by occupation deposits (5977, 6128, and 6093). These were rich in charcoal, which was more concentrated in the north of the building especially above a heavily fire-scorched part of the floor that indicated the position of an internal hearth (Plate 2.4). Identifiable bones from pig, cattle, sheep and goats, hare, partridge, duck and others from unidentifiable domestic fowl and other birds were retrieved from occupation layer 5977. This is an exceptional range of bone to find in a deposit of this nature, and it seems very likely that this building was a kitchen, perhaps for Building 5840 to the south (see below).

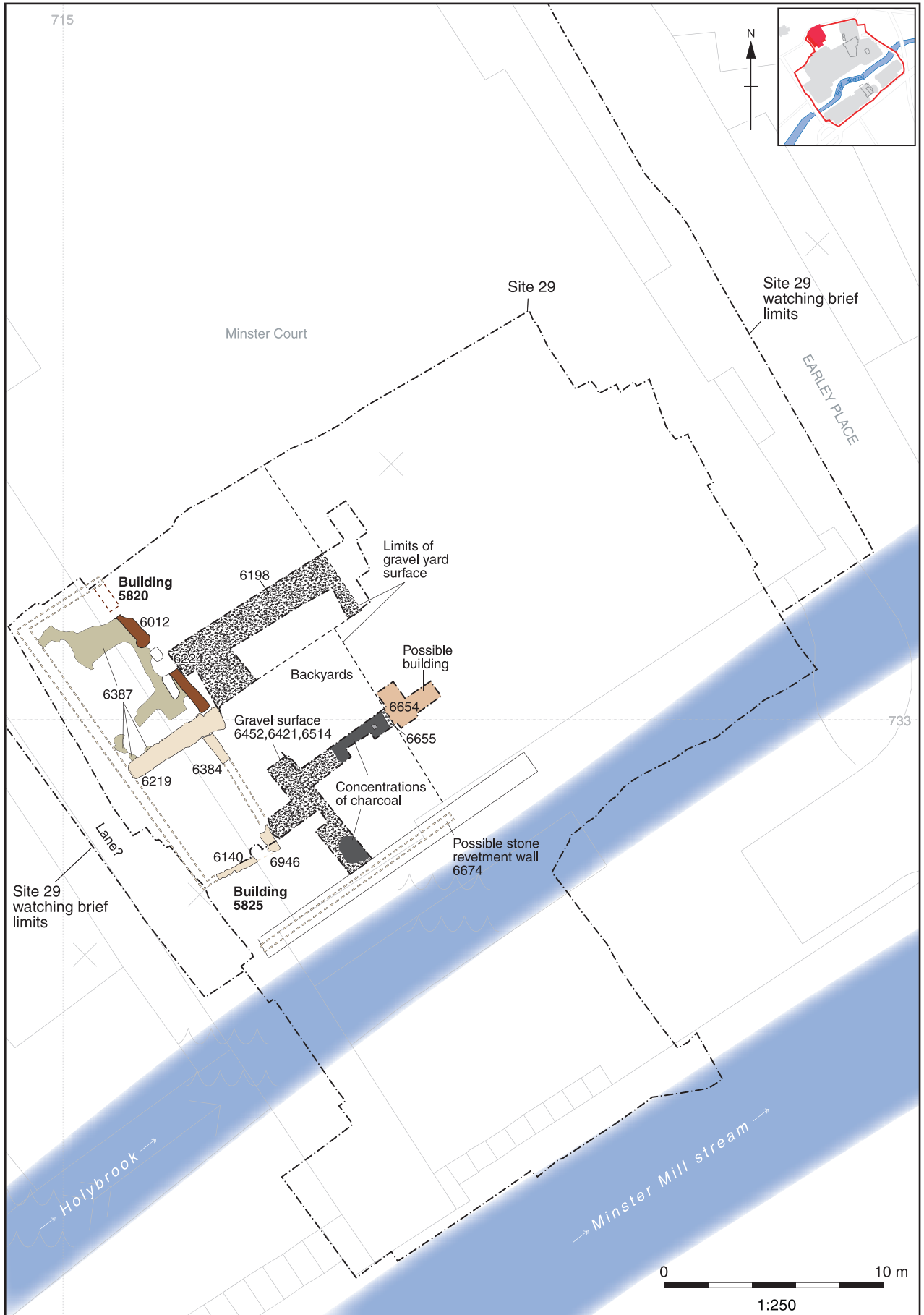
To the east of this structure was an extensive metallised gravel yard (6198) covering an area of at least 8.25 x 5.2 m. The south-eastern edge of the yard surface coincided with the alignment of the south wall of the building itself (6219). Pottery dated the building's construction and occupation to the late 11th- to early 12th century.

Construction of Building 5825 and development of Building 5820

Development extended southwards down the lane on the western side of site 29 with the construction of Building 5825 (Fig. 2.6) immediately south-east of Building 5820, which remained in use (site sub-



Plate 2.4 Site 29: view looking SW of the heavily fire-scorched hearth area within Building 5820 (Project Phase 2)



phase 2904b). The southern and eastern walls (6140, 6384/6496 respectively) were built using chalk. The east wall was keyed into the south wall of Building 5820. Unlike its earlier neighbour to the north there is no evidence of ground raising from dumps of rubble prior to construction, the walls having been constructed immediately on top of the abandonment/destruction deposits from Building 5830 (see above). The interior of Building 5825 measured 5.75 by *c* 3 m, and again the lack of internal divisions suggests this structure consisted of a single room. Minimal evidence for internal flooring and occupation was recovered.

Deposits of sandy gravel up to 0.12 m thick to the east/rear of Building 5825 probably formed a back yard area covering an area of 7.5 x 6 m (contexts 6452, 6421, and 6514). Charcoal-rich deposits were found on the eastern (6659; 6664) and southern areas of the yard (6351), which probably represented the debris from activities carried out there. The east edge of the yard seems to have been marked by a wattle fence (6655), or possibly a wattle-built wall of another building further east. This had burnt down. The evidence for this comprised a 0.25 m-wide strip of brickearth within which were a series of regularly spaced concentrations of charcoal. To the east of this was a chalky/sandy surface 6654, which was not investigated further than the limited sondages shown on Figure 2.6.

Project Phase 3: mid 12th to mid 13th century (site sub-phases 2905a-b; 15002c)

A new stone building, 5840, and associated features (Fig. 2.7)

Stone and timber structure Building 5820, which had been in use from the first half of the 12th century (see above) appears to have remained in use for at least some of this phase probably going out of use towards the later part. To the south, Building 5825 either collapsed, or more likely was deliberately demolished. Some of the resulting debris of chalk pieces and chalk dust was left *in situ*, presumably to help prepare the ground for subsequent construction work. The new development was on an unprecedented scale with the construction of Building 5840, a significant stone house (Fig 2.7; Plate 2.5). This structure was rectangular in plan and measured 8.4 x 15.8 m externally, enclosing an internal space of 6.5 x 13.7 m, an area of 89 m². The long axis of this building was parallel with the Holy Brook, which flowed against its southern wall.

The foundations for the building were substantial and constructed in two distinct ways. Those immediately adjacent to the Holy Brook consisted of very large flint nodules overlain with chalk rubble, and the south-eastern elevation, which was exposed to flowing water, was faced in dressed flint.



Plate 2.5 Site 29: view looking S with Building 5840 in the mid-ground and the Holy Brook in the background

Fig. 2.6 (opposite) Site 29: plan of Buildings 5820 and 5825 (Project Phase 2)

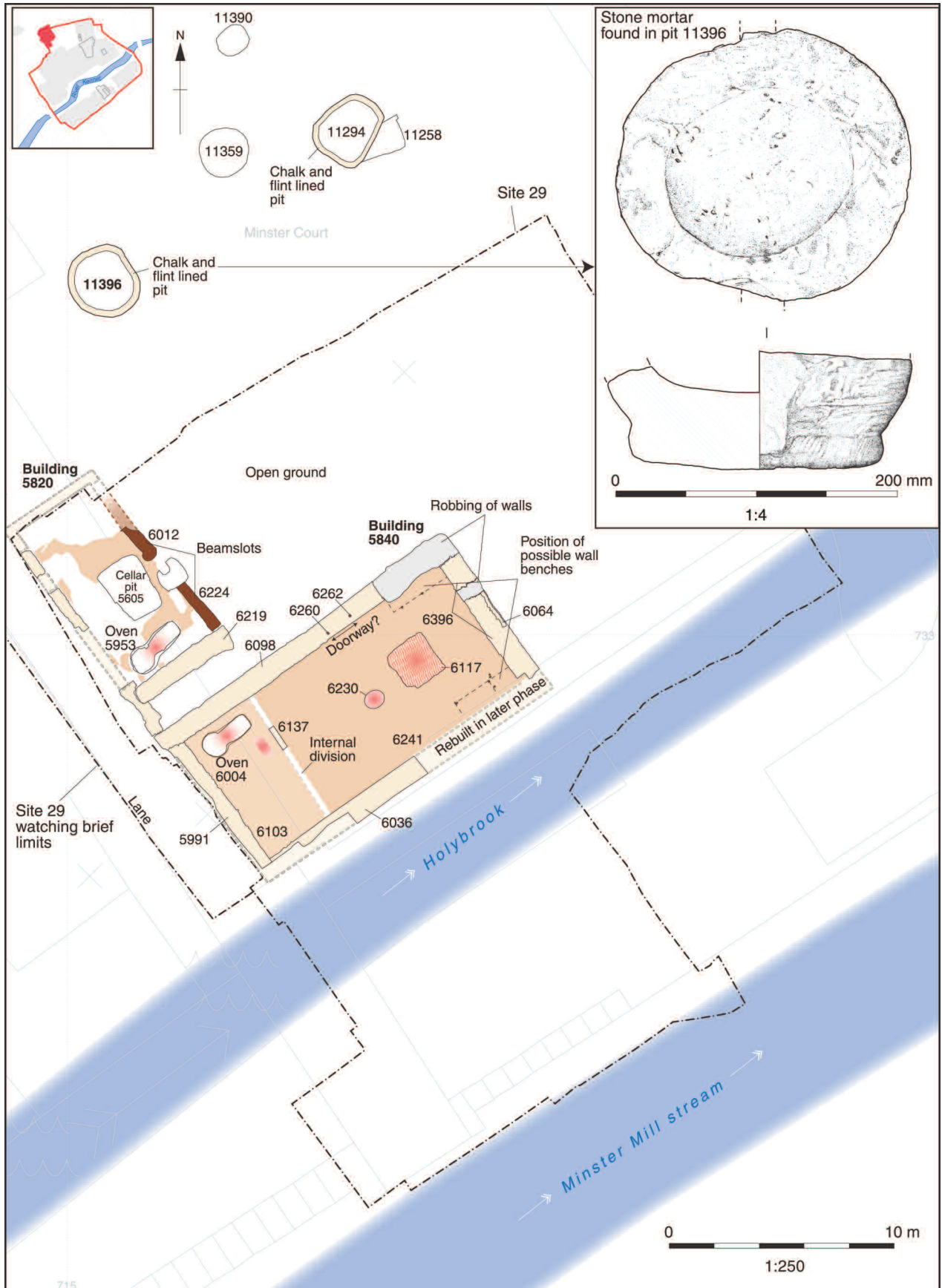


Fig. 2.7 Site 29: plan of Buildings 5820 and 5840 and cess pits (Project Phase 3)

(As discussed above, this wall may have re-used elements of an earlier retaining wall 5743 associated with Building 5830 or 5825.) The foundations for the remaining three sides were laid in large vertically-sided trenches, measuring 1.2-1.4 m wide and up to 1.5 m deep. These foundations, which were dug into solid but soft and waterlogged ground, were not exposed to flowing water, and consisted of alternating layers of rammed chalk and gravel (up to 0.10 m thick) (Plate 2.6). Once the foundations were established the footings were laid. Those for the northern wall (6098) were constructed first, then the height of the internal area of the building was raised and levelled with chalk-rich dumps, before the remainder of the footings for the east and west gable end walls (5991 and 6396 respectively) were built. The footings measured *c* 1.2 m wide, and the overlying walls consistently measured *c* 1.0 m wide. Larger, roughly-dressed chalk lumps were used to form both faces of the footings, which had a chalk rubble core. Dressed flint nodules were used for the external face from the contemporary ground level upwards. A sandy lime mortar bonded all the stone elements. Within the southern wall there were a number of circular postholes, which may represent the position of temporary scaffolding during construction or during the later rebuild. Located within the northern wall were two square postholes (6260 and 6262), 1.15 m apart, which may indicate the position of a doorway. No other evidence for

entrances was found, due to the later removal of much of the walls below the level of the thresholds.

Within the building a number of the initial floor surfaces of rammed mortar and chalk had survived. Chalk-rich floor surface 6297 = 6291 = 6303 was scorched indicating the position of a floor-set hearth in the eastern side of the building (this was later replaced, see below). Within this surface were two groups of stakeholes, suggesting some form of division or structure, possibly side-benches against the walls, in the south-east and north-east corners. Silty occupation layers 6296 and 6298 remained *in situ* under the locations of the suggested benches. The primary floor was heavily eroded, and had been replaced by floor 6241, which sealed the stakeholes and was significantly thicker, and made of sandy lime mortar. A small shallow depression (6230) was cut into this floor; its sides and base had been affected by temperatures high enough to have vitrified the sand content of some of the surrounding deposits, but its function is unknown. In the north-west corner of the building the high mortar content of floor 6241 gave way to a more chalky area of the surface, 6108. This change in flooring material coincided with a 1.2 m length of chalk rubble wall (6137). On the western side of this wall the floor surface was scorched, indicating the position of a hearth. Together this evidence suggests the presence of an internal division at the western end of the building, perhaps separating a larger



Plate 2.6 Site 29: view looking N showing detail of the foundations and footings at the south-east corner of Building 5840 (Project Phase 3)



Plate 2.7 Site 29: view looking N of partially excavated stone-lined cess pit 11294 located on Fig. 2.7 (Project Phase 3)

living space to the east from a smaller area with a different function, perhaps a kitchen to the west. Further occupation deposits (6240, Sample 1078; and 6383) overlay this floor; these were high in charcoal content that probably derived from the use of the hearth.

This sequence of floors and overlying occupation deposits contained a very limited number of finds, mainly small fragments of pottery (in fabrics F1, F2, F361, F358, see Chapter 7) indicating that the internal space was kept clean. The pottery from these deposits and from the backfilled construction trenches suggests a date for the construction and initial use of this building no earlier than the middle of the 12th century.

Evidence for activity in other areas of the site was limited to the construction of substantial stone-lined cess pits Group 11294 (Plate 2.7) and 11396 to the north of Building 5840. The pit shafts were 2 and 2.5 m in diameter respectively. The walls were founded on the undulating contour of the chalk bedrock (created by the quarrying activity in Project Phase 2, see above), and therefore acted to retain the softer ground above this level. They were constructed using chalk rubble and flint nodules bonded with lime mortar. Of special note within pit wall 11396 was a large fragment of a stone mortar from a pestle and mortar set (Fig. 2.7). The pits were positioned some 20 m south of Minster Street, to the rear of the second gravel terrace, adjacent to the break of slope, and the northernmost limit of the earlier quarrying activity. This location was probably to the rear of

properties orientated north-south that had frontages at right-angles to Minster Street. These new pits possibly replaced the latrine pits adjacent to Minster Street and may indicate that redevelopment was taking place on the street frontage.

Later development of Building 5840

Some time after construction of Building 5840 and the initial occupation sequence, described above, a purpose built rectangular hearth, 6117, replaced the original hearth in the same location. This structure was made from flat roof pegtiles set on edge within a cut that measured 1.9 x 2.0 m (Plate 2.8). It was positioned equidistant from the north and south walls, towards the east end of the building. Vince suggests (Chapter 8, below) that this hearth could have provided light and heat within the building rather than being used for cooking purposes. Again this adds weight to the argument that the larger eastern part of the building was partitioned off in some way, and served as a living area, with the kitchen to the west. The hearth showed signs of heavy use, with damage to the tiles concentrated towards its centre. There was no evidence for any superstructure such as a smoke hood, and the smoke would have been allowed to rise into the roof space, indicating that at least in part of the east end of the building there was no second floor.

Both buildings on the site (Building 5840 and the earlier Building 5820) were modified by the construction of semi-sunken keyhole shaped 'oven'



Plate 2.8 Site 29: detail of central hearth 6117 from Building 5840: (above) looking SW before excavation and (below) looking NW after partial excavation (Project Phase 3)





Plate 2.9 Site 29: details of oven construction: (left) looking NE showing oven 6004 in Building 5840 and (below) looking N showing oven 5953 in Building 5820 (Project



structures. The two structures (Plate 2.9), 6004 within Building 5840 and 5953 within Building 5820, were very similar in size, form, orientation, and construction technique and materials. Their position within each building was also similar, both neatly positioned within the corners. Only the structural elements that were below the contemporary ground level survived. The initial construction cuts were keyhole shaped and *c.* 0.60 m deep. At the south-western end of each were sub-circular firing chambers that measured *c.* 1.1 m in diameter at ground level narrowing to *c.* 0.70 m at the base. These were joined to rectilinear intake flues, both *c.* 1.2 m long and 0.75 m wide, which ran to the north-east. Spanning the entrance to both fire chambers from their respective intake flues were arches constructed solely of ceramic roofing pegtiles (see Vince, Chapter 8). The sides or lining of both the firing chamber and intake flue for each structure were built from different materials. In Structure 5953 they were completely lined with roughly hewn chalk lumps and flint nodules bonded with sandy lime mortar, forming a wall. In Structure 6004 only a layer of sandy lime mortar remained, with a single re-used Roman brick adhering to the east of the arch, suggesting the flue and fire chamber had originally been completely lined with this material. Although much of the original lining in structure 6004 had been removed, evidence remained for heat scorching on the tile arch, floor and sides of the sub-circular fire chamber, although this was limited probably due to the original presence of a brick lining. In Structure 5953 flints within the walling of the fire chamber, the lower courses of the tile arch, and the flooring all showed signs of the effects of heat. Overlying the floors of the intake flues were charcoal-rich deposits that probably derived from *in situ* fires (6004 = 6193).

The similarities between these structures indicate that they were probably contemporary and integral to life within these buildings and probably served a domestic function, such as baking/cooking ovens. Structure 6004 was inserted into an area that was partitioned from the rest of the internal space of Building 5840, a possible separate kitchen area, and probably replaced the cruder hearth from the previous phase. Within Building 5820 the addition of the oven seems to have occurred at the same time as the construction of a small cellar 5605 (seen cutting the earlier occupation layers within Building 5820 on Plate 2.4). The cellar was located towards the centre of the rear wall of the building, and consisted of a vertically-sided rectangular pit measuring 3 x 1.9 m, and 1.05 m deep. The sides and floor of the pit were probably constructed in timber, which had decayed to form rich silts against the sides of the cut. The cellar probably functioned as a cool storage space, although no archaeological evidence was retrieved to suggest what had been stored.

The possibility remains that the oven structures discussed above were contemporary with the expansion of Building 5840 seen in the following

phase, and may have acted as temporary lime burning kilns, where limestone or more probably chalk would be heated to temperatures above 900° C to form quicklime. However the position of these structures within the buildings seems an unlikely location for such an activity when there was a large open space to the north and east of these structures that would have more suitable.

Project Phase 4: mid 13th to late 14th century

The development of a new large hall and associated features, AD 1271+ (Fig. 2.8) (site sub-phase 2905c)

Building 5820 did not remain in use in this phase, having gone out of use probably towards the very end of Project Phase 3. The cellar pit (5605) in Building 5820 was finally infilled with deposits suggesting a rapid large scale dumping episode during a period of demolition and contained building material fragments such as ceramic roof-tile, flints, and chalk lumps. There was a limited amount of pottery from this infill, of which the latest date range was 1250-1350. This was also the case for oven 5953. Oven 6004 has a slightly later range of 1250-1450 for the latest pottery and therefore could have gone out of use at a later date. One other find of note came from these fills: a metal octofoil mount that would have decorated a shoe or perhaps a horse fitting; these first appeared in the 13th century but proliferated in the 14th and 15th centuries (Fig. 5.33 No. 9).

The next phase of activity saw a major redevelopment and extension of Building 5840, to form Building 5860 which more than doubled the internal floor area of its predecessor (Fig. 2.8 and Plate 2.10). A series of precise felling dates were obtained on timbers from a channel revetment and a series of piles underlying the south wall of this building, dating the start of the redevelopment to the period *c.* 1271 (see Chapter 11; Table 11.7). This change commenced with the construction of the well-built timber revetment, Structure 5422 (Plate 2.11), along the north bank of the Holy Brook. It consisted of a substantial horizontal timber baseplate into which were tenoned vertical uprights that retained a wall of horizontally edge-lain timber planks. The baseplate (sample 5423) was sampled for dendro-chronology and gave a precise felling date of the winter of 1268/9. The revetment served to separate and protect the stone south wall of Building 5840 from the flowing water of the stream. The failure to do this originally may have led to the need to rebuild it in this phase. The area between the stone wall and the revetment was filled in, and provided a base for a level platform which served as a walkway, and possibly even as a jetty or 'wharf', alongside the building.

Building 5860 was formed by the expansion of Building 5840 to the north and east. The southern wall of Building 5820 (wall 6219) was used to form

the west end of the new north wall of Building 5860. The eastern length of the north wall was newly built (5778), and abutted the eastern end of wall 6219. The point at which this wall returned to the south was particularly interesting; the north-eastern corner was canted at 45 degrees, before meeting a

projecting return. The northern and eastern wall foundations (much of which had at a later stage been robbed) measured 1 m wide and were made up of chalk and flint nodule rubble laid in rough courses within large construction trenches up to 1.8 m deep (Plate 2.12).

