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Chapter 5

Discussion

by Steven Teague and Kate Brady

THE NATURAL LANDSCAPE AND EARLY ACTIVITY *by Steven Teague*

The location of the site within a former low-lying marshy area, prone to flooding from the adjacent River Avon, would have precluded settlement prior to the drainage of the area. The evidence from the present excavations suggests that such permanent settlement did not occur prior to the early 12th century (see below) and this supports the published results of other excavations within the historic southern suburb of Redcliffe and the Bristol Urban Archaeological Assessment (Alexander 2015; Baker *et al*. forthcoming; Jackson 2004). Indeed, it is likely that the area remained susceptible to flooding and overbank alluviation into the 12th century. Analysis of samples from an early recut of the Law Ditch (7497) and the early drainage ditches alongside the line of Temple Street identified diatom and pollen remains of freshwater and estuarine taxa that would suggest an upper salt marsh environment (Druce, Chapter 7). Furthermore, plant macrofossils from Period 1 drainage ditch 6003, which ran along the western side of Temple Sreet, included water plantain, spike-rush, sea arrowgrass and Spear-leaved/Babington's orache, all of which are indicative of wet ground, with sea arrowgrass and Spear-leaved/Babington's orache being particularly indicative of salt marsh and salt-sprayed grassland (Jones, Chapter 7).

The earliest feature seen in the excavations was the large ditch (7496) that ran across the western side of Area 1 (Figs 2.2-4 and 5.1). In its earliest form this ditch was at least 7m wide and 2.5m deep, and it was recut and enlarged to a width of around 12-15m at an early stage (4893, Fig. 2.4 and 7408, Fig. 2.5), although still apparently before the area was developed for occupation. It seems likely that around the time that the suburb was first developed the ditch was recut as a narrower channel, around 5m in width, with evidence for a wattle revetment surviving on its eastern bank. By the 14th century this ditch is identifiable in documentary sources as a Law Ditch, a term used locally for a property boundary, and it marked the boundary between the Redcliff Fee to the west and the Temple Fee to the east. The origin and dating of the earliest phases of this ditch were key research aims of the project, since it may have originated as part of a putative bridgehead on the south bank of the Avon that defended the south side of the bridge into the late Saxon town. It has been argued from documentary and cartographic evidence that the bridgehead can be identified with the area later known as Arthur's Fee (see Leech, DVD section 13 and Fig. 5.1), and the alignment of the ditch corresponds with the eastern limit of this area as described in a document of AD 1285. Mapping of the underlying topography of the area suggests that the ditch does not follow a course that would be expected for a natural channel and it is therefore definitely a man-made feature. It was dug into the top of the thick subsurface alluvium, with its base at +4.5m OD, and its earliest fills comprised clay deposits consistent with low-energy waterlain deposits. Taken together with the environmental evidence from the fills of the early recut (7497), this would be consistent with a substantial defensive feature dug in a largely unoccupied area of salt marsh. Radiocarbon dates of cal AD 1021-1155 (NZA 30143) and cal AD 991-1152 (NZA 30153) were obtained on samples taken from the basal fills of the earliest recut, from which four sherds of pottery from a single jar or cooking pot were also recovered (see Cotter, Chapter 6). The fabric is not currently identified, although it lies somewhere between a coarse Cotswolds-type fabric and a coarse variant of Bath A ware. Bath A ware occurs at Bristol after *c* 1100, but is known at Bath and Dublin in 10th-century contexts, and these sherds may well be of 10th- or 11th-century date. The subsequent recut (7947) produced radiocarbon dates of cal AD 1031-1162 (NZA 30154) and cal AD 1018-1155 (NZA 30159) and contained sherds of Ham Green ware, which came into use *c* 1120. Taken together, this dating evidence suggests that the first recut is likely to date to the 11th or early 12th centuries and the second (7497) to the early 12th century, with the ditch originally established at some time during the 11th century. Parts of the Law Ditch have been excavated immediately to the south of Finzel's Reach at 32-36 Victoria Street (Andy King, BaRAS, pers. comm.) and to the north at the Courage Brewery site (Jackson 2007, 1-55), but in neither instance was evidence found for a date as early as that suggested here for ditch 7946/7. On the

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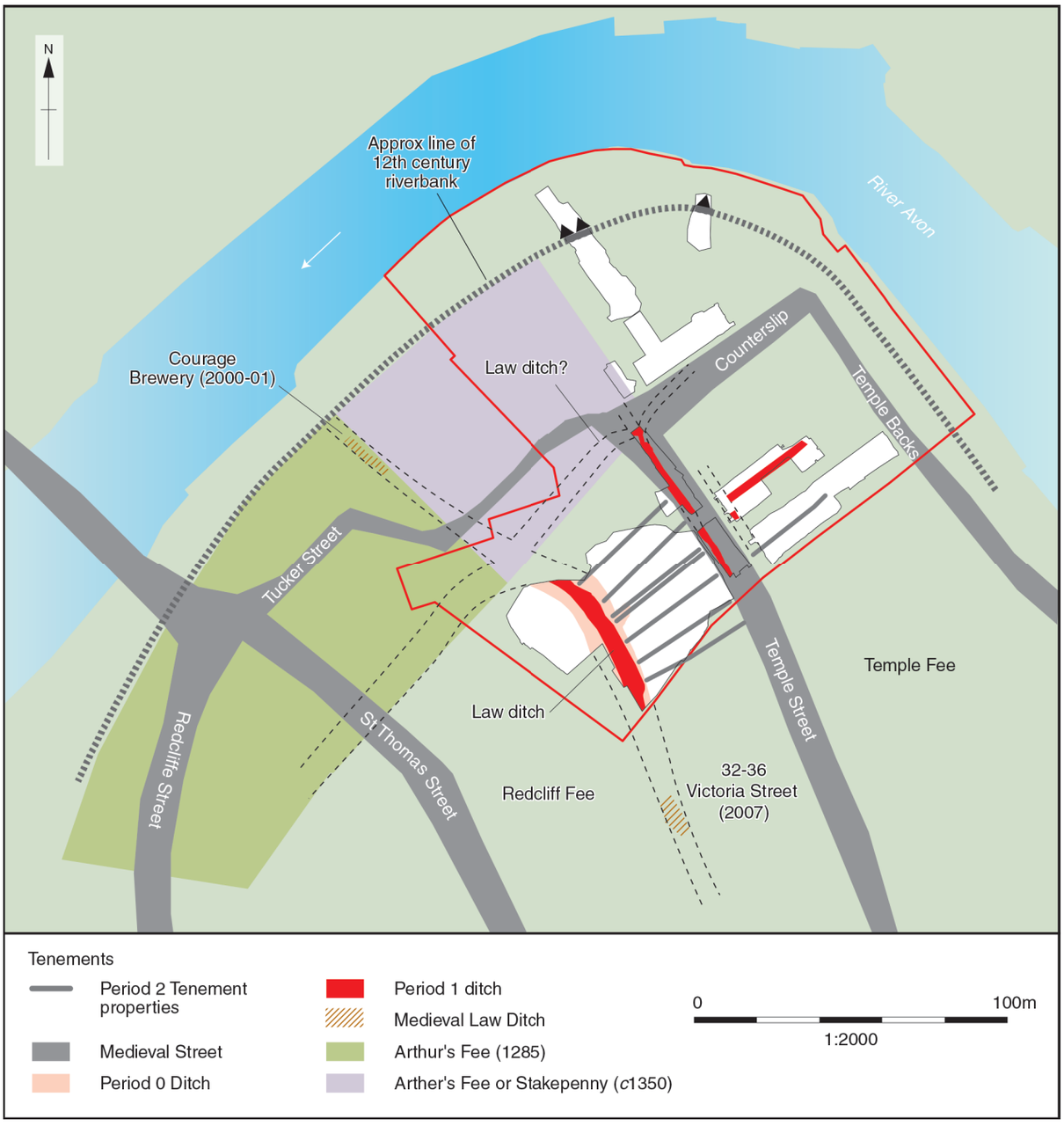

Fig. 5.1 The site area in the 12th century showing Arthur's Fee and Stakepenny (after Leech 2000)

former site the full width of the Law Ditch was not revealed, but the excavated part of the feature was dated to the late 12th century or 13th century, while at the latter site a trial trench showed that the medieval ditch was *c* 6m in width (Jackson 2007, 56). A few sherds of late Saxon pottery from this site comprise the only certain evidence for pre-Conquest activity in the area (ibid., 17). An evaluation at 100 Temple Street, close to the southern limit of the suburb and *c* 350m south-east of Finzel's Reach, also recovered evidence for a Law Ditch which was at least 5m wide and similarly separated the back plots of properties fronting Temple Street and St Thomas Street (Cotswold Archaeology 2003).

There is some evidence from the present excavations to support the alignment proposed by Leech for the south-eastern boundary of Arthur's Fee, since the roadside ditch on the west side of Temple Street (6045) appeared to turn at this point, perhaps indicating a junction with a second Law Ditch running NE-SW. This very regular arrangement of the boundaries of Arthur's Fee, defined on the north-eastern and south-eastern sides by Law Ditches, may represent a rationalisation of boundaries contemporary with the definition of Redcliff and Temple Fees to the south. If so, it could be

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suggested that the possible extension of Arthur's Fee along East Tucker Street to the line of the parish boundary of St Thomas's (which Leech suggests may be the part known as Stakepenny) was compensation for land lost when the area south of this second Law Ditch was divided between Redcliff and Temple Fees. The environmental evidence points to ditch 7946/7 having originally been connected to the River Avon and it seems likely that its original course is reflected in the alignment of Tucker Street and the now culverted Law Ditch mentioned in 1285 and identified by Leech as a possible boundary of Arthur's Fee. Taken together, this evidence would support the proposal that the extension of Arthur's Fee to the parish boundary of St Thomas's might have been part of a regularisation of property holding in the area contemporary with the definition of Redcliff and Temple Fees.

THE DEVELOPMENT OF THE SUBURB DURING THE EARLY 12TH CENTURY

by Steven Teague

In a recent review of the evidence for Saxon and medieval Bristol, Roger Leech (2014, 18-19) has suggested that the development of the marshland south of the Avon into an entirely new suburb was a joint enterprise by its two main feudal lords. The eastern part, or Temple Fee, had been granted to the Knights Templar by Robert of Gloucester between 1128 and 1148. The western part, or Redcliff Fee, was held by Robert FitzHarding (*c* 1095–1170), a leading burgess of Bristol and son of the former king's reeve of the town, as part of his manor of Bedminster. The two fees were divided by the Law Ditch seen in the present excavations and discussed above, with main streets laid out to either side (St Thomas Street to the west and Temple Street to the east), connected by the three cross streets of Long Row, Mitchell Lane and Pile Street. On the west, Redcliff Fee, located downstream of Bristol Bridge, had a frontage onto the Avon capable of taking seagoing vessels. A second major street, Redcliff Street, lay between St Thomas Street and the river, and the two streets converged just south of the bridgehead. Thus, Leech suggests, FitzHarding may have had the better site, with the Temple suburb, upstream of the bridge, appearing to be much more self-contained, with its contacts as much with the rural hinterland as with the town to the north. The Temple and Redcliff Fees seem to have been developed more or less simultaneously, a process that must have begun with the draining of the marsh and the setting out of the basic infrastructure of boundary and drainage ditches, streets and plots of land.

