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Cover: The 1704 (Old) Council House, looking east. Ernest A Parkman 1856-1921. Bristol Museums, Galleries & Archives Acc. No. M390.

CONTRIBUTIONS

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ARCHAEOLOGICAL EXCAVATION, BUILDING SURVEY & WATCHING BRIEF AT 22-30 WEST STREET, OLD MARKET, BRISTOL, 2004

by Andy King

SUMMARY

An excavation, building survey and watching brief were carried out by Bristol and Region Archaeological Services at the site of Nos. 22-30 West St, Old Market, Bristol. During the medieval period the site lay outside the town boundary, buildings were present along the street frontage and the area behind would have been in use for pasture or cultivation. Settlement from the late 16th to mid 18th-centuries is represented by the replacement of medieval buildings and a proliferation of domestic rubbish-pits. The Civil War clearance of buildings outside Lawford's Gate briefly interrupted the growth of the suburb and widespread

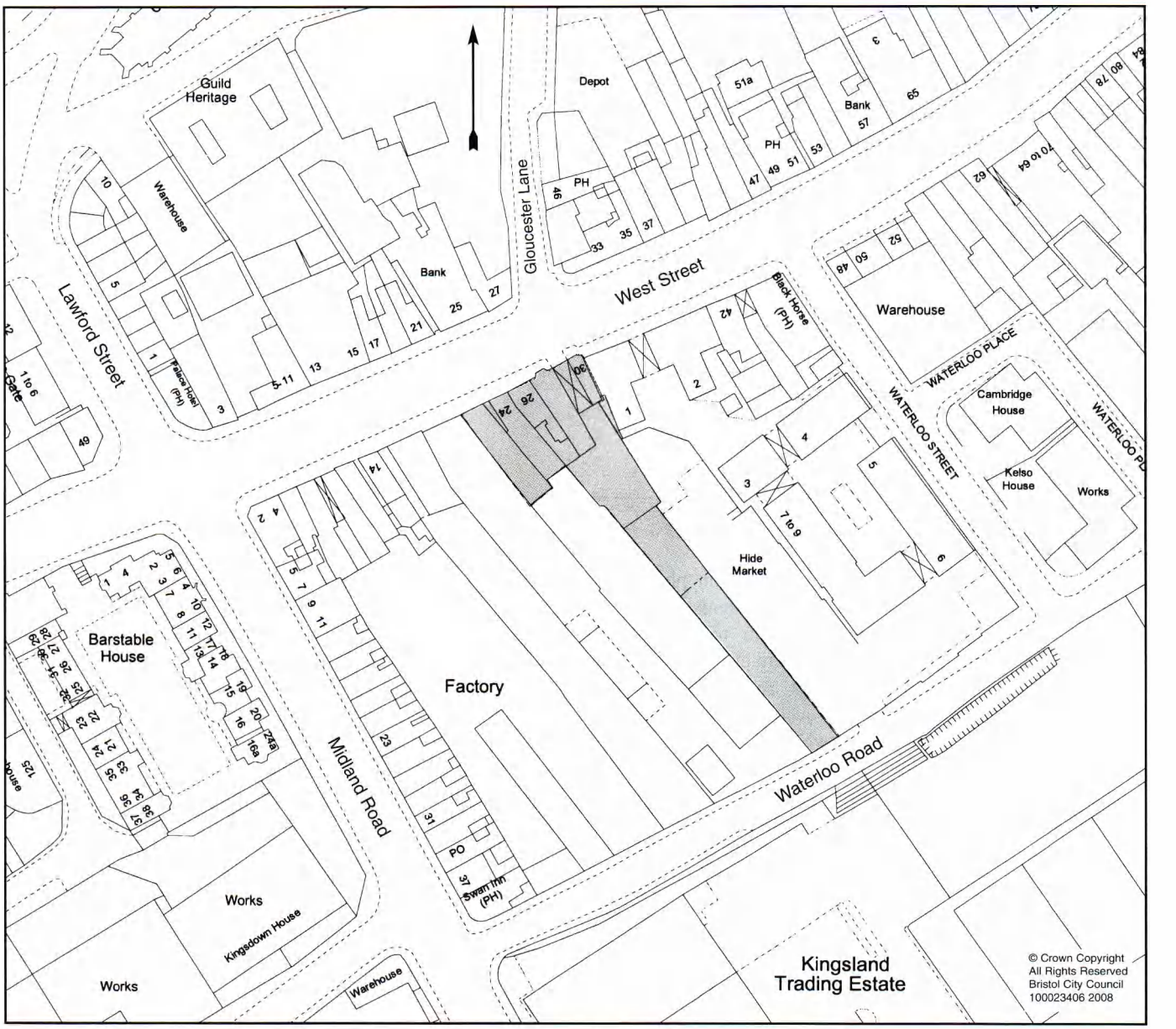

Fig.1 Site location plan, based on Ordnance Survey 1999 published edition, scale 1:1400.

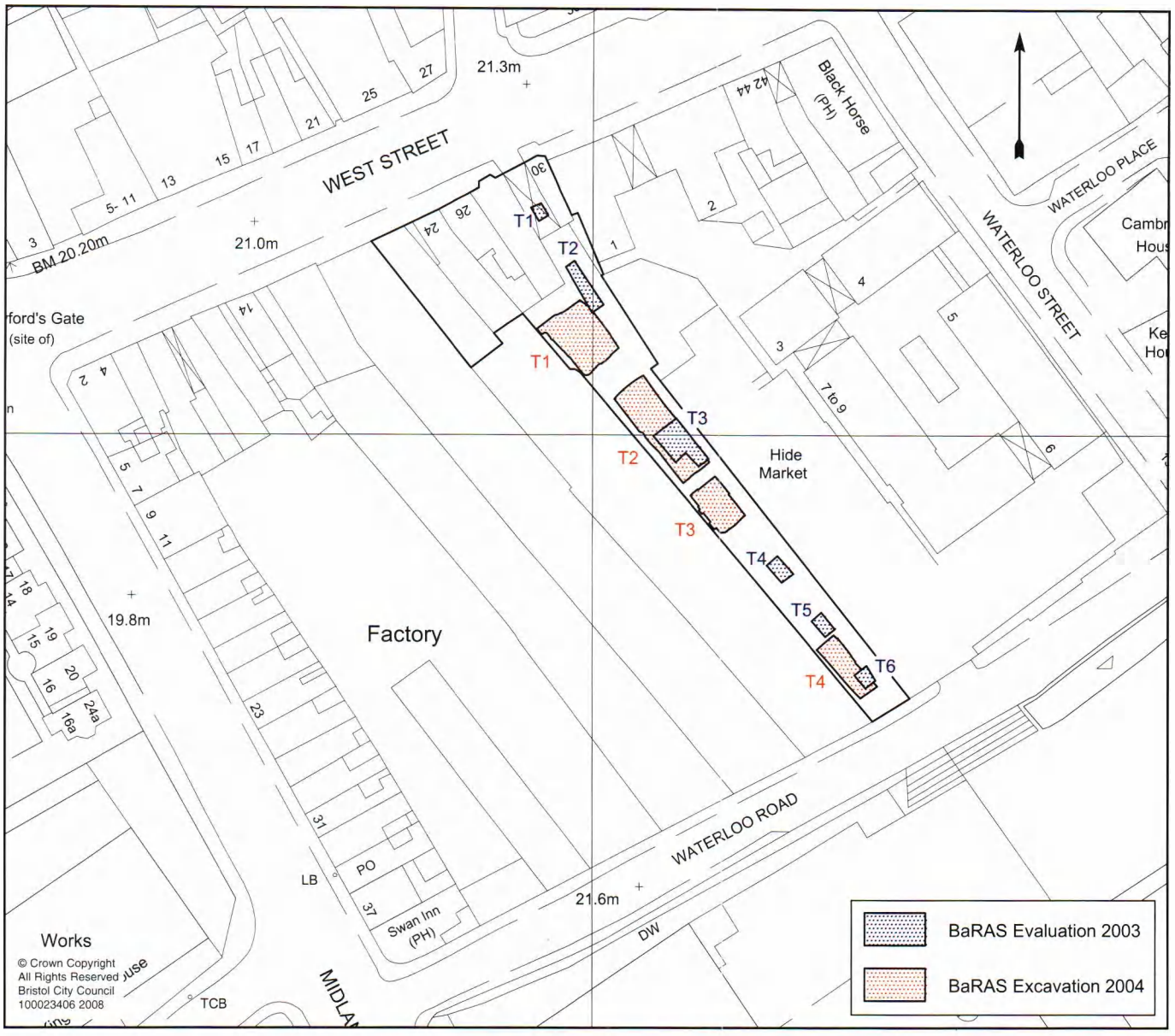

Fig.2 Area of excavation trenches and location of 2003 evaluation trenches, scale 1:1000.

rebuilding was followed by a relatively opulent phase of occupation at West Street, reflected in the contents of stone-built cess-pits dating from the late 17th to mid 18th centuries. To the rear of 26-30 land that had effectively been turned over to waste disposal was revitalised as an ornamental garden before being replaced around 1775 by a large workshop and low-quality dwellings. The dwellings were cleared by 1874 but the area covered by the workshop remained in use for light industrial premises until the later 20th century.

INTRODUCTION

This report concerns the history and archaeology of an area between West Street and Waterloo Road, Old Market, in the parish of SS. Philip and Jacob, Bristol (Fig.1; NGR ST 59907 73199). In the last six years this part of Old Market has seen large-scale redevelopment, which in turn has provided useful opportunities to investigate the archaeology of one of Bristol's oldest suburbs. The site comprised a terrace of four properties fronting the south side of West Street (Plate 1). The standing buildings of 22, 28 and 30 West Street had a Grade II listing, the remainder of the site consisted of a plot of land behind 26-30 West Street extending 83m south to Waterloo Road.

At the time of the fieldwork a modern office complex and car park called the Hide Market lay to the east of the site. To the west was the recently completed residential development of 18-20 West Street where medieval and early post-medieval structural remains were recorded adjacent to the modern pavement (King & Parry 2004).

In 2003 a planning application was submitted to redevelop the properties of 22-30 with residential apartment buildings and associated car parking. A desk-based archaeological assessment of the site (King 2003a) was followed in May-June by a field evaluation and assessment

of the standing structures (Jackson & Leech 2003). The evaluation trenches revealed the remains of medieval and early post-medieval structural features and occupation deposits, surviving in good condition adjacent to the frontage of No.30 West Street. Garden soil deposits, 19th-century walls and areas of made ground were also present across the site.

From the results of the evaluation and due to the disturbance that would be caused by the proposed development, the City Archaeologist requested that a further programme of excavation and a building survey during demolition of standing buildings should be carried out, with a subsequent watching brief during construction work to monitor ground disturbance. The excavation took place between 19 July and 6 September 2004, the building survey was concurrent with this. The limited working area meant that four trenches were excavated along the length of the site to ensure safe access routes and to avoid destabilising boundary walls (Fig.2). For the subsequent watching brief, the recording of features in five main areas continued until February 2005 (Fig.3).

THE HISTORICAL BACKGROUND

West Street lay outside the boundary of the medieval City of Bristol and was part of Gloucestershire until 1835, consequently the historic records for West Street are not quite as comprehensive as those for Old Market Street, although only several metres separate the two streets.

Founding of Bristol

The Saxon settlement of Brigstowe is suggested to have been growing in importance shortly after 1000AD and was probably centred close to St Mary le Port church at the west of the present-day Castle Park, around the crossroads that is formed today by High Street, Wine Street, Corn Street and Broad Street (Lobel & Carus-Wilson 1975, 2-3). This would have been the most topographically advantageous location but the exact limits of the Saxon settlement are still a matter of conjecture. The Domesday survey records that the town (and the area that would become Old Market) lay within the Royal manor of Barton in the administrative Hundred of Swinehead (Morris 1982:163b). Following the Norman conquest of 1066, a motte and bailey castle was constructed at the eastern end of the Saxon town. These castles were often placed in prominent positions and usually involved the demolition and clearance of buildings, not simply for strategic reasons but also to deliberately dominate the local population. Bristol was retained as a Royal Manor by King William and granted to Geoffrey, Bishop of Coutances. After the death of the Bishop in 1093 his lands were granted by William II to Robert Fitzhamon the Earl of Gloucester (Sharp 1982, 70). In 1109, after the death of Fitzhamon, Robert Fitzharding was granted Bristol and the surrounding area. Fitzharding came from an Anglo-Saxon family that had served King William and prospered under William Rufus and Henry I. He became Earl of Gloucester sometime after 1121 and instigated the improvement of Bristol castle as well as founding the priory of St James and the church of SS. Philip and James (later Jacob) *c* 1137. Earl Robert may also have instigated an eastern extension of the town, beyond the boundary of the original Saxon settlement.

Plate 1 West Street frontage of Nos. 22-30, looking south-east.

Origins of Old Market

The date that a market was first established in the district east of Bristol castle is unknown but within a hundred years of the Conquest (*c* 1160) the area was being described as the *'feria'*, a medieval Latin term used for a fair or market (Potto Hicks 1934, 172). Unlike other districts of Bristol, the market did not have the protection of a town wall but was enclosed at its eastern end by an earth bank and ditch, the 'Great Ditch'. The ditch ran parallel with and slightly west of, the present-day Midland Road and Lawford Street. The main access route across the Great Ditch was through a gate called Lawford's Gate, situated close to the modern junction of West Street and Old Market (Burchill 2001). West Street would have been the main route to London from the east side of Bristol and similarly Gloucester Lane was the start of the road to Gloucester via Stapleton.

From 1232 grants of murage were frequently made by the Crown enabling tolls to be collected at town gates, ostensibly for the upkeep of defensive walls. There is no evidence to suggest that Lawford's Gate was strongly fortified in the medieval period but it would have been useful for collecting tolls from those attending the market and fairs on this side of Bristol. The Abbey of St Augustine and St Mark's Hospital owned property and land beyond the town ditch in the demesne pastures of the 'Kings Barton'. The church of SS. Philip and Jacob was a cell of Tewkesbury Abbey and may also have owned land beyond Lawford's Gate.

Development of West Street

Ecclesiastical records confirm that a period of urban growth was taking place in the area of West Street and Gloucester Lane by the early 1200s. It is difficult to accurately place West Street property boundaries from medieval deeds as the

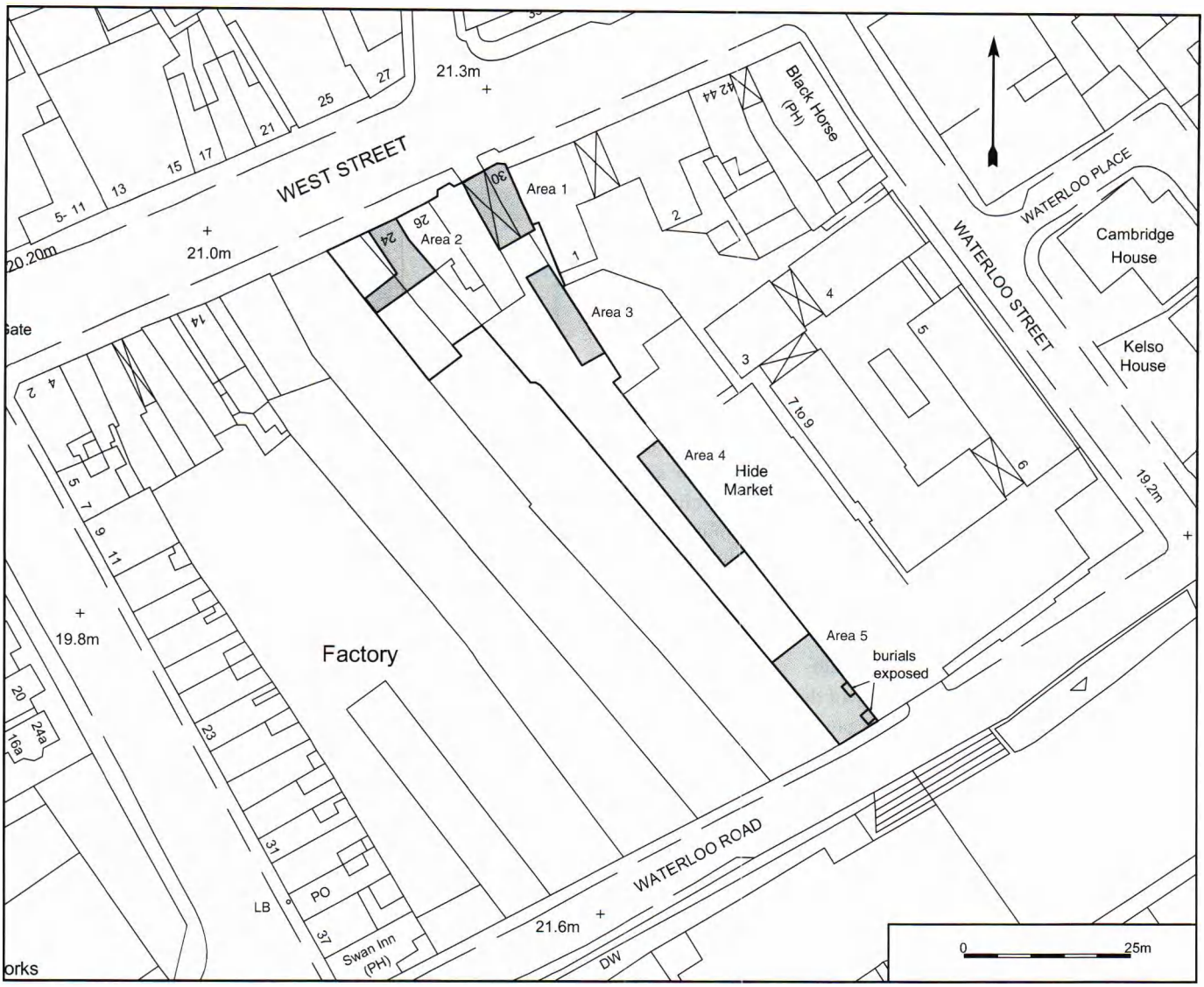

Fig.3 Areas covered by the watching brief, scale 1:1000.

descriptions given were based on names of individuals, long-vanished fields or the former routes of watercourses. Only general locations are deductible from the recorded names of pastures in the Barton along the road from Lawford's Gate. For example, a meadow belonging to St Mark's hospital called *'Wainbroke'* extended in the 13th century between the *'...Meadow of the hospital of St Lawrence of Bristol and the meadow formerly of Richard de Pisa'* (Ross 1959, 249). To the north of Wainbroke was another meadow called *'Berehulle'* (Sharp 1982, xlvii). The leper hospital dedicated to St Lawrence was founded sometime before 1199 in the reign of King John and the location of this hospital was described by William Worcestre, (*c* 1480), as being 1200 steps (approximately 672 metres) from Lawford's Gate along the road to London (Neale 2000, 109). If William Worcestre's pacing was even reasonably accurate then the meadows of Wainbroke, Berehulle and that of Richard of Pisa all lay in the area between the present-day Lawford's Gate Junction and Lawrence Hill roundabout. Houses, curtilages, land and crofts on the road to Stapleton (later Gloucester Lane) are all mentioned in medieval deeds, but not specifically located (Walker 1998, 345-48). A charter of *c* 1274 describes land beyond Lawford's Gate extending from '...the street in front to the street behind...'(Ross 1959, 114) hinting at the existence of a parallel 'Back lane', possibly on the line of the present Waterloo Road. It would have been quite usual for urban development to spread out along the route of main highways, especially so close to a City gate.

From the 15th and 16th centuries there are far more documentary sources mentioning properties near the junction of West Street and Gloucester Lane (BRO P/St.P & J/D/7 (a), P/St.P & J/D/16 (c)). Some of the earliest cartographic depictions of Bristol, such as those by Smith and Hoefnagle, date from the later 16th century and only showed urban development extending as far as Lawford's Gate. These maps were not to scale and are merely stylistic representations. A slightly later map of Kingswood dated 1610 gave an indication of scattered properties and enclosures, to the east of Lawford's Gate and at the junction

of the London Road and Gloucester Lane, some with the land-owners names. There may be some small significance in the fact that the map of 1610 did not depict the tenement plots immediately east of Lawfords Gate as long thin strips.

Civil War Destruction

In the Civil War the City of Bristol was held initially by Parliament and then by the Crown and thus suffered the effects of two sieges, the first in 1643 and the second in 1645. On the eastern side of the city the Parliamentary defences of 1643 were essentially a repair of the medieval defences, reinforced by ordnance. It may be the case that buildings along West Street were made into strong-points or possibly demolished to prevent their use by an attacking force and to provide a clear field of fire for the defenders. Whatever the reality may have been, the principle attack on Bristol was directed at other areas of the City. During the two years of the Royalist occupation the eastern defensive circuit was greatly strengthened by an outer series of earthwork bastions and gun-emplacements outside Lawford's Gate. Unlike the siege of 1643, fighting at this point of the line was fierce and protracted in 1645. It is likely that to enable the most effective use of the outer defences many, if not all, of the surrounding buildings would have been levelled. This destruction may at least have been carried out under some measure of control, perhaps allowing the inhabitants time to gather belongings and find alternative accommodation, unlike the outlying villages of Bedminster and Clifton that were rapidly burned at the start of the second siege (Lynch 1999, 145). Following the battle of Worcester in 1651 a degree of national political stability had been regained and it was during this period that Cromwell ordered the castle, forts and outer earthwork-defences of Bristol to be dismantled and infilled. West Street was certainly being rebuilt by the early 1650s. An indication of the scale of the outer defences was recently uncovered during an excavation at Gloucester Lane (King 2003b) and similar features may exist somewhere to the south side of West Street. A watching brief at the site of Nos. 48-54 West Street (Insole 2000) recorded a large linear feature of uncertain date which may also be connected with the Civil War defences. The preponderance of historically recorded, mid to late 17th-century, buildings and structures along West Street in the Bristol Urban Archaeological Database and the absence of standing medieval walls in this area, may also be directly associated with Civil War destruction and subsequent rebuilding.

17th - 18th centuries

From 1681 French Protestant Huguenots began arriving in Bristol and West Street was one of the areas in which they settled bringing a brief period of prosperity. The district around West Street was fast becoming Bristol's first real suburb inhabited by a few hundred weavers, colliers and market gardeners (Latimer 1900, 3). Jacobus Millerd's maps of 1673 and *c* 1715 are again representative rather than historically precise, but showed both sides of the London Road fully built up as far as Gloucester Lane (Fig.4). Millerd's maps also showed extensive gardens and property divisions to the rear of the housing along West Street which extended southwards to a lane that, over the centuries, would undergo several name-changes from *Back Lane* to *Cheese Lane* in the 1770s then *Dead Horse Lane, Lucky Lane* and *Lear's Lane* through the 19th century, before eventually becoming Waterloo Road in 1893.

From the late 17th-century onwards the documentary references to ownership, or exchanges of land and properties along West Street, became more comprehensive and it begins to be possible to place the exact location of property boundaries for this period. For example a Back Lane and a boundary wall are referred to in a document concerning Articles of Agreement between an Inn-holder, Matthew Wright and a tailor, Thomas Fleming dated 1 April 1717 (BRO P/St.P & J/D/3 e). The agreement was related to the building of a party wall between two adjoining pieces of garden that extended from West Street outside Lawford's Gate to the "*...lane leading from Baber's Tower to the house of Alderman Elton*". Babers tower is clearly marked on Jacobus Millerd's plans and the house of Alderman Elton probably refers to Waterloo House that stood on the south

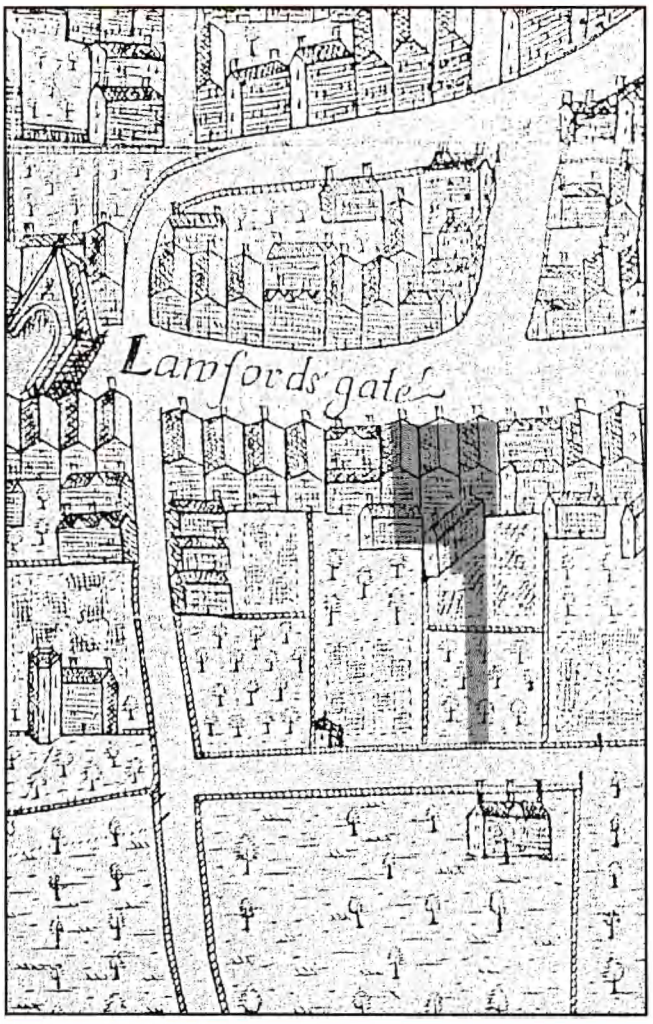

Fig.4 Jacobus Millerd's map of c1715.

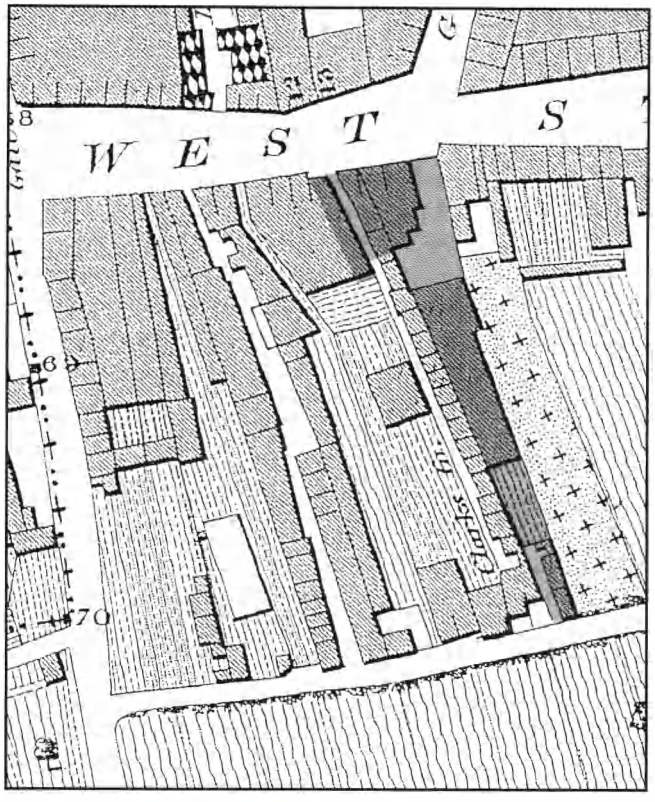

Fig.5 Plumley & Ashmead's map of 1828.

side of Waterloo Road. A popular fair was held in West Street from 1729 and throughout the Georgian period. Latimer quotes an advertisement for the fair in Farley's Newspaper for 21 December 1728 that stated "....*For encouragement the inhabitants will give the use of their bulks and standings gratis.....*" (Latimer 1900, 167), which implies that shop fronts were quite numerous along West Street at that time. J. Rocque's map of 1742 gave no detail of individual properties but showed buildings present along the West Street frontage and some along the Back Lane, with the area between depicted as being under gardens or cultivation.

In Sketchley's Bristol Directory of 1775 the properties fronting West Street numbered 85 (west) to 80 (east) corresponded with the present Nos. 22-30. The occupants of these properties were predominantly tradespersons and craftsmen. However, standing out quite dramatically at No. 80 were the light industrial premises of *Williams and Winwood, engine-smiths and screw-makers*. Reed's directory of 1792 listed *Winwood and Protheroe - Iron Founders* in West Street. In Mathew's directory for 1793-4 they were listed as *Wrought Iron Founders*. Mathew's directory for 1800 listed *Winwood, John & Thomas - Iron Masters*.

Late 18th-19th century

From the late 18th- through to the 19th century, building development along West Street encroached on former garden areas. Plumley and Ashmead's map of 1828 showed the site of No. 80 (30) as an open yard with a wide entrance off West Street, leading back to a large building that may have been the former engineering workshop associated in the directories with the name Winwood. On the same map a terrace of small dwellings called 'Clarke's Court' ran almost all the way through from 84 West Street (present-day No. 24) to the lane that was later to become Waterloo Road. The West Street entrance to Clarke's Court and part of the passageway between Nos. 85 and 84 survived until the present development (Fig.5). Behind the warehouse building, situated to the rear of Nos. 82 to 80, were a garden area and some small dwellings, of a similar size to those in Clarke's Court, facing a yard off Waterloo Road. East of the study area was the Francis burial ground that was closed in the mid-19th century, but never cleared of interments. Unfortunately, no records of the burials have survived.

There were very few changes to the layout of the study area on the SS. Philip and Jacob Tithe map of 1847. On George Ashmead's plan of 1854 Nos. 77-81 were depicted as dwellings while No. 80 was a yard space with a small annexe. The entrance to the yard space apparently survives today as an arched opening with a rusticated stone surround that must have been constructed sometime between 1828 and 1854. Mathew's Bristol Directory for 1851 listed a *cooper and vat-maker*, an *oil and colourman* and a *grocer and victualler* at No. 80. Lavarr's plan of 1867 was too general and inaccurate to show much detail of individual properties. In 1870 the former Nos. 85-80 were renumbered as 80 to 76. Ashmead's 1874 plan showed the location of main sewer channels that supplied the West Street frontage but the dwellings adjacent to Waterloo Road had gone by that time and no mains services were present for the rest of the site.

Late 19th-20th century

The large building shown at the rear of 82-80 West Street on Ashmead's 1828 map, was later described as a storehouse on the 1884 edition Ordnance Survey plan. The eastern and western boundary walls that stood on this part of the site contained numerous blocked, arched brick openings, windows and beam slots all of which must have related to the former use of the site as warehouse and light industrial premises in the 18th and 19th centuries. The West Street numbering changed in 1888 to the present Nos. 22-30. The Goad's Fire Insurance Plan of 1896 depicted No. 22 as a public house, known at the time as the Royal Oak, with a dwelling to the rear (Fig.6). The Goad's plans did not always show cellars even when they were present, as at Nos. 26 and 28. Part of the late-19th-century cellar constructed within No. 22 was exposed during underpinning works in 2002. Number 22 later became a fishmongers and then an oyster bar from 1914 until the early 1920s, the tiled walls, presumably from this period, were still in place in 2004. Numbers 24 to 28 were shop premises while No. 30 and most of the buildings behind were occupied by Herniman & Sons, wheelwrights, a company that lasted until the mid 1960s. In the timber-framed structure above the former yard entrance at No. 30 was a hoist mechanism presumably used to raise the bodies of carriages off their chassis. This

mechanism may have been of some local historical significance but it was lost during demolition of the buildings. In the 1890s No. 28 was a three-storey building with an attic but had at some time been reduced by one storey, possibly as a result of incendiary-bomb damage during the blitz.

Goad's 1896 plan showed the premises and yard space of J. Smith & Sons fronting Waterloo Road, there was no mention of their trade or occupation in the Bristol Directories. A range of small buildings were constructed along the western boundary of the site, the layout of these changed over time. The properties of Nos. 18-20 West Street were probably demolished soon after 1918 and Clarke's Court survived until the 1930s. On the 1950 edition O.S. plan the remains of Clarke's Court was shown as a passage through to a box and case factory but by the early 1960s this passage had been blocked off at the rear of No. 24. Widening of Waterloo Road in the mid-20th century did not affect the layout of the site. The wheelwright premises of Hernimann's became an automotive repair centre, latterly Motorweld Ltd., until its closure in 2000.

THE ARCHAEOLOGICAL BACKGROUND

A recent archaeological excavation on the site of 18-20 West Street (King & Parry 2004) located the remains of two phases of medieval walls and a metalled surface adjacent to the modern pavement. Deposits associated with these features contained pottery sherds dating from the late 13th century. The medieval walls at 18-20 West Street ran parallel to the present-day street frontage but one phase probably represented the rear wall of a building. Just as significantly, the medieval walls extended beyond the western property boundary. This would indicate that at some time in the post-medieval period, West Street had been considerably widened and building plot boundaries re-laid,

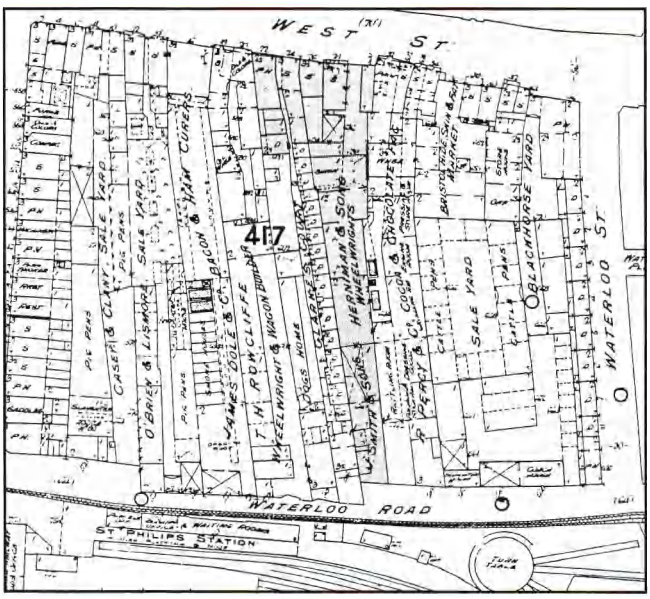

Fig.6 C. Goad's 1896 Fire Insurance Plan, sheet No. 49.

the most convincing reason for this is still Civil War demolition. Recent archaeological fieldwork lends weight to this idea.

In the 2003 evaluation within the haulingway of Nos. 28-30 a robber trench for a medieval wall was exposed (Jackson & Leech 2003). Unfortunately no return walls were present within the limits of the evaluation trench to indicate the extent of this building.

Similarly, at an excavation and watching brief on the site of 30 Gloucester Lane in November 2002 (King 2003b) fragmentary remains of medieval walls were revealed, apparently representing the rear and party walls of properties fronting Gloucester Lane. These walls were almost directly in line with the modern street frontage; as with the 22-30 West Street site this appears to indicate that Gloucester Lane was once significantly narrower than it is today.

The only evidence for plot boundary walls running south from West Street, that pre-date the 17th century, comes from an observation made in 1988 of the party walls between Nos. 32-34 and 34-36 West Street. The fieldworkers identified these walls as being of 15th-century origin, however since this observation, nothing typologically comparable has been found in this area.

In the 2003 evaluation at 28-30 West Street the presence of clay tobacco-pipes indicated that a medieval wall, on an east-west alignment, exposed in trench 1 was robbed out sometime after *c* 1600. Another wall was then constructed to replace, or partly replace, the earlier medieval structure. A significant increase in early post-medieval settlement activity was recorded by the discovery of deposits containing 16th-century pottery sherds during evaluations to the west of the study area (Parry 2001 & Bryant & King 2003).

An evaluation and standing wall assessment carried out to the rear of Nos. 8-14 West Street (Bryant & King 2003) revealed that the principle alignments of the eastern and western boundaries had hardly altered since the beginning of the 19th century, but no earlier masonry could be found within the standing walls on that site. However, the building survey at 22-30 revealed patches of Pennant sandstone bonded with orangey-pink, lime-flecked mortar, typical of 17th-century construction in this part of Bristol, surviving between 2 and 3m above ground level in the western wall of 22 West Street.

In addition the eastern wall of No. 22 contained elements of a much-altered timber-framed building surviving beneath later brickwork. Monitoring of pits excavated to underpin No. 22 proved conclusively that this building had 17th-century foundations.

At the site of 18-20 West Street, Rocque's map of 1742 showed buildings constructed adjacent to Waterloo Road. One of those buildings may have been associated with a section of standing wall first recorded during the archaeological evaluation and watching brief on that site (Parry 2001) and again during the course of this excavation.

THE STANDING BUILDING SURVEY
(Fig.7, Plates 2-5)

with contributions by Dave Stevens, Kevin Potter & Roger Leech

The survey of features, building fabrics and structural elements uncovered during demolition took place between the 21 June and 7 September 2004. The building survey specifically sought to provide evidence of the forms and phases in which housing has evolved in the locality. The buildings were all in a dangerous condition; although every effort was made to ensure the survey was complete, access to many areas was unavailable.

Three main phases of building were identified, but should not be viewed as exclusive, the earliest (Phase 1) being later 17th century followed by extensive alterations in the late 18th and 19th century (Phase 2), then minor 20th-century repairs (Phase 3) though the latter are not discussed here. Preservation of 17th-century fabric comprised occasional patches of stonework within the party walls of Nos. 22, 24 and 26 and quite unexpectedly, the remains of a timber frame within the eastern wall of number 22 (Fig.7); this wall was found to be structurally unsound and in a change to the agreed scheme of works had to be partially demolished. A digital survey and detailed record of the timber frame were undertaken prior to its demolition. For ease of reference the historic timbers of No. 22 were individually numbered.

Number 22

Number 22 West Street has a Grade II Listed status (Listed Building number 901-1/12/1662). At the time of the survey it was a two and a half-storey pitched-roof building with two rooms on each floor separated by centrally placed, modern, stairs. The building was separated at ground floor level from the terrace comprising Nos. 24-28 by the former Clarke's Court passage. The upper floors, above the Clarke's Court passage, were linked to the terrace and at one time, a doorway was present between Nos. 22 and 24. The front ground floor room had two in-situ ceiling beams, a high status ovolo-chamfered beam in the centre of the room (timber 15) and a plain-chamfered beam towards the front (timber 14). At the rear of No. 22 was a small, enclosed courtyard beneath which, underpinning works exposed a 19th-century rainwater collection-tank with a Pennant slab base and vaulted brick roof. The tank measured 2.8m east to west by 1.7m north to south and would have had a depth of at least 1.5m from the springing for the roof. South of the courtyard were the external walls of a two-storey detached building, possibly a kitchen block, with a fireplace in the southern wall. With the exception of the eastern party wall the outer walls of the building have been retained within the new development.

Phase 1

There were remains of pink-mortared sandstone visible in patches throughout the outer walls of No. 22 and the yard

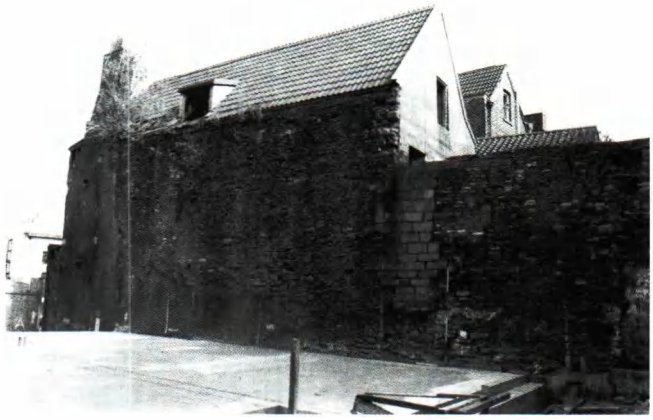

Plate 2 The eastern boundary wall of No. 22 West Street, photographed in April 2003.

wall behind it. The western elevation was inaccessible at the time of this survey but had been photographed in 2003 (Plate 2) when it was observed to contain substantial remnants of 17th-century mortared stonework. A watching brief of underpinning pits confirmed the 17th-century stonework to be directly founded on the underlying clay.

The age of the timber frame found encased within the eastern party wall could not be scientifically determined (there was insufficient material for dendrochronological dating), yet was certainly of 17th-century origin. The base plates (timbers 2 & 17) of the timber framing were laid directly on the ground surface thus predating the structural elements above. The frame had not been a structurally integral part of the building within the last century although the ceiling beams 14 and 15 of the ground-floor front room were supported upon timber posts 13 and 16, to which they were connected with splayed-tennon joints. Post 16 was also supported with the remains of a down brace (timber 10). The first floor base plates (timbers 6 & 7) were likely to be contemporary with post 15, a scarf joint with vertical abutment survived joining 15 and 6. First floor ceiling beam 3 and vertical post 5 were connected with a tennon joint.

Some principle members of the frame showed signs of historical re-use, post 16 and brace 18 each had two pegged holes that would have served no obvious purpose (Plate 3). A ground-floor door lintel (timber 19) a first-floor vertical post (timber 12) and front-room ceiling beam (timber 20) appeared to be of a similar age, but were not directly connected with the rest of the frame. Ceiling beams 3 and 20 also differed in their chamfering indicating re-use or even replacement within the building.