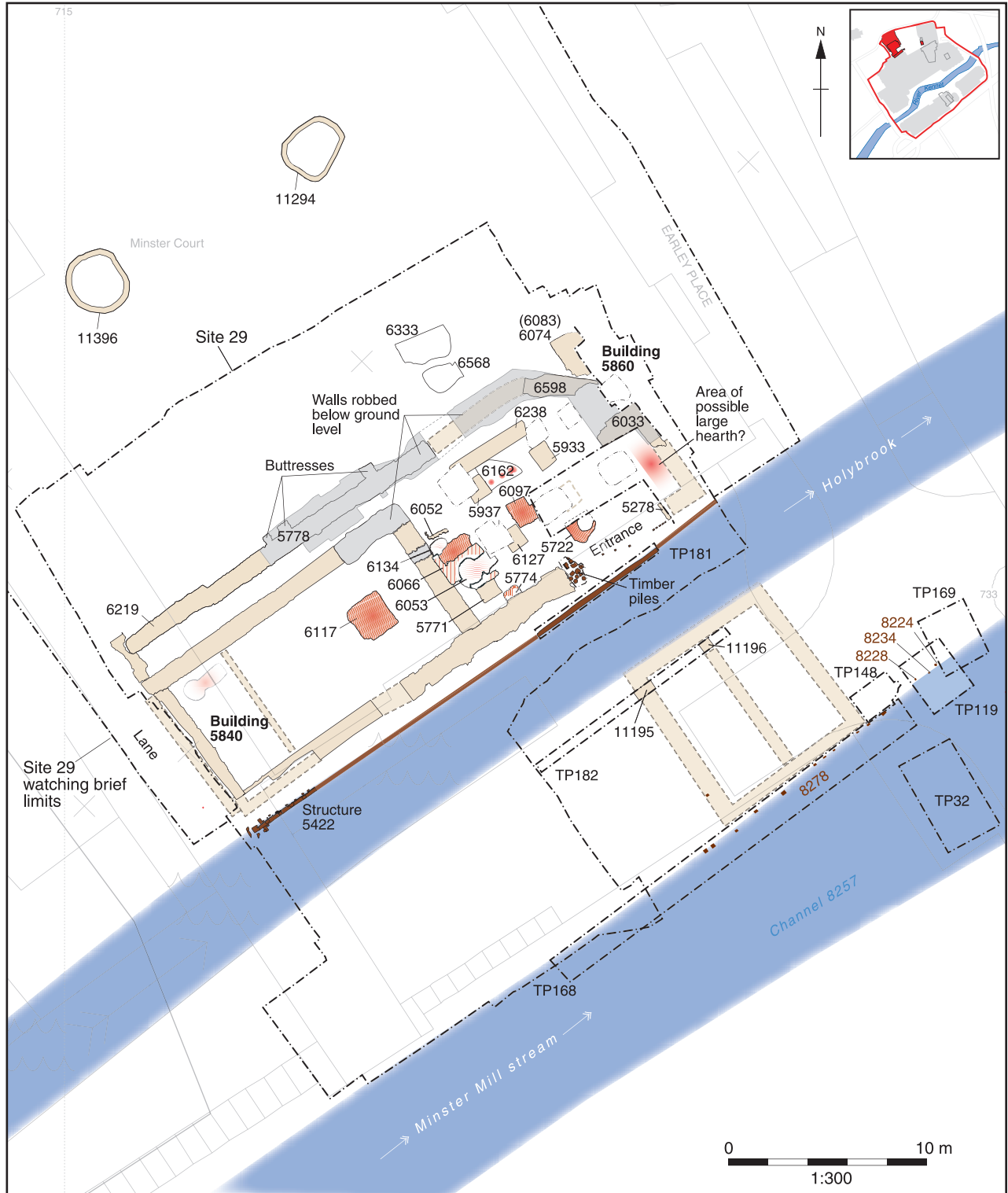


Fig. 2.8 Site 29: plan of Building 5860 (Project Phase 4)



Plate 2.10 Site 29: view looking SW showing Building 5860 (highlighted, along with Building 5840) (Project Phase 4). It is interesting to note that the northern wall of this building (partially robbed) is on the same alignment as the boundary between the two standing buildings immediately beyond the site

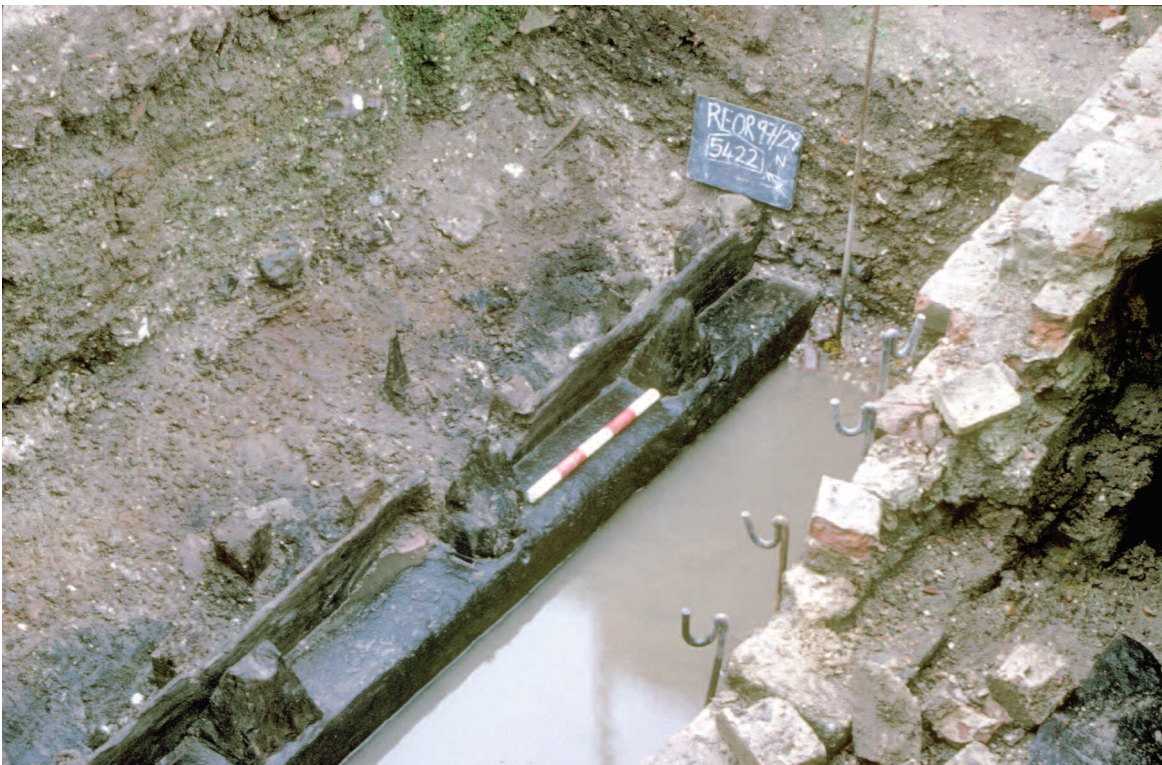


Plate 2.11 Site 29: view looking N showing detail of timber revetment, Structure 5422, running between the Holy Brook and Building 5860 (Project Phase 4). The baseplate was tree-ring dated to the winter of AD 1268–9



Plate 2.12 Site 29: Building 5860: view looking NW showing the substantial and partially robbed foundations of the buttressed north wall 5778 (Project Phase 4)

The southern wall had two distinct elements; firstly the rebuilding of part of the original southern wall of Building 5840, and secondly the extension of this wall eastwards. A substantial part of the southern wall to Building 5840 was rebuilt. The rebuilding involved removing some elements of the original foundation and shoring the remaining foundation stones with timber piles driven along the outer edge of the wall. The new foundation stonework, where it overlay the retained elements of the old, used a chalk rubble core with a dressed flint nodule southern face. The extension of this wall beyond the south-east corner of Building 5840 had a rather different foundation design more suited to the softer ground immediately adjacent to the Holy Brook. Vertical oak piles had been driven into the silts at the base of the construction trench (Plate 2.13). The piles acted to form a stable foundation

upon which the chalk rubble foundations and the overlying wall rested. Of note within the structure of the above-ground element of this wall (5743) was the use of flat ceramic roofing tile, not set horizontally to level a stone course, but paired and at angles to each other, serving perhaps as an additional strengthening device (Plate 2.14). A fragment of 12th-century hoodmould that may have come from the demolished wall of Building 5840 was recovered from this wall and its significance is discussed further below (Chapter 6; Preston, Chapter 8, Stone Type No. 10). Within the southern elevation of Building 5860 was a gap 5.7 m wide, where the stone foundations were absent. Further timber piles (Group 11224) had been positioned within this gap between the two wall ends, and dendrochronological dating showed these to have been contemporary with the other piles. These piles were sawn off at a higher level than



Plate 2.13 Site 29: view looking SE showing timber foundation piles underlying the footings of the southern wall of Building 5860 (Project Phase 4). The piles were tree-ring dated to the period AD 1267-71



Plate 2.14 Site 29: view looking SW showing the unusual method of setting stones and tiles on the diagonal in the footings of the southern wall of Building 5860 (Project Phase 4)

those in the foundation trenches suggesting that although there was no wall foundation to support at this point they were needed possibly to stabilise the ground or support some form of superstructure. A total of 13 dendrochronological samples from piles gave felling dates ranging from the winter of 1267/8 to the winter of 1270/71 (see Chapter 11; Table 11.7). On the southern side of the Holy Brook immediately opposite the gap in the south wall foundations, were two parallel chalk rubble foundations (11195 and 11196) that also rested upon timber piles. These were parallel and *c* 3 m apart orientated SE-NW. Only very short elements of these walls were observed and no northern or southern walls or floor surfaces were excavated.

The western part of a probable slaking pit (6568) was revealed, much of which had been destroyed by later activity. The pit was set into the ground, with straight, vertical sides that had been lined with roughly hewn chalk lump walls bonded with clay. A deposit of hardened lime, up to 0.17 m thick, lined the base and extended more thinly up the inside of the chalk walls. The floor of the pit narrowed to the east before extending beyond the site limits; at this narrow point were two opposing stakeholes, which were probably part of a timber superstructure. The structure had a specialised function, but the lack of evidence for scorching excludes the use of fire.

The form and function of Building 5860

In its finished form the maximum external dimensions of Building 5860 measured 29 x 11 m (Fig. 2.8). It is considered that the majority of the former walls to Building 5840 were retained. Therefore the extensions created a 16 m long passage along the north of the building. This led to a large roughly square internal space (measuring 8 x 10 m internally) with an angled north-east corner, a projecting return that enclosed an additional area of 4 x 1 m at the eastern end, and a large opening in the southern wall. This new internal space contained three 1 m square chalk and flint-nodule foundations (5933, 5937 and 6127; the fourth lay outside the excavated area); these were for vertical columns, probably of timber, but possibly stone, to support the roof.

Not all of the internal space was investigated, as some of it lay outside the excavation area and approximately 20% had been destroyed by large 20th-century concrete foundations (see Project Phase 10, below).

Most notable within this space was the variety of different firing structures and surfaces, and the charcoal rich deposits that were seen in association with them. Abutting the eastern side of wall 6396 (the east wall of Building 5840) was a large circular hearth with a linear stoke hole to the north-east, structure 6053 (Plate 2.15 i). The floor (6067) of this structure was of pitched tile. The firing area and stokehole were defined by walls, constructed using a significant amount of re-used Roman bricks (see Chapter 8, CD Rom), which survived to a height of *c* 0.3 m. Possibly associated with activities taking

place at this circular hearth and located to the south of it in the south-west corner of the extension were two incomplete raised 'working surfaces'. An area measuring 1.0 x 0.8 m, of small compacted stones (5771), abutted the south wall of the hearth. Immediately south of this and adjacent to wall 5743 lay 5744, a small pitched tile surface. A further small open pitched tile surface 5722, with evidence for *in situ* burning, was located immediately north of the gap in the southern wall. Immediately to the north of the circular hearth was a small pitched tile surface 6134 (Plate 2.15 ii) which showed signs of *in situ* burning; this was later enlarged (see sub-phase 2905d below). To the north and east of these abutting hearths was a substantial patch of charcoal rich material (6162) which showed three discrete patches of more intensive burning within its surface indicating three separate firing areas. Located to the north of this were the almost entirely robbed away remains of a linear flint and chalk nodule built structure, 6238. It was *c* 1 m wide and 5.3 m long, orientated NE-SW in line with (but 3 m to the east of) the northern wall of Building 5840 (6098). Its size and position suggest it is the remains of a wall/internal division (probably not standing to any great height or bearing any structural load). It may have served to extend the line of the passage into this room, the gaps at its west and east ends allowing access to different working areas within the space.

Taken together this evidence suggests that there were probably three distinct areas of activity perhaps representing different processes which involved fire, taking place in this new room. In some way, and for an unknown purpose, this building and the processes therein were linked via an opening within the southern wall to the Holy Brook and to an associated building on the opposite side of this watercourse.

A sub-rectangular pitched tile hearth (6066), also defined by low walls, was subsequently added to the northern side of the circular walled hearth structure (6052; site sub-phase 2905d). This hearth appeared to have been open to the north and incorporated an earlier small tile surface 6134. Deposits 6124 (SS 1062), 6111, and 6096 and 6058 (SS 1051) which derived from the use of this hearth were rich in charcoal. Deposit 6124 was rich in animal and fish bones, which included plaice and flounder, woodcock, domestic fowl and other unidentifiable bird bones, as well as pig, sheep/goat and cattle. Overlying this was a further deposit, 6096, within which there was a significant amount of charred grain including free threshing wheat, oats, barley and rye chaff. Other plant remains included broad beans and fig (the only likely import). The sample was dominated by weeds, some of which are typical of medieval cornfields and show that the grain was brought in from a number of different locations including areas on heavy soils as well as lighter well drained soils (Pelling Chapter 11, below).

A small and simple square shaped pitched tile firing surface 6097, which had no associated walls,



Plate 2.15 Site 29: details of hearths in the eastern end of Building 5860: (above) view looking SW showing large 'key-hole' hearth 6053 and (below) view looking SE showing rectangular hearth 6066 with earlier hearth 6134 in the immediate foreground (Project Phase 4)



was added to the structures grouped in the northern part of the extension. Deposits 5738=6100, 6099, 6125, 6150 that derived from the use of this hearth were rich in charcoal. Deposit 6125 contained charred remains of free threshing wheat, hulled barley, oats, pea/bean/vetch, hazelnut shell, and oak which was presumably the fuel wood. Deposit 6150 contained shell, free threshing wheat, barley, indeterminate grain, fodder vetch, pea/bean/vetch, hazelnuts and oak.

Project Phase 5: 15th century

The abandonment of Building 5860

(site sub-phases 2905e, 2906a-b)

The activities that took place within Building 5860 appear to have ceased, and the building went out of use (site sub-phase 2905e; not illustrated). There was no significant accumulation of deposits over the internal occupation layers, which suggests that the building did not stand empty for long before it was demolished. The entire roof and the majority of the upstanding walls were dismantled and the stone elements of the foundations were robbed away by varying degrees. The foundations for Building 5860, consisting of useful chalk and flint rubble, were more heavily robbed than the crushed chalk and gravel foundations of Building 5840. The foundations on the east side of the site were more heavily robbed (to a depth of 1 m below ground level) than those on the west. The reclaimed building materials were removed from the site for re-use, presumably elsewhere in the town. The remaining structural elements of the walls and foundations, the internal floors, the pitched tile hearths and their associated superstructures, were overlain with chalk dust, sandy lime mortar, and small chalk, ceramic tile and flint fragments (5571, 5572) resulting from this demolition and robbing activity. Context 5571 contained an off-white Flemish brick of 14th- or 15th-century date, imported from the Low Countries.

The area was not immediately redeveloped and a period of abandonment followed the demolition and robbing (site sub-phase 2906a). On the surface of this abandonment deposit there was evidence for possible occupation activity on the west side of the site. A row of postholes (5510, 5512, 5514 and 5516) was orientated NW-SE and measured 2 m in length. This probably formed part of a fence line that ran parallel with the lane to the west, and perhaps indicates that the area was once again being divided up. This activity occurred immediately prior to the extensive loams that covered the entire area in the next sub-phase.

A number of dark-brown, and greenish brown, silty clay deposits were identified across the entire area of site 29 to the north of the Holy Brook (site sub-phase 2906b). Together they covered an area of 21 x 15m and were 0.30 m in depth. The thickness and extent of these deposits, and the presence within them of significant quantities of pottery,

suggests that some of the material had been deliberately imported onto the site. These deposits had the appearance of garden soils and indicate that the area may have been used as a market garden or for penning animals during this period.

Project Phase 6: 16th century

Redevelopment for a new cobbled yard and sandstone house (Fig. 2.9)

(site sub-phase 2907)

Following a period of abandonment and probable use for cultivation, the area of site 29 was again redeveloped, with the construction of Building 5835 and an associated cobbled yard. Dating evidence suggests this activity occurred sometime after 1500.

As in earlier phases the redevelopment of this area started adjacent to the north-south lane on the western side of the excavation where the remains of the foundations of a new structure, Building 5835 (5303 (Plate 2.16), 5183, 5494, 5294) were located (Fig 2.9). Much of this building, including the floor levels, had been destroyed by the construction of later Victorian cellars, which left only very limited elements of the foundations remaining (see Chapter 3, below). These were 0.6 m wide and characterised by the first use on the site of sandstone, which was used in combination with flint nodules. The building measured 4.25 m (SW-NE) by c 11 m (SE-NW) with the long axis parallel to, and fronting, the lane on the west side of site. Its southern wall was adjacent to the Holy Brook.

It is interesting to note that the length of this building (SE-NW) corresponds very closely to the width of the previous structure, Building 5860. This could mean that although the area had been abandoned, certain property divisions, although slightly shifted, were still relevant. The initial function and construction date of the structure are uncertain, but the western wall of the Oracle workhouse was constructed directly on top of its western wall, demonstrating that it must have been built and demolished prior to the construction of the workhouse in 1627-8.

An interesting group of features survived in the north-east part of site 29. These are interpreted as remains from a temporary builders' yard associated with the construction of Building 5835. They included an area for mixing lime-based mortar, a possible saw pit (5195) and a large rubbish pit 5049. The mortar mixing area was represented by layer 4422, an extensive layer of a hard light greyish lime mortar up to 0.20 m thick that covered over 10 square metres. This spread was limited to the west by a 2 m long alignment of four rectangular postholes (5062, 5064, 5066, and 5068), and extended 5 m to the east where it thinned out. The postholes indicated the position of a timber wall against which mortar mixing activity would have taken place.

After the sawpit and the mortar mixing area went out of use, their associated timber structures

were dismantled. The postholes and sawpit were rapidly infilled with sand deposits containing chalk flecks and tile pieces. Pit 5049, which was cut into deposit 4422 and the initial fills of 5195, was filled with more waste from the construction event. The general area was overlain and filled in fairly rapidly with deposits of silty-sand, flint and chalk nodules, presumably building materials that proved surplus to the requirements of the construction process.

Immediately to the north-west and north-east of the builders' area were the remains of a backyard represented by two discrete patches of the same small rounded stone or 'cobbled' surface, 3750=4545. In combination the area covered by these surfaces was c 16 x 12 m. A linear depression was seen that would have acted as an open drain running southwards with the slope of the surface towards the Holy Brook. The cobbled surfaces were overlain by a number of clayey-silt occupation deposits (5172, 5173, 4810, 4987) that contained a

number of sherds of imported European pottery, including maiolica, Frechen and Rouen stonewares.

The Tannery/clothiers works, mid 16th century to 1628 (Fig. 2.10)
(site sub-phase 2908)

Following the construction of Building 5835, which continued in use, the area of site 29 was occupied by a tannery or clothier's works. This is suggested to have functioned from about the middle of the 16th century until just prior to the construction of the Oracle workhouse in 1628. The majority of the features belonging to this complex were recovered from the north side of the Holy Brook, although there was also limited evidence for the complex extending into the area south of the Holy Brook.

In preparation for the construction of the features associated with the tannery/clothier's works, the ground was raised and levelled with a series of dumped deposits (site sub-phase 2908a).



Fig. 2.9 Site 29: plan of Building 5835, re-building in the 16th century (Project Phase 6)



Plate 2.16 Site 29: view looking SW showing the heavily truncated remains (4594/5303) of early 16th-century Building 5835 (Project Phase 6)

The principal features that survived from the complex were the pits that held the wooden vessels that were set into the ground (Plate 2.17). The process of construction for these features was similar throughout all phases. Firstly, a flat-bottomed pit was dug; the base of the pit was then covered in a layer of clay upon which was set a wooden vessel, either a barrel/cask or trough. The entire outside of the vessel was then ‘puddled’ in a thick layer of the same clay, before the void between the outside of the clay proofed vessel and the construction pit was backfilled. The clay functioned as a waterproofing layer, which prevented leakage of the liquids contained within the vessels. A rough working surface of stones and broken ceramic tiles was laid around the top of each pit. It is possible that the barrels protruded, but to an unknown height, above this level.

Although initially the barrels were set one to a pit, later expansion of the complex saw more than one barrel placed in each pit (Plate 2.17i). In addition to the barrels there were a number of shallower rectangular troughs, which appear to have been set into the ground in a similar way.

In almost four centuries since this complex was in operation, the wooden barrels and troughs had decayed, and all that remained upon excavation in the majority of cases was the clay-proofing layer. This preserved the negative shape of the vessels with impressions of the ‘round-wood’ hoops that had bound the staves together, and the batten which joined the boards of the base or headpiece together, (Plate 2.17ii). In a few cases the wood had not decayed completely and elements of the boards and the batten that formed the base were well enough preserved to show the grain of the wood.