The excavations at Finzel's Reach have provided valuable new evidence for the initial process of laying out the suburb. The combined evidence of radiocarbon dating and pottery discussed above suggests that the pre-existing Law Ditch (7946) was recut as a narrower channel during the second quarter of the 12th century. The earliest layers in the base of this ditch contained very few finds, but as the ditch silted up small quantities of pottery and leather began to appear at higher levels, suggesting the arrival of some form of occupation nearby. The remains of a wattle revetment survived towards the north end of the ditch. It seems very likely that the recutting and revetting of the ditch was part of the process of marking out the new suburb. The fact that the recut ditch 7497, unlike other Law Ditches observed elsewhere, can be demonstrated to be on the line of an earlier precursor, suggests that a ditch around the eastern side of the bridgehead may have been a significant pre-existing topographical element in the marshy landscape that could be used to define the land donated to the Templars and that retained within the manor of Bedminster.

The excavations have also revealed direct evidence for the laying out of Temple Street. Although no early street surfaces survived, a pair of early ditches were recorded that extended along each side of the street. The ditch along the west side of the street (6045) was fairly substantial, over 2m in width and around 1m deep, and it is possible that it formed part of an interlinked network of drainage ditches that was (tentatively) implied at its northernmost exposed extent within Area 2. Here the ditch seems to have joined an NE-SW aligned ditch that corresponds closely to the line of the Law Ditch identified by Leech as marking the south-eastern limit of Arthur's Fee or Stakepenny (see above). If projected, this second ditch may have run along the northern edge of Counterslip, suggesting that this street was extant by this time. A roadside ditch of similar proportions was also recorded along the east side of Temple Street (1241/2091). These ditches would have been instrumental in the initial draining of the former salt marsh in order to allow habitation of the area and would ultimately have fed into the River Avon. The fills of the roadside ditches, especially the western ditch, were rich in settlement waste, including horn cores and leather-working waste, with smithing debris in the upper fills, suggesting that settlement was well established in this area by the time the ditch was silting. Although the dating evidence from the ditches relies on the ubiquitous Ham Green wares, which date from the early 12th century, a felling date of 1099-1131 was obtained by dendrochronological analysis of a timber from a substantial structure on the eastern frontage of the street (Building 2792). This building appears to have been built after the drainage ditch on the east side of the street was established, since its posts cut into a levelling deposit likely to have derived from upcast from the ditch. If the structure is assumed to be contemporary with the use of the ditch, which contained Ham Green Redware (*c* 1120-1300) in its earlier fills, then the structure (and by implication the laying out of Temple Street) seems likely to be datable to the 1120s-1130s. This seems early, but is corroborated by dating evidence from excavations at Dundas Wharf,

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Redcliff Street, where timbers from a post-pit structure, the earliest in the sequence of structures occupying a riverside tenement, were dendrochronologically dated to 1123-33 (Nicholson and Hillam 1987, 133-155). The recently published excavations at the nearby sites at Nos 1-3 Redcliff Street found similar evidence for development beginning in the first half of the 12th century, contemporary with the development of the wharves on the river, and the establishment of the Redcliff and Temple Fees (Alexander 2015, 137 and 151).

Early evidence for fences along the sides of these ditches was recovered in Area 1, on the east side of the Law Ditch, and in Area 2, along the side of the western roadside ditch of Temple Street. Some evidence for contemporary structures was seen to the west of the Law Ditch in Area 1, where postholes and pits may have formed parts of a timber structure (20001). Microslags and part of a smithing hearth bottom from these features suggest that this property may have been an early smithy, although no clear working area or smithing hearth was identified. To the east of Temple Street the remains of two possible post-built buildings were recorded in Area 5, including the structure that gave the dendrochronological date. Area 1, between the Law Ditch and Temple Street, seems to have taken more effort to drain, however, as there was little sign of early 12th-century occupation here. Perhaps this was a reflection of the pre-existing topography of this part of the site, since evidence obtained from mapping of the surface of the alluvium would suggest that this area was lower lying. This may account for the need to dump a thick layer of redeposited alluvium over much of the area in order to build it up (Period 2, Group A1.11). The alluvium may have been derived from the digging out of the silted ditch 7496 to form ditch 7497, but the quantities of domestic debris found within it suggest that material was also brought here for dumping, perhaps from elsewhere in the town.

THE ESTABLISHED MEDIEVAL SUBURB

by Kate Brady

The Law Ditch and the Temple Street roadside ditches

The Law Ditch was again recut on at least two occasions, although evidence for other episodes of clearing out of silts and rubbish may not have survived. The earlier of these recuts (4925) probably dated to the later 12th century. Ditch 4925 was only roughly half the size of the previous iteration of the ditch (7497), which perhaps reflects progress in the drainage and settlement of the area. Stakes from a possible fence (4687) alongside the ditch were found towards its north-eastern edge. A further recut (3604) probably dates from the late 13th century, with 14th-century pottery occurring in its middle and upper fills. Stone walls lining the ditch appear for the first time at this stage, although these were not continuous along its whole length and may represent the initiative of the individual holders of adjacent tenements.

The roadside ditch to the west of Temple Street had silted up completely by the late 12th century. On the east side of Temple Street, the roadside ditch was recut in a more substantial form as ditch 1009. This was contemporary with a second, smaller ditch (1267), which ran at right-angles to its east side and was traced for a length of 26m. Ditch 1267 is on the line of the rear boundaries of properties fronting onto Counterslip and may represent a drainage and marking-out feature for the creation of this frontage. Why the roadside ditch to the east of the street should be re-established while that on the west had been allowed to go out of use is unclear. However, ditch 1009 was not seen to the south in Area 5 and it may be that the recutting of the ditch seen in Area 4 was in some way connected with the definition of the frontage of Counterslip to the east. Ditch 1009 may have been finally levelled during the mid to late 13th century, and its fills contained significant quantities of industrial debris including smithing debris and waste from leather- and boneworking.

Property boundaries

The best-preserved evidence for a sequence of tenements was found in Area 1. Along the west side of Temple Street much evidence had been removed by post-medieval cellars, and consequently very little evidence was found for buildings on the street frontage. However, the back half of the tenements contained substantial evidence in the form of pits, drainage gullies and other features datable to the period *c* 1150-1350 that may have been deliberately sited close to the Law Ditch and associated with craft-working. Among these were a number of more substantial ditches and gullies, and the occasional fenceline and pathway, that followed parallel NE-SW alignments between the street and the Law Ditch. These can be seen as a series of regularly spaced boundaries that defined adjacent tenements and also served to drain the area and channel water and waste from activities carried out within the properties. In the late 14th century (Period 4) the appearance of large stone buildings, surfaced paths and stone boundary walls provides the clearest evidence for property divisions until later post-medieval maps and surveys. Table 5.1 shows how the boundaries shifted over time. For the purposes of analysis, the possible tenements that emerge from this were designated TSW1-5 (Temple Street West, from south to north), largely defined on the basis of the Period 4 boundaries. The evidence for tenement boundaries in the northern part of Area 1 was very unclear, although it is possible that at least two tenements (TSW4/5) were present here at times. In Period 2 (*c* 1150-1225), there seems to be a relatively clear and ordered pattern of layout that includes a group of narrow tenements of around 4.0-5.5m in width. This is similar to the measure-

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ment of *c* 5-6.5 yards that was found elsewhere in the suburb at St Thomas Street and Redcliff Street, where it has been suggested that a standard plot of around six yards was employed (Baker *et al*. forthcoming). It could be further suggested that the actual measurement employed was the medieval rod or pole (5½ yards), a unit of measurement that seems to have been used during the setting out of late 9th-century properties at Staple Gardens, Winchester (Ford and Teague 2011, 190-3). The use of such standardised measurements suggests a degree of central planning and seems to have been commonly used in setting out burgage plots in new medieval towns, such as at Coventry (Goddard 2004, 45-6). This pattern was not so clear in the northern part of the present site, however, where it was difficult to identify a clear division between the pathway north of TSW3 (Group A1.20) and the substantial ditch 4516 (Group A1.29) at the north end of the site. This area is, however, approximately twice the width of the properties to the south, and could possibly have been a larger holding. It is notable that this area (TSW4/5) produced some of the best evidence for higher status occupation (see below). Minor changes are apparent in Period 3 (*c* 1225-1375), in particular the possible subdivision of one of the Period 2 properties (TSW4) into two smaller holdings. Period 4 (*c* 1375-1500) sees the amalgamation of four Period 3 properties into two large holdings (TSW2 and TSW3), with the Period 2 and 3 ditches and gullies preserved in the form of drains and passages (Table 5.1).

No such overview was possible on the east side of Temple Street, where the excavated area was much more limited. Two properties were identified on the east side of the street and designated TSE1 and TSE2, with evidence for the subdivision of TSE1 into a northern and a southern half, at least from the late 12th century (Fig. 2.22). These were recombined into a single property where a more substantial stone house was built in Period 4 (Fig. 3.33). The western edge of Area 1, west of the Law Ditch, was the only part of the present excavation area to fall within the Redcliff rather than the Temple Fee, where the backs of tenements fronting onto the east side of St Thomas Street were revealed. Some of the earliest structural evidence occurred here, with possible traces of two walls of a post-built building (20001) at the edge of the Law Ditch datable to Period 1, the early to mid 12th century (Fig. 2.2). However, little evidence datable to Periods 2 and 3 was seen here, and the first clear sign of a division into three tenements (LDW1-3) only appears during the late 14th century (Fig 3.20). At this point the boundaries were marked by stone walls, and correspond closely to the plot boundaries shown on the 1st Edition Ordnance Survey map (Fig. 1.12). It is interesting to note that similar evidence for enduring property boundaries was noted in the excavations at Nos 1-3 Redcliff Street (Alexander 2015, 181). As at Finzel's Reach, the boundaries at 1-3 Redcliff Street, established during the late 12th-early 13th century, appear to have been marked out with gullies and to have been quite fluid until they became fixed with the construction of stone boundary walls and house footings from the late 13th century (ibid., 137).