Phase 2

The building, as it stood at the time of the survey, appeared to have a largely 19th-century layout. The walls were almost completely refaced inside and out and large sections of original 17th-century stonework were repaired or replaced with red brick bonded in the English bond pattern with grey-ash mortar. Internal walls had been removed prior to the survey but the remaining fragments suggested they too were of 19th-century origin. There were four surviving fireplaces,

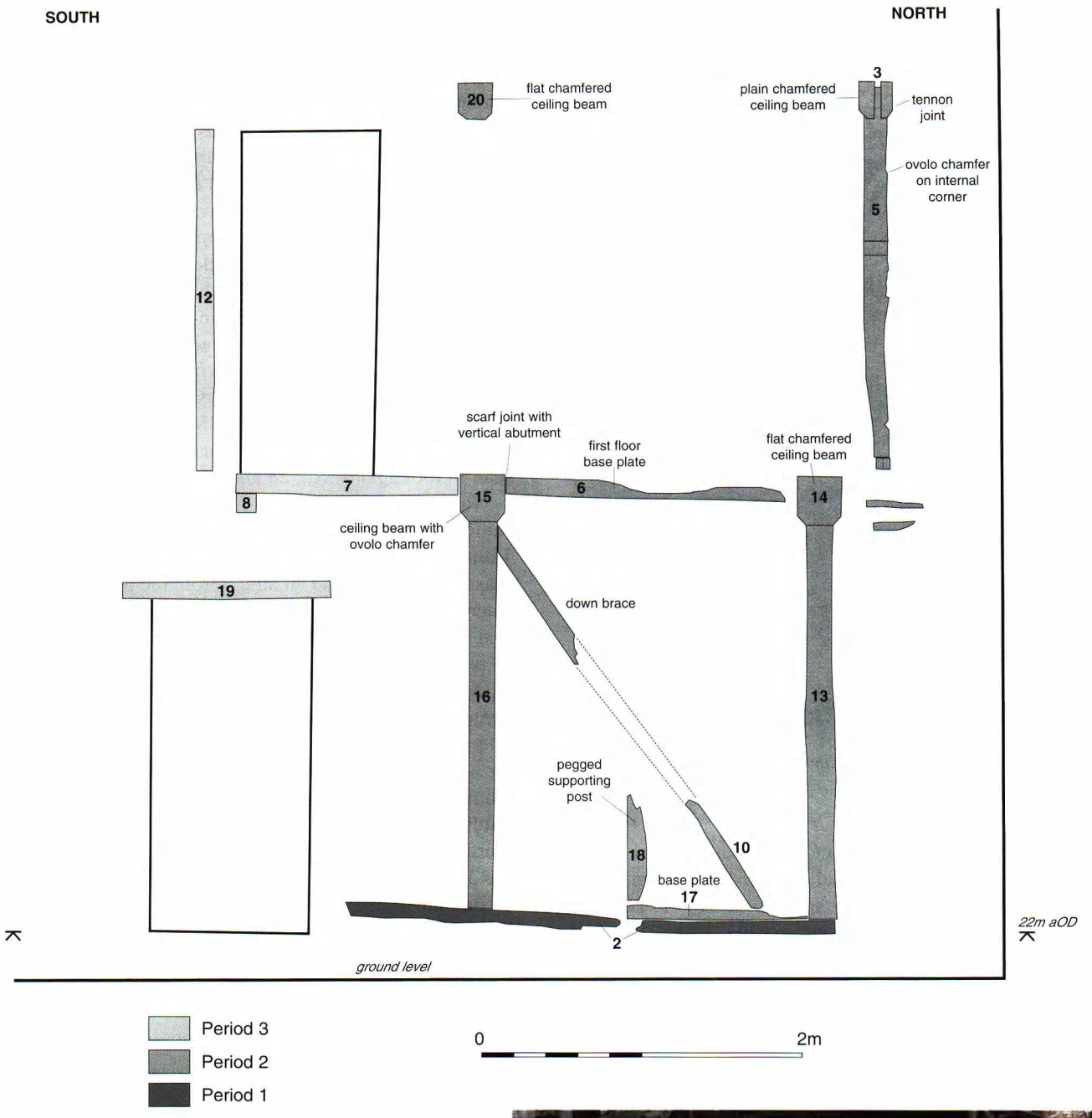

Fig. 7 Digital survey of the eastern boundary wall of No. 22. Timber numbers shown are mentioned in the text.

Plate 3 Base-plate (timber 17) supporting post (timber 18) and down brace (timber 10) in bottom north of the eastern boundary wall No. 22.

Plate 4 View of Nos. 24 and 26 during demolition showing party wall with 17th-century stonework at ground floor level, looking north.

one of each in the north-west and south-east corners of the first and second floors, they all had red brick surrounds bonded with light grey ash mortar, the hearths were Pennant sandstone. The photograph taken in 2003 (Plate 4) shows the chimney-stack in the north-west corner of the building to also be of red brick construction.

A cellar was revealed at the front of the building during demolition of the ground floor and this also appeared to be of 19th-century origin. The cellar walls underpinned the 17th-century timber base plates and stonework at the base of the overlying elevations. With the exception of the western wall, which was 20th century, the cellar walls were built from regularly coursed grey sandstone blocks, bonded with hard black mortar. The floor was partially covered with grey Pennant sandstone slabs.

The roof space was converted for accommodation and the front of the building was remodelled in the later 19th century (Jackson & Leech 2003). Decorative, applied half-timbering was added to the upper façade, the first floor was refenestrated and a shop window was inserted on the ground floor.

Numbers 24-28

Numbers 24, 26 and 28 form a single terrace and as such are here discussed together. Number 24 West Street was a three-storey building with an attic in a pitched roof set behind a parapet frontage of single room depth with a two-storey modern extension behind. The street-front façade was built from brick in Flemish bond and had a central doorway at ground floor level with a shop window to either side and two sash windows with plat bands beneath on both the first and second floors. To the rear of the main house were the remains of at least two detached structures. Furthest away from the house the eastern party wall was formerly part of a two-storey detached building, similar to that behind No. 22 and again, this may have been a detached kitchen.

Number 26 was a three and a half-storey building with a pitched roof, of two-room depth separated by centrally-placed, modern stairs. The ground floor had a central doorway with shop windows to either side, there were five sash windows, two on the first and second floors with plat bands beneath and one in the half-storey gable. To the rear was a small detached, scullery or heated workshop with a lean-to roof against No. 28 and an open yard.

Prior to this survey No. 28 was a cellared, two-storey building, located at the eastern end of the terrace with a lean-to roof against No. 26. Formerly it would have had at least three storeys and an attic. From the proportions of the interior spaces and positioning of the fireplaces for the front and rear rooms, it can be deduced that No. 28 was originally of two-room depth, separated by centrally placed stairs. The floor plan layout of the house is indicative of late 18th-century construction and it was probably remodelled in the late 19th century. At one stage this house was connected to No. 26, the doorway between the two houses was blocked from No. 28. To the east it was linked to No. 30 by an arched haulingway entrance with a rusticated stone surround. There were blocked arched openings in all of the cellar walls of No.28, which were clearly of 19th-century origin. The walls were built from a mix of coursed Pennant sandstone blocks and red brick, bonded in grey-ash mortar. The underside of the (reused) beams supporting the ground floor showed signs of burning. The terrace was demolished using a large 360° mechanical excavator and access above ground floor during demolition was therefore impossible.

Phase 1

17th-century remains were not widespread throughout the terrace, there were however, two small areas of pink-mortared Pennant sandstone in the party wall between numbers 24 and 26 and the remains of a splayed window which looked east from the first floor of the party wall between numbers 26 and 28 (Plate 4).

Phase 2

The terrace as it stood at the time of the survey was largely constructed from 18th- and 19th-century materials. To the south of the detached scullery/workshop behind No.26 the party walls were built in a mixture of 18th-century brick and stone. The brick walls of the detached scullery were bonded in black mortar and a Belfast sink and fireplace, possibly for a copper, had been inserted in the south-east corner.

The façades fronting West Street, and also the party

Plate 5 North-eastern corner of No. 30 West Street showing blocked chimney flue at first floor level.

walls, were predominantly built from red brick bonded with either black mortar or grey-ash mortar. All internal features including floors, stairs, and windows were removed by mechanical excavator so could not be examined in-situ, though examination of the materials after their removal suggested they were largely of 18th- and 19th-century origin.

Number 30

At the time of the survey No. 30 comprised the street front façade and partial remains of the side walls. The building had two storeys with a façade of single window-width and a parapet with a lean-to roof against No. 32. The building of No. 30 had been joined to No. 28 by a timber-framed structure which contained a carriage-hoist mechanism. As the building had been largely demolished prior to the survey little physical information was available.

Phase 1

There were no structural elements relating to the 17th century noted in the standing remains of No. 30.

Phase 2

There were no structural elements relating to the 18th century noted in No. 30, the standing remains were largely 19th-century in origin and comprised red brick bonded in the English pattern using grey-ash mortar and Pennant sandstone blocks bonded with hard, light pink mortar. The eastern side wall was constructed from Pennant sandstone blocks bonded with a hard pink mortar of late 19th-century date. Worthy of note was a cylindrical chimney flue revealed in the north-east corner of the building (Plate 5); no fireplace opening could be discerned and it was blocked at first floor level with red brick bonded with light grey mortar.

The boundary walls behind Nos. 28-30

The boundary walls provided information about structures that stood both within this tenement plot and on the adjacent plots. Closest to Waterloo Road, the western boundary wall formed part of an early 18th-century building on the adjacent plot. Beyond this was a short length of modern brick wall. The southernmost 30m of the eastern boundary wall had been constructed as the boundary of the adjacent burial ground behind No. 32 after its closure in the second half of the 19th-century. Approximately 29m from Waterloo Road was a wide brick arch that provided access to the land behind No.32.

A building 17m in length and occupying the width of the plot, had once stood approximately 32m back from Waterloo Road. Large rectangular glass slag blocks were incorporated in the eastern wall of this building which had four windows facing the plot of No.32. All four windows were blocked with 18th-century brickwork. The western wall of this building consisted of a Pennant sandstone wall containing four, wide, 18th-century, brick-arched openings blocked with brick and Pennant rubble, that would have led to the adjacent plot to the rear of No. 24.

A second, adjoining building 15m in length had two windows in the eastern boundary wall and another wide, brick arch providing access to No. 32. The western wall of this building was thickly plastered and painted so no blocked openings were discernible. The stonework exposed was similar to that in 17th- and 18th-century structural phases elsewhere on the site.

Closer to the West Street frontage the eastern boundary wall of No. 30 had been demolished and rebuilt with modern concrete blocks.

CONCLUSIONS

The building survey and monitoring of demolition works confirmed the phasing reported by Dr Roger Leech in 2003. A more detailed examination of the building fabric and construction methods has further characterised the development of the properties, suggesting that the earliest standing walls on the site date from the later 17th century and were constructed of randomly coursed Pennant sandstone, at No. 22 this included timber framing. Numbers 22-26 appear to have 'evolved' over time, with alterations and extensions taking place during the 18th and especially the 19th centuries. Party walls were rebuilt or added to, cellars and extra floors were inserted and the original detached kitchen blocks were reused for a variety of purposes. As with most of the properties along West Street

and Midland Road, the street front façades of Nos. 24-26 would have been replaced by the late 19th century, with the exception of No. 22, which has an early 20th-century façade. Thus the party walls and outbuildings to the rear contained the oldest structural elements on the site.

Number 28 differed from the rest of the terrace as it was a single-phase construction, most probably of the Regency period while No. 30 dated from the mid 19th century. The 20th century saw further structural repairs, No. 22 had its façade replaced in a mock timber-frame design by 1906 and the rear wall was partially rebuilt in the 1990s.

The current phase of development has removed all internal features and structures. The frontal façades have been maintained, though some structural elements, such as windows, were removed. The rear walls have, with the exception of No. 22, been demolished. The party walls between the properties have been partially retained with occasional patches of 17th-century stonework surviving.

THE ARCHAEOLOGICAL EXCAVATION & WATCHING BRIEF

Excavation Strategy and Recording

The specific objectives of the excavation and watching brief were to make a complete record of all sub-surface archaeological features and deposits within areas of the site that would be subjected to groundworks. The location of the four excavation trenches, in former garden areas over 20m away from the West Street frontage, significantly reduced the chances of finding evidence of medieval occupation levels. The restrictive working area meant it was necessary to excavate, record and backfill the trenches in two stages. The investigation of the two northernmost trenches, numbered 1 and 2, was thus completed before the opening of trenches 3 and 4. Modern surfacing, made-up ground and demonstrably modern strata were removed using a 180° mechanical excavator equipped with a toothless bucket under archaeological supervision. Thereafter excavation proceeded by hand.

Recording of the site was carried out using the BaRAS continuous numbered recording system. In the 2003 evaluation context numbers from 100 to 600 were assigned to the six trenches. To avoid confusion in the excavation narrative contexts were numbered from 1000 to 4000 for the four trenches. The site was planned at a scale of 1:20 using fixed points established with a Total Station and linked to the Ordnance Survey grid. The relative heights of all layers, features and structures were related to Ordnance Survey Datum and are referred to as heights above Ordnance Datum (aOD). Sections were recorded at a scale of 1:10.

The site was photographically recorded using 35mm monochrome print and colour transparency film. Finds were cleaned and marked individually with the Bristol City Museum accession number and the site context number, then bagged and boxed by find type and context for storage purposes. Finds Record Sheets were prepared giving full details of the quantity of finds from each context to aid the post-excavation work and to assist in the long-term curation of the material.

Special finds were given an individual Small Find number and were recorded in detail on a Small Find Record Form. A total of 68 special finds were recovered. These were assessed, X-rayed and conserved, where appropriate.

Environmental, geoarchaeological and technological samples were taken from appropriate deposits for specialist analysis.

The first of the excavation trenches, Trench 1, was located to the rear of Nos. 26 and 28 West Street, centred on NGR ST 59900 73215 and measured 10.2m x 6.4m. Trench 2 measured 5.2m east-west by 17m north-south and was centred on NGR ST 59912 73198. Trench 3 centred on NGR ST 59926 73161 measured 8m north-south x 4m east-west and was the smallest of the excavation trenches, yet the north-western section had the least disturbed stratigraphical sequence of soils on the site. Trench 4 was centred on NGR ST 59942 73161 and extended for 10m north-south x 4m east-west at the Waterloo Road end of the site. The results gained from the 2003 evaluation trenches are included within the following report where appropriate.

Archaeological monitoring of intrusive groundworks for new foundations, services and the underpinning of standing walls took place in five locations (labelled Areas 1-5) between September 2004 and February 2005 (Fig.3). The results of the watching brief are available for study within the site archive.

The Site Phasing

The following broad phasing has been achieved based on an analysis of the stratigraphy, the physical sequence of structures, cartography and a study of the finds.

Period 1: Medieval
Period 2: Late 16th century
Period 3 Early – Mid 17th century
Period 4: Late 17th century
Period 5: *c* 1715 to *c* 1742
Period 6: *c* 1742 to *c* 1828
Period 7: *c* 1828 to *c* 1920s
Period 8: 1920s to present

EXCAVATION NARRATIVE

The Natural

Contexts 1055, 1103 /2072, 2075, 2080 /3030 /4030

The site lies at the top of a low ridge of Triassic Redcliffe Sandstone. Before the current development began the height of ground level varied between 21m and 23m aOD. The natural reddish-brown, silty clay underlying the site was exposed at a height of 21.7m aOD close to the West Street frontage in the 2003 evaluation. The excavation recorded undisturbed natural clay at a maximum height of 22.06m aOD in trench 1. The natural sloped gradually downwards to the south in trenches 2 and 3 and was exposed at a height of 20.51m in trench 4 at the Waterloo Road end of the site.

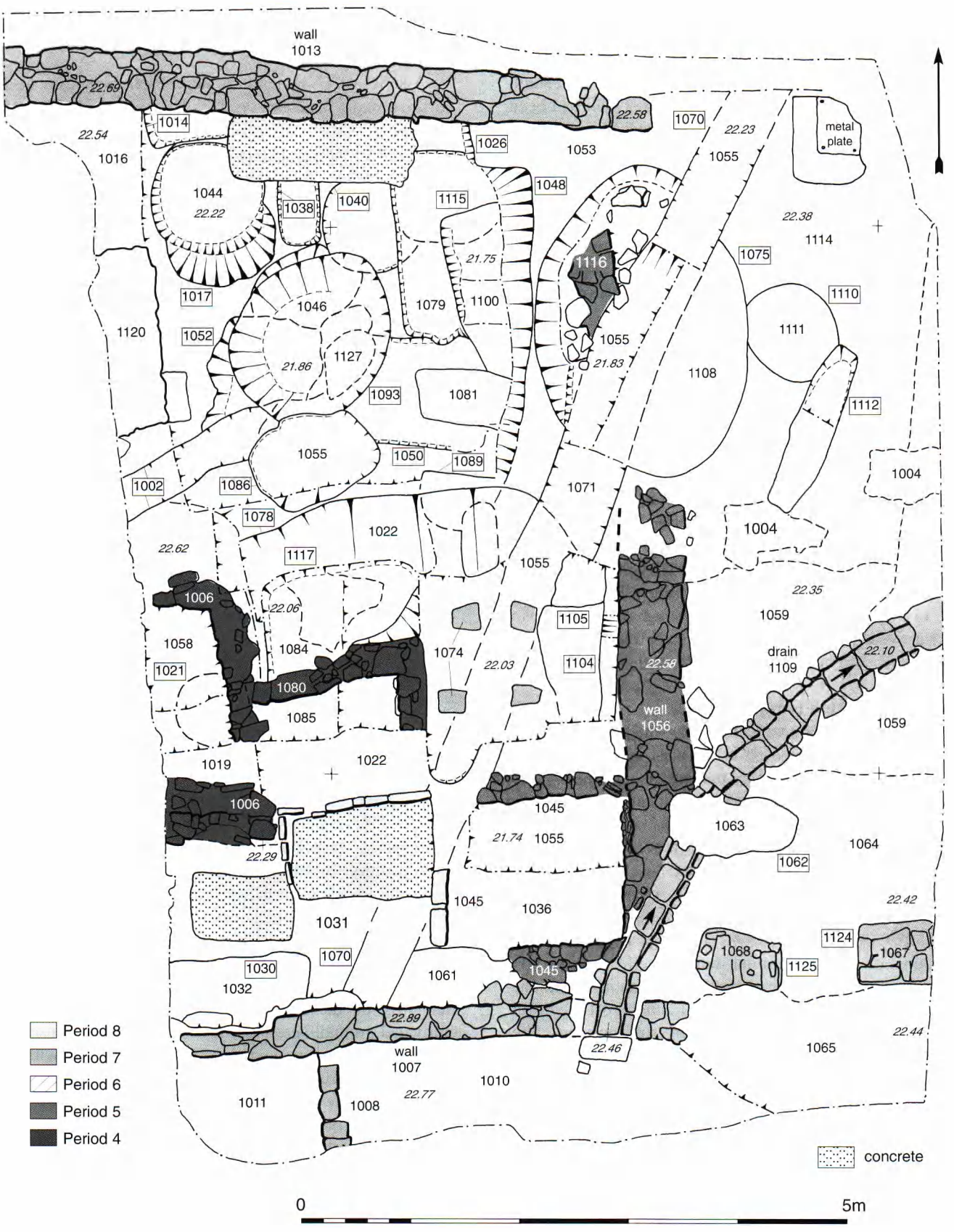

Fig.8 Plan of Trench 1, showing density of inter-cutting post-medieval rubbish pits, scale 1:50.

Period 1 - Medieval

Contexts (1044, 1079 /2070, 2072, 2085, 2089, 2090, 2092/3013, 3016, 3034/4073)

In trench 1 of the 2003 evaluation, approximately 6.5m to the south of the modern street frontage of Nos. 28-30, a 1.2m length of a robbed-out medieval wall on a north-south alignment was exposed. The footings of this wall had been cut into the undisturbed natural clay. The backfill material of the robber trench contained clay tobacco-pipe stem and must therefore post-date *c* 1600.

There was no firm dating evidence for medieval activity within excavation trenches 1 to 4. This period was stratigraphically represented by an orangey-brown, sandy clay with inclusions of charcoal flecks, immediately overlying the undisturbed natural clay. Deposits of this soil horizon were present, to a greater or lesser extent, in all four trenches and are indicative of a naturally developed cultivation soil. In trench 1 this deposit only survived in patches between the many post-medieval cut features and contained no dating evidence. The same picture emerged in trench 2 of extensive post-medieval truncation of the earlier soil horizon, which again contained charcoal flecks but no firm dating evidence. A single farthing of Charles I (SF41) recovered from 2089 is likely to have been intrusive.

The north-western area of trench 3 had the best-preserved stratigraphical sequence of soils where the medieval soil deposit (3013) survived for a maximum thickness of 300mm and contained pottery sherds of a late 13th- to 14th-century date range. The medieval soil deposit only survived at the extreme southern end of trench 4 (4073) as this trench had been heavily disturbed.

Period 2 - Late 16th century (Fig.12)

A large cut feature 400mm deep (2098) which had truncated the natural clay was exposed in the west-facing section of trench 2. It had been sealed by the garden soil (2072). The most extensive post-medieval deposits identified in all four of the excavation trenches consisted of mid-brown, silty clay, characteristic of a former garden soil, that had been thoroughly mixed and contaminated in antiquity with domestic and industrial waste (1005, 1016, 1053, 1059, 1064, 1101, 1114, 2005, 2041, 2049, 2085, 2086, 3011, 3016, 3029, 4010/4052, 4057). These deposits contained inclusions of mortar, animal bone, shell, slate, brick, charcoal and occasionally pottery sherds dating from the late 16th to late 17th centuries. All other post-medieval features truncated the mixed garden soil horizon. The earliest, datable, post-medieval feature was a domestic rubbish pit (1098) partially surviving in trench 1 and containing pottery sherds dating to the late 16th century. Many later rubbish pits and structural features had truncated the pit to the extent that its original dimensions could only be assumed.

Period 3 - Early-mid 17th century (Fig.8)

In trench 1 of the 2003 evaluation the backfill material of a trench for a robbed-out medieval wall was dated to after 1600. In the same trench, part of an early post-medieval wall was exposed, 800mm in width and constructed of Pennant sandstone bonded with hard, off-white lime-rich mortar indicative of early post-medieval masonry in this part of Bristol.

A series of 17 intercutting domestic rubbish pits at the northern end of trench 1 (1017, 1038, 1040, 1042, 1048, 1050, 1052, 1077, 1078/1095, 1082, 1086, 1089, 1091, 1093, 1100, 1117) had heavily truncated medieval soil deposits 1044/1079, which may account for the absence of earlier features in this trench. The original extent of almost all the intercutting pits was uncertain; however, it is possible to establish a broad chronological phasing using the pottery sherds and clay tobacco-pipe fragments they contained. Most of the rubbish pits dated from the 17th century, which was evidently a period of increased occupation in this area.

Three pits in trenches 3 and 4 (3012, 3037/4047) contained contemporary dating evidence, with fill deposits that included 17th-century pottery sherds. The fills of these pits were similar in consistency to the rubbish pits of trench 1.

Period 4 - Late 17th century (Figs.8-13)

Running parallel with the western edge of trench 4, a ditch (4053/4059) had been cut through soil deposit 4052/4057 and the underlying clay (4030) (Fig.9). It was evident that the line of the ditch was reused to define a property division, as the lower fill layers (4069/4055) had been truncated by the foundation cut of a later-17th-century boundary wall (4004) described below. Consequently only half of the ditch-cut was visible. The ditch had been cut to a depth of 600mm and may originally have been up to 2m in width. Sondages excavated through the primary fill (4069/4071) of 4053/4059 recovered pottery dating from the mid to late 17th century.

The earliest structural features were recorded in trench 1. Two sub-rectangular, stone-lined, cess-pits (1006, 1080) bonded with orangey-pink lime mortar had been founded into deposit 1005. Both could be firmly dated to the late 17th century by their mortar bonding and the finds recovered from the fill deposits (1019/1057, 1085). It was evident that 1080 preceded 1006. Cess-pit 1080 was constructed within the fill of a mid 17th-century rubbish pit (1117) and cess-pit 1006 incorporated the western end of 1080 in its footings. Environmental analysis of the organic-rich fills of these pits indicates that both waste and cultivated ground were present when they were in use (see environmental report below). This would tie in with the gradual reconstruction of housing and gardens along West Street after the postulated Civil War clearances. The assemblage of pottery recovered suggests that the properties associated with these cess-pits were of a fairly high-status.

At the northern end of trench 2 were two shallow, sub-circular pits (2003, 2006) up to 400mm deep, cut into deposit 2005. A black, ashy silt sealed fragments of Pennant stone slabs (2008) lining the base of pit 2006 at a height of 22.34m aOD. The shape of this pit and the slab lining were

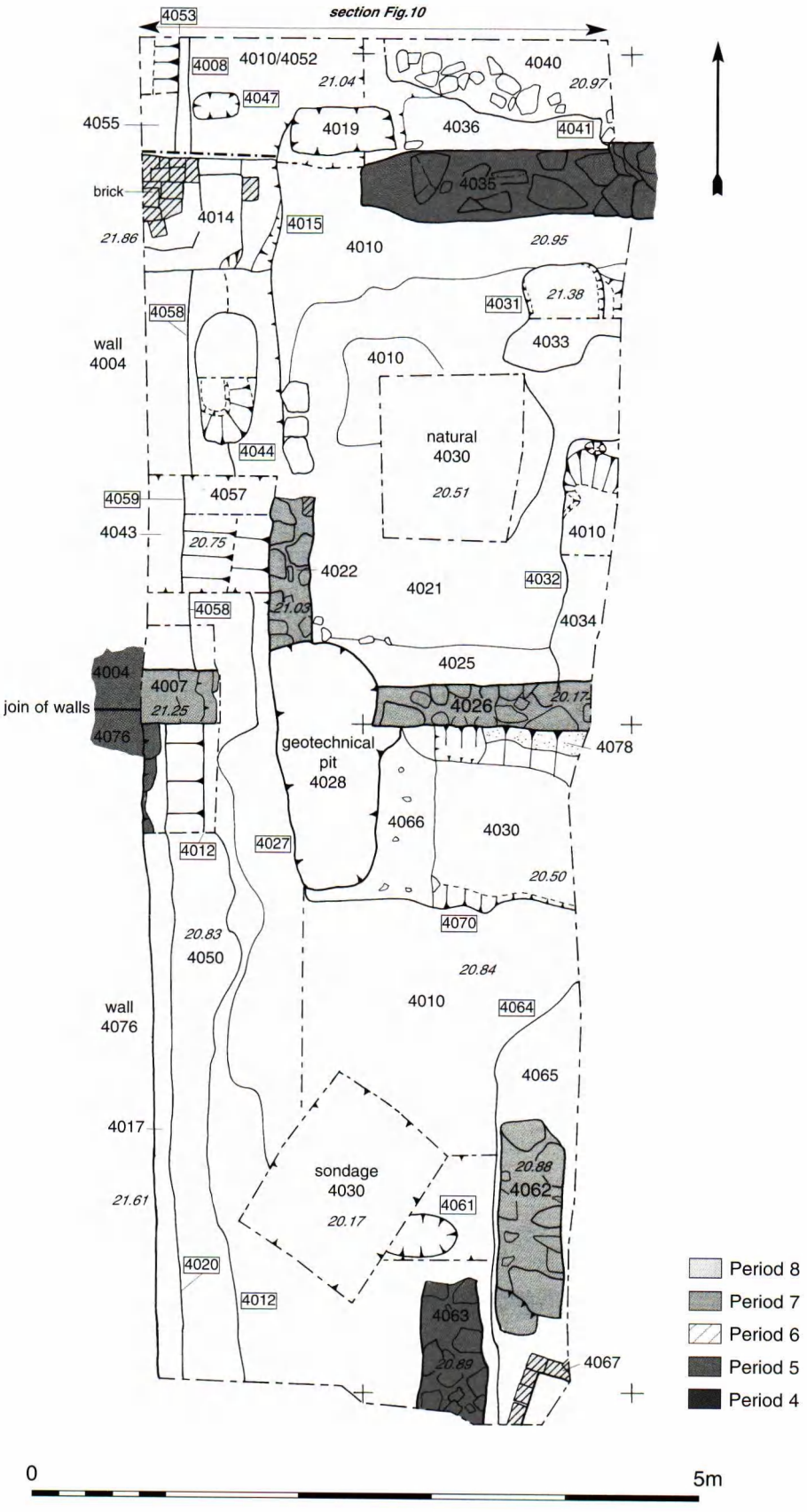

Fig.9 Plan of Trench 4, scale 1:50.

suggestive of a post-pad. At the southern end of trench 2, cut into deposit 2049 at a height of 22.31m aOD, was another sub-circular pit (2051) containing lumps of slag (2052) arranged as if to form packing for a post. However, no association could be made between pits 2006 and 2051. Unfortunately within the area of trench 2 there were no other features that could be associated with either of these distinctive pits.

Within trenches 2 and 4 were several other cut features (2055, 4018, 4031, 4032, 4044) of differing sizes and shapes, the fills of which contained late 17th-century pottery and clay tobacco pipe fragments. There was no pattern to the layout of these pits which all had fill material typical of domestic rubbish pits.

Period 5 - *c* 1715 -1742 (Figs.8-13)

A 2.4m length of heavily truncated, Pennant stone wall footing (1056) was exposed in the centre of trench 1 on a north-south alignment. Two courses of wall 1056 survived up to 650mm in width with traces of an eastern return at its northern end (1004). The construction cut (1104) for wall 1056 was exposed in a sondage dug to extend a 19th-century pit. On the western side of 1056 and incorporated in its construction was a third, stone-lined cess-pit (1045). This cess-pit had been partially truncated by a later rubbish pit to the south (1066) and a modern machine base to the west (1012) yet survived to a depth of 800mm (Plate 6).

The fill deposits of 1045 contained a wide variety of ceramic and glass objects, some of which were intact and datable to the late 17th to mid 18th centuries. The partial remains of what was possibly a fourth cess-pit (1116) were exposed at the base of a 19th-century cut feature (1075). Structure 1116 was so heavily truncated that only a 1.8m length of walling survived with apparently no associated deposits.

The foundation trench (4012/4058) for a Pennant stone wall (4004) truncated the fills of ditch 4053/4059 that was exposed in trench 4 (Fig.10). A 5m length of wall 4004 was exposed, over 1m in height and up to 280mm in width. The wall was bonded in pale grey, lime mortar and extended beyond the northern edge of excavation. The stratigraphic sequence showed that the earlier boundary ditch, probably laid out soon after the Civil War clearance of properties in West Street, was replaced within a short period of time by a stone wall on the same alignment as the ditch. The dating evidence for this sequence is conveniently close to the previously mentioned documentary reference from 1717 concerning the construction of a boundary wall in this area (BRO P/St.P & J/D/3e). Together with the excavated evidence from the site of the 18-20 West Street frontage there is a strong indication that principal property divisions outside Lawford's Gate are later 17th century in origin, whereas those in Old Market Street are more likely to be medieval.

The southern end of boundary wall 4004 had been rebuilt by the mid-18th century, with much deeper footings (4076) probably when cellars were constructed on the adjacent site to the west; the cellars were recorded during an excavation at 18-20 West Street in 2002 (Parry & King 2004, 10). Wall 4076 was keyed-in to wall 4004 approximately halfway along the excavation trench.

Domestic rubbish pits dating from the early to mid 18th century were present in all four trenches. In trench 1 pits 1014, 1021, 1050, 1066, 1095, 1115 only partially survived. At the northern end of trench 2, a sub-circular rubbish pit (2078) had been bisected by a 3m length of a curvilinear cut feature (2076) on a north-east to south-west alignment that extended beyond the eastern edge of excavation, the western end of 2076 having been truncated by a later feature. Cut 2076 was 700mm wide and 400mm deep with a very mixed fill of building rubble and domestic refuse in a blackish-brown silt (2077). The purpose of the cut was unclear but it may have been a garden feature such as a planting-trench.

Two rubbish pits (3027, 3033) measuring up to 1.3m in diameter were exposed in the west-facing section of trench 3. The fills of these pits were similar and contained a significant amount of demolition rubble.

In trench 4 a sub-rectangular pit (4044) had been cut into

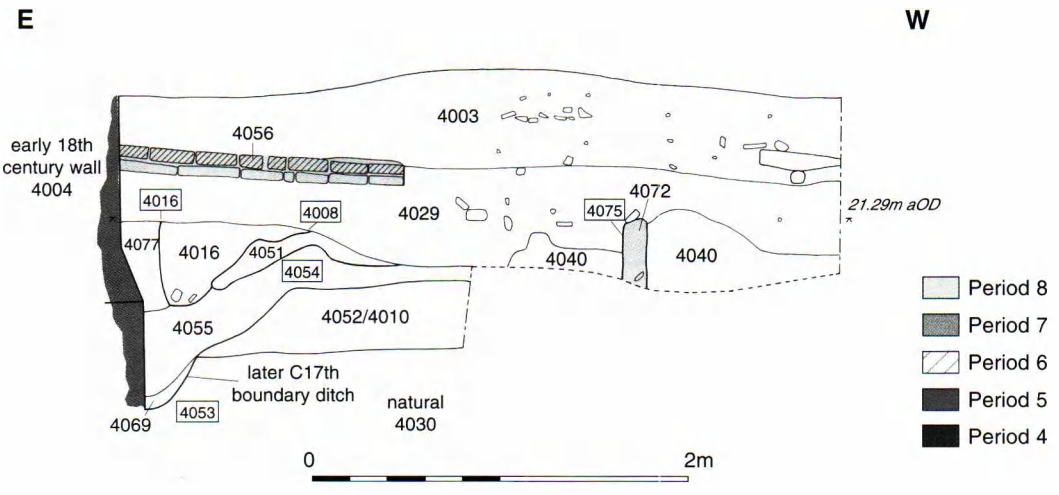

Fig.10 Trench 4, south-facing section, scale 1:40.

Plate 6 Trench 1, wall 1056 and cess pit 1045 showing half-sectioned fill deposits, looking south.

the upper fill of ditch 4059. This pit and those in trench 3 were dated stratigraphically as the only finds recovered were the stems of clay tobacco-pipes.

Period 6 - *c* 1742-1828 (Figs.8-13)

During this period a relatively high-status occupancy at West Street, reflected in cess-pit contents, was followed by a brief flourish of elaborate garden design behind the property at Nos. 28-30. This in turn had a rapid demise as 19th-century light industrial and residential development began in earnest.

Isolated deposits of mid-brown, silty-clay (1032/1059/1064/1114) in the southern end of trench 1 were the remains of a former garden soil heavily disturbed by 19th- and 20th-century features. Part of the southern wall (1013) of outbuildings that stood at the rear of No. 26 West Street formed the northern edge of trench 1. Wall 1013 was constructed of Pennant stone, three courses of which survived. The earliest bonding material within the stonework was a pinkish-brown lime mortar typical of late 18th-century construction in this part of Bristol.

In trench 2 part of a substantial pit (2040), measuring 4.2m north to south by 3.4m east to west, had been cut to a depth of 1.2m at 21.76m aOD (Plate 7). The lower fill deposits within this pit (2035 – 2039) consisted of redeposited clays, rubble and silts with a relatively high organic content. The pottery and clay pipe evidence from the uppermost fills (2064 - 2067) showed that the pit had been in use until the later 18th century. Environmental sampling of the organic material within pit 2040 showed that it was derivative of hay-waste, most likely to have originated from stable-sweepings.

At the northern end of trench 2 (Fig.11) were a series of irregular intercutting pits (2076, 2078, 2081, 2083, 2093, 2095) measuring no more than 400mm x 560mm and up to 310mm in depth. The fills of these pits were sooty/ashy silts indicative of hearth-sweepings. A fill deposit from one of the pits (2082) contained pottery sherds of late 18th-century date. At the southern end of the trench a sub-circular pit (2050) with a diameter of >800mm was filled with a similar ashy/sooty deposit (2033).

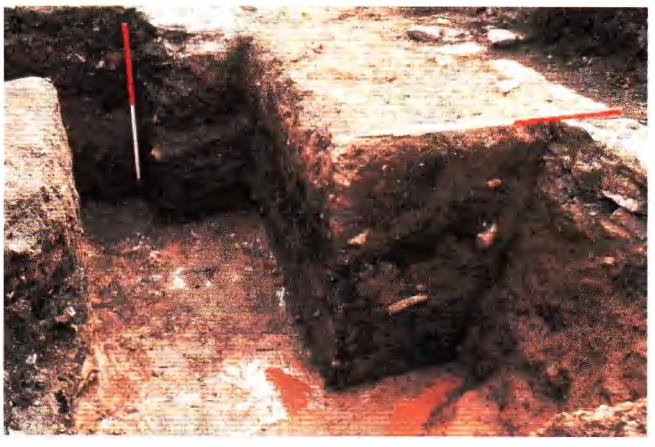

Plate 7 Fill deposits of pit 2040, looking south towards structure 2021.

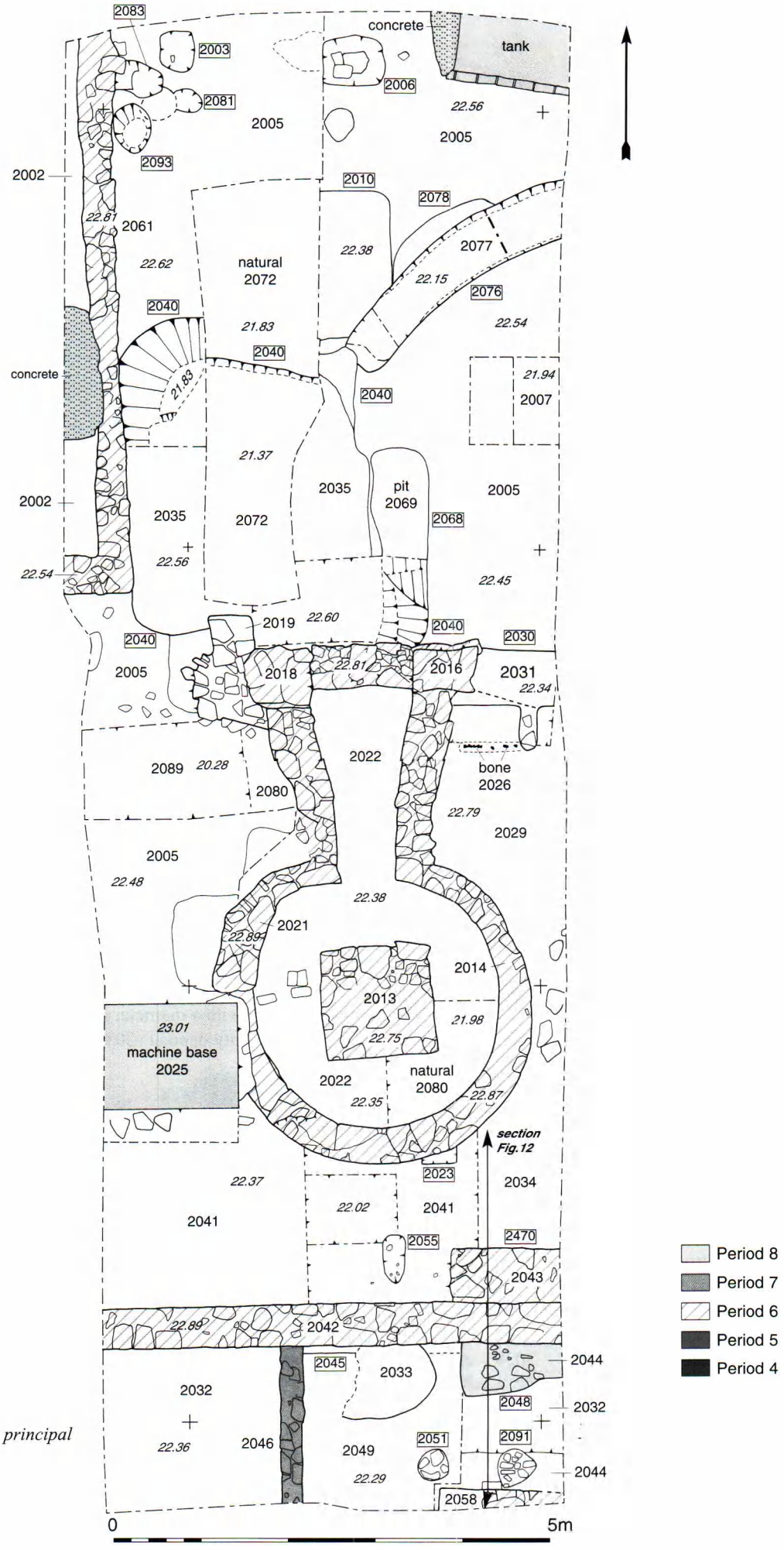

Fig.11
Plan of Trench 2 showing principal features, scale 1:40.

Plate 8 Trench 2, garden feature 2014/2021 with plinth 2013, looking west.

Running parallel with the western edge of trench 2 was a 6.2m length of Pennant sandstone wall (2061) bonded in beige-grey mortar. A short, western return to this wall ran into the edge of excavation. Only two courses of 2061 were exposed.

In trench 2 a keyhole-shaped structure (2014/2021) of Pennant stone and brick was excavated that had an internal diameter of 2.8m with a 1.3m square, stone plinth (2013) in the centre (Plate 8). The walls of 2014/2021 were faced internally and it had a mortar floor surface (2022). Two splayed walls extended for 2.5m to the north. The area between the central plinth and the sides of the structure was filled with a dark-brown, ashy silt containing a high proportion of demolition rubble (2012).

Removal of deposit 2012 showed that 2014/2021 had several separate elements of construction but was built for a single purpose. The gap between the ends of the splayed walls had a blocking of contemporary stonework (2017) and there was no other opening to the structure, which meant it was never intended for use as an oven or kiln. The northern end of 2014/2021 had been constructed over the fills of pit 2040 and thus required a deeper footing for the north-eastern corner (2020).

Most of structure 2014/2021 was recorded in the evaluation of 2003 when it was suggested that the structure dated from the late 18th- to early 19th-century and may have had an ornamental function because of the absence of evidence for associated industrial activity (Jackson & Leech 2003, 5-6). The excavation exposed the whole of 2014/2021 and was able to confirm the findings of 2003. The strongest indication that 2014/2021 was intended as a garden feature came from the surrounding blackish-grey, ashy silt (2029), an imported soil that was also present in trench 3 (3010). Deposit 2029 contained the remains of a planting trench (2030), a line of individual, placed stones (2027) and a short row of calf long bones, also known as cannon bones. The long bones had been set vertically so that the proximal ends would have protruded above ground to form a decorative border (Plate 9). A similar use of animal bones was recorded at a site in Upper Maudlin Street, Bristol (Boore, in Ponsford *et al* 1989).

To the south of 2014/2021 was a Pennant stone wall up to 400mm wide, bonded with a hard white mortar (2042). The wall extended east-west across the full width of the trench and was aligned with traces of a wall-stump visible in the eastern boundary of the site that would have stood up to 4m in height (Fig.12). Abutting the north side of 2042 at its eastern end and running into the eastern edge of excavation was a short length of Pennant stone wall bonded with beige/grey mortar (2043). Wall 2043 was exposed for a length of 1m and had been cut to the same depth as the footings of 2042. Clearly wall 2043 served as a buttress for 2042. On the southern side of 2042, immediately opposite 2043, was a fragment of Pennant stone and concrete rubble (2044) that at first appeared to be the remains of a second buttress to 2042, however the construction method was very poor and it had no significant depth of foundation.

It is possible that walls 2042, 2043, 2044 and the contemporary part of the standing boundary wall were associated with a substantial workshop/warehouse first depicted on Plumley & Ashmead's map of 1828 (Fig.5).

In the south-eastern corner of trench 2 a third fragment of walling on an east-west alignment (2058), also running into the eastern edge of excavation, was partially exposed running parallel with 2042. The mortar bonding 2058 was contemporary with 2043 and 2044 but otherwise no association could be made with other structural features in trench 2.

Abutting the southern side of 2042 was a single surviving course of an insubstantial wall constructed on a north-south alignment (2046). Wall 2046 had no footings and was founded directly onto garden soil 2032, this would indicate that its purpose was to be a garden boundary rather than part of a building.

