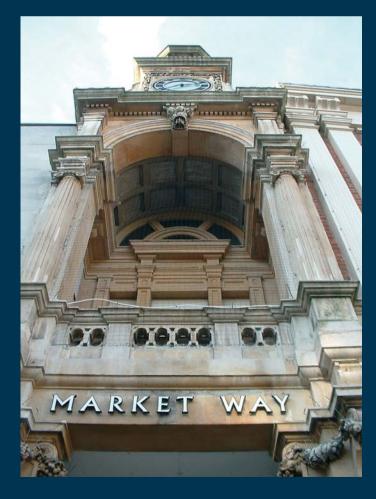
This publication brings together the results of two excavations carried out by Oxford Archaeology along Reading Broad Street.

Excavations at 7–8 Broad Street revealed part of a possible 16th- to 17th-century tavern or inn, situated behind the street frontage. Finds included a large collection of pottery associated with the serving and consumption of drink including fine Venetian style glassware and early clay pipes. Although evidence of medieval occupation was found in the form of rubbish pits, much of the site had been severely disturbed by the construction of the Corn Exchange in the 19th century.

Excavations at 90–93 Broad Street revealed a cultivation soil and ditch that may represent activity in the grounds of St Mary's Church pre-dating the laying out of tenements along Broad Street. Medieval gravel and cess pits were revealed within the back yards of tenements fronting Broad St and Chain St, immediately to the north of St Mary's Churchyard. Also revealed in this area was a bell mould pit which was likely to be used for the casting of a 13th-century bell for St Mary's. The excavations produced exceptional assemblages of bird, fish and animal bone. There were also notable assemblages of 11th- to 13th-century pottery and 16th- to 17th-century glass.

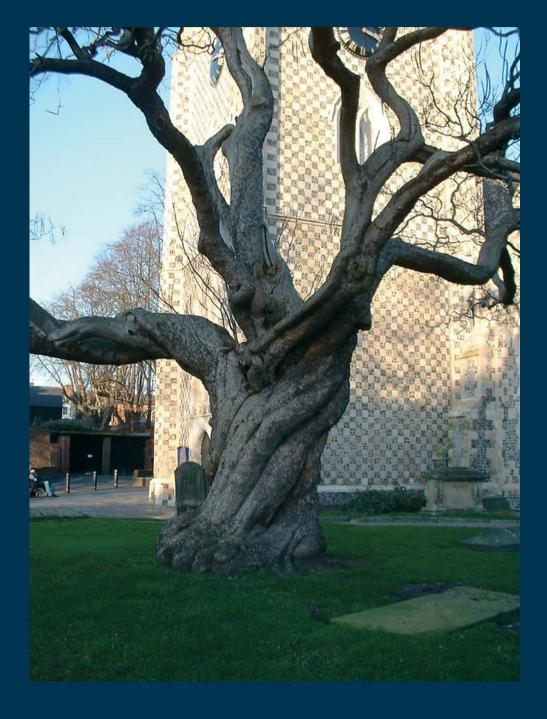




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EXCAVATIONS IN BROAD STREET, READING



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EXCAVATIONS OF MEDIEVAL AND EARLY POST-MEDIEVAL FEATURES AT 90–93 BROAD ST, READING

By Andrew Norton and Daniel Poore

with contributions by

Paul Blinkhorn, Joan Dils, Denise Druce, Emma-Jayne Evans, Rowena Gale, David Higgins, Claire Ingrem, Graham Morgan, Ian Scott, Terence Smith and Rachel Tyson

Illustrations by

Anne Stewardson and OA Graphics Office

Oxford Archaeology Occasional Paper No. 13

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Summary

Between February and April 2002 Oxford Archaeology carried out excavations at 90–93 Broad Street, Reading (NGR SU 7142 7342) in advance of a new retail development. The excavations revealed a cultivation soil and ditch that may have represented activity within the grounds of the Saxon Minster; a small assemblage of early to mid Saxon pottery was recovered from later deposits, including a single sherd of Ipswich ware. Medieval gravel pits, cess pits and a bell mould pit were revealed within the back yards of tenements fronting Broad St and Chain St, immediately to the north of St Mary's Churchyard. It is likely that the bell mould pit was for the casting of a 13th-century bell for St Mary's. The pits contained exceptional assemblages of bird, fish and animal bone, suggestive of primary butchery and skinning in the vicinity, as well as the presence of a high status household. There were also notable assemblages of 11th- to 13th-century pottery and 16th- to 17th-century glass.

Acknowledgements

Oxford Archaeology is grateful to John Mowlem and Company PLC, who funded the archaeological investigations, analysis and publication. OA would also like to thank Kev Beachus of the Babtie Group, for his co-operation and help on site. Thanks are also due to Joan Dils for her historical research and to the OA staff for their hard work in excavating the site, especially the weekend support team of specialists and managers, some of whom had not dug for some time. The authors would particularly like to thank Emma-Jayne Evans for her thoughts on the animal bone assemblage, and Anne Stewardson and the OA graphics office for their hard work in preparing the illustrations. The excavations were managed by Dan Poore, and Alan Hardy oversaw the post-excavation phase of the work. Julian Munby proved invaluable as a sounding board on ecclesiastical and medieval matters. The report was edited for publication by Anne Dodd.

PROJECT BACKGROUND

The Development

The site lies in the centre of Reading (NGR SU 7142 7342), on the south side of Broad Street. It is bounded to the east by Chain Street and No. 94 Broad Street, to the south by St Mary's Centre and the grounds of St Mary's Church and to the west by the United Reformed Church and No. 89 Broad Street. The development area comprises a roughly 'L' shaped block of c 0.12 ha (Figs 1 and 15).

The site lies at c 45 m OD between the rivers Thames and Kennet. The geology is drift deposits of River Terrace Gravels, overlying solid geology of Upper Chalk (Geological Survey of Great Britain, Sheet 268). The site was previously occupied by Boots the Chemist, which has now been demolished as part of the current programme of redevelopment.

Archaeological and historical background

The site has been the subject of a separate desk-based assessment (Fell 2000) and a search of documentary sources has been undertaken by Joan Dils. There is limited evidence for prehistoric and Roman activity within the centre of Reading. This is likely to be as a result of the destruction of such deposits during Reading's expansion rather than the absence of settlement or activity during these periods. The town of Reading is thought to have been founded during the Saxon period, when it was likely to have been focused on the site of St Mary's Church, which lies to the immediate south of the development site (Astill 1978, 75). Documentary evidence suggests this was the location of a royal vill in the late 9th century. A fortified camp was built by the Vikings at Reading in 870-871, and this probably lay to the east in the area of the later abbey precinct. A burial and a coin hoard dating to the 9th century have been recorded within the grounds of St Mary's (RD 11341). The foundation of Reading Abbey in the early 12th century provided a stimulus for the rapid expansion of the town. The market had traditionally been held in the area around St Mary's, but trade was gradually drawn away to the new market place outside the abbey gates to the east. Broad Street and Friar Street were probably laid out on the abbey's initiative, to join the new market to the old main thoroughfare and create new tenements for rent. The existence of Friar Street is confirmed in documentary sources by 1186, but no clear documentary references to the project area have been found for the medieval period. Some detail about the early postmedieval properties in the project area is provided by Amyce's survey of 1552. By this time, there was a tenement and garden on Chain St, north of St Mary's Churchyard, held by Sir Francis Knollys, with a garden owned by William Grey's heirs and occupied by John Bell to the north. On the corner of Chain St and Broad St was a tenement and garden called 'the corner house', lying outside the project area, and to the west two cottages or tenements held by William Grey's heirs and occupied by William Gylle for 4s 2d rent. These can probably be identified with the area of the excavations. Between here and Old (West) St were two more tenements with gardens, and two gardens, suggesting that this was not a very populous area by the mid 16th century. Figure 9, which is based on Peyton's mapping of the Amyce survey, suggests how these properties may have related to the excavated remains. Cartographic evidence, starting with Speed's map of 1610 (Fig. 2) suggests that until at least 1879 (1st edition OS 50 inch map) the buildings were focused on the north and east frontages of these tenements, with the rear areas used as yards and gardens. By 1900 only the south-west corner was unoccupied by buildings (1st edition OS 25 inch map).

Excavation methodology

In January 2002 a field evaluation (OA 2002b) revealed that most of the proposed development area had been heavily truncated by basements, with archaeological remains surviving only towards the south-east of the site (Area A on Fig. 1). This area was fully excavated by hand after non-archaeological deposits were removed, using a mechanical excavator with a toothless ditching bucket to minimise disturbance to archaeologically sensitive strata. The area of the basements (Areas B and C on Fig. 1) was covered by a concrete floor slab overlying slight make-up deposits. This was broken out under archaeological supervision and all other deposits were hand-excavated archaeologically.

Soils and conditions

As indicated by the evaluation results, Area A was found to contain the largest concentration of archaeological features, and the medieval ground level could be seen in isolated patches. In Areas B and C, 1.5 m of archaeological deposits had been removed by the Boots basement. When considering the depths of the archaeological features within these areas, truncation must be taken into account. The natural chalk was revealed c 3.5 m below ground level (bgl) and was overlain by c 2.5 m of terrace gravels. The gravel was overlain by a layer of brickearth that, where seen, was cut by the archaeology. The archaeological features were generally filled with silty clays and gravel derived from the natural deposits.

ARCHAEOLOGICAL DESCRIPTION

Phase 1 800-1100

Area A (Fig. 3)

The earliest deposit encountered within the area was a layer of orange-brown silt (795). It was seen in patches throughout Area A and contained no reliable dating evidence, although a small abraded sherd of possible Romano-British pottery was recovered. Pig bones were recovered and environmental samples taken

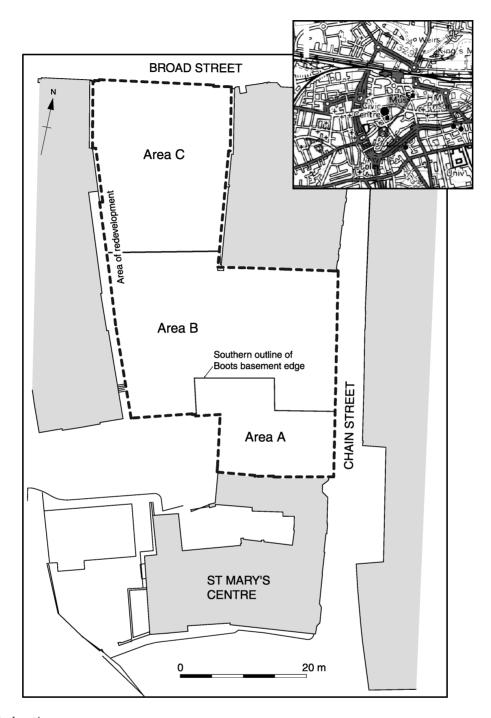


Figure 1 Site location.

from the soil produced cereal grains, hazelnut shell fragments and weed seeds. The soil may have represented a Romano-British or Saxon occupation level, possibly a cultivation soil. It was truncated by a NE-SW aligned ditch (544), 1.0 m wide, 0.80 m deep with 45° sides. The ditch had silted up with brickearth at its base and had then been backfilled with dumps of silt. No dating material was recovered but the environmental samples revealed similar remains to the surrounding soil. A few residual Roman brick fragments and one fragment of combed box-flue tile from

a hypocaust heating system were recovered from later features within the area.

Phase 2 1100-1250

Area A (Figs 3-5)

Soils and structures

At the southern edge of the site was a deposit of brown silty soil (434), 0.3 m thick. Patches of a similar soil were seen to the north and west. The soil

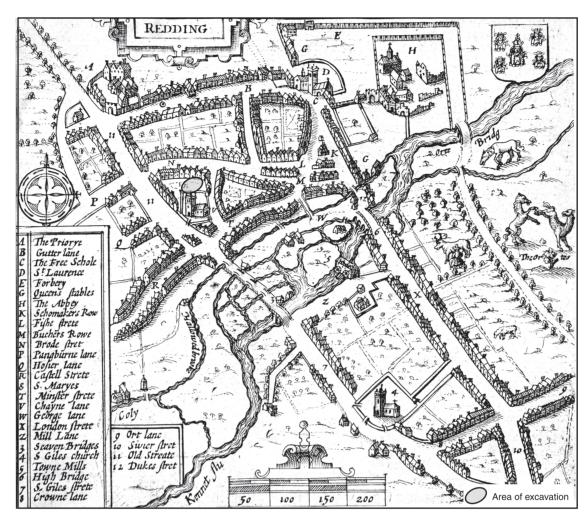


Figure 2 Speed's map of Reading of 1611, showing location of site.

was cut by an east-west aligned ditch (430), 1.1 m deep and 1.9 m wide. The ditch had sides of 45° and a concave base and was filled with dumps of brown silts. The fills contained a small amount of locally produced 12th-century pottery and a small assemblage of animal bone, comprising cattle, sheep or goat, pig, two rabbit bones and single bones from a horse and a red deer. A garden soil (316) was identified over ditch 430 (Fig. 4); it produced over 2 kg of pottery sherds dating from the period 1200-1250. Three crude chalk and flint foundations cut through soil 316. The first (841) was aligned approximately east-west and measured 0.3 m in depth and 0.7 m in width. Perpendicular to this were two truncated foundations (315 and 411), 1 m wide and 0.6 m deep, which may originally have extended further to the north. Pottery dated to the 12th century was recovered from these foundations, although this was probably redeposited.

Bell mould pit

A large pit (503) containing debris from bell casting was located roughly 5 m to the north-west. It was

roughly square in shape with a flat base and vertical sides, and measured 2.9 m north-south, 2.7 m westeast and 0.8 m deep. At the base of the pit was a thin layer of fired clay, charcoal and silt (527) overlain by a layer of redeposited brickearth (528) (Fig. 5). The bulk of the fill comprised a dump of brown silty clay (504) from which pottery, dated from between 1200 and 1250, was identified. A quantity of copper based slag was also recovered, samples of which were analysed by Dr G C Morgan of the School of Archaeological Studies, Leicester University. The more silvery metal fragments contained a high percentage of tin (19-23%) that suggested that the slag was a product of bell casting. The metal comprised a mixture of casting waste and perhaps scrap castings or mis-cast bell fragments. Charcoal was also recovered and originated from burning wood from mixed deciduous woodland. The presence of burnt clay, coupled with no evidence of scorching to the sides and base of the pit, indicates that the pit may have been clay lined. A small posthole (589), 0.26 m wide and 0.1 m deep, was seen to the north of the pit and may have related to an associated structure.

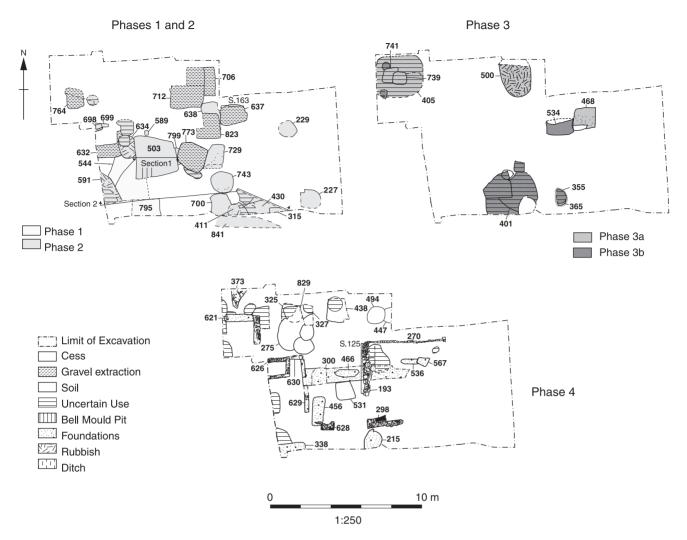


Figure 3 Area A features.

Pits

A number of other pits were spread across Area A, and their form and fills suggest that they were dug and used for a variety of purposes. Most contained pottery dated to between 1100 and 1250. A number of pits (227, 229, 700, 729, 743 and probably 638) were sub-rectangular with flat bases and vertical sides and appeared to have been used as cesspits. They were concentrated in the eastern part of the area and measured between 1.3 m and 1.4 m in diameter, and generally between 0.8 m and 2 m deep, although some were heavily truncated. They contained bands of green and brown organic fills and ashy layers, overlain by a sequence of dumped soils. As well as cess, these pits contained animal and fish bones suggesting that they had also been used for general rubbish disposal. Pit 700 contained woodcock, jack-snipe and snipe bones, and most of the whiting and rabbit bones found during this phase. Pit 227 contained a high proportion of foot and skull bones (head and hooves) from cattle and sheep and pit 729 contained over 1 kg of 12th-century pottery.

A number of pits of square or sub-rectangular form seem to have been dug primarily for gravel extraction, although some were subsequently used as cess or rubbish pits. Pits 637 (Fig. 5) and 706 in the north of Area A, and 632 in the west, were filled with lenses of ash and green-hued cess deposits below backfilled soils. Pit 706 also contained most of the herring and eel bones found during this phase; glazed roofing tiles were also recovered. Four other distinctly square or rectangular pits were recorded within the north-west quarter of Site A (712, 764, 773 and 823). These had vertical sides and flat bases and measured between 1.0 m and 2.5 m in width and between 0.8 m and 2.5 m deep. They were filled with slumped gravel and silty clay but fills of pit 823 also contained dumps of pottery weighing more than 8 kg and dumps of animal bone totalling more than 2 kg. Head and hoof bones from cattle and sheep comprised a high proportion of the animal bone recovered from pits 773 and 823.

Several pits were sub-rectangular in shape and between 1.8 m and 2.6 m in width and between 0.8 m and 1.5 m deep. Pits 591 and 634, in the west of the

Section 2

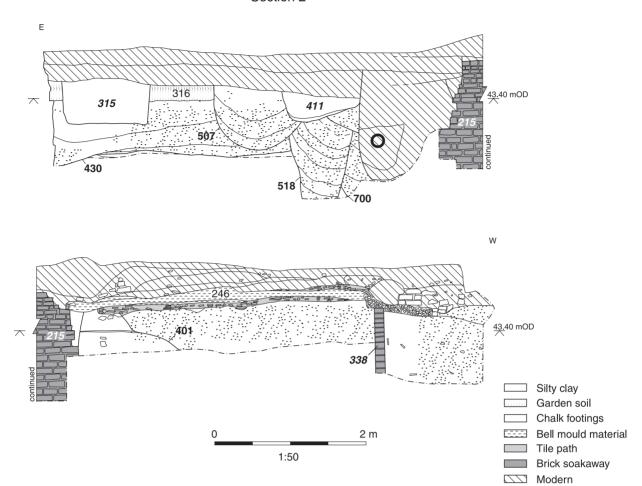


Figure 4 Section 2 across the southern limit of the site.

area, contained backfilled soils and brickearth and may have been used for the disposal of rubbish.

A number of pits were generally circular and measured between 0.9 m and 1.7 m in diameter and between 0.3 m and 1.5 m in depth. They were backfilled with a mixture of redeposited natural brickearth, gravel and soil. A small amount of pottery and bone was recovered from the pit fills amongst which were a number of cat bones. The features were of an uncertain purpose; they may have been a mixture of garden features, holes dug to obtain material to backfill cesspits, or had some other use (see Fig. 4, pits 507 and 518).

Area B (Fig. 6)

Numerous pits with similar functions were recorded in Area B. Three vertically sided, flat based pits (2308, 5003 and 5037) may originally have been dug for gravel extraction, but were subsequently used to dispose of cess and rubbish. They were between 1.4 m and 2.1 m in diameter and between 0.2 m and 1.0 m deep, and contained bands of green and brown organic fills and ashy layers below a sequence of dumped soils. Pottery sherds dating to the period

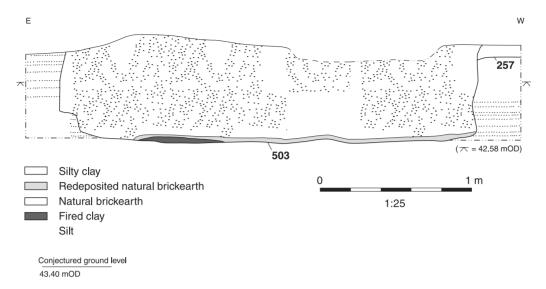
1100–1250 were recovered from the fills. Pit 2308 had been re-cut by a similarly dated pit (2307) which was 0.9 m deep, had not been cut into the gravel and may have functioned as a rubbish pit. A number of other pits were sub-circular or rectangular with vertical sides and flat bases. They measured between 1.0 m and 2.5 m in width and were between 0.1 m and 0.6 m deep, and filled with slumped gravel and silty clay.