The early management of the riverside

Although little of the riverside area was investigated in detail, enough evidence was obtained from Area 3c to suggest that the upper part of the 12th-century riverbank lay *c* 30m south of its modern position. The extent of reclamation in this area is therefore identical to that found at Dundas Wharf on Redcliff Street (Jones 1991, 20-1). During this period the riverbank seen in Area 3c was retained by a stake and wattle revetment made from beech stakes, which represents an early attempt to stabilise its line, and mirrors the wattle revetment found at Dundas Wharf, which was similarly dated to the 12th century (Jones 1991). The riverbank was also seen in Area 3d, where there was evidence for the dumping of settlement refuse at the water's edge, including 12th- to early 13th-century pottery and animal bone. An environmental sample taken from early channel layer 11010 in this area included dumped kitchen waste, comprising remains of fruit and nuts, animal bone, fish bone, eggshell and oyster, with the presence of cereal bran pointing to some of this material originating from cess. This sample also produced the earliest evidence for cloth finishing at Finzel's Reach, in the form of fuller's teasels and dye plants including madder, weld and dyer's greenweed.

The wattle revetment along the edge of the early river channel may have been a relatively temporary structure, since similar structures at other waterfront sites such as Bristol Bridge, Dundas Wharf and Redcliff Street were replaced in stone during the second quarter of the 12th century. No evidence for a 12th-century stone wall was found at Finzel's Reach, however. It may be that stone quay construction was confined to the areas further down river at this date and may suggest the slightly later development of the waterfront within Temple Fee. Truncation by later features was severe in this area, however, and it is alternatively possible that a 12th-century river wall could have been removed by the construction of post-medieval walls. It is not until the mid 13th century that we have evidence for stone construction here. A layer of alluvium at the riverfront overlying the wattle fence structure was dated to 1170-1275 and suggests that further reclamation was undertaken during the mid-late 13th century, when a stone wall (2088) was built roughly 3m further out into the river channel. This coincides with documentary evidence and archaeological evidence from other sites along the waterfront for large scale redevelopment of the waterfront, presumably associated with the diversion of the River Frome, which was moved westwards via a new man-made channel, providing the space for

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Table 5.1 Possible plot boundaries of Periods 2, 3 and 4

Period 2	*Groups*	*Period 3*	*Groups*
TSW4/5	A1.28	TSW4/5	A1.52
			A1.47
A1.29 ditch 4516	**A1.29**	**A1.45 ditch 4515**	**A1.45**
TSW4/5	A1.27		
	A1.26		
	A1.25	TSW4/5	A1.46
	A1.24		A1.44
	A1.23		A1.43
	A1.22	**A1.42 track/gullies 4240/4224 etc**	**A1.42**
	A1.21	**A1.40 fenceline phs 4402/4170 etc**	**A1.40**
A1.20 path/gullies 7290, 7318	**A1.20**	Path line lost	
TSW3	A1.19	TSW3	A1.38
			A1.36
		A1.37 trackway and gully 7292	**A1.37**
A1.18 gullies 4777/7284	**A1.18**	**A1.36 gully 4918**	**A1.36**
TSW2/3		TSW3	A1.35
		A1.34 ditch 4750/7018 (recut as 7007)	**A1.34**
	A1.17	TSW2	A1.33
A1.16 ditch 7241	**A1.16**	**A1.33 ditch (recut) 4154**	**A1.33**
TSW2		TSW2	
	A1.15		A1.33
A1.14 ditch 4926	**A1.14**	**A1.32 ditch (recut) 4830**	**A1.32**
TSW1		TSW1	A1.31

Key: **bold = boundary feature** roman = property plot

new quays to be constructed. Occupation of the immediate riverside areas and the reclamation appears to follow a similar pattern to that seen in part at other sites along the riverfront, with dumping during the 12th century followed by construction of quay walls during the 13th century.

Living in the Temple suburb in the medieval period

The excavations revealed glimpses into the lives of the inhabitants of Temple Street and the surrounding area during the Medieval period. The excavated finds and environmental assemblages generally reflect everyday life and the range of goods and foods that would have been widely available and used in the town, but analysis has also revealed some more subtle distinctions. The distribution of some of the more distinctive components (such as glazed jugs, imported pottery, decorative roof furniture, medieval glass and floor tile) suggests that a few observations can be made. The properties on the west side of Temple Street exhibited a clearly higher proportion of jugs relative to jars/cooking pots than those on the east side of the street, where the proportions are reversed. The same distinction was seen with imported pottery, mainly Saintonge jugs and a few more exotic imports from Spain, Portugal and Italy. These imports are few in number, but are all from properties on the west side of the street, whereas properties on the east side of Temple Street produced more sherds of unglazed coarsewares/kitchen wares. The one part of the site that stands out particularly is towards the north of Area 1, on the west side of Temple Street, where TSW4 produced a higher number of imported sherds in both Periods 3 and 4. This is also supported by other artefactual evidence. The combination of louvres, finials and decorated floor tiles in the ceramic building assemblage and finds of medieval window glass from a pit to the rear of the property suggests that this was one of the wealthiest properties in the excavation area during the late 14th to 15th century. Immediately to the south, TSW3 had a fair proportion of imports and also several vessels associated with brewing (including the lower part of a cistern), perhaps also suggesting a higher level of social drinking and entertaining. Finials and louvres in the roof tile assemblage also indicate slightly wealthier inhabitants from the 13th to the 15th century. The small finds assemblage from this property included a copper alloy jetton, six lead or tin tokens and a possible lead pan weight from deposits of late 14th- to 15th-century date relating to building 7503 at the back of the plot, which suggests that the occupants were engaged in trade.

These differences could reflect those seen in the evidence for craftworking and industry (see above). The east side of Temple Street produced much of the best evidence for trades such as tanning and smithing, whereas much of the evidence for the

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Period 4	*Groups*
TSW4/5	
A1.60 stone wall 4032	**A1.60**
A1.59 Gully 3790 ?property bdry/drain	
TSW4/5	A1.59
	A1.60
A1.59 Path 3746/gully 4513 n side	
A1.59 stone wall 3486	**A1.59**
TSW3	
Bldg 7503 n	A1.66
ditch 3817 Bldg 7240 frontage	A1.58
	A1.65
Bldg 7503 s	A1.57
A1.57, 56, 69; path 3525, walls 3036/3669/4940	**A1.57**
TSW2 North part of building	A1.56/69
A1.69 path 3711/drains n3014/s3859	A1.56/69
TSW2 S partof building	A1.56/69
A1.55 passage? Stone wall 3168	**A1.55**
A1.55 stone-lined drain 3018	A1.55
TSW1	A1.55
A1.55 stone wall 3040?	**A1.55**

higher-status textile trades came from the west side of the street, in addition to which the scale of the buildings developed here in Period 4 suggests substantial investment.

Domestic activity

The earliest sign of people living and working in the excavated areas dates from the first half of the 12th century (Period 1), when the earliest buildings on the eastern Temple Street frontage in Area 5 were constructed, supported by substantial timber posts set within large square postholes. A date for this development was provided by the felling date of 1099-1131 that was obtained for one of the posts (2764). It is interesting to note that these buildings do not appear to respect the line of the tenement boundary identified in Area 5 from Period 2 onwards. These buildings can be directly compared with the only evidence for street-frontage structures that survived on the west side of Temple Street, grouped as Structure 20004. Here, a group of very similar large square postholes held substantial timber posts supported by timber post pads made of reused planks. The postholes of Structure 20004 did not contain any remaining posts suitable for dendrochronology and so the structure can be only broadly dated by the presence of Ham Green ware dating to the period after *c* 1120, but apparently predated the introduction of Redcliffe ware *c* 1250. A date relatively early in this period is suggested by the similarity of these postholes to those associated with the dendrochronological date on the east side of the street, and by the fact that Structure 20004, if indeed it is a single structure, does not obviously conform to the arrangement of the tenements seen elsewhere in this area in Period 2.

The site produced one of the largest animal bone assemblages excavated to date in Bristol and this, combined with the remarkably well-preserved plant remains assemblage, provides a great variety of information on diet and animal husbandry. The medieval diet was mainly grain-based, supplemented by home-grown vegetables/legumes, and this is reflected in the cess recovered from many of the pits, with cereal bran abundant in many samples. Bread wheat was the most commonly identified charred cereal grain recovered at the site, followed by oats and lesser amounts of barley and rye. There was little chaff recovered, showing that grain was already processed when it reached the site, and the lack of stone processing tools recovered also reflects this. The grain would have been processed at one of the city's mills, the nearest to the site possibly being at the castle. Large domestic animals appear to have been kept on or near the site, as many of the features had stabling waste in their fills. The Temple Street roadside ditches received stabling waste from the early 12th to 13th century, suggesting that the earliest inhabitants of the site kept animals nearby. Sheep are also likely to have been grazed nearby, particularly as the wool trade was so important in this area. Smith's map of 1568 shows areas of grazing within the city walls, including the riverfront at Temple Back (Fig. 1.6).

Smaller animals such as hens and pigs are likely to have been kept in backyards both for eggs and for meat; eggshell was recovered from numerous samples, and the high phosphate levels recorded in the monolith samples through the garden soils may have been caused by the urine from pigs housed here. Domestic fowl dominated the avian assemblage, followed by goose, which is typical of medieval assemblages in Britain. Alongside the sole peacock bone (possibly obtained through poaching), ducks, waders, corvids and small passerines appear to have been eaten, and also possibly partridge/quail. Other sites in Britain show an increase in wild bird species in the later medieval period, but this was not demonstrated at Finzel's Reach, although this may be a reflection of changing waste disposal practices here rather than a reflection of dietary habits. Unusually, more male domestic fowl were identified than female, which is surprising as it would be expected that more females would be kept for egg production. It is possible that the additional male birds were raised for cock fighting.

Vegetables were generally not represented, but peas and beans were found charred in mid-13th- to mid-14th-century pit groups to the west of Temple Street and in large numbers in the rake-out deposit of one of the late medieval ovens in Building 7240, and would have formed an important part of the diet.

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The variety of fish consumed was demonstrated by the very large fish bone assemblage. The composition of the assemblage did not change greatly over time and in all periods herring and common eel were the most frequent, with cod and small flatfishes also present in many contexts. Other fish recorded included hake, conger eel, sea bream, gurnards and rays. Freshwater fish were present in a small number of samples and included cyprinids, perch and pike. Unsurprisingly, given the port location, marine species dominated. Shellfish were also eaten and may have been collected by the inhabitants of the site, with oyster, mussel and cockle shells found in some cases in large dumps in boundary ditches.

The pottery assemblage included many large jars, which probably functioned as cooking pots, suggesting that communal cooking was the norm, most likely of dishes such as stews. Another insight provided by the pottery assemblage is that the inhabitants of the site appear to have regularly heated liquids in jugs, perhaps making a kind of 'hot toddy'. An unusually high proportion of jugs were sooted or heat-scorched externally and this is probably a result of vessels being heated close to open fires. This was seen even on the finest of jugs, and was unusually prevalent at this site, perhaps representing a local custom.