In trench 3, a fragment of wall footing (3038) was exposed in a sondage through the western edge of excavation. The wall fragment was constructed of Pennant stone blocks bonded with hard, white mortar. From the exposed extent of 3038 it was apparent that this was a corner

Plate 9 Section through imported soil deposit 2029 showing proximal ends of vertically-set calf long bones, used as a decorative border, looking south.

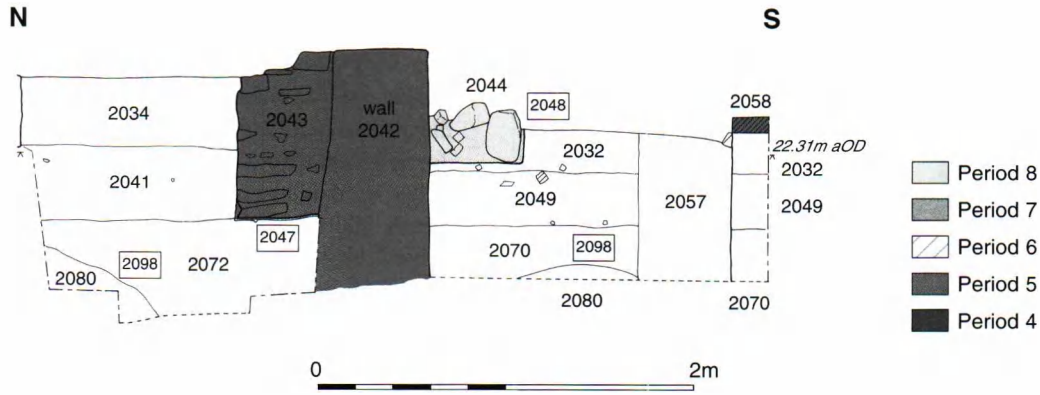

Fig.12 Trench 2, west-facing section showing wall 2042 and adjacent stratigraphy, scale 1:40.

of a structure that would have been situated to the west of the excavation area. The sondage revealed 1.5m of the footing to a height of 21.82m aOD but the base was not exposed, indicating that 2038 was part of a fairly substantial building. A second wall fragment (3035) in the northern edge of trench 3 was of Pennant stone and red brick bonded in pale cream mortar. Wall 3035 had been cut into deposit 3010 at 22.64m aOD and was clearly a non-supporting wall, possibly for a garden division.

At the southern edge of trench 4, a one metre length of Pennant stone wall (4063), running north-south and bonded with soft white, lime mortar had been heavily truncated in antiquity. At the northern end of the trench, on an east-west alignment, was part of another Pennant stone wall (4035) bonded with a similar mortar to 4063. These wall fragments represent the remains of the first buildings constructed at this end of the site.

Period 7 - *c* 1828 - 1920s (Figs. 8-13)

At the southern end of trench 1 a Pennant stone and brick wall (1007) on an east-west alignment formed the limit of excavation. Wall 1007 was of 19th-century construction and had been truncated at the eastern end by a curvilinear drainage run (1009), the base of which was lined with pantiles. A comparable example of this use of roof tile within drains was recently excavated at the site of 118-122 Jacob Street, Old Market (Bryant & King 2005). Drain 1009 had been truncated at the northern end of its exposed route by an irregular-shaped pit (1062) filled with a black, ashy deposit containing clinker, slag, coal and pieces of corroded iron.

A sequence of cut features in trench 1 contained similar fills of ashy/clinker-like material and represented recent industrial activity on the site. A sub-circular pit (1110) with a diameter of 750mm and up to 150mm deep contained the remains of an iron wheel-rim, within a deposit of decayed wood, ash, cinders and slag (1111). Pit 1110 had been truncated to the east by a linear cut feature (1112) that contained an ashy fill and a piece of decayed timber. The west side of 1110 had been truncated by a large sub-circular pit (1075) with a diameter of up to 2.4m and filled with a similar ashy deposit. Pit 1075 had in turn been bisected by a linear cut feature (1070), over 9m in length, running on a north-east to south-west alignment and extending beyond the edge of excavation. The purpose of 1070 is uncertain but appears to have been the backfilled route of a service pipe.

Several machine footings were present in trench 1. Two were of late 19th- or early 20th-century construction and consisted of a single course of roughly hewn pieces of Pennant stone bonded with black mortar (1067, 1068), each of these footings measured 500mm x 700mm. The largest machine footing was a sub-rectangular, conglomerate block of large Pennant stone pieces bonded with concrete and bound with iron straps (1126). The block measured 1.7m x 1m, was 700mm in depth and would have rested on four evenly spaced polygonal Pennant stone slabs in the base (1074), each measuring no more than 300mmm x 300mm.

In the south-western quarter of the trench were two sub-rectangular concrete footings. One was bordered by a red brick surround bonded with black mortar (1012), the other was a slab of concrete (1029). Both of these features had stumps of iron fixing bolts protruding from their upper surfaces. The exact function of these bases is uncertain but they are most likely to be associated with the occupation of the site by the firm of Hernimann & Sons, wheelwrights, from the late 19th century and subsequent garage premises. Running parallel and adjacent to wall 4063 in trench 4 was a more substantial Pennant stone and brick wall (4062) bonded with grey-ash mortar. The depth of 4062 indicated that it had formed the western wall of a cellar.

Fragments of walls (4007, 4022, 4026) constructed of similar material represented 19th-century divisions within the original cellars.

Period 8 - 1920s to present (Figs. 8-13)

All deposits and features in trench 1 had been sealed by a layer of brick and stone rubble in a matrix of dark brown ashy silt (1001) which formed the bedding for the modern concrete floor (1000) of the 'Motorweld' premises. In trench

2 a shallow sub-rectangular pit (2010) filled with grey mortar, plaster and brick rubble in a black silt matrix with frequent charcoal inclusions had partially truncated cut features 2040, 2076 and 2078; the purpose of pit 2010 was unclear beyond it being specifically to hold this material. Another fairly recent pit (2091) that contained rubble and concrete (2059) was present at the southern end of trench 2, once again the sole purpose of this pit would seem to be for disposing of building rubble.

Two large blocks of shaped limestone (2025, 2097) each measuring up to 1.5m x 1m and up to 600mm in thickness had partially truncated the western and southern sides of structure 2021. The exact function of these blocks is uncertain but they must have been set to provide a load-bearing foundation or support for heavy machinery.

As with trench 1 all earlier deposits and features within trench 2 had been sealed by two layers of ashy silt and rubble (2001, 2002) that formed the bedding for the concrete surface (2000). Within the area of trench 2 a geotechnical test pit (2068) had been cut though the concrete floor of the former Motorweld premises and truncated every deposit beneath. This test pit was not re-excavated but was partially exposed in a sondage through pit 2040.

In trench 3 a large block of masonry (3002) consisting of Pennant stone and brick bonded with grey and cream mortars was partially exposed (Fig.13). The block measured 3.2m east-west by 4.1m north-south and up to 700mm in thickness. Two shallow, rectilinear troughs (3003, 3006) had

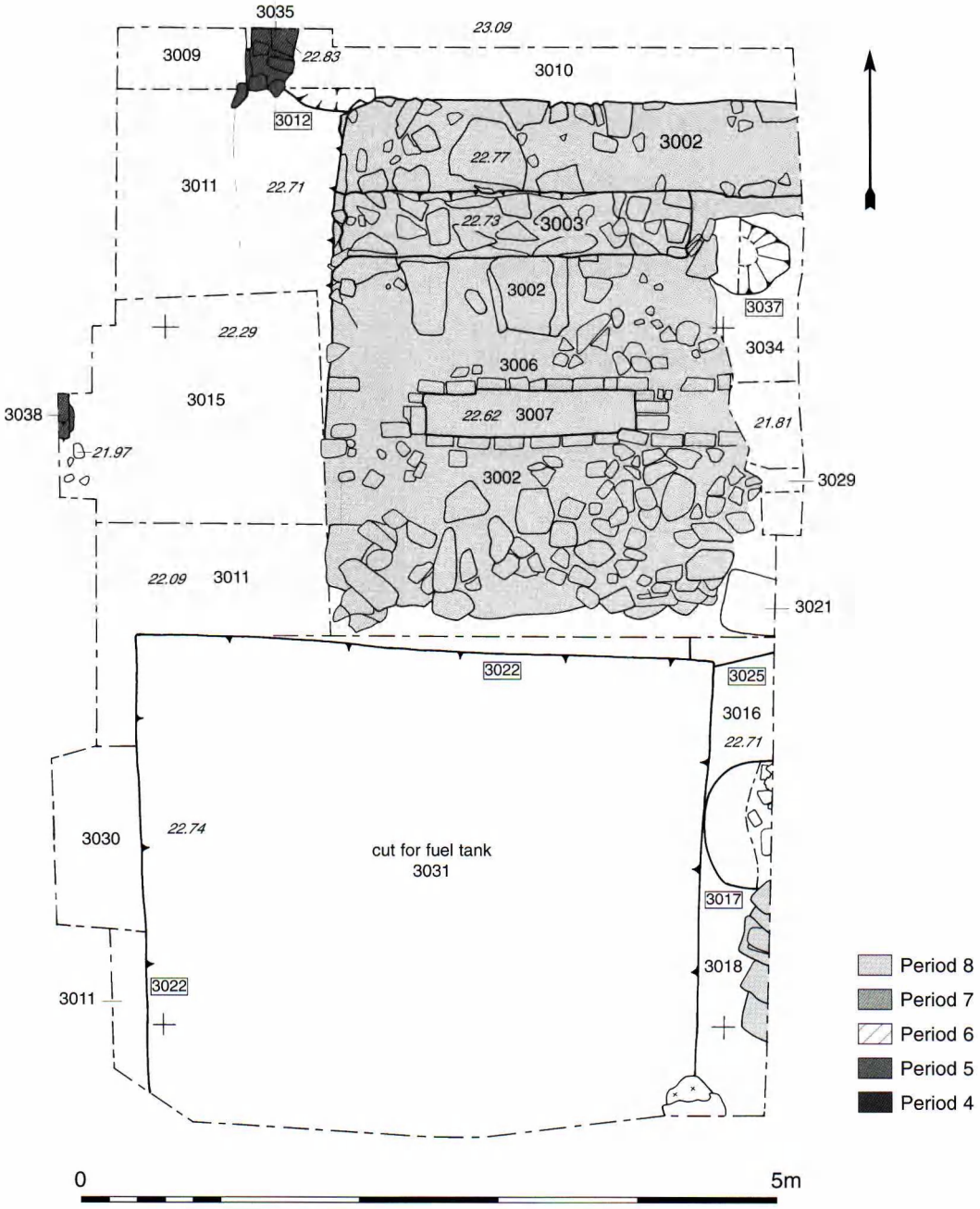

Fig.13 Plan of Trench 3, scale 1:50.

been set into the surface of 3002 which was probably originally for a machine base. A second block of masonry (3018), of similar bonding material and construction to 3002, was exposed in the south-eastern edge of the trench.

Both 3002 and 3018 had been heavily truncated by a large pit (3022) that measured 4.6m east-west and over 3.8m north-south. The base of the pit was not exposed but a machine-cut sondage was excavated to 19.84m aOD. The size and regularity of this cut would suggest it was for a 20th-century fuel tank.

A similar feature to pit 2091 was present in trench 4 (4070) and contained three deposits of clay and rubble (4048-9, 4066) yet apparently serving no purpose other than to dispose of such material.

The modern disturbance was quite varied in trench 4, the former cellars of buildings fronting Waterloo Road had been backfilled with layers of clay and rubble (4048, 4049, 4081, 4080). The area beyond these cellars had been heavily truncated in the third quarter of the 19th century, an event that removed all but the lowest courses of late 18th- to early 19th-century walls.

A brick surface (4056) exposed in the northern edge of trench 4 and a brick wall (4037/4082) in the west-facing section were probably contemporary in their construction. An earlier cellar wall, 4035, had been re-used as the footings for 4037/4082.

The most recent structural feature at the southern end of the site consisted of part of a concrete surface (4002) visible in the eastern edge of excavation that abutted wall 4037/4082.

A second geotechnical test pit (4027) truncated deposits in trench 4.

SPECIALIST REPORTS

In addition to the specialist reports published here, more detailed versions of the finds, ceramic building material, geoarchaeology and environmental reports, are available for study in the site archive.

The Pottery

by Reg Jackson

The excavation produced 1,761 sherds of pottery weighing 46.065kg from 90 contexts. The sherds represent a minimum number of 1,309 vessels. Only 211 sherds (12% of the assemblage) are medieval, the majority of the pottery dating to the 16th century or later. The sherds are quantified according to the Bristol Pottery Type Fabric series (BPT) in Table 1.

Period 1 - Medieval

Nearly all the medieval pottery consisted of small, heavily abraded sherds which were residual in later contexts. Three contexts contained only medieval sherds and may therefore be medieval in date, while a further two contexts each contained medieval sherds together with one sherd of post-medieval pottery which may have been intrusive.

BPT No.	Description and Date	No. of Sherds	% of Assemblage
18	Minety ware, 1100-1550	7	0.4
26	Ham Green glazed ware, 1150-1250	2	0.2
32	Ham Green unglazed redware, 1150-1250	12	0.8
39	Saintonge polychrome ware, 1280-1500	1	0.05
40	Saintonge green-glazed ware, 1280-1500	8	0.4
46	Bath A fabric, 1050-1350	1	0.05
72	Bristol/Redcliffe ware, 1275-1500	174	9.9
93	Cistercian ware, 1500-1650	43	2.4
95	Westerwald stoneware, 1600-1800	40	2.3
96	South Somerset (Donyatt) ware, 1550-1900	169	9.6
99	English tin-glazed ware, 1640-1770	252	14.3
100	Bristol/Staffordshire yellow slipware, 1650-1800	240	13.6
107A	Ligurian tin-glazed ware, 1520-1820	2	0.1
108	North Devon fine wares, 1650-1900	23	1.3
109	Staffordshire red ware, 1630-1750	7	0.4
112	North Devon gravel-tempered ware, 1600-1900	185	10.5
156	Saintonge mottled glazed ware, 1280-1500	3	0.2
168	Malvern Chase medieval glazed ware, 1250-1550	1	0.05
179	Staffordshire white salt-glazed stoneware, 1700-1770	16	1.0
182	Tudor Green ware, 1400-1550	1	0.05
201	Late post-medieval wares local to site, 1750-1950	94	5.3
202	Late white china, 1770-2000	9	0.6
203	English porcelain, 1700-2000	1	0.05
211	Bristol/Staffordshire mottled (manganese) glazed ware, 1690-1800	60	3.4
212	Nottingham stoneware, 1690-1900	3	0.2
218	Glazed red earthenware, 1500-1650	94	5.3
225	Saintonge pink fabric, 1250-1350	1	0.05
269	Donyatt black glazed cups, 1500-1600	16	0.9
277	English (mainly Bristol) stoneware, 1700-1950	59	3.3
278	Transfer-printed ware, 1770-1900	2	0.1
285	Misc. unsourced Somerset post-medieval redware, 1550-1800	207	11.8
286	Frechen stoneware, 1550-1600	4	0.2
311	Black basalt ware, 1740-1900	4	0.2
326	Cream ware, 1765-1830	4	0.2
	Chinese porcelain	8	0.4
	Others/unidentifiable	8	0.4
Totals		1,761	100

Table 1: Quantification of the pottery fabrics.

The largest quantity of medieval pottery present at 174 sherds is the so-called Bristol/Redcliffe ware which dates to the late 13th/14th centuries (BPT72). This represents 82% of the total medieval assemblage from the site. Although the sherds are generally quite small, the rims and plain or thumb decorated bases of baluster jugs could be identified as well as the top of a strap handle with vertical slashed decoration (context 2054) and a rod handle with stamped ring and dot decoration (context 2089).

Other medieval pottery types present were Ham Green unglazed redware (BPT32), Ham Green glazed ware (BPT26), Minety ware (BPT18), Saintonge polychrome ware (BPT39), Saintonge green-glazed ware (BPT40), Saintonge mottled glazed ware (BPT156), Saintonge pink

fabric (BPT225), Malvern Chase medieval glazed ware (BPT168) and Bath A fabric (BPT46).

Period 2 - Early Post-Medieval

The site produced only a few sherds of 16th-century pottery although the production periods of some of the medieval wares extend into the early post-medieval period (for example, Malvern Chase medieval glazed ware (BPT168)). The assemblage contained forty-three sherds of the so-called Cistercian ware which is typically found in 16th-century contexts in the city (BPT93). They all belong to the usual one or two-handled cups in a hard fired dark red to purple fabric with a dark brown or black glaze which are known to have been made at Falfield in South Gloucestershire (Fig.14.1; Bennett *et al* 1974, 123-126). The presence of sherds of BPT93 in contexts 1005, 1016 and 1018 suggest they date to the 16th or early 17th centuries although most of the Cistercian ware sherds were clearly residual in later contexts.

The assemblage also produced one sherd of a Tudor Green ware cup which also dates to the 16th century (BPT182; context 1005).

Periods 3-6 - Post-Medieval and Early Modern

The most common post-medieval pottery in the assemblage was English tin-glazed ware which was produced from the first half of the 17th century through to the late 18th century (BPT99). Two hundred and fifty-two sherds of this ware represented 14.3% of the total assemblage. The types of vessel present were plates and chargers, dishes, teabowls, chamberpots and pharmaceutical pots for storing ointments or pills. The plates, chargers, dishes and tea bowls were decorated with floral or geometric patterns, usually in shades of blue but more rarely in red, green and purple. The pharmaceutical pots were generally undecorated although an ointment pot or 'albarello' from context 1046 had a blue diamond decoration typical of the mid-17th century. It is likely that many of the tin-glazed wares were made in Brislington or Bristol, especially those with an external lead glaze and with speckled purple decoration (Jackson 1999).

Almost as common during the late 17th and 18th centuries were yellow slipwares made in Bristol or Staffordshire (BPT100; 240 sherds; 13.6% of assemblage). These were typically tall cups with trailed brown slip decoration over a yellow ground. The rims and necks of the cups are often decorated with brown dots, vertical lines separated by dots, horizontal lines or crossing horizontal or vertical lines. The globular bodies usually have trailed slip which has been combed through. Some of the bases of the cups are heavily sooted where they have been placed close to a fire to warm the contents. Also present were parts of a number of press-moulded plates usually with 'pie-crust' thumbing around the rim and decorated with a combed brown slip. Unusually, especially from context 1037, were a number of plates with raised moulded decoration consisting of initials: 'B', 'M' and 'W' on one plate and 'H' on another. Other plates had 'jewelled' decoration – that is raised dots or lines of yellow slip applied on top of the brown trailed slip. The raised initials and jewelled decoration are more typical of slipware made in Staffordshire than in Bristol (Wondrausch 1986, 43-49).

Other wares present in the assemblage in relatively large numbers are the ubiquitous bowls, pancheons and storage vessels in the heavy North Devon gravel-tempered fabric generally thought to originate from the Barnstaple area during the 17th and 18th centuries (BPT112; 185 sherds; 10.5%); South Somerset (Donyatt) wares consisting of plates, bowls, dishes and a collander often decorated with trailed white slip in geometric patterns (BPT96; 169 sherds; 9.6%); and utilitarian red ware vessels from as yet unsourced production sites in Somerset (BPT285; 207 sherds; 11.8%) and elsewhere (BPT218; 94 sherds; 5.3%). Wares present in smaller quantities in the late 17th- and early to mid 18th-century contexts were North Devon fine wares, generally in the form of plates or dishes with slip and sgraffito decoration (BPT108; 23 sherds; 1.3%); mottled (manganese) glazed ware tankards or bowls made in Bristol or Staffordshire (BPT211; 60 sherds; 3.4%); English brown salt-glazed stoneware tankards – the majority probably made in Bristol – (BPT277; 59 sherds; 3.3%); Nottingham stoneware (BPT212; 3 sherds); Staffordshire red ware often decorated with white trailed slip (BPT109; 7 sherds); Staffordshire white salt-glazed stoneware (BPT179; 16 sherds) and English porcelain (BPT203; 1 sherd).

Only a small number of sherds came from imported pottery. The most common was Westerwald stoneware which generally took the form of globular bottles although one chamberpot decorated with lion and floral medallions on applied stamps was present in context 1037 (BPT95; 40 sherds). Fragments of dark brown salt-glazed bottles made at Frechen during the late 16th century included, from context 1099, a bearded facemask applied to a bottle neck and shoulder (Fig.14.2), and from context 1019, parts of an applied press-moulded medallion showing coats of arms with splashes of cobalt blue under a brown salt glaze (BPT286; 4 sherds). Eight sherds of Chinese porcelain teabowls and two sherds of Italian Ligurian tin-glazed ware (BPT107A) were more unusual imports.

Pit 1037

One stone-lined rubbish pit, dated by the clay tobacco pipes it contained to between about 1735 and 1760, produced a rich assemblage of pottery, including some complete or almost complete vessels. The following vessels were present of which a number have been illustrated:

Fig.14.3 Westerwald stoneware single-handled chamberpot in a grey fabric with applied motifs including a lion wearing a crown and incised decoration. There are cobalt blue bands below the rim, above the base and around the motifs. (BPT95; 1 example).

Fig.14.4 English tin-glazed earthenware plate decorated with a powdered manganese purple ground with a central

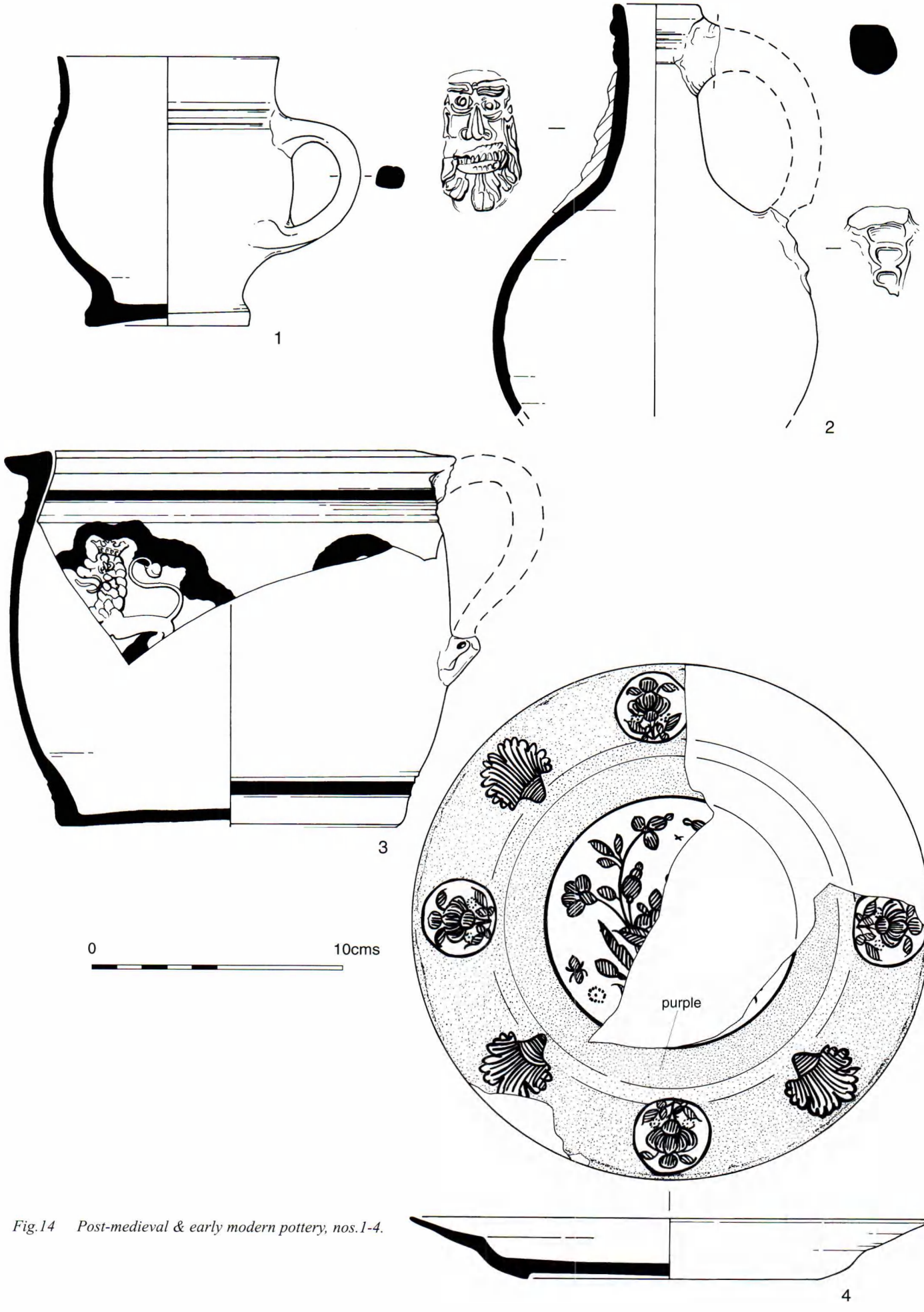

Fig.14 Post-medieval & early modern pottery, nos.1-4.

circular panel of flowers and insects in blue. The plate rim has circular panels containing blue flowers and blue wheatsheafs. A similarly decorated plate attributed probably to Bristol and dated to about 1750 is illustrated by Britton (1982, 243, 15.26). (BPT99; 2 examples).

Fig.15.5 English tin-glazed earthenware plate decorated in blue with a central panel of flowers surrounded by concentric lines, the rim border being of interlocking arcs and crescents. A similar rim border is dated to about 1710 by Britton (1982, 144, 10.9). (BPT99; 1 example).

Fig.15.6 English tin-glazed earthenware plate decorated in blue with an overall floral pattern. It has the under-rim marks of three lines and a circle in blue 'III' and 'O'. These have been attributed to Bristol (Britton 1982, 310-311). (BPT99; 1 example).

Fig.16.7 English tin-glazed earthenware plate decorated in blue with an overall stylised leaf and clustered mimosa flower pattern and concentric lines. The extreme edge of the rim is painted with a fine red-brown line. Archer (1997, 175, B.118) illustrates a similarly decorated plate and attributes it to London or Bristol with a date of about 1735 to 1745. (BPT99; 1 example).

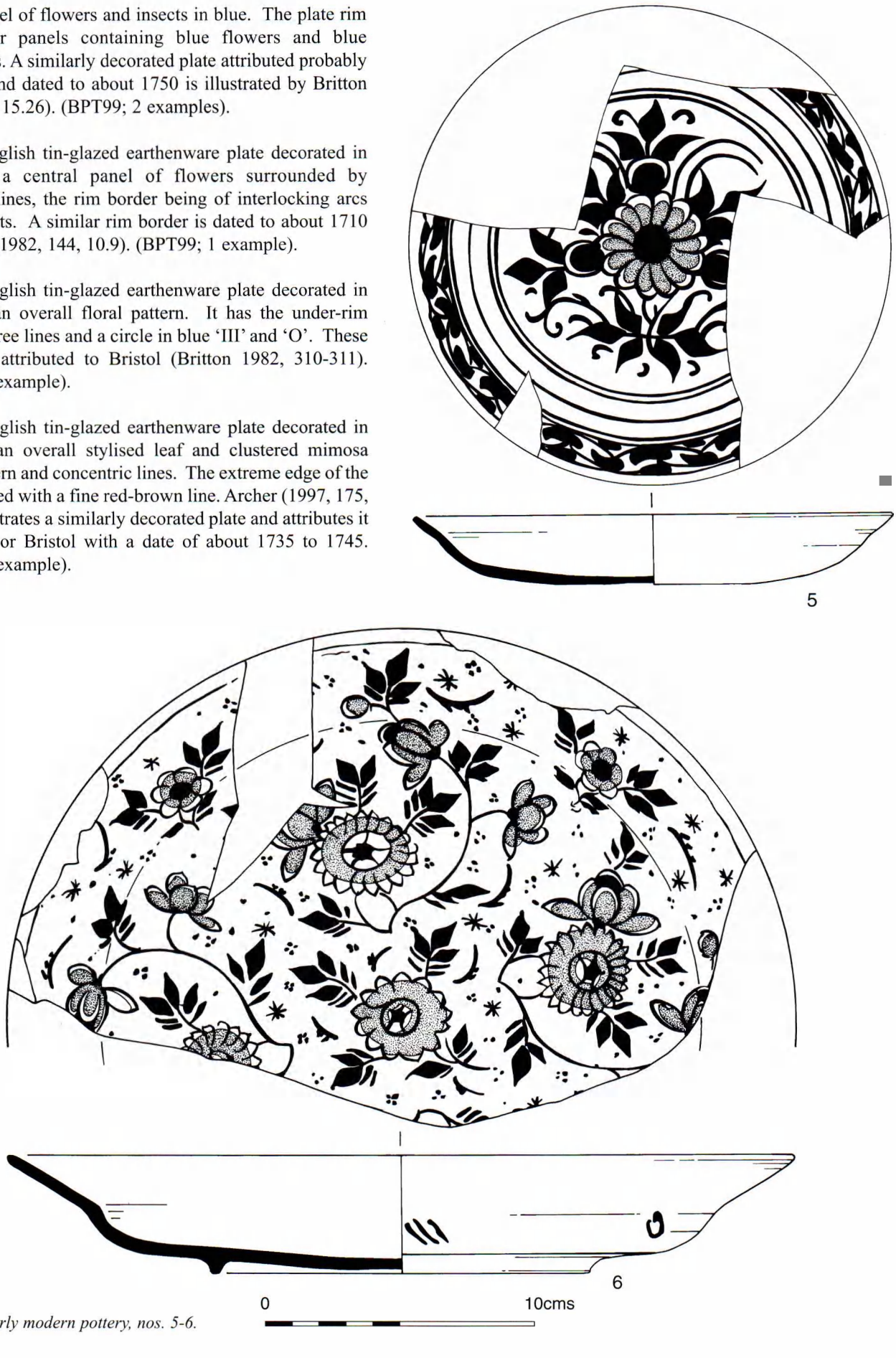

Fig.15 Early modern pottery, nos. 5-6.

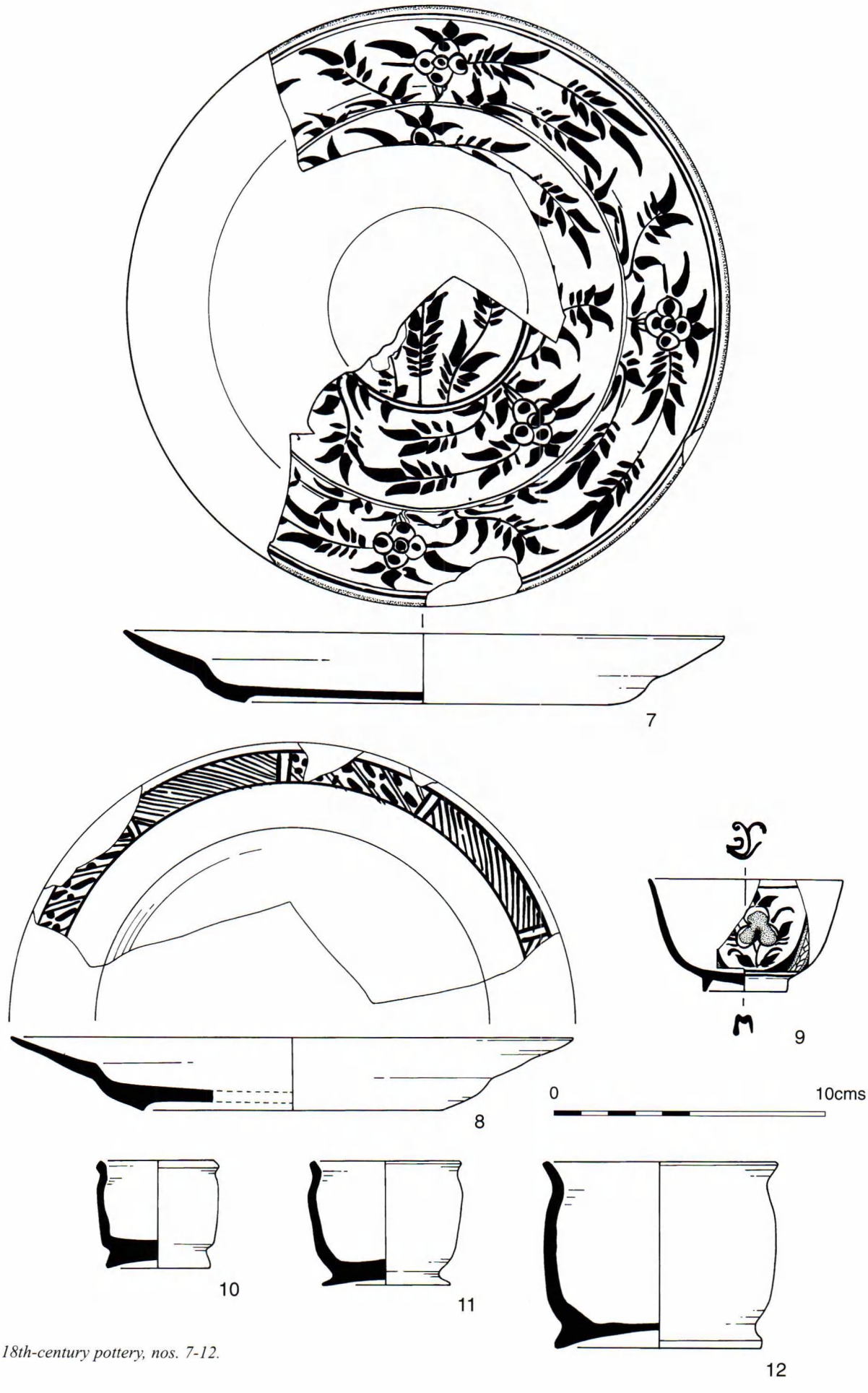

Fig.16 18th-century pottery, nos. 7-12.

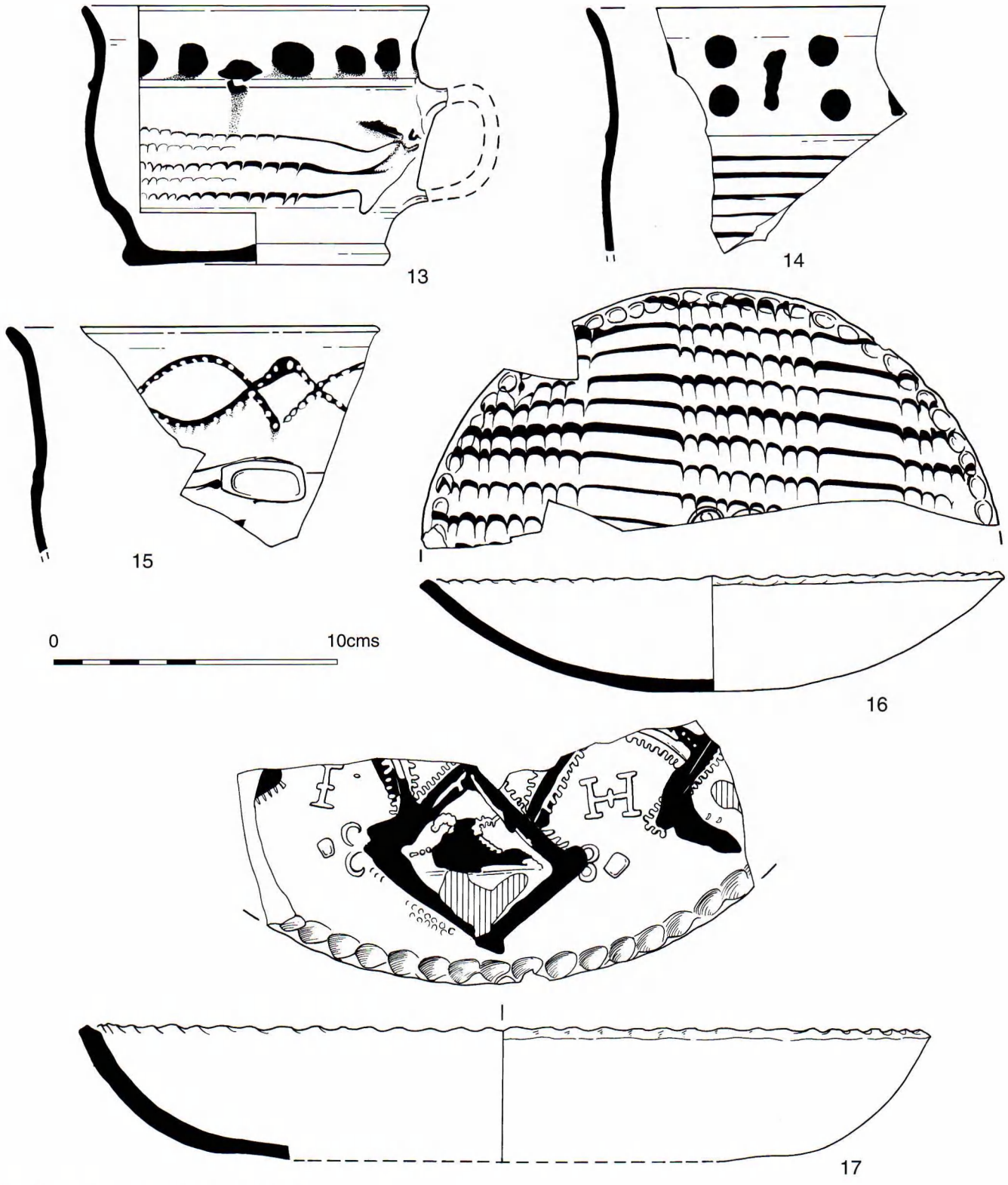

Fig.17 18th-century pottery, nos. 13-17.

Fig.16.8 English tin-glazed earthenware plate with a blue rim decoration comprising panels of angled lines and possibly stylised flowers between concentric lines. (BPT99; 1 example).

The pit contained parts of four other English tin-glazed earthenware plates.

Fig.16.9 English tin-glazed earthenware tea bowl decorated in blue with four panels of flowers separated by other decorative motifs. Concentric lines close to rim and base. Internally the bowl has a single stylised floral spray in the base and externally it has the letter 'M' or 'W' on the base. (BPT99; 1 example).

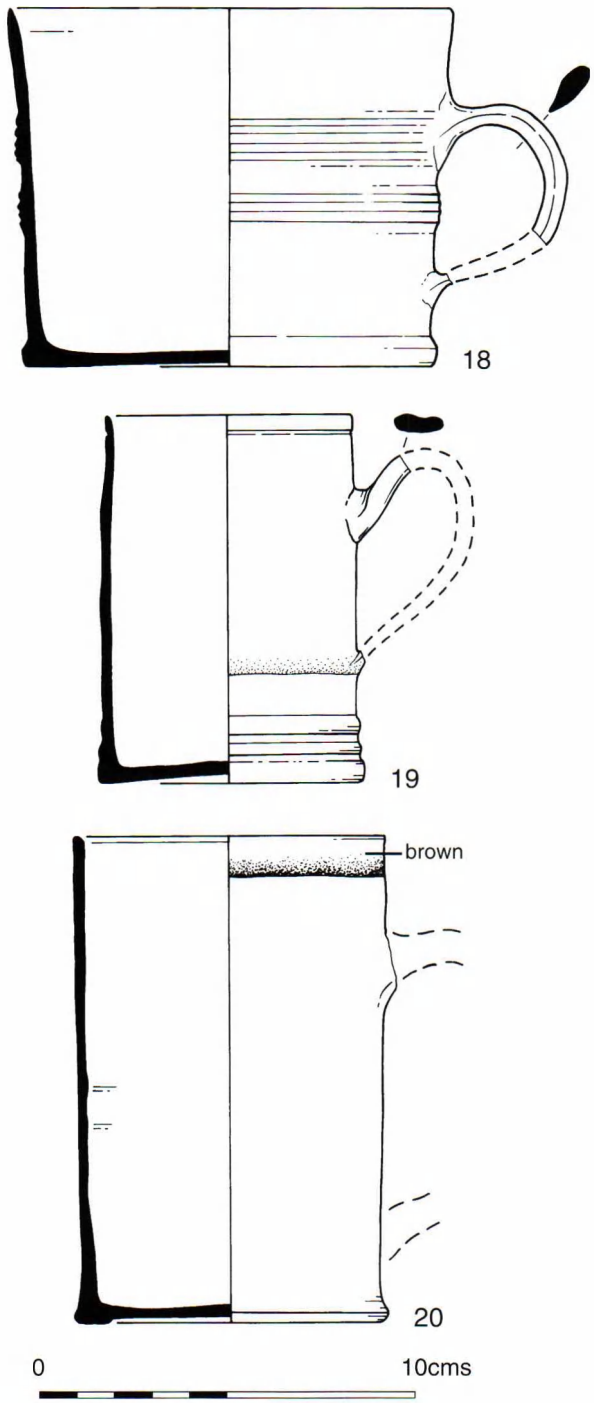

Fig.18 18th-century pottery, nos. 18-20.

The pit contained parts of two other English tin-glazed earthenware tea bowls.

Fig.16.10-12 English tin-glazed earthenware pharmaceutical pots of various sizes. (BPT99; 4 examples).

The pit also contained parts of at least eleven English tin-glazed earthenware chamberpots or other bowls and four dishes.

Fig.17.13 Bristol/Staffordshire yellow slipware single-handled cup decorated with brown dotted, trailed and combed slip. (BPT100; 1 example).

Fig.17.14 Bristol/Staffordshire yellow slipware single-handled cup or bowl decorated with brown dotted, trailed and combed slip. Rim diameter 90mm. (BPT100; 1 example).

Fig.17.15 Bristol/Staffordshire yellow slipware cup or bowl with brown trailed and combed slip. The trailed brown slip pattern below the rim is dotted with yellow slip in an effect known as 'jewelling'. Rim diameter 100mm. (BPT100; 1 example).

The pit also contained parts of 22 other Bristol/Staffordshire yellow slipware cups or bowls.

Fig.17.16 Bristol/Staffordshire yellow slipware press-moulded plate with finger impressed rim and brown combed slip decoration. (BPT100; 9 examples of various sizes).

Fig.17.17 Bristol/Staffordshire yellow slipware press-moulded plate with finger-impressed rim. It is decorated with a moulded raised geometric design incorporating the letters 'H' and 'I'. The design is partly in-filled with lines of dark brown and patches of red-brown slip. These elaborately decorated press-moulded plates are generally attributed to Staffordshire potters such as Samuel Malkin and the Toft family (Wondrausch 1986, 44-48). (BPT100; 1 example).

Fig.18.18 Bristol/Staffordshire mottled (manganese) glazed ware single-handled tankard with lathe-turned lines around the body of the vessel. (BPT211; 9 examples of various sizes).