A number of pits were cut through the gravel into the underlying chalk, and were probably originally dug for the extraction of both gravel and chalk. A circular pit (2400) and rectangular pit (5173) were between 1.0 m and 2.5 m in width and between 1.2 m and 2.1 m deep. Pits 5007 and 5026 were roughly circular and measured between 3.3 m and 4.2 m wide. Pit 5007 was 3.0 m deep; pit 5026 was more than 5.0 m deep, but its base was not seen. An abundance of fig and blackberry seeds within the fills of pit 5026 was indicative of cess and the pit may have had a secondary function as a cesspit.

Area C (Fig. 6)

The archaeology within Area C comprised subcircular pits with vertical sides and flat bases. They

North facing section of bell mould pit 503



North and east facing section of cess pit 637

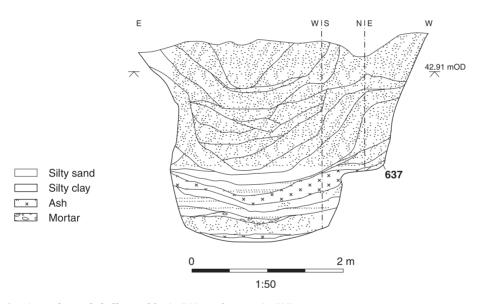


Figure 5 Sections through bell mould pit 503 and cess pit 637.

measured up to 3.0 m in width and were up to 3.5 m in depth. They were filled with slumped gravel and silty clay backfills and were probable gravel extraction pits. A number of circular pits (1009, 1012, 1106 and 5062) and a rectangular pit (1401; see Fig. 7) were a similar width and contained similar fills but were over 2.0 m deep. These pits were probable gravel and chalk quarry pits. A number of the pits contained cat bones, some of which displayed cut marks associated with skinning.

Phase 3a 1250-1400

Area A (Figs 3 and 7)

A possible cesspit (468) was identified that measured between 0.5 m in diameter and 1.7 m in depth. It was filled with bands of brown and greenish silts below dumps of soil. The base of a second cesspit was seen below the Phase 3b pit 365.

A sub-square rubbish pit (500; Fig. 7) had been dug through the fills of an earlier gravel extraction

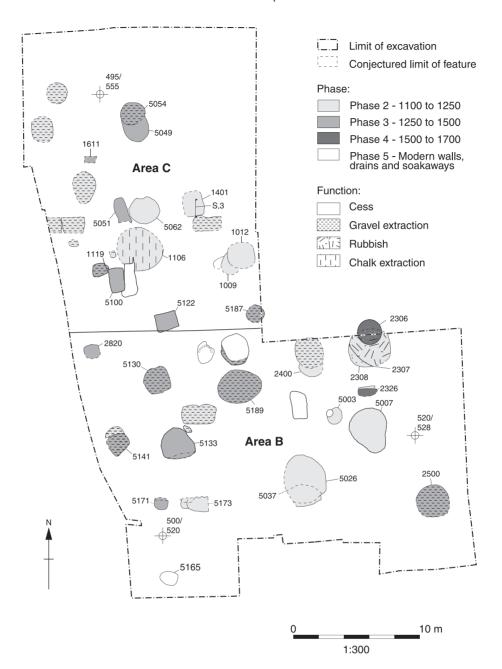


Figure 6 Area B and C features.

pit (712, phase 2) and measured more than 2.6 m north-south and 2.2 m east-west. It was over 2.0 m deep and contained slumped gravel and backfilled soil deposits. Over 1 kg of 13th-century pottery was found within the final deposits. A large proportion of head and hoof bones from sheep and cows were recovered and cat bones were also present. Ceramic building material, including glazed roof tile, was also recovered from the fills.

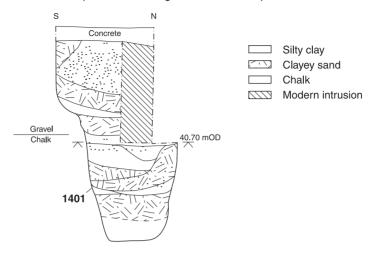
In the north-west of the area were several pits of uncertain function (405, 739 and 741). They were square in shape and between 0.9 m and 1.7 m wide and 0.3 m and 1.2 m deep. They were filled with

redeposited natural and dumped soils and may have been shallow gravel extraction pits. A few sherds of 13th-century pottery came from pit 739 and a number of cat bones were recovered from the area.

Area B (Fig. 6)

Three pits within Area B (2820, 5133 and 5171) were roughly rectangular in plan; all had been truncated, measured between 1.1 m and 2.6 m in width and were between 0.6 m and 1.7 m in depth. They were filled with dumps of silts, gravels and chalk and were probably quarry pits for chalk and gravel. Pit 5171

Compiled west facing section of chalk pit 1401



East facing section of pits 500 and 712

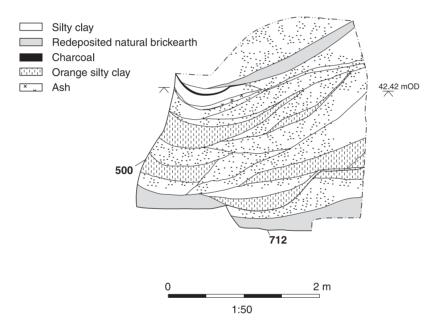


Figure 7 Section through chalk extraction pit 1401, rubbish pit 500 and gravel extraction pit 712.

also contained bands of green and brown loamy fills and may have had a secondary use as a cesspit.

Area C (Fig. 6)

Three rectangular pits (5051, 5100 and 5122) and two circular pits (1611 and 5049) varied between 0.3 m and 1.8 m in depth and were c 1.5 m to 1.9 m in width; pit 5051 measured more than 3.2 m north-south. The pits contained slumped gravel, chalk and backfilled soil deposits and may have been gravel and chalk quarries. Pit 5122 also contained green and

brown humic fills and may have had a secondary use as a cesspit.

Phase 3b 1400-1500

Area A (Figs 3 and 4)

Pit 534 measured 2.2 m east-west by 1.4 m north-south. It was c 1.5 m deep and contained laminated deposits with a greenish hue. A mineralised weed seed suggested the presence of faecal material and the pit may have superseded an earlier cesspit (468).

A number of pits were shallower and were of uncertain function (see 401, Fig. 4). They were circular and measured between 0.5 m and 3 m in width and 0.1 m and 1.1 m in depth, although several were very truncated. These shallower features may have been garden features or pits dug to retrieve material to backfill cesspits. Most contained pottery dated between the 13th and 14th centuries. Woodcock and pheasant bones were amongst the recovered bone assemblage.

Area B (Fig. 6)

Two circular pits (2500 and 5130) measured between 0.1 m and 0.7 m in depth and between 1.5 m and 2.0 m in width. They contained dumps of gravel and silts and were probable gravel extraction pits. A subcircular pit (5141) and an ovoid pit (5189), which was 3.5 m long, both contained similar fills and were probable gravel quarries, although 5189 was not excavated. Only pit 2500 contained any dating evidence in this area. The other pits were assigned to phase 3b, the latest medieval phase, because of the absence of any brick or concrete within their fills.

Area C (Fig. 6)

Three circular or sub-circular pits (1119, 5054 and 5187) were seen in Area C. They were between 0.6 m and 1.6 m deep and between 0.8 m and 1.4 m wide. They contained dumps of gravel and silts and were probable gravel extraction pits. Cat bones were recovered from some of the pits, the skulls of which displayed cut marks associated with skinning. Pit 5054 contained pottery dated between 1400 and 1550 and an iron mattock head. The other pits were assigned to phase 3b because of the absence of any brick or concrete within their fills.

Phase 4 1500–1700 (Figs 3, 5 and 8)

Area A

Structures

The truncated remains of what were probably three shallow beamslots aligned approximately at right-angles to each other were observed in the south-west of the area. Cut 456 measured 1.7 m north-south, 0.8 m east-west and 0.8 m in depth, and was filled with mottled silty clay. Features 466 and 536 were aligned west-east, measured 1.6 m by 0.2 m and 1.2 m by 0.5 m respectively and were c 0.1 m deep. Feature 466 was filled with a greenish organic deposit and 536 with backfilled soil. To the east of 536 was a square post-hole (567) 0.2 m deep, 0.4 m wide and filled with yellow sand; no dating material was recovered from 466 and 567 but stratigraphically they appeared to form the earliest activity within Phase 4.

At the western limit of the site were several limestone and flint wall foundations, the eastern extent of which was defined by a single coursed, north-south aligned wall footing (629). The footing was c 4.0 m long, c 0.2 m wide and c 0.2 m high and bonded with a lime mortar. A similarly constructed west-east aligned footing (630), over 2.0 m long, extended from the northern limit of 629 and joined 626 to the west. Structure 626 comprised three walls that formed a c 1.0 m wide step down to the west. The walls were c 0.2 m wide and constructed from limestone, flint and brick. They were 0.3 m high and were 0.2 m below the base of the other walls. A 15thor 16th-century brick surface lay at the bottom of the structure below an organic deposit that contained fragments of 16th-century glass drinking vessels. To the south of the walls was a square area of tiles that had been laid in clay (628). It measured 0.9 m westeast by 0.6 m north-south and may have formed part of a step. Deposits of mortar and rubble, dated to the 16th century, overlay the foundations. The foundations were very shallow and may have formed the base of a lean-to structure or outbuilding, and the rubble deposits may have derived from the demolition of this building.

A possible foundation cut (295) filled with mortar and greenish clay extended from group 629 towards the east (Fig. 8). It was more than 7 m long, 0.9 m wide and up to 0.6 m deep, and residual pottery dated between 1250 and 1450 was recovered from the fills. The feature had been truncated by a linear trench (300), filled with dumps of soil and 15th- or 16th-century brick and tile, which may have removed any masonry.

Cess pits

To the north of the structures was a sub-circular pit (275) measuring 2.0 m in width and 0.8 m in depth. The north side of the pit was extended to form a smaller square pit (829), 1.1 m wide and 0.8 m deep. Both features appeared to contain the same bands of organic fills, although they may have originally been separate features. Two postholes, 0.2 m in diameter and c 1.0 m deep, were observed within the pit fills of 829, an indication that there may have been a superstructure over the pits. The features may have represented an earth closet. Pottery, animal bone and glass were recovered. A second cesspit (531) was also identified to the south of the area and contained roof tile and brick dated to the 17th century; it may have functioned as a soakaway.

Three pits (438, 447 and 494) along the northern edge of the area were either sub-circular or square and measured between 1.2 m and 1.5 m in width and between 0.9 m and 1.7 m deep. They were filled with bands of organic deposits and dumps of greenish soil and were probably cesspits; 15th- or 16th-century brick was recovered. Further pits that contained cesslike fills were recorded in the area. They were circular and measured between 1.0 m and 1.4 m in diameter and 0.75 m and 1.3 m in depth. The date range of the clay pipes recovered from the pits suggested that they were infilled in the mid to late 17th century. Two smaller circular pits (325 and 327) truncated pit 829.

Section 125

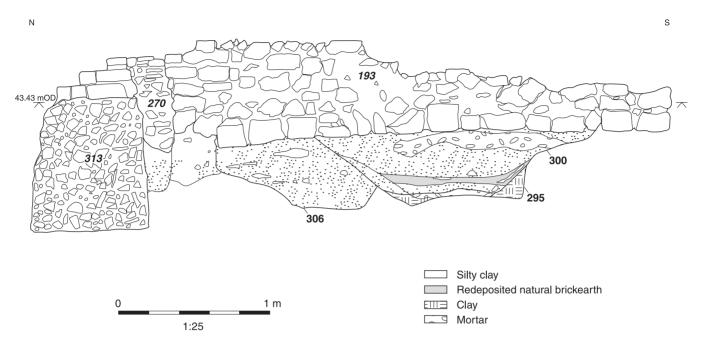


Figure 8 Elevation of wall 193.

They were between 0.1 and 0.3 m deep and more than 0.8 m wide, filled with brown silt and had no obvious functions. A large amount of cow and sheep extremities were recovered, as were several cat bones.

A number of similar sub-circular or circular pits were seen throughout this area of site. They ranged from 0.3 m to 1.3 m in depth and 0.6 m to 2.3 m in diameter, were filled with dumped soils and had no obvious function. Among the animal bone assemblage were bones from red deer, rock doves and woodcocks.

A cellar and soakaway

A square soakaway (338), constructed from 17th- or 18th-century bricks, and a cellar (621), were identified at the west edge of the site. The infilling of the soakaway contained clay tobacco pipes that suggested a final deposition date after the 1690s. The cellar was formed by sunken walls, 0.4 m thick, constructed from flint, limestone, tile and 15th- or 16th-century brick. It measured over 1.9 m in width and 1.0 m deep. A trampled surface, overlain by a mortar surface, was seen at the base. The structure was backfilled with demolition deposits. A crude flint foundation (373) was seen to the north of this cellar and may have been part of an associated structure. It was aligned north-south and measured 1.0 m in width and 0.2 m in depth.

A walled yard or workshop

In general the aforementioned features appeared to be sealed by 17th-century garden soils which may have been associated with a series of walls to the east. The majority of the copper pins recovered from the excavations were found in the soils. Three associated wall foundations (270, 298 and 193) in the centre of the site appear to form three sides of a yard or workshop 5.0 m in width and over 5.0 m long. The north wall (270) was constructed from 15th- or 16th-century brick at its eastern end, flint nodules in the centre and peg tiles at the western end. It measured over 2.5 m in length, 0.7 m in height and 0.4 m in width (Figs 3 and 8). A truncated parallel wall (298) was seen to the south, and appeared to extend to the north at its western end. It was also constructed from brick, flint and limestone and was of similar dimensions. An associated pitched-tile step, with 17th- or 18th-century brick edging, was set into a recess within the return of the wall. The step measured 0.7 m west-east and 0.3 m north-south. A north-south aligned wall (193) was observed running between the western ends of the aforementioned walls; it had been truncated to the south but appeared to post-date wall 270 to the north. Sherds of window glass dating from the mid 16th century were recovered from within the wall. It was constructed from flint nodules and limestone blocks and measured $0.7\ m$ in height, $0.4\ m$ in width and over 3.2 m in length (Fig. 8). A series of rough surfaces had been laid within the yard. The first was a compacted gravel surface, which contained a fragment of a glass dating from 1550 to 1650, below a layer of plaster. This was overlain by a rammed chalk surface and its subsequent replacement surfaces.

At the southern edge of the site a brick soakaway (215) was recorded with a crude tile path between it and soakaway 338 to the south. The bricks were dated to the 17th or 18th century. The path was overlain by make-up layers, one of which (246) contained redeposited bell mould material (Fig. 4).

Area B (Fig. 6)

Two circular pits were seen in this area; they measured approximately 0.8 m in depth and 0.7 m in width. Pit 2306 contained deposits with a greenish hue and may have been used as a cesspit, whilst pit

2326 contained dumps of rubble and silts. The pits contained pottery dated between 1550 and 1700.

Phase 5 1700-1900

Area A (Fig. 9)

Fronting Chain Street were three 19th-century cellars, behind which were associated brick soakaways. A fourth cellared area lay to the west of the soakaways. To the east were a brick foundation and a soakaway. The structures relate to buildings shown on Tomkins' map of 1802.

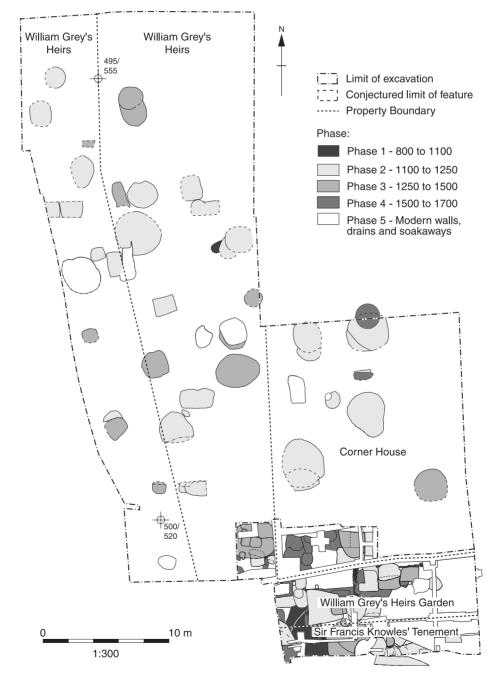


Figure 9 Property boundaries, from the Amyce survey of 1552 and the 1st edition OS map of 1879.

THE FINDS

The finds from the site were generally of a utilitarian and unexceptional nature, and are not considered here in detail. The full original reports are available in the project archive and can be downloaded from the Oxford Archaeology web site at www.oxfordarch. co.uk. The assemblages of ceramic building material, metal and bone objects, and clay tobacco pipes were identified and catalogued by Terence Smith, Ian Scott and David Higgins respectively, and the metalworking debris from pit 503 was analysed and identified by Graham Morgan. The most interesting groups that were contemporary with the main phases of medieval and early post-medieval structural evidence were the pottery and glass, which are reported here in more detail; the full original reports are available in the project archive.

Pottery Paul Blinkhorn

Introduction

The pottery assemblage comprised 4,408 sherds with a total weight of 118,084 g. The estimated vessel equivalent (EVE) by summation of surviving rimsherd circumference was 33.72. The material is particularly notable on several counts, not least because it includes a small assemblage of early to middle Saxon pottery, and also a sherd of middle Saxon Ipswich ware, definite archaeological evidence of activity in the town during the 8th or early 9th century. The medieval pottery is also of importance, as it includes one of the largest and

best-preserved groups of early medieval (11th-13th century) material ever excavated in Reading. The later medieval and post-medieval assemblage is largely utilitarian in character, with tablewares and other evidence of dining notably lacking. This report is a shortened version of the full pottery report, which is available in the project archive. Previously published wares are referenced but otherwise not described, and a fuller discussion of most fabrics and forms can be found in the report on the Reading Oracle excavations (Blinkhorn forthcoming (a) for medieval pottery; Brown and Thomson forthcoming for post-medieval pottery). The 'F' prefixed codes are those used in the database and tables (see archive). A quantification of the main fabric types as a percentage of phase totals can be found in Table 1.

Provenance and dating

The earliest pottery at the site is three sherds (38 g) of Romano-British wares, followed by a small group of early-middle Saxon hand-built wares, along with a single sherd of Ipswich ware. There is no ceramic evidence for any activity at the site between AD 850 and the Norman Conquest, but pottery is then plentiful from the mid-late 11th century to virtually the present day.

Early to middle Saxon, AD 450-850

The hand-built wares occurred in the following fabrics:

F1: Chaff. Moderate to dense chaff voids up to 5 mm. 14 sherds, 170 g, EVE = 0.17.

Table 1 Pottery occurrence per ceramic phase by fabric type, main fabrics only, expressed as a percentage of the phase total by weight (in g).