Plate 2.17 Site 29: the dyeing/ tanning complex (Project Phase 6): (left) view looking S of the clay lining to pit 4741 with the impression of the batten that held the base together, and (below) view looking S showing the clay lining for 4735, with impressions of the wooden barrel and binding hoops that sat inside it.



The sequence of development and use of the tannery/clothier's works

Evidence suggests that the operation started on a small scale (Fig. 2.10a and c; site sub-phase 2908b), with the construction of four sunken circular wooden vessels (4720, 4721, 4722, and 4726). These were set within four individual and separate pits (5128, 5115, 5055 and 5037 respectively). These vessels were in use simultaneously and were located to the north of the Holy Brook on the east side of the site, a location which allowed later expansion westwards (see below). The dating evidence indicates only that this initial activity occurred after AD 1500. The next phase of development saw a significant increase in the scale of the complex (Fig 2.10b and c; site sub-phase 2908c), which expanded westwards of the initial four vessels. These are considered to have remained operational. A large pit (5040) was excavated, within which were set eight circular vessels (4723, 4724, 4725, 4727, 4728, 4729, 5123, 4743, 4737), laid out in two rows of four on an SW–NE alignment. Vessel 5123/4743 seems subsequently to have been replaced by vessel 4730 in pit 4996. Further vessels were added immediately to the north and south of the western end of pit 5040. To the north, pit 5111 received two circular vessels (4734 and 4735), and to the south pit 5133 housed a further two (4740 and

4741). All the wooden vessels measured from 1.00-1.40 m in diameter.

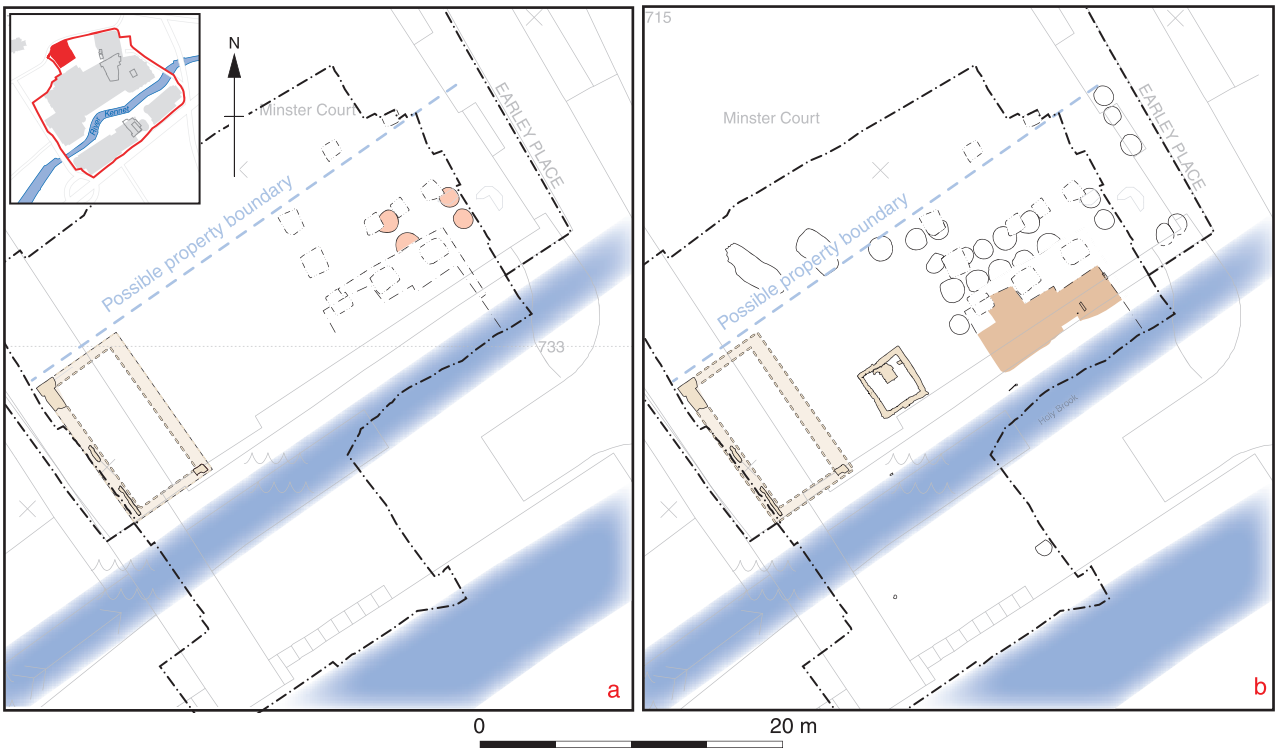
Immediately to the south, and contemporary with the main sunken vessel complex, a very large pit (4817) was excavated (Plate 2.18). The pit measured 9 m long (SW–NE) by 4.8 m wide (SE–NW). Its base was lined with clay, but no trace of individual vessels was seen, suggesting that this feature remained as one large purpose-built tank. The clay sealed an isolated timber (5466), thought to be related to the modification of the Holy Brook (see below). This was submitted for dendrochronological dating, and gave a felling date range of 1526-?58 (see Chapter 11; Table 11.7).

Other developments on site 29 associated with the main expansion of the industrial complex include the strengthening of the north bank of the Holy Brook, which had fallen into disrepair since the demise of Building 5860. The south-western corner of the site produced the best evidence for modifications to the channel. The evidence comprises an east-west cut, at the base of which a series of small posts retained a plank (structure 4585). Only a 9 m length of the remains of this revetment was recorded, but it probably continued further to the north-east (Fig. 2.10c). Three of the timber posts from Group 4585 were dated, and gave the following felling date ranges: Post 5348 – 1553-76;



Plate 2.18 Site 29: view looking NW of clay-lined tank 4817 (Project Phase 6)

Fig. 2.10 (opposite) Site 29: plan showing the development of the tannery/clothiers' works during the 16th and early 17th century (Project Phase 6)



1:500



Post 5349 – 1566-85; and Post 5350 – c 1566 (see Chapter 11; Table 11.7). Therefore the revetment was constructed after c 1566. This was the last in the sequence of wooden revetments before the introduction of brick wall revetments in the later phases (described below). The dating evidence from the revetment agrees with the date from isolated timber 5466 which gave a date range of AD 1526-758, and strongly suggests that the main expansion of the industrial complex occurred just after the middle of the 16th century.

A small building, Structure 5186, which formed a single nearly square room that measured 2.80 x 2.60 m internally was constructed immediately to the south-west of the main group of sunken vessels (Plate 2.19). The foundations, which consistently measured c 0.40 m wide, used a combination of flint nodules (dressed on the internal face which was roughly plastered), tile and brick fragments, bonded by a silty-clay brick-earth. The floor of the room (5311) was formed of brick-earth. A hearth platform (5309) was built within the structure, located centrally against the internal face of the north wall. The north wall immediately adjacent to the hearth was heavily scorched, presumably from a flue (SS 1013). The hearth was made from flint nodules, tile, and brick fragments bonded by brick-earth, and measured 1.2 x 0.8 m. It was heavily scorched from *in situ* burning, and overlain with deposits rich in charcoal. The building may have been a furnace house or a drying room, probably

associated with the industrial processes that took place in the sunken vessel complex.

A single sunken vat pit (Group 4927), that had been re-cut, was noted to the south of the Holy Brook. All that remained of the primary pit was part of the initial cut and part of the clay cladding. Evidence for decayed wood was evident on the clay cladding of the secondary pit. No dating evidence was recovered from the feature. A collection of horn cores was recovered from Test Pit 11 on the bank of the Minster Mill stream, some 20 m to the south.

Additions and replacements to the vats continued during the 16th century and probably the early part of the 17th century (Fig 2.10c; site sub-phase 2908d). A further 5 vats were added. Two were placed as a pair (4732, 4733) to the north of the main pit (5040). Vat 4730 replaced two earlier vats (4713 and 5123). The majority of the vats in this phase follow the original alignment. One exception was a long narrow clay-lined vat (4739), located adjacent to the furnace house or drying room, Structure 5186. The feature was orientated SE-NW and measured c 3.50 m long and c 0.40-50 m wide. The extent of the remains of the entire complex can be seen on Plate 2.20.

Eventually the vats went out of use and were backfilled (Plate 2.21) (site sub-phase 2908e). The pottery evidence can only indicate a date-range of 1500-1700, but the last possible date for the decommissioning of this complex must be 1627-8 when the Oracle workhouse is documented as having been constructed on the same site.



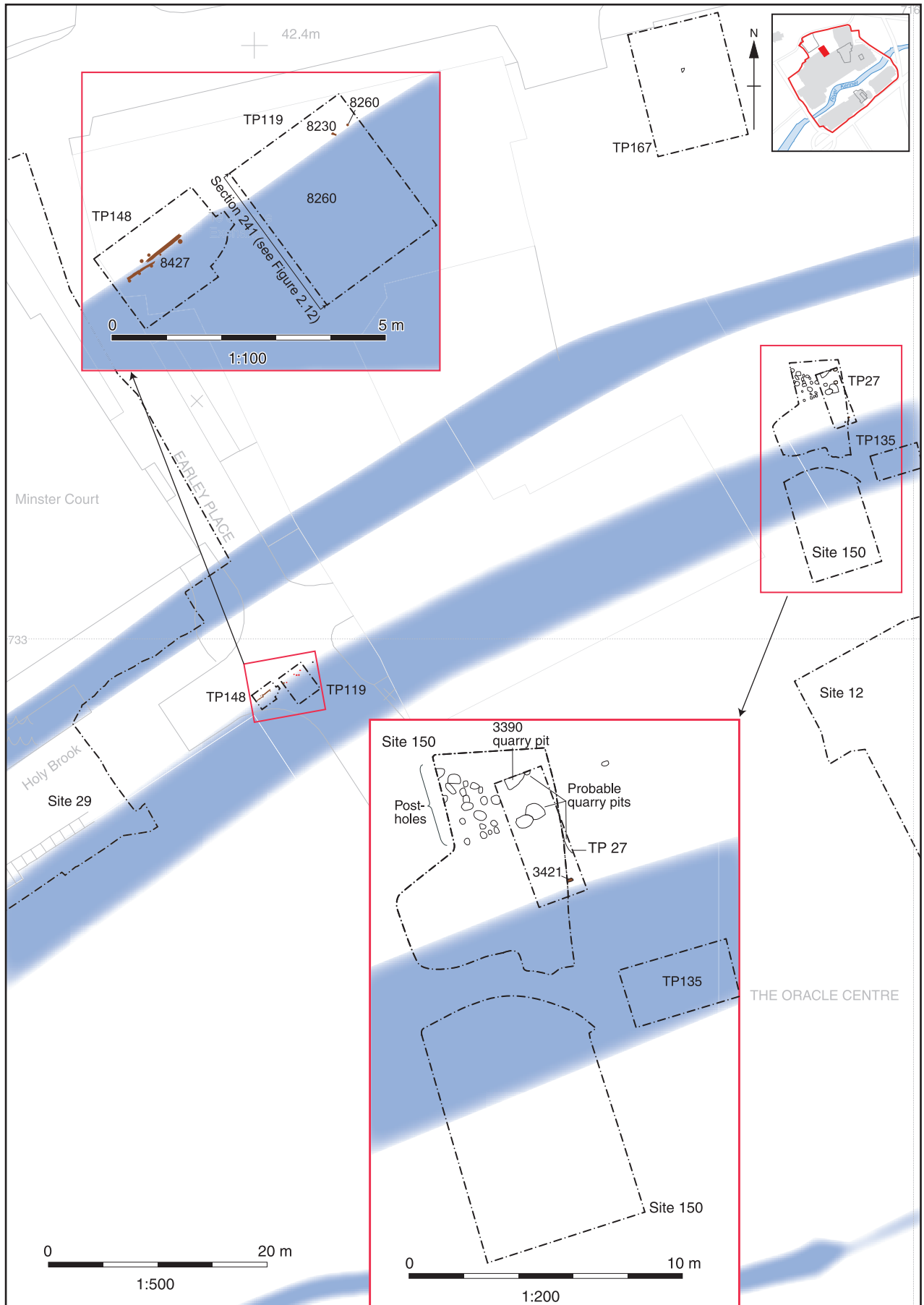
Plate 2.19 Site 29: view looking NW showing the remains of the square furnace house or drying room, structure 5186 (Project Phase 6)



Plate 2.20 Site 29: general view looking SW of the dyeing/tanning complex under excavation (Project Phase 6)



Plate 2.21 Site 29: view looking S of the 17th-century cobbled courtyard surface of the Oracle workhouse slumping into the compressed fills of a decommissioned and backfilled barrel from the tannery/dyeing complex



SITE 150: THE MINSTER MILL

Project Phase 2: mid 11th to mid 12th century

The Minster Mill and the Minster Mill stream
(Figs 2.11-2.12)
(site sub-phases 15001, 15002)

Some 15 m to the south of site 29 and the Holy Brook was a second water channel, the Minster Mill stream. The Minster Mill and its millstream were investigated in a series of trenches and test pits. These were located along the line of the stream channel (TPs 148 and 119), on the site of the mill itself (site 150 and TP27), and along a lane providing access to the mill from Minster St (TP 167) (Fig. 2.11).

The earliest evidence for the Minster Mill stream was seen in the southern area of site 150, where a series of silty deposits formed its southern bank at a height of approximately 35.1 m OD (site sub-phase 15001a; not illustrated). The earlier deposits sloped at an angle of about 5 degrees, the later deposits at about 20 degrees, and all appeared to have been dumped behind a man-made channel edging, or revetment, which had subsequently rotted away leaving a near-vertical edge. This bank was in

approximately the same location as the southern bank of the later Minster Mill Stream. Evidence for the northern bank of the channel was visible, although less clear, at the southern end of TP 27, where there were several sloping dumped deposits of gravelly loam. A single water-worn timber stake had been driven into the chalk in the same part of the trench and may be evidence for early attempts at revetment, mirroring those on the southern bank.

Evidently this early attempt at channel management had been inadequate. Several layers of alluvial material had been deposited over the chalk natural to the north of the channel, and covering the stake itself (sub-phase 15001b). This shows that the channel was flooding, and pottery from two of these layers (10230 and 10229) dates this flooding activity to the late 11th or early 12th century.

During the 12th century, the mill stream channel edges were recut and the banks were raised. The cutting of the channel was very clearly seen in TP 119 (8260; Fig. 2.12) where the cut extended into the underlying chalk (8261), and the material removed when clearing the channel was subsequently used to create the banks. This process was also observed on site 150 where a raised bank was created on the north side of the channel by the dumping of a series

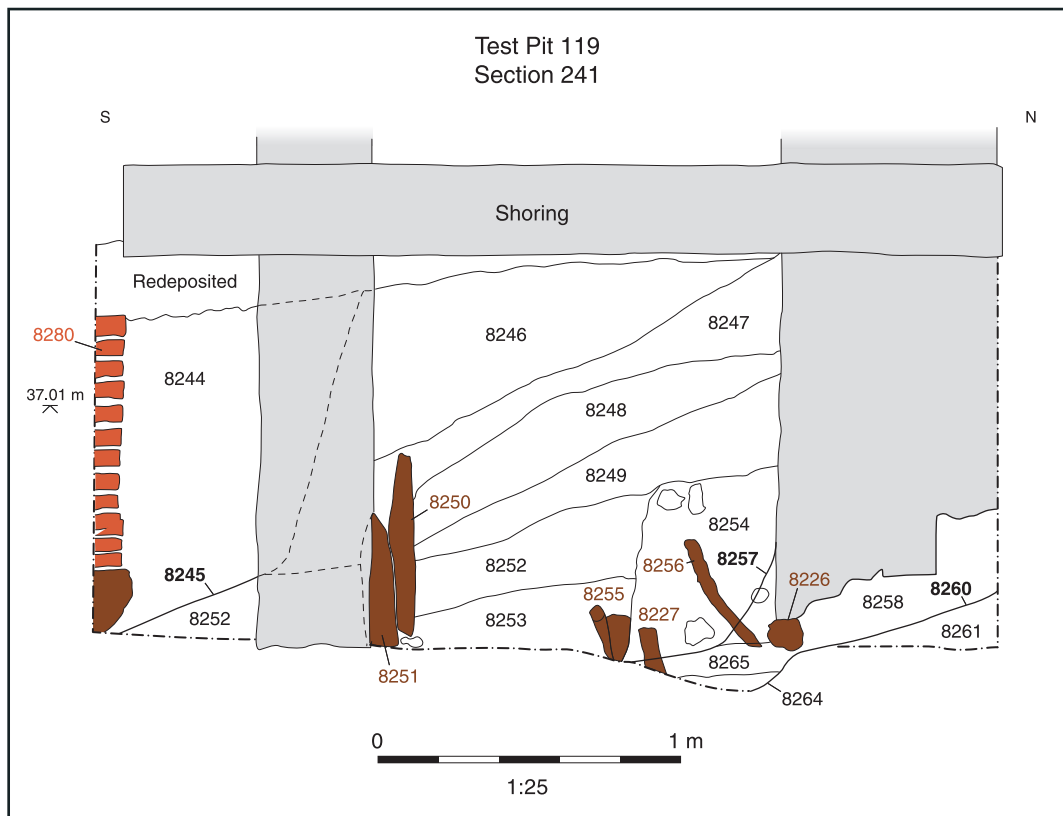


Fig. 2.12 Test Pit 119: NE facing section 241, showing the full sequence of development of the north bank of the Minster Mill Stream

Fig. 2.11 (opposite) Site 150 and other test pits: showing evidence for the Minster Mill and Minster Mill Stream (Project Phase 2)



Plate 2.22 Site 150 Test Pit 167: general view looking NE showing multiple resurfacing of the lane leading from Minster Street (left) to the Minster Mill (right) (Project Phases 2–8)

of clay and chalk deposits above the earlier flood horizons. No dating evidence was associated with the cut seen in TP 119. The new bank of the recut on site 150, however, overlay the late 11th- to early 12th-century flood deposits, and a 12th-century date is therefore considered likely for this phase of activity.

Revetments retaining the northern bank of the Minster Mill stream were identified at the extreme southern limits of site 29, and in TPs 148 and 119. A

revetment structure of which several posts and staves survived was associated with the recut northern bank of the stream in TP 119 (cut 8260; timbers 8230, 8231, 8237, 8238, 8239). In TP 148 this revetment survived in the form of two horizontally lain planks held in place by stakes and posts (Revetment Group 8427). Two packing deposits formed a bank immediately behind this revetment, one of chalk rubble (8428) and the other a silty clay

containing much chalk and gravel (8429). Similar deposits were also seen behind timber revetments at the base of the sequence at the south edge of site 29 (5107, 5108; not illustrated). In neither place was the chalk deposit dated, although in TP 119 deposits that sealed the revetment structure contained pottery manufactured from the late 11th century to the 14th century. The two sections of revetment identified on site 29 were different in construction and comprised vertical posts with angled braces (5106, 5099/5100) perhaps indicating a later construction date.

Associated with the increased millstream management was the introduction of a formalised access point to the land. At the north edge of the site, just south of Minster St (TP 167), a lane was established, leading southwards from Minster Street to provide access to the Minster Mill. The lane consisted of a compacted surface (10228) of sand, gravel and very small pieces of fired clay (possibly broken up Roman tile), that overlay the earlier possible quarry pits in this area (see description of Phase 2 for site 29) (Plate 2.22). This lane continued to be maintained and resurfaced during the 12th century. The earlier surface was replaced (site sub-phase 15002c) with one comprising compacted chalk and gravel in a sand matrix. No dating evidence was associated with this surface, but the surfaces were overlain by a layer that contained pottery of mid 13th-century or later date.

At the mill site itself (site sub-phase 15002a), five pits were cut through the earlier flood layers in TP 27. One of these was a partially revealed cut (3421) that measured 0.26+ m long x 0.38 m deep; it contained a deposit of almost pure charred grain (3418) dominated by oats and free-threshing wheat, with smaller quantities of barley and rye (see Pelling, Chapter 11; also Chapters 5 and 6). The high percentage of germinated grains suggests that the oats and barley were being used in the production of malt for brewing. In association with the pits were a number of postholes indicating the presence of structures that probably represented an early phase of the Minster Mill although they cannot be reconstructed into a coherent form. A sequence of intercutting postholes suggests that this underwent a series of repairs. Dating evidence was very scarce, although pottery of a mid 11th- to 12th-century date was recovered from one of the pits/postholes. The group was sealed by layers datable to the 13th century, suggesting that they went out of use at that time.

Project Phase 3: mid 12th to mid 13th century and Project Phase 4: mid 13th to late 14th century
(site subphases 15003, 2803a)

The pits, cut features and road surfaces of the earlier 12th century remained in use through most of Project Phase 3 but were sealed by silty deposits representing their disuse, dated by pottery to the latter half of the 13th century. With the expansion

that was being experienced elsewhere onto the floodplain, a period of abandonment or disuse at Minster Mill and along the approaches to it seems unlikely; however, no observations datable to Project Phase 4 were recorded in relation to the Minster Mill Stream and mill site.

Project Phase 5: 15th century and Project Phase 6: 16th century

A phase of revetment of the Minster Mill stream is probably datable to the 15th century. The north bank of the channel was recut through earlier waterlogged deposits (cut 8257, Fig. 2.12; cut 5107 on site 29, not illustrated). The revetment for the recut was identified in TPs 168, 148 and 119 (see Fig. 2.8). Behind the revetment was a substantial bank (8254, Fig. 2.12) with a vertical edge that would have been flush with planks before they rotted or fell away. A similar cut was identified in section at the southern edge of site 29 and revetments had also been placed in it (5102, 5103). These could not be directly related to the cut on site but they were in similar positions and had similar material dumped behind them to form the bank. The revetment on site 29 post-dated an earlier revetment (see above), and its backfill contained pottery indicating a 15th-century or later date for this phase of revetting.