The pit also contained one bowl in Bristol/Staffordshire mottled glazed ware.

Fig.18.19-20 English salt-glazed stoneware tankards. (BPT277; 5 examples of various sizes).

The pit also contained the following vessels:

North Devon fine ware plate (BPT108).
North Devon gravel-tempered ware: 5 jars, 1 skillet and parts of three other vessels (BPT112).
Staffordshire white salt-glazed stoneware: 3 bowls and 1 other straight-sided vessel (BPT179).
Locally produced late post-medieval red wares: 3 vase shaped vessels, 1 large bowl and 1 possible flower pot (BPT201).
Chinese porcelain: 2 teabowls.

Period 6-7

During the late 18th century and into the 19th century cream ware (BPT326; 4 sherds); transfer-printed ware (BPT278; 2

sherds); other white chinas (BPT202; 9 sherds); and black basalt ware (BPT311; 4 sherds) began to appear on the site, together with common red ware utilitarian vessels made in Bristol or the surrounding area (BPT201; 94 sherds; 5.3%; Jackson 2006).

Conclusion

The excavation produced relatively few sherds of medieval pottery and these were mainly residual in later contexts. By far the largest proportion of sherds present were those of Bristol/Redcliffe ware which was produced during the late 13th and 14th centuries. This indicates that the West Street frontage of the site was certainly occupied during that period. However, the occurrence of a few sherds of the 12th and early to mid 13th centuries gives rise to the possibility that occupation may have started here or close by at an earlier date.

The relatively few sherds of early post-medieval pottery may imply that the site was not occupied, or only intermittently occupied, during the 15th and 16th centuries. The wealth of 17th- and 18th-century pottery in the assemblage, which included relatively high proportions of good quality English tin-glazed earthenwares, Bristol or Staffordshire yellow slipwares, salt-glazed stonewares, porcelains and other types of slip decorated wares, suggests the presence of relatively high status occupants in these properties during that period. This is underlined by the contents of a rubbish pit, deposited between about 1735 and 1760, which contained numbers of decorated and, at that time, expensive table and other wares.

The Clay Tobacco Pipes

by Reg Jackson

The excavation produced 578 clay tobacco pipe fragments from 66 contexts. One hundred and sixty-three were either complete pipe bowls or bowl fragments of which 122 had sufficient features remaining to allow them to be dated by form or the presence of makers' names or initials. There were two decorated stems in the assemblage.

The clay tobacco pipes from the assemblage mainly date to the 17th and early 18th centuries. Only four contexts produced pipes dating to the later 18th century (1037, 2012, 2036, 3009) and one contained a pipe dating to the 19th century (4049).

Twenty bowls (16% of the total) bore pipemakers' initials or other identifying marks, while another two bowls were decorated but were otherwise unmarked. With only four exceptions these bowls all appear to have been made by Bristol manufacturers, while the decorated or unmarked bowls were typical in form to those known to have been made in the city. As Bristol was a major pipe manufacturing centre there was clearly little need for the inhabitants to have imported pipes from elsewhere.

The pipes of the following Bristol makers were present: Richard Berryman, Israel Carey I or John Carey, Philip Edwards I or II, Llewellin Evans, William Naylor, John Newton I or II, Timothy Ricketts, Thomas Smith I and John Tippett II. These pipes are listed and described in Table 1. The information on the working dates of the pipemakers is taken from Jackson and Price (1974) and Price and Jackson (1979).

Two bowls bore simple decoration. One spurred bowl fragment was decorated in relief down the front and rear mould lines although too little of the pipe remained to identify the decorative motif. The bowl form suggests that it was made in the late 18th century (context 3009). The other was badly damaged but had leaf decoration up the front and rear mould lines and dates to the late 19th century (context 4049).

Two pipe stems had rouletted decoration each comprising four bands of milling divided by a band of joining diamonds (contexts 2034, 2049). Although the stems bore no maker's initials, pipes with this decoration are known to have been made by the Bristol pipemakers Llewellin Evans (Jackson & Price 1974, 94.74; Fox 1999, 135), John Sinderling (Hurry & Keeler 1991, fig.13a) and William Evans I or II (Pogue 1991, fig.13A; Fox 1999, 144). They probably date to between *c* 1660 and *c* 1685.

Three early to mid 17th-century bowls had a hand or 'gauntlet' mark incuse on the heel (contexts 1043, 1046 and 3009). The identity of the maker of these pipes is unknown. While pipes bearing the 'gauntlet' mark are particularly common in Wiltshire and were obviously made there, the Mould Size Agreement of the Bristol pipemakers, written in 1710, refers to a type of pipe they were making as 'Gauntletts' (Jackson & Price 1974, 85).

One pipe had the initials 'EB' in relief on a small heel (context 1046). Its bowl form, heel size and the mark being in relief rather than incuse all indicate a Dutch origin for the pipe. Similar pipes have been found elsewhere, for example in the Netherlands (Duco 1981, 257.181), the West Indies (Fox 1999, 93-96) and North America (McCashion 1979, 112). They have been attributed to the Englishman Edward Bird who was working as a pipemaker in Amsterdam from 1630 to 1665 (Duco 1981, 399). This corresponds well with the other pipes from this context which suggests a date for its deposition during the early to mid 17th century.

The Glass

by Reg Jackson

The excavation produced 173 fragments of post-medieval glass from 37 contexts. There were 83 fragments of bottles, 38 of phials, 4 of drinking glasses, 30 pieces of window glass and 18 fragments of other glass vessels. They range in date from the mid 17th century to the 19th century. All but one of the vessels present are likely to be of English manufacture.

Drinking Glasses

Fig.19.23 Rim of fluted drinking glass or beaker in light

Pipemaker's Name	Working Dates	Mark, Description and number of Examples in Assemblage in Brackets
Richard Berryman	Working by 1619, probably still working in 1652.	Initials 'RB' incuse on heel (1). Context 1022. Initials 'RB' incuse on heel with a dagger and heart between the initials (1). Context 1046.
Israel Carey I or John Carey	Free 1756, dead by 1788. Free 1780, working until at least 1815.	Spurred bowl with the initials 'IC' incuse on the rear of the bowl (1). Context 2012.
NC	There is no record of a pipemaker with these initials working in Bristol in the early to mid 17th century.	Initials 'NC' with decorative motifs above and below incuse on heel (1). Context 1084.
WC	A number of pipemakers with these initials working in Bristol in the first quarter of the 17th century.	Initials 'WC' with decoration above and below incuse on heel (1). Context 2038.
Philip Edwards I or Philip Edwards II	Free 1650, dead by 1683. Free 1681, still working in 1696.	Initials 'PE' incuse on heel (2). Contexts 2034, 3021.
Llewellin Evans	Free 1661, died 1688.	Spurred bowl with the initials 'LE' incuse on the rear of the bowl. Slight traces of decoration below the initials (1). Context 1039.
William Naylor	Free 1722, probably died 1736.	Spurred bowl with the initials 'WN' incuse on the rear of the bowl (2). Contexts 1022, 1037.
John Newton I or John Newton II	Free 1747. Probably free *c*1750. Either or both working until at least 1768.	Spurred bowl with the initials 'IN' in relief in a dotted circle on the side of the bowl (1). Context 2012.
Timothy Ricketts	Free 1669.	Initials 'TR' with decoration below incuse on heel (1). Context 1019. Initials 'TR' incuse on heel (2). Contexts 2005, 2049.
Thomas Smith I	Free 1651, dead by 1667.	Initials 'TS' incuse on heel (1). Context 4021.
John Tippett II	Free 1735, dead by 1766.	Spurred bowl with the initials 'IT' incuse on the rear of the bowl (1). Context 1037.

Table 2 The occurrence of marked clay tobacco pipes and the identity of their makers.

green glass with heavy surface weathering. Thickened rim and mould-blown decoration of small ?diamonds. Context 1057. Late 17th century.

Two fragments of wine glass in clear colourless glass came from context 1037 which dates from about 1735 to 1760. The largest piece was the foot of a glass with a folded edge and having a diameter of 64mm. The second piece was a tiny fragment of rim possibly from the same glass. A further fragment from the bowl of a clear glass wine glass with mould-blown ribbed decoration came from context 3009 which dates to the late 18th century.

Phials or Small Bottles

These were generally of pale green glass with light iridescent weathering. One was of quite a dark green, unweathered, glass. Five complete phials came from context 1037 and one from context 1036.

The vessels had base diameters ranging from 22mm to 90mm and all were slightly concave with a pontil mark at the centre. They are generally vertical-sided with short, narrow necks and flattened rims, although a few had sides tapering towards the top. Where it could be determined their heights range from 55mm to 145mm. The largest rim has an external diameter of 40mm and an internal diameter of 22mm, the smallest an external diameter of 18mm and an internal diameter of 5mm. They came from contexts dating from the late 17th century to about 1760.

Fig.19.25 Phial, light green with light surface weathering. Base diameter 40mm, height 90mm. (SF 30, context 1036, 18th century).

Fig.19.26 Phial, light green glass with light surface weathering. Base diameter 24mm, height 145mm. (SF4 (which includes another similar phial), context 1037, *c* 1735 to 1760).

Fig.19.27 Phial, light green glass with light surface weathering. Base diameter 22mm, height 55mm. (SF11

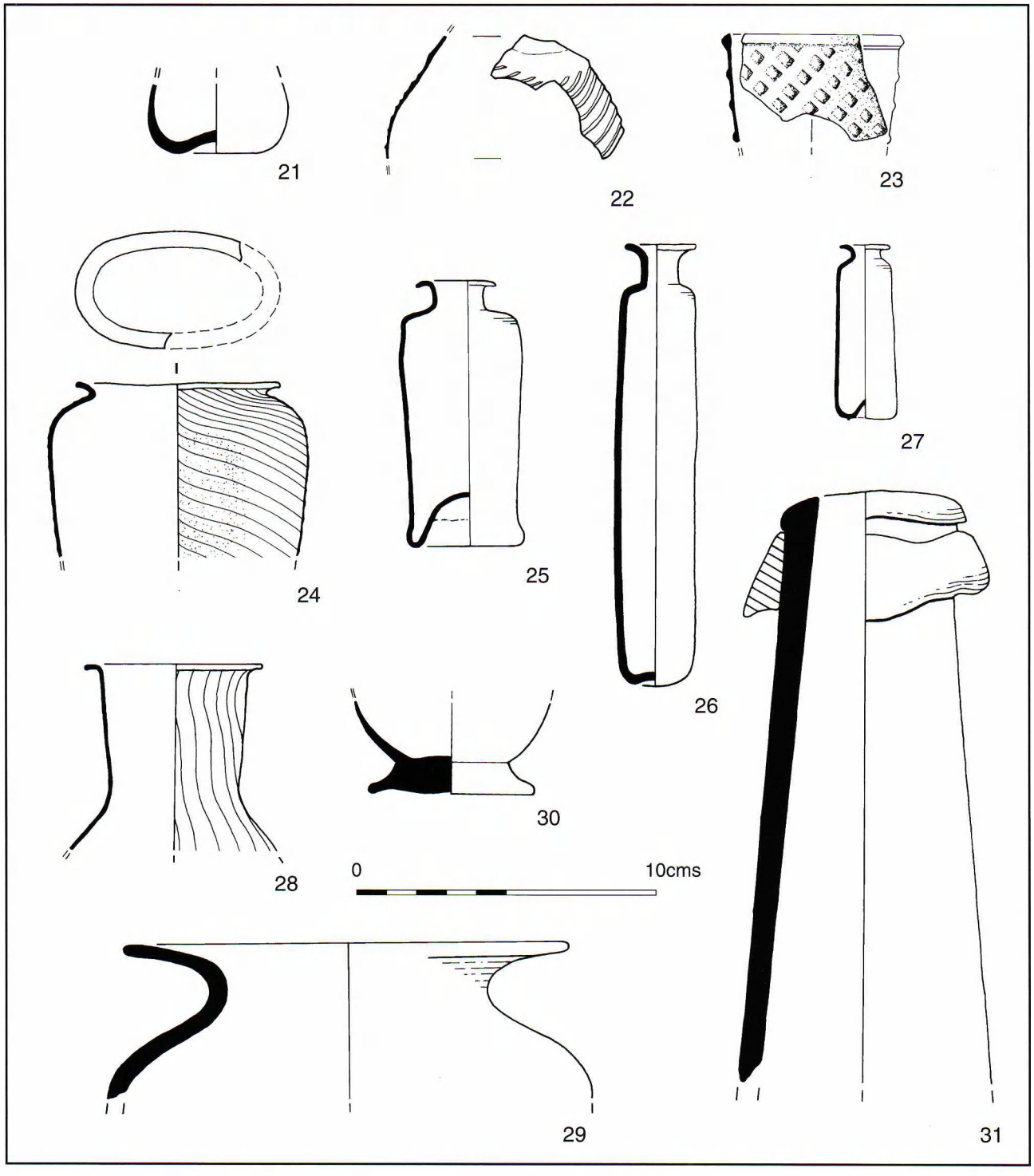

Fig.19 The glass.

(which includes four other similar phials), context 1037, Date *c* 1735 to 1760).

Bottles

These were all of thick dark green glass with considerable iridescent surface weathering. No complete bottles were present in the assemblage but most appear to be of the typical 'shaft and globe' shape with long necks and heavy concave bases (Willmott 2001, 89; 25.3). The necks from rim to shoulder range in length from 50mm to 95mm and each has a thin string band near the rim. The bases range in diameter from 100mm to 145mm and each has a pontil mark at the centre. These bottles came from contexts dating from the late 17th century to about 1760.

There were two vertical-sided bottles from context 1037 which dates from about 1735 to 1760. One had a large base diameter of 155mm.

Other Vessels

Fig.19.21-2 Base and part of the body of a small globular shaped bottle in an opaque pale green glass with thick light brown surface weathering. May be from separate vessels. Slightly concave base 40mm in diameter. Mould-blown wrythen spiral ribbed decoration. Context 1046. Early 17th century.

Fig.19.24 Part of the rim and upper body of a small oval shaped vessel of light blue-green glass with little surface weathering. The rim measures 60mm by 42mm. Fine mould-blown wrythen spiral decoration. Context 2036. Probably late 17th century.

Fig.19.28 The rim and neck of a flask in pale green glass with light surface weathering. Vertical mould-blown ribbing. Rim diameter 58mm. (Context 1037, *c* 1735 to 1760).

Fig.19.29 The rim of a wide-mouthed jar; dark green glass with light surface weathering. Rim diameter *c* 140mm. (Context 1037, *c* 1735 to 1760).

Fig.19.30 Heavy pedestal base, part of the sides and a handle of a cup-shaped vessel in opaque white glass with heavy brown surface weathering. Diameter of base 53mm with pontil mark. Small pulled and folded handle with angled attachment. Opaque white glass was produced to imitate Chinese porcelain by factories in France and Germany during the 17th and 18th centuries (Vose 1980, 88). (Context 1037, *c* 1735-1760).

Fig.19.31 Rim and neck of a massive storage bottle or carboy in dark green glass with heavy surface weathering. Large applied bead below rim. Diameter of neck at rim: externally 60mm, internally 33mm; length of neck at least 200mm. (Context 1037, *c* 1735 to 1760).

Window Glass

Fragments of light green window glass came from a number of contexts dating from the mid-17th to the 19th centuries.

The Small Finds

by Stuart Whatley

Introduction

A selection is included here of the total of 57 small finds examined and a full descriptive list is available in the site archive. The finds included artefacts made from copper alloy, iron, lead, silver, ceramic/glass working, glass and worked bone. The finds have been categorised using function types set by the Museum of London Archaeology Service and those that could not be identified were placed in a miscellaneous section. The metal objects were in a poor state of preservation as most items were corroded and many had exterior corrosive growth. They were all x-rayed and many were cleaned in the conservation process.

Abbreviations:

D	Diameter
L	Length
H	Height
G	Gauge
T	Thickness
W	Width
Obv	The obverse side of a coin containing the head, or principal symbol
Rev	The reverse side of a coin
SF	Small Finds

Coins and Tokens

Copper Alloy

Coin or token, copper Royal Farthing of Charles I 1625-1649. D 15mm. (SF 41, context 2089, mid/late 17th century).

Copper alloy coin or token, broken, conserved but illegible. D 17mm, (SF 37, context 1094, early-mid 17th century).

Silver

Silver Coin. Obverse unclear - design and inscription visible but not legible. Reverse quartered shield, date above ?1573, inscription unclear. Elizabeth I third issue three-half-pence (Mitchell & Reeds 1988, 168). D: 17mm. (SF 59, context 1022, late 17th/early 18th century).

Kitchen equipment, serving and display vessels

Iron handle

Looped iron object, terminals bent at right angles to form a loop. Probably a handle. L: 70mm x W: 51mm x T: 30mm. (SF2, context 1022, late 17th/early 18th century).

Knives

Bone Handles

Fragment, possibly from a cutlery handle. Outer surface smooth, one end rounded and curving inwards; part of drilled hole in one broken edge. L: 32mm x W: 10mm x T: 4mm. (SF 64, context 2049, mid/late 17th century).

Cutlery handle, debased pistol grip type. Part of tang surviving, the corrosion of which has split the handle into two lengthways. Surface polished. L: 54mm x W: 21mm x T: 13mm. (SF 17, context 1037, *c* 1735 to 1760).

Handle, probably from a penknife. Octagonal in section, grooves carved down narrow sides. Tapers, wider end 13mm wide with remains of copper alloy fastening and shallow drilled hole in end; narrow end obscured by corrosion. Dimensions without corrosion: L: 62mm x W: 13mm x T: 8mm. (SF 65, context 1037, *c* 1735 to 1760).

Tuning Peg

Bone, tuning peg for stringed instrument. Unfinished; tapered, with double lobes at wider end. Groove running down one side. L:63mm x W:26mm x T:9mm. (SF18, context 4010, 19th century).

Fig.20 17th-century 'Fishtail-Butt' toy musket, SF45, context 1049.

Leisure Items

by Geoff Egan

Toy Gun

Recovered from the fill of a rubbish pit (context 1049) was a miniature gun, of the type known as a 'Fishtail Butt' musket. This model gun is based on the matchlock muskets used during the 16th and 17th centuries, it was made of copper alloy with a high proportion of lead. Originally a working model, the gun was crudely hollow-cast in one piece with a faceted barrel, open circular pan and an angular trigger guard. The accompanying ramrod would have screwed into the threaded barrel but the end has broken off and the ramrod shaft now seals the barrel. The touchhole at the join of the butt and barrel is blocked by corrosion. The butt has ring-and-dot motifs; five on the touchhole side and four visible on the other. The ring and dot decoration imitates inlays of bone, mother-of-pearl and ivory of late 16th and early 17th-century western European gunstocks. Corrosion and poor casting obscure any decoration there may have been on the barrel (Fig.20).

Howard Blackmore's 1989 study on Elizabethan toy guns identified a type series for Fishtail Butt muskets (Blackmore 1989,11). The West Street example was closest to Type 1, Design 2 of miniature guns as shown in a recent publication of finds from London (Forsyth & Egan 2005, 91) and this seems to be the first one found in Bristol. Similar examples have been recovered in counties around Britain and are listed on the current Portable Antiquities Scheme Website from Essex to Glamorgan and from Yorkshire to Somerset (www.finds.org.uk). A particularly well-preserved example, dated to the late 16th-early 17th century, was recovered from excavations in Cuckoo Lane, Southampton, research for that site found more examples at the Ashmolean and British Museums (Platt & Coleman Smith *et al* 1975, 2.264).

There is a general paucity of secure dating evidence to indicate over what period the production of mass-produced miniature firearms, as working replicas capable of firing a charge, took place. Evidently, they were contemporary with the widespread availability of hand-guns from the early 17th-century but the question of a date range is further obscured by how long they would have been modelled on obsolete types of weapons no longer in use and the lifespan of what were probably very popular toys. L: 94mm (SF 45, context 1049, late 17th century).

Lead Alloy Cloth Seal

Recovered from the fill of a rubbish pit (context 1090) was a cloth seal. Comprising two discs joined by a strip; one disc has a central hole and the other would have held a lead lug (Fig.21).

This is most likely to be a two-disc local weaver's/clothier's seal, with a 'KS' privy mark not previously known, that appears stylistically to be 16th- or early 17th-century. The other side has what are probably dimensions scratched in Roman numerals XXII or perhaps XXXII, possibly representing the length of the cloth in yards. The inside surfaces of the discs have the imprint of a coarse textile, probably a traditional woollen cloth (G. Egan, pers. comm.).

Of a type attached to bales of cloth, one or more of these seals were attached to each traded bale in a period ranging from the late 14th to19th-centuries as part of a complicated system of industrial regulation and quality control of exported fabrics, similar to the hallmarking of precious metals. The information stamped on the seals relates to the specifications, provenance and the individuals who processed each cloth (Endrei & Egan 1982). The seals are found in large quantities in Port Cities or where cloth-finishing industries such as dyeing were established.

When a cloth was to be sealed, the central strip was folded and the projecting lug at one end was threaded through the hole in the other. The name of the town or individual on the seal was impressed into the lead as the seal was squeezed tight. The seal therefore shows the place at which the sealing of cloth was carried out. Several unpublished examples have been found on riverside sites in central Bristol and are held in the collections of the City Museum and Art Gallery (Egan 1980). A lead four-disc cloth seal dated 1678 was recovered from the site of Nos. 42-43 Welsh Back, Bristol in 2001 (Stevens & Jackson 2006, 41). No definite evidence that this type of seal was used for

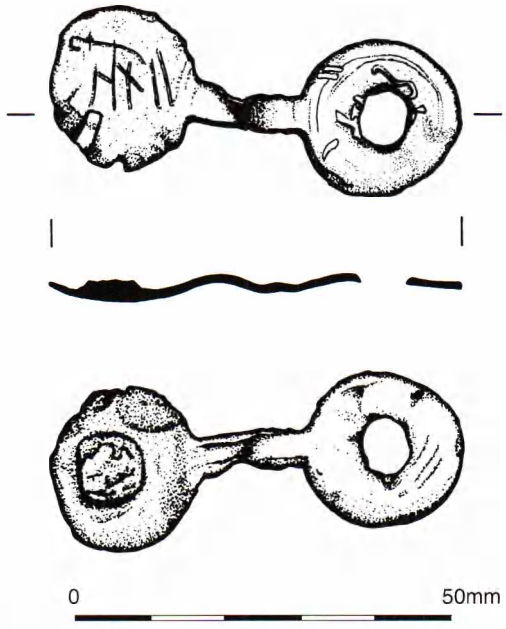

Fig.21 The lead alloy cloth seal, SF61, context 1090.

goods other than textiles has yet come to light. A similar example, with the lug surviving, is known from Exeter and dates to between 1660 and 1750 (www.exeter.gov.uk/timetrail/10_goldenage). L: 54mm. (SF 61, context 1090, 16th to 17th century).

The Geoarchaeology

by Terra Nova

Two monoliths were taken to examine deposit profiles and collect samples for laboratory study in order to identify the potential of the deposits and construct a provisional geoarchaeological interpretation. Monolith 1 was approximately 700mm in length and taken from the east-facing section within trench 2. Monolith 2 was approximately 970mm in length taken from the south-facing section of trench 3. Sediment descriptions were logged on modified recording sheets, further data is available for research within the project archive.

The deposits examined in the monoliths represented sandy clay loams within which a truncated soil profile was overlain by a very dark brown granular deposit containing archaeological debris.

Monolith 1

From 0 - 80mm in depth the deposits consisted of a medium dark brown sandy clay loam with a granular structure and containing fragments of ceramics and charcoal. Evidence of mixing by worming and rooting was observed and the application of 1M HCl to these deposits caused them to effervesce slightly showing them to be slightly calcareous. High magnetic susceptibility readings suggest the presence of significant amounts of industrial and occupation debris within the soil.

From 80 – 350mm in depth the deposits consisted of a medium brown sandy clay loam containing fragments of charcoal and ceramics. Evidence of mixing by worming and rooting was observed and the application of 1M HCl to these deposits caused them to effervesce slightly showing them to be slightly calcareous. The gradually dropping magnetic susceptibility readings suggest that the profile here has had industrial and occupation debris mixed down into it from above by an active soil biota and by the gradual movement of fine particles in suspension. This indicates that this is the upper part of a truncated former soil profile which has been contaminated by later material, rather than incorporating debris within the original profile.

From 350 – 700mm in depth the deposits consisted of a medium red brown sandy clay loam containing a few fragments of charcoal. The application of 1M HCl to these deposits caused no effervescence showing them to be non calcareous. The magnetic susceptibility values fall gradually to background values down the profile indicating the incorporation of surface debris by soil biota.

Monolith 2

From 0 - 350mm in depth the deposits consisted of a very dark brown, granular, sandy clay loam containing fragments of charcoal and ceramics. The application of 1M HCl to these deposits caused them to effervesce showing them to be calcareous. High magnetic susceptibility readings from 0 - 200mm suggest the presence of significant amounts of industrial and occupation debris within the soil.

From 350 – 680mm in depth the deposits consisted of a medium brown, granular, loam containing fragments of charcoal and ceramics. The movement of darker material down fissures and pores from the deposits above was observed and the application of 1M HCl to these deposits showed them to be very slightly calcareous. The magnetic susceptibility values fall gradually to background values down the profile indicating the incorporation of surface debris by soil biota.

From 680 - 920mm in depth the deposits consisted of a red brown sandy clay loam with a structure that was prismatic becoming blocky with depth. The deposit contained a few fragments of charcoal and the application of 1M HCl showed it to be non to very slightly calcareous. Magnetic susceptibility values are all low and consistent with natural background values.

Conclusions

The most archaeologically informative part of the soil profile tells us that the surface predating the development of this site has been truncated and incorporated into a mixed topsoil from the 17th-century onwards. The lower part of the soil profile is typical of those formed on these substrates and locations. While we can say that the upper soil profile represents a former, biologically active soil that may have been a garden, we can say little more. Unlike soils on the Avon floodplain, the underlying parent materials of this soil

are pre-quaternary in age and therefore more detailed study is unlikely to be archaeologically informative. High magnetic susceptibility values tell us that there is a great deal of industrial and domestic contamination within the upper soil profile.

The Faunal Remains

by Lorrain Higbee

Introduction

A small assemblage of animal bone was recovered from 77 separate contexts during the normal course of hand-excavation; the diagnostic fraction comprises 346 fragments (Table 3). In addition a small number of undiagnostic fragments were retrieved from sample residues. The assemblage is discussed below by broad chronological period, these are as follows: medieval, post-medieval (17th-18th century) and modern (18th/19th-20th century).

Methods

A selective suite of mammalian skeletal elements were recorded as standard and used in counts following Davis (1992), these are termed 'parts of the skeleton always counted' (or POSAC's). In addition to the POSAC's selected by Davis the following elements were also counted: horn cores with a complete transverse section and the zygomatic part of the skull. The recording of avian bones was limited to bones from the wing and leg, however, these were only recorded if they retained at least one complete articular surface. The above methods of quantification reduce the over-recording of fragmented material to give a truer indication of species proportions. The number of specimens identified to species (or NISP) was calculated for all taxa, however the minimum number of elements (or MNE) and individuals (or MNI) were only calculated for the most common taxa. Any non-countable elements from less common species or elements displaying butchery marks, pathological changes or of anomalous size were also recorded but were not used in counts. Vertebrae (i.e. centra) were recorded to general size categories (e.g. cattle-size or sheep-sized), this information was collected in order to take account of epiphyseal fusion but again this information was not used in counts. Non-countable bones are shown in parenthesis in Table 3.

The following methods were also employed during analysis of the assemblage: Boessneck (1969); Cohen and Serjeantson (1996); Davis (1987); Dobney and Reilly (1988); Grant (1982); Halstead (1985); Harcourt (1979); O'Connor (1989); Payne (1973, 1985 and 1987); Payne and Bull (1988); Silver (1969) and Von den Driesch (1976).

Tooth eruption/wear data and biometric data detailed analysis is limited by small sample size. This information is available for study within the site archive.

Recovery, preservation and taphonomy

The vast majority of the assemblage was recovered by hand and hand-recovered assemblages are typically biased in favour of large, easily observed fragments (Payne 1992). Therefore it is not too surprising that bird, fish and small mammal bones are relatively rare in the assemblage compared to larger mammals, especially livestock species.

	Period				
Taxon	**medieval**	**post-medieval**	**modern**	**undated**	**Total**
Cattle	1	58 (19)	55 (26)	3 (1)	117 (46)
sheep/goat	2 (1)	18 (9)	30 (16)		50 (26)
Sheep		5 (1)	2 (2)		7 (3)
Goat			(1)		(1)
Pig	1	14 (3)	13 (3)		28 (6)
Dog		4 (1)	2 (1)		6 (2)
Cat		11 (2)	1		12 (2)
Horse	1	(1)	3 (1)		4 (2)
Fallow deer	1	1	(1)		2 (1)
Rabbit		1 (1)			1 (1)
Chicken		1 (1)	1 (1)		2 (2)
Goose	1				1
Crow		1 (1)			1 (1)
fish n.f.i.		1			1
cattle-sized	(2)	(10)	(3)	(1)	(16)
sheep-sized		(3)	(2)		(5)
Total	**7 (3)**	**115 (52)**	**107 (57)**	**3 (2)**	**232 (114)**

Table 3 Number of specimens identified to species (NISP) by broad chronological period. Figures in parenthesis are non-countable bones after Davis (1992).

A large proportion (58%) of the assemblage was recovered from various layers, including cultivation and garden soils, rather than the fills of cut features. There is a clear difference in the distribution of bone between deposits types for the two main periods. The post-medieval assemblage is equally distributed between layers and fills, whilst most of the modern assemblage (*c* 71%) was recovered from layers and very little from fills.

The majority (*c* 77%) of fragments are in a good state of preservation; anatomical details and other surface marks (e.g. butchery marks) are clear and easily observed. The rest of the assemblage is poorly preserved; these fragments have exfoliated or pitted cortical surfaces ranging in severity from moderate flaking of the outer surface, to extensive loss of cortical bone typically associated with deep cracks. A small proportion of these fragments also have abraded edges. The majority of poorly preserved fragments are from layers, in particular those dated to the modern period, this could indicate that some fragments are residual having been reworked from earlier deposits, or that single deposits include refuse from different sources, some of which might have been exposed to weathering, especially rolling and trampling, for longer periods.

Butchery marks were recorded on 42% of fragments, chop marks are more common than cut marks and the majority occur on cattle bones indicating size related

butchery techniques. Gnaw marks were recorded on only 16% of bone fragments, which suggests that whilst a small number of bones were exposed to scavenging before burial, the majority were rapidly buried.

Medieval

The medieval assemblage comprises only ten bones (see Table 3). Identified species include a small number of cattle, sheep/goat, pig bones. Other species include horse, identified from a single third premolar, fallow deer (*Dama dama*), identified from a distal tibia, and goose, from a juvenile tarso-metatarsus.

Post-medieval

The 17th- to 18th-century assemblage is reasonably diverse although most identified fragments belong to livestock species. Together cattle, sheep/goat and pig account for *c* 83% of NISP and cattle is by far the most abundant species. In terms of the relative frequency of livestock species, cattle accounts for 61% of NISP, sheep/goat a further 24% and pig 15%. Less common species include dog, cat, horse, fallow deer, rabbit, chicken, crow and an indeterminate species of fish.

Cattle: MNE and MNI values are presented in Table 4. All parts of the beef carcass are represented suggesting either local slaughter or more likely the disposal of waste from a variety of sources (e.g. butchery and domestic waste). Metatarsals, humeri and scapulae are the most common skeletal elements and at least five individuals are represented. Chop marks were recorded on 57% of cattle and cattle-sized bone fragments, compared with *c* 21% recorded with knife cuts and only 6% with saw marks. This clearly indicates that the dismemberment and reduction of beef carcasses was carried out using a heavy cleaver rather than a knife, as is the case for smaller carcasses. There is no indication of slaughter method, most chop marks occur at major joints or in the mid-shaft region of long bones and generally relate to primary divisions to remove limb extremities, and divide and reduce the carcass. Cut marks relating to skinning were noted on the anterior shafts of metatarsals and filleting marks were noted on a small number of other long bones. Methods of dividing the main trunk of beef carcasses varied, most were divided by removal of vertebrae transverse processes, less commonly the trunk was divided by chopping along the midline of the centrum.

	Cattle				Sheep/Goat			
	post-medieval		modern		post-medieval		modern	
Skeletal element	**MNE**	**MNI**	**MNE**	**MNI**	**MNE**	**MNI**	**MNE**	**MNI**
Deciduous & permanent incisors	4	1	3	1			1	1
Deciduous & permanent premolars	1	1	2	1	3	1	3	1
M1/2	5	2	5	2	6	2	6	2
M3	1	1	2	1	3	2	4	2
Skull	2	1						
Horncore	1	1	2	1	3	2		
Mandible			2	1	3	2	4	2
Scapula	5	3	2	1	2	1	4	2
Humerus	7	4	2	1	1	1	5	3
Radius	1	1	1	1			2	1
Metacarpus	2	1	1	0.5	2	1	2	1.5
Pelvis			2	1	1	1	2	1
Femur	1	1	2	1	3	2	2	1
Tibia	4	2	2	1	2	1	4	2
Astragalus	2	1	1	1				
Calcaneus	2	1	3	2	2	1		
Metatarsus	6	5	4	1.5	1	1		
Phalanx 1	5	1	5	1			2	1
Phalanx 2	5	1	11	2				
Phalanx 3	1	1	2	1				
Total	**55**	**29**	**54**	**22**	**32**	**18**	**41**	**20.5**

Table 4 Cattle and sheep/goat skeletal elements by number of skeletal elements identified to species (or MNE) and minimum number of individuals (or MNI) for post-medieval and modern assemblages.

		post-medieval			Modern			Total		
Taxon	**Fusion category**	**No. F**	**No. UF**	**% F**	**No. F**	**No. UF**	**% F**	**No. F**	**No. UF**	**% F**
Cattle	early	20	1	95	18	2	90	38	3	93
	intermediate	8	6	57	4	8	33	12	14	46
	late	3		100	1	2	33	4	2	67
	final	2	6	25				1	6	14
sheep/goat	early	1		100	10		100	11		100
	intermediate I	2		100	3		100	5		100
	intermediate II	3	1	75	3	1	67	6	2	75
	late	1	2	33	2	2	50	3	4	43
	final	2		100		2	0	2	2	50
Pig	early	1	1	50		1	0	2	1	67
	intermediate I	1		100	1	1	50	2	1	67
	intermediate II		2	0		2	0		4	0
	late					2	0		2	0

Table 5 Livestock species number and percentage of fused epiphyses for post-medieval and modern assemblages. Fusion categories after O'Connor (1989).

Information on the age at slaughter for cattle is limited; mandibles and teeth are comparatively rare in the assemblage so most available data is based upon epiphyseal fusion of the post-cranial skeleton (Table 5). This suggests that mostly sub-adult and adult cattle are represented. A small number of calf bones are also represented indicating that veal was occasionally eaten. Overall the ageing data suggests that cattle were primarily drawn from dairy herds.

Sheep/Goat: MNE and MNI values are also presented in Table 4. Not all parts of the mutton carcass are represented but any absences can generally be accounted for by small sample size. Loose teeth are common and at least two sheep/goat are represented. Butchery marks were recorded on only eight sheep/goat bones including the basal section of three horn cores. This evidence suggests that horns were removed from the skull and their outer sheath detached for further use. Some sheep/goat vertebrae had also been split in half in much the same way as cattle vertebrae indicating that although sheep/goat carcasses were much less extensively butchered than larger species, at least some techniques were universally applied. Tooth eruption and wear data indicates the presence of animals aged 3-6 years (wear stages F and G after Payne 1973), however epiphyseal fusion data suggests that younger animals are also present (see Table 5).

Fused and fusing epiphyses are amalgamated. Only unfused diaphyses, not epiphyses are counted. F = total number of fused/ing epiphyses; % = percentage of fused/ing epiphyses out of the total number of fused/ing epiphyses and unfused diaphyses (U).

Pig: There are too few pig bones to draw any adequate conclusions about procurement, however humeri are the most common element. Most bones and mandibles are from animals less than 2 years of age and one humerus from a perinatal animal further suggests that pigs may have been kept within backyard areas of the City during this period.

Less common species: Horse, dog and cat bones are present in low frequencies from most urban assemblages. Horse carcasses are usually disarticulated and occur as isolated elements, whilst dogs and cats tend to be recovered as whole or partial skeletons, as is the case here. Several bones from at least one dog and one cat were identified from fill (1037) of cesspit [1036]. Measurements taken on two of the dog bones from the cesspit suggest a shoulder height of 35.4cm. With the exception of crow (*Corvid corone*), the other species, namely fallow deer, rabbit, chicken, goose and fish, represent occasional additions to the diet.

Modern

The assemblage from 18th- to 20th-century deposits is also characterised by a high frequency of bones from livestock species, they account for 93% of NISP and once again cattle bones predominate. In terms of the relative frequency of livestock species, cattle accounts for 55% of NISP, sheep/goat 32% and pig only 13%. The overall trend is therefore remarkably similar to that recorded for the post-medieval period, however the species range is not as diverse. Less common species include goat, dog, cat, horse, fallow deer and chicken.

Cattle: The MNE and MNI values (Table 4) indicate that all parts of the carcass are represented suggesting little change in the procurement of meat or the origin of waste deposited at the site. Foot and ankle bones, and loose teeth are common and at least two individuals are represented. Chop marks are only slightly more common than cut marks on modern cattle bones, but the overall pattern suggests little change in butchery techniques from the post-medieval period. However, the available age data (Table 5) indicates

that more calves and younger cattle were selected for slaughter during this period.

Sheep: In similarity with the post-medieval assemblage some sheep/goat bones are absent as a result of small sample size. Loose teeth and humeri are the most common skeletal elements and at least three individuals are represented. Most mandibles are from adult animals between 3-6 years of age and this is confirmed by epiphyseal fusion data (Table 5).

Pig: There is a fairly even spread of bones from different areas of the pork carcass. This suggests either that whole carcasses were purchased; that small-scale pig rearing continued in back gardens/yards or that waste from different sources was deposited on site. Two skull fragments were noted with evidence of decapitation on the occipital condyles. The skulls had also been split in half along the sagittal line in order to get at the brain tissue. All of the other butchery evidence noted on pig bones are cut marks and generally relate to the skinning and boning out of carcasses. Mandibles from two individuals aged 21-27 months were recorded and epiphyeal fusion suggest the presence of younger animals, including a piglet.

Less common species: As already indicated dog, cat and horse are common finds from urban sites and are usually present in low frequencies. Fallow deer and chicken appear to be the only other food animals represented from this period.

Discussion

The assemblages from each of the main periods are relatively small and dominated by the bones of livestock species, in particular cattle. A basic comparison of the relative frequency of livestock species with similar data from a range of other post-medieval and modern assemblages from Bristol (see Table 6) suggests that the species ratios recorded for 22-30 West Street are atypical for both periods.

Most of the other Bristol assemblages either have a higher percentage of sheep/goat to cattle, or near equal proportions of these two species. The only exception to this general trend is the post-medieval assemblage from 26-28 St Thomas Street, which has species ratios similar to West Street. There are a variety of reasons for this apparent discrepancy including dietary preferences of difference socio-economic groups living in separate areas of the City, however given the small size of the assemblages from most of the Bristol sites it would be misleading to draw too strong a conclusion from these gross differences. In order to overcome the sample size problem, relative frequencies were calculated from the combined NISP values from all sites surveyed. This indicates that during both the post-medieval and modern periods the overall trend is for near equal proportions of sheep/goat and cattle, and a low frequency of pig.

In general, post-medieval animal bone assemblages have been given much more consideration than modern assemblages, both regionally and nationally, and it was therefore possible to compare the post-medieval data with contemporary assemblages from elsewhere in Britain (Table 7).

The results of this comparison clearly indicate that there is a great deal of variation in the relative importance of livestock species from urban centres during this period. The West Street sample is a clear outlier; it has species ratios that are most similar to the assemblage from Dursley in Gloucestershire. Using the combined NISP values from all

		sheep/goat		cattle		pig	
Site	**period (phase)**	**NISP**	**% NISP**	**NISP**	**% NISP**	**NISP**	**% NISP**
22-30 West St	modern	32	32	55	55	13	13
30-38 St Thomas St	modern (4)	31	44	30	43	9	13
Cheese Lane	modern (4-6)	23	49	16	34	8	17
Union St	modern (5-7)	48	56	27	32	10	12
York Gate	modern	111	64	49	28	14	8
Total	**modern**	**245**	**51.5**	**177**	**37**	**54**	**11.5**
22-30 West St	post-medieval	23	24	58	61	14	15
26-28 St Thomas St	post-medieval (2-3)	156	30	293	57	68	13
30 Gloucester Lane	post-medieval	12	34	17	49	6	17
30-38 St Thomas St	post-medieval (2-3B)	152	39	192	49	47	12
Cheese Lane	post-medieval (2-3)	156	54	96	33	39	13
Mail Marketing site	post-medieval	51	40	58	45	19	15
Union St	post-medieval (3-4)	300	46	262	40.5	86	13.5
Welsh back	post-medieval (I-VI)	157	60	72	27.5	33	12.5
Total	**post-medieval**	**1007**	**42.5**	**1048**	**44.5**	**312**	**13**

Table 6 Comparison of the relative frequency of livestock species by number of specimens identified to species with similar data from a number of contemporary assemblages from Bristol.