A few finds provide a glimpse of life beyond trade and subsistence. A slate counter and four filed-down pottery sherds may have been used for gaming, as may two bone dice that were recovered from the east side of Temple Street. Pieces of two different stringed instruments were found. One of these, the bridge from a lute or similar instrument recovered from a late 12th- to early 13th-century pit in TSW3, is an extremely rare find for this period in the UK, with only a crude example from Anglo-Scandinavian York providing a parallel (Morris 2000, 2356). Three bone writing implements attest to literacy, and further suggest that the household from which they came was probably not the poorest in the local community. Another notable find was the pilgrim badge recovered from a late 12th- to early 13th-century fill of the eastern roadside ditch beside Temple Street. The object was made from a scallop shell with two holes pierced in it and would have been worn suspended from a hat, cloak or bag as a sign of pilgrimage to Santiago de Compostela in Northern Spain. This find connects the site to ships travelling to Gascony and Iberia as part of Bristol's trade connections. These trading ships often carried pilgrims and Bristol was one of the main embarkation points for those travelling to Santiago de Compostela. An appliqué of a sleeping knight probably represents a Roman soldier from an Easter sepulchre of wood, and was found in reworked garden soils in Area 1 that overlay Period 3 features.

The local environment

Methods and locations for the disposal of waste changed over the medieval period and may reflect wider events in Bristol and beyond. During the late 12th to early 13th century, the earliest major occupation of the site, waste was deposited in backyard pits, ditches (including the roadside ditches and the Law Ditch) and was also dumped on the riverfront. The preservation of plant remains and insects was excellent and has proved to be an invaluable resource for the understanding of diet, settlement and waste management practices.

The insect fauna suggests that most of the waste deposited in features was derived from within buildings rather than from the surrounding yards and countryside and therefore suggests that this is the environment for which the material provides evidence. Further evidence for settlement waste was provided by the presence of human fleas in samples from the late 12th century to early 13th century eastern Temple Street ditch. The predominance of evidence for settlement waste over species from the surrounding landscape also indicates that the deposits were covered relatively quickly after being dumped, before they could be colonised by wild flora and fauna. Several pits contained thick deposits of relatively clean alluvial clays or layers rich in straw/hay, both of which are likely to have been deposited as 'capping' layers to cover rotting material and control the resultant smells. The insect analysis indicated that cess was incorporated into most of the features on the site, suggesting that toilet waste was deposited primarily where convenient, including in boundary ditches and garden soils. The riverfront was also a favoured location for dumping waste, and layers here contained kitchen waste, cess and industrial waste (from cobblers' and dyers' workshops). Although in most pits cess and domestic/kitchen waste was clearly dumped together, it is clear that occasionally different types of waste were separated. For example, pits in property TSW5 dating to the late 12th to early 13th century were rich in kitchen waste such as nuts, fruit, animal bone, oyster shell and eggshell but no faecal matter was identified in any samples from this group despite conditions otherwise being similar to other areas of the site. The waste dumped in the backyard areas of properties became worked into the garden soils and it is possible that at times this may have been a deliberate strategy to add organic matter for soil improvement, to better facilitate the growing of vegetables and other small crops. In general, however, it is likely that conditions would have been particularly unpleasant, with sewage spread in gardens, and possibly over the street, and certainly filling the ditches either side of the road. The riverfront was clearly a focus for the dumping of much waste, a location probably chosen with the hope that the river would wash much of it away. This method would probably have been more effective in Bristol than at other riverside locations, due to the high tidal range of the Avon, but the volume of waste that remained in layers on the site suggests that the riverside would still have been a

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smelly and insanitary place. As in many medieval towns, the authorities issued repeated regulations to control the dumping of waste. The inhabitants of Bristol were forbidden to 'cast dung or rubble at the Quay or The Back', except at assigned places, and to throw urine or 'stynking water' out of the windows or doors (Jones, 1991, 22 after Veale 1933, 142). The effect of living conditions on the health of the inhabitants was graphically demonstrated by the identification of a whipworm egg attached to a leek epidermis fragment from late 12th to early 13th century pit 4987 in TSW4. The insanitary conditions will have contributed to repeated outbreaks of the plague throughout the medieval period; Boucher (1938, 37) has estimated that 35-40% of the population of Bristol died in The Black Death, and records in relation to the southern suburb that in 1349 the parishioners of St Cross of the Temple were pardoned from acquiring from the Prior of the Hospital of St John of Jerusalem in England half an acre of land contiguous to the churchyard, which had been filled up by the bodies buried in the pestilence (ibid., 35).

The changes evident in the late medieval period (Periods 4 and 5) are of considerable interest. On the one hand, there are signs of some retrenchment of settlement, particularly at the northern end of Area 1, where there was little sign of occupation nearby. To the south, the two large properties occupied by the substantial buildings of Period 4 appear to have been formed by amalgamation of smaller earlier tenements. Although this would also be consistent with a reduced population, the relative sophistication of these buildings, which are accompanied by stone walls, paved pathways and lined drains, does not suggest decline. Rather, the evidence is consistent with a smaller number of more prosperous traders with the means to redevelop vacant properties on a larger scale. There was a general absence of late medieval wares in the pottery assemblage, and the small assemblages from deposits of this date appear to be mostly residual. This seems to be an indicator, combined with the reduced number of rubbish pits attributed to this period, that rubbish disposal practices changed in the late 14th century. It is possible that due to hygiene concerns after the Black Death, rubbish was now taken away from occupied areas for disposal, perhaps to outside the city walls, as was dictated by city ordinances in other badly affected towns such as Winchester and London (Keene 1985, 472-3).

Working in the Temple suburb in the medieval period

The Temple area was predominantly the home of artisans, and there is an abundance of evidence for craftworking, both from the finds and environmental assemblages and from the nature of the features found on the site. In this, the present site is closely comparable to many others in Bristol, where there appears to be very good preservation of medieval industrial remains. At the nearby site at Nos 1-3 Redcliff Street, for example, it is suggested that dyeing was taking place from the early 12th century, but appears to have declined from the mid 14th or early 15th century (Alexander 2015, 143). Dye plants including madder, weld, woad and dyer's greenweed were present across the Redcliff Street site, as well as flax seeds, which were used in dye production. At both sites structural remains of dyeing processes were represented by numerous subrectangular pits with wattle linings and dividers and circular stone-built hearths that may have supported dye vats or cauldrons. Evidence for cobbling waste and tanning was also noted (ibid., 142), and the casting of lead-bronze cauldrons or posnets was introduced in the late 14th or 15th century (ibid., 142).

Textiles

The finishing of textiles was probably the main industrial practice in the area, and evidence for the industry at Finzel's Reach begins during the late 12th to early 13th century, with evidence for the presence of raw wool on the site as well as dyeing and finishing of cloth (Fig. 5.2). A bale pin that would have been used to secure bales of wool was found in an alluvial layer dating to the late 13th or 14th century at the river's edge, providing possible evidence for the loading or unloading of raw wool. Insect remains also attest to the presence of raw wool on the site, with puparia of sheep ked and sheep louse found in pits to the rear of TSW2, which suggest the processing of wool within these properties between the late 12th and early 13th centuries. These species were notably absent from later medieval deposits.

However, artefacts that might suggest the processing of wool on site were lacking, restricted to single finds of a stone spindle whorl from a pit in TSW4 and the wooden head end of a distaff from one of the early fills of the eastern roadside ditch of Temple Street. The only textile 'tool' identified in any quantity was fuller's teasel, found in dumps at the riverfront in Area 3 and in a pit to the rear of TSW1. The spiky head of this plant was used throughout the medieval and post-medieval periods to raise the nap on cloth after fulling and dyeing. The function of a 'brush back' with copper alloy bristles found in a Period 3 fill of the Law Ditch is unclear, but it is possible that this was a tool associated with textile working.

The animal bone assemblage provides some evidence for the increasing importance of wool. Animal ages suggest a growing focus on secondary products (probably wool) with an increase in animals over 3.5 years throughout the medieval period (Strid, Chapter 7). A small number of skulls of genetically hornless sheep were found in mid 13th- to 14th-century and late 14th- to 15th-century deposits, representing breeds that were preferred as the absence of horns reduced damage to the

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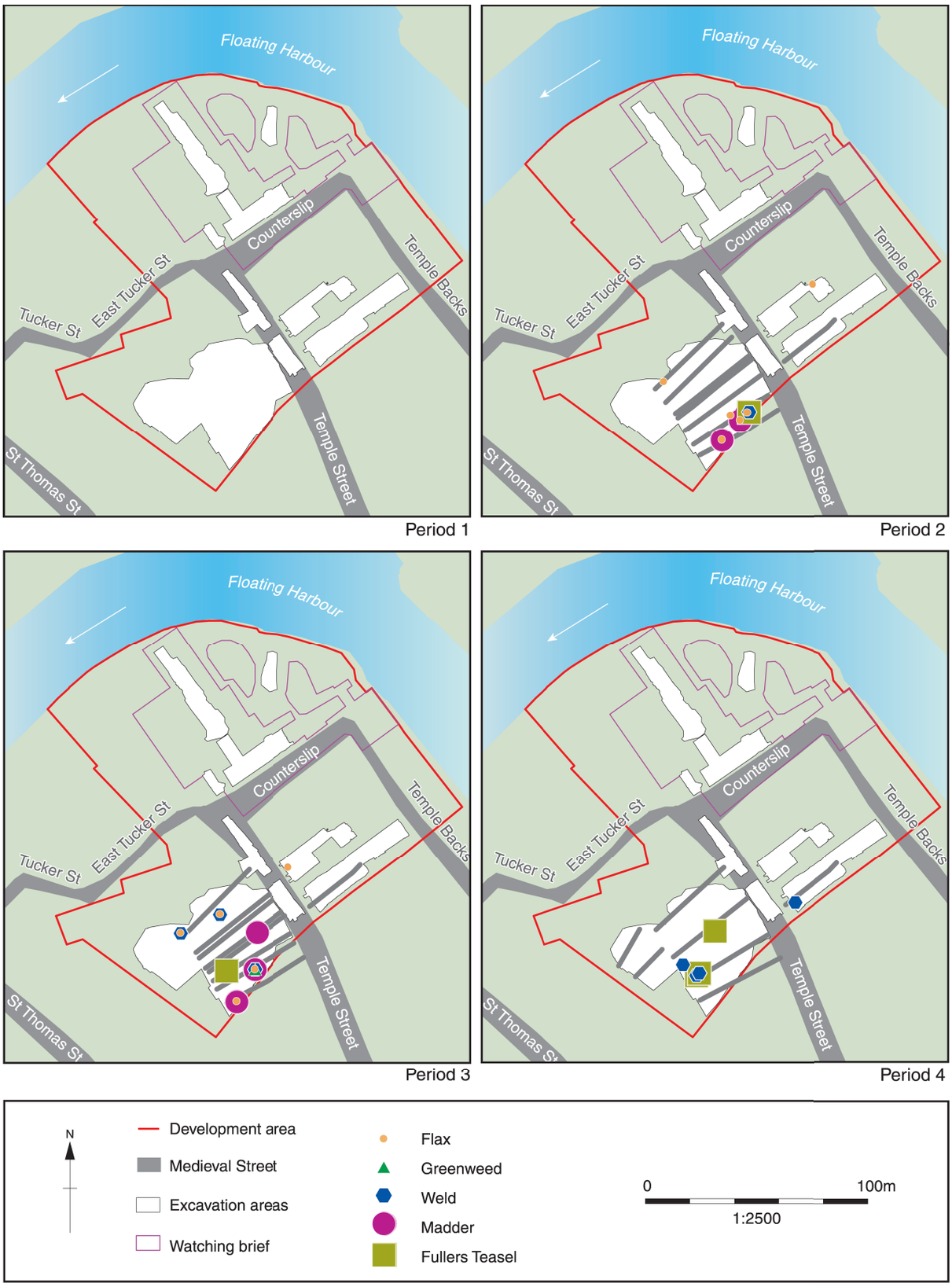

Fig. 5.2 Distribution of cloth processing and dyeing evidence (from plant remains)

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fleece when scratching or fighting. The preservation of small amounts of linen and one piece of wool fibre in the waterlogged conditions of the site was unusual and although these small fragments need not represent textiles produced on the site the assemblage serves to highlight the importance of linen as well as wool in the textile trades of the time.