Towards the end of the 15th century the lack in maintenance of the lane leading to the site of the Minster Mill that was identified in TP 167 came to an end, and a new road surface of gravel and broken ceramic building material (8486) was laid. No activity dating to Project Phase 6 was identified.

THE FLOODPLAIN: SITE 12 (THE YIELD HALL) AND SITE 101 (THE BACK BROOK)

Two area excavations (sites 12 and 101) and associated test pits produced evidence for the development of low-lying land towards the centre of the floodplain, between the Minster Mill stream to the north, and the Back Brook to the south. It is likely that this area was developed from the late 12th century, following the laying out, or extension southwards, of the road later known as Yield Hall Lane. Site 12, which is considered first, was located to investigate the development of the area eventually occupied by the building that came to be known as the Yield Hall. Evidence for the management of water channels, in conjunction with land reclamation and the building of apparently industrial structures, suggests that this may have been developed as an area for crafts and trades that relied on a good water supply. Site 101 was located to investigate the development of the channel known as the Back Brook, which crossed the floodplain approximately halfway between the Minster Mill stream to the north, and the main channel of the Kennet to the south. No evidence was found for human intervention in this area in Project Phase 2 (mid 11th to mid 12th century).

Site 12: Project Phase 3: mid 12th to mid 13th century

The development of Yield Hall Lane frontages: land reclamation, channel management and the establishment of a craft/industrial workshop (Figs 2.13-2.15)

(site sub-phases 1202-3)

During the second half of the 12th century activity began to expand onto the marginal land of the valley floor. The evidence suggests there was a substantial effort to develop and exploit this boggy and floodable land, beginning with the creation (or southwards expansion) of the north-south road later known as Yield Hall Lane. The lane lay just outside the eastern limit of site 12 and was therefore not identified by excavation, but its existence at this time is implied by the construction and land reclamation taking place to either side of its line. Yield Hall Lane formed the parish boundary between the parishes of St Mary's and St Laurence's, with the Minster Mill stream forming a common boundary with St Giles's parish to the south. The laying out of the lane was followed by land reclamation, and enhancement and regularisation of the water regime was seen on site 12.

Two channels were investigated on site 12 (Fig. 2.13). The first (channel 9269) was aligned broadly north-west to south-east. The southern edge of this

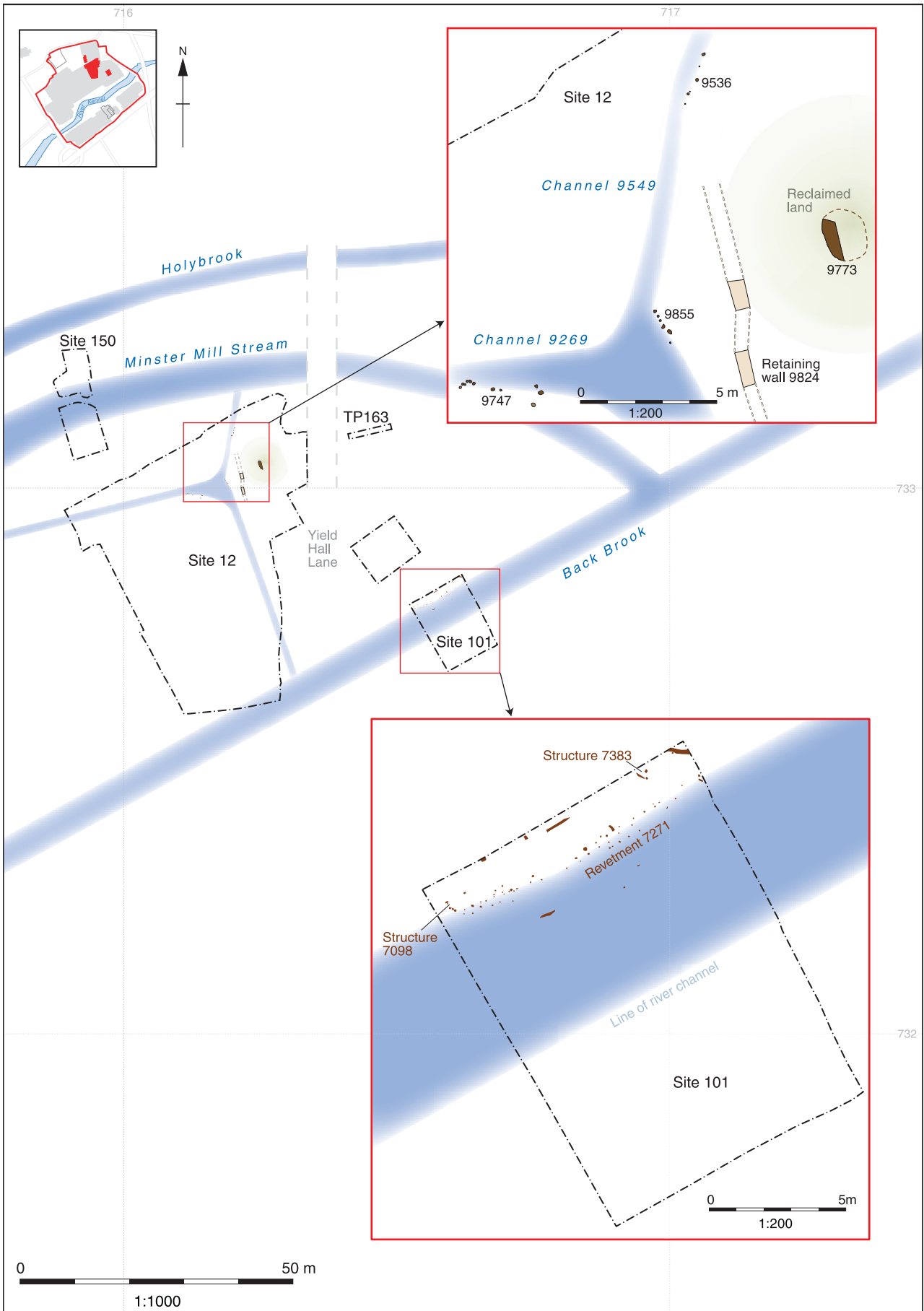
channel had been strengthened by a post and plank revetment (9747), but there was no evidence for cutting of the channel edge and the northern edge was not seen. The alignment of this channel suggests that it functioned as a simple bypass or overflow for the Minster Mill, leaving the Minster Mill channel upstream of the mill and carrying surplus water away at times of high water or floods.

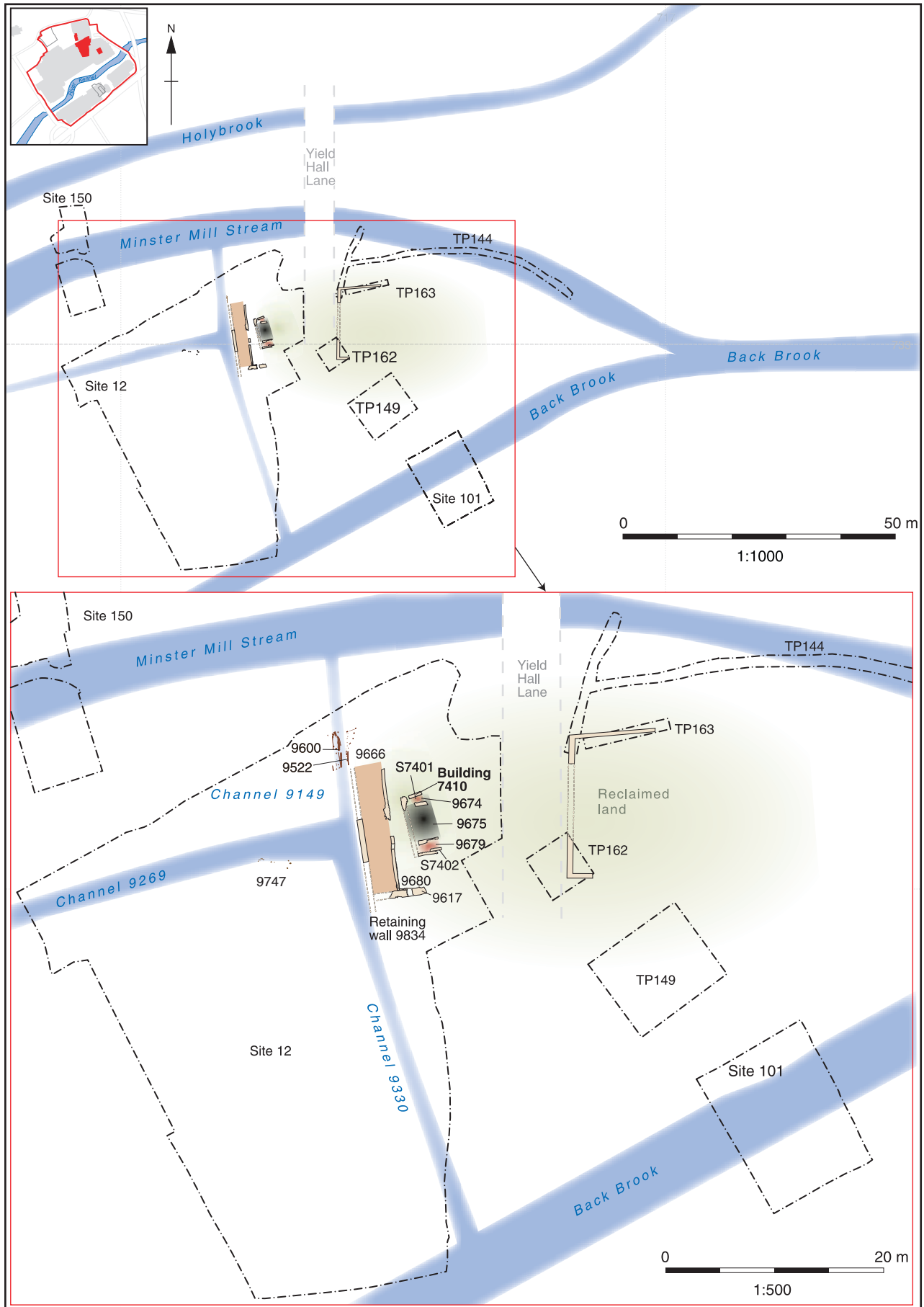
More effort was put into the creation and management of the second channel investigated (the eastern channel 9549), probably cut in the latter half of the 12th century. This was aligned north-south and appears to have been a deliberately man-made channel taking water from the Minster Mill Stream downstream of the mill. This would have ensured a more regular supply of water, and would not have interfered with the operation of the mill itself. A clear cut was seen on the eastern side of the channel. The channel was cut through flood deposits of mid 12th-century date and was edged with post and plank revetments (9855 and 9536). The creation of channel 9549 was almost certainly part of a more general initiative to exploit this area of the floodplain. At the same time as the channel was dug, considerable effort was being put into reclamation of the land immediately to the east of the confluence of these channels. Here a substantial flint nodule wall (9824), at least 5 m long and 0.5 m wide, was built to retain a series of dump deposits



Plate 2.23 Site 12: view looking SE of successive revetments on the eastern bank of channel 9549/9149 (Project Phase 3)

Fig. 2.13 Site 12: showing the Minster Mill bypass channel (9269) and channel (9549) in relation to the reclaimed land; Site 101: the earliest revetment structures for the Back Brook (Project Phase 3)





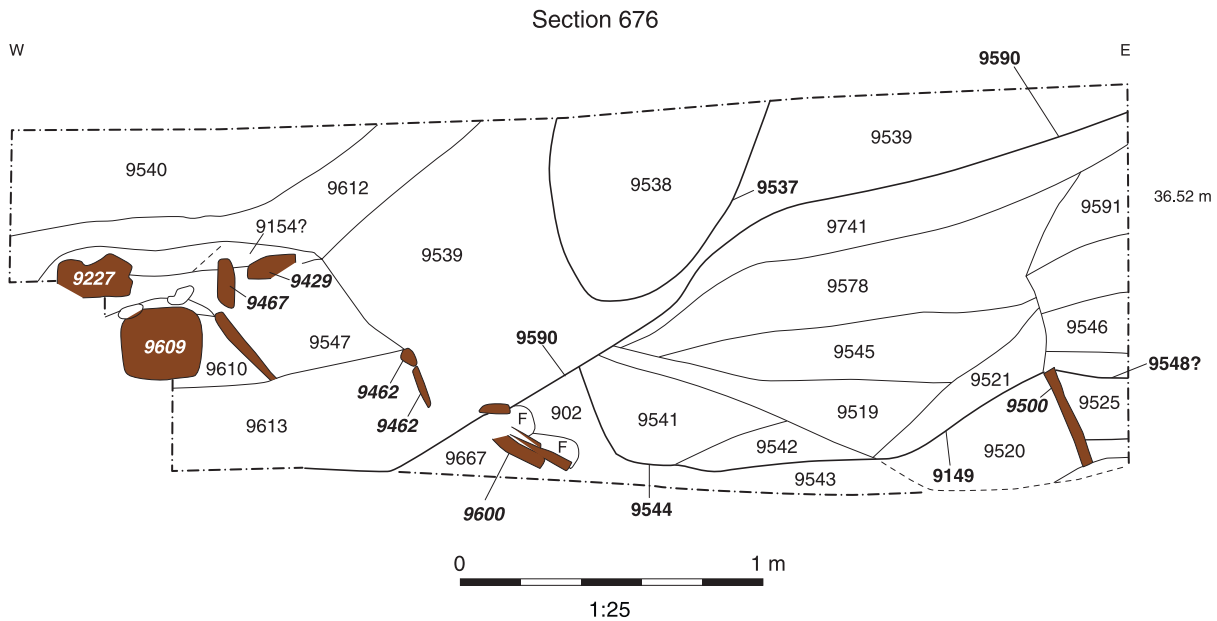


Fig. 2.15 Site 12: South facing section 676, showing sequence of development for channel 9149

comprising mainly crushed chalk and gravel. Two intercutting pits (9827, not illustrated, and 9773) were recorded on the land east of the retaining wall. One of them (9773) contained a high concentration of charcoal, and may have been a hearth-pit operated during the construction of the wall.

Channel 9549 was re-cut, possibly during the late 12th or early 13th century, approximately 0.50 m to the west, as channel 9149 (Figs 2.14-2.15; Plate 2.23) (site sub-phase 1203a). Channel 9149 was 1 m wide and in excess of 0.60 m deep, and was revetted on both sides with post and plank structures. Most of the timbers that survived were vertical roundwood posts or horizontal planks of 1-1.5 m in length. At least one timber appeared to have been re-used from an earlier structure, bearing the remains of a tenon joint at one end. No dating evidence was recovered from the new channel cut or the revetments, but their relationship to the preceding structures suggests a date in the late 12th or early 13th century.

At the same time, the earlier retaining wall (9824) was demolished and dumps of gravel were laid in its place. A new retaining wall of large chalk blocks and orientated north-south (9834) was constructed approximately 0.40 m to the west. This was observed for over 10 m and probably extended further to the north and south. To the south was a short section of east-west wall 9680, which may have been the eastern return of this wall defining the southern limit of the reclaimed land. A second wall (9666), of flint and chalk, was constructed 2 m east of the new retaining wall 9834 (Plate 2.24). Its

southern end abutted 9680. A circular pit (9823, not illustrated) measuring 0.7 m diameter x 1.6 m deep and located just to the south contained 60% chalk blocks and 40% flint nodules, material likely to be the debris from the demolition of 9824 and surplus after the construction of 9834.

Much of the surrounding area had been heavily truncated by later activity, and the relationship between wall 9834 and wall 9666 could not be determined; no evidence of return walls that might have formed a closed structure was seen. The two walls were parallel to each other and the space between them was surfaced with chalk. However, at only 2 m in width, this space appears too narrow for a building, and the likeliest interpretation is that it functioned as a corridor (if roofed) or a walkway (if unroofed), along the side of the water channel. This interpretation is strengthened by the fact that wall 9666 was clearly built in two sections, with a gap of approximately 1-1.5 m in the middle, forming a doorway that would have given access to the corridor or walkway.

Wall 9666 is interpreted as the west wall of a building or working area, Building 7410, constructed on the reclaimed land between the channel and Yield Hall Lane. Within Building 7410 were two small, probably industrial, open rectangular structures formed by the remains of stone walls enclosing hard surfaces (Structures 7401-2). The better preserved of these, Structure 7402 (Plate 2.25), measured at least 2 x 1.5 m and comprised walls constructed of chalk and flint (9676 and 9677). Between these walls lay two probable surfaces, one

Fig. 2.14 (opposite) Site 12: recut of channel (9149) and the construction and use of Building 7410 and other structures on the reclaimed land in the late 12th to early 13th century



*Plate 2.24 Site 12:
view looking S across
Building 7410 with
tank or vat bases 7401
(foreground) and 7402
(background), charcoal-
rich deposit 9675 in
between them and wall
9666 to the right
(Project Phase 3)*

*Plate 2.25 Site 12,
Building 7410: view looking
SW of detail of tank or vat
base 7402 (Project Phase 3)*

a spread of tiles (9678) and the other a cobbled surface (9679) forming the floor to a probable working area. Structure 7401 was located 3.4 m to the north (7401). This comprised walls of similar chalk and flint construction (9670, 9671 and 9672) enclosing a hard surface made from chalk fragments, flint and pea gravel (9674). Between the Structures 7401 and 7402 was layer 9675, 0.22 m thick, which consisted of 80% charcoal; sheep and goat bones were recovered from this layer. Neither structure produced any finds that help interpret their function, although it is clear that this must have required both water and heat and their form suggests that they were perhaps the bases for vats, or possibly the remains of stone tanks.

Yield Hall Lane lay approximately 5 m to the east, but the intervening area had been heavily truncated by later activity and no further evidence for Building 7410 and the extents of the features described above could be recovered.

To the east of Building 7410, and the suggested line of the lane that led to it, further structural remains were recovered. The north and south corners of a very substantial stone wall of the same flint and chalk construction were located in TPs 163 and 162 respectively (site sub-phase 1203b). The wall was 1 m wide and 13 m long, orientated north-south, and returned to the east at both ends. The southern return is on virtually the same alignment as wall 9680 to the west. This structure was probably a retaining wall for contemporary reclamation activity on the eastern side of the access lane, and may even have formed part of a building similar to building 7410. Unfortunately no internal evidence was recovered.

Test Pit 149 was located further down the east side of Yield Hall Lane, some 5 m back from the modern street frontage (Fig. 2.14). Reclamation dumps similar to those seen on site 12 were observed in this test pit, along with a wall orientated roughly east-west (8438/8453, not illustrated) of similar chalk rubble and flint nodule construction to retaining wall 9834. Associated finds evidence only suggested a date after the late 11th century, but the similarity of construction materials suggests that the laying-out of Yield Hall Lane may have been associated with quite widespread development of its frontages during the late 12th and early 13th centuries. Whether this was all industrial in nature is unfortunately not apparent from the remains that survived.

Site 12: Project Phase 4: mid 13th to late 14th century
(site sub-phases 1204 and 1205)

The tanning complex on site 12 (Figs 2.16-2.17)

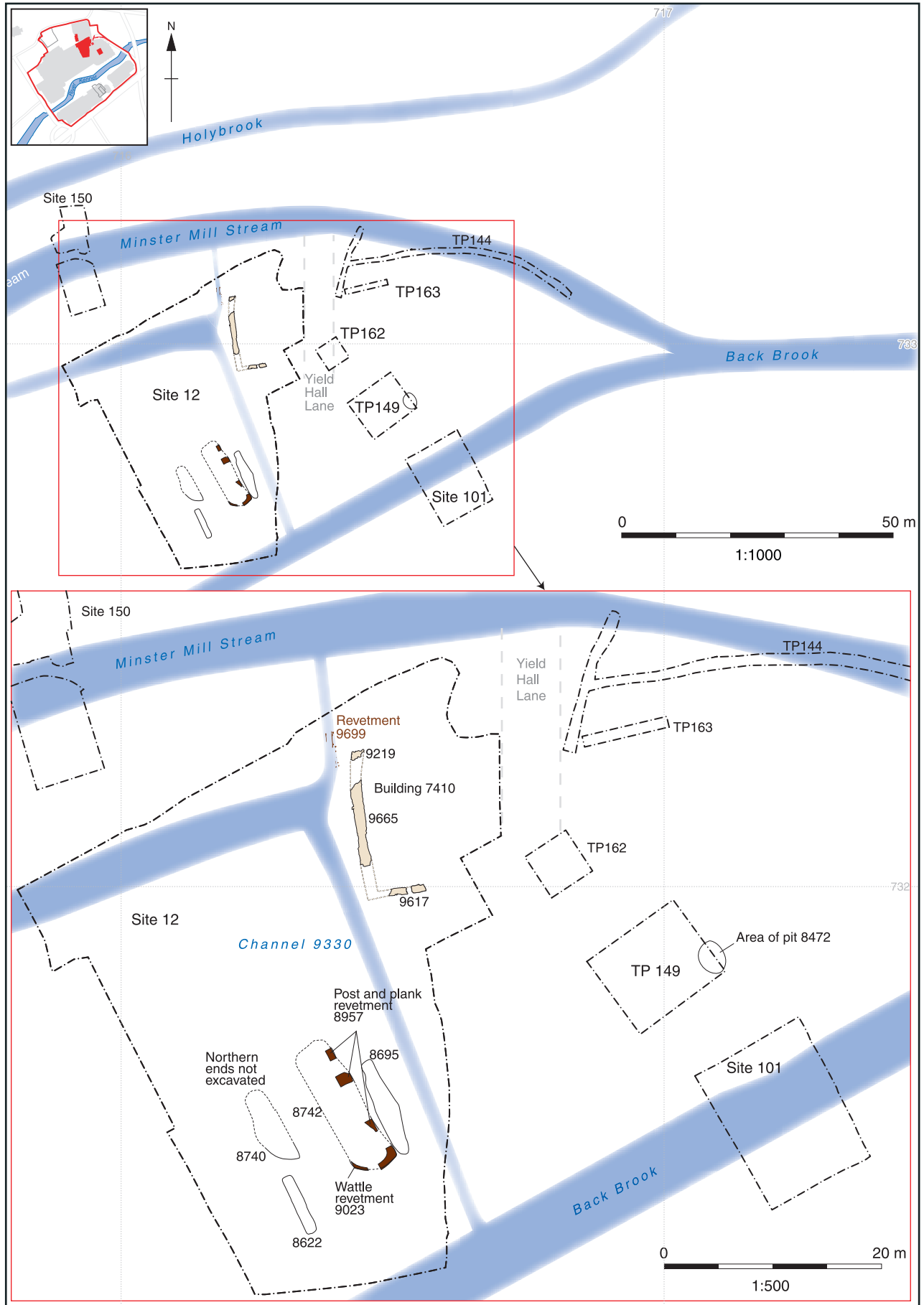
Over the course of the ensuing 250 years, much of the land in the south of site 12 was in use as a tannery or a tawery (Fig. 2.16). A number of large pits, some with substantial timber linings, were laid

out across the area. As before, there was evidence that site 12 was showing only a keyhole glimpse of widespread development. A very similar pit was also identified in TP 149 (pit 8472), on the opposite side of Yield Hall Lane, and contained pottery of mid 12th-century or later date.