Site	County	Period (phase)	sheep/goat NISP	sheep/goat % NISP	cattle NISP	cattle % NISP	pig NISP	pig % NISP	Reference
22-30 West St, Bristol	Avon	post-medieval	23	24	58	61	14	15	this report
26-28 St Thomas St, Bristol	Avon	post-medieval (2-3)	156	30	293	57	68	13	Higbee (2003a)
30 Gloucester Lane, Bristol	Avon	post-medieval	12	34	17	49	6	17	Higbee (2002a)
30-38 St Thomas St, Bristol	Avon	post-medieval (2-3B)	152	39	192	49	47	12	Higbee (2004)
Alms Lane, Norwich	Norfolk	post-medieval (XVI-XVIII)	1286	34	2091	56	385	10	Cartledge (1985)
Beehive Yard, Bath	Avon	post-medieval (10)	163	45	163	45	37	10	Higbee (2002b)
Benham's Garage, Taunton	Somerset	post-medieval	120	43	154	55	6	2	Levitan (1984)
Blackfriars St, Carlisle	Cumbria	post-medieval	86	32	142	52	45	16	Rackham (1990)
Castle Mall, Norwich	Norfolk	post-medieval (XVI-XVIII)	531	39	677	50	149	11	Albarella *et al* (1997)
Cheese Lane, Bristol	Avon	post-medieval (2-3)	156	54	96	33	39	13	Higbee (2002d)
Christchurch	Dorset	post-medieval	75	43	73	42	25	14	Coy (1983)
Closegate, Newcastle	Tyne and Wear	post-medieval (XVII-XVIII)	121	70	44	26	8	5	Davis (1991)
Exeter	Devon	post-medieval (pm1-pm4)	2900	51	2156	38	608	11	Maltby (1979)
King's Lynn	Norfolk	post-medieval (XIV-XVIII)	513	32	895	56	195	12	Noddle (1977)
Lincoln	Lincolnshire	post-medieval (mid XVII)	758	36	1175	55	195	9	Dobney *et al* (1996)
Lurk Lane, Beverley	Humberside	post-medieval (9)	230	47	202	42	54	11	Scott (1991)
Mail Marketing site, Bristol	Avon	post-medieval	51	40	58	45	19	15	Higbee (2005a) and (2006)
Middleborough, Colchester	Essex	post-medieval	428	56	249	33	87	11	Luff (1993)
North Elmham Park	Norfolk	post-medieval (XVI-XVII)	623	28	1169	53	419	19	Noddle (1980)
Queen St, Newcastle	Tyne and Wear	post-medieval (XVI-XVII)	121	41	144	49	31	10	Allison (1988)
St Peter's St, Northampton	Northamptonshire	post-medieval (XVI-XVII)	100	59	58	34	12	7	Harman (1979)
The Hamel, Oxford	Oxfordshire	post-medieval (9-10)	435	49	376	43	73	8	Wilson and Bramwell (1980)
Total Bristol	Avon and NE Somerset	post-medieval	1007	42.5	1048	44.5	312	13	this report
Totnes	Devon	post-medieval	169	63	79	29	21	8	Bovey (1984)
Union St, Bristol	Avon	post-medieval (3-4)	300	46	262	40.5	86	13.5	Higbee (2003b)
Victoria Works, Dursley	Gloucestershire	post-medieval (5)	78	27	170	59	42	14	Higbee (2005b)
Welsh back, Bristol	Avon	post-medieval (I-VI)	157	60	72	27.5	33	12.5	Higbee (2005c)

Total Bristol includes all post-medieval sites listed in Table 6

Table 7 Comparison of the relative frequency of livestock species from post-medieval assemblage by number of specimens identified to species with similar data from a number of contemporary assemblages.

of the sites listed in Table 7, the Bristol sample falls within a loose cluster of sites with near equal proportions of sheep/goat and cattle. This cluster includes other sites in the region such as Beehive Yard in Bath and Christchurch in Dorset. This basic pattern is considered to be typical of the majority of British urban post-medieval assemblages (Albarella *et al* 1997, 22).

Conclusions

Analysis has shown that small assemblages such as this can provide a range of information about the types and ages of animals culled for the urban meat trade during the post-medieval and modern periods. However, the interpretive value of this information is quite limited and may produce misleading results. More comparative work is needed that could provide a basic framework against which to test the results from small assemblages. Specifically targeting research priorities towards key urban areas or sites, particularly those with contrasting types of occupation (e.g. residential/industrial) and socio-economic groups, would also help to identify some of the factors influencing the variability recorded amongst Bristol's animal bone assemblages.

The Palaeoenvironmental Analysis
by Katie Head and Andrew Mann

Introduction

A total of 13 samples were selected for analysis from deposits considered to be of high potential for the recovery of environmental remains. Pollen and plant macrofossil remains were analysed from a medieval cultivation soil, late post-medieval pit deposits and a garden soil and garden feature of the same date. The plant macrofossil remains from post-medieval features included a diverse range of edible cultivars such as fig, grape, plum, mulberry and walnut. Fruits which may have been collected locally included sloe, elderberry and blackberry, while raspberry, cherry, apple, parsnip and hop are possible cultivars. Some of these may have been cultivated on the site, as cultivation soils were extensive. The pollen profiles largely reflected the background flora of the site and its surroundings rather than human activity on the site. A detailed description is included as little pollen work has been carried out in Bristol.

The excavation revealed limited evidence for medieval occupation and only a probable medieval cultivation soil was sampled. The agricultural nature of the land during the medieval period is also mirrored at excavations at 30 Gloucester Lane (Jones 2002). The discovery of numerous

pits and garden features and soils provide evidence for the increased use of the land from the 17th century.

Plant macrofossil remains

Processing and analysis

For each of the samples thought to contain organic remains (contexts 1037, 1038 and 2038) a sub-sample of 1 litre was processed by the wash-over technique as follows. The sub-sample was broken up in a bowl of water to separate the light organic remains from the mineral fraction and heavier residue. The water, with the light organic faction was decanted onto a 300micron sieve and the residue washed through a 1mm sieve. The remainder of the bulk sample was retained for further analysis.

The remaining samples were processed by flotation followed by wet sieving using a Siraf tank. The flots were collected on a 300micron sieve and the residue retained on a 1mm mesh. This allows for the recovery of items such as small animal bones, molluscs and seeds.

The residues were fully sorted by eye and the abundance of each category of environmental remains estimated. The flots from both processes were scanned using a low power MEIJI stereo light microscope and only those with the potential to provide additional information were fully sorted. Plant remains were identified using modern reference collections maintained by the Service, and seed identification manual (Beijerinck 1947). Nomenclature for the plant remains follows the *Flora of the British Isles,* 3rd edition (Clapham, Tutin and Moore 1989). Further data is available for research within the project archive.

Results

Medieval cultivation soil (3013)

A single bulk sample was processed from a cultivation soil (3013) believed to be medieval in date. The flot contained no seeds or identifiable plant remains although root stems, soft plant tissues, charcoal and clinker fragments were common. Occasional identifiable plant remains (Table 8) were, however, recovered from a column sample (comprising of three 10 litre spits) through this soil. Sedge (*Carex* sp) may have been growing in damp areas, while elderberry (*Sambucus nigra*) is indicative of scrubby, waste ground and commonly found in samples from urban sites.

The presence of annual mercury (*Mercurialis annua*), a weed of cultivated or disturbed soils, and raspberry (*Rubus idaeus*) are an indication that soil 3013 may have been cultivated. The latter is likely to have been cultivated or at least allowed to colonise. As identifiable remains were sparse, it was not possible to detect changes in the environment within the profile. These remains are likely to have survived as they are particularly robust seeds, but probably only provide a limited indication of the range of the original vegetation.

18th-century pit fill (3036)

This sample was taken from the primary fill of a post-medieval rubbish pit. Only sparse plant remains were recovered in association with abundant charcoal and clinker fragments. Occasional charred animal bone fragments were also noted. Charred plant remains included single grains of wheat (*Triticum* sp) and barley (*Hordeum vulgare*), which are likely to have been charred during food preparation or as a result of waste being discarded on to fires. The very low quantities of this waste, animal bone fragments and pottery sherds suggest that domestic processing or waste disposal were piecemeal. Occasional uncharred seeds of white horehound (*Marrubium vulgare*) and annual mercury (*Mercurialis annua*) suggest areas of waste and disturbed or cultivated ground respectively, surrounding the pit.

17th - 19th-century cesspit fills

Although bulk samples were taken from a variety of similar features, the quantity of surviving remains was variable. However, all seeds presumably survived as a result of anoxic (oxygen reduced) conditions.

Samples from cesspits 1080, 2040 and 1045, contexts 1085, 2038 and 1038/1054 and 1037 respectively, contained abundant seed remains. Fill 1085 was dominated by seeds of blackberry (*Rubus fruticosus* agg), and raspberry (*Rubus idaeus*), in association with occasional wild strawberry (*Fragaria vesca*), apple (*Malus* sp) and cherry stones (*Prunus avium/cerasus).* These could have been gathered from local hedgerows or woodland, but at this time were also commonly cultivated. Fig (*Ficus carica*) and grape pips (*Vitis vinifera*) were also common, and are likely to have been imported. Although fig could be have been grown locally, the fruit is likely to have produced vestigal seeds unlike the fully formed seeds identified from this sample. Black mustard (*Brassica nigra*) may have been a garden cultivar, but could also have been growing wild in this location. Other weed seeds present included chickweed (*Stellaria media*), fat hen (*Chenopodium album*), annual mercury (*Mercurialis annua*) and cornflower/lesser knapweed (*Centaurea cyanus/nigra*). These would have grown on waste or disturbed ground surrounding the pit, although it is also possible they originated from cultivated ground. Fragments of unidentified soft plant tissues such as stem fragments were common, and a small 'pit fall' assemblage of small mammal and amphibian bone was also noted, indicating that the pit was open for some time (Table 9).

The assemblage from pit 2040, fill 2038, was similar to those described above, being rich in apple pips (*Malus* sp), and seeds of blackberry (*Rubus fruticosus* agg), raspberry (*Rubus idaeus*), wild strawberry (*Fragaria vesca*), cherry (*Prunus avium/cerasus*), and fig (*Ficus carica*). Other common seeds recovered include plum (*Prunus domestica*) sloe (*Prunus spinosa*), mulberry (*Morus nigra*), wild parsnip (*Pastinacea sativa*) and hop (*Humulus lupulus*). Although parsnip could have grown as a casual in waste places, and the hop in hedgerows and thickets, both may have been cultivated. The Mulberry was a particularly popular orchard fruit throughout the medieval and post-medieval periods. Other weeds of waste or cultivated

Latin name	Family	Common name	Habitat	1037 lower	1037 upper	1038 lower	1038 upper	1057	1085	1100	2012	2029	2038	3013 lower	3013 upper	3036	4033
Volume processed (L)				1	1	1	1	10	10	10	10	10	10	1	1	10	10
Fraction of flot sorted				1/2	1/2	1	1	1	1	1	1	1	1	1	1	1	1
Charred plant remains																	
Triticum sp grain	Gramineae	wheat	F													+	
Hordeum vulgare grain (hulled, straight)	Gramineae	barley	F													+	
Gramineae sp indet grain	Gramineae	grass	AF										+				
Uncharred plant remains																	
Brassica nigra	Cruciferae	black mustard	AB			2			1								
Viola sp	Violaceae	violet	CDE									+					
Stellaria media	Caryophyllaceae	chickweed	AB			1	1		1								
Chenopodium/Atriplex sp	Chenopodiaceae	goosefoot/orache	ABCD							+							
Chenopodium album	Chenopodiaceae	fat hen	AB			2			1				6				
Vitis vinifera	Vitidaceae	grape vine	F			3			5				10				
Rubus cf *idaeus*	Rosaceae	raspberry	CD	127	119	93	11		26				19		+		
Rubus fruticosus agg	Rosaceae	blackberry/bramble	CD	305	332	21	29	+++	41			+	89				+
Rubus idaeus/caesius/fruticosus	Rosaceae	raspberry/bramble etc	CD	25	30												
Potentilla sp	Rosaceae	cinquefoil	BCD				1										
Fragaria vesca	Rosaceae	wild strawberry	CD						21				12				
Prunus spinosa	Rosaceae	sloe	C	1	1	2			1				8				
Prunus domestica	Rosaceae	plum	F			4			1				9				
Prunus avium	Rosaceae	cherry	C						1				4				
Prunus avium/cerasus	Rosaceae	cherry	CF			1			14				18				
Malus sp	Rosaceae	apple	CF						15				53				
Mercurialis annua	Euphoriaceae	annual mercury	AB			3	1		8		26	+	24	+	+	+	++
Urtica dioica	Urticaceae	common nettle	CD				1										
Humulus lupulus	Cannabaceae	hop	CF										2				
Ficus carica	Moraceae	fig	F	2	3	45		++	58	+			48				
Morus nigra	Moraceae	mulberry	F										1				
Juglans regia	Juglandaceae	walnut	F			1											
Stachys sylvatica	Labiatae	hedge woundwort	C										1				
Marrubium vulgare	Labiatae	white horehound	BD				1					+				+	
Labiatae sp indet	Labiatae									+							
Sambucus nigra	Caprifoliaceae	Elder	BC		1			+		+	190	++		+			+
Centaurea cyanus/nigra	Compositae	cornflower/lesser knapweed	ABD						1								
Eleocharis sp	Cyperaceae	spike-rush	E				1										
Carex sp	Cyperaceae	sedge	CDE								3		1		+		

Key:

Habitat	Quantity
A = cultivated ground	+ = 1 - 10
B = disturbed ground	++ = 11- 50
C = woodlands, hedgerows, scrub etc	+++ = 51 -100
D = grasslands, meadows and heathland	++++ = 101+
E = aquatic/wet habitats	
F = cultivar	

Table 8 Plant remains from selected samples.

Context	Sample	large mammal	small mammal	fish	bird	mollusc	insect	charcoal	charred plant	waterlogged plant	other	Comment
1037	6		mod	occ			occ			abt	abt	phosphate concretions
1037	7		occ	occ						abt	abt	phosphate concretions
1038/ 1054	8	occ	occ	occ						abt	abt	phosphate concretions
1057	5	occ	occ	occ	occ			mod		abt		
1085	10	occ/mod	occ							mod	abt	phosphate concretions
1100	9	occ						mod	occ	abt		
2012	1	occ				occ				abt		
2029	4	occ		occ				abt		mod		
2038	15	mod					occ		occ	abt		
3013	18		occ					abt		mod		
3036	20	occ	occ					occ	occ	occ		
4033	22	occ						mod		occ		

Key:
occ = occasional mod = moderate abt = abundant

Table 9 Summary of environmental remains from selected samples.

ground, similar to those discussed above also survived.

The fills of pit 1045, contexts 1038 and 1037 provided the largest assemblages from all features sampled, although species diversity was low. These two contexts were also further sub-sampled on site to provide an upper and lower division for each context. The primary fill (1038) of this pit was dominated by seeds of blackberry (*Rubus fruticosus* agg), raspberry (*Rubus idaeus*), and fig (*Ficus carica*). The lowest sample (1038) also contained grape pips (*Vitis vinifera*), plum (*Prunus domestica*) and sloe (Prunus spinosa) stones. A single specimen of walnut (*Juglans regia*) was also recovered from within this sample, and although it is likely to have been imported from the continent, walnut trees were grown and propagated in this country throughout the post-medieval period. The upper fills from 1037 appear less diverse and are notable for being dominated by blackberry (*Rubus fruticosus* agg), and raspberry (*Rubus idaeus*) seeds.

Occasional seeds of elderberry (*Sambucus nigra*), blackberry (*Rubus fruticosus* agg), and fig (*Ficus carica*) were also recorded in samples from the primary fills of cesspits [4031], [1115] and abutting the walled feature 1006 and 1080, contexts 4033, 1100 and 1057, respectively.

A single sample was also analysed from a post-medieval garden soil (2029), and from a post-medieval garden feature (2012). These only produced occasional seeds of annual mercury (*Mercurialis annua*), elderberry (*Sambucus nigra*), Violet (*Viola* sp), white horehound (*Marrubium vulgare*) and blackberry (*Rubus fruticosus* agg).

Discussion

Samples from the post-medieval cess pits show varying concentrations of cess waste and associated vegetation, some possibly thrown into the pit to dampen down foul odours. Only a limited quantity of domestic or kitchen waste was recovered. The plant remains provide evidence for a variety of edible fruits in the diet, and it is possible that some of these were cultivated on the site or locally and some collected from surrounding hedgerows and woodland. Cultivated species within the post-medieval cess pits were dominated by the fruit species plum, cherry, fig, grape and apple, although mulberry and walnut were also present in lower numbers and were probably imported regularly from the Continent during the post-medieval period. Blackberry was seldom cultivated as it was commonly found growing wild and cultivation did not improve the quality or quantity, while raspberry, although also a native fruit, was under cultivation from the 16th-century onwards (Roach 1985). It is also possible that strawberries, which were also taken into cultivation around this time, may have not been collected from the wild. Hop, wild parsnip and black mustard all may have been cultivated in garden plots within the city. but are equally likely to have been growing wild or as casuals on the site. If cultivated, these all have culinary uses.

The weeds present in many of the samples are commonly found in deposits of medieval to post-medieval date in the city and reflect a mosaic of waste ground and disturbed or cultivated ground surrounding the pits.

CONCLUSIONS

The archaeological investigations at 22-30 West Street have reinforced the idea that medieval dwellings were most likely to have been concentrated along the street frontage. No medieval domestic occupation layers were encountered and the earliest pottery sherds, dating from the late 13th to 14th centuries, were from former cultivation-soil horizons. The exact layout of the medieval tenement plot boundaries in this vicinity is still unknown. However, the discovery in 2002 on the adjacent site of 18-20 of medieval wall footings and a surface extending beyond the western edge of that site, proved the present plot divisions must be post-medieval in origin.

The earliest boundary ditch and remains of standing

walls dated from the later 17th century, evidence from the 2003 evaluation, the excavations at 18-20 and the nearby site of Gloucester Lane, implies that medieval buildings along West Street were demolished during the Civil War. From around 1650 onwards rebuilding began and a reorganisation of plot boundaries took place.

It is only from the stratigraphy of the early 17th century onwards that a noticeable increase in the density of occupation becomes apparent. This was archaeologically represented by an excavated sample of thirty-five intercutting, domestic rubbish-pits in an area measuring 7m by 6m to the rear of Nos.26-28. One of these pits contained a toy 'Fishtail-Butt' musket typologically dated to the early 17th century. Although these toy guns are known nationally one has never before been found in Bristol. Another pit contained an almost complete cloth seal, local examples of these have mostly been recovered from riverfront sites. The rubbish pits were superseded by stone-built cess-pits, the contents of which reflected a higher status of occupation in the early modern period, at around the time that immigrant Huguenot merchants and traders were at the peak of their success. In particular, expensive tablewares and pieces of a 'carboy', a substantial bottle used for storage, were recovered. Ironically, few standing walls survived from this period. Buildings were cartographically represented at both the West Street and Waterloo Road ends of the site in 1742 but even the below-ground remains of these earlier structures were heavily truncated by intensive 19th- and 20th-century rebuilding.

In the centre of the site an area of land remained open and in use for waste disposal until sometime in the later 18th century. Part of a domestic/stable refuse-pit, over 2m in depth was sealed by quantities of imported garden soil (of questionable quality) and the construction of a large, keyhole-shaped structure. Although it first appeared to be part of a kiln or oven, there were no traces of flues, signs of heating or any associated industrial activity in the vicinity. The keyhole-shaped structure had been built in stages but evidently to a single original design. It had no lining or sealed base to indicate that it was a pond and thus it would seem to have had a decorative or ornamental, rather than a functional purpose. Several suggestions have been put forward for the structure's usage that range from a lawn-billiards or pell-mell pitch, to an icehouse, shooting range, or a raised planting bed. The most probable explanation is that it was a sort of garden grotto or small temple (Timothy Mowl *pers. comm.*), perhaps with a statue, or similar object, resting on a plinth at the southern end.

Assuming the structure was completed the most convincing evidence for its use as a garden feature is the surrounding imported garden soil that also contained a short row of cattle long bones (also known as canon bones), set vertically, so that the proximal ends would have protruded above ground to form a decorative border. The visual effectiveness of this distinctive garden did not compete with commercial enterprise, by the mid 1770s a workshop-type building (recorded in early directories as Winwoods engine-smiths and screw-making works) had been constructed in place of this ornamental garden, while low-quality dwellings also began to encroach on the remaining open spaces at the Waterloo Road end of the site. The former Winwoods workshop premises remained in use throughout the early 19th century.

In 1870 the opening of St Philip's station, on a branch line of the Midland Railway, led to a predominance of light-industrial and livestock-processing plants along Waterloo Road. The character of this part of Old Market had thus substantially altered in the space of 100 years and this is reflected in the results of the recent archaeological investigations along the south side of West Street. Garden soils, mostly used for domestic waste-disposal, were succeeded by machine-bases and industrial surfaces. The once-grand Georgian houses were subdivided for small commercial operations and tenements, stables were replaced by motor-repair workshops. The site escaped with relatively little damage in the Blitz but became increasingly run-down after the closure of the St Philip's station in 1953. After nearly 200 years of industrial use the present housing development has made the area behind 26-30 West Street residential once again.

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EXCAVATIONS AT THE OLD COUNCIL HOUSE, CORN STREET, BRISTOL, 2005

by
Reg Jackson

SUMMARY

This report describes the results of archaeological work carried out in 2005 at the Old Council House, Corn Street, Bristol. Despite the small scale of this work, the archaeological evaluation, watching brief and excavation together provided a unique opportunity to investigate the archaeological resource in the heart of the medieval city. Continuous occupation from at least the late 12th century to the present was recorded, although it is clear that earlier occupation deposits remained unexcavated. Nevertheless, deposits and features over two and a half metres deep were found to have accumulated since the 12th century and the wealth of finds for such a small excavation, including a gold ring and rare imported pottery, hints at the high status of the inhabitants.

Specialist reports are included on the pottery, ceramic roof tiles, small finds, animal bone, fish bone and environmental remains.

INTRODUCTION

In 2005 Bristol and Region Archaeological Services carried out an archaeological excavation within the Old Council House on the north side of Corn Street, Bristol, as a result of a planning application for the installation of a lift which necessitated the excavation of a pit about 2.5 metres deep into archaeological deposits.

The site is located in the heart of the medieval city, some 40 metres north-west of the meeting point of the major thoroughfares of Corn Street, Broad Street, Wine Street and

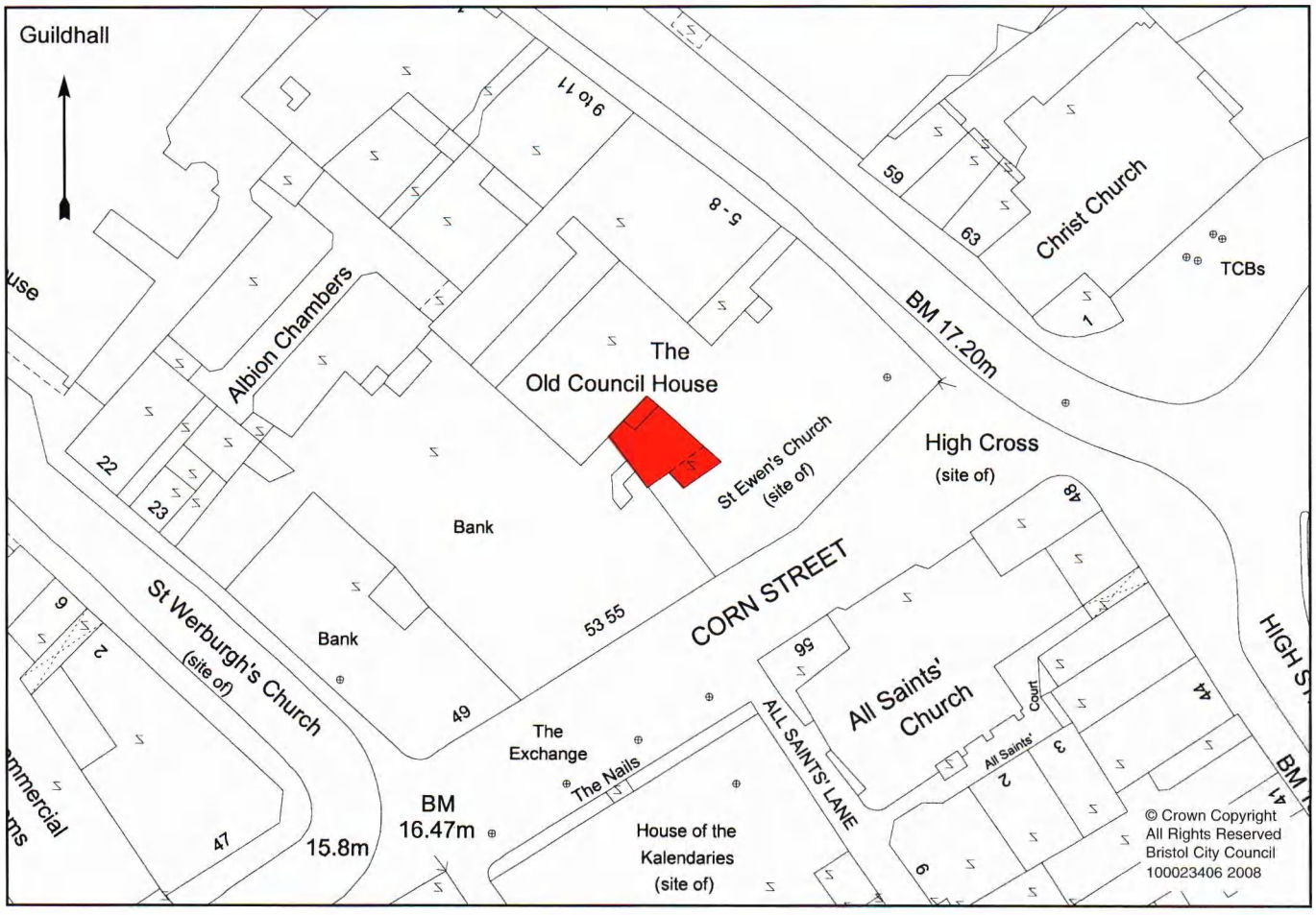


Fig.1 Site location plan, scale 1:750.

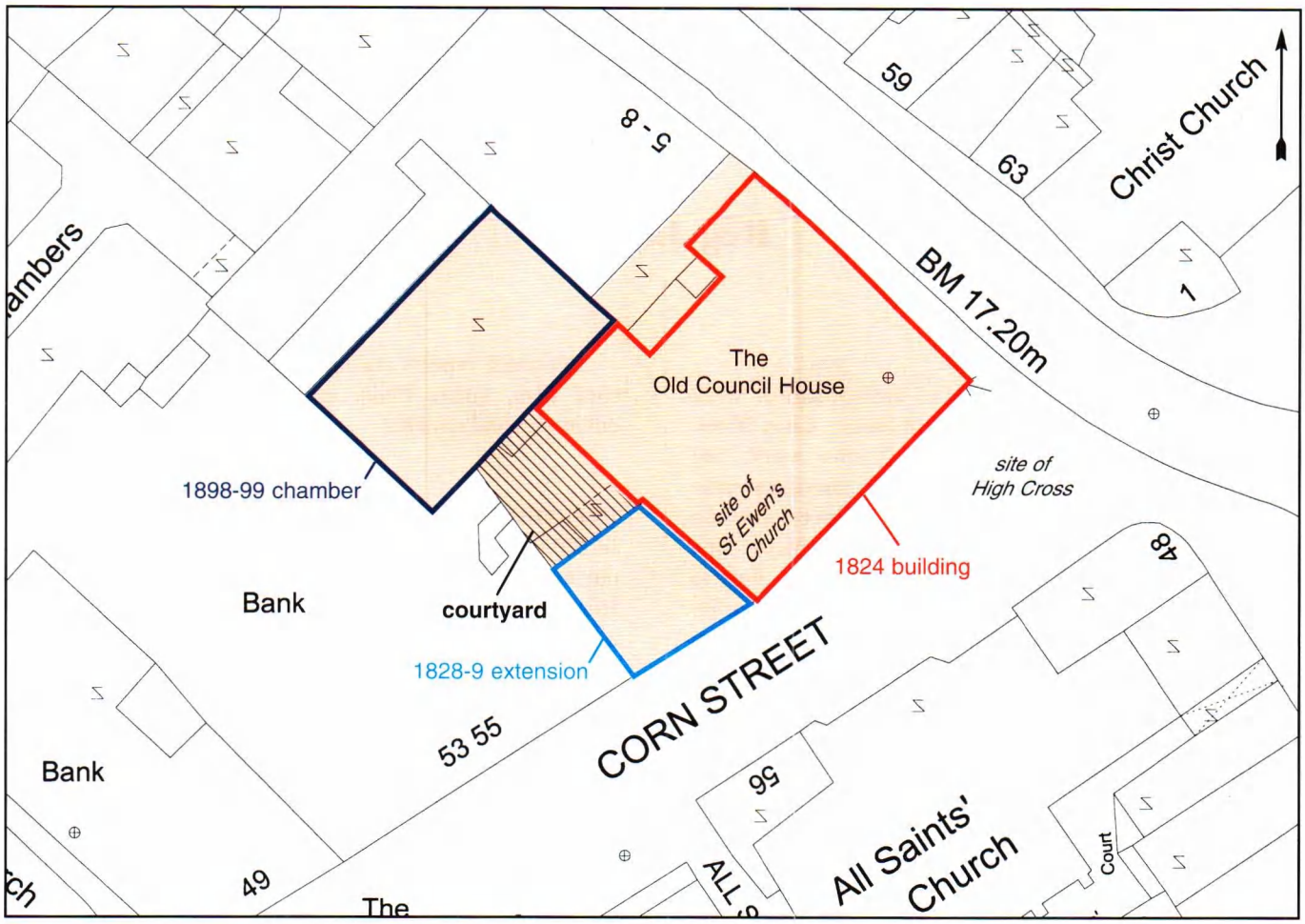


Fig.2 Ground floor plan of the Council House showing building phases, scale 1:500.

High Street, and adjacent to the site of St Ewen's church, founded in c.1140 and demolished in 1791 (Fig. 1; NGR ST 58847 73048). It lay in a courtyard measuring 10 metres by, at most, 7.5 metres, bounded on the east by the Old Council House built in 1824, north and south by the 1898-1899 and 1828-1829 extensions respectively to that building, and west by nos. 53-55 Corn Street which is occupied by the HSBC Bank (Fig. 2). All the buildings surrounding the site are Listed Grade II.

The site lies at around 17.4 metres above Ordnance Datum. The underlying geology is Mercia Mudstone of the Triassic period.

An historical and architectural survey of the Old Council House was undertaken by Roger Leech in 2000 (Leech 2000) and this was followed by an archaeological evaluation carried out by Bristol and Region Archaeological Services in January 2005 (Fig. 3; BaRAS 2005), a watching brief in August 2005 and an excavation in November 2005.

The archaeological investigations were required as a condition of the planning consent granted to Property Services, Bristol City Council (Planning Reference 05/00580/LA) and the requirements were set out in a 'Brief for Archaeological Excavation and Watching Brief' issued by the City Archaeologist in August 2005 (Jones 2005).

The objectives of the excavation were to establish the date of the earliest activity on the site and attempt to characterise the nature of that occupation; to record any later post-medieval structures within the site and to establish their function; to examine palaeoenvironmental and technological samples to establish a greater understanding of the character and development of the historic core of the city; and to monitor groundworks to establish the surface of the earlier (probably pre 19th-century) archaeological levels in order to ensure their protection in the course of subsequent construction.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

In recent years there has been little opportunity to investigate the archaeology of central Bristol owing to the lack of redevelopment on the main medieval thoroughfares. Certainly no archaeological work using modern techniques of excavation and recording have taken place on Corn Street. The excavations nearest to the site were to the north and north-east on Broad Street and Tower Lane.

In 1991 surviving areas of stratigraphy were excavated below the former Head Post Office on the west side of Broad Street, some 50 metres to the north of the present site (Rawes 1992, 215). There, a 12th-century wall, postholes

and a large cesspit were recorded near the street frontage, as were a succession of 11th- to 12th-century linear features, including one which would have comprised planks set vertically in the sand with intervening gaps of about 0.3 metres. Against Leonard Lane a large medieval cellar with, below, the rear of a bank which may have been the precursor of the adjacent early town wall, were uncovered. The lower storey of late medieval double-storeyed cellars was recorded on the site of the Creswicke mansion which was destroyed by fire in 1818.

In 1980 a site at Tower Lane, just inside the city wall and 70 metres north-east of the present site, was excavated (Youngs & Clark 1981, 205-206). The earliest occupation discovered there were cesspits, isolated postholes and a pit containing evidence of burning, metal slag, animal bone and pottery dating to the 10th and 11th centuries. In the early 12th century a stone building with an undercroft, possibly a merchant's house, was erected. The site was intensively occupied with a complex of stone and timber buildings constructed in the 14th and 15th centuries. In 1991 the adjacent plot was excavated and a cesspit containing pottery of Saxo-Norman date was revealed. Subsequently a building of 12th-century date had undergone major alterations in the 13th, 14th and 16th centuries, culminating in its conversion to a 'cyder house' in the 18th century (Rawes 1992, 215).

St Ewen's church was founded in about 1140 at the corner of Corn Street and Broad Street and was given to Thurstan the priest by Earl Robert (1125-1147) (Lobel & Carus Wilson 1975, 5). It was probably rebuilt in the early 15th century and was 22 yards (20 metres) long and 14 or 15 yards (13 metres) wide. There was a nave with one aisle on the south side, the aisle being a chapel in honour of St John the Baptist to which was attached the Guild or Fraternity of Tailors, founded in 1399. Successive Council Houses, rebuilt on the corner site from 1552 to the 1820s, gradually

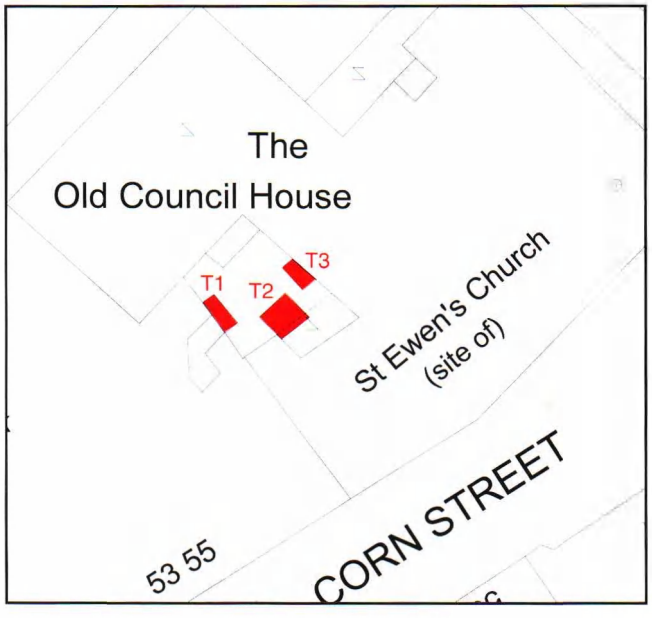


Fig.3 Location of the evaluation trenches, scale 1:500.

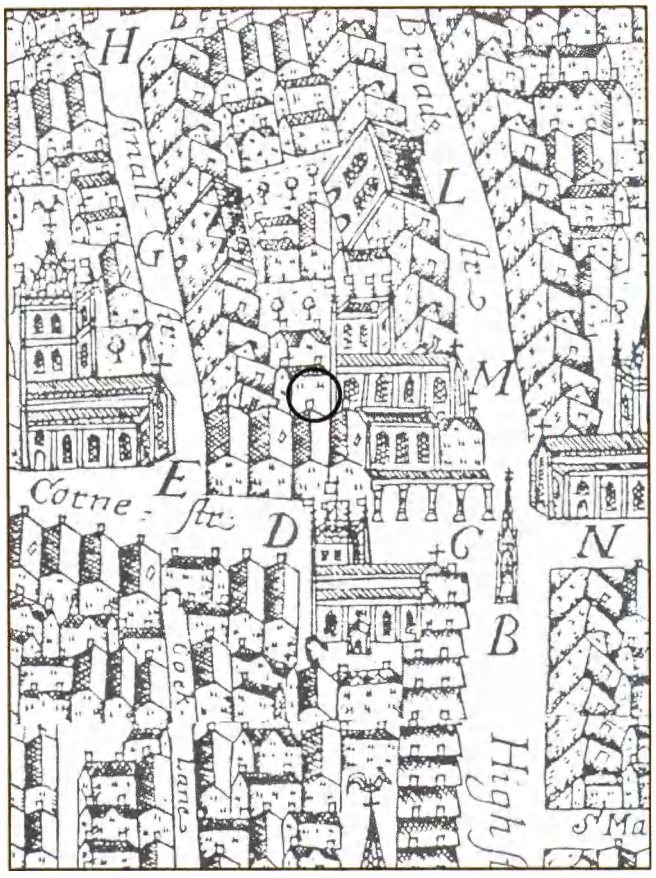


Fig.4 Millerd's map, 1673.

demolished and absorbed first the chapel, and then the rest of the church (Neale 2001, 33).

The Old Council House

The following account is based on an historical and architectural survey of the Old Council House carried out by Dr Roger Leech (2000).

The present Old Council House building dates from 1824, with an extension on its west side added in 1828. Prior to this the site was occupied by a number of important buildings. The church of St Ewen occupied the corner of Corn Street and Broad Street opposite Christ Church. Following the Dissolution the guild chapel of the Fraternity of St John the Baptist became 'a common place of audience' known as the Tolzey, effectively a court of law, and the Council House. A single dwelling can be seen on Millerd's map of 1673 occupying the corner plot (Fig. 4). The remainder of the properties fronting Corn Street were erected in c.1675 and a detailed plan of these properties, nos. 49-50 Corn Street, survives (Fig. 5).

In 1699 a resolution was passed by the Common Council that the Council House 'shall be amended and repaired' and this involved the demolition of the Tolzey, which was no longer deemed 'worthy of the wealth and dignity of the city'. The new Council House was built in the classical style on the south side of St Ewen's church between 1701 and 1704 (Figs. 6 & 7). Its dimensions were: 54 feet (16 metres)

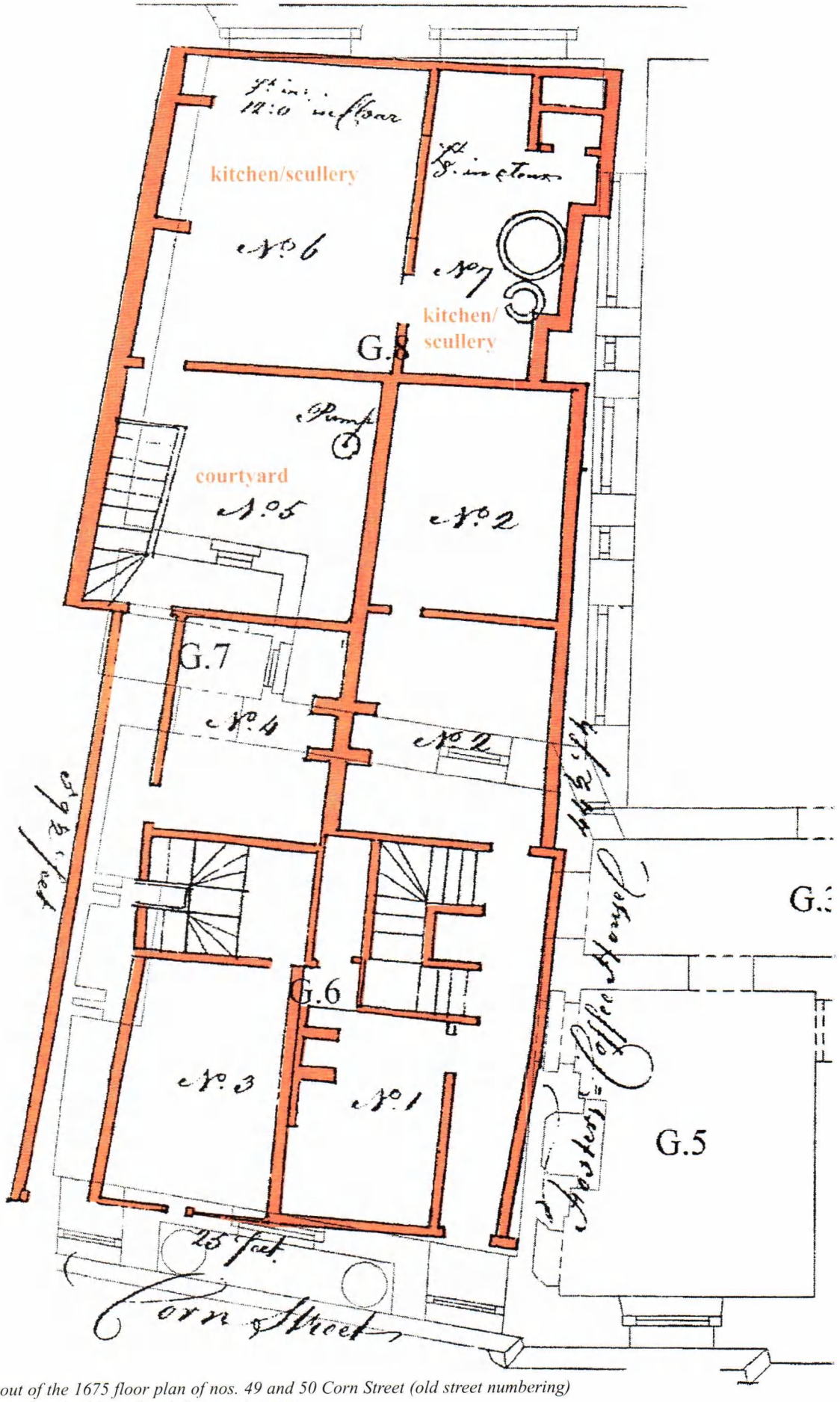


Fig.5 Layout of the 1675 floor plan of nos. 49 and 50 Corn Street (old street numbering) overlaid on a modern building plan (after Leech 2000).

Fig.6 The 1704 Old Council House, Corn Street, looking west. James Johnson 1822. Bristol Museums, Galleries & Archives.

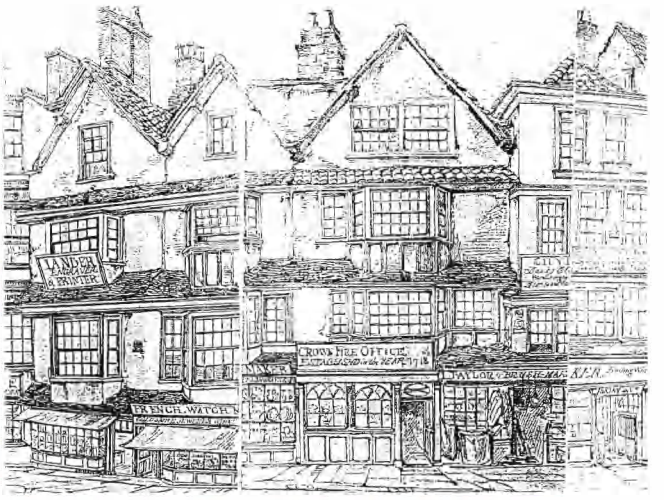
on the Corn Street front and 33 feet (10 metres) onto Broad Street. The front was built entirely in freestone and was two storeys high. The Corn Street frontage of the late 18th century can be seen on drawings in the Braikenridge Collection and other sketches and watercolours from the time (Figs.6, 7, and Fig. 8, after Leech 2000).

By 1787 St Ewen's had ceased to function as a church and was being used as a library to store the city's archives. In 1788 an Act was obtained to enlarge the Council House. The church was demolished in 1791 but no further work took place on the scheme for thirty years. In 1823 Robert Smirke submitted a design to build a new Council House and widen Broad Street by demolishing the existing Council House and two adjoining properties and utilizing the site of St Ewen's. The design was approved and work began in 1824.