Dyeing on or near the site, suggested by the presence of dye plants in environmental samples, appears to have started during Period 2, from the late 12th to early 13th century, and the evidence suggests that this was on an industrial scale. Until the late 12th century, dyeing was typically a domestic activity and urban sites at London, Southampton and particularly Winchester have produced jar sherds exhibiting purplish staining on the interior from their use in preparing madder-based dyes (Cotter 2011). Domestic dyeing using pots is thought to have died out during the late 12th century, when industrial scale dyeing, using wooden vats, made it obsolete, and the absence of madder-stained pottery at Finzel's Reach may indicate that the dyeing activity here dates to after this transition. The industrial scale of this activity is also suggested by the associated archaeological features, particularly a succession of circular hearths with flues revealed in Area 3a, on the northern side of Counterslip. The hearths were only partially preserved, and the earliest structures (8045 and 8036), dated to the late 12th to early 13th century, were truncated by later replacements. The most complete remaining portion of one hearth suggested an internal diameter of around 1.3m, which is consistent with hearths found at Union Street that were interpreted as the bases of dye vats (Jackson 2010). Other similar hearths from sites nearby have been similarly interpreted and include features at Dundas Wharf (Good 1990; 1991), Redcliff Street (Williams 1981) and the Courage Brewery (Jackson 2007). The Finzel's Reach hearths were rebuilt and replaced several times, suggesting intense long-term use. Furthermore, the proximity of these hearths to the riverfront (as at the other sites) and to the broadly contemporary dumps nearby containing dye plants provide a compelling argument for the interpretation of these hearths as dye vat bases. Domestic refuse dumped at the riverfront in Period 2 included remains of the dye plants madder, weld and dyer's greenweed and fuller's teasels also provided evidence for cloth finishing. This activity appears to have carried on at least into the later 13th/early 14th century, with one of the floors of an oven in the complex to the north of Counterslip being replaced at least twice during its life, and riverfront dumps containing dye plants also continue into this period. A layer of demolition debris overlying the ovens contained pottery dating to after 1280, indicating that the use of these particular ovens had ended by this time, although replacement ovens may have been built nearby, outside the excavation area.

Dye plants were deposited along with domestic rubbish in features to the rear of properties TSW1 and TSW2 during Periods 2 and 3 (late 12th to mid 14th century). Remains of madder, dyer's greenweed and weld (with one sample containing over 900 seeds of the latter) were found in a barrel-lined pit (3850) at the southern edge of the site, and madder root fragments, weld seeds and twigs from coppice stools of dyer's greenweed were found in pit 4431, along with the sheep ked and louse noted above. No hearths of this period were found, although the frontages of both properties lay outside the excavated area and the heating of vats may have taken place there, with the waste being deposited along with domestic waste in these features to the rear. Analysis of environmental samples from these pits demonstrated that the fills were made up of domestic refuse, including kitchen waste and cess, but the nature of the pits themselves suggests that this was not their primary function. Pit groups of Periods 2 and 3 included several large, deep, straight-sided pits, some of which had had associated structures evidenced by the remains of timber linings or postholes. Other pits were very shallow, and were clearly used for an activity where the contents of the pit had to be easily reached. Shallow gullies between some pits further suggest the movement of liquid between features, and/or from features to nearby drains. Similar groups of pits at Beverley in Yorkshire (Evans and Tomlinson 1992), with remarkably similar dark 'peaty' fills, timber and stone linings and gullies that were lined with wattle, were interpreted as a textile processing complex where dyeing, fulling and flax retting took place. The preservation at Beverley was better than at Finzel's Reach, but the similarities are compelling.

Various functions have been considered for the Period 3 barrel-lined pit 3850. The environmental evidence suggests quantities of cess were deposited in it, but its location, near to groups of probable industrial features, and the presence of the remains of dye plants in the fills, suggests that it may originally have been a well, used to draw clean water for use in the dyeing industry. Environmental analysis of samples from ditch fills suggests that the water in the ditches was polluted by dumped stable waste, cess and discarded food and craft debris, and this was probably completely unsuitable for use in dyeing, since relatively uncontamined well water would have been necessary in order to achieve control over the colour and produce a more desirable product. The use of barrels to line the well reflects an interesting connection between import and export trades vital to the success of medieval Bristol. Allen (Chapter 6) has suggested that these were reused wine barrels and may have originated in Gascony, the source of much of the wine imported into Bristol until the region was lost to the French in 1453. Interestingly, this reflects the connection between the textile industry and the Gascon wine trade, as wool and cloth were exported to Gascony in return. The absence of a match between the barrel

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and the tree-ring chronology for the British Isles would be explained by the origin of the barrel being Gascony.

The scale of the Period 4 rebuilding in Area 1 dating to the late 14th to 15th century suggests an industry organised on a substantial scale. Building 7240 on TSW3, in particular, with four regularly-spaced hearths built into the back wall, seems likely to represent a late medieval scaling-up of industrial activity, although, as is so often the case, artefactual and ecofactual evidence for exactly what this industry was is largely absent. Given the importance of the textile industry in the immediate area, it seems reasonable to suggest that these were the bases of large dye vats and that the barrel-lined pit was a cold fixing tank. Evidence that cloth finishing was being undertaken in the vicinity was provided by several charred teasel achenes that were identified from the rake-out deposit of one of the hearths, one of which was positively identified as fuller's teasel. However, other interpretations of these features remain possible. Cotter (Chapter 6) comments that there are numerous pottery vessels associated with brewing, storage and drinking here, and the ovens might conceivably have been used for malting. Nicholson and Jones (both Chapter 7), on the other hand, note the presence of charred peas, broad beans, and charred grain (mostly barley) in a rake-out layer associated with oven 4100, suggesting the processing of food. It is quite possible that the building and its ovens were used for different purposes over its lifetime, as the basic structures would presumably have been suitable for a variety of functions.

A later property within the area of TSW1 is recorded in deeds of 1578 as 'the void piece of ground late of Thomas Snead dyer' (Leech, DVD section 03). Although the historical evidence does not demonstrate an unbroken line of dyers on this property, the archaeological and documentary record suggest that dyeing was taking place within this and adjacent properties from the late 12th century until the mid 16th century. Documentary, cartographic and archaeological evidence records the textile industry in Temple into the 15th to 16th century and beyond, with tenter racks for stretching cloth found at Cart Lane (Webster and Cherry 1975, 242) and similar structures are depicted along with rolls of cloth beside the waterfront at Temple Back on Millerd's map of 1673 (Fig. 1.8). The evidence from Finzel's Reach attests to the presence of the textile industry in Temple almost from the establishment of the suburb, during the late 12th century, and adds to the known evidence for the industry on the waterfront of Redcliffe.

Tanning and leatherworking

The tanning industry was frequently situated in riverside locations and on the periphery of towns due to the requirement for large volumes of water and the noisome substances and processes involved. The evidence from the excavations suggests that both tanning and leatherworking were practised at Finzel's Reach during the late 12th to early 13th centuries. Figure 5.3 shows the distribution of features, artefacts and ecofactual material that are suggestive of tanning and leatherworking. It should be noted, however, as Rebecca Nicholson comments (Chapter 7, below) that there was almost no evidence for primary tanning waste in the leather assemblage, and little direct evidence in the form of typical tanning-associated insect faunas. Although potential tanner's debris such as horn cores and lower limb bones did occur in pits, it was usually in relatively small quantities and associated with a wider range of general settlement debris.

The most convincing evidence for tanning came from the east side of Temple Street, on property TSE1S, where two rooms were exposed of a stone-founded building (2602) to the rear of the street frontage, probably dating from the late 12th century. The western room contained a hearth that appears to have been used for smithing and evidence for food preparation or consumption was also found, but the adjacent room appears to have been a focus for the preparation of hides for tanning or tawing. The first stage of this process involves the soaking of hides in pits with lime or alum to loosen the hair so it can be more easily scraped off (Blair and Ramsay 1991, 301) and two shallow, barrel-lined pits in this room may have been used for this process. Both barrels contained lime-rich residues, and the analysis of impressions on the surfaces of these deposits confirmed the presence of animal hair in one sample, consistent with the use of the barrels for tanning or tawing. Two very similar pits were found in the excavations at Dundas Wharf (Good 1991), similarly situated within a possible shed to the rear of a frontage building. Two further pits of a similar size and arrangement that were found at Canynges House may also have been tanning/tawing pits, although no timber linings survived (Youngs *et al*. 1986, 119).