Ceramic Phase	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9
F300	7.8%	8.8%	5.6%	4.9%	0	4.5%	0.8%	0.4%	0.3%
F302	73.8%	69.6%	55.0%	33.5%	44.1%	13.0%	3.1%	4.4%	0.1%
F303	6.4%	7.0%	2.5%	3.4%	0	3.8%	0	0.5%	0
F202	10.2%	5.3%	10.6%	2.3%	0	0	>0.1%	0	>0.1%
F358	_	7.1%	14.6%	1.3%	0	1.9%	0.3%	0.2%	0
F361	_	1.5%	1.6%	1.2%	0	1.1%	0.3%	0	0
F356	_	_	8.8%	39.6%	0	4.5%	3.2%	1.1%	0.3%
F403	_	_	_	4.7%	4.4%	0.5%	0.6%	0.2%	0
F405	_	_	_	5.5%	0	12.3%	2.7%	8.6%	0.2%
F401	_	_	_	1.5%	0	5.6%	0.8%	0.2%	>0.1%
F404	_	_	_	_	17.6%	0.4%	0.2%	0.1%	>0.1%
F425	_	_	_	_	-	39.0%	64.8%	30.9%	75.1%
F451	_	_	_	_	_	12.0%	9.2%	5.9%	1.8%
F417	_	_	_	_	_	_	2.3%	16.4%	0.1%
F416	_	_	_	_	_	_	0	0	4.7%
F414	_	_	_	_	-	_	_	18.7%	0.9%
F438	_	_	_	_	_	_	_	9.3%	5.1%
F448	-	_	-	_	-	-	_	_	6.8%
Total	21305	19301	19868	7947	68	5489	9849	9506	24720

F2. Coarse guartz. Moderate to dense subrounded white fabric with few visible inclusions, usually quartz up to 3 mm. Occasionally rare calcareous highly decorated jugs with incised and applied material of the same size. 3 sherds, 30 g, decoration and a bright green copper glaze. Such vessels are well-known in London (Vince EVE = 0Oolitic limestone and chaff. Moderate to dense 1985, 47-8), and have been noted at other F3-Thames Valley sites such as Eton (Blinkhorn sub-angular oolitic limestone up to 2 mm, rare to 2000, 20), Windsor (Mepham 1993, 53), Oxford (Maureen Mellor, pers. comm.), and Newbury moderate chaff voids up to 3 mm. 1 sherd, 4 g, EVE = 0. (Mepham 1997, 63).

Brill/Boarstall ware, AD 1200–1600 (Mellor The hand-built chaff- and quartz-tempered wares F352: 1994). 14 sherds, 261 g, EVE = 0.11 (all jugs). All the sherds appear to be from glazed jugs of found here are typical of the pottery known from sites of both early and middle Saxon date along virtually 13th- to 14th- century type. the whole length of the Thames Valley, including F353: Laverstock ware, 13th-14th century. (Musty et London (Blackmore 1988; 1989), Maidenhead (Blink*al.* 1969). 3 sherds, 141 g, EVE = 0. This assemblage comprised entirely plain bodysherds. Surrey Whiteware, mid 13th-mid 15th century horn 2002), Windsor (Blinkhorn forthcoming (b)) and, F356: to the west of Reading, at such places as Lechlade (Pearce and Vince 1988). 294 sherds, 5633 g, EVE = 4.17 (jars = 1.54, bowls = 0.24, jugs = 2.39) (Blinkhorn in archive). The oolitic limestone wares are a little more unusual, but could have originated Ashampstead ware, 12th–14th century (Mepham and Heaton, 1995). 261 sherds, 5485 g, EVE=1.11 (jars = 0.22, jugs = 0.89). F358: anywhere between the Cotswold region and Öxford, an area where both contemporary and later pottery **London ware c. 1150–1350** (Pearce *et al.* 1985). 19 sherds, 798 g, EVE = 0.20). Most sherds are from F361: with a similar petrology is well-known, and suitable deposits of clay exist (Mellor 1994, 50). The vast Highly Decorated jugs, including the rim and majority of hand-built Anglo-Saxon pottery, which handle from a Rouen-style vessel. was made without a wheel and fired in bonfires, F401: LMT earthenware, 15th-6th century? 46 sherds, 537 g. Hard, slightly sandy fabric, glazed and comprises undecorated jars with simple globular unglazed, in a variety of late medieval vessel forms and everted rims. forms. Common in contemporary sites in the Thames Valley, such as Reading Oracle, and probably produced at a number of local centres. Middle Saxon: Replaced rapidly by 'true' post-medieval Red-wares in the mid-late 16th century. Ipswich ware group 1, AD725 - 850 (Blinkhorn F95: F402: Beauvais Double Sgraffito Ware. 16th century forthcoming (c)) 1 sherd, 58 g, EVE = 0.12. (Hurst et al. 1986, 108–11). 1 sherd, 10 g. Slow-wheel made ware, manufactured exclusively in F403: 'Tudor Green' Ware, late 14th century-c 1550. (Pearce and Vince 1988, 79–81 and figs 126–7). 50 the eponymous Suffolk wic. Hard and slightly sandy sherds, 474 g, EVE = 1.94 (jugs = 0.50, cups = 0.44, costrels = 1.00).to the touch, with visible small quartz grains and some shreds of mica. Frequent fairly wellsorted angular to F404: Cistercian ware, 1475-1700 (Brears 1971, 18-23). sub-angular grains of quartz, generally measuring 18 sherds, 73 g, EVE = 0.19 (all cups/tygs). Rhenish Stonewares. AD1480+. (Gaimster 1997). 57 sherds, 2,243 g. The majority of vessels below 0.3 mm in size but with some larger grains, F405: including a number which are polycrystalline in are mugs, which were imported into London in appearance. vast quantities in the early post-medieval period, along with a few bottles with Bartmann ('bearded man') facemasks. Medieval and later wares: F411: Midland Blackwares, AD 1580-1700. (Brears 23 sherds, 659 g. Most sherds came from rrel-shaped mugs from the same context. wald/Cologne Stoneware, AD 1600 t. (Gaimster 1997). 2 sherds, 225 g (both dshire Mottled Ware, late 17th-18th (Barker 1999). 34 sherds, 2302 g (chamber politan'-type slipware, 17th century ey 1990, 251). 9 sherds, 1157 g. Dutch Tin-glazed Earthenware 17th-8th century (Orton 1988). 34 sherds, 1843 g.

F200:	Cotswolds-type ware, AD 875–1350 (Mellor 1994). 2 sherds, 87 g, EVE = 0 .		1969). 23 sherds, 659 g. Most sherds came from two barrel-shaped mugs from the same context.
F202:	Newbury coarsewares, late 11th-early 15th century (Mepham 1997, 51–2). 179 sherds,	F413:	Westerwald/Cologne Stoneware, AD 1600 – present. (Gaimster 1997). 2 sherds, 225 g (both jugs).
	5510 g, EVE = 2.95 (jars = 2.91 , bowls = 0.04). The range of vessel types, dominated by jars is typical of the tradition.	F414:	Staffordshire Mottled Ware, late 17th–18th century (Barker 1999). 34 sherds, 2302 g (chamber
F300:	Local coarse sandy ware, ?Late 11th-mid 13th century. 208 sherds, 5,333 g, EVE = 1.43 (jars = 0.88, bowls = 0.20, jugs = 0.28, skillets 0.07). A	F416:	pots). 'Metropolitan'-type slipware, 17th century (Crossley 1990, 251). 9 sherds, 1157 g.
	range of coarse sandy fabrics, similar to those noted at the Reading Waterfront excavations	F417:	Anglo-Dutch Tin-glazed Earthenware 17th- early 18th century (Orton 1988). 34 sherds, 1843 g.
	(Underwood 1997, 144). Discussed in Blinkhorn forthcoming (a).	F418:	Creamware. 1750–1820 (Barker 1999). 2 sherds, 37 g.
F302:	Local fine sandy ware, ?Late 11th-? 14th century. 2150 sherds, 44,534 g, EVE = 20.58 (jars = 13.41, bowls = 2.78, jugs = 4.21, skillets 0.18). Discussed in Blinkhorn forthcoming (a).	F425:	Post-medieval Redwares, Mid 16th-late 18th century. 511 sherds, 29,586 g. See Brown and Thomson forthcoming. The assemblage from this site comprises mainly jars, bowls and dishes
F303:	'M40' type ware, ?Late 11th-14th century (Hinton 1973). 215 sherds, 3698 g, EVE = 0.88 (all jars).	F428:	of various sizes, although a few fragments of colanders were also noted. Chinese Porcelain, 16th century + (Whitehouse
F307:	Early Medieval Sand and Shell Ware, early 11th-late 12th century (Vince 1985). 10 sherds, 117 g, EVE = 0.18 (all jars).	F438:	1972, 63). 16 sherds, 390 g. English stonewares, late 17th–9th century (Gaimster 1997, 309–24). 24 sherds, 1948 g. A
F350:	Seine Valley Whiteware, 13th–15th century (Barton 1966). 3 sherds, 23 g. EVE = 0. Fine,		medallion on an English stoneware sherd may be an inn-sign from an establishment on or near

	1
	or gorge of English stoneware carries a stamped
	assay mark of Queen Anne (1702-14).
F442:	English Yellow-glazed earthenwares, 1785-
	1835. (Barker 1999). 3 sherds, 406 g.
F443:	Staffordshire white salt-glazed stonewares,
	1720–1780 (ibid.). 23 sherds, 137 g. (Drinking vessels)
F445:	Nottingham stonewares, 1690–1800 (ibid.). 3
11101	sherds, 30 g.
F447:	Pearlwares and transfer-printed Pearlwares,
	1770 – early 19th century. (ibid.). 15 sherds, 391 g.
F448:	Mass-produced white earthenwares, 19th-20th
	century. (ibid.). 76 sherds, 1718 g.
F451:	Border Ware, 1550–1700 (Pearce 1992). 179
	sherds, 2571 g.

the excavation and a semi-complete tavern mug

Most of this assemblage was quite fragmented, but appears to comprise a wide range of vessels.

Discussion of the pottery

Early to middle Saxon

Small quantities of early/middle Anglo-Saxon pottery have been noted before in Reading, mainly around the abbey, including finds made during the 1970s excavations (Slade 1975) and at the Waterfront sites, with the latter producing a total of 26 sherds (Underwood 1997, table 16). The excavation of the Oracle sites (Blinkhorn forthcoming (a)) produced an assemblage of six sherds (98 g), so it would appear that there was Anglo-Saxon activity on the north bank of the river underneath much of the area of Reading which was occupied by the medieval town and abbey. The pottery at the present site was undecorated, and cannot be more closely dated; it may be earlier than, or contemporary with, the sherd of Ipswich ware that provides definite evidence of a middle Saxon presence at the site in the period 725-850. Ipswich Ware, which appears to have been made exclusively in the eponymous Suffolk town, has by far the widest distribution of any native pottery type of the period, occurring in eastern England in an area from York to Kent, with the river valleys of the south and east midlands showing the greatest penetration of the ware inland. The Thames Valley appears to be the southernmost limit of its distribution, apart from a few finds in northern Kent. The material invariably occurs at high-status sites within its distribution, but cannot alone be taken as an indicator of high status, although the further the find-spot from the production centre, the more likely that the site was once of high status. It seems likely that most of the Thames Valley finds came as secondary trade from the Saxon emporium in the Strand area of London (Blackmore 1988; 1989), where over 1,000 sherds of such pottery have been found. It has also been shown (Blinkhorn forthcoming (c)) that Ipswich ware finds from sites outside the East Anglian kingdom tend to be of pitchers or large jars, and this find fits the pattern, being of the latter type, with a rim diameter of 200 mm. The large jars are likely to have been used as containers for traded goods, as the Thames Valley potters of the period were able to make pots of equal size, and had no need to import such vessels. This sherd is burnished and stamped, but is too badly damaged to allow identification of the stamp design.

Ceramic Phase 1 (11th-mid 12th century)

This site has produced the largest assemblage of medieval pottery from the immediate post-Conquest period in Reading. The excavations at the Oracle sites (Blinkhorn forthcoming (a)), despite covering a much larger area that this, produced only 7900 g of medieval pottery dating to before the mid 12th century. Medieval pottery of pre-mid 12th century date was said to be absent from the Waterfront sites (Underwood 1997, 150-4), although the dating of the earliest phases there appears rather late, as the range of fabrics and vessel forms does not appear radically different from the ones noted here, and the assemblage could perhaps benefit from re-interpretation based on more recent work. There is no published quantification of the Waterfront pottery, other than the amount found at each site by fabric, so any meaningful comparison with the pottery from this site is all but impossible.

The range of pottery types from this phase is typical of a domestic site of the period in the middle Thames region, comprising a narrow range of simple, multifunctional forms, largely jars, with a lesser number of bowls and pitchers, and a few specialist vessels such as the lamp (Fig. 11 No. 15). The fabrics are mainly sandy wares of unknown but probably local manufacture, along with smaller quantities of pottery from other sources in the region, such as the Newbury and 'M40' wares (10.2% and 6.4% respectively). Around 30% of the local sandy wares (F300 and F302) are glazed, of which around 15% are glazed bowls and the rest jugs/pitchers, with just two jars so treated. Only 7 sherds were noted with slip decoration, and this comprised simple painted lines. All the rimsherds were from jars, bowls and jugs, although the base and stem of a pedestal lamp in fabric 302 was noted (Fig. 11 No. 15). Such vessels are regularly found in small quantities on sites of this date throughout southern and eastern England (eg Mellor 1994, fig. 54). Also of note are a number of bowls with spouts and decorated rims. They are all sooted on the outside, and appear to have been used as specialist cooking vessels. They all, during this phase, have rim diameters of 300 mm or less, so appear unlikely to have been used for cooking food in quantity.

Incised decoration was noted on a small number of sherds, mainly unglazed jars in F300 or F302. The most common technique was vertical combing on the body, a typical feature of early medieval pottery in the region. A total of 990 g of the local sandy wares of this phase, around 5% by weight, were so treated. A few unglazed vessels were noted with finger-tipping on the shoulder or thumbed applied strips, but decoration was otherwise rare. Two spouted bowls in the same fabrics were noted with stabbed decoration on the rim. This again seems to be typical of these vessels, with most of the known examples from this site so treated.

Ceramic Phase 2 (Mid 12th-mid 13th century)

The local unglazed sandy wares still dominate the phase assemblage, comprising over 75% of the pottery. Decoration is still quite limited, and scored wares form around 1.75% of the fabric assemblage, suggesting that this was largely an early form of decoration. As before, a few unglazed vessels were noted with finger-tipping on the shoulder or thumbed applied strips, but decoration was otherwise confined to the glazed vessels. Vessel use shows little change from the previous phase. Jars still dominate the assemblage, although bowls and skillets increase in use at the expense of jugs. As in the previous phase, these are nearly all heavily sooted, although the vessels appear larger than before, with a few examples with rim diameters around 400 mm, and several others in the 300 mm -400 mm diameter range.

This phase sees the first use at the site of pottery from London and Ashampstead. London ware, from an unknown source in or near the capital, first came into production around 1140, and seems to have been arriving in Reading soon after, as the Oracle sites produced large quantities of the ware, including early types. A small number of vessels in the Highly Decorated and Imitation Rouen styles were noted (Fig. 13 Nos 29–32). These date to the 13th century in London and the former, with polychrome slip decoration and representations of animals and plants, are typical products of the London ware industry, particularly in the second half of the 13th century. The latter were direct copies of whiteware jugs imported from Rouen at the time, and the London ware potters seem to have made a habit of copying vessels from a range of sources in Northern France (Pearce et al. 1985, 28-31). A sherd of 'true' Northern French pottery was noted at this site during this phase (below).

Small numbers of other regional imports and pots from overseas began to arrive during this phase. A sherd of Brill/Boarstall ware occurred in this phase. This material, manufactured on the Oxfordshire/ Buckinghamshire border, is often found in small quantities at sites in the middle Thames Valley, but is likely to be evidence of contact with Oxford, where it is very common (Mellor 1994). A sherd of Laverstock ware, from the manufactory in Wiltshire (Musty et al. 1969), was also present. This has been noted in small quantities at sites in the region, such as Bartholomew Street in Newbury, where five sherds occurred (Mepham 1997, 63). The foreign imports consisted of two joining sherds from a Seine Valley whiteware jug with incised decoration. French pottery was relatively common in London at that time (Vince 1985, 79), and so it is highly probably that this vessel was 'traded on' from the capital. The presence of foreign pottery is unlikely to be of significance in terms of site status. Work at Southampton (Brown 1997) has shown that there is little evidence for continental pottery being any more highly regarded than local wares in the medieval period.

Ceramic Phase 3 (mid 13th–early 15th century)

This phase sees an increase in regional imports into the site, particularly from London and its hinterland. Surrey whitewares, mainly from Kingston, but also from other known sources such as Cheam, began to arrive at Reading. London wares continue to be used. In the case of the latter, vessels in the Highly Decorated style continued to be favoured, but the Surrey wares quickly came to dominate the market, as was the case in the capital, where they were on a par with London ware by the late 13th century, and had virtually replaced it by the mid 14th (Vince 1985, figs 18 and 23).

The local sandy wares drop to around 50% of the assemblage during this phase, and scoring becomes very rare, with only 1.4% of the material (by weight) so treated. As before, jars dominated the assemblage, but in lesser numbers, and jugs were becoming more common.

Ceramic Phase 4 (15th century)

This phase, as is common in the region, saw a steep decline in the earlier medieval pottery types, and the introduction of a range of relatively sophisticated fabrics and forms. Local sandy wares only represent around one third of the pottery from this phase, with the mean sherd weight of the material dropping very sharply in comparison to the previous phase, indicating that it was mainly residual. Ashampstead and Newbury wares also decline sharply, with Surrey whitewares becoming more common. Another Surrey product, the 'Tudor Green' wares are introduced at this time, along with German Stonewares and LMT redwares suggesting that most of Reading's pottery was being imported from the London area or beyond. German Stoneware was imported into London in vast quantities in the later medieval and earlier post-medieval period, mainly in the form of beer-mugs. This is again a fairly typical scenario for the region, and the same general pattern was seen at the Oracle sites.

The vessel consumption during this phase seems fairly typical of a site of this period. Jars decline in use to less than half the total, with bowls rare, but jugs increasing to around 44% of the assemblage. This is thought to be due to the increasing availability of relatively cheap metal cooking pottery at the time. Mugs and cups also appear for the first time, in the form of 'Tudor Green' and German stoneware vessels. These represent nearly 7% of the assemblage. Small numbers of other vessels which are typical of the period, particularly Surrey whitewares, appear during this phase, with fragments of a cauldron, bunghole cistern (probably used for brewing), and a dripping dish handle all noted. These are a typical 14th-century introduction on sites in the Thames Valley (eg Mellor 1994, fig. 54) and are evidence of the increasing sophistication of cookery practices in the high medieval period. Dripping dishes, a specialist vessel for catching the juices from spit-roasting meat, are a good indicator of domestic activity and are often found in small quantities on sites of this date in the region, especially in the urban context, but they do appear a little underrepresented at this site. This may be a by-production of urban living in the medieval period. Many medieval houses in towns did not have adequate cooking facilities, and, from the 12th and 13th centuries at least, relied for much of their food on specialist 'cookshops', where hot roast meat and fowl, fish, pies or even entire meals could be purchased for consumption in the home (Hammond 1993, 50–1). The recent excavations at the Oracle sites (Ford *et al.* forthcoming) identified a cookshop, probably owned by Reading Abbey, just south of Minster Street.

Ceramic Phase 5 (late 15th-mid 16th century)

Pottery is very scarce from this phase, with only 68 g noted. There seems no reason why this should have been the case, as records show us that Reading thrived during the 15th and 16th centuries, and the population is thought to have tripled (Astill 1978, 76). Pottery of this phase was plentiful at the Oracle sites (Blinkhorn forthcoming (a)). The most likely explanation would seem to be that much of the ceramic phase 5 pottery was removed from the site in antiquity, possibly during a phase of levelling of the site for construction.

Post-medieval pottery (Ceramic Phases 6–9)

A relatively small and fragmented assemblage of mid 16th- to early 17th-century (ceramic phase 6) pottery sees the introduction of a wide range of new types, particularly the post-medieval Redwares, which comprise 39% of the material from this phase. German Stonewares are still common, with Border wares having a similar representation. The later groups (ceramic phases 7–9, 17th to 20th century) are dominated by utilitarian Redwares, simple earthenware dishes and chamber pots, and stonewares.

Catalogue of illustrated pottery

Figure 10

0	
1 (HM1):	Context 690, CP2. Hand-built fabric 1. Rim from jar. Black fabric with variegated black and orange-brown surfaces.
2 (HM2):	Context 5088, early-middle Saxon. Hand-built fabric 1. Rim from jar. Uniform black fabric.
3 (IP1):	Context 5114, CP1. Ipswich Ware. Rimsherd from large jar. Uniform grey fabric. Horizontal burnishing streaks on outer surface, row of grid stamps below neck carination. Abraded.
4 (NB2):	Context 388, CP1. Newbury coarseware. Full profile of jar. Grey fabric with reddish-brown surfaces. Outer surface heavily sooted and burnt.
5 (SB1):	Contexts 418 and 429, CP2 and CP1. Local coarse sandy ware. Full profile of bowl. Grey fabric with orange-brown surfaces, patchy internal yellowish-green glaze. Stabbed decoration on rim top. Heavily sooted and burnt outer body and base.