The complex of pits remained in use until the very end of the 15th century (Project Phase 5) and they were not finally backfilled and decommissioned until a major episode of land reclamation in the early 16th century (Project Phase 6). The earliest in the sequence were pits 8742, 8740, 8622 and 8695, and associated pottery supports a date range from the 13th to the late 14th century. It is not clear whether they were used continuously over this period, but it seems probable, given that there would have been a need for useful facilities for the industry of leather preparation that was so important to the town. Pit 8740 appears to have been recut at least twice (8722=8768/8721; Fig. 2.17). Dating evidence suggests that the final recut, 8721, remained in use as late as the end of the 15th century, at which point the very large pit 8742 may also have been infilled.

None of the pits was fully excavated, but there was evidence for structures that revetted and thus strengthened their sides. Pit 8742 for example, which measured at least 12 m long x 4 m wide, had a wattle revetment (9023) on its west side, and a post and plank/board revetment (8957) on its east side (Plate 2.26). The wattle revetment consisted of 60 mm-wide stakes with large branches of 40-50 mm diameter woven between them. The post and plank/board revetment was represented in the excavated section by two large vertical posts and horizontal planking, which supported a deposit of chalk rubble. The floor of the pit was puddled with clay, which would have made it waterproof. Towards the end of the 15th century, the final recut of the central pit, 8721, showed limited evidence in the form of posts (8780-8783; 8678), at its northern terminus, that its sides had been revetted.

The pit fills contained considerable quantities of material associated with hide processing and leather working (see Chapters 5 and 9). Unfortunately, the main episode of backfilling took place when the complex was being decommissioned and the area reclaimed for building, in the early 16th century (see Project Phase 6, below). It is clear that the fills included material brought from elsewhere, and so no definite link can be made with the earlier phase of use of the pits. Nevertheless, it seems very likely that the waste identified from the primary stages of skin processing originated somewhere in the vicinity, and casts some light on the range of activities that had been carried out in this area of the floodplain during the later medieval period. An early fill of pit 8742 (fill 8852) was particularly notable, since it contained calf hair, a waste product of the tawing trade. A wide range of material was found in fill 8894 of pit 8721, including goat hair (probably from two kids), sheep/goatskin and



pigskin, as well as waste bovine leather including primary waste material such as udder. This would suggest that both the tanning and the tawying trades were operating in the area.

The channels and Building 7410 (Figs 2.16-2.17)

Evidence was recovered for continued channel management and land reclamation during Project Phase 4. The retaining wall 9834 and industrial structures 7401 and 7402 in use during the previous phase were demolished. Their remains were sealed below well-compacted deposits of chalk fragments and flint nodules probably resulting from the demolition. This material was used to raise the ground level by approximately 0.4 m and contained pottery indicating a date after the middle of the 13th century.

This was followed by the rebuilding of the retaining wall and re-cutting and revetment of the north-south man-made water channel. The evidence for this was very fragmentary and has

proved difficult to interpret. A new channel revetment wall, 9665 (= 9219) of flint nodule construction was built on the west of the reclaimed land (Fig. 2.16; Plate 2.27). It is not clear how long this wall was in place (see below). Wall 9665 may have formed the west wall of a new building, and two short sections of a second flint wall (9617) which lay to the south and at right-angles to wall 9665 may have been associated with an eastern return; however, the remains were too insubstantial for this to be certain.

Channel 9149 was then re-cut (9330=9590=9304) and revetted by a timber post and plank structure (9699). This cut and structure post-dated the construction of, but co-existed with, the new retaining wall (9665=9219).

A number of dump deposits were recorded respecting wall 9665, and were therefore laid down at some point after the wall had been constructed. These included two flint deposits dumped on the channel side of the wall to form an artificial bank,

Plate 2.26 Site 12: view looking NE showing sondage through tanning pit 8742 (foreground) revealing post and plank revetment 8957 (Project Phase 4). The tile floor of the Yield Hall cellar in Room 2 from Project Phase 7 is visible to the right



Fig. 2.16 (opposite) Site 12: plan of the tannery/tawery (Project Phase 4)

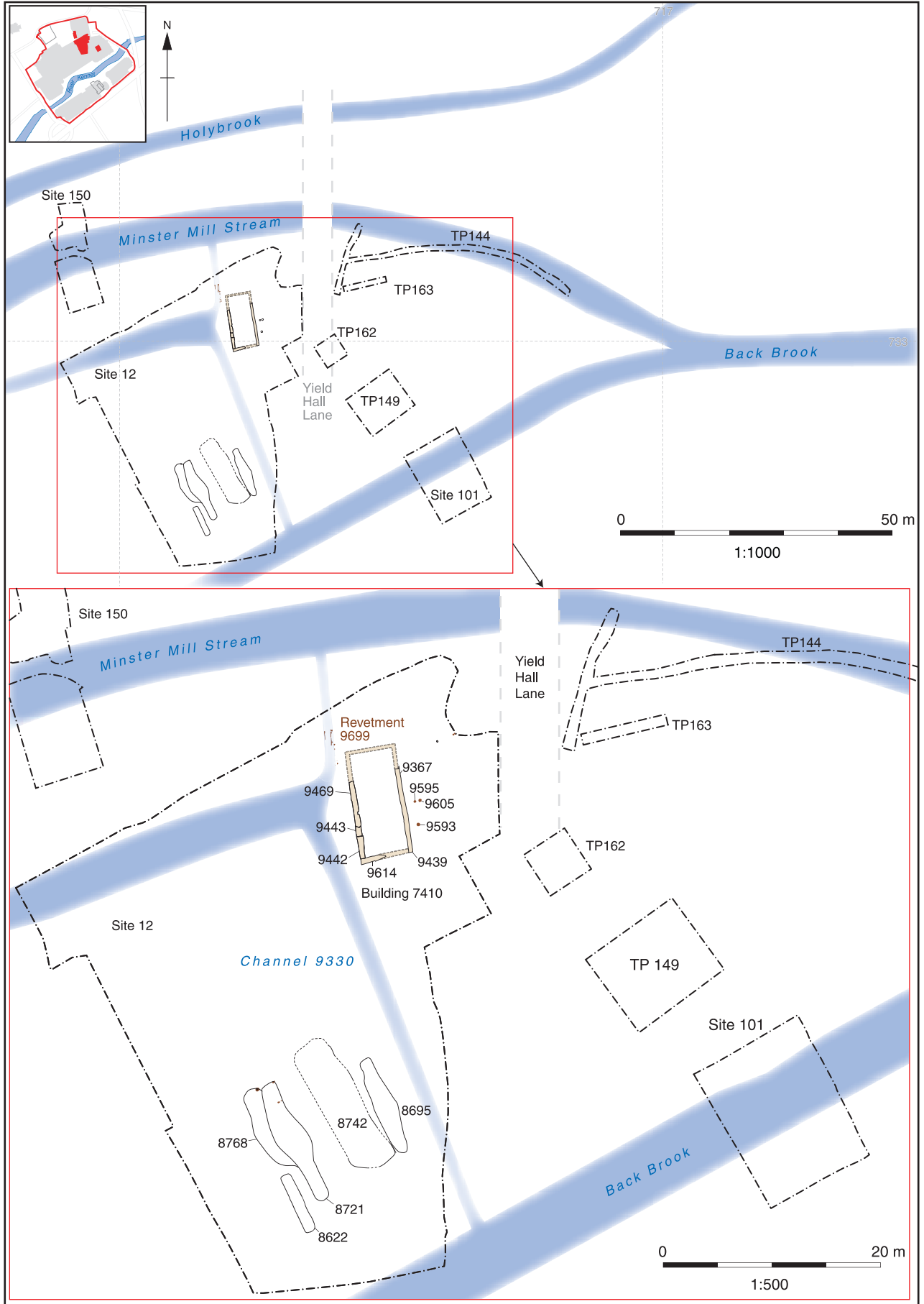




Plate 2.27 Site 12: view looking E with chalk bank 9497 in the foreground abutting wall 9665 behind (Project Phase 4)

and an extensive chalk hardcore deposit (Plate 2.27) (9497, 9552, 9626, 9530), which overlay these dumps and the walls of Project Phase 3, and underlay most of the succeeding structures. This suggests activity in preparation for a new phase of building. The only datable material within this deposit was a fragment of used decorated floor tile of a late 14th- or 15th-century type, suggesting that the dump may date towards the end of Project Phase 4 or the start of Project Phase 5.

A new phase of development then took place, beginning with the demolition of revetment wall 9665 (site sub-phase 1205b), which is hard to explain except as part of a project to construct a new building on the site with access to the channel via the newly formed artificial banks (Fig. 2.17). The west wall (9469/9443/9442) of the new building (building 7410) was constructed on the foundations of the demolished wall 9665; the remaining walls were represented by a number of surviving fragments (9367 on the east; 9614 on the south and 9439 in the south-east corner). Together these appear to form a building measuring 4 x 10+ m. The new walls were built in several stages and comprised variously flint, chalk and flint, and chalk, flint and tile. Only the eastern wall (9367) of the building was constructed entirely of flint nodules. This suggests a more makeshift approach to building than in earlier phases and a greater emphasis on the use of whatever was available, with more haphazard

construction when time, materials or finances would allow.

The building was heavily truncated by modern foundations, and it has proved very difficult to reconstruct its medieval form with any confidence. A small timber structure comprising two small shallow postholes (9595 and 9605) and a single post pad to the south (9593) was located next to the eastern side of wall 9367. This was of unknown function. However, Building 7410 was extended to the east during the 15th century (see below), and these early post settings may bear some relation to this.

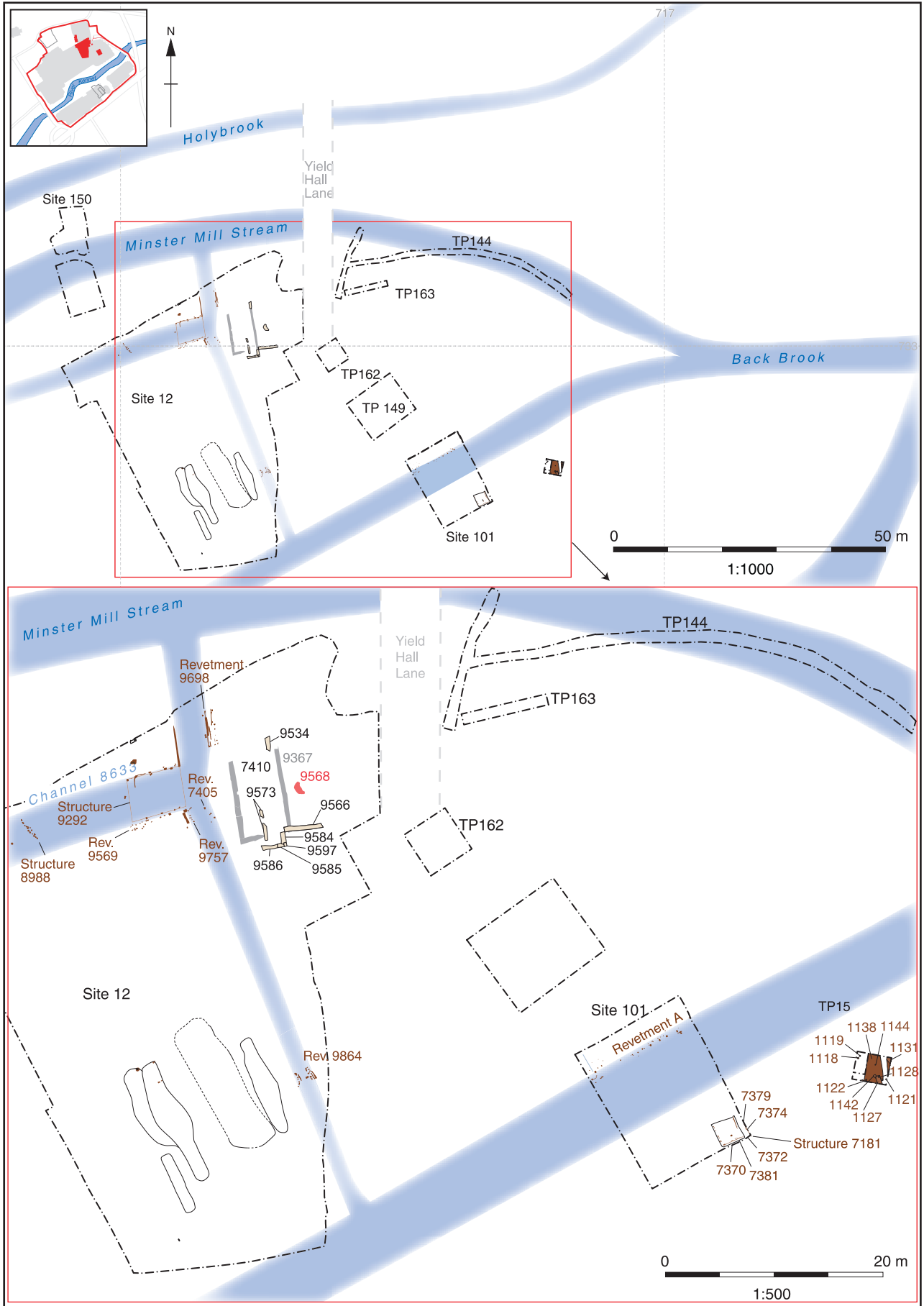
Site 12: Project Phase 5: 15th century

The Yield Hall Lane frontage (Fig. 2.18) (site sub-phase 1206)

During this phase, the hide-processing pits at the southern end of site 12 continued to be used. Most of the evidence for change was related to the channels themselves, and building on the reclaimed land that fronted onto Yield Hall Lane to the east (Fig. 2.18).

The bypass or overflow channel first seen in Project Phase 2 (9269) was realigned slightly to the south (8633) and revetted with an alignment of small roundwood and larger squared posts (9569), which probably acted to strengthen its confluence with the artificial channel to the east (channel 9149). No

Fig. 2.17 (opposite) Site 12: showing the rebuilding of Building 7410 (Project Phase 4-5)



planking was associated with the vertical posts but the banks were consolidated with wattle hurdling (9668). Adjacent to revetment 9569 was a square structure (9292) measuring approximately 4 x 4 m which may have been a holding tank. The banks of the possible holding tank were consolidated with the same wattle hurdling (9668) found in association with the revetment. A plank from structure 9292 (timber 9267) was dated by dendrochronology, and gave a felling date after 1447, and probably between 1447 and 1479 (see Miles, Chapter 11).

Adjacent to the probable holding tank were two well-consolidated surfaces consisting of brick, tile, sandstone and flint nodule fragments in a matrix of silt, sand and mortar (9682 and 9508). These surfaces measured 0.89 x 0.93 m and 1.6 x 0.7 m respectively and formed an approach to the holding tank. One of these was dated to 1500+ and was therefore slightly later than, but probably contemporary with the later use of, the holding tank. At the western end of the investigated section of channel 8633 was a line of 17 timbers (8988; Plate 2.28) orientated across the channel. The gaps between the posts measured between 0.07 m and 0.14 m suggesting it may have served as some sort of fish trap or water control.

At the same time, the channel south of the confluence was also relined, with revetment 9757 along the western edge (comprising 11 timbers including one horizontal plank) and revetment 7405 along the

eastern edge. Together they revetted a channel that was approximately 2 m wide and of unknown depth. The eastern revetment was also identified further north (9698) where it was the fourth in the sequence of revetments seen in this position (see above). A post (9468) from revetment 9698 gave a felling date range of 1429-59 (see Miles, Chapter 11). The revetment post-dated silting containing pottery of late 15th-century or later date, which could suggest post 9468 had initially been used elsewhere. A final timber revetment (9523) was put in place after this and was sealed by mixed deposits containing pottery of late 15th-century or later date indicating that it was close in date to the previous revetment. A recut of channel 9149 was also identified towards the south-east edge of site 12 (8825; Plate 2.29). This formed a narrow channel just over a metre wide which was revetted on both sides (9864), and the presence of two alignments of timbers on the eastern bank suggest that there were two phases of revetting. An early fill of this cut (8802) dated to 1490+.

Alteration to Building 7410 (Fig. 2.18)

During the 15th century, and coinciding with the concentration of activity at the channel confluence, Building 7410 underwent a series of modifications, none of which has left very substantial or interpretable remains but which seem to imply that the



Plate 2.28 Site 12: view looking E showing fish trap 8988 built across channel 8633 (Project Phase 5)

Fig. 2.18 (opposite) Site 12: realignment and revetting of channels and extension to Building 7410; Site 101: late 15th-century revetment A of the Back Brook (Project Phase 5)



Plate 2.29 Site 12: view looking W showing revetment 9864 marking the banks of channel 8825 near its confluence with the Back Brook

building was extended, certainly to the east and south, and possibly to the north. The eastern extension (Building 7411; Fig. 2.18) was represented by the addition of a new walled, or part-walled, area. There is not enough evidence to suggest whether this can be interpreted as a roofed room, the only surviving remains being a short length of flint, tile and chalk wall apparently returning eastwards from the southern end of wall 9367 (9566). A hearth, 9568, had been constructed in this area; this comprised 50% charcoal, and contained a French jetton of 15th-century date. There was some evidence for a short extension to the north (9534). A southern extension (9584, 9586) was built in several stages, and may have formed a porch area on the southern end of the building or a fireplace. A further three 14th- to 15th-century jettons (Nos 1825, 1830 and 1832; see Chapters 5 and 9) and an Edward III halfpenny of 1355-61 (No. 1829) were found in dump layers and a posthole fill of this site sub-phase.

Site 12: Project Phase 6: 16th century

The Yield Hall Lane frontage, channel engineering and land reclamation (Fig. 2.19) (site sub-phases 1207a, b; 1208a, b)

During the early 16th century there were large-scale changes to the area of site 12. A major phase of channel engineering was undertaken, which involved the backfilling of the two medieval water channels in the area (8633 and 9149), and the cutting of a new channel some 16 m further west (channel 8634), linking the Minster Mill stream to the Back Brook (Fig. 2.19; the disused medieval channels are shown with a dotted outline). This extended the usable area on the Yield Hall Lane frontage and presumably created the configuration of channels that is visible on Speed's map of 1611. The medieval complex of hide-processing pits was decommissioned, and the pits backfilled. After a phase of

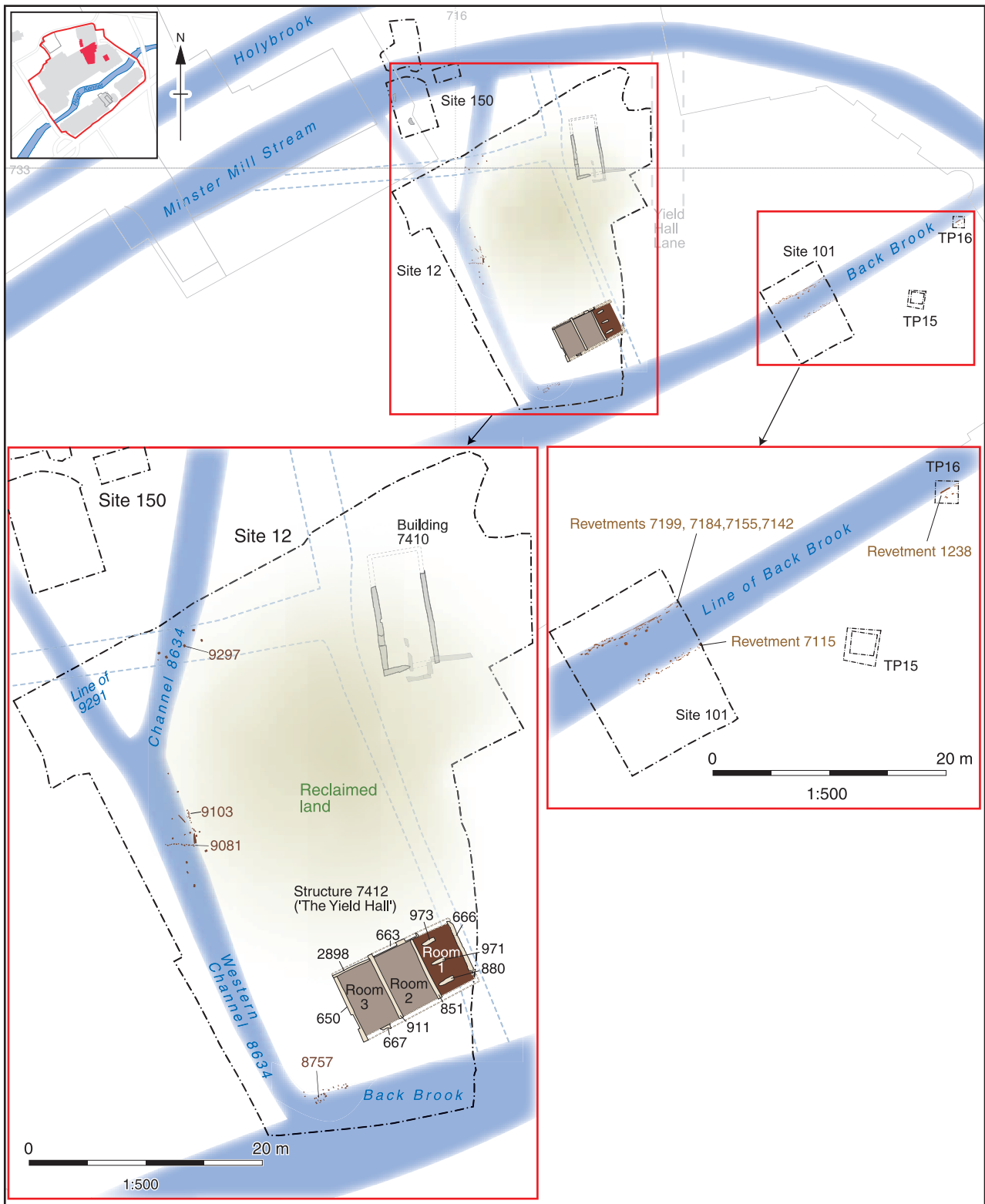


Fig. 2.19 Site 12: plan showing the early-mid 16th-century redevelopment of the area, with new channels and primary phase of the Yield Hall; Site 101: revetment of the Back Brook (Project Phase 6)



Plate 2.30 Site 12: view looking NE of revetment 9103 marking the eastern bank of channel 8634 (Project Phase 6)

dumping to raise the land, a new building was constructed on the reclaimed site; this building is the one that subsequently came to be known as the Yield Hall, and with numerous adaptations and extensions it survived on this site until it was demolished in 1935.