Such surviving evidence as hair impressions on lime deposits is rare and evidence that can be specifically associated with tanning is generally difficult to identify, since the waste material, comprising the horncores and feet that were attached to the hide when purchased, were often sold on to other craftsmen for use in horn- and boneworking. Tanning may therefore leave little artefactual evidence unless a tanner has dumped the waste instead of selling it on, leaving large dumps of horncores and/or metapodials/phalanges. The actual tanning process used bark to treat the skins, although this material was quite readily broken down and does not often survive. A large rectangular pit (2634) adjacent to the twin barrel-lined pits in TSE1S contained bark, lime, horncores and metapodials that is likely to represent the waste from tanning, with the bark suggesting that the tanning process itself was taking place here and not just the initial hide preparation. This type of large, deep pit may also have functioned as a layaway pit,

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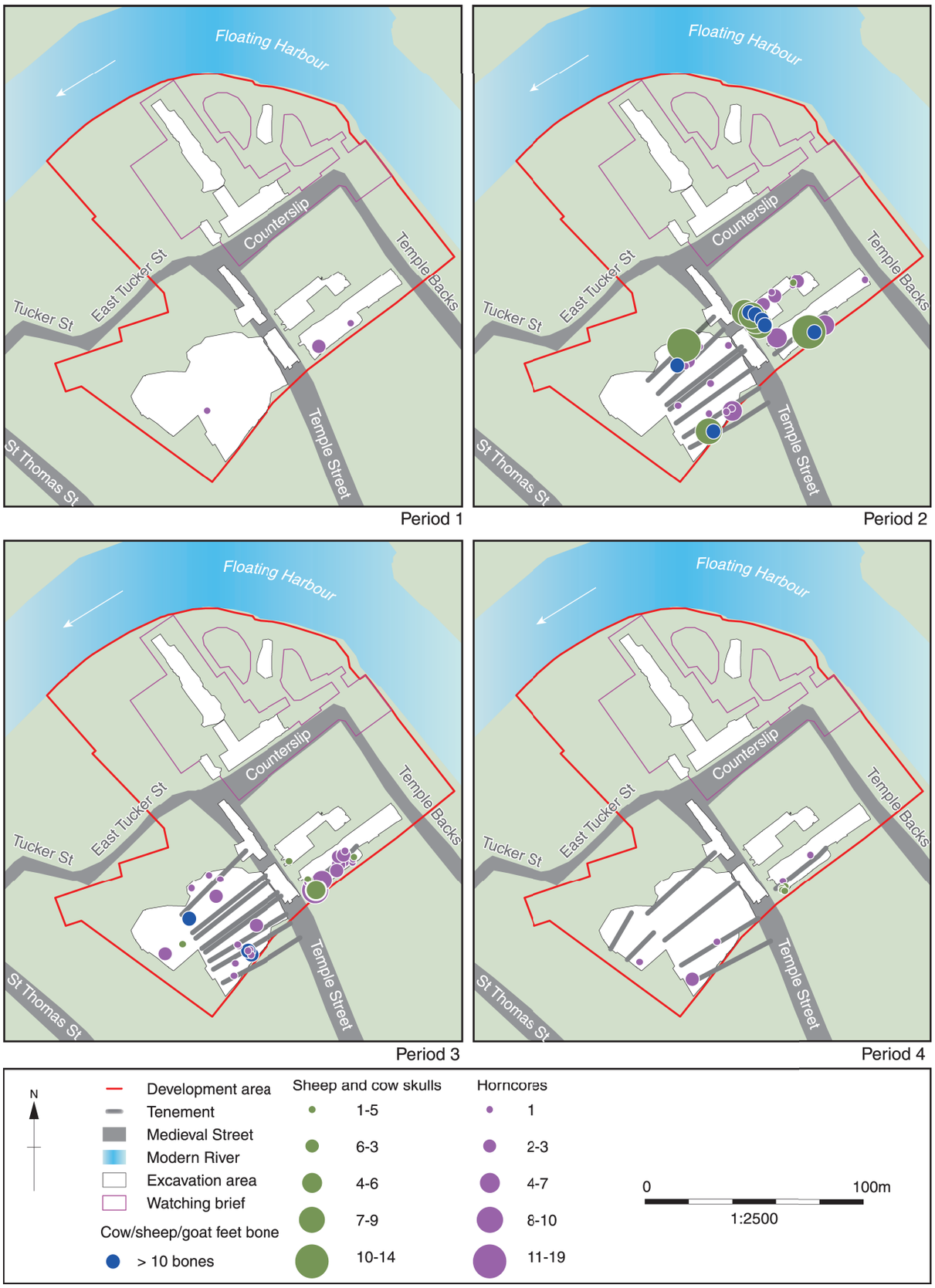

Fig. 5.3 Distribution of tanning evidence

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in which hides were soaked for a long period. Another large rectangular pit just outside the building (2328) appeared to have been stone-lined at the base, suggesting that the empty pit had an industrial function rather than being merely a receptacle for waste. The backfill contained abundant cattle horncores and sheep/goat metapodials, along with degraded bark and possible lime. Similar waste was found in the recut of this pit (2504) and the infilling of both pits was dated to after 1250. Dumps of horncores along with some foot bones were also recovered from the late 12th-century fills of the ditch along the east side of Temple Street, and may represent waste from the tanning nearby. Also recovered from the ditch was part of a wooden rake head, which could have been used in the tanning process for scraping or moving skins at arms length.

Evidence for tanning on the western side of Temple Street is less conclusive, although a significant amount of waste was deposited in pits and ditches to the rear of TSW2, suggesting that hides were processed here. In three pits there were notable concentrations of horncores and metapodials, constituting one of the few assemblages on the site that can be described as a 'dump', along with some bark. One large deep pit (4708) also had a collapsed wooden lining in its base, which may also suggest some kind of industrial function, perhaps as a layaway pit. Shallower pits nearby (such as 4914) may have been 'handler' pits where hides were washed before being placed in the layaway pits to soak.

The ditches on either side of Temple Street contained cobbling waste of early to mid-12th century date, suggesting that this industry was practised nearby (see Mould, Chapter 6). Further cobbling waste was found in ditch 1267, which ran perpendicular to the street, along the northern side of property TSE2, and highlights this property as a possible location for a cobbler's workshop. Such a workshop is not likely to be highly visible archaeologically, except for the waste it generated. However, a workshop here would exploit a prime location on the approach to Bristol with a service likely to have been required by travellers and locals alike. Other cobbling waste was found in a pit to the rear of TSW2 and may indicate that this activity took place on this property, although worn leather shoes also found in pits such as those to the rear of TSW2 and TSW3 are just as likely to have been deposited as standard domestic waste. Cobbling on or near the site into the later medieval period is demonstrated by cobbling waste found in dump layers at the riverfront including waste from a 13th- to 14th-century shoe and a piece showing a distinctive 15th-century seam.

Metalworking

Some of the earliest industrial evidence relates to metalworking, with large amounts of waste recovered from the ditches on either side of Temple Street, including large numbers of smithing hearth bottoms deposited in fills attributed to the mid 12th and early 13th centuries (Period 2). The large number of smithing hearth bottoms suggest that there was a smithy close by, and slag from features on both sides of the street suggests that smithing may have been practised in more than one location throughout the period (Fig. 5.4). The wide distribution of smithing slag, however, may indicate that the material had been redeposited, and a better indicator of the likely locations of smithies is provided by the presence of microslags, occurring in the form of hammerscale and smithing spheres. On this basis, the frontage building in Area 5 (TSE1S) is a likely location for a smithy during the late 12th and early 13th century. No bulk slags were recovered from within the structure, but hearth 2283 and associated charcoal-rich layer 2574 contained broken hammerscale flakes, some tiny smithing spheres and tiny iron shavings and fragments, while a nearby pit contained slag dribble. It is additionally likely that at least some of the material found in the adjacent roadside ditch originated from activity within this building. This activity appears to have continued into the late 13th to early 14th centuries, with microslags recovered from rake-out deposits and layers of this date. The recovery of only a single smithing hearth bottom from deposits of this later date may indicate that most of the bulk slags continued to be deposited in the recut eastern roadside ditch. Smithing also appears to have expanded into the adjoining property, TSE1N, in this period, where a floor layer and a charcoal-rich layer contained more microslags. Large quantities of hammerscale flakes and smithing spheres were found in samples of garden soils from the backyard area behind TSE1S, suggesting that while bulk slags were transported and dumped in the roadside ditch, smaller debris was swept up and deposited in the yard.

Similar evidence was recovered from Period 3 (mid 13th- to mid 14th-century) deposits at property TSE2 in Area 5. Large quantities of smithing debris were found in the final levelling layers of the roadside ditch along the east side of Temple Street, and the presence of a great deal of microslag evidence in soil samples taken from Building 20037 suggests that this may well have been the source. As Temple Street was one of the main streets leading to and from Bristol Bridge at this time it would have been a good location for a smith shoeing horses and carrying out minor repairs.

The finds assemblage included several artefacts from medieval deposits on both sides of Temple Street that suggest that non-ferrous metalworking also took place on or near the site, including fragments of copper alloy plate, sheet and strip, a possible waster from a tripod vessel and small amounts of lead waste (Fig. 5.5). The quantity of material was not large, but it is likely that many offcuts would have been melted down and reused rather than discarded. However, none of these

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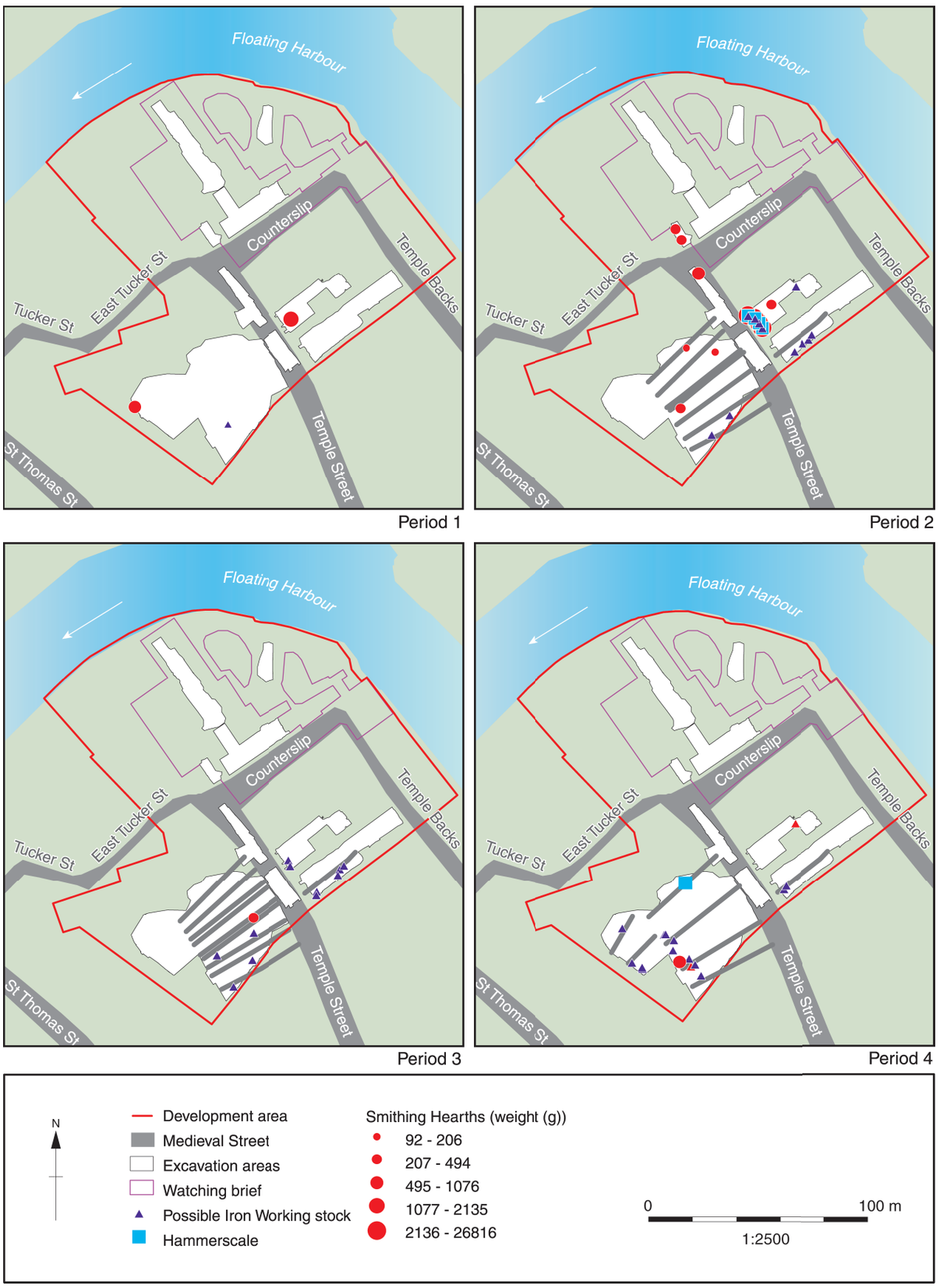