The foundation stone of the new Council House was laid by Mayor J. Barrow on 12 May 1824. By demolishing the two properties to the west of the old Council House, Smirke was able to effect the widening of Broad Street, even though this new building was wider than its predecessor (approximately 22 metres by 22 metres). The shell of the building was finished by the end of 1825, and completed and occupied in February 1827. It did not conform to the line of the rest of the Corn Street frontage. The new building was built in the Greek Revival style and was largely a restatement of the design used by Smirke for the Trafalgar Square Union Club and College of Physicians.

An extension was built on the west side of the new Council House between 1828 and 1829 as the original lighting was not adequate (Plate 1). It was designed by Pope and Dymond and followed Smirke's Classical style. Its construction involved the demolition of two further properties on Corn Street and was finished in November 1829. A further extension to the building, a new Chamber, was added to the north-west corner of the Council House in 1898-1899.

Fig.7 Watercolour of the 1704 Council House by E. Cashin, looking east.



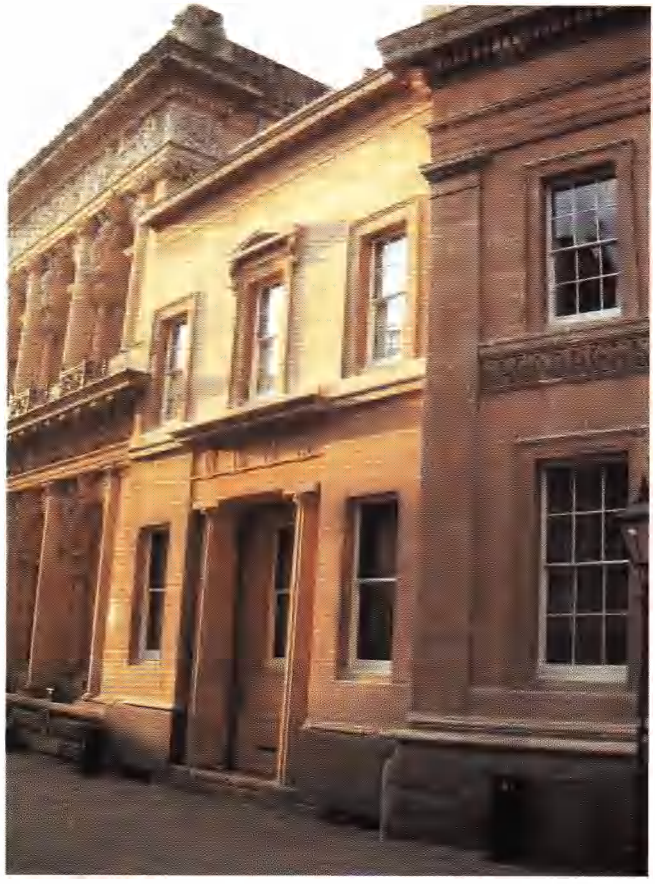


Plate 1 The 1828 extension to the Council House, Corn Street, looking west.

THE EXCAVATION

Methodology

An irregularly shaped area measuring at most 6 metres by 2.5 metres was excavated by hand (Fig. 9). Only the south-western end of the area was on the site of the proposed lift and was excavated to the base of the lift pit. The north-eastern end of the area, over a length of 4 metres, was excavated to a maximum depth of 0.8m below the level of the existing courtyard.

The watching brief which preceded the excavation and was carried out when the level of the courtyard was reduced by about 0.8m, confirmed the results obtained from the evaluation trenches and did not add to the information gained from the excavation.

Archaeological features, structures, cuts, fills and layers observed during the work were recorded using a continuous numbered context system. No separate feature or structure numbers were used. The following context numbers were allocated to the various stages of the archaeological work:

Evaluation:	100 to 310
Watching Brief:	1 to 23
Excavation:	400 to 501

The evaluation, watching brief and excavation archives were assigned the Bristol Museums, Galleries & Archives accession number 2005/6. All the paper archive and finds from the site bear this accession number and have been deposited in the museum. The archaeological work has been given the Bristol Urban Archaeological Database event numbers 4202 and 4244.

The site has been phased as follows:

Period 1: Medieval
- Period 1A: Late 12th to mid 13th century
- Period 1B: Demolition of wall 484, mid 13th century
- Period 1C: Mid 13th century to late 15th century

Period 2: Demolition of Period 1C building, late 15th ccentury
Period 3: Late 15th century to 1675
Period 4: Construction and occupation of the 1675 building
Period 5: 1824 to 1898/99
Period 6: 1898/99 to the present

Period 1: Medieval

Period 1A: Late 12th to mid 13th century

(Figs. 10, 18-20)

The area was only excavated to the base of the lift shaft at around 14.85m above Ordnance Datum (aOD) and so the earliest archaeological features and deposits were not encountered. The excavation terminated at the late 12th- to mid 13th-century occupation although it was clear that the archaeological resource continued below this level.

The oldest feature uncovered was a north-west/south-east wall (484) which had been cut by Period 4 wall 401/448

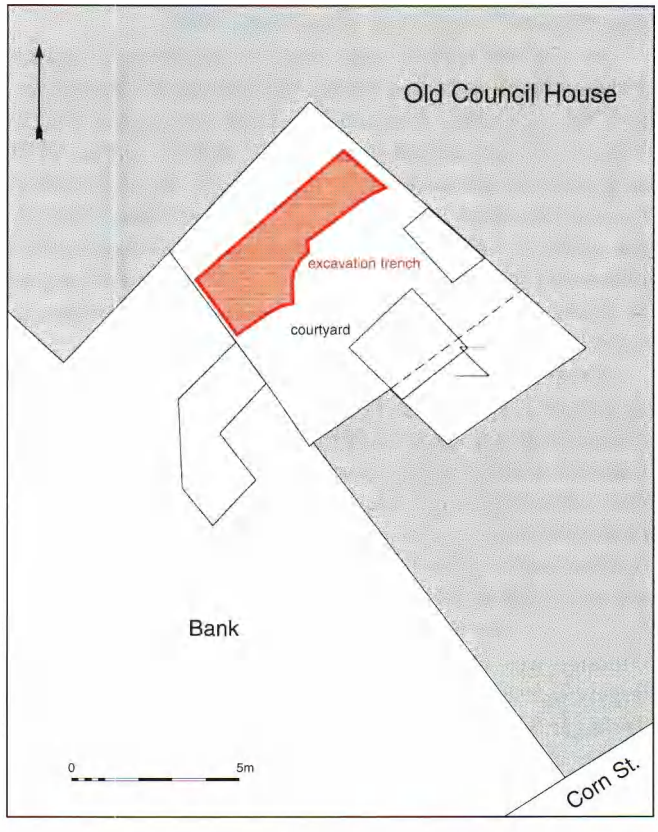


Fig.9 Plan showing the location of the excavation.

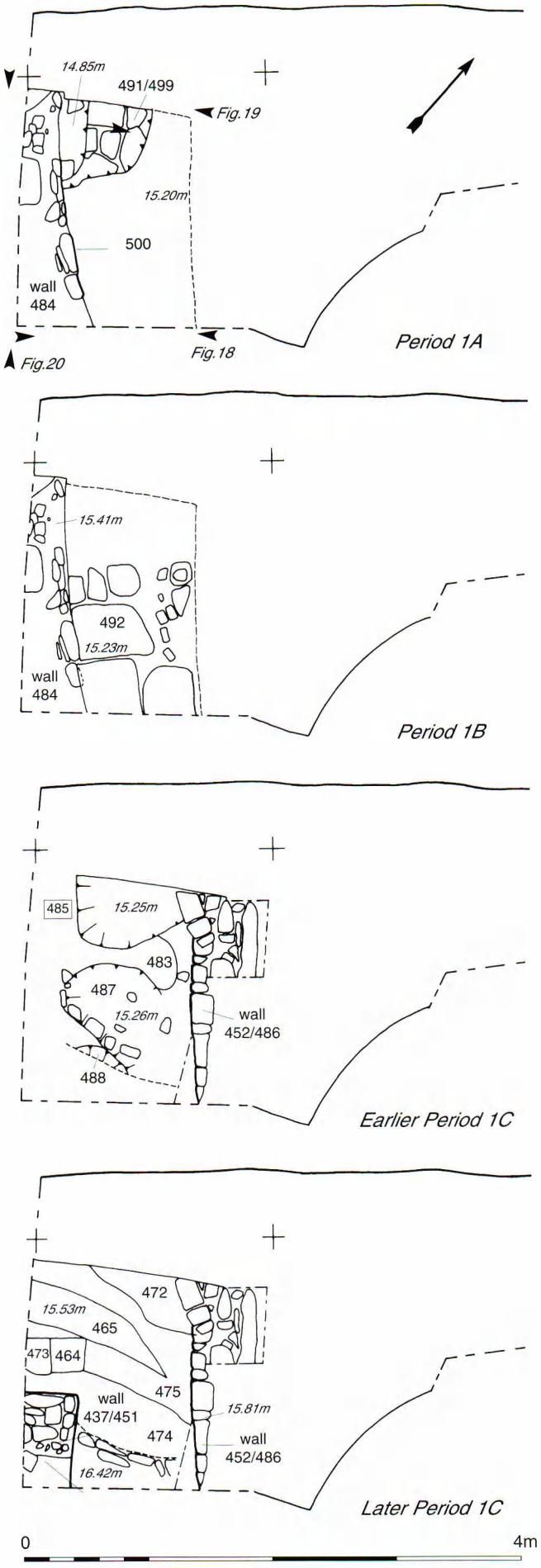
Plate 2 Period 1A: wall 484, looking south-west. Scale: 1m.

(Plate 2). It was constructed mainly of Brandon Hill Grit with a few pieces of Pennant sandstone and was bonded with a friable, light yellow-brown, sandy mortar. It was at least 0.35m wide, although its western face lay outside the excavated area. The wall contained a sherd of 12th- to mid 13th-century pottery.

Abutting the eastern face of wall 484 was a layer of Pennant sandstone rubble (491/499) which appeared to be slumping into a feature below, although this was not investigated. Overlying the rubble were layers of dark brown clayey silt which produced sherds of 11th-/12th-century hand-made cooking pot (500, 501). Over deposit 501 were patches of red-brown and dark brown sandy clay containing charcoal flecks, animal bone and 12th- to mid 13th-century pottery (493-498). It is assumed that these deposits all relate to the occupation of the building of which wall 484 formed a part.

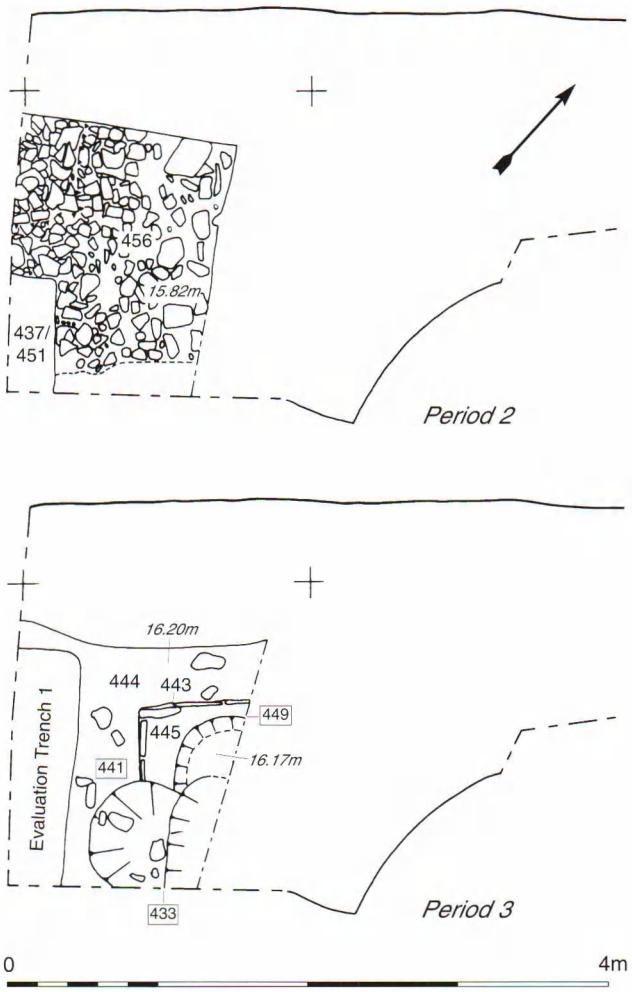
Period 1B: Mid 13th century
(Figs. 11, 18-20)
Overlying the Period 1A occupation deposits, on the east side of the excavated area, was a layer of rubble presumably resulting from the demolition of the Period 1A building. This consisted of fragments of Brandon Hill Grit and yellow sandy mortar (492). It produced no dating evidence but pre-dates the overlying deposits which contained pottery dating from the mid 13th to the late 15th centuries.

Period 1C: Mid 13th century to late 15th century
(Figs. 12, 13, 18-20, 22)
At the beginning of this period of occupation a north-west/south-east wall (452/486) was built on the Period 1A and 1B deposits (Plate 3). This was 0.6m wide and constructed of Brandon Hill Grit bonded with a pale pink mortar, although its rubble core was bonded with grey-brown silty clay. Its western face had been rendered with pale pink plaster (458). It had been cut to the north-west by



Figs.10-13 Main excavation areas, scale 1:50.

Plate 3 Period 1C: wall 452/486, looking north-east. Scales: 0.5 and 1m.



Figs.14-15 Main excavation areas, scale 1:50.

Period 4 wall 401/448.

Abutting the western face of this wall were deposits of bright red to dark brown sandy clay containing much charcoal flecking and mid 13th- to mid 14th-century pottery (483, 487, 488, 489). These deposits were in shallow depressions and their bright red colour, almost certainly the result of burning, suggests that they may have been the remains of hearths. Deposit 483 was cut by a pit (485) 0.2m deep and filled with red-brown sandy clay (483).

Another north-west/south-east wall (451/437) was built over the possible hearths 483, 487, 488 and 489. This was constructed of Pennant sandstone bonded with a pale pink mortar, but did not extend the full width of the excavated area. Walls 451/437 and 452/486 were abutted by a succession of interleaving occupation deposits consisting mainly of dark brown, red-brown and dark grey silty clays containing abundant charcoal, animal bone and pottery having a date range from the mid 13th century to the late 15th century (462-468, 472-482). These probably equate to similar deposits in Evaluation Trench 2 which also contained pottery of late 13th-/14th-century date (225-229).

Period 2: Late 15th century

(Figs. 14, 18-20, 22)

A series of rubble deposits (450, 453-457, 459-460) covered the excavated area and appeared to derive from the demolition of the Period 1C building (Plate 4). The rubble deposits contained a large number of late 13th-/14th-century glazed ceramic ridge tiles, Pennant sandstone roof tiles, a fragment of red brick and pottery having a late 15th- to mid 16th-century date range for its production. However, a late 15th-century date for the demolition seems most likely. One of these demolition deposits contained a late 14th-century gold ring (459; SF43, Fig.26.2).

An area of crushed pink mortar in Evaluation Trench 2 (224) also probably relates to this demolition event.

Period 3: Late 15th century to 1675

(Figs. 15, 18-20, 22)

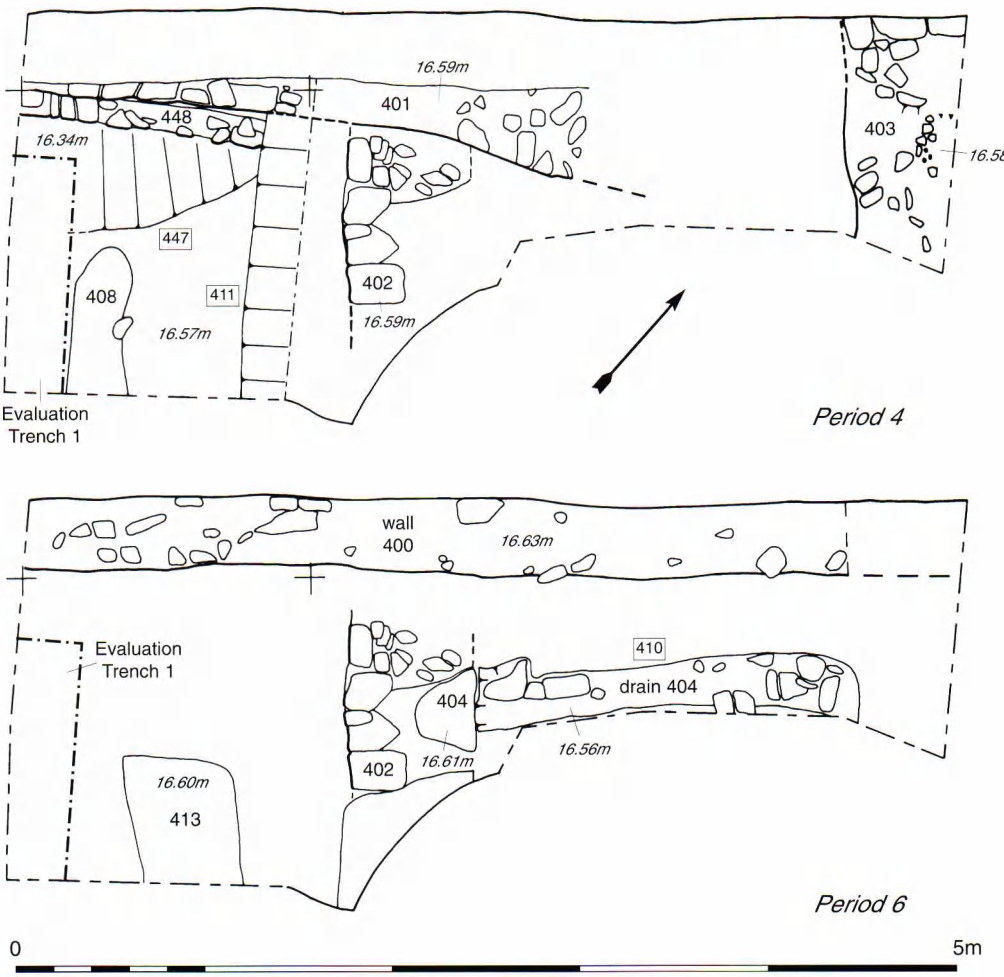
No walls are associated with this period of occupation of the site and it seems likely that the area was used as a garden.

Two lines of Pennant sandstone slabs set on edge and forming a right-angled corner (443) are typical of those observed on excavations elsewhere in Bristol to define the edges of garden borders and paths (Plate 5). These were

Plate 4 Period 2: demolition rubble 456, looking south-west. Scale: 1m.

Plate 5 Period 3: edging stones 443, looking west. Scales: 0.2m and 0.5m.

Plate 6 Period 3: pit 449, looking east. Scale: 0.5m.



Figs.16-17 Main excavation areas, scale 1:50.

abutted by a deposit of red-brown sandy clay containing stone fragments, pieces of brick or tile and a large quantity of late 15th- to mid 16th-century pottery sherds (444/445). A similar deposit in Evaluation Trench 2 (223) also produced 16th- and early 17th-century pottery.

The stone edging and its associated deposit had been cut by a number of pits (441, 433, 449; Plate 6) which had been backfilled with dark brown to black sandy silt containing mainly 16th-century pottery (426, 434-436, 446).

These pits were sealed by deposits of dark orange-brown silty clay (429, 440), the upper deposit containing 17th-century tin-glazed earthenware (440). Over these were

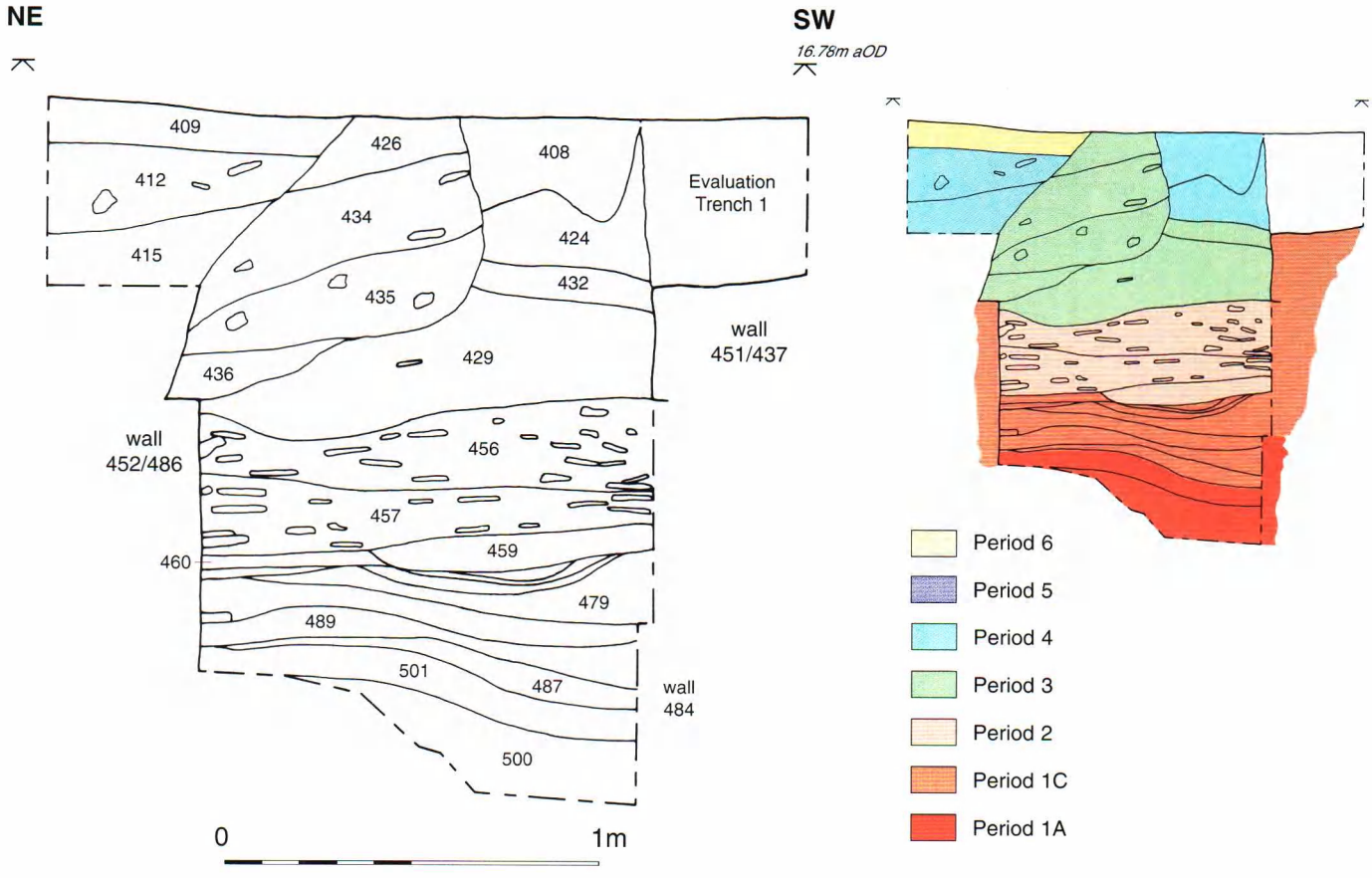


Fig.18 Main excavation area, north-west facing section, scale 1:20.

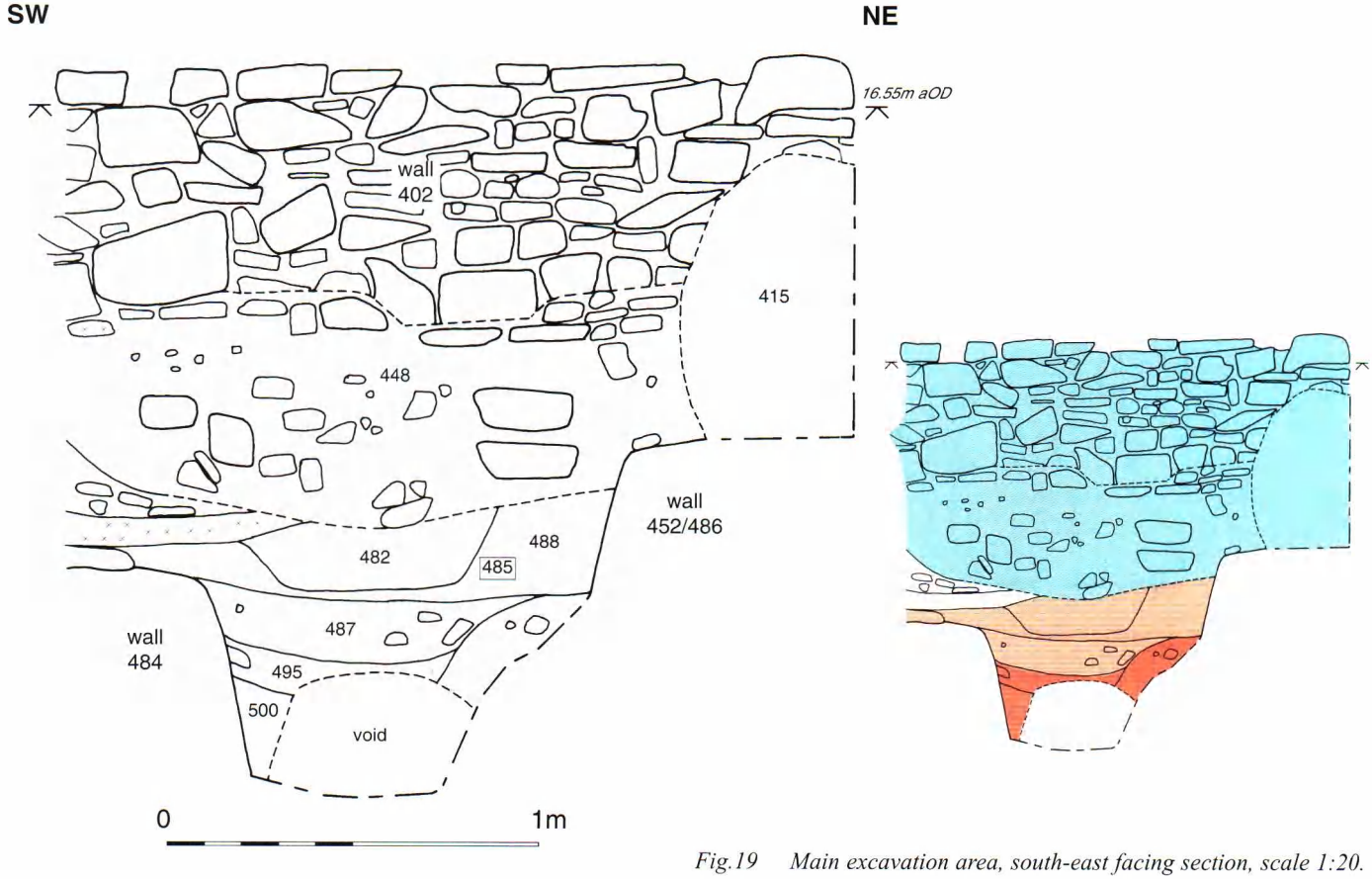


Fig.19 Main excavation area, south-east facing section, scale 1:20.

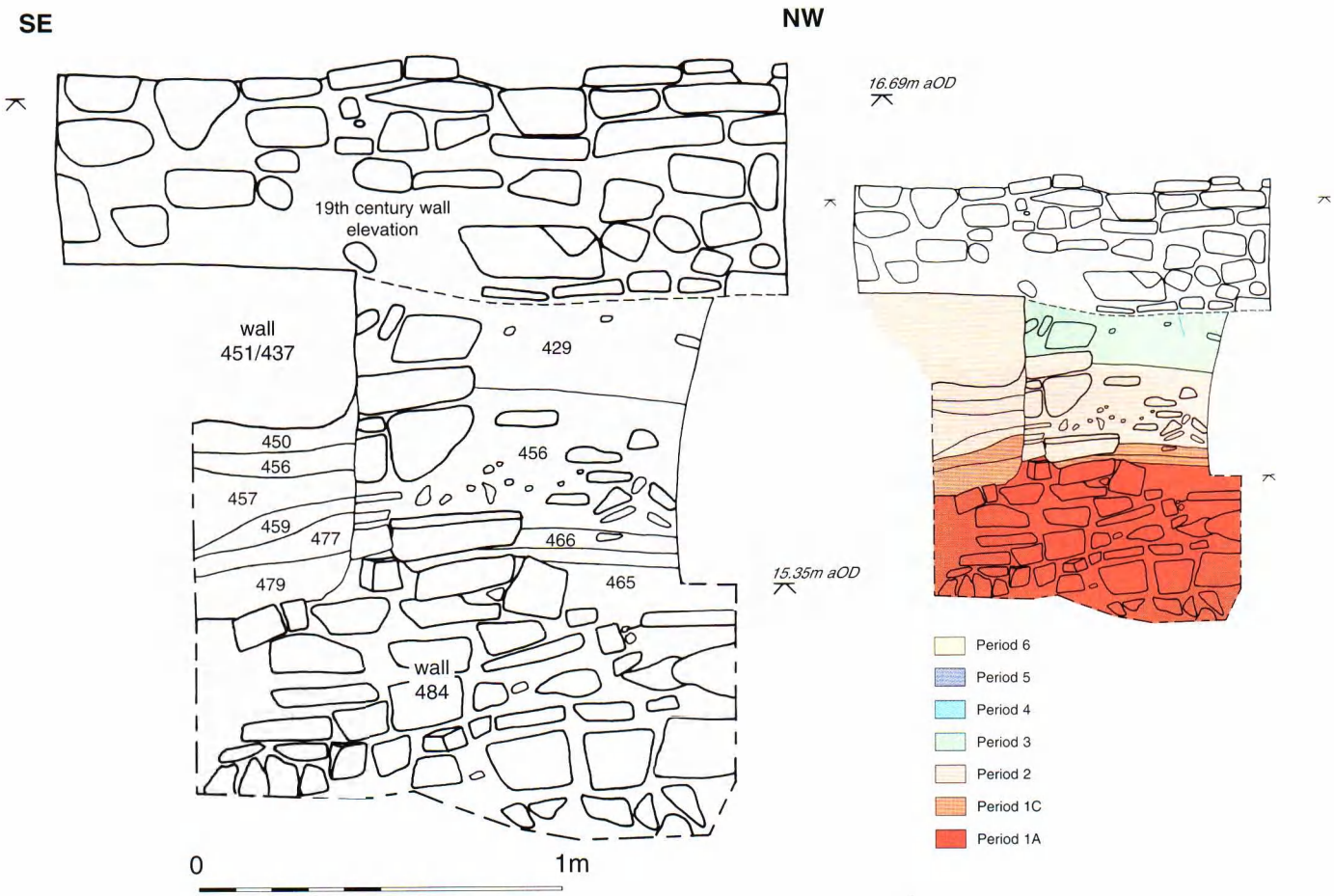


Fig.20 Main excavation area, north-east facing section, scale 1:20.

layers of rubble and dumped material (425, 438, 439).

Period 4: Construction and occupation of the 1675 building

(Figs. 16, 18, 19, 21-24)

It is known that a property was built fronting Corn Street in about 1675 and comparison with a plan of that structure (Fig. 5) shows that its north-west end and internal walls correspond with the location of Period 4 walls 401/448, 402 and 403.

These walls were built of Pennant sandstone bonded with an off-white sandy mortar. Wall 401 was built on a wider, offset foundation 448 and lay within construction cut 447 which had been backfilled with loose, light grey, sandy mortar (423, 430, 431). It seems likely that wall 401/448 had originally abutted wall 403 but its eastern end had been damaged by a later disturbance and was therefore not fully excavated. Wall 401/448 had been cut along its north-west side by Period 6 wall 400. Wall 402 abutted wall 401/448 and lay within construction trench 411 which had a similar fill (412) to construction trench 447.

No deposits or floors associated with the occupation of the 17th-century building survived although an area of light buff mortar containing 18th-century pottery (408) may have been part of a make-up layer for a later floor in the 17th-century building.

In Evaluation Trench 2, two Pennant sandstone walls bonded with buff mortar (214, 230; Plate 7, 230) date to the 18th century, wall 214 being rendered on its north-east side (216). These walls seem to be associated with compact red silt deposits (209, 210) overlying brick and mortar surfaces (215, 216) which may have been cut for a partition wall (231). Beneath these surfaces were dumped deposits of mortar and stone fragments (219-222) which probably equate to deposit 310 in Evaluation Trench 3.

Period 5: 1824 to 1898/99

(Fig. 24)

In the early 19th century the 1675 building was demolished in order that the Council House could be extended, the work on the extension commencing in 1824. There was no archaeological evidence for this demolition in the main area of excavation but a succession of rubble deposits in Evaluation Trench 3 (302-305) contained 19th-century pottery and appear to date to this period. This area between the buildings of the Council House was used as a courtyard throughout Periods 5 and 6.

Period 6: 1898/99 to the present

(Figs. 17, 18, 22, 24)

The New Chamber was added to the Council House in 1898/99 to the south of the excavated area. An east/west

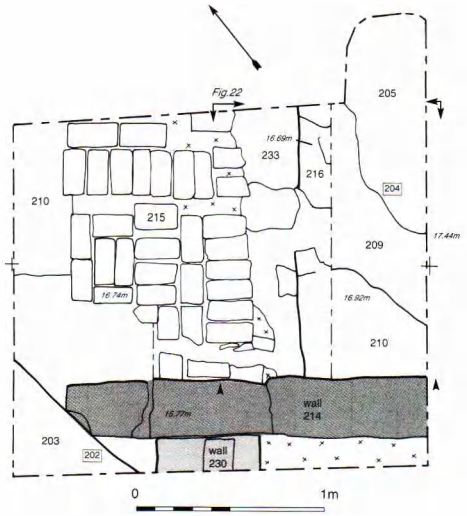


Fig.21 Evaluation Trench 2, scale 1:40.

Plate 7 Period 4: wall 214, looking south-west.

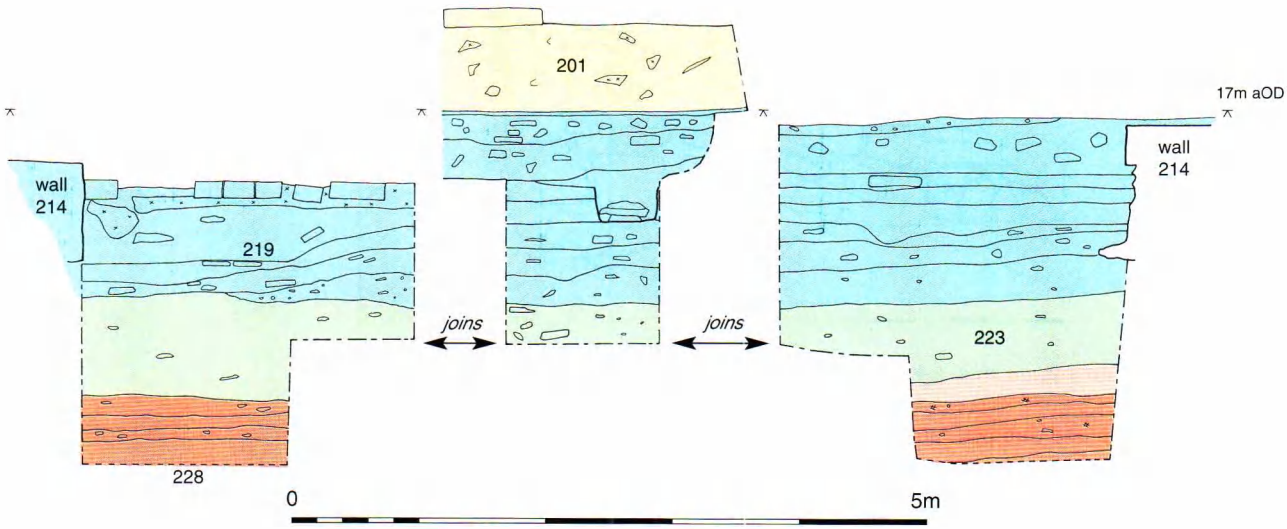


Fig.22 Evaluation Trench 2, phase drawing of sections

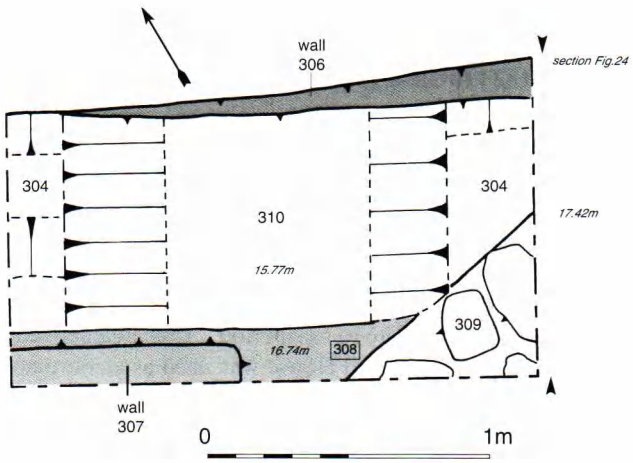


Fig.23 Evaluation Trench 3, plan of features.

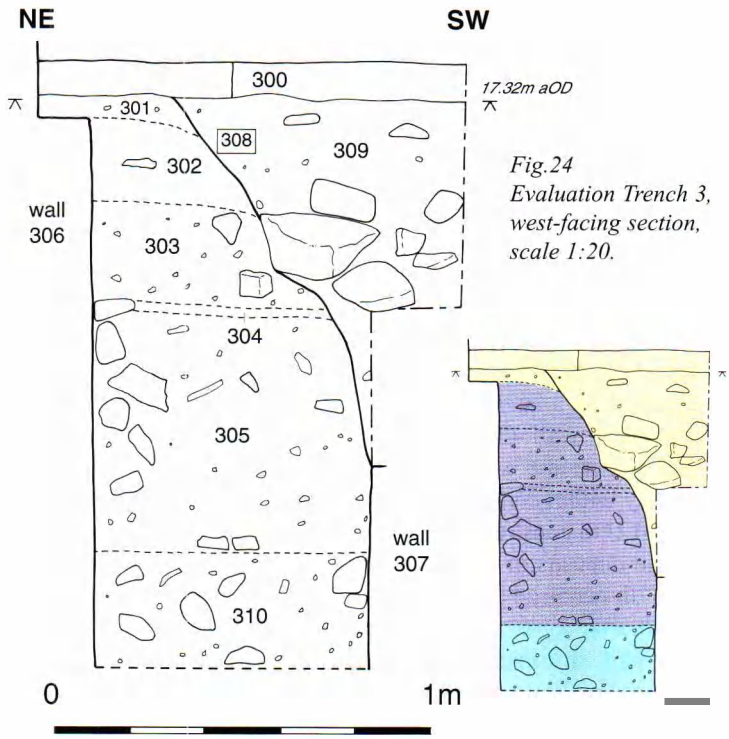


Fig.24 Evaluation Trench 3, west-facing section, scale 1:20.

retaining wall (400), a stone-lined drain 404 in construction cut 410, and levelling deposits (for example, 413) belong to this period of construction although this area remained a courtyard until 2005.

In Evaluation Trenches 2 and 3 the courtyard flagstones (200, 300) had been set on a levelling deposit of rubble (201, 301). In both these evaluation trenches modern drain trenches (202, 204, 308) had been cut through the Period 4 and 5 structures and deposits.

SPECIALIST REPORTS

In addition to the specialist reports published here, assessment reports were also provided by Reg Jackson on the clay tobacco pipes, the ridge and pan tiles and the glass objects. These are available for study in the excavation archive.

Abbreviations used:

BPT	Bristol Pottery Fabric Type series number
D	Diameter
G	Gauge
L	Length
SF	Small (Registered) Find number
T	Thickness
W	Width

Pottery

by Alejandra Gutiérrez

A small group of pottery comprising 316 sherds (some 5kg) was recovered from the excavations. The pottery was sorted into fabrics with the aid of a microscope (x20 magnification) and then counted and weighed. Sherds were small (15g average) and complete profiles were absent except for one example. Most of the assemblage consists of medieval wares (74% of the total sherds), with a small group of late medieval/early post-medieval wares of the 16th century (22%) whereas the assemblage of later pottery was negligible (2%).

Medieval wares

The assemblage is dominated by local wares, although a few possible regional imports are also present. The main fabrics are as follows:

Fabric 1. Bristol? 11th-12th centuries.
Dark grey core, brown to red surfaces. Well sorted inclusions of quartz, limestone and poorly sorted sandstone. Hand-made coarsewares. Similar to Bristol Fabric C and Bristol Pottery Type (BPT) 309 (Alan Vince pers. comm; Vince 1988; Ponsford 1998, 137).

Fabric 2. South Somerset? 11th-12th centuries?
Grey or black fabric. Well sorted inclusions of polished rounded quartz, bivalve shell and thin-walled freshwater or land mollusc.

Ham Green coarsewares. Bristol. 12th–13th centuries (BPT32; Vince 1988, 258).
Black throughout, usually with red surfaces. Abundant sub-angular quartz <0.2 mm; moderate rounded mudstone <1 mm; sparse calcareous grains <0.5 mm. Hand-made coarsewares.

Ham Green jugs. Bristol. 12th–13th centuries (BPT26; Barton 1963; Ponsford 1991).
Grey core; buff or white margins; pink, orange or buff interior surface. Inclusions of well-sorted quartz, limestone and clay pellets. Hand made and finished on slow wheel. Green glaze on exterior surface and over the interior of the rim only.

Bristol(/Redcliffe) ware. Bristol. 13th–15th centuries (BPT72; Vince 1988, 260; Ponsford 1998).
Usually pale yellow throughout, sometimes with a light grey core. Inclusions of quartz and quartzite up to 1.2 mm, clay pellets <1 mm, occasional sandstone up to 7 mm, iron ore 0.2 mm across, rounded limestone up to c.0.3 mm. Wheel thrown. Green glaze on exterior, sometimes with applied clay strips.

'Bath A'. Avon Valley-West Wiltshire? Late 11th–13th centuries (BPT46; Vince 1979).
Usually grey core, buff margins and grey surfaces. Abundant mica, rare calcareous inclusions, sparse flint/chert <3 mm, moderate glassy quartz <2 mm. Smoothed-over surfaces. Hand made. Occasional green glaze on exterior surfaces.

Minety-type ware. North-west Wiltshire. 12th–13th centuries (BPT18; Vince 1988, 262).
Grey core, white or pink interior margin, buff or orange interior surface. The main inclusion is abundant oolitic limestone which leaves a characteristic round void when burnt out during firing; occasional chert/flint. All inclusions are ill-sorted and mainly <1 mm, but also up to 2 mm. Wheel thrown jugs. Exterior green glaze over very rough surfaces; combing decoration on exterior wall.