6 (SK1):	Context 653, CP2. Local coarse sandy ware. Large skillet handle with stabbed decoration. Dark grey fabric with browner surfaces, thin glaze patches on inner surface. The whole heavily burnt and sooted except for the end of the handle.
7 (CP1):	Context 5103, CP3. Local coarse sandy ware. Full profile of jar. Dark grey fabric with browner surfaces. Outer body and base heavily burnt and sooted.
8 (FS1):	Context 760, CP2. Local find sandy ware. Rim from jar with fingertipped shoulder. Grey fabric with light brown, sooted outer surface.
Figure 11	
9 (FS2):	Contexts 648 and 651, both CP2. Local fine sandy ware. Rim from jar with incised cordons on the shoulder. Reddish-brown fabric with darker surfaces.
10 (FS4):	Context 5033, CP1. Local fine sandy ware. Skillet/dripping dish handle with stabbed decoration. Grey fabric with brown surfaces.
11 (FS5):	Context 654, CP3. Local fine sandy ware. Handle and rim from skillet with stamped decoration. Dark grey fabric with reddish-brown surfaces. Thick sooting under the handle.
12 (FS8):	Context 455, CP1. Local fine sandy ware. Rim and spout from spouted bowl. Uniform grey fabric. Stabbed applied strip on rim top. Underneath of spout and lower body evenly sooted.
13 (FS10):	Context 418, CP2. Local fine sandy ware. Full profile of bowl with pulled lip. Stabbed decoration on rim top. Both surfaces thickly sooted.
14 (FS12):	Contexts 760 and 777, both CP2. Local fine sandy ware. Full profile of bowl. Grey fabric with reddish brown surfaces. Base pad and outer body heavily sooted.
15 (FS13):	Context 240, CP1. Lamp stem. Local fine sandy ware. Dark grey fabric with grey-brown surfaces.
16 (FS15):	Context 5073, CP2. Local fine sandy ware. Rim and long tubular spout from tripod pitcher. Grey fabric with orange fabric. Thin orange glaze, with thin yellow slip stripes on the spout.

17 (FS18 – formerly

labelled SW18): Context 5103 and 5105, both CP3. Local fine sandy ware. Full profile of jar. Grey fabric with orange-brown outer surface. Outer base an lower body thickly sooted, limescale on inner surface of base.

18 (FS19): Context 771, CP1. Local fine sandy ware. Near-complete jug/tripod pitcher. Uniform brick red fabric. Dull, orange, partly unvitrified orange glaze on outer surface.

Figure 12	
19 (FR1):	Contexts 760 and 777, both CP2. Seine Valley Whiteware. Bodysherds from a jug. White fabric with glossy, bright green glaze on outer surface.
20 (SW1):	Context 797, CP3. Surrey Whiteware. Bodysherd from highly decorated, anthropomorphic jug. Buff-pink fabric with pale grey surfaces, Applied decoration in body clay, vertical stripes of brown slip, the whole covered in a glossy green, copperspotted glaze.
21 (SW5):	Context 2100, CP4. Surrey Whiteware. Rim from conical jug. Buff fabric with large patch of glossy green, copper-spotted glaze on outer surface.
22 (SW6):	Contexts 2100 and 2101, both CP4. Surrey Whiteware. Rim and shoulder of large round jug/cistern (ibid. fig. 110). Light grey fabric with buff surfaces. Band of glossy green copper-spotted



Figure 10 Pottery Nos 1–8.

23 (SW7):	glaze around shoulder, vertical stripes of grey slip. Contexts 2100 and 2101, both CP4. Surrey White-	27 (AS3):	Uniform brick red fabric, yellow and red slip decoration with thin green glaze over all. Context 776, CP2. Ashampstead ware. Body-
24 (SW8):	ware. Lid fragments. Uniform buff fabric. Context 2100 and 2101., both CP4. Surrey Whiteware. Base and leg of tripod cauldron. White	20 (404)	sherd from jug with all-over fingertip decoration. Grey fabric with buff surfaces, variegated yellow-green glaze on outer surface.
	fabric with a pale grey outer surface. Pale green glaze with copper spotting on inner surface. Outer body sooted.	28 (AS4):	Context 656 and 670, CP3 and CP4. Ashamp- stead ware. Bodysherd and handle from jug with sgraffito decoration. Light grey fabric with
25 (SW10):	Context 2100, CP4. Surrey Whiteware. Dripping dish/skillet handle. Uniform pale grey fabric. Single green glaze spot on sooting on lower surface.		buff surfaces. Outer surface covered with white slip, with stamped and incised decoration cut through. The whole covered in a clear,
26 (AS1):	Context 5107, CP2. Ashampstead ware. Bodysherd and handle from polychrome jug.		copper-spotted glaze, the sgraffito appearing brown.

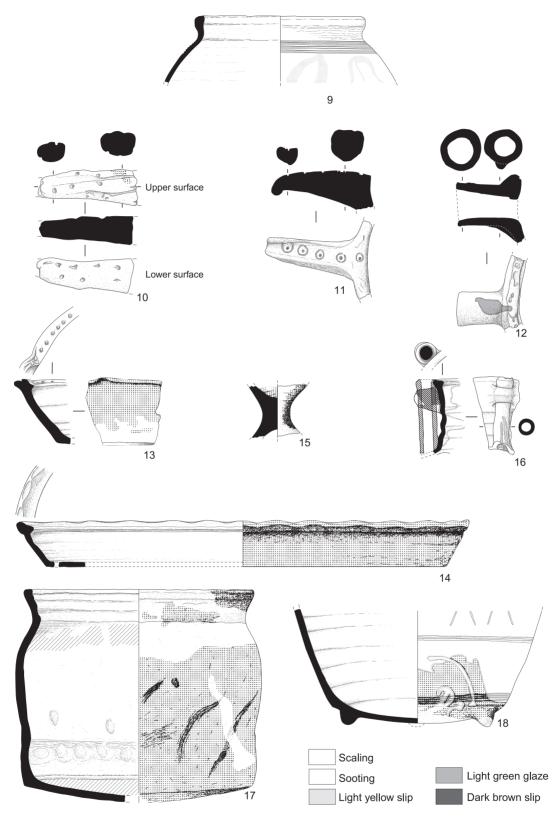


Figure 11 Pottery Nos 9–18.

Figure 13

29 (LW1):

Context 803, CP2. London ware. Rim and handle from Rouen-style jug. Brick-red fabric with a grey core. Traces of red and white slip and a clear glaze around the handle terminal.

30 (LW2):

Contexts 747 and 750, both CP2. London ware. Two non-joining sherds from the upper shoulder of a highly-decorated jug. Orange fabric with a grey core. Stamped slip decoration in a brown slip, clear glaze over all. Body clay appears orange under glaze, the decoration dark red.

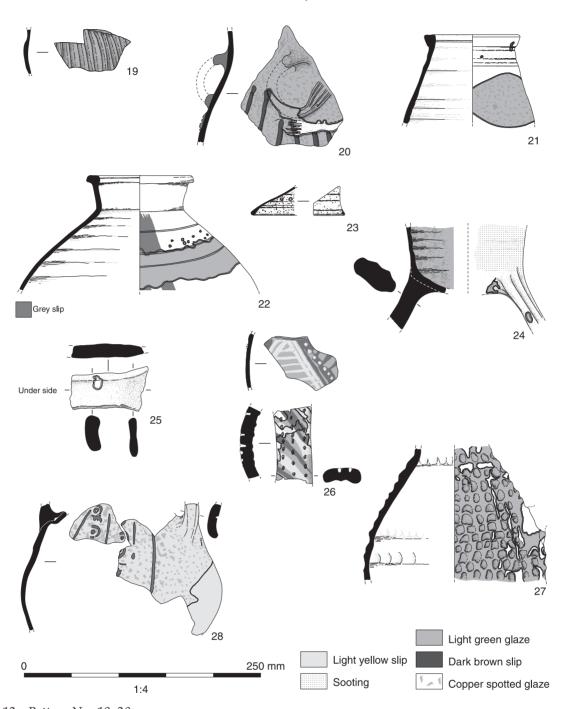


Figure 12 Pottery Nos 19–28.

31 (LW3):	Context 813, CP3. London ware. Bodysherd from Highly Decorated jug. Brick red fabric with a grey core. Applied decoration in a brown slip with white slip dots on the trefoil heads. Thin clear glaze over all, appearing green on the body,	34 (GS1): 35 (MS1):	Context 368, CP8. Rhenish stoneware. Near-complete mug. Light grey fabric with variegated brown and grey surfaces. Context 195, CP8. 'Metropolitan'-type slipware. Large dish. Grey-buff fabric with darker sur-
32 (LW4):	the slip being purple-brown and yellow. Context 797, CP3. London ware. Base and lower body from jug. Brick red fabric with a grey core. Outer body has applied decoration in brown and white slip, sparse patches of thin clear glaze over all.	36 (ES2):	faces. Geometric decoration on the inner surface comprising reddish-brown stripes and green dots, with a clear glaze over all which appears yellow on the body clay. Context 339, CP8. English stoneware. Tavern mug or gorge with 'AR' assay-mark on shoulder.
33 (TG1):	Context 201, CP7. 'Tudor Green' ware. Costrel neck. Pale buff fabric with glossy green, copper-streaked glaze on the outer surface.		Buff fabric with brown iron-wash slip on outer surface.

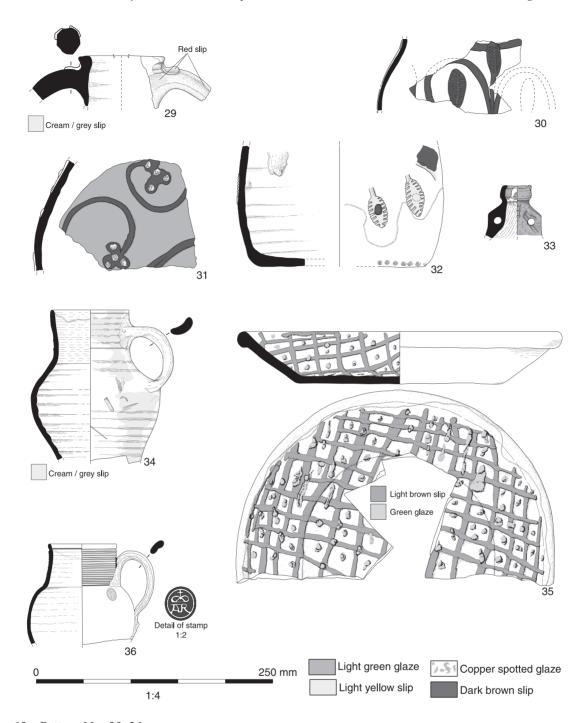


Figure 13 Pottery Nos 29–36.

Glass Rachel Tyson

A total of over 958 fragments of vessel and window glass were recovered from contexts dating between the 12th and 19th centuries at 90–93 Broad Street. This report concentrates on the 802 fragments of the 16th and 17th centuries, which provide evidence for above-average wealth with some interesting and unusual vessels. Imported vessels datable to the period $\it c$ 1550–1650 include a rare type of pedestal

beaker from Germany or the Low Countries, and fragments from Venetian or *façon de venise* glass. Some high quality wine glasses and possible plate glass of later 17th-century date represent the burgeoning English industry of the time. Overall, the assemblage is domestic in character with drinking vessels, storage bottles for medical preparations and wine, diamondpane windows and a possible plate glass mirror. Three fragments of painted medieval window glass from a 17th-century context probably derive from St Mary's Church. The remaining medieval glass

consisted only of a few small undecorated window fragments and an undiagnostic vessel fragment, and details of this and the 18th-century and later glass can be found in the assessment report in the site archive. A full catalogue of the 16th- and 17th-century glass has also been deposited with the site archive.

16th century

The most exceptional vessel found was a green-tinted beaker with a high pedestal base, decorated with an applied prunt with four arms pulled to form a cross (SF 1009, Phase 4 cess pit 2306; Fig. 14 No. 1). The pedestal beaker was a common form between c 1550–1650 (Willmott 2002, 45–50), and even from c 1500 on the Continent, but no close parallels exist for the decoration on the Broad Street beaker. Prunts were common over a long period, but the technique of pulling threads of glass into a decorative feature was generally more popular in the 16th century, suggesting a date of c 1550–1600. The beaker was probably produced in Germany or the Low Countries; larger types were probably used for beer, although smaller examples could have held wine.

Another vessel dating to the 16th century (recovered from a Phase 4 cess pit) was a small pale green flask with a flattened oval profile, with the body formed from two layers of glass and covered by optic-blown wrythen ribbing (Fig. 14 No. 2). Despite being a product of the fairly unexclusive English forest glass industry, these flasks are not common finds, although another example was found nearby at the Reading Oracle site (Willmott forthcoming). Two were found in the barber-surgeon's chest on the *Mary Rose*, dated to 1545, suggesting a use for medicines or lotions (Willmott 2002, 81–2).

Later 16th-early 17th century

Much of the glass could be dated to around the year 1600. Many fragments come from drinking vessels, including a colourless fragment decorated with vetro a fili, recovered from a surface within Phase 4 structure 626 (Fig. 14 No. 3), with parallel opaque white bands, alternating with a clear section where air has been trapped as a result of the white bands having been applied as part of a second skin of glass. This may be Venetian, or made in one of the façon de venise workshops set up by immigrant Italian glassworkers in other parts of Europe, such as Antwerp, from the second half of the 16th century. A colourless fragment had two applied horizontal milled trails (surface within structure 626; Fig. 14 No. 4), a less common decorative style found on drinking vessels such as beakers of the same date (Willmott 2002, 39, 1.7), and may also come from a façon de venise workshop in the Low Countries, or Venice.

At least five green-tinted pedestal beaker bases were found, at least one of which was decorated with opticblown ribbing. In contrast to the prunted pedestal beaker discussed above, these are the standard common type of English drinking vessel, with evidence for production on a number of forest-glass furnace sites (Willmott 2002, 45-50). A further body fragment recovered from a Phase 4 soil layer appears to have an opticblown mesh pattern, a less common variant of the pedestal beaker (ibid., 48), also seen on the cylindrical beaker (ibid., 38–9). Other vessel types include bases of two green-tinted flasks, jugs or bowls with pedestal feet, whose bodies flare out sharply above the base (structure 626). Containers are represented by fragments from at least two green-tinted globular jars with optic-blown ribbing, a rarely found type dating to the first half of the 17th century (ibid., 99–100). There is no suggestion in contemporary documents or illustrations of their function although the relatively wide neck suggests that they may have held solids rather than liquids. Two small cobalt blue fragments, recovered from a Phase 4 soil and pit fill, were of indeterminate date or form but their colour, achieved using a costly pigment, indicates a relatively valuable vessel, for table or display.

Mid-later 17th century

A fragment of particular interest is a thick, flat, greyish-colourless fragment with one extant right-angled corner (Phase 4 pit 327), whose thickness (c 4.8 mm) makes it unlikely to be window glass. A comparable 17th-century fragment from Narrow Street in Tower Hamlets, London (Tyson 2005, 58), additionally had bevelled edges and a polygonal shape. Suggested uses for that piece included a plate glass mirror, a coach window or a fingerplate for a door. The Duke of Buckingham's glasshouse at Vauxhall is known to have been making mirror plate in 1663, while it was otherwise being made in France.

Fragments from at least two wine glasses represent the early part of the English lead glass tradition, originating in the last quarter of the 17th century. Two came from soakaway 338, one of which suffers from the early fault of this glass type: crizzling, where the matrix of the glass is covered by fine internal cracks and eventually crumbles. The second has not suffered this problem (Fig. 14 No. 5). It has a round funnel bowl, flared base with hollow folded foot rim, and a solid stem composed of three knops with a short narrow stem section below. The lower stem and two knops are covered by wrythen ribbing, which was a characteristic of 'ale glasses', another early lead glass type, dating to c 1700 (Bickerton 1986, 62–3), although ale glasses more usually have ribbing on the bowl and upper half of the stem. The Broad Street example is an interesting variant. A folded foot fragment also came pit 327.

A further wine glass is made of colourless glass with a greyish tint, and it is uncertain whether this is lead glass or a late soda glass type (retrieved from a Phase4 pit; Fig. 14 No. 6). It has a flaring funnel bowl, with a thick crudely pincered trail around the top of the (missing) solid stem. Again, this is not a known type, but its style suggests the late

17th century. A high-kicked base of the same colour-less-greyish glass from the same context appears to come from a vessel with an oval profile, such as flasks made to hold holy water (eg Bickerton 1986, 59, figs 33–4, *c* 1700), although they may also have held other precious liquids.

Associated with these wine glasses were a minimum of 18 wine bottles dating to the second half of the 17th century. The majority of these represented onion wine bottles, so-called due to their bulbous body, with a tapering neck and a disc-like string-rim typical of the last decades of the 17th century. It is possible that some fragments may come from slightly earlier shaft-and-globe wine bottles, but these are more difficult to identify from fragments.

At least three small pale green cylindrical 'apothecary's' phials were recovered (within Phase 4 pit fills) which can be dated to the second half of the 17th century in this context. These were common in domestic contexts and would have held medicines, lotions, perfumes or other precious liquids (Willmott 2002, 89–91).

Window glass

A minimum of 185 fragments from the 16th- and 17th-century deposits were window fragments. Almost all were green-tinted with a thickness of *c* 1 mm or just over, including some with evidence for a diamond-pane glazing scheme, the standard window design in this period. They have diamond-cut edges, the technique employed from the mid 16th century onwards, but otherwise are not closely datable.

Three adjoining fragments of heavily weathered glass (Phase 4 pit fill; Fig. 14 No. 7) showed decoration painted with a red iron-oxide pigment typical of medieval glass painting. Although rather a small area for inferring the style of window design, it could possibly be part of an architectural canopy design of the 14th or 15th centuries and has probably come from St Mary's Church.

Catalogue of illustrated glass

Figure 14

- 1 Green-tinted pedestal beaker decorated with applied prunt with four arms pulled to form a cross. *c* 1550–1600. SF1009, ctx. 2301.
- 2 Small pale green small oval flask with wrythen ribbing. 16th century. Ctx. 324.
- 3 Fragment of colourless *vetro a fili* with white canes. Late 16th-early 17th century. Ctx. 375.
- 4 Fragment of colourless glass with milled trails. Late 16th-early 17th century. Ctx. 375.
- 5 Colourless lead glass wine glass with three solid knops and wrythen ribbing on the lower part, c 1700. Ctx. 339.
- 6 Colourless lead glass wine glass with thick crude pincered trail around bowl base, late 17th century. Ctx. 407.
- 7 Painted window glass, 14th or 15th century. Ctx. 368.

Other Finds

A few ceramic building materials of Roman date were present, comprising brick fragments and one fragment of combed box-flue tile from a hypocaust heating system. A fragment of a shouldered peg tile, recovered from a Phase 2 chalk extraction pit (5173), with brown cover-glaze is of a type used between the mid 12th and early 13th century. They appear to have been confined to higher status buildings such as monasteries. The majority of the tiles were of the longlived plain peg-tile type introduced in the medieval period and little changed thereafter. A few glazed examples, which may be of medieval date, were present. The presence of mortar suggests that some may have been used as thin 'bricks'. A number of ridge tiles were found, with glazed examples from a small number of contexts. Amongst the assemblage of bricks were a number of probable 15th- or 16th-century date; Reading developed a vigorous brick and tile industry beginning in the later medieval period, and most of the tiles and bricks were probably made locally.