A new channel was dug from the Minster Mill stream to the Back Brook (channel 9291), replacing the old bypass channel (channel 8633), which was filled in. The fills of channel 8633 contained dumped deposits of a variety of materials including large dumps of leather and fragments of knitting, the craft of which was established in England during the 15th century (see Chapters 5 and 9).

A new channel (8634) was also created to bring water from downstream of the Minster Mill. It was at least 1 m deep, but of unknown width. Its construction is datable to the early 16th century, as it post-dated many late 15th-century deposits and its lowest fills were early 16th-century in date.

These changes resulted in the creation of a new western channel (also called channel 8634), some 20 m to the west of the medieval alignment. Its banks were supported with a post and plank structure (revetment 9103 (Plate 2.30)) comprising at least 12 vertical timbers and at least one horizontal plank. A further revetment was also identified at the confluence of the new channel with the Back Brook, where a series of posts and planks (8757) were found; these were not directly dated, but their position suggests they were contemporary with the channel cut.

Several timber structures were associated with the new channel. To the north, four square timber

posts (9297) were aligned across the width of the channel. These are unlikely to have contributed to water control as they were not at a junction and it is more likely that they functioned as some sort of fish trap. A similar alignment of 17 timbers (9081, Plate 2.31) was positioned SE-NW across the channel in a more southerly position and may have functioned as another trap. Less than 1 m to the north of structure 9081 (phase 1207a), and post-dating it was an additional timber structure comprising three rectangular timber posts tapered to a point and orientated E-W across the channel (9091). This also post-dated many channel fills including some dated to 1530+. It may have been associated with management of the flow of water in the channel.

The redundant medieval man-made channel (channel 9149) was infilled with all sorts of industrial refuse, including a deposit of bell mould (8644). A brick conduit found in the area (9683, see Smith, Chapter 8 below) may have been an early attempt to deal with ensuing drainage problems after the channel had gone out of use. Following the realignment and backfilling of the channels, the whole area was reclaimed. The hide-processing pits of earlier phases were filled in with stable waste and subsequently with general rubbish such as tile, bone, shell, charcoal and pottery dating to the late 15th to early 16th centuries.

Material was then dumped across the whole area to raise and level the ground surface; this contained frequent occupation debris such as broken ceramic building material, oyster shells, charcoal, chalk and stones. Several contexts contained large dumps of



Plate 2.31 Site 12: view looking S of a timber fish trap built across the new channel (8634) (Project Phase 6)

waste leather (Mould, Chapters 5 and 9, below) excavated both under watching brief conditions and on site 12 (8395). This material was deposited at the edge of the disused bypass channel 8633 and included fragments with hair still attached, which suggests that tanning was taking place nearby. Amongst the general trade detritus and hard core were occasional fragments of much more unusual objects, including a late 13th- to early 14th-century colourless stemmed goblet, unique to this country and probably originating in France (Willmott, Chapters 5 and 9, below). The likeliest point of origin for such a vessel is the abbey itself, and it is possible that some of this material came from the abbey after its dissolution in 1539. Two of the levelling deposits contained pottery dating to the late 15th and early 16th century or later (1475+ and 1520+).

The occupation and use of the area in the first half of the 16th century (Fig. 2.19)
(site sub-phase 1207b)

Construction of the Yield Hall

The first elements of the building that subsequently became known as the Yield Hall (Building 7412) were constructed in the very southern part of the reclaimed land, overlying the now disused medieval channel and tanning pits. The underlying deposits date the construction of the building to some time after 1520 but probably before the mid 16th century, given the dating of the first phase of

extensions (see below). For ease of reference, this building will be called the Yield Hall from this point, although this name was only applied to it at a much later date. The building underwent several phases of expansion and rebuilding throughout its life, and seems to have been badly affected by subsidence. Its 16th-century development is set out below; from the 17th century onwards its development can be followed in Chapter 3.

The first phase of the Yield Hall measured 11 m by 6.5 m (Fig. 2.19) and comprised four external walls (663 and 2298 on the north; 667 on the south; 650 on the west and 666 on the east), and two internal walls (911 and 851) dividing the building into three rooms (Rooms 1, 2 and 3). The walls were of flint stub construction, 0.3 m wide, and the external walls had been topped with a layer of tiles to support timber framing above (seen on walls 650, 2898 and 666). The walls varied slightly in their surface treatments; walls 911 and 2898 were rendered on both faces while wall 663 was rendered on the outer (north) face only. No evidence survived of rendering on any other walls. A doorway existed in the south-eastern corner of the building in wall 666, forming an entrance to the building via Room 1.

Levelling deposits containing brick, tile, mortar, shell and bones were subsequently laid down within the building to raise the surface to beam level for the insertion of floors. Room 1 (the entrance room) was floored with wood, indicated by the presence of a series of E-W orientated linear beam slots containing wood fragments in the cut edges and evenly spaced across the bay (880, 971,



Plate 2.32 Site 12, Building 7411: view looking W of wall 9482 showing the mixture of building materials used (Project Phase 6)

973). They each measured approximately 1.3 x 0.25 x 0.15 m. There was no evidence for earlier floor surfaces, which suggests this timber floor was contemporary with the construction of the building. Room 3 seems to have had a compacted earth floor (2763) while no evidence of the floor survived in Room 2. Immediately above the floor in Room 3 was an occupation deposit 692 which contained much in the way of debris such as broken pins and other copper alloy fragments.

Building 7410/7411

Some changes to Buildings 7410/7411 seem to have taken place during the first half of the 16th century, but the evidence is very fragmentary. The 15th-century south wall of the east extension (Building 7411; wall 9566) appears to have been rebuilt, using ceramic building material and flint, as wall 9482 (Fig. 2.20; Plate 2.32). A short length of uncoursed flint and tile stub-wall (9571) was recorded south of

the eastern extension; in line with this wall, and 1 m to the north was a flint post-pad (9572) (Fig. 2.20). The function of these alterations is unknown.

Mid to late 16th century (Fig. 2.20)

The Yield Hall (site sub-phase 1208a)

During the second half of the 16th century, the Yield Hall was extended with the addition of a new room to the west and a corridor running the length of the south side (Fig. 2.20). The corridor (16.5 by 2 m) appears to have been constructed first, and was composed of walls of a mixture of brick, flint, tile and stone set in mortar and roughly coursed. The southern wall of the corridor appears to have been constructed first and was built in a construction trench that contained pottery dating it to the mid 16th century (2700, 2817). The new internal space

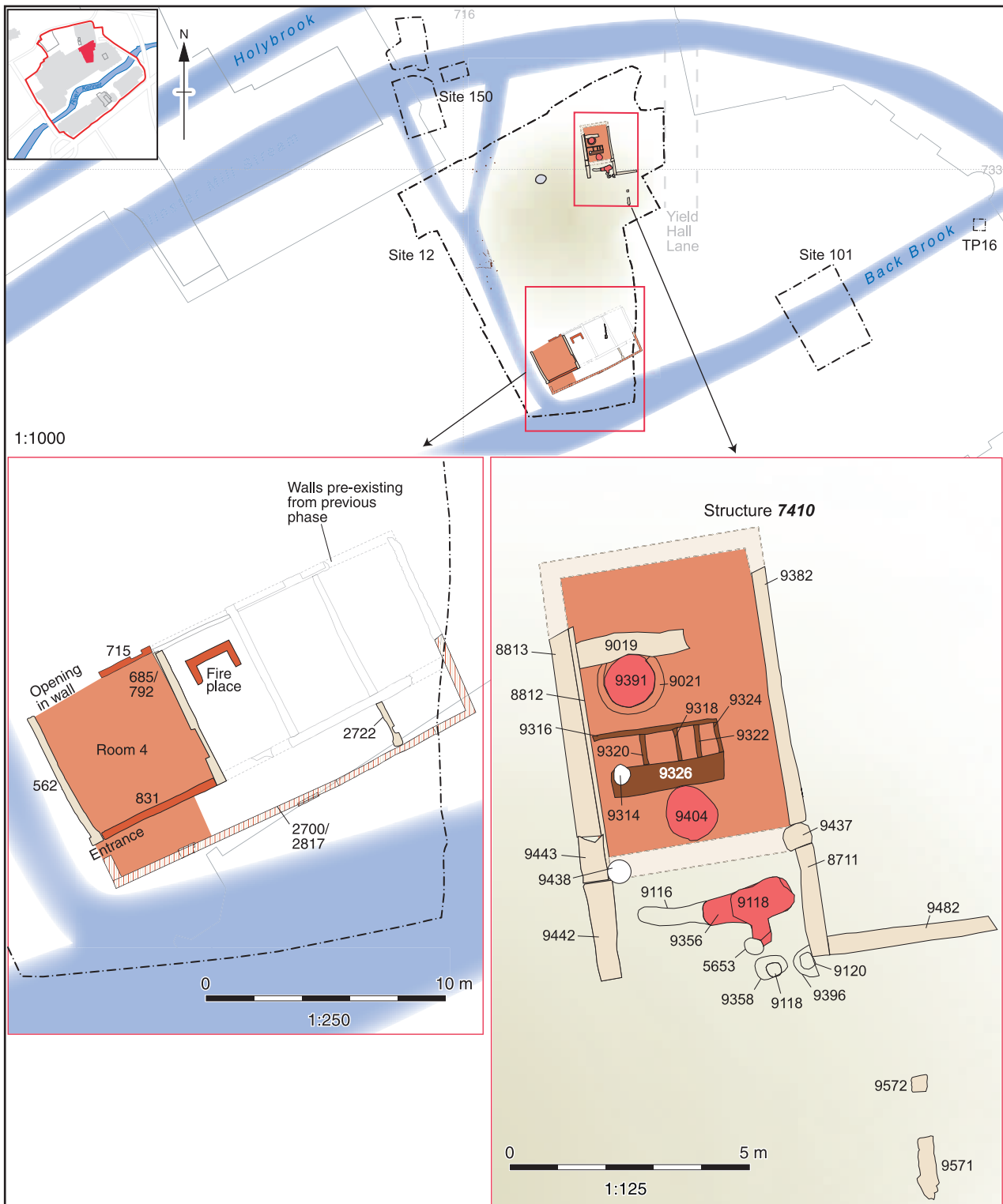


Fig. 2.20 Site 12: later 16th-century extensions to the Yield Hall, and modifications to Buildings 7410/7411 (Project Phase 6)

created to the north of this wall was levelled with broken ceramic building material and gravel (2773) and the remaining corridor walls (2812) and those of Room 4 were built upon this deposit.

The new room, Room 4, was added to the west of Room 3. It measured 5.6 x 5.7 m. Its external walls were of differing construction; the west wall (562) was built of uncoursed flints, and the north of coursed brick. The former external west wall of the building (wall 650), which had previously been a flint stub wall with timber framing above, was rebuilt in coursed brick (685/792) to form the partition between Room 3 and the new Room 4. Wall 831, of broken bricks in a sandy mortar, divided Room 4 from the corridor. The northern wall of Room 4 (715) was heavily truncated by later activity, but the evidence indicates that there was a wide opening within the wall.

The variety of materials employed in the construction of Room 4 and the corridor suggests that it may have been a staged construction, with walls being added as the resources became available, probably locally. Much of the building material may have been obtained from demolished buildings elsewhere, including those of the former Reading Abbey (dissolved in 1539), which would also account for the mixed nature of the building materials used.

The west end of the corridor contained an entranceway and this may correspond to the blocking of the doorway in the eastern end wall (666). An internal division within the corridor and

in line with the dividing wall between Rooms 1 and 2 was also probably inserted at this time (2722). It seems most likely to have functioned as a partition and possible support for stairs to a loft level.

At the same time as the extension to the building, a large U-shaped brick fireplace measuring 2 m x 1.1 m was inserted into Room 3 (2821, 2820) (Plate 2.33). The foundations of this hearth (695) comprised flint nodules set in mortar above which a layer of tile and mortar supported a brick fireplace (of which one course survived). The fireplace is not directly dated but the presence of an occupation deposit and possible early floor surface underlying it suggests that the fireplace was not an original feature of the room. A compact mortar floor surface (2743) was laid in and around the fireplace and replaced the earlier compacted earthen floor.

The western end of the corridor (770) and the whole of Room 4 (708) were floored with brick, although only the imprinted mortar bedding survived. At this time the wooden floor surface was removed from Room 1 and it was floored with a compact very pale yellow mortar (634); similar floors appear to have been laid in Rooms 2 and 3.

The function of this building is unclear but its location on the floodplain, an area used primarily for industry, indicates that although it may have functioned as a dwelling place, it is likely to have been in addition to its function as a workplace. The presence of a substantial hearth in Room 3 and a wide open entrance to Room 4, suggests some sort of industrial function to the building.



Plate 2.33 Site 12: view looking NW showing the remains of fireplace 2821 added to Room 3 of the Yield Hall (Project Phase 6)

Building 7410
(site sub-phase 1208b)

During the later 16th century, the whole area associated with Building 7410 was levelled and the building was substantially altered. The walls were mostly rebuilt and features of an industrial nature including a possible vat base and two hearths were constructed, both inside and outside the building (Fig. 2.20).

The ground was stabilised with dumped material (50% of which was flint) and then levelled with brickearth deposits. This episode probably dated to the latter half of the 16th century as the associated dumps and levelling layers significantly post-dated deposits of mid 16th-century date. The east wall of the building (formerly 9367) was rebuilt in two sections (9382 and 8711), north and south of the south wall (see below). Both new sections were constructed from roughly coursed flint nodules but 8711 included tile courses and was capped by a double layer of red tile, which would have provided a base for a timber framed structure above. The west wall of the building retained the earlier walls 9442/3 at its southern end, with a rebuild to the north (wall 8812) constructed of regularly coursed tiles and a few flints. A large irregularly coursed wall (8813) of crudely knapped flint nodules was built along the west side of wall 8812, probably in order to strengthen the west side of the building, which lay along the edge of the infilled former channel course. The central section of the south wall had been robbed

out, so its form was unknown; the west and east ends survived where they butted the west and east walls, and suggest that the south wall was of similar flint and tile construction. Modern foundations had destroyed the remains of the building to the north.

Inside Building 7410 were a number of industrial features including a timber structure comprising a series of beam slots (9316, 9318, 9320, 9322, 9324 and 9326) and a posthole (9314). Two long beam slots (9316 and 9326) were orientated E-W and measured 2.25 x 0.17 x 0.12 m and 2.5 m x 0.6 m. The remaining four beam slots were positioned between these and at right-angles to them. A posthole located in the south-western part of this structure contained pottery of mid 16th-century or later date confirming that the first structures built on the brickearth had an earliest mid 16th century date (9314).

The timber structure was associated with two hearths, one just to the north and one to the south. Hearth 9391 was a large circular tile feature (9021) consisting of four surviving courses set in brick earth and measuring 1.35 m diameter (Plate 2.34). A possible working surface of tiles, 3 tiles wide and 17 tiles long, was positioned across the northern edge of the hearth (9019). This floor was of the same build as wall 8812. A further smaller hearth (9404) was positioned immediately to the south of the timber structure and the very close proximity of the three features suggests their function was linked. The presence of large circular hearths for heating and an associated platform may indicate that these structures were part of a dyehouse with



Plate 2.34 Site 12: view looking W showing partially excavated hearth/vat base 9391 in Building 7410 (Project Phase 6)

dye being heated over the two hearths and the cloth or yarn being processed between them.

In addition to the internal features of Building 7410, a substantial hearth or furnace (9116, 9356) was constructed in the subsidiary area to the south of the main building. This area appears to have been timber-framed above a flint and tile base (see wall 8711, above), and there may have been a timber wall across its south end. The hearth or furnace survived as a linear feature 3 m in total length and 0.6 m wide with a N-S arm 1.2 m long. There was an area of burning at its east end. A number of postholes seem likely to have been associated.

A total of three coins and four jettons of broadly 14th- to 15th-century date were found associated with surfaces and make-up layers of this phase. Although all must clearly be redeposited, the composition of the group is very similar to those of sub-phase 1206b, suggesting a common source.

Site 101: Project Phases 3 and 4: mid 12th to late 14th century

The Back Brook

(site sub-phases 10101b, 10102a)

At the base of the excavated sequence in site 101 lay a wide shallow channel of the river Kennet containing waterlain deposits, a precursor of the channel later known as the Back Brook (Fig. 2.1). At this stage, there was no evidence for organised management or revetment of this channel. It was orientated NE-SW but its precise dimensions were unknown. To the south, between the channel and the main course of the Kennet, was an island composed of clay layers (7292, 7324, 7330) containing many wood fragments. Extensive mixing had taken place in the channel between the latest silty gravel deposits (7291, 7290, 7113) and the early fills of the formalised Back Brook that overlay them, but the majority of the pottery (94 of 102 sherds) suggests that the natural channel was silting during the 12th century. A wooden drain and a boardwalk of probable 12th-century date were found on the northern side of the channel and represent the earliest activity identified (see Fig. 2.13). The drain (7383) emptied into the channel and was made from a single timber (7095) aligned SE-NW, from which the heartwood had been removed to create an item with a flat base and raised sides measuring 0.5 x 0.28 m by 0.15 m (see Allen, Chapter 8). The top of the drain was covered with two slats of oak (7248 and 7249) and adjacent to it was a pile-driven square post which may have been associated.

A further timber structure (7098) may have formed part of a boardwalk at the water's edge. It consisted of a timber plank (7099) measuring 0.21 x 0.15 x 0.03 m, which was deliberately angled up to the north at 30 degrees. A large square shanked post (7100) measuring 0.24 m x 0.045 x 0.055 m, was driven into the gravel fill 7113 through a hole in the plank. The southern end of this plank (which was

no longer present) was secured to the gravel with 4 large pegs (7101-7104). The angled plank probably acted as a brace for a large upright to the north (outside the limits of excavation) supporting the boardwalk. Both these structures overlay 12th-century deposit 7113 and were sealed by a thick organic clay of mid 13th-century or later date (7090), suggesting that they were of late 12th- or early 13th-century date.

Over time, the early Back Brook channel gradually migrated, or was moved, southwards. The first clear revetment structure associated with the channel (7271, site sub-phase 10102b; Fig. 2.13) was approximately 1.5 m further south than the drain and boardwalk, which marked the channel edge at an earlier point. The surviving elements of the revetment consisted of 70 mainly roundwood timber posts measuring approximately 0.10 m in diameter and 0.90 m in length. They were orientated east-west along the north bank of the channel. The revetment was not directly dated but the silts overlying the drain and boardwalk were of mid 13th-century date or later, implying that the north bank of the channel had moved southwards by this date.

A later revetment of the north bank of the channel (see Project Phase 5, below) was identified a further 1 m to the south, and this revetment was dated to the late 15th century (revetment A, see below). The north bank of the Back Brook must therefore have been in the position indicated by revetment 7271 at some point between the mid 13th and late 15th century. Timber posts identified to the east in TPs 82 and 84 aligned with revetment 7271, and may represent the same phase of revetting, although they were not directly dated.

Site 101: Project Phase 5: 15th century

Late medieval structures

(site sub-phase 10103)

Following the early wooden structures of phase 10102 there was a long period with no dated activity on the banks of the Back Brook, although the channel itself had migrated further south. During the late 15th century, the area saw renewed activity with the installation of a major revetment along the northern bank and the possible construction of a fish holding tank on the southern side (see Fig. 2.18).