Saintonge green glazed ware. France, mid 13th–mid 14th centuries (BPT40).
Micaceous white fabric with occasional white or transparent quartz (0.2-3.0 mm). Exterior green glaze. Wheel-made.

Although only a few undisturbed medieval contexts were excavated, medieval pottery was found right through the stratigraphy, indicating later disturbance on site (Table 1). Sherds associated with Period 1A were few, amounting to just 18 sherds (5% of all the sherds recovered). Of these, only one context (501) did not contain any glazed wares; the 5 sherds recovered from this context and those from a

Period:	1A				1C				2				3				4				6			
Fabric	No.	%	g	%	No.	%	g	%	No.	%	g	%	No.	%	g	%	No.	%	g	%	No.	%	g	%
Bristol C? Fabric 1	2	12.5	60	19.9																				
Ham Green cw	3	18.8	43	14.2	8	22.9	142	31.4																
Ham Green jugs	3	18.8	102	33.8	10	28.6	166	36.7	2	3.2	22	2.3	1	0.5	2	0.1								
Bristol ware	2	12.5	15	5.0	13	37.1	125	27.7	17	27.4	150	15.6	2	1.1	18	0.6								
Bath A	1	6.3	5	1.7	1	2.9	9	2.0																
Fabric 2	3	18.8	67	22.2	1	2.9	7	1.5																
SE Wiltshire	1	6.3	5	1.7																				
Saintonge	1	6.3	5	1.7	1	2.9	2	0.4	2	3.2	8	0.8	2	1.1	17	0.6								
Minety-type									12	19.4	250	26.0	5	2.7	32	1.1								
Malvern ware									19	30.6	461	47.9	114	61.6	2324	82.4	3	23.1	140	67.6				
Surrey Whiteware					1	2.9	1	0.2	6	9.7	18	1.9	21	11.4	70	2.5								
German stoneware									1	1.6	35	3.6	2	1.1	17	0.6	1	7.7	6	2.9				
Italian maiolica									1	1.6	3	0.3	3	1.6	7	0.2	1	7.7	14	6.8				
Merida-type ware									1	1.6	4	0.4	5	2.7	36	1.3								
Somerset glazed wares									1	1.6	12	1.2	3	1.6	78	2.8								
Cistercian ware													20	10.8	140	5.0								
Delft													2	1.1	5	0.2	2	15.4	8	3.9	1	50.0	7	35.0
Spanish wares													5	2.7	73	2.6								
Mottled ware																	1	7.7	1	0.5				
Pearlware																	5	38.5	38	18.4	1	50.0	13	65.0
Totals	**16**		**302**		**35**		**452**		**62**		**963**		**185**		**2819**		**13**		**207**		**2**		**20**	

*Unphased: Ham Green glazed ware: 3 sherds; 22 g, from context 483

Table 1 Distribution of pottery by period (%: percentage within the total by period).

flanged roof tile (see below) may indicate an early 12th-century date for the layer (though with caution on the basis of such a meagre collection). Among the coarsewares some possible South Somerset wares are also present. Fabric 2 contains polished quartz, derived from lower Cretaceous sands that outcrop in western Wiltshire and South Somerset (Alan Vince pers. comm.). Whereas Wiltshire wares are characterised by their muscovite silt (such as in 'Bath A'; Vince 1979), this is absent in Somerset wares, such as in those fragments recovered from the Old Council House excavation.

The rest of the material from this Period includes Ham Green glazed jugs (Fig. 25.1) and coarsewares (Fig. 25.2) and Bristol-type jugs (Fig. 25.3). A single sherd of Saintonge green glazed ware is also present. The presence of both Bristol ware and Saintonge green glazed jugs in the fill of possible pit 491 would indicate a mid 13th- to mid 14th-century date for the infill of this feature.

Later medieval and early post-medieval wares

A range of fabrics dated between the 15th and early 16th century is represented by regional and foreign imports:

Malvern Chase ware (BPT168). Worcestershire. 15th–16th centuries (Vince 1977).
Orange throughout. Occasional inclusions of granite of varying sizes, usually 2–3 mm, but up to 8 mm across. Transparent partial glaze, usually with dark green spots. Wheel-made.

Cistercian-type ware (BPT93). Mainly from South Gloucestershire. 16th century.
At least a couple of fabrics are present; one is dark brown throughout, with sparse inclusions of quartz and quartzite up to 1 mm and rounded iron ore up to 0.4mm; very thick dark brown/black glaze all over, except on underside of the base, where only a purple wash is visible. A second fabric is much finer, with no inclusions visible; glaze and fabric are lighter brown. Wheel-made, thin-walled vessels. Some of the lighter fragments are decorated with white slip pads.

Surrey whitewares. Surrey/Hampshire border. Mid 15th–mid 16th centuries (Pearce and Vince 1988; Pearce 1992).
White, very fine fabric with characteristic thin walls. Including Coarse Border ware (no BPT), Early Border ware (no BPT) and Tudor Green (BPT182). Wheel-made; some sherds have a bichrome glaze (yellow on internal surface and green on external) or are green glazed.

Somerset glazed wares (BPT96). Late medieval–post-medieval.
Generally orange throughout, but occasionally with grey core or surfaces. Sandy texture with no visible inclusions. Plain glazed wares; slipwares. Wheel-made.

Early English tin-glazed ware (BPT99). Bristol or London, 17th century.
Very fine buff fabric, with over-all, thick, white tin glaze, speckled with manganese on the exterior surface. Wheel-made.

Siegburg stoneware (no BPT). 15th–16th centuries (Hurst et al 1986, 176).
Fine light grey and buff fabric with unglazed exterior surface. Wheel-made.

Langerwehe stoneware (no BPT). 15th century (Hurst et al 1986, 184; Gaimster 1997, 186–187).
Dark grey fabric with buff outer margin. Brown glazed on exterior surface. Wheel-made.

Merida-type ware (BPT282). Portugal, medieval and post-medieval (Hurst et al 1986; Gutiérrez 2000).
Characteristic red fabric with mica flecks, no surface treatment and no decoration. Earlier, medieval examples have sometimes a brown fabric. Wheel-made.

Italo-Netherlandish maiolica (no BPT). End of 15th–mid 16th century.
Very fine buff fabric with no inclusions visible. All-over tin-glaze and polychrome decoration (yellow, brown, green, orange, blue). Wheel-made.

Italian polychrome maiolica (BPT107). Florence area, end of the 15th-16th century.
Very fine buff fabric with no inclusions visible. All-over tin-glaze and polychrome painted decoration (yellow, brown, green, orange, blue). Wheel-made.

Seville-type olive jar (BPT61). Seville area, southern Spain. 16th–18th centuries (Gutiérrez 2000).
Sandy fabric with mica inclusions. Wheel-made coarsewares, with occasional glaze. Wheel-made.

Seville green-and-brown tin-glazed ware (BPT333).
Fine buff fabric with no inclusions visible. All-over tin-glaze and painted decoration in green and brown on exterior surface. Wheel-made.

Seville Morisco ware (BPT333). Seville, Spain. 16th century (Gutiérrez 2000).
Fine buff fabric with no inclusions visible. Glazed in a variety of fashions. Wheel-made.

Whereas the earlier medieval phase was dominated by local products, in the 15th century the assemblage is superseded by other regional wares, especially those from the Malvern area (Table 1). This trend is well documented across other Bristol excavations (for example, Good 1987; Ponsford 1998). Malvern products represented here are wheel-made, with partial transparent glaze, sometimes copper-speckled, and lacking the iron wash of later 16th-century vessels. Although very fragmented, pipkins, jars, jugs and chafing dishes have been identified (Fig. 25.4-9). They dominate in Period 2 contexts, having been found amongst the demolition rubble of the Period 1C building. Undiagnostic sherds of Bristol ware also occur here, although it is impossible to judge how much is residual and how much belongs to the later medieval phase of production. Material clearly dated to the 16th century is however absent from this Period.

Imports in Period 2 consist of single sherds of German stoneware, Merida-type ware and Italo-Netherlandish maiolica. The stoneware is a Siegburg Jacobakanne jug, of a type which was traded across Europe between the end of the 14th and 15th centuries (Fig. 25.11) (Hurst *et al* 1986, 88; Gaimster 1997, 117, 169).

The maiolica is decorated with the trigram YHS for the Holy Name of Jesus, painted in blue over white tin glaze (Fig. 25.14). Decoration of this type often appears on jugs or ring-handled vases (so called 'altar' vases), with the letters encircled in a blue medallion. They were produced in Italy at the end of the 15th century and production moved with the potters to the Netherlands, these two sources being impossible to distinguish apart by eye (Hughes and Gaimster 1999; Blake 1999; Blake *et al* 2003). Maiolica of this type is spread across Britain, being concentrated in urban sites (Hurst 1999) and other examples have already been identified from the city (for example, two from Temple Street, Ponsford 1988, fig.17, no.129 and fig.22, no.250).

In Period 3 Cistercian wares and Surrey whitewares (including Early Border Ware and 'Tudor Green'), mainly in the shape of cups, typical of both centres, appear associated with Malvernian wares. The Cistercian wares are very fragmented, although a few small handles seem to represent the typical cylindrical cups. Some of the sherds are decorated with pads of white slip under the glaze, in similar vein to others recovered from Bristol (Fowler and Bennett 1975, 124).

More remarkable is the limited presence during this period of Somerset wares of characteristic fine red fabric, which in other excavations in town can dominate in the 16th century (for example, Good 1987). They are represented only by a small handle, dark glazed, which has parallels elsewhere in the first half of the 16th century (Coleman-Smith and Pearson 1988, fig.75, 7/9); and also by a pancheon or dish decorated with trailed slipware of the 17th century (Fig. 25.18). Other 16th-century and later material (to the construction of the 1675 building) is scant during this period. The only other 17th-century pottery present during this period is a tin-glazed and purple (manganese) speckled vessel (2 sherds), in a form of decoration used by Bristol and London potters (Archer 1997, 242).

The range of imports at this time is also of interest. A jug (2 sherds) of Langerwehe stoneware has an upright, cylindrical neck (Fig. 25.10) (Hurst type IV; Hurst *et al* 1986, 184); Langerwehe stoneware was already traded to the Low Countries in the middle of the 14th century but has wider distribution in the 15th century, being more common in the north of England than in the south (Gaimster 1997, 187).

A further four sherds of Merida-type ware are also present. One of them (context 443) is in a brown fabric traditionally associated with earlier medieval production (Hurst *et al* 1986) and might be residual here. The others have the characteristic red micaceous fabric and although undiagnostic, at least that from context 444 could belong to a typical costrel with two handles. Merida-type ware is ubiquitous in the town albeit in small numbers (Ponsford and Burchill 1995).

Two vessels of Italian maiolica of the end of the 15th century and 16th centuries were also found. One of them (context 429) is a maiolica jug of 'Santa Fina' style (*c* 1450–1480) from Florence, named after the hospital where a large assemblage of *albarelli* and jars so decorated were found at the beginning of the 20th century (Cora 1973, 134, tav 166). This style consists of detailed painted decoration in purple, blue and orange imitating the bryony flower used on Spanish lustrewares of the 15th century which were exported to Italy in great numbers. On Italian vessels the decoration is frequently found on jugs with a strap handle,

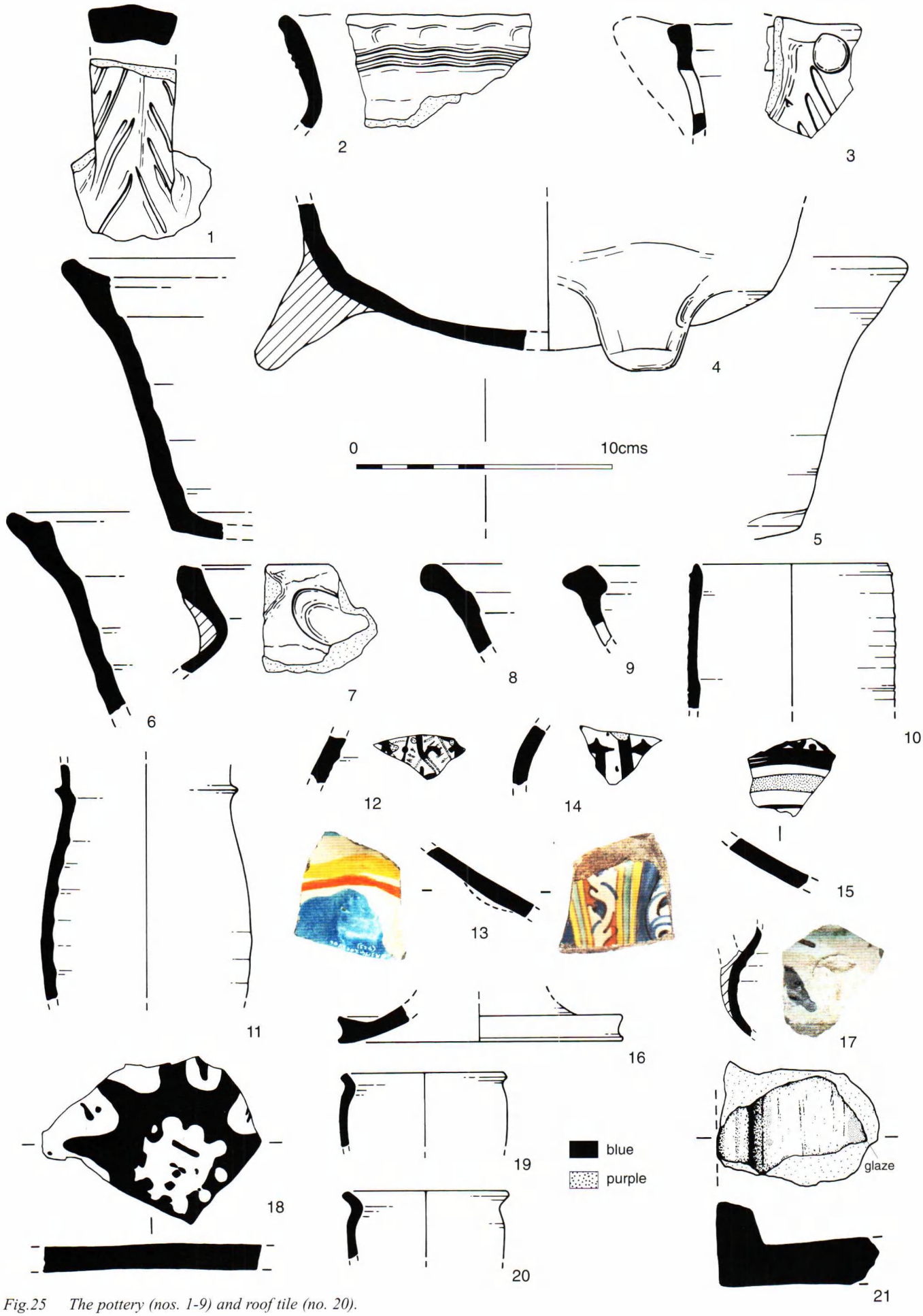


Fig.25 The pottery (nos. 1-9) and roof tile (no. 20).

flat base, trefoil rim and a medallion with a coat of arms on the front. The sherd recovered from Bristol is only small, but possibly part of the neck of such a jug (Fig. 25.12). This type of Italian maiolica is rare in Britain and so far only one other example is known, from Southampton (Gutiérrez 2000, fig.5.12, no.4). Arrival of early and unusual types, such as this, is thought to have been through direct contact with Italians or acquisition as souvenirs rather than trade, its peak being established by the middle of the 16th century (Hurst 1991).

The second Italian sherd (context 423; residual in Period 4) belongs to a *crespina* dish, with fluted walls and polychrome decoration on the interior surface (yellow, brown, green, orange, blue); yellow and orange lines together with blue areas decorate the exterior (Fig. 25.13). The profile and range of colours can be paralleled with products of the Florence area at the end of the 16th century (c.1575–1600) (Cora 1973, tav 273; Hurst *et al* 1986, 24). Although trade in Italian maiolica had increased in Britain by the 16th century, *crespine* dishes are uncommon and only appear rarely in this country (Hurst 1991, 214). A further *crespina* dish has been previously published from Bristol (Burchill 2005, fig.16 no.5) but the published drawing does not seem to corroborate the written identification and would make the sherd from the Old Council House excavation the only one published so far from the city.

Among the vessels imported from Spain, the olive jars used to transport foodstuffs and other goods, such as soap, had a utilitarian function and were produced with the same profile between the 16th and 18th centuries, being widespread especially in ports (Gutiérrez 2000, fig.2.37). Two Morisco wares of the end of the 15th - early 16th century were found also in Period 4: a dish decorated with the typical blue and purple concentric bands (Fig. 25.15), and a pedestal vessel (Fig. 25.16). Only a fragment of the base survives from the latter, with the exterior surface covered in plain tin glaze, but with a thick dribble of green glaze on the underside. The combination of colours is typical of the 'plain white with green edge' vessels, traditionally used in small bowls and cups (Gutiérrez 2000, fig.2.31 no.5). The diameter of the Bristol sherd is however slightly larger and may be paralleled to pedestal jugs of long spout and one handle, such as that illustrated by Pleguezuelo and Lafuente (1995, fig.18.14). Both vessels are also unusual finds in Britain. The production of blue-and-purple wares in Seville decreased in favour of that of plainer wares to meet the large demand required by settlers and ships travelling to the New World (Gutiérrez 2003). Finds in northern Europe are rare and have been explained as a result of direct contact with Spaniards (Gerrard *et al* 1995); they are equally scarce in Bristol (Ponsford and Burchill 1995).

One further Spanish sherd is tin glazed all-over with the remains of green and brown decoration (Fig. 25.17). The sherd, however, is too small to interpret the pattern or extension of the decoration. It belongs to a handled vessel, the fragment being that part where the handle was attached to the body. The fabric is very similar in colour and texture to the typical Morisco wares. The fragment has been chemically analysed in order to pinpoint its source and the analysis suggests that the sherd is from the Seville area (see report by Michael Hughes below). This is of great interest since later medieval production of green-and-brown pottery is poorly documented in Seville itself, where this combination of colours does not appear among the known Morisco wares of the mid 15th and 16th centuries. Finds of earlier date have thus far been considered to be imports from other regions of Spain (Lafuente 1997, 126). Tin-glazed bowls and dishes decorated only in green are also known in the 14th century in Seville, but these are scarce and characteristically lack the brown decoration (López and Rueda 1994). Only one other sherd of green-and-brown tin-glazed ware of Seville origin has been found in Britain (its source was also identified through the same type of chemical analysis); this is a bowl from a 13th/14th century context in Southampton (Gutiérrez 2000, fig. 5.7, no. 3). The Bristol sherd was found in a later context (441), dated to the 15th/16th century, together with Cistercian ware, Malvern wares and Tudor Green ware. Given that most of the decorated imports from the site belong to the same phase, it seems unlikely to be residual there, although this would suggest a later date than that for the Southampton bowl.

Later wares

English tin-glazed ware (BPT99). Bristol? 18th century.
Very fine buff fabric, with over-all, thick, white tin glaze. Two vessels are undecorated; a further vessel is speckled with manganese on the exterior surface. Wheel-made.

Mottled ware (BPT211). Bristol? 18th century.
Very fine buff fabric, with over-all, mottled brown glaze. Wheel-made.

Pearlware (BPT349). End 18th–19th century.
Very fine white fabric.

Pottery of later date is almost absent from this site. Only two plain tin-glazed ointment jars (Fig. 25.19 & 20) and a mottled ware represent 18th-century occupation. They could be local products as manufacture of such wares is well attested in Bristol (Jackson *et al* 1991; Price 2005). The latest pottery from the site dates to the end of the 18th–beginning of the 19th century, in the shape of a small dish of shell-edge pearlware and a hand-painted bowl with oriental decoration. Very little residual pottery (6 sherds) was also found in the later period of the site, mainly in construction trenches 411 and 447.

Conclusion

Although small, this pottery assemblage is of great interest in the range of sources represented. Apart from local products and regional wares already well known from other excavations in the city, some of the imported pottery includes types rarely found in Britain. The presence of these

'exotic' items may simply indicate a well appointed occupant with access to international goods either directly or through specialised markets (such as those in London), with links with the Mediterranean world markedly evident.

Illustrated sherds

Fig. 25

1. Jug handle; Ham Green. Dark green glaze on exterior surface; incised diagonal lines carefully drawn under the glaze. Context 484, Period 1A.

2. Rim from a jar; Ham Green coarseware. Wavy incised decoration on exterior surface. Context 487, Period 1C.

3. Bearded spout from a jug; Bristol ware. Dark green glaze with patches of brown on exterior surface; applied clay pellet and incised decoration. Context 452, Period 1C.

4. Foot and part of a base, probably from a tripod jar; Malvern Chase ware. Partial transparent glaze on interior and exterior of base, with darker green spots. No signs of burning. Context 450, Period 2.

5. Jar; Malvern Chase ware. Partial transparent glaze on interior surface; burnt underbase (from being near fire). Contexts 429 (7 sherds) and 444 (1 sherd), Period 3.

6. Rim from a jar; Malvern Chase ware. Partial transparent glaze on interior surface. Context 430, Period 4.

7. Rim from a jar; Malvern Chase ware. Partial transparent glaze on interior surface; applied thumbed strip around the rim. Context 444, Period 3.

8. Rim from a jar; Malvern Chase ware. Partial transparent glaze on interior surface, with darker green spots. Context 444, Period 4.

9. Rim from a chafing dish; Malvern Chase ware. Partial transparent glaze on interior and exterior surfaces. Context 429, Period 3.

10. Jug; Langerwehe stoneware. Yellow and grey fabric. Over-all brown glaze on exterior surface only. Context 444, Period 3.

11. Jug; Siegburg stoneware. Unglazed. Context 450, Period 2.

12. Jug. Santa Fina style maiolica from Florence. Buff fabric. All-over white tin glaze; on exterior surface: blue, orange and purple decoration imitating bryony flower as used on Spanish lustrewares. Context 429, Period 3.

13. *Crespina* dish with fluted walls; Florence area. Buff fabric. All-over white tin glaze and decoration on the interior surface (yellow, brown, green, orange, blue) and exterior surface (yellow, orange and blue). Context 423, Period 4.

14. Jug/vase; Italo-Netherlandish maiolica. Buff fabric. All-over white tin glaze, with painted blue decoration on exterior surface. Context 456, Period 2. A further sherd (with blue lines) from 429 might belong to the same vessel.

15. Dish; Morisco Ware from Seville. Buff fabric. Blue and purple painted decoration on interior surface; over-all white tin glaze. Context 436, Period 3.

16. Pedestal vessel, form unknown, probably a jug; Morisco Ware from Seville. Buff fabric. White tin glaze on upper surface; green glaze on underbase. Context 429, Period 3.

17. Handled vessel, probably a jug; all-over tin-glazed with green and brown decoration on exterior surface. There is very little decoration visible, but it includes some thin brown lines, a thicker line of green, and two concentric lines/areas of green (below the handle and around the neck). Buff fabric. Chemical analysis suggests this sherd is from Seville. Context 441, Period 3.

18. Base of pancheon or dish; Somerset trailed slipware. Red fabric with grey core. White slip decoration under transparent glaze on interior surface. Context 435, Period 3.

19. Rim of ointment jar; buff fabric, all-over white tin glazed. Context 412, Period 4.

20. Rim of ointment jar; buff fabric, all-over white tin glazed. Context 409, Period 6.

Flanged Roof Tile

by Alejandra Gutiérrez

Three sherds from a flanged roof tile (125g) were found in context 501 (Period 1A) and a further sherd in context 495. They may all belong to the same tile, although only two actually join together. The fabric is hard, reddish brown throughout, and feels very heavy; it is very sandy, with well-sorted quartz 0.2–0.5mm; sometimes with siliceous lumps. One of the sherds has a spot of clear glaze on the upper surface (Fig. 25.21). The underside and sides are well covered in the same sand as that from the fabric, presumably to avoid the clay sticking to the mould while it was being shaped. The tile is about 10mm thick and the flange is 30mm high. The even thickness and finish of the surviving sides indicate careful craftsmanship.

Flanged tiles such as this would have been used together with curved tiles in the Roman style although a differing characteristic is the glazed surface. They are earlier than the typical flat and ridge tiles of the 13th century onwards. They are also rarer and are thought to have been introduced by tilers working on Norman castles and abbeys (Cherry 1991,

Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Ba	Co	Cr	Cu	Li	Ni	Sc	Sr	V	Zn	Zr*	U	Th	Rb
13.03	4.16	2.62	16.32	0.88	1.94	0.80	0.37	0.034	328	17	92	255	31	29	11	354	61	73	75	3.84	8.94	85

Nb	Cs	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Dy	Ho	Er	Yb	Lu	As	Pb	Cd	Tl	Mo	Sb	Bi
15.9	4.84	19	30.0	59.1	7.5	31.7	6.25	1.24	5.09	3.35	0.64	1.75	1.49	0.23	7.7	5693	0.1	1.0	2.2	15.5	40.1

Table 2 Analysis results on the Bristol sherd (sample U81) by inductively-coupled plasma atomic emission spectrometry (ICP-AES) and inductively-coupled plasma mass spectrometry (ICP-MS). (The results from Al2O3 to MnO inclusive are given as the oxide, in weight percent; all the rest are given as the element, in parts per million).

194). In spite of their scarcity they do appear across the country, from Scarborough to Southampton (Dunning 1975, 189), but they seem limited to wealthy urban and monastic sites, such as Reading and Battle Abbeys where they have also been found (Streeten 1985, 95; Platt 1975, 24). They are always associated with 12th-century contexts and the best preserved examples are those from London, where complete tiles found were pierced at the top with one hole and measured 357mm long by 255–297mm wide (Keily 1998, 27–28).

The example from Bristol is the only one from the city known to the writer so far. It was found in the only earlier medieval context excavated on site and is likely to indicate the existence of a church or high-status dwelling nearby.

The Analysis by ICP-AES and ICP-MS of a Green and Brown Pottery Sherd

by Michael J Hughes

A tin-glazed sherd from context 441 was considered to be a possible Spanish import. A chemical analysis of it was proposed, to compare against previously analysed sherds of Spanish pottery of known origin (production centre). A large programme of neutron activation analyses of Spanish ceramics was carried out in the 1980s and 90s at the British Museum, when substantial numbers from Valencia, Seville and Malaga were analysed, and smaller numbers from several other production centres (Hughes 1995; Hughes and Vince 1986; Gaimster *et al* 1991; Blake *et al* 1992). Since then further analyses have been undertaken using inductively-coupled plasma-atomic emission (ICP-AES) and mass spectrometry (ICP-MS) as a more widely available alternative to neutron activation. A recent application has studied the ceramics of several delftware production centres in London (Hughes 2008). These ICP techniques provide a comprehensive chemical 'fingerprint', namely the concentrations of many chemical elements in the fabric of the pottery. Plasma spectrometry has been applied to the Spanish ceramics from the shipwreck in Studland Bay (Hughes 2003). Chemical analysis measures the overall chemistry of clay fabric plus inclusions in the ceramic.

Chemical analysis

A powdered sample of the body fabric was obtained using a hand-held 12 volt drill fitted with a 2mm diameter solid tungsten carbide drill bit. The powder was analysed for 27 elements by ICP-AES and 26 elements by ICP-MS at the Department of Geology, Royal Holloway, University of London by Dr J N Walsh using their routine technique (Thompson and Walsh 1989). The analysis results are given in Table 2.

Interpretation of the chemical analyses

The analytical results given in Table 2 were compared to previously analysed sherds of Spanish pottery, looking for patterns of similar chemistry, which indicates similar origin. The sherd is made of a lime-rich clay containing 16.3% calcium oxide, entirely typical for tin-glazed wares.

Comparison against the large NAA database of ceramics from Valencia shows distinct differences to the Bristol sherd. A recent unpublished ICP study of five Valencian sherds from the Deansway excavations, Worcester (Dalwood and Edwards 2004) also shows different patterns to the Bristol sherd; some of the obvious differences occur for potassium (Valencia, Deansway: 2.7–3.4%; Bristol: 1.94%); rubidium (142/165ppm; 85ppm respectively); caesium (11/12.7ppm; 4.8ppm); cerium (74/79ppm; 59ppm); lanthanum (40/43ppm; 30ppm); and thorium (13.2/13.9 ppm; 8.94ppm). These are a representative spectrum of elements across the Periodic Table and indicate significant differences which are not confined to a small range of elements. The Bristol sherd is also unlike neutron activation analyses of ceramics from Barcelona and Malaga.

In contrast, the Bristol sherd showed significant similarities to the analyses of Seville ceramics in the NAA database. The sherd is also similar to Seville ceramics analysed by ICP from the shipwreck in Studland Bay: particularly close is a base fragment of a thumbed bowl (Hughes 2003, table 1, analysis 4753-3). The sherd is also very close to the composition of a green and brown sherd from Southampton (sample AG79; Gutiérrez 2000, 143). The same elements which showed differences to Valencian ceramics showed concentrations which fell within the range of typical Seville ceramics. Unpublished ICP analyses of five Renaissance polychrome ceramics (for Anthony Ray, report dated 28 May 1997) identified as Sevillian showed similar results to the Studland ceramics, confirming the general ICP pattern for ceramics from Seville.

Conclusions

Analysis of the Bristol sherd by ICP-atomic emission and ICP-mass spectrometry and comparison with previous analyses of Spanish ceramics has concluded that it is entirely typical of the ceramic products of Seville.

Small Finds

by Stuart Whatley

Introduction

A total of 80 small finds have been examined for this report, which covers items of copper alloy, iron, gold, bone, shell and slate. These finds have been categorised by function using function types set by the Museum of London Archaeology Service.

In the report the identification number of the object in the site archive is prefixed with SF (e.g. SF1).

Lorrain Higbee has commented on the species and origin of the worked bone.

The metal objects were generally in a poor state of preservation, most were corroded and many had exterior corrosive growth. They were all X-rayed and many were cleaned in the conservation process.

The assemblage dates from the 12th century to the early 20th century and comprises mainly domestic or structural objects, tools and a few personal items such as a buckle (SF50) and a gold finger ring (SF43).

Dress Accessories

Bar-mount with a suspension loop

Copper alloy bar-mount for a belt. Rectangular with a loop at one end with two rivets. The object is in four fragments which may have been decorated externally with a leaf design, although this is now very worn. L: 39mm, W: 11mm. Poor preservation. A similar type is illustrated by Egan and Pritchard (1991, 214-5, fig.134.1164). (SF48, context 495, Period 1A).

Buckle

Rectangular iron buckle frame in two fragments. Possibly a harness buckle. Central pin mostly missing. Sides are looped at the end for a solid roller. Very corroded. 53mm x 62mm. Very similar to an iron rectangular harness buckle from Billingsgate, London (Egan & Pritchard 1991, 95, fig.60.428) and of a type which they feel carried on unaltered into the post-medieval period. (SF50, context 429, Period 3).

Copper alloy pins

The dress pins date from the medieval to the post-medieval periods (Periods 1C-3). A polygonal-headed pin dates from Period 1C while solid-headed pins date from Period 3. The dress pins with wound-wired heads only date from Periods 2 and 3. The pins were described and dated using Egan's typology (in Egan and Pritchard 1991, 297-304).

Plain polygonal-headed pin. Slightly corroded with a flattened polygonal head. Shank L: 37mm, head size: 1.5mm, G: 1mm. (SF37, context 474, Period 1C).

Solid pin-head. Slightly corroded copper alloy pin fragment. Shank has circular shaped cross-section. L: 37mm, head size: 1.5mm, G: 1mm. Dressmaker's pin. (SF18, context 429, Period 3).

Solid pin-head. Corroded curved shank with fractured terminus. No point. L: 42mm, head size: 4mm, G: 1.5mm. (SF2, Evaluation Trench 3, context 305, Period 5).

Wound-wire pin-head. Slightly corroded copper alloy pin fragment. Shank has circular-shaped cross-section. L: 40mm, head size: 1.5mm, G: 1mm. Dressmaker's pin. (SF42, context 459, Period 2).

Wound-wire pin-head. Slightly corroded copper alloy pin fragment. Shank has circular-shaped cross-section. L: 30mm, head size: 2mm, G: 1mm. Dressmaker's pin. (SF19, context 440, Period 3).

Wound-wire pin-head. Slightly corroded copper alloy pin fragment. Shank has circular-shaped cross-section. L: 30mm, head size: 1mm, G: 0.5mm. Dressmaker's pin. (SF20, context 444, Period 3).

Wound-wire pin-head. Slightly corroded copper alloy pin fragment. Shank has circular-shaped cross-section. L: 25mm, head size: 1mm, G: 0.5mm. Dressmaker's pin. (SF36, context 440, Period 3).

Long thin copper hair-pin. Round cross-section for shank. Slightly corroded. L: 74mm, G: 2.5mm. (SF16, context 429, Period 3).

Bone pins

Thin bone pin. Long, thin worked shaft and point and unworked end with visible break-point. The end may have contained a section for the eye. The fibula has a broken proximal and a modified mid/distal shaft. L: 60mm, G: 3mm. (SF53, context 501, Period 1A).

Thin bone pin or possible stylus from a modified distal shaft of a chicken radius. The object has been smoothed, and made into a point at one terminus. L: 56mm, G: 5mm. (SF49, context 469, Period 1C).

Fig. 26.1 Long bone pin. A proximal shaft modified from a pig fibula. The pin has been smoothed, and shaped to a point at one terminus. L: 132mm, H: 16mm, G: 5mm. (SF40, context 450, Period 2).

Twisted loop

Copper alloy loop. Corroded. D: 12mm. Egan (2005, 62) suggests various uses for such loops. Many have been found sewn into purse strings, possibly to stop cut-purse thieves in the street. Other examples have been found from clothed burials, where they seemed to have been used as fasteners. (SF22, context 444, Period 3).

Finger Ring

Fig. 26.2 Gold finger ring. Formed of a simple gold wire,

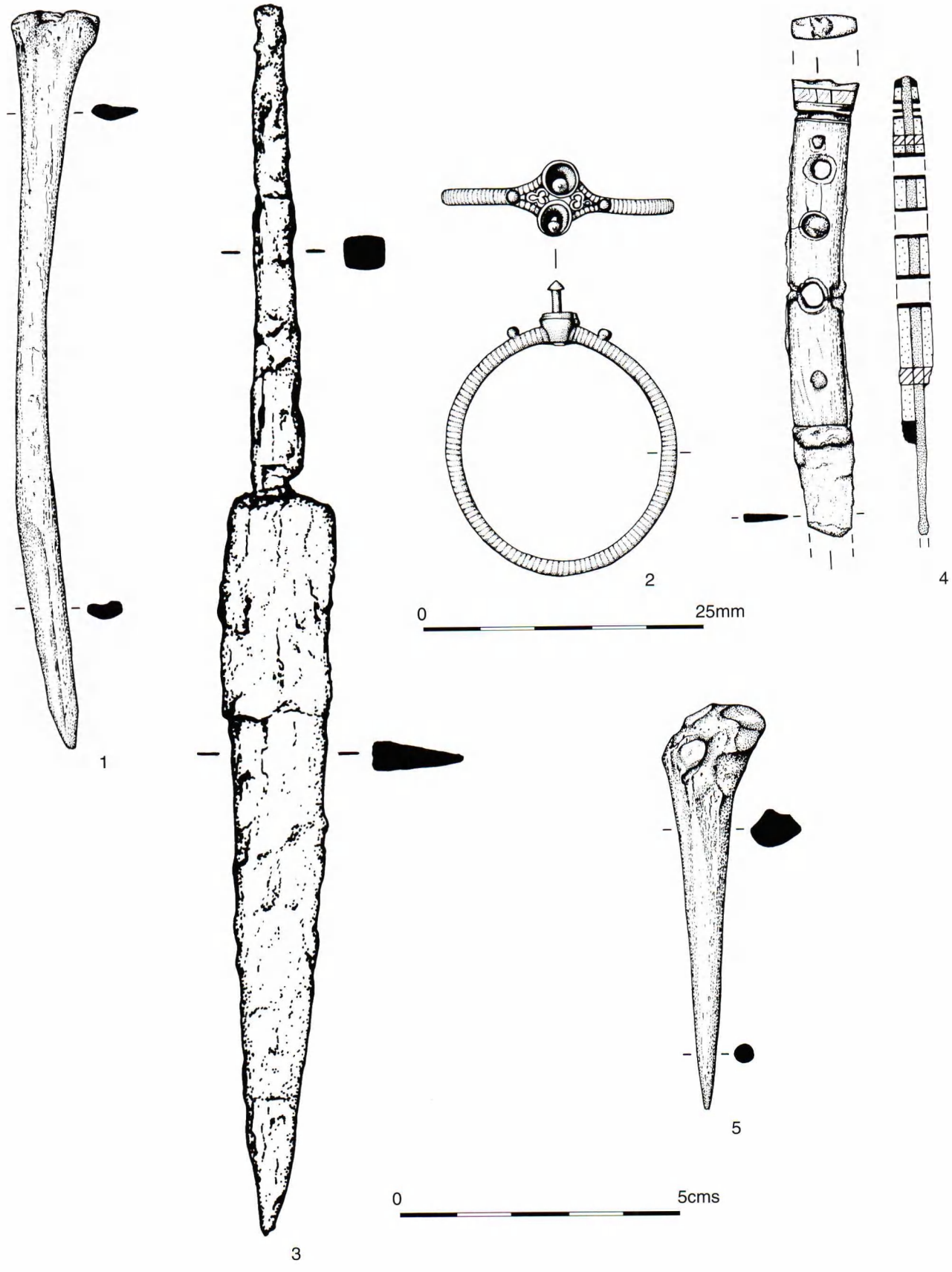


Fig.26 The small finds.

with milled decoration, which terminates in a sphere on each shoulder. The double bezel consists of two circular collets and is supported by an openwork spandrel, into which is inserted a miniature trefoil. The stones are missing, but the method of attachment survives in the form of two rivets which may originally have held pearls. Late 14th century. L: 23mm, W: 20mm. (SF43, context 459, Period 2). (The description of the ring was provided by J.P. Robinson, Curator of Medieval Collections at The British Museum in Treasure Report 2006 T42, Department for Culture, Media and Sport).

Shell Pendant (by Matthew Law)
A right (flat) valve of a saddle oyster (Family Anomiidae Rafinesque 1851, probably *Anomia ephippium* L.), with a valve height of 34.17 mm. The shell has a natural off-centre hole, the byssal foramen, with an internal diameter of 10.22 mm. *Anomiidae* are unpalatable, and so not harvested for food, and are not currently found in the Bristol Channel east of Exmoor (Neal 2004). It is possible that the shell was collected accidentally while harvesting for oyster or other shellfish; however, given that no other marine mollusc shells were collected from the same context, deliberate collection is a strong possibility. It is suggested that given the shell's natural shape and pearlescent interior, it may have been used as a pendant (Context 444, Period 3).

Horse Equipment
Horseshoes
Left branch of a heavyweight horseshoe. Four nail holes, two of them containing nails. Very corroded. Surviving L: 126mm, W: of surviving web 38mm. (SF70, context 459, Period 2).

Kitchen and Tableware
Flat vessels
Small rim-sherd of a flat copper alloy vessel. Very corroded. L: 57mm, W: 18mm. (SF21, context 445, Period 3).

Knives
The knife blades and handles have been described according to Cowgill's terminology of production and dating (Cowgill *et al* 1987, 8-32).

Fig. 26.3 Undecorated iron knife blade and whittle tang. Very corroded. Blade L: 134mm, W: 20mm, T: 6mm. Whittle tang set just below back. L: 88mm. Sloping shoulder and tapering. The knife is very similar in style and date to a 15th-century whittle tang knife from Trig Lane, London (Cowgill *et al* 1987, 101-2, fig.66.258). (SF41, context 457, Period 2).

Knife blade and fragment of attached whittle tang. Blade, fragmentary with a notch. L: 44mm, W: 18mm, T: 5mm. Whittle tang, in two fragments, centred, and sloping. Tiny fragment of wooden handle survives on tang. L: 58mm. (SF58, context 469, Period 1C).

Fig. 26.4 Scale knife handle. Iron tang with flat, bone, scale attachments on either side. The bone handle attachments may have been copper-plated as the bone is discoloured green on the surface. The handle contains three tubular holes, with one iron rivet filling the central hole. One terminus contains one rectangular copper alloy shoulder plate and an additional rectangular plate. Set within the two copper alloy plates is a bone fragment. The other terminus has no end cap. (SF17, context 429, Period 3).

Leisure Items
Gaming piece
Possible slate gaming counter. A thin, partially weathered, sub-circular slate disc. D: 35mm, T: 4mm. (SF73, context 487, Period 1C).

Comb fragment?
Off-cut of worked bone in two fragments. Possibly part of a comb worked from a section of tine from a deer antler. (SF 31, context 434, Period 3).

Security Equipment
Key
Iron rotary key with circular bow, very corroded. L: 84mm, bow D: 22mm, bit 18mm x 14mm x 6mm. Symmetrical rectangular clefts. Analysed using Egan's (1998, 110) rotary key terminology. (SF72, context 441, Period 3).

Textile Working
Awl
Fig. 26.5 Small horn-core from a deer antler sawn from a larger horn. It has been smoothed, and there are two cut marks on the underside. Possibly used as an awl or was part of a larger artefact. (SF77, context 494, Period 1A).

Thimble
Copper alloy thimble. Domed, cast and turned, with no central hole. Drilled pits in continuous spiral. Engraved/turned line around base. Notch in base. H: 19mm, D: 20mm. Similar to the early 15th-century domed, cast and turned thimble illustrated by Egan (1998, 266-7, fig.206.829). (SF38, context 472, Period 1C).

Tools and Production
Iron bars
Heavily corroded iron bar with a sub-triangular cross-section. L: 124mm, W: 15mm, H: 17mm. (SF35, context 444, Period 3).

Iron nails
A total of twenty-seven iron nails were examined, seven from the three evaluation trenches and twenty from the excavation trench. The nails were found in various states of preservation, the majority thickly corroded, with many shapes unclear until X-rayed. Several nails had no metallic core with only the exterior growth remaining, many were also very brittle. The nails were either from furniture or

from structures and date from the medieval period to modern times, being both hand-made and machine-made.

Copper alloy tack
Small tack or stud, domed head, square section shank. L: 8mm, head size: 12mm, G: 2mm. (SF1, Evaluation Trench 3, context 305, Period 5).

Plant Remains and Marine Molluscs

by Elizabeth Pearson

Methods

Fieldwork and sampling policy
Samples were taken by the excavator from deposits considered to be of high potential for the recovery of environmental remains. A total of six samples were taken from the site (Table 3) which generally produced low levels of environmental remains. However, context 500, a Period 1 early medieval layer contained a small to moderate size assemblage of charred cereal remains which was selected for analysis. A summary of the environmental remains from the bulk samples is given in Table 4.