A total of 585 metal and 3 worked bone objects were recovered, 75% of which were nails, unidentifiable and miscellaneous sheet and wire fragments and fragments of slag and cinder. The identifiable objects suggest that the assemblage is predominantly domestic in composition, and most datable objects are of the later medieval or early post-medieval period. The most interesting individual objects are a spur fragment, found within a Phase 4 pit fill, the fan-shaped eraser head from a stylus, from within a Phase 2 chalk extraction pit (5062) and a taper or candle holder with arms that terminate in looped rolls or scrolls, found within a Phase 3 chalk extraction pit (5155; for similar objects from York see Ottaway and Rogers 2002, 2856 and figs 1432-33, 12543 and 12547). Personal items comprised 64 copper alloy pins and lace chapes from 17th-century garden soils, and 14 pieces from buckles and straps, found within a number of pits and soil deposits. A small number of tools and household items included mattocks, a hammer, a mallet, a possible awl, three thimbles and 11 very corroded pieces from knife blades and tangs. The remainder of the assemblage comprised small numbers of structural and furniture fittings including a key, a ward plate from a lock, and two pieces of lead window came.

The excavations produced a total of 222 clay tobacco pipe fragments, comprising 40 bowl, 175 stem and $\vec{7}$ mouthpiece fragments. The earliest firm evidence for smoking on the site is provided by a bowl of c 1620-50 (found during the initial evaluation). This is of the same profile as an example from the nearby Market Way site in Reading (REMAST 02 01.367, Context 5016) and the two pipes were probably made in the same mould. Apart from this single example the next earliest pipe bowls date from the 1640s, and pipes of the period *c* 1640 to 1790 are relatively well represented in the assemblage. After 1790, however, only a couple of pieces are represented. Most of the bowl forms are of typical London types (Atkinson and Oswald 1969, 177-180), the only local characteristic of note being the occasional use of a fabric containing fine sandy inclusions, which is particularly common in the Oxford region during the late 17th and early 18th centuries. Five fragments

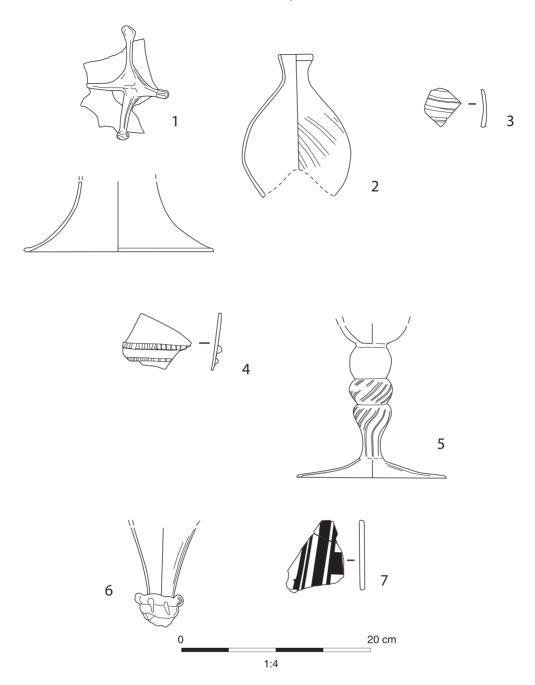


Figure 14 Glass.

had moulded makers' marks on the sides of their heels.. Two of these almost certainly relate to John Paty (1688–1745; Cannon 1999), whose initials are by far the most common in Reading. Two bowls can be attributed to Edward Parker of Wallingford, who was apprenticed in 1757 (Oswald 1975, 161), and one to a maker using the initials RP, probably either Richard Pyeman or one of the Richard Pickmans who are known to have been working in Wallingford and Henley during the first half of the 18th-century. The final marked pipe has a moulded stem mark reading C.CROP/LONDON and was produced by Charles Crop's firm, which operated from 1856 to 1929.

The products of this well known business would have been readily available at tobacconists around the London area.

ENVIRONMENTAL EVIDENCE

The full texts of the animal bone, bird and fish bone, plant remains and charcoal reports and all accompanying tables are available in the project archive, or for download from www.oxfordarch.co.uk. The following shortened versions highlight the results of greatest significance for the understanding and interpretation of the present site.

Animal, Bird And Fish Bone by Emma-Jayne Evans (animal bone) and Claire Ingrem (bird and fish bone)

A total of 8970 fragments (105,918g) of animal bone and teeth were excavated from the site, of which many broken fragments were refitted, reducing the number to 6313. The bone was in good condition, and 2413 fragments (38%) could be identified to species (see Table 2). A total of 524 bird bones were recovered of which almost 80% were hand collected. Most of the remains came from deposits dated to Phase 2 (1100-1250) and Phase 4 (1500-1700) and although galliforms are the most frequent taxa overall a wide range of species are present. Most of the fish bones were also recovered by hand collection but nevertheless some bones of small fish such as herring were found. A total of 216 identifiable specimens of fish were recovered, the majority from Phase 2 deposits. Overall, whiting is the most frequent species.

The evidence by phase

Little can be said about the small group from phase 1 (most of which came from ditch 544), although butchery marks were noted on a roe deer bone. A large proportion of the bone came from features (especially pits) of phase 2, dated to the period 1100-1250. The presence of foetal or neonatal pig remains suggests that these animals were raised on site. Many of the pits contained large proportions of cattle and sheep/goat phalanges, metapodials, skulls and mandibles, suggestive of primary butchery waste. These distinctive patterns of disposal are not evident among the pig and horse bones, suggesting different butchery and disposal processes were applied to these animals. Many cattle, sheep/goat and pig long bones had been chopped, probably for marrow extraction. There is also evidence of the chopping of large and medium sized vertebrae down the sagittal plane, usually caused when a carcass is hung up and processed. This would imply the presence of a structure, or structures, in the vicinity capable of supporting the carcass of a complete cow. The presence of distal phalanges, skulls and mandibles suggests that the cattle, sheep/goat and pigs were brought into this area of the town as complete animals. Burning noted on a small number of bones may be due to the burning of bones during disposal. Most of the cat remains from this phase are from kittens, with articulating skeletal elements present in pits 1401, 2718 and 5026. All the cat remains are likely to derive from skinning processes carried out in the vicinity, and characteristic cut marks were preserved on the skull and mandibles of the kitten in pit 5026. The remains of rabbits, probably also skinned for fur, were recovered from pits 764, 823, 5062 and from pit 395, which contained the majority of rabbit bones including articulating remains from at least two adults. A small number of bones from red and fallow deer were also recovered from pits and from ditch 430; these included two antler fragments, and bones bearing butchery marks associated with the dismemberment of carcasses. The 179 bird bones from this phase included goose, duck (mallard and teal), galliform (domestic fowl/chicken, pheasant and partridge), snipe, jack snipe and woodcock. Bones belonging to thrushes and sparrows are also present, and the partial remains of a buzzard were recovered from pit 1401. Most of the domestic fowl remains are limb bones, and cut marks were seen on a domestic fowl bone and a goose bone. At least eleven species of fish were present among the 164 fish bones from this phase, including herring, eel, conger eel, whiting, cod, sea bass, mackerel and turbot. Members of the Salmonidae, Clupidae and Pleuronectidae families are also present. Whiting is the commonest fish, with herring and eel fairly well represented; other species are represented by no more than five bones each. The majority of the fish bones came from cess pit 700, which produced almost all of the whiting bones; 53% of the bird and 88% of the fish bones from this context had been burnt. In contrast, almost all of the herring and eel bones came from pit 706; a proportion of bird and fish bones from this pit also showed evidence of burning. Eel and herring were represented virtually exclusively by vertebrae, while all parts of the body of whiting (including head and tail) were present.

A similarly sized sample of bone was recovered from features of phase 3 (1250–1500), with the great majority again coming from pits. Sheep/goat and pig remains are more abundant relative to cattle in this phase. The distribution of cattle and sheep/goat bones in many of the pits again appears to indicate an area of primary butchery, with large proportions of phalanges, metapodials and mandibles present. There is also evidence for the chopping of large and medium vertebrae down the sagittal plane. The pig remains represent higher proportions of meat-bearing limbs than the cattle or sheep/goat, suggesting that these animals were butchered differently, or that some domestic waste was incorporated in the pits. Much of the butchery evidence for all three groups suggests the dismemberment of the carcass, and the chopping of long bones for marrow extraction. The number of cat bones shows a large increase compared with the previous phase, suggesting that this was the peak period for skinning at the site. Most cat bones came from a Phase 3 chalk extraction pit (2820), which contained at least three kittens; smaller numbers were found in a few Phase 3 and 4 pits, with the presence of articulating bones suggesting the disposal of whole or partial carcasses. The three cat skulls with articulating mandibles from pit 2820 all have cut marks associated with skinning. Rabbit remains were also recovered from several of the Phase 3 pits, including cess pit 355. Both adults and juveniles were present; butchery marks were only noted on one pelvis, and it is likely that these remains are also from animals that had been skinned. Fallow deer remains were also recovered from cess pit 355, representing at least two individuals that

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Table 2 Animals, birds and fish identified to species, by phase.

Phase date	900-1100	1100-1250	1250-1500	1500-1700	1700-present	Unphased	Total
Domestic mammals							
Cattle	5	277	117	483	52	18	952
Sheep/goat	4	168	129	338	66	6	711
Sheep	_	22	15	20	3	3	63
Goat	_	1	_	_	_	_	1
Pig	11	87	87	119	15	2	321
Horse	_	12	1	2	1	_	16
Cat	_	19	155	21	1	_	196
Dog	_	_	_	4	4	_	8
Unidentified	96	1047	804	1589	330	34	3900
Total	116	1633	1308	2576	472	63	6168
Wild animals							
Rabbit	_	36	38	27	4	2	107
Red deer	_	3	_	2	_	_	5
Fallow deer	_	5	6	7	_	1	19
Roe deer	1	_	_	_	_	_	1
Fox	_	1	_	_	_	_	1
Brown rat	_	_	_	5	3	_	8
Frog/toad	_	2	1	_	-	_	3
Total	1	47	45	41	7	3	144
Bird							
Anser spp.	_	12	19	17	2	_	50
? Anser spp.	_			3		_	3
Anas/Aythya spp.	_	5	6	2	1	_	14
Galliform	_	32	39	63	8	_	142
?galliform	_			1		_	1
Phasianus colchicus	_	6	1			_	7
Perdix perdix	_	12	6			_	18
Fulica atra	_			3		_	3
Vanellus vanellus	_		1			_	1
Gallinago gallinago	_	6				_	6
Lymnocryptus minimus	_	2				_	2
Scolopax rusticola	_	4	4	1		_	9
Columba livia	_	•	•	18	1	_	19
Strix aluco	_			2	•	_	2
? Strix spp.	_			1		_	1
Pica pica	_			1		_	1
Turdidae		6		1			6
Passeridae	_		10	2		_	
Buteo buteo	_	5 8	10	3		_	18
	_		2	22		_	8
Lge. Bird Med. Bird	_	17 36	2	23 3		_	42 39
Med. Bird	_		2			_	
	_	7	3	26		_	36
Sm. Bird	_	1	4			_	1
Sm. Bird Bird	_	2 18	1 52	15	4	_	3 89
Total	_	179	144	182	16	_	521

Table 2 (continued)

Phase date	900-1100	1100-1250	1250-1500	1500-1700	1700-present	Unphased	Total
Fish							
Clupea harengus		27		2			29
Salmonidae		1					1
Esox lucius				1			1
Cyprinidae		1		2	4		7
Anguilla anguilla		21		1			22
Conger conger		3	1	1			5
Merlangius merlangus		87	1	1			89
Gadus morhua		5	2	5			12
Melanogrammus aeglefinus				1			1
Molva molva			1	5			6
?Molva molva			1	2			3
Lge. Gadidae		1	1	5			7
Med Gadidae		1					1
Sm.gadidae				1			1
? Gadidae		5					5
Dicentrarchus labrax		5	1				6
Scomber scombrus		2	1				3
Scophthalmus maximus		2					2
Pleuronectes platessa			3	2			5
Pleuronectidae		3					3
Flatfish				6			6
?flatfish			1				1
Total		164	13	35	4		216

had been processed for consumption and marrow utilisation. A total of 144 fragments of bird bone were recovered from deposits dated to Phase 3. At least six different species/taxa are represented including goose, duck (teal), domestic fowl, pheasant, partridge, lapwing and woodcock, and specimens belonging to Turdidae and Passeridae are present. It is interesting that all six partridge specimens are tarsometartarsals recovered from a single pit fill within cess pit 355, which also produced a sea bass dentary. Only thirteen fragments of fish bone are present, but these are representative of several species including conger eel, whiting, cod, ling, sea bass, mackerel and plaice. A supracleithra belonging to ling recovered from pit 2500 exhibits evidence for butchery in the form of cut marks.

The largest assemblage of bone came from features of phase 4, 1500–1700. As in phase 3, sheep/goat and pig were well represented compared with cattle. The presence of head and foot elements of all three groups, the distribution of bones within pits, the evidence for the chopping of vertebrae and long bones, and many dismemberment cut marks, suggest that this continued to be an area where whole animals were brought for primary butchery. Carnivore gnawing was noted on several bones, suggesting that they had lain exposed for a time before their final deposition. By contrast with earlier phases, no cut marks were seen on any of the cat bones from

phase 4, and the bones themselves were recovered from a variety of features. This suggests that the skinning of cats may not have carried on into this period, or at least not on the same scale. By contrast, the skinning of rabbits may have continued. Rabbit bones (many of juveniles) continued to be deposited in pits; no butchery marks were noted, and the long bones were mostly complete, which is unusual in rabbits that have been butchered for meat. Fallow and red deer bones were recovered from a number of pits. A total of 182 fragments of bird bone were recovered from Phase 4 deposits with eight species represented: goose, duck (mallard), galliform, coot, woodcock, dove, tawny owl and magpie. In addition, a few bones belonging to Passeridae are present. A third of the bird bone was from Galliforms, probably all domestic fowl; the only other birds present in significant numbers are rock dove (n = 18; most from a partial skeleton within a pit of uncertain use) and goose (n = 17). The two owl bones also came from a pit fill. Both are fragments of left femora and probably belong to a single individual; the only other identifiable bones in this context belong to goose and galliform. Dove remains came from a deposit of garden soil in which the only other identifiable remains belong to domestic fowl. As in Phase 3, a wide range of fish was recovered from Phase 4 deposits despite the small sample (n = 35). Species present are herring, pike, cyprinid, eel, conger eel,

whiting, cod, haddock, ling and plaice. Pit 325 produced most identifiable specimens (n = 8), all vertebrae that belong to cod, haddock and flatfish. Herring, cyprinid, eel, cod and ling are represented in the fills resulting from the recutting of cess pit 275 and again all the bones are vertebrae. The recutting of cess pit 275 also produced a dentary belonging to pike and five fragments of cleithra, two belonging to ling and the rest only identifiable to large gadid.

A smaller assemblage of bone from the later postmedieval period (1700 to date) is reported in full in archive. The distribution of bones suggests that the site had been much disturbed, making it impossible to identify specific activity areas. The presence of skeletal extremities, and chop and dismemberment marks, suggests that cattle, sheep/goat and pig may have continued to be brought whole to the site for primary butchery during at least part of this period. There was no further evidence for the skinning of cats or rabbits.

Conclusions

The good condition of the bone, and good recovery rate, has allowed a large proportion of the assemblage to be identified to species. This suggests that there is very little bias in the recovery rate of small and large mammal bones, and that the number of animals recorded gives a fairly accurate representation of the relative importance of animals utilised on site. The vast majority of the bones were from animals butchered for consumption, with the primary stages of butchery being carried out in the vicinity from the medieval period through into the later post-medieval period. The presence of neonatal pigs throughout suggests that pigs were being bred in the back yards of the houses, and the deer bones suggest the primary butchery of venison. One of the most interesting aspects of the bone assemblage is the evidence for the skinning of cats and rabbits during the medieval and early post-medieval period. The cat remains tend to be articulating skeletons of kittens under one year of age and seem to have been deposited in pits. A similar pattern was observed at Exeter (Maltby 1979). At Exeter, as at the present site, none of the cat long bones had butchery marks or breakages normally associated with the processing of carcasses for meat production. Skinning marks were present on several skulls and mandibles at the present site, and it is quite possible for an expert to skin a cat without leaving any trace of the activity on the post-cranial elements. It is also likely that the rabbits were mainly processed for their skins rather than meat, as characteristic butchery marks and bone breakage patterns associated with butchery for consumption are not present. As with the cat remains, many of the bones are from juveniles, and the presence of phalanages, skulls and mandibles suggests that complete animals were being deposited.

The most noticeable characteristic of both the bird and fish assemblages is the wide range of species present, despite the relatively small size of the samples, indicating a varied diet. The presence of domestic goose and fowl is unsurprising for this period and the low ratio of male to female galliforms suggests that most of the chicken came from hens and these were most probably kept to provide eggs as well as meat. Pheasant and partridge display a relatively high frequency in phase 2 deposits which, when combined with the presence of snipe and woodcock, suggests that a considerable proportion of wild fowl was also eaten. Woodcock was present in deposits dated to 1150-1250 at Exeter and it was the most common game bird in those dated to 1250-1300 (Maltby 1979). During medieval times, these birds were considered a delicacy and being expensive to buy were consumed only by the wealthy and privileged (Dobney et al. 1996, 52). It is very probable that thrushes and sparrows were also eaten; according to Hammond (1993) at medieval feasts lapwings, thrushes and larks were all served only to the lord. The buzzard remains may have been from a bird hunted and eaten as game, or it

may have been used as a hawking bird.

Whiting, an inshore species that can be caught all around the coasts of Britain, are clearly predominant in phase 2 deposits. The presence of cranial bones suggests that they were imported to the site as whole fish, probably in cured form. Herring is also fairly common during this phase which is unsurprising given the development of the herring fisheries after the 11th century. Herring is an oily fish that does not keep well and it is therefore likely that these fish were also purchased in a pickled form. Eel may have been caught in local streams or rivers and therefore eaten fresh. A variety of other fish are represented: salmonid, cyprinid, conger eel, cod, mackerel, sea bass, turbot and flatfish. Most are marine and therefore must have been imported from the coast, quite possibly as fresh fish given the small numbers involved. Cyprinids however are only found in fresh water and so are most likely to have been caught locally, in a river or fishpond. The earliest fishponds date from shortly after the Conquest and are believed to have been constructed in response to the demand for fresh fish by the wealthy (Bond and Chambers 1988). This may also be the case for salmonid, although as these anadromous fish can be found in both marine and freshwater environments it is possible that they too came from the coast. The samples from phase 3 deposits are smaller but provide evidence that game birds continued to be eaten alongside domestic goose and fowl, most notably wild duck, partridge and woodcock. Although few fish bones were recovered, several species of marine fish are represented, an indication that the inhabitants continued to enjoy a varied diet. During phase 4 the proportion of domestic goose and fowl appears to increase at the expense of wild fowl and there is no evidence for pheasant or partridge. Size suggests that the duck remains may belong to domestic rather than wild ducks. The presence of coot, woodcock and passerines indicates that some wild birds still contributed to the diet, but owl and magpie are perhaps more likely to represent natural casualties. Dove appears for the first time and may signify the existence of a nearby dovecote. There is a change in the species of fish present, and most are large gadids, probably cod and ling, deep water marine fish that must have been imported from the coast. Butchery marks seen on a few appendicular bones are often associated with decapitation prior to curing and suggests that large cod family fish arrived in a cured form. The presence of freshwater species such as eel, cyprinid and pike indicates that freshwater sources were still being exploited and probably provided the inhabitants with fresh fish. Pike was particularly prestigious.

Plant Remains by Denise Druce, with charcoal by Rowena Gale

A total of 14 bulk samples were selected for analysis, 4 from phase 1 contexts, 9 from phase 2 contexts, and a single sample from a phase 3 pit. The results were, however, of only limited interest, and the following account is a summary of the full report by Denise Druce. It is followed by a summary of the charcoal analysis, which was undertaken by Rowena Gale. The full reports can be found in the project archive, or downloaded from www.oxfordarch.co.uk.