The northern channel bank was strengthened with a series of 31 large revetment posts and horizontal planking (Revetment A), and associated dumped material. The posts were positioned in shallow scoops before being pile driven through the gravel channel fill 7113 (phase 10101) and surrounded by a sandy silt deposit containing flint, tile, and pottery dating the construction to the late 15th century (Fig. 2.21). A large rubbish pit (7210, Phase 10103c, not illustrated) was cut and filled at the same time (the lowest fill dated to the late 15th century) and represents the activity associated with

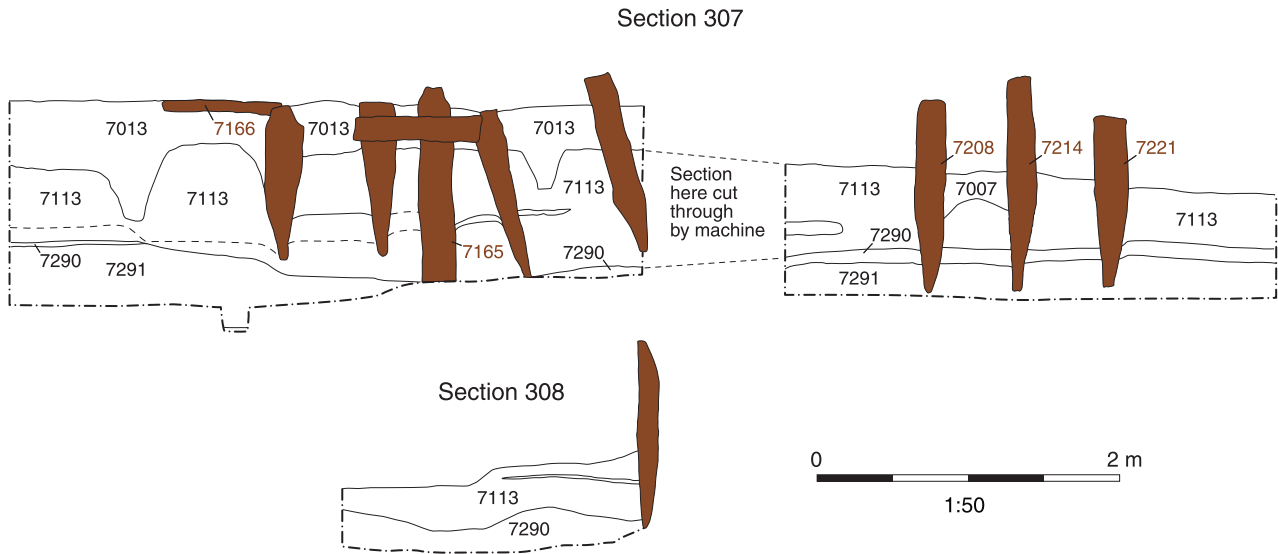


Fig. 2.21 Site 101: South facing section 307 showing construction of Back Brook revetment A

the construction of Revetment A. It measured at least 1.03 x 2.3 x 0.8 m (though was not fully visible in plan) and was deliberately backfilled with various rubbish deposits of charcoal, bone, mortar, tiles and leather.

The southern side of the channel was not revetted at this time and continued to suffer from periodic flooding during the 15th century. Use was made of the available water on that side however, with the construction of a square, timber post/plank structure measuring 2 m x 2 m (7181), which may have functioned as a fish holding tank. Three sides of the tank were made of a post and plank construction while the fourth (northern) side comprised a small segment of wattle fencing (7121) made from approximately 20 pieces of coppiced willow each 0.4 m long woven alternately around upright slats. The wooden sides consisted of 14 timber posts driven through the natural clay, that measured approximately 0.5 m long x 0.2 m across with the exception of four posts in one corner which were each a metre in length. These secured planks laid directly against a vertical construction cut seen on the eastern, western and southern sides of the feature. The planks (7370, 7372, 7374, 7379) were approximately 0.3 m–0.4 m wide and over a metre long and they were waterproofed on the outside with pitch and horsehair.

The natural clay floor of the structure sloped down 30 degrees towards the channel. In the centre of the clay floor a 0.2 m square cut (7381) extended vertically approximately 0.46 m to the water table thereby creating a 'spring'. Following removal of the deposit filling the structure, a constant flow of clean water was produced while the area remained exposed. This, combined with the partially submerged wattle side acting as an outflow, suggests the structure was a fish holding tank or served some industrial purpose. Later deposits to

the west of the structure which butted its timbers were alluvial and indicate that the structure was partially submerged during use (up to 0.5 m below the alluvial deposits). The date of the structure is unclear as it overlay sediments which have not been securely dated but the dumped material which filled the structure (7182, phase 10106a) had a TPQ of 1600+ (3 sherds). This fill also contained a rare example of sackcloth made from plant fibres (SF 1327, Walton-Rogers, Chapter 9, below). This may have been imported from India or south-east Asia but an exact match could not be found. It was probably used for the transport of goods to and from the site.

Unfortunately, a late medieval date for this structure is brought into doubt by 19th-century map evidence which reveals an osier pit in the same location. There is no indication that an earlier feature was reused or recut and it is therefore difficult to assign this feature with any confidence to either phase although for discussion purposes it has been assigned to the current phase.

Further activity near the south bank of the Back Brook was identified in TP 15 (Phase 10103d). This activity consisted of a possible drainage ditch and boardwalk across the silts, neither of was directly dated but which were sealed by silts containing shoes of mid 16th-century design (1126, phase 10104c) suggesting they were contemporary with Revetment A.

The drainage ditch was located 6 m south of the river channel and was only partially exposed but it was orientated north-south and the base of the cut sloped southwards into a deeper section, possibly a sump. Associated with this possible drainage ditch were a beam slot and timbers (1130, 1131, 1127) which appeared to form a boardwalk across the silts. The main timber (1127, partially exposed) was supported by a further timber (1142) at its southern

end which protruded 0.25 m from underneath it. It was also secured at its northern end through a slot with a square cut peg measuring 0.1 m across (1128). Eight timber piles (1118-1123, 1143, 1144) were also visible and were probably associated but their exact function is difficult to interpret. One of the timbers (1121) showed signs that it had supported a horizontal plank and they may all have been part of some sort of bridge or walkway across the wet ground.

Site 101: Project Phase 6: 16th century

The cutting of the Back Brook
(site sub-phases 10104, 10105a)

Between the late 15th century and the mid 16th century, the initial cut of the formalised channel historically known as the Back Brook was made (10104a). This was a large E-W linear feature, 12 m wide and at least 1.5 m deep (but not fully excavated). After a period of silting (phase 10104b) of unknown, but probably short duration the channel was revetted on both sides (phase 10105a; Fig. 2.19; Plate 2.35). The northern revetment contained two timbers sampled for dendrochronology, one (sample 7216) giving a reduced felling date range of 1537-41 (see Miles, Chapter 11). The correspondence between this date range and the dating of the major channel realignments on site 12 (see above) suggests that they may have formed part of the same operation.

Most of the timbers identified were posts made from lengths of quartered timber but two planks were also recovered. The revetment on the southern side of the channel (7115) comprised 42 posts surrounded by a rubble fill containing pottery of mid 15th-century or later date. Further evidence for the revetting of the southern side of the channel was also identified in TP 16 approximately 20 m to the east (Phase 10105b). This consisted of a line of 11 substantial squared timber posts or smaller roundwood posts and two horizontal planks (revetment 1238) which aligned with 7115 in site 101. No dating evidence was directly associated with it although it dates to the 17th century or earlier because it was superseded by another revetment at about 1700 (phase 10108b below). Further posts suggest additional phases of revetting not identified on site 101.

**SOUTH OF THE KENNET: SITE 300
(ST GILES MILL)**

The area south of the Kennet was the subject of a separate phase of investigations in 1998. Four trenches were targeted on the known location of the historical St Giles Mill: site 300 (including Test Pit 301) and Test Pits 302, 303 and 304. Elsewhere, a watching brief was carried out on engineering and construction works across the width of the floodplain (various test pits, see Figs 1.3 and 2.22a) to investigate the development of channels



Plate 2.35 Site 101: view looking NE of 16th-century revetments of the northern bank of the Back Brook (Project Phase 6)

upstream and downstream of the mill, and the reclamation of land on the London Street frontage at the east end of the site. The preservation of wooden structures in the vicinity of the mill and mill streams was excellent, and allowed the recovery of unusual detail from a variety of elements of successive mill structures, supported by a large number of good dendrochronological dates. A discussion of the Reading mills can be found in Chapter 5, below.

Project Phases 2 and 3: mid 11th to mid 13th century

Fragmentary evidence for the first mill structure and its immediate landscape (Figs 2.22, 3.14) (site sub-phase 3001a)

The excavations recovered evidence from the St Giles Mill site for the existence of managed channels and a pond, and for the presence of a watermill, by the late 11th or early 12th century. No evidence for the mill building or the location of its waterwheel, or for the channels carrying the water to and through the mill, was directly observed, and their precise location at this date remains conjectural. The features observed in the excavations are thought to represent successive early bypass channels leading surplus water northwards away from the mill and back towards the main channel of the Kennet. A man-made clay bank consolidated with plant matting seen in Test Pit 302 is likely to mark the southern edge of the tailrace channel, which carried water away from the mill after it had passed through the wheel.

Within site 300 the southern and eastern edges of a large irregularly shaped feature, 13448, interpreted as a possible pond, were cut into the natural alluvial/fluvial silts and clays. The northern edge of an east-west channel (13813), and the western edge of a possible north-south channel (13949), ran from its downstream end. A number of timber stake and post alignments (none of which could be dated) appeared to be associated with these features and probably represent the remains of bank revetments. A channel leading to the west side of the possible pond was observed in TP 303. The south side of the channel was strengthened with a timber revetment. Although the revetment may not have been constructed until the late 13th century (see Project Phase 4, below), the channel itself must have been contemporary with the pond.

The near-complete remains of an oak wheel 13385 (Fig. 5.51; Plate 2.36) rested on a gravel deposit (13444) at the base of a sequence of waterlain silts within the pond. This object is a pitwheel from the gearing of a watermill. It would have been mounted on the horizontal axle that was turned by the waterwheel, and would have driven the 'lantern pinion' attached to a vertical shaft on which the millstones were mounted (see Chapter 5,

below). The wheel's outer diameter measured 1.35 m (4 1/2 ft), and was constructed from four separate but jointed segments of curved oak known as felloes, which were 0.15–0.18 m (or 6-7 in) square. On the inner face of the wheel were four empty joints spaced at 90° intervals around the wheel; these would have held the four spokes that provided bracing to a central hub around the axle. Thirty-six large, empty holes were located equally spaced around the wheel and drilled from the centre of one flat face through to the other. These holes would have housed the driving teeth or cogs. It can be compared in both size and form to the single felloe found at Bordesley Abbey which, like the Reading example, has headed pegs with small wedges hammered in to one end to tighten the joint (Astill 1993, 216-17). The pitwheel showed signs of use and failure, suggesting that it had been deliberately discarded into the pond. Dating evidence from the fills of the pond suggest that it filled up from as early as the late 11th century through the 12th century.

The technology of the wheel, combined with the dating evidence from the pond fills, suggests the object can be dated to the 12th century, and probably to the period AD 1100 -1150. Analysis of the silting sequence within the pond indicates that the water it contained was fairly clean and slow-flowing, with occasional plants present around its banks. There was no evidence for any significant build-up of organic deposits or rotting vegetation at the edge of the feature. Occasional cereal waste (rye) indicates possible settlement or milling activity nearby.

To the south of the pond and within the structural remains of the later mill of Project Phase 4 (see below), was a single timber pile (14041). This was dated by dendrochronology to c 1131, ten years after the foundation of Reading Abbey (see Miles, Chapter 11). Although no other timbers could be dated to this phase it remains possible that other timbers in this area (assigned to site sub-phase 3002) were also contemporary.

In TP 302 to the south of site 300 a man-made clay bank orientated south-west to north-east was consolidated with layers of deliberately laid plant matting (Plate 2.37). This probably represents the southern bank of a man-made channel, which, from its location, seems likely to have been the tailrace channel of the mill, taking water away once it had turned the waterwheel.

Taken together this rather fragmentary but compelling evidence indicates a working mill of significant size on this site during the late 11th and early 12th century. This raises the strong probability that the position and course of the upstream feed channel or leat (later known as Mill Water) and the downstream channel that returned water to the river (later known as Mill Tail) had already been established. The first conclusive evidence of these features comes in the following Project Phase.



Plate 2.36 Site 300: view looking SW of the fully excavated remains of (above) complete pit wheel 13385, with (below) a detail showing the joint between two of its felloes (Project Phase 2)





Plate 2.37 Site 300, Test Pit 302: view looking SE of the plant matting placed to consolidate the south bank of the mill tail (Project Phase 2)

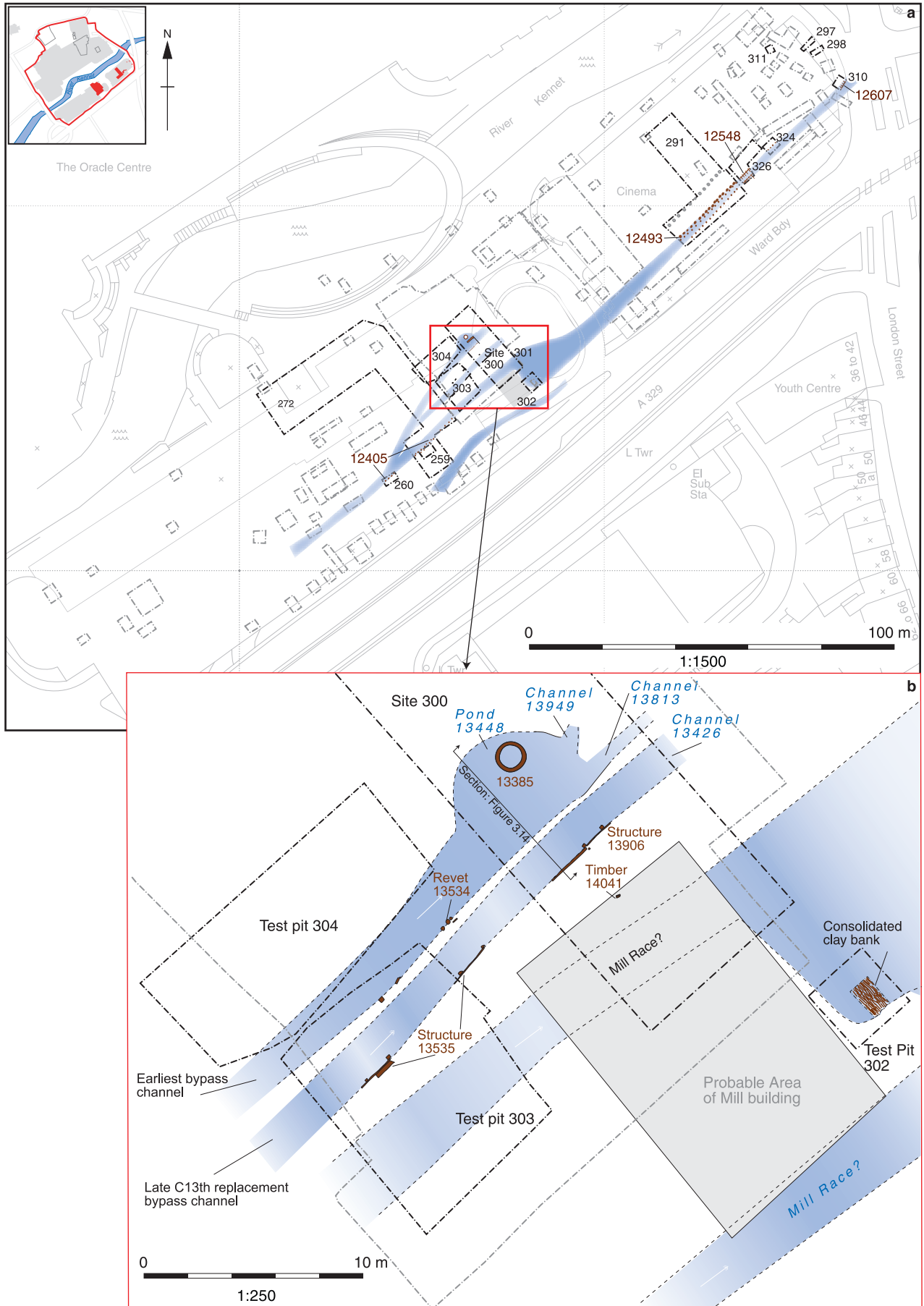
Project Phase 4: mid 13th to late 14th century

St Giles Mill: maintenance of the old mill, channel engineering and development on the London Street frontage (Figs 2.22, 3.14)
(site sub-phases 3001b, 3002a,b)

During the late 13th century the old mill seems to have been approaching the end of its useful life. The pond was silting up, and a new channel was cut immediately to the south, probably intended as a replacement bypass channel to ensure that surplus water continued to be carried away from the mill and returned to the Kennet. Evidence for this channel, which was lined with timber revetments, was seen within TP 303 and site 300 (Fig. 2.22b). Upstream, what was probably the revetted south side of the mill leat, bringing water from the Kennet towards the mill, was recorded in TPs 259, 260 and 272 (Fig. 2.22a). Downstream, evidence was

recorded for the maintenance and revetment of the mill tailrace channel. The existence of a tailrace channel was inferred in Project Phases 2-3 (above) from the presence of a man-made reinforced clay bank in TP 302. In Project Phase 4, a channel lined with post and plank revetments was traced downstream as far as 80 m from the site of the mill itself (Fig. 2.22a).

London Street, incorporating a new bridge over the Kennet, had been laid out by the abbey during the late 12th century as part of a deliberate attempt to divert trade, from the area of the old Minster to a new market outside its own west gate (see Chapter 1, above). London Street was laid out with burgage plots to either side, in order to attract new tenants and raise the abbey's rent revenues. Plots along the London Street frontage would have backed onto the floodplain, offering all the advantages of access to its water resources. This probably attracted crafts and trades that needed ample supplies of water into



the area. Although the London Street frontages were not subject to controlled excavation during the project, the watching brief on the east side of the project area, adjacent to London Street, found evidence for this occupation and exploitation of the floodplain.

In the immediate vicinity of the mill

In TP 303, immediately upstream from the position of the mill, the southern side of a channel that led to the pond (described in sub-phase 3001a) was associated with a simple post and plank revetment 13534. A number of these timbers yielded tree-ring dates but only plank 13533, which dated to AD1257-77, proved to belong to this phase. This may represent the primary attempt to strengthen and formalise the earthen banks of an already existing channel. Other timbers gave early 14th-century date ranges (see below).

A second channel, orientated SW to NE and measuring 2 m wide and 0.8 m deep, was constructed between the south side of the silted-up pond and the area of the 12th-century timber pile (see above). The channel (cut 13426 on Fig. 3.14) was observed to run for a total of 19 metres, through TP 303 and site 300. The southern bank was strengthened and retained with a simple post and plank revetment structure, Structure 13535 in TP 303 and

Structure 13906 on Site 300 (Plate 2.38); the northern side however was left as a simple earthen bank with no associated timber-work. A number of different timbers belonging to the revetment yielded dendrochronological dates, which collectively suggest a construction date no earlier than 1277 (see Miles, Chapter 11, below). The channel then filled with fairly clean alluvial silts with generally low levels of organic remains; fragments of oak (see Allen, Chapter 8, below) may represent two separate episodes of construction waste entering the channel. Late 13th- and early 14th-century pottery from the fills of the channel concurs with the dendrochronological dates.

This channel was created in the last decades of the mill's life. The addition of this channel suggests remedial measures were necessary, perhaps due to failures in the old mill, or some change in the water regime in the valley floor.