Fig. 5.4 Distribution of smithing evidence

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Fig. 5.5 Distribution of possible copper alloy and lead waste products

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artefacts occurred in concentrations sufficient to suggest a specific location for this activity and no crucibles were recovered from the site, and it is therefore likely that any non-ferrous metalworking was on a small scale and probably represents the undertaking of occasional *ad hoc* repairs rather than industrial production.

Other industries

A small amount of boneworking waste was found, suggesting that this was undertaken at least on a small (perhaps domestic) scale in TSE1 during the early 16th century, consisting of three strips of button/bead working debris. Several finds of axially-drilled metatarsals spread across the site also suggest the initial stages of making something out of bone, although just what is not known. It may be that these items were acquired in this raw state by individual households and finished into items such as handle replacements for household tools after purchase. Similarly, the deer antler assemblage was too small to suggest the presence of an antler working workshop but the antler fragments could suggest small-scale working for household use.

THE EARLY POST-MEDIEVAL PERIOD

by Steven Teague

There was a very notable decline in archaeological evidence attributable to the 16th and 17th centuries. No new buildings appear to have been constructed and indeed many of the structures that occupied the rear areas of properties appear either to have gone out of use or to have been demolished by the end of the 16th century. This is perhaps best illustrated by the properties on the west side of Temple Street, which were the most fully exposed by the excavation. Only within TSW3 is there any evidence for the modification of existing structures, comprising the levelling of the ovens within Building 7240, a substantial building perhaps used as a textile workshop, suggesting that whatever process they had been used for was no longer carried out within the structure. The insertion of a new oven (7045), possibly with a domestic function, could imply a

Fig. 5.6 The excavation areas in relation to documented properties (after Leech 2009)

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Table 5.2 Correlation of properties defined by the excavation with Leech's (2009) reconstruction of early post-medieval tenements

Property	*Leech's tenement*
TSW1	157-8
TSW2	159
TSW3	160-4
TSW4	165-6
TSW5	167-9
TSE1S	7
TSE1N	6
TSE2	4-5

change of use of the building, which seems to have coincided with a reorganisation and perhaps partial demolition of outbuildings to the rear. The paucity of archaeological evidence cannot necessarily be assumed to reflect a major decline in the degree of occupation across the site, however, since much of the medieval street frontage either lay beyond the excavation areas or had been removed by the digging of later cellars. The evidence we do have from properties TSE1-2 is that the main frontage buildings of the medieval period probably remained standing into the 18th century.

Further information comes from surviving contemporary documentary and cartographic evidence. This was reviewed for the present project by Roger Leech, whose report is available on the DVD accompanying this volume (section 03); information from documentary sources discussed here is reproduced from that report unless otherwise stated. An attempt has been made to compare the properties defined by the excavation with Leech's (2009, see DVD section 03) reconstruction of the early post-medieval tenements in the area (Table 5.2, Fig. 5.6).

No. 157 Temple Street was recorded in 1578 as 'the void piece of ground late of Thomas Snead dyer'; it appears in 1674 as a messuage with walled yard or garden occupied by John Bisse cooper. Both tenements may have also been vacant in 1459 when No. 157 was granted by William Canterbury and Alice his wife to the feoffees of St Thomas's church and No. 158 was 'land formerly of Thomas Cheddar'. No. 159 Temple Street was described in 1566 as one of six properties, part of the lands of Lord Lisle, sold in fee farm by the Corporation to John Palmer, baker, a narrow plot of ground on the west side of Temple Street of Margaret Hannye widow, between a garden of Henry Stone, mason, on the north (No. 158?) and a garden of the said Margaret Hannye on the south, extending to the Law Ditch. This description, if referring to the whole property, could suggest an open area devoid of structures. Such a description would correspond with the surviving archaeological evidence that we have for the 16th century that shows both properties largely devoid of structures (within the area investigated) with no evidence for a boundary between the

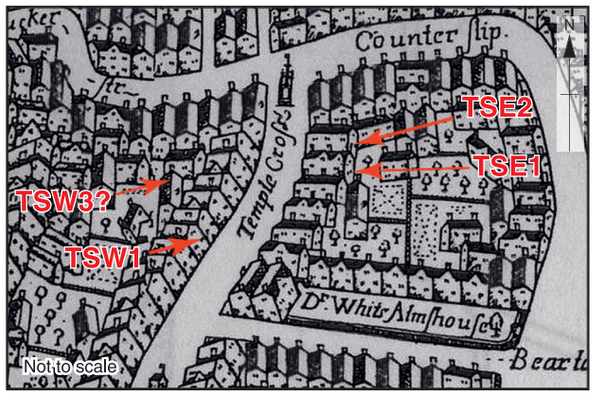

Fig. 5.7 Suggested correlation of excavated properties with James Millerd's plan of Bristol of 1673

two properties. If such a garden was contained within both properties this would tentatively correspond with James Millerd's map of Bristol (1673), which depicts the rear area of TSW1-2 as a large single garden with a ?single house on the frontage (Fig. 5.7). A small assemblage of 16th-century pottery from TSW1 included an elaborate late Gothic-style openwork chafing dish from Saintonge, which suggests an occupant of some wealth and status. This property appears to have been occupied by Henry Stone, a mason, at some time before 1566.

Smith's map cannot be relied on in detail, but if these properties are correctly identified, the map also depicts a range of three structures occupying the full length of the adjacent property to the north of these gardens (TSW3?), the central structure of which would corresponded with Building 7240 with further structure(s) to its rear, all of which the archaeological evidence suggests were still extant at this time. The largest late medieval pottery assemblage came from this part of the site. Late medieval pottery was scarce to the north of these properties, suggesting low occupancy, and indeed Smith's map shows at least two vacant plots here.

Although little evidence for 16th-century activity was found elsewhere on the site, how much of this was due to its removal by later truncation is difficult to ascertain. The small quantities of Malvernian and Tudor Green wares that were found in later contexts within properties TSE1-2 on the east side of Temple Street point to at least some level of activity, the lack of finer wares perhaps suggesting that the occupants were less well off than their counterparts on the west side of the street. Again the documentary evidence gives some insight into the occupants on the east side of Temple Street, which shows that properties TSE1-2 continued to be occupied well into the 16th century and possibly uninterruptedly into the following century. However, the evidence is largely uninformative concerning the occupations of the tenants, though the resident of No. 7 Temple Street (TSE1S) is named as John Barnes (merchant) in 1607 and as James Pendergast (dyer) in 1617. Smith's map

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appears to show the main houses still standing, with large gardens to their rear. In a deed of 1640, at least two pre-existing houses and a barn are referenced, apparently in poor repair and where Thomas Dittie, merchant, had 'lately dwelt'.

Post-medieval growth of new industries

During the 1620s and 1630s the growing English settlements in the Americas saw the start of a revival in Bristol's fortunes and within a few decades they would create new trading opportunities as lucrative as southern Europe had been a century or so earlier. Indeed, Bristol ended the 17th century as the one of the most important ports of the Atlantic world and during the 18th century it attained perhaps its greatest economic power, with a key role in the development of Britain's American and Caribbean colonies (Baker *et al*. forthcoming). By far the most profitable trade with the new colonies was in luxury goods, particularly sugar, which was to become a major industry in the city in the 18th and early 19th centuries. This formed the third part of Bristol's 'Triangular Trade': the export of goods to Africa, particularly from its rapidly expanding glass, pottery and metalwork industries, to be exchanged for slaves who were then sold to the Caribbean and American colonies.

On the west side of Temple Street, use of the former industrial complex (TSW3) seems to have continued into the 17th century with further modifications to outbuildings to its rear and the construction of a new path that led to it from the street frontage. Documentary evidence seems to imply that this property (at least its northern part, No. 164 Temple Street) was occupied throughout the 17th century, since it was leased to Matthew Warren for a rent of £1 13s 4d in 1626, later to Christopher Woodward and then in 1673 to John Hawkins. The documentary evidence suggests that No. 159 Temple Street (TSW2) was still being rented out, at least during the first part of the century, since in 1622 it was the tenement of Humphrey Andrewes and by 1640 it was held by Marie Davis. In 1661 it was described as a tenement, garden and penthouse but no occupier was listed. The frontage of the property lay outside the excavated area but an early 20th-century photograph shows a 17th-century or earlier house with three storeys and an attic. By contrast, there is no documentary evidence for occupants within Nos 165-70 to the north during the 17th century and (apart from No. 169) until the middle of the 18th century.