All samples from the phase 1 contexts (800-1100) contained charred cereal grains, which were particularly abundant in ditch 544, with *Triticum* sp. (wheat) and Hordeum vulgare (hulled barley) particularly evident. Wheat remains included short plump grains that have been tentatively identified as free-threshing wheat such as Triticum cf. aestivum (bread wheat). All samples also contained Avena sp. (oats), of either the wild or cultivated variety, and two samples contained a single Secale cereale (rye) grain. Very little cereal chaff was present in the phase 1 samples, which suggests that at this period the cereal grain was brought onto the site once it had been processed. All samples contained abundant charred Corylus avellana (hazel) shell fragments, which suggests that hazel nuts may have been collected as a food source; other charred edibles were scarce, suggesting that they did not form a major part of the diet. It appears that a variety of soils were being cultivated in the area, with a combination of species associated with lighter well drained soils such as Rumex acetosella (sheep's sorrel) and Silene sp. (campions) together with taxa that prefer damper conditions such as Anthemis cotula (stinking chamomile) and some species of Galium sp. (bedstraws). The other weed taxa present, such as Poaceae (grass) and Bromus sp. (bromes), though not directly associated with cereal crops, may have been growing in the field margins and therefore have been accidentally harvested along with the crop.

All phase 2 samples contained cereal grains and in all but sample 5000 (pit 5007) the dominant type was *Triticum* sp. with some short plump grains tentatively identified as *Triticum* cf. *aestivum* (bread wheat). Sample 5000 was dominated by *Hordeum*

vulgare (hulled barley), which was also present, though in relatively low numbers, in all but two of the other samples. All samples contained either wild or cultivated Avena sp. (oat) grains, and four contained one or two Secale cereale (rye) grains. As a whole, more cereal chaff was present in the phase 2 samples, particularly in Sample 1009, which contained primarily charred culm nodes and Secale cereale rachis fragments. Triticum sp. chaff, Hordeum vulgare rachis, and Avena sp. awn fragments, of a probable wild variety, were also noted. All samples contained Corylus avellana (hazel) shell fragments, but other charred edible plants remained scarce. The weed seed assemblage is very similar to that from phase 1, with the presence of taxa indicative of open/arable land and the cultivation of a variety of soil types. Waterlogged seeds of Rubus fruticosus (blackberry) were especially abundant in sample 5004 (pit 5026). This latter sample also contained a number of Ficus carica (fig) seeds, plus a number of waterlogged weed seeds; amongst these, Hyoscymacus niger (henbane) and Lamium sp. (dead-nettles) seeds are indicative of waste/rough ground. The abundance of fig and blackberry seeds suggests that this feature may have also contained cess material. The cereal assemblage in phase 3 was similar to the two previous phases, with Triticum sp. (including Triticum cf. aestivum) dominant, and wild or cultivated Avena sp., Hordeum vulgare, and Secale cereale also present. The cereal chaff remains, as a whole, were similar in content to that from the phase 2 contexts, with Hordeum vulgare and Secale cereale rachis. Charred Corylus avellana fragments were present, with scarce fragments of other charred edibles. A continuity of open/arable landscape is indicated by the persistence of key indicator weed taxa, and a number of mineralised weed seeds were consistent with waste/rough and/or arable land.

Charcoal from the early 13th-century bell-mould pit, 503, seems likely to have originated from fuel residues from the firing of the bell-mould furnace, although domestic refuse cannot be entirely ruled out. The charcoal analysis indicated the use of firewood that included beech (Fagus sylvatica), hazel (Corylus avellana), the hawthorn/Sorbus group (Pomoideae), oak (Quercus sp.), blackthorn (Prunus spinosa), maple (Acer campestre) and elder (Sambucus sp.), and included a high proportion of fairly narrow roundwood. Although it was not possible to establish the use of coppiced wood, it is suggested that managed woodland would have been the most likely source for this period. Fuel was probably supplied from local mixed deciduous woodland.

DISCUSSION

Property divisions

No documentary evidence for the medieval period survives for the project area, but it is likely that much of the form of medieval properties in the area can be reliably reconstructed from Amyce's 1552 property



Figure 15 View of the excavation area, looking east. Area B to left, Area A to right.

survey, and the property boundaries shown on the 1st Edition OS map of 1879. Figure 9 shows the likely layout of medieval properties in the area, reconstructed from this information, and combined with the excavated evidence. By 1879, Amyce's 'Corner House' property had been subdivided, and land at the rear of the plot had been taken into new properties formed on Chain Street, reducing the plot length to c 25 m. In Figure 9, it has been assumed that the 'Corner House' plot was originally the same length as the two plots to the west, c 46 m long in 1879, which can be identified with Amyce's properties of William Grey's heirs on Broad St.

Before the development of Broad St, which is likely to date from the 12th century, all this land probably formed part of St Mary's churchyard. Land was presumably taken from the churchyard to create the tenement plots. It is possible that some time after the development of Broad St, the properties may have been further extended into church land, but there is no documentary or cartographic evidence for this. As a major thoroughfare, Broad St was probably a more prestigious address than Chain St/Grope Lane. The lane is likely to have originated as an alleyway giving access to the backs of Broad Street properties, with further properties subsequently being created along its frontages. An individual plot width of 5 m can be inferred for Chain St/Grope Lane compared with 10 m for Broad Street. The width of standard medieval house frontages was approximately 16 feet or c 5 m (Dils 1980), and the Broad Street properties may have been twice the size of the standard properties. No physical evidence for property boundaries survived on the site, as a result of the extensive truncation due to modern basements.

Chain Street/Grope Lane (Area A)

Phase 1 (800-1100)

There is little evidence for activity of the Anglo-Saxon period on the site, although a few redeposited sherds of relatively unabraded handmade pottery and a sherd of Ipswich ware were recovered from later medieval features. They add to the growing evidence for Anglo-Saxon activity in Reading between the 5th and 9th centuries. A probable plough soil and ditch were revealed but neither produced any reliable dating evidence. It is likely that they were late Saxon in date and the area may have been used for cultivation, although the general absence of chaff indicated that cereal was not grown in the area. It is likely that from, if not before, the 9th century the southern part of site formed part of the grounds of a minster church and the ditch may have defined a boundary. A few Roman brick and tile fragments may derive from Roman occupation in the vicinity, although it is also possible that such materials may have been used in the construction of a mid Saxon minster church, subsequently demolished. Similar small quantities of Roman brick and tile were found during the Oracle excavations in deposits of late 11th- or early 12th-century date (Ford et al. forthcoming).

Phase 2 (1100-1250)

During the late 12th and early 13th centuries, Chain St/ Grope Lane would have provided access to the rear of the Broad St properties. Properties would have also sprung up along Grope Lane, possibly churchowned, or built on land sold off by the church. It is



Figure 16 View of Area A, looking east.

likely that two such properties were located towards the south of the excavated site, probably identifiable with two properties listed in the Amyce survey of 1552. The excavated area seems to have functioned as a general back space, with numerous quarry, cess and rubbish pits. A number of roughly square pits were probably dug for gravel extraction, and were subsequently used as cess or rubbish pits, and some of the shallower pits may have been dug to obtain soil for capping layers of noxious waste. To the south-east of Area A was a west-east aligned ditch, containing locally produced 12th-century pottery, that may have formed a boundary separating the Grope Lane properties from the church. A garden soil containing over 2 kg of pottery dating to the period 1200–1250 formed over the ditch, and west-east aligned chalk foundations with two north-south extensions were cut into the soil. This may have represented a later garden/church wall.

The most notable pit within Area A was a possible bell casting pit (503; seen in the foreground of Fig. 16), roughly 3 m square and possibly 1 m deep from medieval ground level. This may have been used in the lost wax casting of a bell, and the pottery from the fills suggests a date of 1200-1250. Two distinct processes were employed to create a bronze bell (Blair and Blair 1991). In the initial phase a wood-fired furnace was built around a bell-mould to melt and release wax from a clay cast. The fire would have been kept burning for a couple of days and must have consumed a considerable amount of firewood. Just prior to the introduction of the molten copper alloy into the mould, the mould-furnace and its fire were removed. The copper alloy was prepared in a separate furnace, which would almost certainly have been fired with charcoal. The charcoal deposits recovered from pit 503 thus seem more likely to have originated from firewood used to melt the wax in the mould, a process that may have taken place in the pit. The presence of a large amount of copper slag and bell mould material would suggest that the waste from the whole process was dumped into the pit after the bell was completed. The proximity of the pit to the church points to the bell being cast specifically for St Mary's, and it does suggest that perhaps the northernmost Grope Lane property was church owned.

The rubbish dumped in the pits is also of considerable interest. Pit 700, a cess pit associated with the southern property (perhaps later Sir Francis Knowles' tenement), contained woodcock, jack-snipe and snipe bones, rabbit, and most of the fish bone from this phase, including almost all of the whiting. The fills of gravel pit 706 contained herring and eel bone, as well as glazed roof tile. Several pits (including pits 227, 773 and 823) contained a high proportion of foot and skull bones from cattle and sheep, and there were also substantial dumps of pottery; over 1 kg of 12th-century pottery came from pit 729, and pit 823 contained pottery weighing more than 8 kg. There was little difference in the types of pottery recovered, but the bone assemblages from the south of the site, the Area A cess pits, were much more varied and distinctive than those from pits in Areas B and C. The quality and variety of the bone suggests that a wealthy household such as that of a merchant may have been living in the area. Evidence of animal butchery was also apparent in three of the pits and it would appear that a butcher or butchers may have traded from

Phase 3

During the later medieval period there was a marked decrease in activity in the back yards (Figs 3, 6 and 9). No gravel extraction pits were revealed and there were fewer cess pits present. The animal bone recovered was still suggestive of a relatively high status diet; cess pit 355 contained bones of rabbit, bone from at least two fallow deer that had been processed for consumption and marrow extraction, six partridge tarsometatarsals and a sea bass dentary. To the south of the area was a cluster of intercutting pits covering an area of approximately 3 m2, possibly dug to recover soil and brickearth for dumping into cesspits or for the making of daub. The apparent decrease in back yard activity may have been related to changing occupiers of the properties, with the disappearance of high waste-producing trades such as butchery. By the later medieval period, much trade had been drawn away from the old market around St Mary's to the new market laid out at the abbey gates. The medieval street name Grope Lane suggests that the area was of low status and some properties in the area may have functioned as brothels. However, the material evidence suggests that people of relative high status also occupied the street. This apparent dichotomy was not uncommon in medieval times, with high and low status people often residing side by side (Julian Munby pers comm).

Phase 4

Between the Amyce survey of 1552 and Speed's map of 1610 Grope Lane became known as Chayne Lane, later Chain Street. The change in name may have represented a move away from the activities and connotations of Grope Lane and could have coincided with the construction of new properties in the northern part of St Mary's Churchyard. The Amyce Survey tells us that the northern part of St Mary's Churchyard had not been sold off by 1552. Roque's 1752 map of Reading, and the more accurate Tomkins map of 1802, show that buildings fronting Chain Street occupied the northern part of the churchyard and the southern part of the 'Corner House'. It is likely that in the late 16th or 17th century the northeast part of Area A and the east part of Area B were within the back yards of new properties fronting Chain Street. Foundations and beam slots were identified which were dated to the mid 16th century and were contemporary with a number of cess pits and soil extraction pits. Fine glassware was recovered including Venetian or façon de venise drinking vessels, also seen at Market Way, and a German beaker decorated with an applied prunt (SF 1009; Fig. 14 No.1) (see above). The animal bones recovered also indicated that the residents continued to be relatively affluent and suggested that red deer, rock dove and woodcock were eaten. Amyce records a property immediately north of St Mary's churchyard held by Sir Francis Knowles. The Knowles (Knollys) were an important gentry family in South Oxfordshire; their seat was at Rotherfield Greys and they also had a house in Caversham. Sir Francis's son, Henry, was MP for Reading in 1563, after which a Knollys occupied one of the two borough seats for many of the next 80 years. In her review of documentary sources for the site (see archive) Joan Dils comments that, in view of the Knollys' political interest in the borough, it is possible that they retained the house in Chain Street as a residence in the town in order to keep an eye on borough affairs. By 1700 Chain Street had left behind the connotations of Grope Lane and achieved a higher status more akin to Broad Street. Reading, at this time, was a wealthy town and the development of Chain Street was a reflection of the expanding population. The cellars and soakaways which truncated so much of the archaeology along Chain Street, dated from the 19th century (OA 2002), and were only demolished to allow construction for the new development.

Broad St (Areas A, B and C)

The medieval evidence for activity within the yards of the Broad Street properties generally comprised a number of gravel and chalk extraction pits. An exceptionally large pit, 5026 within Area B (Fig. 6), more than 4 m wide and 5 m deep, was the largest feature excavated on the entire site. This seems to have been a very substantial chalk- or flint-extraction pit; it was subsequently backfilled with cess deposits containing an abundance of fig and blackberry seeds. A rubbish pit, that contained butchery evidence, was also evident in the area. The earliest pottery from the pits dated to the period 1100-1250. These are typical features of medieval backyards, and are probably associated with phases of both construction and occupation of tenements fronting onto Broad St. Similar features were encountered at excavations on both Friar Street (Ford 1998) and Market Way (Scott and Hardy 2006).

There was no clear division through Area C (Fig. 9) which could reflect the existence of separate medieval properties We know from the Amyce survey that one tenant held both properties in 1552 and it may be that there was only one residence prior to this. It may be that the whole area was used for a single industry. However, the excavations have shown that throughout the medieval period there was an area devoid of pits *c* 17 m west of Chain St/Grope Lane, on a line with the edge of the corner tenement, suggesting that the modern properties follow the limits of the medieval tenements.

Within Area C, the eastern area was devoid of deep features within a 13 m long area to the north, the assumed area of any residential building. The western area was only devoid of pits within a 5 m area. It is feasible that the building to the east was much larger or that the area directly behind the building was used for a different purpose. The majority of the cat bones recovered came from pits

behind these properties. The bones were mostly from kittens and displayed characteristic marks associated with skinning. It is possible that a fur trader or glove maker may have resided and worked from one of the properties. A cat skinner may also have trimmed religious attire, which could have proved useful to any nuns associated with St Mary's or the Abbey. The 13th-century Ancrene Riewle states, 'You shall not possess any beast, my dear sisters, except only a cat' (Zettersten and Diensberg 2000). This is thought to mean that nuns could use cheap cat fur in their garments while expensive furs were reserved for higher church officials.

The relative lack of evidence for post-medieval activity in the vicinity is probably due to the truncation of the site by modern basements. A foundation was revealed in the north-west part of Area A, and may be associated with a structure at the end of a back yard, such as a toilet.

ARCHIVE

The finds and site archive will be deposited with Reading Museum (Acc. No. REDMG: 2001.352).

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THE EXCAVATION OF MEDIEVAL PITS AND A PROBABLE 16TH- TO 17TH-CENTURY TAVERN OR INN AT 7–8 BROAD STREET, READING, BERKSHIRE, 2002

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Summary

Excavations at 7–8 Broad Street (Market Way), Reading, revealed part of a possible 16th- to 17th-century tavern or inn, situated behind the street frontage. A stone cess pit and a cellar were revealed, built in the 16th century and demolished in the 17th century. A large collection of pottery associated with the serving and consumption of drink, fine Venetian-style glassware and a few early clay pipes were recovered from these features. Limited evidence of medieval occupation was also found, in the form of rubbish pits, although much of the site had been severely disturbed by the construction of the Corn Exchange in the 19th century.

Acknowledgements

The authors would like to express their gratitude to Prudential Property Managers Ltd for funding the fieldwork, the post-excavation analysis and the production of this report. Thanks are also due to Paul Chadwick for his support and advice during the project. A particular note of gratitude is due to Joan Dils, for her documentary research into the 16th- and 17th-century history of the area. The illustrations are by Laura Kirby and Lucy Martin, and the text was edited by Anne Dodd.

INTRODUCTION

Project Background

In 2002 Oxford Archaeology (OA) undertook a programme of archaeological investigation prior to redevelopment of a site to the rear of Nos 7–8 Broad Street, Reading (SU 7164 7346), for CgMs Consulting on behalf of Prudential Property Managers Ltd.

Location and geology

The site (Fig. 1) is situated in the medieval centre of Reading, behind the modern frontage to the west side of Buttermarket and the north side of the east end of Broad Street. It lies on the riverine silts, gravel terraces and underlying chalk north of the north bank of the river Kennet at approximately 43 m OD.

Archaeological and historical background

In 1996 Oxford Archaeology produced a desk-based assessment of the site (OA 1996) to assess the archaeological potential of the area of development.

The assessment identified that there is 'background noise' of prehistoric and Roman evidence from the gravel terrace on which Reading has developed, but other than a general clustering of material in the area of Reading Abbey, no specific prehistoric or Roman sites have been identified within the town centre.

From documentary and cartographic sources, the desk-top study identified that the Broad Street frontage can demonstrate continuous development from at least the early 17th century and it is likely to have been occupied at least since the layout of the town's street plan in the late 12th or early 13th century. To the rear of the Broad Street and Market Place frontages, the area has been less intensively developed (see Fig. 2), although cartographic evidence indicates that this area has contained buildings since at least 1761.

Excavation Strategy

OA undertook an archaeological watching brief on geotechnical investigations on the site (OA 2001). As a result of this work (and examination of structural engineering drawings of the existing structure) it was clear that the Broad Street frontage was occupied by two modern infilled basements that had removed archaeological deposits across most or all of this frontage. However, archaeological remains, along with undisturbed natural gravel, did survive in the central portion of the site. Consequently, a programme of targeted excavation was agreed, focused on the impact areas of the pile caps of the new development.

In two cases (Trenches 5 and 7) the discovery of significant structural remains led to the extension of the trench (after consultation with Paul Chadwick

of CgMs and Kevin Beachus of Babtie). Due to safety considerations, the lower deposits in both these trenches was excavated by machine. In all other trenches the archaeological deposits were excavated by hand. A comprehensive photographic record was maintained, and all recording followed standard OA procedure (Wilkinson 1992).

RESULTS

Post-medieval and modern building activity had caused considerable truncation and disturbance across the area of the investigations, and the natural gravelly brickearth was identified only in small areas across the ten trenches. Later disturbance had also significantly compromised the medieval and later stratigraphy, which survived in only a few of the excavated locations. As a result of this, and the targeted nature of the excavation strategy, the following report is a selective account concentrating on the main results from the archaeologically significant trenches. A full record of the excavations, finds and environmental assemblages can be found in the project archive, which will be deposited with Reading Museum.

Five phases of activity were identified, as determined by a combination of the stratigraphy and finds evidence. Significant features are illustrated in Figures 3 and 4.

Phase 1 (pre-11th century)

Surviving in patches across the site was a buried soil, identified in two trenches (Trenches 3 and 8, contexts 3010 and 8008) as a light orange-grey clay-silt at an average height of 43.69 m OD. These deposits contained no dating evidence and could be of Saxon date or earlier.

Phase 2 (late 11th to 15th centuries)

This phase was characterised by a scatter of medieval rubbish pits identified in most of the trenches, cutting the natural or Phase 1 soil, and containing generally 12th-century pottery, although later pottery, dating up to the 15th century, was also recovered.