In the surrounding landscape – upstream from the mill

In TPs 259, 260 and 272 a SW-NE orientated timber post alignment (Structure 12405) was identified, and ran for a distance of approximately 15 m (Fig. 2.22a). Although a number of timbers were sampled, none yielded a tree-ring date. This structure sat between the historically known northern and southern sides of the later mill leat called Mill

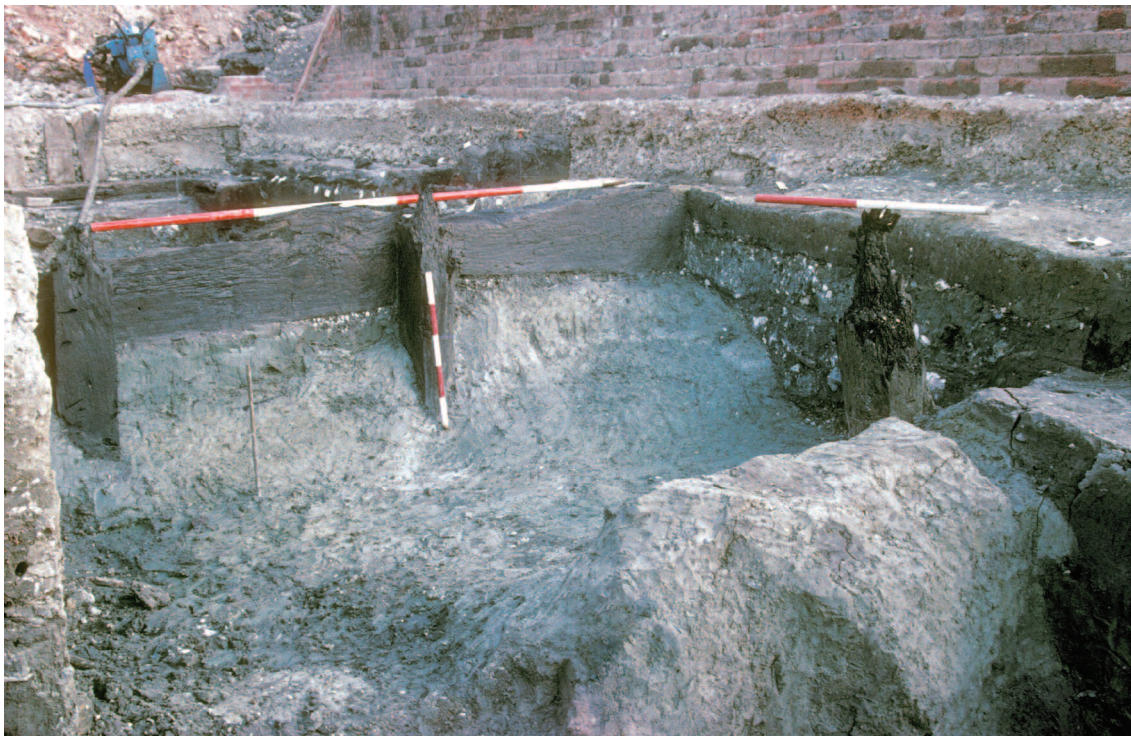
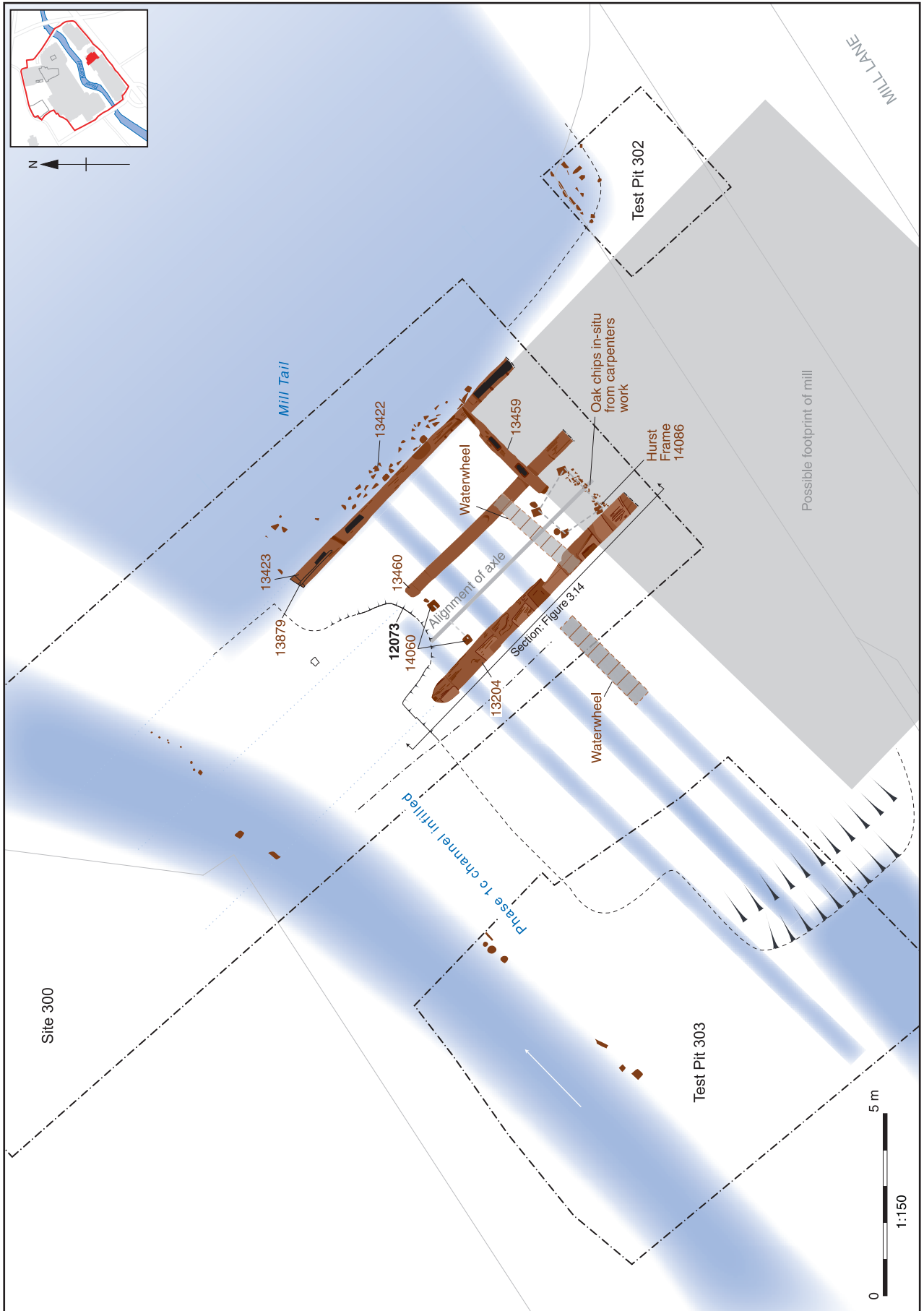


Plate 2.38 Site 300: view looking S of post and plank revetment 13906 of the southern bank of the bypass channel; the timbers were tree-ring dated to AD 1278 or after (Project Phase 4)

Fig. 2.22 (opposite) Site 300 and neighbouring test pits: showing the mill features of the 12th and 13th century in relation to the general plan of all investigations south of the Kennet showing the location of mill channels of the later 13th century (Project Phases 2–4)



Water, and therefore probably predates this water course. The remains were similar to the mill tailrace structure 12493 in test pit 291 (see below) and therefore it may belong to this phase and probably acted to retain the southern edge of the principal mill leat itself.

The surrounding landscape – downstream

Downstream, evidence was seen for a channel that was probably the mill tailrace channel, taking water away from the mill (Fig. 2.22a). An alignment of timber posts was revealed within four test pits, from west to east TPs 291 (structure 12493), 326 (Structure 12548), 324 (not numbered), 310 (structure 12607). In TP 326 the posts were associated with planks, and probably represent a revetment structure. These alignments were closely associated with the remains of a SW to NE orientated channel, which survived as a strip of dark organic silts overlying the natural blue-grey alluvial deposits (of site sub-phase 3000). Dendrochronological date ranges from the timbers in these structures span the duration of this phase (see Miles, Chapter 11, below). These date ranges indicate that re-used timbers were incorporated into the structures and/or that there was constant maintenance and repair of this landscape feature.

The London Road frontage

On the east side of the project area, to the north of the mill tailrace channel discussed above, was a concentration of activity attributed to this phase. A variety of features and deposits were recovered from TPs 297, 298 and 311 (test pits are located on Fig. 2.22a but the features are not illustrated). TP 311 located another SW-NE orientated timber alignment, 12492, dated by dendrochronology to the summer of AD 1272. Evidence from TPs 297 and 298 was fragmentary but indicates significant activity, including timber structures and other probable man-made channels that had filled with silts containing well preserved organic remains. This shows clear evidence for development of the valley floor associated with the rear of plots probably fronting onto London Street as it crossed the valley floor from the south towards the market area established by the abbey outside its west gate.

The new mill: 1308-1600 (Figs 2.23-2.24, 3.14) (site sub-phase 3002)

This phase has clear evidence for the construction, and subsequent use and modification of a substantial vertical watermill. Elements recovered included the timber ground frame, wheel races, mill tail and probable 'Hurst Frame'. These structural remains were constructed to the south of the former pond, which was re-dug. This phase has a number of sub-phases which represent later modifications to the

mill. There is also evidence for reclamation of the valley floor to the east of site. An explanation of mill terminology can be found in Chapter 5, below.

Construction c 1308+ (site sub-phase 3002a)

The northern and western edges of a very substantial cut, with near vertical sides, were revealed on site 300 and in TP 303 (Fig. 2.23; cut 12073 on Fig. 3.14). The cut measured over 7 m NW-SE by over 17 m SW-NE and was 1.0-1.2 m deep. The eastern and southern extents of the feature lay beyond the site limits. The northern edge had an irregularly shaped plan, which had been tailored to the differing lengths of the timber foundation elements it was designed to receive. Its primary fill (on site 300 and TP 303) was a substantial dump of large chalk and flint nodule rubble which acted to consolidate the soft alluvial silts at the base of the cut, and therefore formed a solid foundation deposit and construction platform (Plate 2.39). Within the construction cut on site 300, and set upon this foundation deposit, were the remains of a timber foundation for a vertical-wheel undershot water mill. The foundations comprised beams laid horizontally on the rubble foundation forming a large horizontal frame, and associated vertical posts and piles (Plate 2.40). The main horizontal frame, Structure 13461, consisted of three large beams set parallel and orientated NW-SE, that is, transversely or at right-angles, to the direction of waterflow (Fig. 2.23). These beams were all dated by dendrochronology; from west to east timber 13204 dated to 1302-?34; timber 13460 dated to 1289-1312; and timber 13423 dated to after 1267. A single ground beam, 13459, orientated SW-NE, did not date. Vacant mortise holes and other joints showed the positions of missing vertical and horizontal elements of the foundation and superstructure (Fig. 2.24). Ground beam 13204 had three large vacant slots or trenches in its upper face; two measured 0.55 m wide and the third 0.47 m wide; all had vertical sides and a flat base (Plate 2.41). Ground beam 13423 had two vertical posts jointed into the upper face of its northern end. These retained the remains of a large vertical plank 13879, dated to 1308-40 (Plate 2.42). Combining these tree-ring dates suggests the structure was built after 1308.

Vertical timbers that belong to this phase of construction were driven into the deposits at the base of the construction cut. In total there were three distinct groups. The two smaller groups (14060 to the north and 14086 to the south) sat opposite each other, and were located between the western (13204) and central (13460) transverse beams of the ground frame. Also present was a very large linear group of piles (13422) on the downstream side of the easternmost transverse ground beam (13423). The interpretation of these is discussed below.

Fig. 2.23 (opposite) Site 300, St Giles Mill: detailed plan of structural foundation timbers of the early 14th-century mill (Project Phase 4) and later additions (Project Phase 5)



Plate 2.39 Site 300: view looking NE showing oak chip waste lying on the chalk foundation deposit, as a result of the on-site trimming of the oak frame by carpenters during construction of the early 14th-century mill (Project Phase 4)

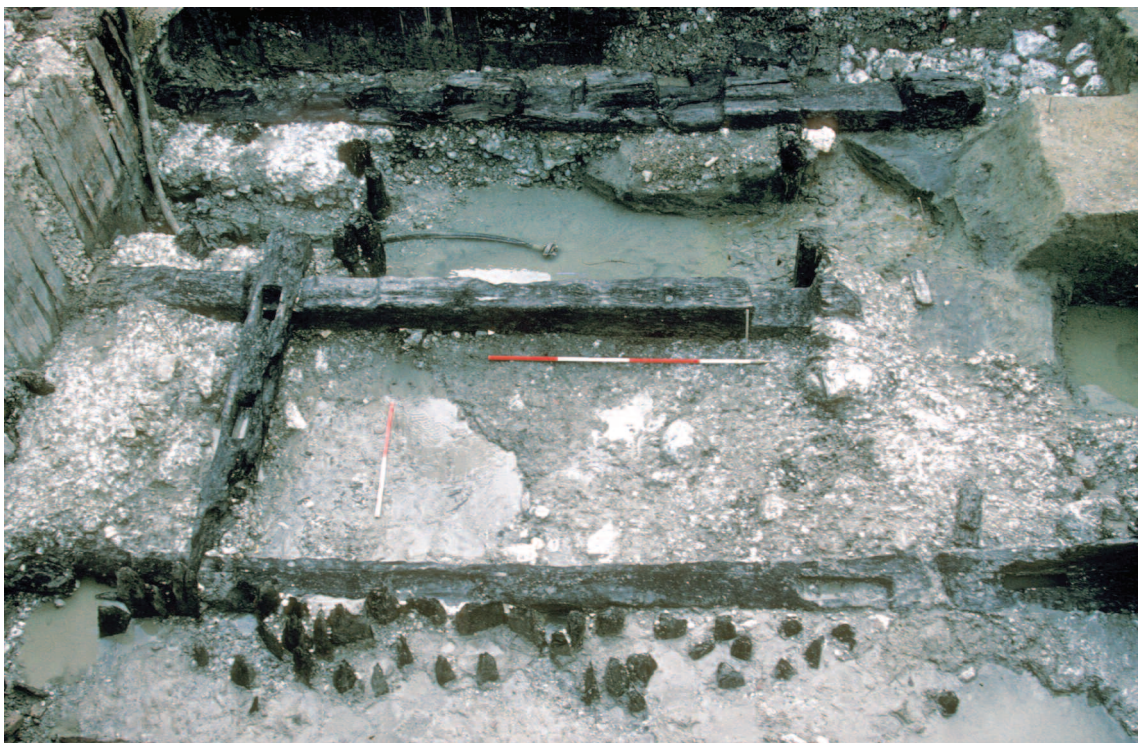


Plate 2.40 Site 300: general view looking SW of the foundation frame of the early 14th-century St. Giles Mill (Project Phase 4)

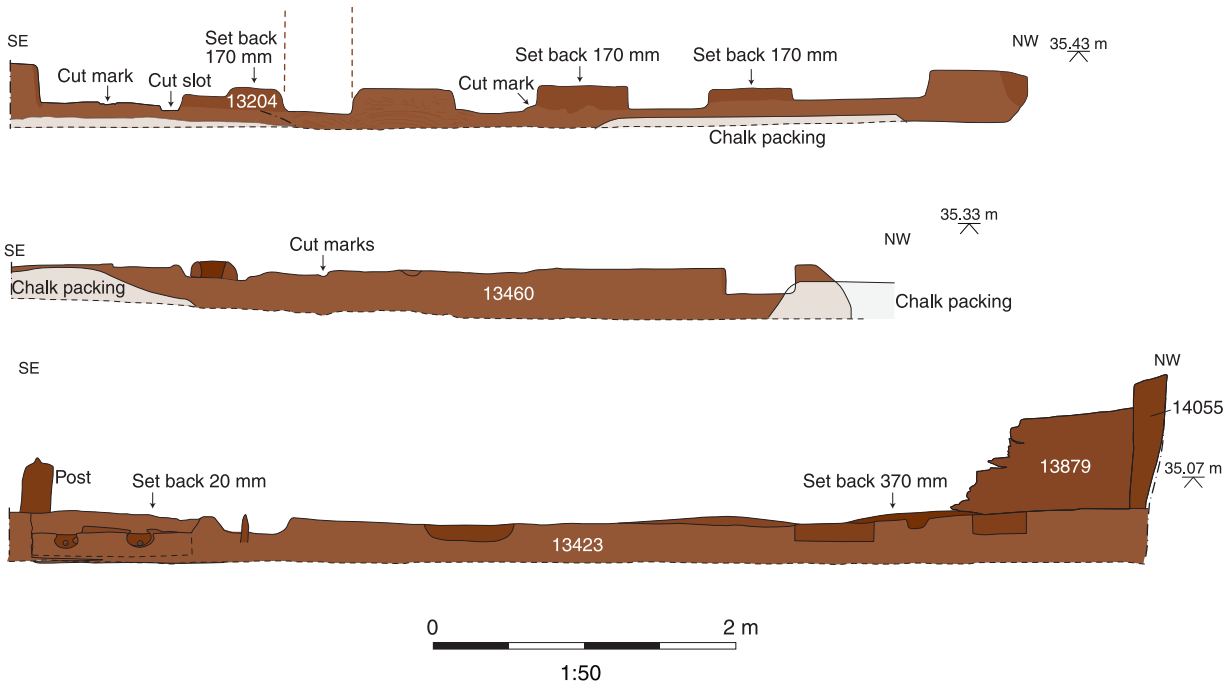


Fig. 2.24 Site 300, St Giles Mill: details of timber joints in the foundation timbers of the 14th-century mill (Project Phase 4)



Plate 2.41 Site 300: view looking SW showing the slots and jointing in beam 13204 which gave a dendrochronological date of AD 1302–?34 (Project Phase 4)



Plate 2.42 Site 300: view looking NW of beam 13423 showing vacant mortices for vertical posts and in-situ planking. The beam was tree-ring dated to after AD 1267 (Project Phase 4)

The ground beams allow us to reconstruct the probable form of this part of the mill, starting with beam 13204 at the upstream end. The three large trenches in the upper face of this timber probably each held timber plank-built trough-like chutes or channels, known as races. The upstream end of the races probably sat in these vacant trenches, directing the water into the races to drive one or possibly two waterwheels, which rotated within them (the third race possibly acted as a spillway or bypass channel or a fish/eel trap). The wheels may have rotated on the same axle (equally it is possible that another wheel sat in the central race upstream of the wheel in the southern race). This axle would have been supported on a Hurst Frame, the remains of which are probably represented by the two groups of opposing posts, 14086 and 14060, situated between the western and central ground beams. The trapezoidal arrangement of the southern group 14086 suggests that this would have been the location of the pitwheel.

Remains of a probable paddle/float (13967) from a water wheel were recovered from channel 14050 (Fig. 5.53 Nos 15-16) and were probably discarded during the demolition of the mill in the early 17th century. The paddle/float was 0.35 m wide and could have operated within a narrow wheel-race conforming to the dimensions of those described above.

The tailrace would have started from the position of the central ground beam, 13460, and the end of the tailrace corresponded to the easternmost ground beam, which would have formed the beginning of the tailrace channel.

These structures were probably outside a mill building that lay on the bank to the south, where the supports for the pitwheel, and therefore the mill stones, would have been located.

Once the timber structure described above had been installed, further chalk and clay waterproofing deposits were packed around it, and the area to the north (where the bypass channel of the late 13th century had been) was reclaimed as solid ground.

Immediately to the north of this reclaimed ground, the very early pond 13448 (see above) was re-established by cut 13297, and the post and plank revetment on the southern side of the channel leading to it had been repaired. Two of these posts were datable by dendrochronology: post 13643 dated to 1294-?1326 and post 13620 dated to 1317-1349.

The remains of a lantern wheel or pinion were found in TP 303, within the chalk and flint rubble foundations (context 13628). A lantern wheel was a gear wheel that meshed with the pitwheel and allowed rotation to move from the vertical turn of the horizontal main shaft to the horizontal turn of the vertical shaft (Fig. 5.52). It is possible that it worked with the pitwheel found in the nearby pond (see above).

The primary structural timbers laid on the rubble foundation deposit in TP 303 used forms of jointing and iron nails that suggest a post-medieval date (see Chapter 3, below). It is possible that remains of the early 14th-century mill frame did not extend into this part of the construction cut, or perhaps they had been removed altogether when the mill was demolished and rebuilt in the 17th century.

It is very likely that the rebuilding of the mill would have been associated with significant works on the channels both upstream and downstream. However, no evidence was recovered from the archaeological observations to confirm this. It is probable that the existing mill leat and mill tailrace channel described above continued in use. Maintenance of the mill tailrace channel during the later 14th century is shown by two timbers from revetment group 12493 originating from the same parent tree, which gave a felling date range of AD1358-90 (site sub-phase 3002b).

The Hurst Frame was repaired or strengthened in the middle of the 14th century, when a timber post, 13897, was added to the northern posthole group of the probable Hurst Frame, 14060. This timber, which would have supported the far end of the axle or main shaft, was dated to winter 1356/7 and suggests that remedial work was needed within 50 years of the initial construction.

The London Street frontage

From TPs 312, 314, 315, 333, and 349 in the north-east corner of the site a distinct horizon of dumping/reclamation was recognised. The deposits contained a significant amount of leather and other more common material such as pottery and building materials. The pottery suggests an extended period of similar activity in this area throughout the 15th century. These deposits were probably related to activities associated with properties fronting London Road, or utilising the water from the tailrace channel.

Project Phase 5: 1400-1500

Mid 15th century additions to the 14th-century mill (site sub-phases 3002b and 3002c)

A number of structures associated with the mill contained timbers that gave dendrochronological date ranges within this phase, suggesting that a series of strengthening works were necessary to the downstream end of the mill building, the downstream limit of the tail races that ran through it, and the reclaimed land upon which its northern element was constructed.

Immediately to the east of the mill ground beam 13423 (Fig. 2.23) was a group of piles, 13422. These acted to retain the beam, and are thought likely to be contemporary with the construction of the mill frame at the start of the 14th century. Three of these piles were tree-ring dated to the mid 15th century, however, suggesting that strengthening works were needed. Pile 13410 dated to 1457-74, whilst piles 13406 and 13413 both dated to winter 1459/60, as they both originated from the same tree (see Miles, Chapter 11). The group of timber piles extended to the south into TP 302 (Group 12235), although none dated to this phase.

Extending to the north of the above group of piles on site 300 was a north-south alignment of three timber posts/piles, two of which gave 15th-century dendrochronological dates: timbers 12122 and 12123 both originated from the same parent tree, with a date range of 1427-?59. These had been driven into the eastern side of the man-made tailrace channel bank, and acted to strengthen the side of this bank, rather than belonging to some form of superstructure that has not survived. A timber tie-back structure, Group 13298, may have anchored the retaining posts but the actual tying-back beam 13251 did not extend far enough to make this connection clear.

No evidence was recovered for activity datable to Project Phase 6, 1500-1600.

Project Phase 6: 1500-1600 continued repairs and maintenance (site sub-phase 3002d)

A small number of timbers were dated to this phase of activity, and attested to the maintenance of revetment structures associated with waterchannels rather than the mill building itself. A single timber from post and plank revetment 12540 dated to the first half of the 16th century giving a range of 1512-?44. Post revetment Group 12235 in Test Pit 302 was repaired or strengthened during the latter half of the 16th century, with the installation of two posts: 12236, which gave a felling date of winter 1549/50, and 12247 which yielded a slightly later felling date range of 1565-92.