On the east side of Temple Street there is documentary and supporting archaeological evidence for the construction of new buildings from at least the middle part of the 17th century. This is best illustrated in properties TSE1N and TSE1S, which represented two tenements apparently sharing a single house on the front (Building 20034). The building had been extensively remodelled and extended though whether it had been rebuilt entirely was not certain, especially if the new structure had utilised the foundations of the medieval building. Examination of the leases for Nos 6-7 Temple Street (TSE1N and TSE1S) suggests that both were extensively rebuilt about the same time; in 1640, No. 7 had been 'lately built' by the clothier Francis Barnes. A lease of the same date concerning No. 6 states it was 'the messuage where Thomas Dittie merchant lately dwelt and wherein Richard Ditty now dwelleth, garden, houses and stable in Temple Street, and shop, now leased to John Yeomans, in consideration of him spending 100 pounds or more in rebuilding and repairing the leased tenements, and in erecting two dwellings, houses and a stable at the further end of the garden towards Bastavon'. It seems likely that these new buildings would correspond to the large post-medieval (albeit poorly dated) Buildings 20041 and 20042 that were added to the rear of the northern tenement (TSE1N). A lease in 1669 suggests that 'late' John Barnes resided over a shop in this tenement and had also leased and rebuilt No. 7 by 1640. This would imply that his residence occupied the floor above the shop in No. 7 that may have extended into No. 6. A watercolour by T S Rowbotham dated to 1828 (Fig. 5.8) depicts a pair of contemporary looking houses, the northern of which (No. 6) had a projecting gable that was supported by scrolled brackets, indicating a 17th-century date. What archaeological evidence there is suggests mainly domestic activity within Nos 6-7 Temple Street though there is a preponderance of

*Fig. 5.8 Watercolour by T S Rowbotham (*c *1828) showing Temple Street, looking south*

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hearths within the frontage building of No. 7 that could be associated with baking or food preparation within a shop. There is evidence from the deeds that the adjacent tenement to the south (No. 8 Temple Street) was leased to and occupied by Edward Nelson, baker, by 1645 and by John Griffith, also a baker, in 1730, which suggests a long association with bakers at this tenement.

An 'oven' (2192) associated with tobacco clay pipe wasters was inserted into a rear building behind No. 7 Temple Street; two bowls stamped with the mark of Flower Hunt were found in association with it. The direct association of the wasters with the oven would imply the manufacture of pipes on the premises. The long rectangular 'oven' had been subject to intensive heat and the wasters had been warped and their fabric had started to fuse, which would have required a temperature of 1000°C or more. If the oven was part of a kiln, then it is likely to have formed part of the ash pit with the kiln structure above (David Higgins pers. comm. See Chapter 6 and DVD section 2.3 for a fuller discussion of this evidence). Seventeenth century kilns were small and had a muffle chamber into which the pipes were stacked, and were probably loaded from the top. The muffle chambers were normally constructed from light-firing clay with reinforcing layers of pre-fired pipes and stems (Peacey 1996). The surviving evidence resembles in both size and construction that of kilns excavated at Oyster Street, Portsmouth and dated to *c* 1690 and the early 17th century, in which partially intact kiln elements survived over a narrow flue or ash pit (Fox and Barton 1986, 68-71). Some of the stem fragments recovered from the oven had fired clay adhering to them, suggesting that they had been used to build the kiln muffle. Flower Hunt was a freeman of Bristol in 1651 and a founder member of the pipemakers guild in 1652 but he is known to have lived elsewhere in the city, at Castle Street on the north side of the river, and he had no known connection with the Temple area. He had a number of apprentices although none of their names appear on deeds associated with No. 7 Temple Street or the vicinity.

Though much of the evidence from property TSE 2 had been removed by modern footings, there may be some correspondence with the documentary evidence. This shows that the former residence (No. 5) of Richard Goodwin clothier (who also leased No. 4, on the northern part of TSE 2) in 1673 was 're-edified and new built by Goodwin who lived there, now leased to Matthew Rogers merchant' and by 1686 it was leased to John Hawkins brewer and others. The association of the property with brewing persisted into the 18th and 19th century when it was the Jolly Brewers public house. Though no certain evidence was found, it is feasible that Building 1139 (Fig. 4.4), towards the rear of the tenement, may have formed part of a malthouse. The structure contained two phases of a large stone-built oven, the latter of which had an external flue suggesting it was used to supply warm air for a floor above, which would be consistent with the raised floor of an oast house. Such floors were composed of perforated oast or malting kiln tiles, allowing for the circulation of heat and air throughout the kiln, although such tiles were not recovered. Malting kilns were usually for the malting of barley and are often associated with brewing. Indeed, a malt house was mentioned in a deed from 1761, which states that there was 'a stable and malthouse of sd. Eames and Co... next to Temple Back' (ie towards the rear of the property). Building 1139 appears to have gone out of use by the early-mid 18th century. The presence of a small cellared structure (1257), presumably for storage, might also have been associated with a small brewery here.

THE LATER POST-MEDIEVAL PERIOD

by Steven Teague

The early 18th century saw the start of a marked increase in rebuilding across the site, although the evidence almost invariably survived only in the form of cellars. This increase in activity also saw the refurbishment of the Law Ditch between Temple Street and St Thomas Street and enhancements of the riverside wall in Area 3c, with the addition of a possible stone structure with a slipway. Groups of cellared structures were recorded in Area 1 on the west side of Temple Street. The cellar within TSW 3 (Building 7195, Fig. 4.13) formed part of a group of four tenements (Nos 161-64 Temple Street) that were by this time under the common ownership of Queen Elizabeth's Hospital. Though no firm date for their construction could be established from the excavation they appear to have been built as a single unit (though No. 164 was possibly slightly later) with common access between the tenements at cellar level. There is little direct evidence from the surviving deeds of any major rebuilding, but it may be significant that in 1763 Nos 161-63 were all leased to Matthew Fatt whereas immediately beforehand, in 1740, they were each leased/rented separately to John Harmer drugget maker (No. 161), Richard Abbot carpenter (No. 162) and Mary Nowell and Hannah Bosely widow (No. 163). Nothing else is known concerning Matthew Fatt but it could be suggested that he acquired the three tenements with the intention to improve the property and set out to rebuild it. It is not known whether he also acquired the northern tenement of the Queen Elizabeth's Hospital property (No. 164), though the well (3725) located behind the cellar in this tenement occupies the same position as well 3509, which seems to have been shared between Nos 161-3, implying they were both built as a single complex. Perhaps the cellars were constructed in order to attract more wealthy tenants or to satisfy the rapidly growing population that Bristol was experiencing. Prior to *c* 1700 the population is not thought to have been more than 20,000 inhabitants (Baker *et al.* forthcoming), though by the census of 1801 it had tripled to 68,944 and by the 1841 census it had more than doubled again to 144,803 (University of Portsmouth Census data 1801 and 1841).

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Until the construction of Finzel's Sugar Refinery in middle of the 19th century there is little direct evidence for the increased industrialisation of the site that was underway from the middle of the 18th century. Fragments of glass waste, including a glass blowing pull, were found within the backfill of drain 3722 within No. 167 Temple Street, but it is possible that it was dumped from elsewhere rather than produced in the immediate vicinity. However, No. 169, the southern side of which the drain skirted, was occupied in 1740 by Joseph Hill, glassman. If glass was made here it would have been carried out on a small scale, given the size of the premises, compared to glasshouses that are known to have existed in the area at Redcliffe Wharf, St Thomas Street, Redcliff Gate, Red Lane and Temple Backs from the end of the 17th century (Baker *et al*. forthcoming).

It would seem that a basement within Area 3d associated with the 20th-century brewery on the site had removed all evidence of the sugar house that preceded Finzel's refinery, apart from an undated wall fragment that may pertain to it (11002, Fig. 4.23). However, this period saw the addition of a substantial stone structure (5014) to the front of the medieval riverside wall, probably a quay or a pier, that appears to have incorporated a slipway, suggesting it was built to allow access to shipping. This would have assisted the easier transportation of goods and raw materials to new factories in the area. Although the date for the construction of this structure is uncertain, it was in use during the early part of the 18th century and must have ceased to function by the time of Plumley and Ashmead's map of 1828, which shows that the existing edge of the river was established by this date. However, this map does show a clear access lane leading from Counterslip through a timber merchant's yard to the river, which could originally have led to the putative quay. To the west of the possible quay were the extensive premises of Philip George and Bristol Porter Brewery, founded in 1768, which had acquired earlier breweries and distillers located on the properties immediately to the west (Nos A and 1 Counterslip). Cellar 10048 (Fig. 4.17) may have formed part of these. Further brewers are noted in the properties to the east, including No. 6 Counterslip, which in 1746 was held by Richard Smith, brewer. Smith's property had cellars that could equate to those revealed in the excavation (Building 9183, Fig. 4.17). These industries required a ready supply of large volumes of water and the adjacent river would be an obvious source, supplemented by the sinking of wells. The base pipe of the wooden water pump (5189) that was found immediately in front of the possible quay could have been part of a water supply mechanism. The mechanism used to draw the water was not found but it would presumably have been housed on top of possible quay structure 5014. How the water was distributed from this point is not known, although it may have been pumped along hollowed elm conduits, as was the case in 17th-century London (Buer 1926, 99).

The last decade of the 18th and the first half the 19th century saw considerable change within the area of Redcliffe and Temple, with major infrastructure projects that would have a profound impact on the character of the existing medieval fabric of the area. This was centred on the need to improve access from the suburbs south of the river to Bristol Bridge. The first major element of this was the creation of Bath Street, begun in 1789, which cut a swathe through the northern part of Temple Street and through both sides of Tucker Street. It was fronted by houses that were constructed with basement kitchens and probably with rain water cisterns to the rear. The rear parts of several of these new houses were briefly recorded (Nos 15-17), their alignments being clearly distinguishable from the earlier remains of Nos 165-67 Temple Street. Dating evidence obtained from the pottery and clay pipe assemblages (*c* 1790-1820) from the infilled cellars and drains behind the demolished Temple Street properties is in close agreement with the date of the establishment of Bath Street, which shows that the area was rapidly cleared and levelled. The construction of Philip Street (with tram lines) around 1841 to serve the newly constructed St Philip's bridge cut through the houses on the east side of Temple Street, resulting in the total removal of the former medieval property TSE2 (Nos 4-5) and the remodelling of TSE1N (No. 6) in order to accommodate its north side. The undated cellar (2017, Fig. 4.22) found within No. 6 Temple Street must date to after this, since its north wall exactly follows the edge of the new street.

The increasingly industrial character of the site during the 19th century was most evident adjacent to the river, by the remains of the sugar refinery built in 1846 by Conrad Finzel. The position of the earlier sugar house of Harwood and Blackwell's is shown on Ashmead's map of 1828, though unfortunately a modern basement had removed all evidence that could be tied to it with any confidence. The map also shows that the existing river frontage was now in place, probably dating from the construction of the Floating Harbour, which was completed by 1809 and greatly improved access for shipping into Bristol. This allowed the constant unloading and loading of sugar cane and processed sugar at any time of the day or night, thus allowing a considerable expansion of capacity. Much of the excavated evidence obtained concerning the layout of Finzel's refinery corresponds closely with the detailed survey of the works undertaken in 1879, shortly before its closure in 1881, including the location of the pier bases that supported machinery within the liquor cistern and the boiler house. The shell of the former refinery was incorporated into Georges and Co brewery after 1919. Despite being bombed during the Second World War, some remains of Finzel's building have survived to be incorporated into the 21st-century redevelopment.

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