Trench 2 (Fig. 4)

The earliest deposits (2046, 2030) appeared to be silty clay backfills of a large pit (possibly a quarry), although the edges of the pit were truncated by later features, primarily pit 2032. This feature was subcircular with near vertical sides and approximately 2.0 m in width. It was excavated down to a level of 41.58 m OD. The lower excavated fills were generally silty clays (2044, 2057, 2042, 2055, 2054 and 2052) interspersed with sand layers and lenses (2043, 2056 and 2059). These were sealed by a substantial layer

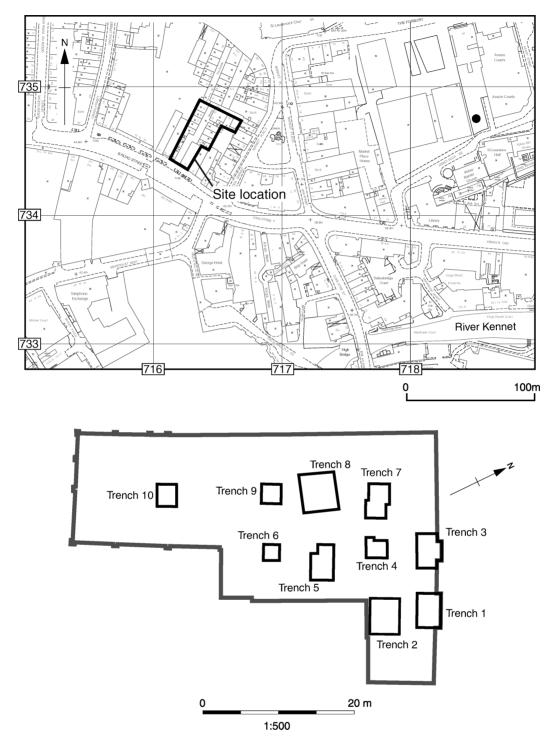
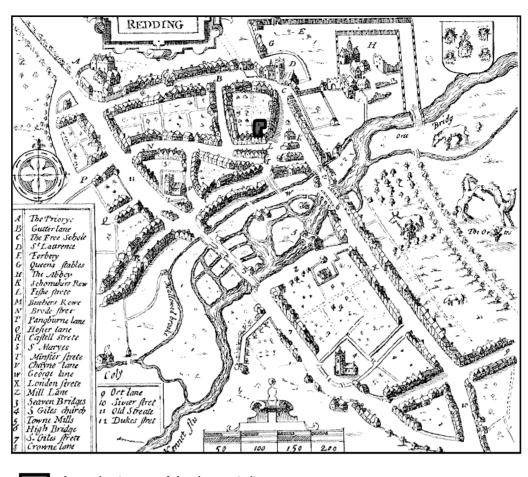


Figure 1 Site and trench location.

of sand (2037) and further layers of silty clay (2036, 2034) and sand (2025). The uppermost fill (2033) contained a high proportion of charcoal. Pottery evidence dates the pit to the 12th century. Layer 2025 contained a horse skeleton and layer 2033 contained pottery dating from the 11th to the 14th centuries. A sequence of levelling layers of silty clay and gravel (2031, 2020, 2022) were identified in the north-west part of the trench, overlain by a post-medieval garden soil (2016).

Trench 3

The Phase 1 buried soil was cut by a large circular pit (3007) measuring 2.0 m in diameter with 45° sloping sides. Its excavated fills consisted of brown/grey silty clays with charcoal inclusions. The dating evidence was limited to two pottery sherds from the lowest fill (3008) that were of a likely 13th-century date. A middle fill (3016) comprised 75% oysters shells, clearly a dump of food waste.



Approximate area of development site

Figure 2 Speed's map of Reading, 1611.

Trenches 4 and 5

A buried soil of reddish grey brown silt with flint and charcoal inclusions (4005 and 5011) was revealed at around 43.7 m OD. This contained no dating evidence, but its stratigraphic position suggests that it is of medieval date.

Trench 6 (Fig. 3)

A sequence of four pits (6014, 6018, 6020 and 6022) cut the natural. Pit 6014 was the deepest at 1.1 m. All were sub-rectangular in plan and varied from 0.5 m to 1.4 m wide. The generally silty clay fills contained 11th- to 14th-century pottery, and remains of oats, bread wheat, barley and hazel nuts, together with fish and animal bone.

Trench 8

Three heavily truncated pits (8011, 8013 and 8015) were identified, cutting into the buried soil (8008). The largest would originally have measured 2.5 m by 2.0 m in plan. These pits may represent quarrying activity, rather than domestic rubbish pits, as they yielded no finds.

Trench 9

A single large sub-rectangular pit (9011), measuring 3.0m by 1.2 m in plan, cut the natural. It had two fills (9009) and (9010), the lower being partially excavated by machine. This fill contained two sherds dated from the late 11th to 14th centuries and some cereal remains.

Phase 3 (16th to 17th centuries)

Trench 4

A number of post-medieval pits were identified; the earliest (4011) measured $0.70 \,\mathrm{m} \times 0.80 \,\mathrm{m} \times 0.12 \,\mathrm{m}$ deep. Pit 4011 was cut by a much larger rectangular pit (4006) $0.40 \,\mathrm{m} \times 1.30 \,\mathrm{m} \times 0.90 \,\mathrm{m}$ deep, containing mid 16th-century pottery, two iron knife tangs, numerous young cattle mandibles, glass and a quantity of nails.

Trench 5 (Fig. 3 and Pl. 1)

Cess pit (5013) dominated the trench, and was lined with walls of roughly faced flint nodules and occasional tile fragments and chalk blocks, set in a bond of pale cream mortar containing some crushed

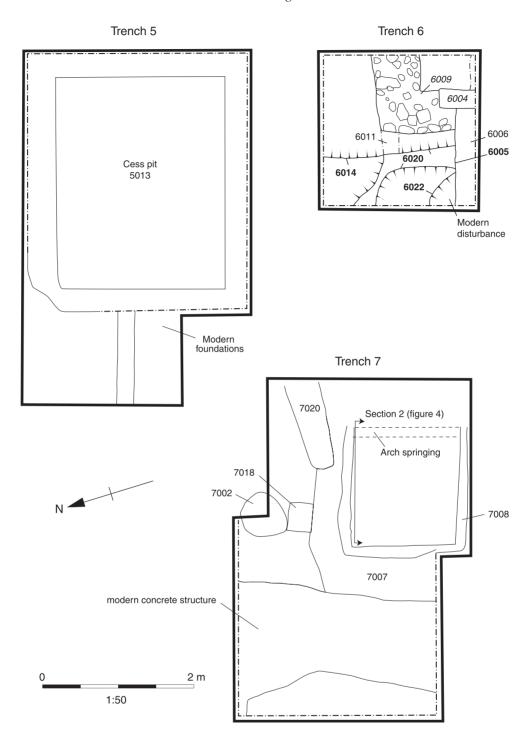


Figure 3 Trenches 5, 6 and 7, plans.

brick. Traces of a mortar render were evident on the lower parts of the wall faces. The structure measured $2.7~m\times2.2~m$ internally; it was excavated to a depth of 3.2~m but not bottomed. Two pairs of squared 'putlog' holes were revealed in the north-west and south-east sides. These could represent the sockets for shoring timbers in use while the pit was constructed, or for the support of a timber platform to facilitate the periodic emptying of the pit. The

lower fill (5015) of the pit was a dark brownish black colour, with organic debris, and contained post-medieval vessel glass and 14th- to 16th-century tile. The upper fill (5016) produced a fragment of clay pipe dating to the period 1620–1650. To the north-west of the cess pit was a spread of reddish brown silty sand (5007) and ashy silty clay (5008) probably representing building rubble possibly used to level the ground.



Plate 1 Cess pit 5013.

Trench 6 (Fig. 3)

A wall (6009) was revealed, approximately 0.60 m wide, and built of flint and chalk blocks, defining the corner of a structure that extended to the east of the trench.

Trench 7 (Figs 3 and 4)

Three sides of a substantial masonry structure (7008), probably a cellar, were exposed. It was of similar construction to the cess pit in Trench 5, being built of flint nodules, occasional chalk blocks and ceramic tiles. Safety considerations precluded full excavation of the structure, although a depth of 2.8 m was reached (by machine excavation) against the northwest and south-east sides. The structure appeared to have originally extended further to the north-east, beyond the trench limits. The opposing exposed sides displayed limestone ashlar blocks incorporated into the wall face, below what appeared to be the remnants of the core of the springing of a vault or arch. The structure was backfilled with a demolition deposit of loose dark brown-grey silty sand (7011) containing quantities of pottery dated to the later 16th-17th centuries, tile, fish bone, fine vessel glass, window glass and 14 pieces of 17th-century clay pipe. The footings of a flint wall (7020), which appeared to represent part of the superstructure, were identified immediately to the north-west.

Trench 8

A series of pits (8001, 8003, 8009 and 8005) and a posthole (8003) were revealed, overlying the earlier

medieval pit sequence. The largest (8001) measured $2.14 \text{ m} \times 1.42 \text{ m}$ and containing a large quantity of tile and other demolition debris dated to the 15th-16th centuries.

Phase 4 (18th century)

Trench 6 (Fig. 3)

The original flint-walled structure (6009) was used as the foundation of a structure of red unfrogged bricks (layer 6004), which were bonded with a limestone mortar. These were associated with an area of brick surface (6002 – not illustrated) thought to be a floor.

Trench 9

Two crudely made footings (9006 and 9007) were identified, both oriented north-east to south-west, and both constructed from a mix of red bricks, flint nodules and chalk blocks. The rough construction suggests that they were constructed using demolition debris from an earlier (possibly Phase 3) structure. Abutting the walls were layers of rubble (9004 and 9005), possibly representing make up for a floor of which there was no surviving trace.

Phase 5 (19th and 20th centuries - not illustrated)

Concrete and brick structures noted in Trenches 1, 3 and 10 had destroyed most earlier remains. Similar structures were also in evidence in the other trenches, although not to the extent of seriously compromising the validity of the archaeological sequence.

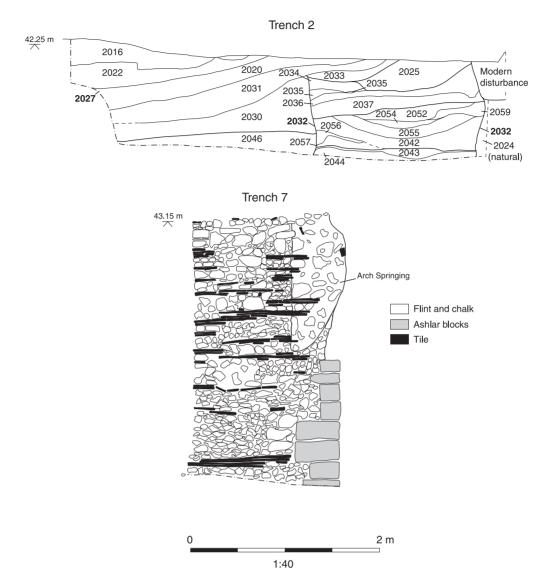


Figure 4 Trench 2, section 1; Trench 7, section 709.

THE FINDS

The individual reports below are summaries. Detailed reports can be found in the archive.

Pottery by Paul Blinkhorn

The pottery assemblage comprised 359 sherds with a total weight of 10,148 g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 4.37. Aside from a single sherd of Romano-British pottery, all the material was medieval or later. The range of ware types present suggests that two main phases of activity were represented in the assemblage, one datable to the earlier medieval period (11th to mid 12th centuries) and the other to the early post-medieval period (mid 16th to 17th century). In the case of the latter, a small but well-preserved assemblage of vessels associated

with the storage, serving and consumption of drink was present, although the rest of the pottery from that period and also the 17th-century assemblages were far more domestic in character. The assemblage is therefore entirely consistent with the suggestion that the excavated structures may have been part of a tavern or inn in the early post-medieval period.

Fabrics

The range of fabric types present is fairly typical of medieval and later sites in the Thames Valley, although perhaps more limited than is usual, although this may be partly due to the relatively small assemblage size. The earlier medieval sandy wares are typical, but the later medieval wares, such as London ware, Ashampstead ware, Surrey Whitewares, 'Tudor Green' types and Cistercian wares appear very under-represented, despite being well-attested at other medieval sites in Reading, such as

the Oracle (Blinkhorn forthcoming). Their absence is difficult to explain but may be a result of the limited survival of medieval levels on the site, following very substantial later truncation. Alternatively, although perhaps less probably, the absence of these fabrics could reflect a genuine lack of medieval activity on the site after the mid 12th century.

The fabrics noted are listed below. Previously fully published wares are fully referenced but otherwise not described. The 'F' prefixed codes are those used in the database and tables (see archive).

F202 Newbury coarsewares, late 11th to early 15th century (Mepham 1997, 51–2). 68 sherds, 915 g, EVE = 0.19.

F300: Local coarse sandy ware, ?L11th to 14thC. 48 sherds, 436 g, EVE = 0.04.

A range of coarse sandy fabrics, similar to those noted at the Reading Oracle and Waterfront excavations (Blinkhorn forthcoming; Underwood 1997, 144). The range of vessels is broadly similar to that of Fabric 302, although there was no definite evidence for tripod pitchers or jugs in the coarse fabrics at either of the above sites or this one.

'M40' type ware, ?Late 11th to 14th century (Hinton F301: 1973). 2 sherds, 33 g, EVE = 0.

F302: Local fine sandy ware, ?L11th to 14thC. 84 sherds, 2,084 g, EVE = 1.47.

A range of similar, fine, sandy fabrics, similar to those noted at the Reading Oracle and Waterfront excavations (Blinkhorn forthcoming; Underwood 1997, 144). This assemblage comprises a typical range of earlier medieval vessel forms, with the vast majority of sherds from jars, along with small quantities of bowls and a few jug sherds. Fine sandy wares such as these were made at a number of different sources, known and unknown, along a considerable length of the middle Thames Valley and its hinterland, and the problem of differentiating between the different wares has been noted in the past (Mellor 1994, 84).

Surrey Whiteware, mid 13th to mid 15th century (Pearce and Vince 1988). 5 sherds, 974 g, EVE = 1.00.

F401: LMT earthenware, 15th to 16thC? 19 sherds, 736 g, EVE = 0.31.

Hard, slightly sandy fabric, glazed and unglazed, in a variety of late medieval vessel forms. Common in contemporary sites in the Thames Valley, such as Reading Oracle, and probably produced at a number of local centres. Replaced rapidly by 'true' postmedieval Redwares in the mid-late 16th century

Tudor Green' type ware. 15th to 16th century. (Pearce and Vince 1988, 79–81 and figs 126–7). 4 sherds, 22 g, F403: EVE = 0.11.

F404: Cistercian ware, 1475-1700 (Brears 1971, 18-23). 7 sherds, 39 g, EVE = 0.

Rhenish Stonewares. AD1480+. (Gaimster 1997). 18 F405:

sherds, 1,177 g, EVE = 1.00. Anglo-Dutch Tin-glazed Earthenware 17th to early 18th F417: century (Orton 1988). 8 sherds, 159 g, EVE = 0. Martincamp ware, c. 1550–1700 (Ickowicz 1993). 7

F420: sherds, 858 g, EVE = 0.25.

F425: Post-medieval Redwares, Mid 16th to late 18th century

(Mepham 1997, 65). 68 sherds, 2,321 g. Mass-produced white earthenwares. 19th to 20th cen-F448: tury. $\overline{7}$ sherds, 68 g. Border Ware, 1550–1700 (Pearce 1992). 13 sherds, 324 g.

F451:

One sherd (2 g) of Romano-British Greyware was also noted.

Chronology

Each context-specific pottery assemblage was given a seriated Ceramic Phase date based on the range of wares present. The resulting dating scheme is shown in Table 1, along with the pottery occurrence by number, weight and EVE per ceramic phase (all fabrics).

There is a distinct lack of pottery dating from the mid 13th to mid 16th century, a period which produced only 10 sherds. This strongly suggests either that there was virtually no activity at the site during this time, or that material from this period had been lost to later truncation, as the defining wares for those phases (see Table 1) are not uncommon finds at sites in the town.

A small but well-preserved group of mid-late 16thcentury pottery comprised almost entirely pottery associated with storage, transportation and consumption of drink, and produced all the Cistercian ware from the site. This would suggest that the site was not in domestic use, and such assemblages are often associated with working sites and manual labouring. However, the 17th-century assemblage is far more domestic in character, comprising wares associated with eating and drinking, and display pottery. This could indicate that there was a change in the use of the site at some time between the mid 16th and 17th century, although it may simply be a distortion caused by the relatively small assemblage sizes and the few well-preserved vessels from context 4015. That assemblage aside, the rest of the CP5 group is quite typical of groups of the period. On balance, the pottery assemblages would be consistent with the presence of a tavern or inn on this site, from the mid 16th century to the mid 17th century.

Table 1 Ceramic Phase Chronology and Pottery Occurrence per Ceramic Phase, all fabrics.

Phase	Date	Defining Fabrics	No	Wt	EVE
CP1	?11th-M 13th C	F202, F300, F301, F302	196	3388	1.70
CP2	M 13th-L15th C	F356	2	109	0
CP3	15th-L15th C	F401, F403, F405	7	66	0.08
CP4	L 15th-M 16th C	F404	1	26	0
CP5	M 16th–17th C	F420, F425, F451	54	3532	2.28
CP6	17th C	F417	90	2951	0.31
		Total	349	10064	4.37

Nine sherds (82 g) were noted in 19th century features. The Romano-British sherd was from a feature which did not produce any other pottery.

Phase assemblages and illustrated pottery (Fig. 5)

CP1 (mid 11th to mid 13th century). This comprises 3,388 g of pottery, and is by far the large medieval phase assemblage from the site. It consists entirely of local sandy wares (F300 and F302) and Newbury wares. The sandy ware assemblage comprised mainly jugs (EVE = 1.11), with jars rare (EVE = 0.59) and bowls absent. This is rather unusual for early medieval assemblages, which are usually dominated by jars. The reason for this imbalance is likely to be a combination of a relatively small assemblage size coupled with the presence of a near-complete glazed tripod pitcher in context 2044 (see Fig. 5.1). The assemblage is otherwise fairly fragmented; if the tripod pitcher is taken out, the remaining assemblage has a mean sherd weight of 10.8 g, and contained nothing worthy of illustration. Ten bodysherds in F300 were noted with scored decoration. This method of surface treatment is common on a small proportion of earlier medieval sandy wares in the region. The unglazed wares in the sandy fabrics were otherwise undecorated. The Newbury ware assemblage (F202) is also worthy of comment. It was very rare at the Waterfront sites (Underwood 1997), but was fairly common at Broad St (Blinkhorn 2007) and is relatively plentiful here, comprising over a quarter of the pottery from CP1. Most of the ware came from a single context, 2033, and consisted of the fragmentary remains of the lower parts of two fairly large jars. The absence of London and Ashampstead wares from this site suggests either that activity had ceased by the mid 12th century, or, more probably, that the medieval assemblages have been distorted by severe truncation from later construction.

Fig. 5.1: Contexts 2043 and 2044, F302. Near-complete tripod pitcher. Fairly soft, pale orange-red fabric with a grey core. Large splashes and pools of poor-quality green and orange glaze, mostly on upper body.

CP2 – CP4 (mid 13th to mid 16th century). As noted above, there was very little pottery from these phases, with the total from all three comprising just 201 g.

CP5 (mid 16th to 17th century). This period produced the largest single phase assemblage, comprising 3,532 g of pottery, although

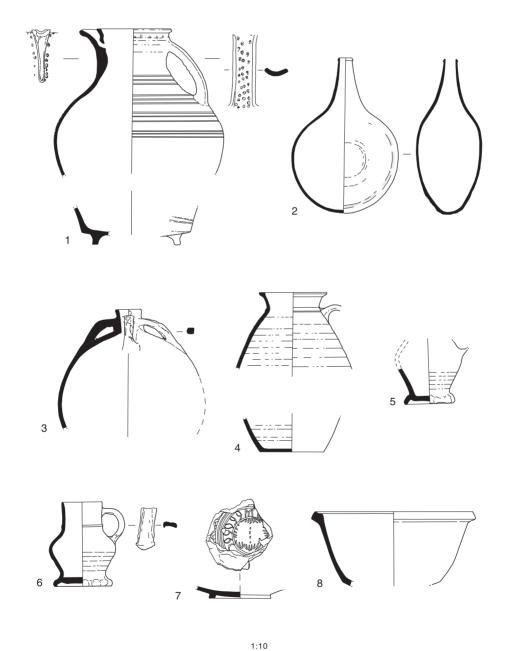


Figure 5 Pottery.

8

most of this came from a single context, 4015, which had cross-fits to context 4009. The assemblage consisted of a small group of near-complete vessels, along with a few sherds from others (Figs 5.2–5.6). The near-complete vessels are all types associated with the storage, transportation and consumption of drink, with the assemblage comprising two Rhenish Stoneware beer-mugs, a LMT red ware jug, a Martincamp flask and a Surrey Whiteware costrel, along with a few sherds of Cistercian ware from at least three cups, three sherds of Rhenish stoneware from two further beer-mugs, a rimsherd from another LMT redware jug and a base sherd from a mug in the same fabric, along with a few LMT and Post-medieval redware body-sherds from vessels of indeterminate type.

- Fig. 5.2 Context 4015, F420. Mammiform flask. Pale grey fabric with variegated grey and brown surfaces.
- with variegated grey and brown surfaces.
 Fig. 5.3: Context 4015, F356. Costrel. Salmon-pink fabric with buff surfaces. Patchy, variegated green and yellow glaze on and around the spout and handles.
- Fig. 5.4: Contexts 4009 and 4015, F401. Upper part and nonjoining base of jug. Grey fabric with grey-brown surfaces.
- Fig. 5.5: Context 4015, F405. Base and body of mug. Grey fabric with variegated grey and brown surfaces.
- with variegated grey and brown surfaces.
 Fig. 5.6: Context 4015, F405. Near-complete mug. Grey fabric with variegated grey and brown surfaces.

CP6 (17th century). The bulk of the pottery of this date came from one context, 7011, the fill of the cellar. This comprised a range of fabrics, which is typical of sites of the period in the region, and also had a wider range of vessel types. Drinking pottery (such as fragments of a few Rhenish Stoneware mugs and at least two Martincamp flasks) was noted, but a fairly large group (1681 g) of post-medieval Redwares was also present. The bulk of the assemblage comprised large bowls (pancheons), a type generally associated with food preparation and serving, along with single fragments from a cauldron and a chafing dish. A small Border ware assemblage was also present, and included fragments from two candlesticks, plates, jars and a strainer. Finally, sherds of three Anglo-Dutch tin-glazed earthenware vessels were noted, including the fairly large fragment of the base of a polychrome dish or plate.

- Fig. 5.7: Context 7011, F417. Base from a polychrome dish. Pale buff fabric with pale green glaze on the exterior, white glaze with painted blue, yellow and orange decoration on the interior.
- Fig. 5.8: Context 7011, F425. Full profile of pancheon. Brick red fabric with dull green glaze on lower inner surface and base.

Glass by Rachel Tyson

A relatively small assemblage of vessel and window glass was recovered, comprising 16 fragments of an undiagnostic base from context 5015, a mid 16th- to 17th-century cess pit fill, and 47 fragments discussed below from context 7011, a 17th-century cellar backfill. These are both contexts associated with a probable tavern, a type of site where one would expect to find a large quantity of vessels, particularly drinking vessels (Willmott 2002, 23–4). Two additional fragments of modern glass are listed in the assessment report; this, and a catalogue of the postmedieval glass, can be found in the site archive.

The majority of the vessel glass comprised drinking vessels, including fragments of a colourless drinking vessel, probably a wine glass, with alternate white *vetro a fili* and *vetro a retorti* canes dating to the second half of the 16th or possibly early 17th century (Fig. 6.1; Tait 1979, 49–50, 70–5). This is one of the most elaborate and high quality styles made in

this period. Although the technique originated in Venice, by the second half of the 16th century immigrant Italians had established *façon de venise* workshops in centres such as Antwerp, and it is currently impossible to distinguish which source fragments such as these came from. A plain colourless base rim from a stemmed wine glass may have come from the same vessel.

Although extremely high quality and popular amongst the elite - a large number were found at Acton Court in Gloucestershire (Willmott 2002, 26) such fragments are not uncommon finds on wealthy urban sites, perhaps well represented partly because they are so easily recognisable. A number of vetro fili fragments were found at the Oracle site in Reading, although they may have been discarded there from elsewhere in the town (Willmott forthcoming). Could taverns have been furnished with such high-quality assets? The evidence from an early 17th-century coaching inn cellar excavated at Bagshot certainly suggests so, where vetro a fili was found as well as other high-quality façon de venise vessels such as wine glasses with mould-blown stems (Willmott 2002, 23, 40, 63-5).

A second colourless *façon de venise* vessel is represented by two fragments with an optic-blown fluted design, possibly from a beaker (although other vessel forms are possible) dating to the late 16th to mid 17th century (see Willmott 2002, 37–8). Finally, the base of a green-tinted pedestal beaker is a common form, made in England in the second half of the 16th and first half of the 17th century, and also found at the tavern site at Bagshot (ibid., 47).

A more domestic vessel was represented by the rim of a urinal, a vessel used in England from the 13th to the early 17th century. Uroscopy involved the diagnosis of illness by examination of the colour and consistency of the urine, but also the everyday monitoring of health, as recommended by contemporary treatises (Tyson 2000, 149–53). Urinals are consequently common domestic finds. They are made of local green forest glass.

The window glass all came from crown glass (spun on the glassmaker's pontil iron into a flat disc), and included four pieces of edge waste; the circular shape of the original pane meant that wastage was inevitable. This suggests that the windows were cut and fitted on site, just as the evidence indicated in the Dissolution debris of Eynsham Abbey where edge pieces and the thick 'bull's eyes' from the centre of the pane were excavated (Cropper 2003, 331). Fragments of a triangular quarry with one rightangled corner were found. Most of the fragments had grozed edges, 'nibbled' to shape with a grozing iron, a medieval tool that was largely replaced by the diamond-cutter (which gave a much cleaner cut) in the course of the 16th century. These fragments may therefore be late medieval. However, the grozing iron may have continued in use beyond the mid 16th century, as it appears in a French illustration of glazier's tools for Diderot's Encyclopédie of 1751–2 (Brown 1994, 24).

Conclusions

While the high percentage of drinking glasses and their style is consistent with a tavern assemblage of the early 17th century, the quantity, with only three or four drinking vessels represented, is not. This could be explained as a bias in the archaeological evidence. The urinal fragment indicates a more domestic function within the tavern. The date of the window glass is inconclusive, but the evidence that it was cut to size on site is of interest.

Metalwork by Leigh Allen

A small assemblage of metalwork comprising 50 iron objects and 1 copper alloy object (a sheet fragment) was recovered. The identifiable iron objects included 2 knife fragments from context 4015, both tangs from whittle-tang knives with very little of the blade remaining. Additionally, a U-shaped staple and 28 nails (including a possible horseshoe nail) were recovered. The condition of the metalwork was generally poor.

Clay tobacco pipes by David Higgins

The excavations produced a total of 24 pipe fragments (5 bowl, 18 stem and 1 mouthpiece) from a total of 8 different contexts. A description and dating of the pipes from each context is included in the archive. The group of 14 pieces from context 7011 (the cellar backfill) and single piece from context 5016 (the cess pit backfill) are described below:

5016 (Fig. 6.2) 1 plain stem fragment of *c* 1610–1660 with a stem bore of 9/64in, and a plain bowl of *c* 1620–50. The bowl is complete, fully milled and of average finish. This piece has 88 mm of surviving stem with a bore of 8/64in. The other stem is 70 mm long and the fresh condition of both pieces suggests that they come from a contemporary and undisturbed deposit of *c* 1620–50.

7011 (Figs 6.3–5) This is by far the largest group of pipes recovered from the site, even though it only comprises 14 pieces (4 bowls, 9 stem fragments and a mouthpiece). Although the fragments all date from the 17th century they are rather mixed in nature and the bowl forms range from *c* 1610 to *c* 1670 in date. The latest bowl dates from *c* 1650–70 and could represent the date at which the pipes were deposited amongst demolition material in a pit.

The context group also contains 9 plain stems, two with bores of 8/64in, five with bores of 7/64in and two with bores of 6/64in. There is one mouthpiece fragment with a simple cut end and a bore of 9/64in. The walls of this fragment are extremely thin, generally less than 1 mm, which must have made production very difficult.

The most notable feature of this small assemblage as a whole is the dominance of early pieces. Almost all fragments are of 17th- or early 18th-century date, with only two or three later pieces being present. There are no marked or decorated pieces and none of the fragments is burnished. The pipes are all typical of local products and there is no reason why they should not have all been manufactured in or near to Reading.

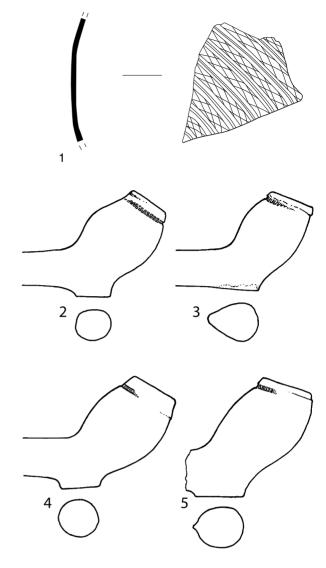


Figure 6 Glass (No. 1) and clay tobacco pipes (Nos 2–5).

The early bowl (Fig. 6.3) from Context 7011 is quite crudely designed and made; it may well represent the early establishment of pipemaking in the area.

Illustrations

- Fig. 6.2 Heel bowl of *c* 1620–50 with a markedly lop-sided bowl form and uneven surface to the bowl / stem junction, especially on the left-hand side. Slightly deep oval stem with a bore of 8/64in. The rim is fully milled and, in places, has been double milled. (Context 5016)
- Fig. 6.3 Heel bowl of *c* 1610–1640. The mould fits poorly and has an uneven surface. The bowl is lop-sided and has a slightly flared, heart-shaped heel. Hard-fired fabric with a stem bore of 7/64in. (Context 7011)
- Fig. 6.4 Heel bowl of c 1640–60. This mould is much better made than nos 6.2 and 6.3, and it has been neatly finished. The rim is half-milled and the stem bore is 7/64in. (Context 7011)
- Fig. 6.5 Heel bowl of c 1650–70. This mould is well made and the pipe has a neat appearance, even though it has been quite simply finished. The rim is one-quarter milled and the stem bore 7/64in. (Context 7011)

Ceramic building material by Terence Paul Smith

Recording of the ceramic building material concentrated on items likely to contribute significantly to overall understanding of the site, the remainder being recorded minimally. The material comprised bricks, floor tiles, and roofing tiles. A modern salt-glazed fragment with a stamped trademark is noted here but not considered further.

Bricks

All the examples have red fabrics and are fairly thin (less than 57 mm); on general appearance all but one (from context 802) would seem to be of 15th- or 16thcentury date. Brickmaking had certainly begun in the Thames Valley by the 15th century (Smith 1985, 27 and 30, fig.7; Bond et al. 1980, 2-7) and 15th-century bricks survive in Reading itself in a turret (part of Reading Abbey) in Valpy Street (Wight 1972, 230). Some of the bricks show sunken margins in upper bedfaces and/or squodge marks (slight protrusions along one or more lower edges). These features are characteristic of 'place bricks': the bricks, that is, were moulded without the use of a stockboard and were then carried, still in the mould, to the 'place' or drying ground, where they were de-moulded to lie flat for initial drying (Neve 1726, 42-3; Smith 2003, 223). The brick from context 802 does not show such features and has sharp arrises. It is a stock brick, made with the mould placed over a stockboard and de-moulded at the bench onto small wooden boards (pallets); batches of such bricks were then taken to the drying ground and placed on edge for initial drying (Smith 2003, 224). This example is perhaps of the 18th century, despite a thickness of only 51 mm (2in): possibly it is a paving brick.

Floor tiles

A fragment of plain glazed floor tile (context 5015) is 35 mm thick; other dimensions are not preserved. Its has a very dark green, virtually black, glaze. It is probably English and of the 14th or 15th century. A further fragment (context 7013) is 30 mm thick; other dimensions are not preserved. Its silty fabric is characteristic of tiles imported from the Low Countries. It has no glaze, but it is uncertain whether this is due to wear. If originally glazed then it is of the 15th or 16th century, if unglazed then of the 17th or 18th century.

Roof tiles

A number of fragments of both plain (peg) tiles, and ridge tiles were recovered, some with splash glazing. The diagnostic examples are of medieval date.

Animal bones by Bethan Charles

A total of 1311 fragments of bone were recovered by hand, with some additional fragments recovered from environmental samples. The majority of the bone was in fairly poor condition, being chalky and fragmented. The following is a summary report. Full quantification can be found in the archive.

Cattle, sheep and pig

It appears that cattle and sheep provided most of the meat to the inhabitants at the site. A large number of juvenile cattle mandibles were identified from within 16th-/17-century deposit 4015. These may have been animals surplus to the dairy industry or animals specifically bred for meat supply to the towns. A quantity of pig bones were recovered from the Phase 3 deposits, indicating that pork was also a part of the diet.

Horse

The horse bone from the site included the remains of a horse skeleton (including limbs, vertebrae, ribs and the skull) from the upper fills (2025 and 2036) of pit 2032.

A metacarpal displayed evidence of degenerative spavin disease around the proximal articulation, observed as partial fusion of the metacarpal and a small amount of additional bone growth. This can be caused by age and overwork, and, though not in itself fatal, may indicate the circumstances of the horse's death.

Other species

A small assemblage of bones from domestic fowl, hare and fallow deer were recovered. A quantity of unidentified fish bone was recovered from the cellar backfill (context 7011).

Plant remains by Denise Druce

Three medieval pit fills were analysed for plant remains (contexts 2044, 2046 and 6011) and the bottom fill of the 16th- to 17th-century cess pit (context 5015) was analysed for waterlogged remains. Analysis followed normal OA procedure. The following report summarises the main results, and full details can be found in the project archive.

The medieval samples

The three samples analysed for charred remains all contained cereal grains, predominantly *Avena* sp.(oats) followed by *Triticum* sp. (wheat), including examples of the short plump variety typical of *Triticum aestivum* (bread wheat). The chaff remains were limited, and dominated by *Secale Cereale* (rye) rachis. All three samples contained charred *Corylus avellana* (hazelnut) shell fragments and a limited amount of charred and waterlogged seeds from other edible plants, although not in any major numbers. All three also contained both charred and a limited number of waterlogged weed seeds typical

of arable/open land. Given the urban context of the site, these remains may have been brought onto the site along with the cereals. The assemblages are typical of urban deposits/domestic waste. The relative abundance of oat grains suggests that this may have been an important food source at this site.

The cess pit sample

The sample was very abundant in seeds from edible/economic plants, including *Ficus carica* (fig), *Fragaria vesca* (wild strawberry), *Vitis vinifera* (grape), *Rubus fruticosus* (bramble), and *Malus/Pyrus* (apple/pear). One specimen of *Linum usitatissimum* (flax) was also present. Weed seeds typical of cultivated/open land were present but these were generally less abundant. This sample also contained abundant wood and charcoal fragments, insect fragments, fly puparia, bone, hair/fibre, and mineralised material. The waste material is typical of cess pits of the period (Greig 1996).

DISCUSSION

The nature of the excavation, a series of discrete trenches, and the degree of modern truncation poses problems for understanding the site as a whole. Extrapolation of the detailed islands of archaeology can be made with validity, but the conclusions are inevitably qualified.

Phase 1: pre-11th century

The site gives little information about this period, the only surviving contexts being those of the buried soil appearing in patches across the site, which may be of Saxon date but did not yield any dating material. The lack of any significant Anglo-Saxon activity is consistent with the results of other fieldwork in the vicinity (Norton and Poore 2007), and provides further evidence to suggest that the documented Anglo-Saxon settlement at Reading lay to the west, around the site of the minster, later St Mary's Church.

Phase 2: late 11th to 15th centuries

The first major period of occupation is represented by a scatter of pits, broadly dating to the period from the 11th to the 15th centuries. The lack of pottery of later 12th-century or later date may mean that the site saw a short, intense period of occupation in the late 11th and early 12th centuries, followed by a long period of very little activity.

The pits are characteristic of backyard domestic cess and refuse pits, and were probably associated with housing fronting either to the east onto modern day Buttermarket, or possibly to the south onto Broad Street. The horse skeleton in one of the pits attests to the utilitarian nature of the likely lifestyle of the inhabitants at the time. No evidence was found of contemporary property boundaries to

clarify the land division in this period, although given the degree of later disturbance, this is not surprising.

The hiatus in the ceramic record in the later medieval period could be associated with a change in land use, and, while unlikely to represent complete abandonment of the area, it could suggest that the area behind the frontage was turned over to gardens or orchards. Any such 'quiet' period seems to have been localised however; a small excavation immediately to the north, on Friar Street, produced evidence of continuous occupation and activity from the 13th century onwards (Atherton 1997, 8). It is possible that the properties including the Market Way site came under the influence of the Abbey to a greater degree; it could well be more than coincidence that the resurgence in activity on the site occurred soon after the dissolution of Reading Abbey (1539), which had dominated the borough in the medieval period.

Evidence from elsewhere in the town suggests that Reading was growing substantially in the 13th century, and settlement was spreading along new approach roads, and onto the low-lying Kennet floodplain to the south (Astill 1978 fig 23; OA forthcoming). That expansion seems to have stopped in the 14th century (Astill 1978; OA forthcoming), with the documented increase in the town's population resulting in further subdivision of land and the creation of courts. By the 15th century there is evidence for retrenchment on the floodplain (OA forthcoming).

Phase 3: 16th-17th centuries

A number of trenches revealed structural remains of this period, although in only two cases (Trenches 5 and 7) could enough be revealed to approach a coherent interpretation. The structure in Trench 5 is clearly a large cess pit; that in Trench 7 appears to be part of a cellar.

The alignment of the remains make it most likely that they represent more than one building, perhaps grouped around a courtyard to the rear of Broad Street and Buttermarket. It is difficult to characterise the buildings that would have stood over these structures. The absence of stone in the demolition material suggests they were probably timber-framed, and the presence of roof tiles is consistent with the preferred method of roofing at the time. In the 17th century, it was forbidden for anyone to roof a building with thatch, and only tiles were to be used. Many tiles and bricks came from Tilehurst, the next village to the west of Reading.

The infilling deposits of both structures, along with contemporary pit fills, produced an assemblage of pottery, glass and tobacco pipes associated with the consumption and serving of food and drink. This assemblage, when considered in conjunction with the size of the cess pit and cellar, would seem more consistent with a public building, a tavern or an inn, than with a private dwelling.

In the 16th and 17th centuries the east end of Broad Street was an affluent commercial focus, and the fine *vetro a fili* and *façon de venise* vessel glass indicate that, if it was an inn, it attracted a reasonably affluent clientele. The Amyce Survey of 1552 indicates that among the known hostelries in Reading during this period was one called The Busshe, towards the east end of Broad Street. However, its location seems to be too far to the west to be connected to this site. Less comprehensive documentary records exist for the Buttermarket frontage.

However, there were also numerous illicit breweries and inns, the proprietors of which were known as 'tipplers'. According to a survey of 1584, along the north side of the east end of Broad Street were three known 'tipplers', Oliver Hall, Abel Harrysse and John or Thomas Child and it is possible that Child, who lived in Broad Street, may have had a yard in the correct vicinity. Until 1600 the surviving inventories of innkeepers indicate that all had another trade as well, and so it is tempting to speculate that this inn could have been a drinking house kept by one of the shopkeepers from Fish Row on Broad Street.

Although identification of a specific tavern on the site of the excavation is difficult, it is possible to describe a substantial inn of the period. Francis Dewell ran the Cardinal's Hat in Minster Street, an inn with a hall, tap house, 11 bedrooms, a great parlour, a little parlour, named chambers (Hall, Parlour, Rud, Corner, New, Lyon, Rose, Well,) and a cockloft, 2 cwt of pewter, and a host of cooking equipment of brass and iron in the kitchen and its own beer cellar

There is an apparent contradiction between the archaeological evidence of a substantial building or buildings to the rear of the Buttermarket/Broad Street frontage in the early 17th century, and the contemporary map by John Speed (Fig. 2), which depicts the area behind the frontage as open space. However, the temptation to see Speed's depiction, and that of his contemporaries, in the same way as modern maps should be resisted. Speed was always more concerned with the street frontage than the back plots, and his work should perhaps be seen more as an illustration than a map.

The archaeological evidence clearly indicates that the cellar and cess pit, and presumably the structures above, were demolished, and the site cleared, in the mid 17th century, indicating a fundamental change of use (and possibly ownership?) of the property. One may speculate that, if it was a tavern, its location, apparently behind the street frontage, may have been less than ideal. Perhaps commercial pressure forced it out of business, although at the time Reading was a wealthy town and the population was increasing, so whatever the reason, it does not appear to be an example of a general trend in the town.

Phase 4 and 5 18th-20th centuries

In the 18th century there appears to be some small scale rebuilding on the site, judging from the brick

footings in two of the trenches, but on nothing like the same scale as before.

Rocque's map of 1761 and Coate's map of 1802 indicate that there was some building on the site, but the outlines differ on the maps and their use is uncertain. In 1854 the Victorian Corn Exchange was constructed on the site and it is likely that the red brick structures seen in Trenches 1 and 10 relate to this.

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ARCHIVE

The finds and site archive will be deposited with Reading Museum (Acc. No. REDMG: 2001.367).

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