Large marine molluscs were also hand-collected from the site, and are quantified and commented on in this report.

Processing and analysis

The sample from context 500 (10 litres) was processed by flotation followed by wet sieving using a Siraf tank. The flot was collected on a 300μm sieve and the residue retained on a 1mm mesh. This allows for the recovery of items such as small animal bones, molluscs and seeds.

The residue was fully sorted by eye and the abundance of each category of environmental remains estimated. A magnet was also used to test for the presence of hammerscale. The flots were scanned using a low power MEIJI stereo light microscope and plant remains identified using modern reference collections maintained by the Worcestershire Historic Environment and Archaeology Service, and a seed identification manual (Beijerinck 1947). Nomenclature for the plant remains follows the *New Flora of the British Isles,* 2nd edition (Stace 2001).

Plant Macrofossil Remains

Quantified results for plant remains from context 500 are shown in Table 5, and scanned results from the remaining samples from the initial assessment (Pearson 2006) in Table 6.

A small to moderate size assemblage of charred cereal crop remains was recovered from context 500, an early medieval (Period 1A) layer. The assemblage was predominantly made up of cereal grain, including free-threshing wheat (*Triticum* sp free-threshing), hulled barley (*Hordeum vulgare*) and wild or cultivated oat grain (*Avena* sp). However, grass grain and weed seeds were also relatively abundant. Meadow fescue (*Lolium* cf *temulentum*), brome grass (*Bromus* sp) and other grasses were recorded in association with seeds of spike-rush, (*Eleocharis* sp), possible smooth tare (*Vicia* cf *tetrasperma*) and other vetches (*Vicia* sp). Occasional fragments of hazelnut shell (*Corylus avellana*) were also disposed of in this layer. With the exception of the hazelnut shells, these remains may have been charred as a result of cereal grain being parched prior to consumption on domestic fires, or as a result of crop waste being used as fuel for domestic fires. The latter seems more likely as there is a relatively high proportion of weed grasses and other weed seeds associated with the cereal grain.

The abundant elderberry seeds (*Sambucus nigra*) are likely to be contemporary with the deposit, and are

Context	Sample	Context type	Description	Date	Period	Volume processed (L)	Residue assessed	Flot assessed
444	1	Layer		15/16 C	3	10	Y	Y
445	2	Layer		LMED/EPMED	2	10	Y	Y
450	3	Layer	Demolition	LMED/EPMED	2	10	Y	Y
475	5	Layer	Charcoal	LMED	1C	3	Y	Y
475	4	Layer	Charcoal	LMED	1C	10	Y	Y
500	6	Layer		EMED	1A	10	Y	Y

Table 3 List of environmental samples.

Context	Sample	large mammal	small mammal	fish	bird	mollusc	eggshell	charred plant	waterlog plant	Comment
444	1	occ		occ-mod	occ	occ*	occ		occ	*also hand-collected
445	2	occ	occ	occ		occ			occ	
450	3	occ	occ	occ	occ	occ*				*also hand-collected
475	4	occ		occ						
500	5	occ	occ	occ	occ	occ*		abt		*also hand-collected

Occ = occasional, mod = moderate, abt = abundant

Table 4 Summary of environmental remains from bulk samples.

Latin name	Family	Common name	Habitat	500
Charred plant remains				
Triticum dicoccum/spelta grain	Poaceae	emmer/spelt wheat	F	4
Triticum sp (free-threshing) grain	Poaceae	free-threshing wheat	F	30
Triticum sp grain	Poaceae	wheat	F	17
Hordeum vulgare grain (hulled)	Poaceae	barley	F	10
Cereal sp indet grain	Poaceae	cereal	F	22
Bromus sp grain	Poaceae	brome grass	AF	2
cf *Avena* sp grain	Poaceae	oat	AF	13
Poaceae sp indet grain	Poaceae	grass	AF	8
Poaceae sp indet grain (small)	Poaceae	grass	AF	1
Corylus avellana shell fragment	Betulaceae	hazelnut	C	7
Vicia cf *tetrasperma*	Fabaceae	smooth tare	AD	6
Vicia sp	Fabaceae	vetch	ABD	1
Eleocharis sp	Cyperaceae	spike-rush	E	1
cf *Festuca pratensis*	Poaceae	meadow fescue	BD	1
Lolium cf *temulentum*	Poaceae	darnel	AB	10
unidentified seed	unidentified			1
unidentified bud	unidentified			1
Anoxic preservation				
Sambucus nigra	Caprifoliaceae	elderberry	BC	+++

Key:

Habitat	Quantity
A = cultivated ground	+++ = 51 -100
B = disturbed ground	
C = woodlands, hedgerows, scrub etc	
D = grasslands, meadows and heathland	+
E = aquatic/wet habitats	
F = cultivar	

Table 5 Plant remains from context 500.

Latin name	Family	Common name	Habitat	444	445	450
Anoxic preservation						
Rubus idaeus/series *Glandulosi*	Rosaceae	raspberry/bramble	CD		+	
Salix sp bud	Salicaceae	willow	C		+	+
Malus sp	Rosaceae	crab apple/apple	CF			+
Sambucus nigra	Caprifoliaceae	elderberry	BC	+		

Key:

Habitat	Quantity
A= cultivated ground	+ = 1 - 10
B= disturbed ground	
C= woodlands, hedgerows, scrub etc	
D = grasslands, meadows and heathland	
E = aquatic/wet habitats	
F = cultivar	

Table 6 Plant remains from samples scanned for assessment.

particularly characteristic of medieval and post-medieval urban assemblages. Associated with the plant remains was a small quantity of fragmented large mammal bone, small mammal, fish and bird bone, and oyster shell recovered from the sample residue. A small number of oyster shells (*Ostrea edulis*) were also hand-collected from this deposit (see below).

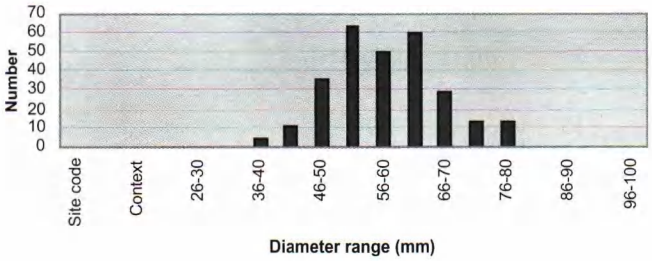


Fig.27 Quantification of oyster valve diameters, Period 3.

Hand-collected Mollusc Shells

A relatively large number of oyster (*Ostrea edulis*) shells, and occasional to moderate cockle (*Cardium edule*), mussel (*Mytilus edulis*) and pod razor shells (Ensis spp) were hand-collected from contexts of this date (Table 7). The marine shells (oysters, cockles and mussels, for example) are most abundant and diverse in contexts of Period 3 (15th-/16th-century) date. These species are estuarine and marine (in shallow coastal waters), and are likely to have been collected from these habitats locally. A histogram (Fig. 27) shows a similar distribution of oyster valve sizes from Period 3 to those recorded for a late 16th-century infill of St Clement's Dock, Narrow Quay in Bristol (Good 1987). The assemblages of oyster shells from Periods 1, 2 and 4, however, were too small for comparison, so it was not possible to comment on any trends in oyster collection over time.

Discussion

Assessment of the samples has shown that a low level of domestic refuse (possibly including cess waste) is present in most of the samples, much of which is likely to have been re-deposited from elsewhere on the site. This type of waste is common on sites of medieval and post-medieval date in Bristol, for example at Jacob Street and West Street (Head 2004; Head and Mann 2008). Charred cereal waste was, however, disposed of in an early medieval Period 1A layer (500). The density of these remains suggests that it is more likely to derive from domestic hearths, than a specialised corn-drying kiln or grain storage structure nearby (where more concentrated levels would be expected). This contrasts to charred crop remains recovered from excavations at the Bus Station in Bristol (Mann and Pearson 2006). Here, concentrated deposits of relatively clean charred grain were found in successive fills of a large medieval pit or pond. These deposits are more characteristic of the waste from agricultural processing of some kind, probably parching prior to storage or milling and are more suggestive of the area being semi-agricultural in character. The site was within an ecclesiastical enclave, being located on the site of the former Priory of St James, and therefore agricultural activities are likely to have been carried out here, or at least the products stored and processed to some degree.

The dumps of marine molluscs are also characteristic of assemblages in urban ports of this date. For example at Narrow Quay (Good 1987) large numbers of marine molluscs were found (larger assemblages than at the Old Council House), and were particularly abundant in deposits of 15th- and 16th-century date, as is the case at the Old Council House.

Period	Context	Oyster		Scallop		Mussel		Cockle		Pod razor	
		Frags	Wt (g)	Frags	Wt (g)	Frags	Wt (g)	Frags	Wt (g)	Frags	Wt (g)
1A	500	1	4								
1C	469	2	7								
1C	479	1	10								
1C	482	1	9								
2	450	6	96			1	2			1	2
2	455	1	22								
2	456	2	130								
2	457	2	19								
2	459	2	11								
2	460	1	77								
3	426	2	22								
3	428							1	1		
3	429	141	1579	1	1	6	10	3	10		
3	432	1	4			1	1				
3	434	5	49								
3	436	1	14								
3	440	18	201			6	12	2	4		
3	441	41	464			2	4	3	7		
3	444	89	961			2	2				
3	446	7	82								
4	405	2	43								
4	421	1	12								
4	431	5	49			3	4				
TOTAL		**332**	**3865**	**1**	**1**	**21**	**35**	**9**	**22**	**1**	**2**

Table 7 Hand collected marine molluscs.

Animal Bone

by Lorrain Higbee

Introduction

A small assemblage of animal bone was recovered from the site: Four hundred and fifteen fragments were recovered by hand during the normal course of excavation and an additional 205 fragments from sieved bulk soil samples. Ninety-one fish bones were separated for specialist analysis (see Nicholson, below). The mammal and bird bone assemblage is briefly discussed below following the recommendations from the initial assessment (Higbee 2006) but detailed information can be found in the site archive. The assemblage dates from the early medieval period (1A) through to the early modern period (6), although the largest stratified collection is from 15th- to 17th-century (Period 6) deposits. The analytical value of the assemblage is limited by small sample size and this prevents detailed comparison between periods.

Methods

The assemblage was analysed following Davis (1992). Using this method a selective suite of skeletal elements are counted (termed POSAC) but others are not. POSAC's are generally bones that show a good survival and recovery rate in most bone assemblages and also provide useful age and biometric data. Non-countable bones have been quantified into general size categories and small splinters into general mammal or bird categories. This information is presented in order to provide an overall fragment count (see Table 8).

	Period							
Taxa	**1A**	**1C**	**2**	**3**	**4**	**5**	**6**	**Total**
human	-	-	-	1	-	-	-	1
cattle	2	8	8	20	1	10	-	49
sheep/goat	5	8	9	23	-	11	1	57
pig	2	3	3	12	1	1	1	23
dog	-	1	1	-	-	-	-	2
cat	-	-	-	1	-	-	-	1
fallow deer	-	-	-	1	-	1	-	2
roe deer	-	1	-	-	-	-	-	1
rabbit	-	-	-	4	1	2	-	7
hare	-	1	-	-	-	-	-	1
mouse (*Mus sp.*)	1	-	-	-	-	-	-	1
chicken	9	10	4	9	-	4	-	36
duck (*Anas sp.*)	1	-	2	10	1	-	-	14
duck (*Anas/Aythya sp.*)	1	-	-	-	-	-	-	1
teal	1	-	-	-	-	-	-	1
goose	2	4	1	5	-	-	-	12
pigeon	1	-	1	-	1	-	-	3
partridge	-	-	-	1	-	-	-	1
pheasant	-	-	-	1	-	-	-	1
small wader	2	-	-	-	-	-	-	2
large mammal	2	7	17	34	5	13	-	78
medium mammal	12	13	14	37	5	17	-	98
small mammal	2	-	1	4	-	-	-	7
ave indet.	12	4	4	18	3	3	-	44
mammal indet.	30	3	10	43	-	-	-	86
Total	**85**	**56**	**60**	**159**	**15**	**59**	**2**	**529**

Table 8 Number of specimens identified to species.

The following methods were used to record age, biometric data and calculate shoulder heights: Grant (1982); Halstead (1985); Hambleton (1999); Harcourt (1974); O'Connor (1989); Payne (1973 and 1987); Silver (1969); Von den Driesch and Boessneck (1974) and Von den Driesch (1976).

Results

Condition of material

The majority of fragments from all periods are well-preserved and this is reflected in the number of identified bones and the recovery of fragile bird, fish and small mammal bones. However, a small number of bones, mostly from later periods, are poorly preserved and these fragments are from immature animals. Bones from immature animals are generally more susceptible to deterioration in the burial environment than the bones of adults.

In addition to the above, gnaw marks made by carnivores and rodents were noted on a small number of fragments (c.4%). Marks made by rodents are distinct from those caused by carnivorous animals such as dogs, their sharp incisor teeth produce parallel striations on bone rather than the irregular pattern caused by dog molars.

Butchery marks were noted on c.15% of fragments, most are chop marks and were recorded on cattle and sheep bones. Some of the techniques, for example the splitting of vertebrae down the midline, are typical of medieval and post-medieval assemblages from Bristol and elsewhere (see for example Bond and O'Connor 1999, 365).

Species represented

Given the small size of the assemblage a relatively wide range of species was identified (Table 8). Bones from livestock species account for 60% of the total number of bones identified to species (or NISP). Overall, sheep bones are marginally more abundant than cattle bones, whilst pig bones are present in low frequencies, and this pattern is repeated for each period. This basic trend has been recorded for other Bristol assemblages, for example 22-30 West Street (Higbee 2008) and generally fits well with national patterns for urban medieval and post-medieval assemblages (Albarella *et al* 1997, 22).

Less common mammalian species account for c.7% of NISP and include domestic pets (e.g. dog and cat), human commensals (e.g. mouse) and occasional additions to the diet (e.g. rabbit, hare and venison in the form of fallow and roe deer).

An unusual aspect of the assemblage is the relatively

high frequency of bird bones (33% NISP), but this probably reflects the origin of the refuse, mostly kitchen/table waste. The bird bone assemblage includes domestic poultry, game birds and waterfowl. Of these, domestic species predominate, in particular chicken, which accounts for 51% of all identified bird bones. Domestic duck and goose are also fairly common, at 21% and 17% of the total bird NISP, respectively. Game birds include pigeon, partridge and pheasant, and waterfowl include teal and a small wader (?plover). These species are amongst the most common from urban medieval and post-medieval assemblages in southern Britain (Albarella and Thomas 2002, 33).

In addition, one human skull fragment was also recovered and probably originates from a disturbed grave in the vicinity of the site.

Body part distribution

The skeletal element distribution for livestock species is given in Table 9. This clearly illustrates that most of the bone waste deposited at the site came from dressed carcasses/joints (trunk, fore- and hind-limbs). A small amount of primary butchery waste (i.e. heads and feet) was also deposited at the site but this mixing of refuse from different processes is fairly common in urban assemblages. The higher ratio of meat joints in the assemblage fits with the relatively high frequency of bird bones and confirms the domestic origin of the majority of the bone waste.

Age at death

Due to the low frequency of cranial fragments in the assemblage, most of the available age data comes from epiphyseal fusion of the post-cranial skeleton; however, this method provides less accurate results than tooth eruption/wear. The epiphyseal fusion data from each period has been amalgamated due to small sample size and is summarised in Table 10. Few sheep were culled as lambs, indeed most are over three years of age and represent animals killed at the optimum age for prime mutton. Cattle from a range of ages were selected for slaughter, from calves through to adults over 5 years of age. Most pigs were culled at a relatively young age, usually before 2 years of age. The kill-off patterns for livestock species are similar to those recorded for the much larger contemporary assemblage from Union Street, Bristol (Higbee 2003), although in this instance it was possible to discern trends in the age data, these trends generally reflect the increasing importance of wool to the British economy during the medieval period.

Both juvenile and adult chickens are represented in the assemblage, although most of the juvenile bones are from medieval contexts. It would therefore appear that larger numbers of capons (castrated males) were fattened for eating during earlier periods.

	all periods			
body part	**cattle**	**sheep**	**pig**	**Total**
cranium	6	1	2	9
vertebrae	22	22	-	44
forelimb	11	29	9	49
hindlimb	13	18	4	35
feet	19	9	8	36
Total	**71**	**79**	**23**	**173**

Table 9 Body part distribution for livestock species.

Taxa	**Fusion category**	**F**	**UF**	**%F**
cattle	early	13	2	87
	intermediate	5	5	50
	late	5	3	63
	final	6	16	27
sheep	early	17	-	100
	intermediate I	2	-	100
	intermediate II	9	1	90
	late	5	3	63
	final	5	16	24
pig	early	4	3	57
	intermediate I	1	2	33
	intermediate II	1	3	33
	late	-	-	-

Table 10 Epiphyseal fusion data for livestock species, all periods combined.

Size and conformation

Biometric data is presented in Appendix 1 of the archive but detailed analysis of this information is limited by small sample size. However, it was possible to estimate the withers (or shoulder) height of sheep from Periods 2 and 3, and a dog from Period 1C. Sheep withers range from 55.8cm to 58.5cm, and this is within the size range of sheep from Union Street (Higbee 2003). The shoulder height estimate for the dog radius from the late medieval assemblage was only 29.5cm; however, the bone is fairly robust in comparison to its length and clearly comes from a small, stout breed of dog.

Conclusions

The small medieval, post-medieval and early modern assemblage from the Old Council House excavation has been fully analysed to provide a complete archive of data for future reference. A brief summary of the most significant information has been provided above and the assemblage generally fits with local and national trends for contemporary urban assemblages.

Fish Remains

by Rebecca Nicholson

Exactly 100 fish fragments were identified from the site, all but one from the residues obtained from sieving 10 litre soil samples. The assemblage derived from three phases: Period 1A (early medieval), Period 2 (late medieval/early post

medieval) and Period 3 (15th/16th century to 1675). All recovered fragments were in good or fair condition; none were burnt and none exhibited evidence of gnawing or chewing.

Methods

All bones and scales were identified by comparison to fish held in the author's reference collection. The small number of bones did not merit biometrical analysis, but fish sizes were subjectively categorised as 'small', 'medium' or 'large', with these sizes relating to the growth patterns of live fish and estimated by comparison with bones from fish of known length.

Species Represented

The fishes identified included marine, euryhaline and freshwater taxa (Table 11). Considering the small size of the assemblage, a remarkably large range of species was present. As is usually the case for English medieval assemblages, clupeids (particularly herring, *Clupea harengus*, but in this case also including sardine, *Sardina pilchardus*) dominated in terms of numbers of bones. However, since each individual fish is relatively small, in terms of meat-weight the larger specimens such as mature cod (*Gadus morhua*) and conger eel (*Conger conger*) may have been at least as significant. Cod tends to dominate most English medieval and post-medieval fish assemblages in terms of the weight of edible meat represented (Locker 2001).

Flatfishes were represented by plaice (*Pleuronectes platessa*) and dab (*Limanda limanda*), with fish from around 20cm – 40cm identified. Gadids (cod family fish) included cod, hake (*Merluccius merluccius*), ling (*Molva molva*) and whiting (*Merlangius merlangus*). Mackerel (*Scomber scombrus*) and thornback ray (*Raja clavata*) were identified from single items (a vertebra and a dermal denticle respectively) while sea bream (Sparidae) was recognised from a single scale. Several bones from small cyprinids were found in samples 6 (context 500) and 3 (context 450); the only species identified was chub (*Leuciscus cephalus*) but not all bones could be speciated. Eel (*Anguilla anguilla*) was identified in three out of four of the sieved samples.

SPECIES	Period 1A	Period 2	Period 3	Grand Total
Thornback ray			1	1
Conger eel	1		3	4
Eel	8	1	2	11
Herring	1			1
Sardine			1	1
Clupeid	24	1	11	36
Chub	1			1
Cyprinid	4	1		5
Cod	1		3	4
Whiting			1	1
Ling			1	1
Gadid	2	2	6	10
Hake			1	1
Mackerel	1			1
Sea Bream	1			1
Plaice			1	1
Dab	2			2
Right eyed flatfish	6		8	14
Flatfish			3	3
Unidentified			1	1
Grand Total	**52**	**5**	**43**	**100**

Table 11 Number of identifiable fish bones, by taxon and period.

Discussion

In common with other fish assemblages from the city, despite the small sample size the fish assemblage from the medieval and post-medieval deposits contained a diverse fauna, generally representing local fishing (Locker 2001; Nicholson 2004 & 2005). Bearing in mind the caveat of small assemblage size, there is little in this assemblage to suggest any significant difference in fish availability and consumption between the medieval and post-medieval centuries. Cyprinids were absent from Period 3, but this apparent lack of freshwater fish cannot be substantiated from such a small number of bones. Freshwater fish were relatively expensive in the medieval period, and cyprinids of a size which would be considered inedible today were certainly bought and consumed (Dyer 1988). Eels were present in all periods and would most probably have been trapped in local rivers or in the Severn Estuary. The identification of hake, conger eel and sardine is typical for a local fishery based off the south-west coast. There is no clear evidence to demonstrate whether fish were purchased as preserved or fresh specimens – whitefish and herrings were commonly conserved by pickling or smoking (herring) or salting and drying (whitefish) and the port of Bristol was a major landing point for both preserved and fresh fish (Carus-Wilson 1951). The single ling bone, a large urohyal from a fish of well over one metre long, is likely to be from a dried fish since ling are most commonly found in northern waters and, like cod, by the end of the medieval period were often imported as 'stockfish' - salted and dried.

DISCUSSION

The oldest feature uncovered in the excavation, and probably dating to the 12th century, was a wall built mainly of Brandon Hill Grit bonded with a friable yellow mortar. This wall was associated with deposits containing pottery ranging in date from the 11th to the mid 13th centuries, although the mid 13th-century pottery is confined to the higher of these deposits.

The wall lies some 30 metres from the street frontage and therefore towards the rear of any burgage plot running back from Corn Street. However, the earliest reliable map of Bristol produced by Millerd in 1673 does not show a system of long, narrow burgage plots in this part of Bristol but instead intensive occupation with groups of houses and gardens in the area to the north of Corn Street between Small Street and Broad Street. Although this map records the post-medieval layout of the area, it is likely that the medieval occupation was similar, with buildings accessed from narrow lanes and paths running between the streets,

although no such lanes exist today. It seems most likely that the wall found in the excavation belongs to one such building.

A layer of rubble suggests that the building was demolished in the mid 13th century before another was built in its place. Two walls were founded on these demolition deposits, the construction of the walls being associated with layers of probable mid 13th-century date. The building of which these walls formed a part seems to have remained occupied until it was demolished in the later 15th century. A series of rubble deposits containing glazed ceramic ridge tiles and Pennant sandstone roof tiles date to this event. The rubble also contained a late 14th-century gold ring.

Following this demolition the area of the excavation was used as a garden from the late 15th century to the late 17th century. Two lines of Pennant sandstone slabs set on edge are typical of the edging used for garden borders and paths elsewhere in the city. Pits were dug through these features in the 17th century.

During the early post-medieval period the presence of a number of types of imported pottery, including rare examples of Italian maiolica, suggest the high status of the inhabitants in this part of the city.

In 1675 a house was built fronting Corn Street and a contemporary plan of that property shows that walls encountered in the excavation coincide with the rear wall of the house and partition walls between rooms. Unfortunately no floors or deposits associated with the 1675 house, or its continued occupation into the early 19th century, survived.

In the early 19th century the 1675 building was demolished in order that the Council House could be extended, the work on the extension commencing in 1824. There was no archaeological evidence for this demolition in the main area of the excavation but a succession of rubble deposits in one of the evaluation trenches contained 19th-century pottery and appear to date to this period. The area of the excavation was used as a courtyard between the separate buildings of the Council House until the present day. A retaining wall and stone-lined drain are the only evidence for a further extension of the Council House in 1898.

This small excavation has provided a unique opportunity to investigate the archaeological resource in the heart of the medieval city. Continuous occupation from at least the late 12th century to the present was recorded, although it is clear that earlier occupation deposits remained unexcavated below the artificial limit placed on the depth of the excavation by the nature of the development. Nevertheless, deposits and features over two and a half metres deep were found to have accumulated since the 12th century and the wealth of finds for such a small excavation, including a gold ring and rare imported pottery, hints at the high status of the inhabitants.

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EXCAVATIONS AT WASHINGPOOL FARM, AVONMOUTH, BRISTOL, 2007

by
Stuart Whatley

SUMMARY
This report concerns the excavation of an early 19th/20th century farm known as Washingpool Farm, located adjacent to the A403, on the north side of Avonmouth.

INTRODUCTION
Washingpool Farm lay on the far north side of Avonmouth on the Avon levels at NGR ST 5336 8156. It was bounded by the A403 on the east, Chittening Trading estate to the south and west, and a former fuel storage depot to the north. Washingpool Farm was in use from the early 19th to the mid 20th century, comprising several buildings either side of the modern A403.

In 1997 BaRAS undertook an evaluation on the proposed development site, approximately 15m away from the A403 (Insole 1997, BSMR 20021). Wall foundations and cobbled surfaces were interpreted as part of the former Washingpool Farm. There was also a pond-like feature that had been filled with 19th-century material. No residual finds earlier than the 18th-century were recovered. On the basis of the evaluation, a condition for archaeological investigation was applied to the planning consent, allowing for open-area excavation of the farm.

The fieldwork was undertaken between April 2007 and May 2007 under the supervision of Stuart Whatley. The project archive will be deposited with Bristol City Museum & Art Gallery under the Accession Number 2007/23 and has been entered in the Bristol Sites and Monuments Record as BSMR 24536.

GEOLOGY
Owing to rising sea levels since the last Ice Age, the Avonmouth Levels have been overlain by a heterogeneous alluvial deposit the various horizons of which are known collectively as the Wentlooge Formation, now renamed 'Newchurch 2 Series'. This name is applied to various alluvial clay layers containing peat banding, which has occurred due to the increase in sedimentation from the Severn estuary. This process has been ongoing for over 9000 years and in some areas the deposit is 5m deep (Allen & Fulford 1992).

Allen states that the Wentlooge Formation is subdivided into three stratigraphic groups. The Lower group comprises gravels and sands overlain by bluish or greenish clay. The Middle group consists of organic beds (peat or silty clay with roots) and clayey silts, and the Upper group consist of greenish grey clayey silts grading into brown mottled silts.

Because the remains of Washingpool Farm were close to the surface, the excavation methodology adopted (strip and record) meant that only the deposits from the Upper Wentlooge group were uncovered.

HISTORICAL BACKGROUND
The Henbury area is first recorded in an Anglo-Saxon charter purportedly of late 7th century date. It records that an estate here was given to the Bishop of Worcester by the Mercian king Æthelred between AD691 and 699 (Sawyer 1968, S77). The grant was for enough to support thirty families at Henbury and Aust with their 'appurtenances' and for a fishery in the Severn (Hamilton Thompson 1915, 99). There followed, at various dates in the 8th century, a series of other Mercian charters confirming and perhaps adding to Æthelred's original grant (see S 146 and S1411; in addition, from the first of these two, Finberg infers the prior existence of a now lost charter of Æthelbald; Finberg 1961, 34, No. 17). The church of Henbury was known as the manor of 'Henbury in the Salt Marsh'.

Various place names in the vicinity provide clues about the nature of settlement in the (probably) late Anglo-Saxon period. These are found attached to farmsteads in forms such as Worthy Farm (worth = enclosed, ring-fenced and probably single-household settlement), Rockingham Farm (ham = land in river bend or generally low-lying and damp), Berwick, Stowick (wick = dairy farm, or farm subsidiary to or dependent on another settlement or estate). Physical features such as 'Mere dyke' (now Mere bank) and 'Upper Compton Rhene' also suggests an origin for Saxon sea defences and drainage (Insole 1997, 23).

In Domesday Book (1086) the area of *Henburie* was owned by the Bishop of Worcester. It was part of the lands of Westbury on Trym, and set within the Brentry Hundred (Williams and Martin 2002, 452). Medieval records also record that the Avonmouth levels became known in this period as the Salt Marsh. This name was still in use in 1577 and was noted as such by Saxton on his map of Gloucestershire. Salt making was probably an important activity in the area, as a drainage channel named the 'Salt Rhyne' is located in the North Avon Levels.

The Bishops of Worcester lost control of the manor of

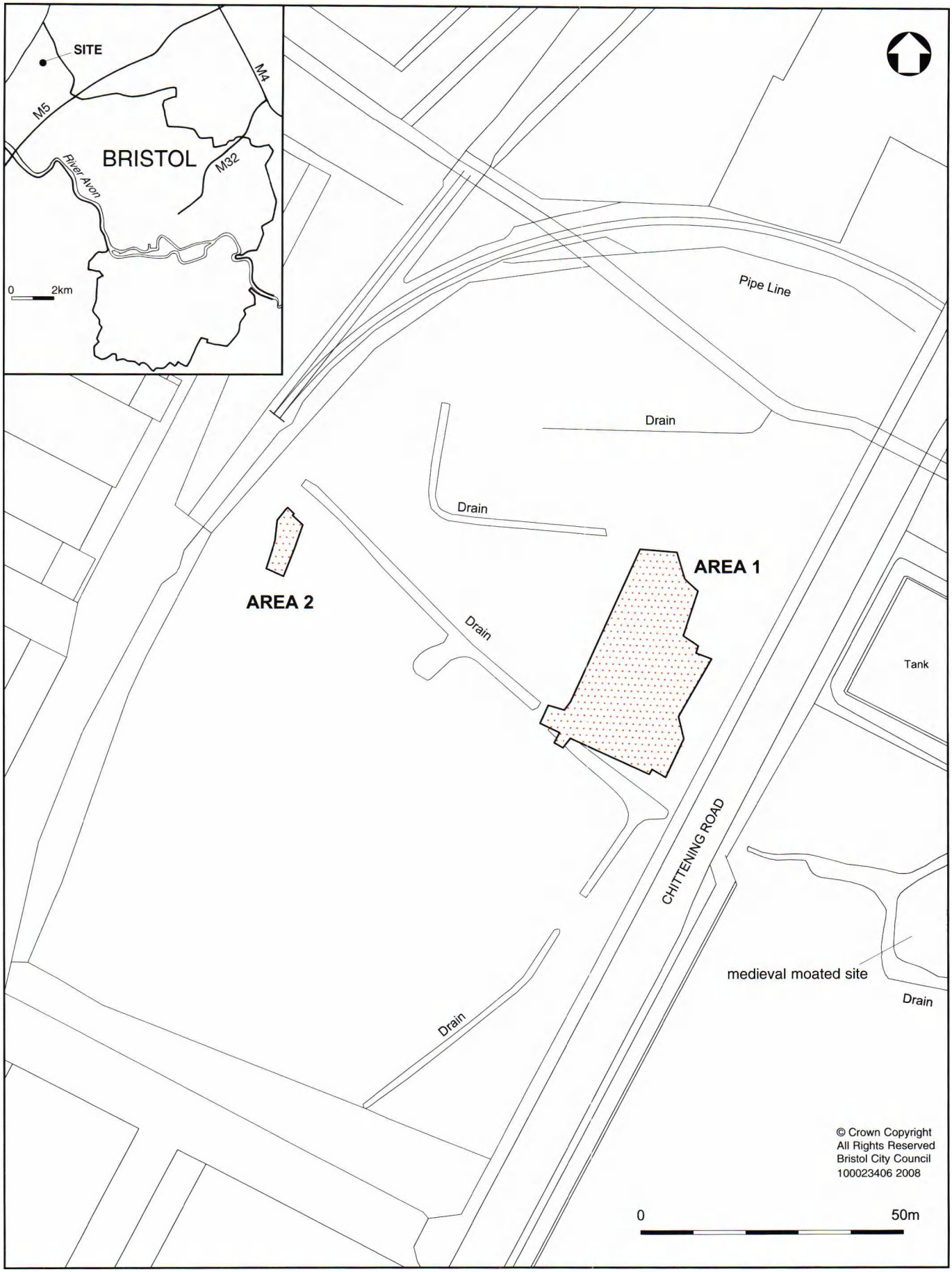


Fig..1 Site location plan, scale 1:1000.

Fig.2 Isaac Taylor's 1773 map of the tithings of Henbury.

Henbury in 1547, and Edward VI subsequently granted it to Sir Ralph Sadleir. After his death in 1587, Sir Walter Aston (later Lord Aston) took over the lands. It was during the life of Walter Aston that the Great Flood of 1607 occurred. This caused many deaths in the Somerset, Gloucestershire and South Wales region, and the precarious nature of habitation in the Salt Marsh area led to the construction of a new Sea Wall by the Commissioners of Sewers in the 17th century.

Lord Aston was succeeded by his son in 1640, and after his death in 1680, Sir Samuel Astry bought the manor. Sir Samuel's eldest daughter Elizabeth married Sir John Smyth, who became the major landholder in the area in 1704.

The development site is first recognised in the historical record as two fields. The northern field (and site of the later western range of farm buildings) was an unnamed field and the southern field was part of *Pickes Leafes*. This is recorded on a map of 1773 (Fig.2) showing Henbury parish and its constituent tithings. The extant Stuppil Rhyne in the north and an unnamed rhyne in the south bound the northern unnamed field.

It was only in 1830 that the Ordnance Survey first depicted farm buildings at the site; these and the field were again unnamed. According to the 1838 Parish tithings, the land (Parcel 987) was owned by Henry Davis and occupied by William Gunter. The farm did not exist at this time as the land is recorded as paddocks and was used as pasture. The name 'Washingpool Farm' was first recorded in 1839 and was noted as a 'paddock', suggesting that livestock was reared there (Smith 1964, 134).

The 1841 tithe award (Fig.3) shows that the development site was located within Parcels 977, 979 and 987. The apportionment states that Parcel 987 comprised a house, homestead and orchard, owned by James Price, but occupied by William Gunton/Gunter (Jackson 1996, 22). The house probably equates to Building 3 in this report and the earlier Washingpool Farm east of the A403 Chittening Road. The orchard is also first recorded in the 1841 tithe award but not on the 1830 Ordnance Survey. Parcel 977 appears to have been farmland and contained two buildings which probably equate to Buildings 1 and 5. Parcel 979 was listed as pasture. The tithe map also depicts a sub-rounded field at the south eastern end of the properties (outside the development area), which is represented today as a small island.

Buildings 4 and 5 first appeared on plan in the 1880s 1:2500 Ordnance Survey (Fig.4). The farm contained numerous agricultural buildings, yard surfaces and an orchard enclosed by the Stuppil Rhyne in the north and more unnamed rhynes in the south and west. It appears that the small buildings shown on J. Sturge's 1840 map of Henbury and on the 1841 tithe map were incorporated into/or replaced by the new Buildings 4 and 5.

The national census records that in 1871 John Edmonds lived at Washingpool Farm with his wife Ann, son Charles, two domestic servants and one farm servant. The 1881 census revealed that John Edmonds had died (*c* 1875) and Ann had remarried John Brewer. Living with them was John Brewer's stepson and stepdaughter, Charles and Ann Edmond, five other sons and daughters, a governess, domestic servant and a farm servant.

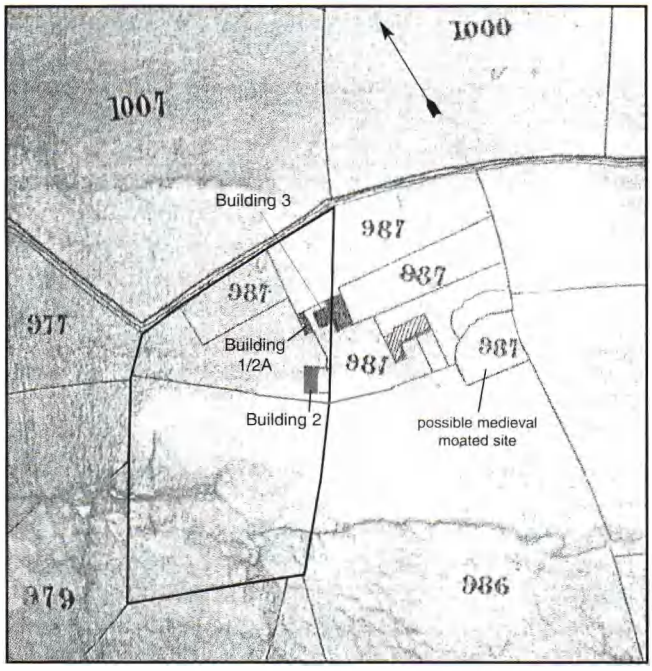


Fig.3 The 1841 Tithe Map of Henbury with Buildings 1, 2, 2A and 3 indicated.

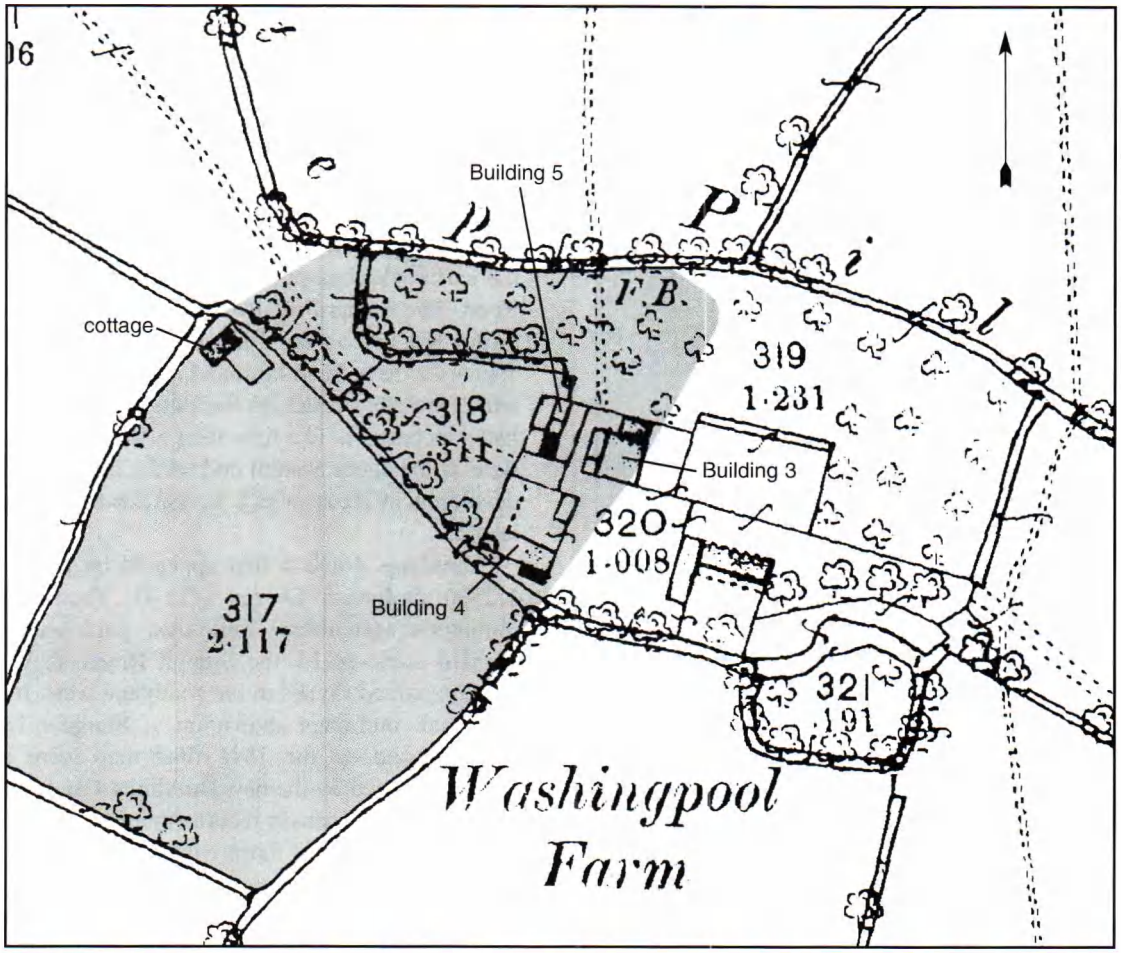


Fig.4 The 1880 Ordnance Survey plan, scale 1:1000.

Between the late 18th and late 19th century many new farmsteads came into existence in the Avonmouth Levels. The enclosure period saw the rise of Chittening Farm (BSMR 9222), Green Splott Farm (9230), West House Farm (9231) and Green Splott Cottages (9229) in the vicinity, and these farms are also recorded in the first three Ordnance Survey plans.

With the onset of World War I the area changed dramatically. Directly south west of Washingpool Farm, the National Filling Factory, No.23 Chittening Road, was established by the Ministry of Munitions in October 1917 to manufacture mustard gas shells. The factory (BSMR 21403) consisted of one and two-storey buildings arranged in a grid pattern, a hospital (BSMR 22350) and an extension of the Severn Beach railway, which was in intermittent use until 1964.

Surrounding Washingpool Farm was a large magazine (BSMR 22347), small magazine (BSMR 22348) and Army Ordnance Department Store (BSMR 22349). These buildings and Washingpool Farm are visible on an RAF aerial photograph taken in 1946 (Fig.6), but they were demolished soon afterwards.

The demise of Washingpool Farm probably occurred in the late 1950s. Planning application No. 2081P/57 (dated to 1957) reveals that Washingpool Farm was to be demolished and a new road, the A403 Chittening Road was to be constructed. The road was orientated north-south through the centre of the site.

ARCHAEOLOGICAL BACKGROUND

Archaeological fieldwork over the last 15 years has greatly increased our understanding of the Avonmouth area. Although the development site only revealed occupation dating from the post-medieval period, it existed within an archaeological landscape dating from the last Ice Age.

Within the Middle Wentlooge Formation soils, archaeological evidence spanning the Neolithic (4000-2000BC) and Bronze Age (2000-700BC) has been revealed. At nearby St. Katherine Farm was found the earliest evidence of activity in the area, a buried clay soil horizon dating to the Neolithic period (Bryant 2004, 7). Neolithic peat levels were uncovered during construction of the Second Severn Crossing (Lawler 1992), and at Seawall Caravan Park (Insole and Longman 1997). Bronze Age pottery has been retrieved from Rockingham Farm 2, and Bronze Age soil horizons have been encountered at Katherine Farm and Cabot Park (Bryant 2004, 7-8).

Evidence of occupation in the Iron Age (700BC-AD43) has not been so forthcoming: the only settlement has been found at Hallen Marsh, which contained phases of occupation extending into the early Romano-British period.

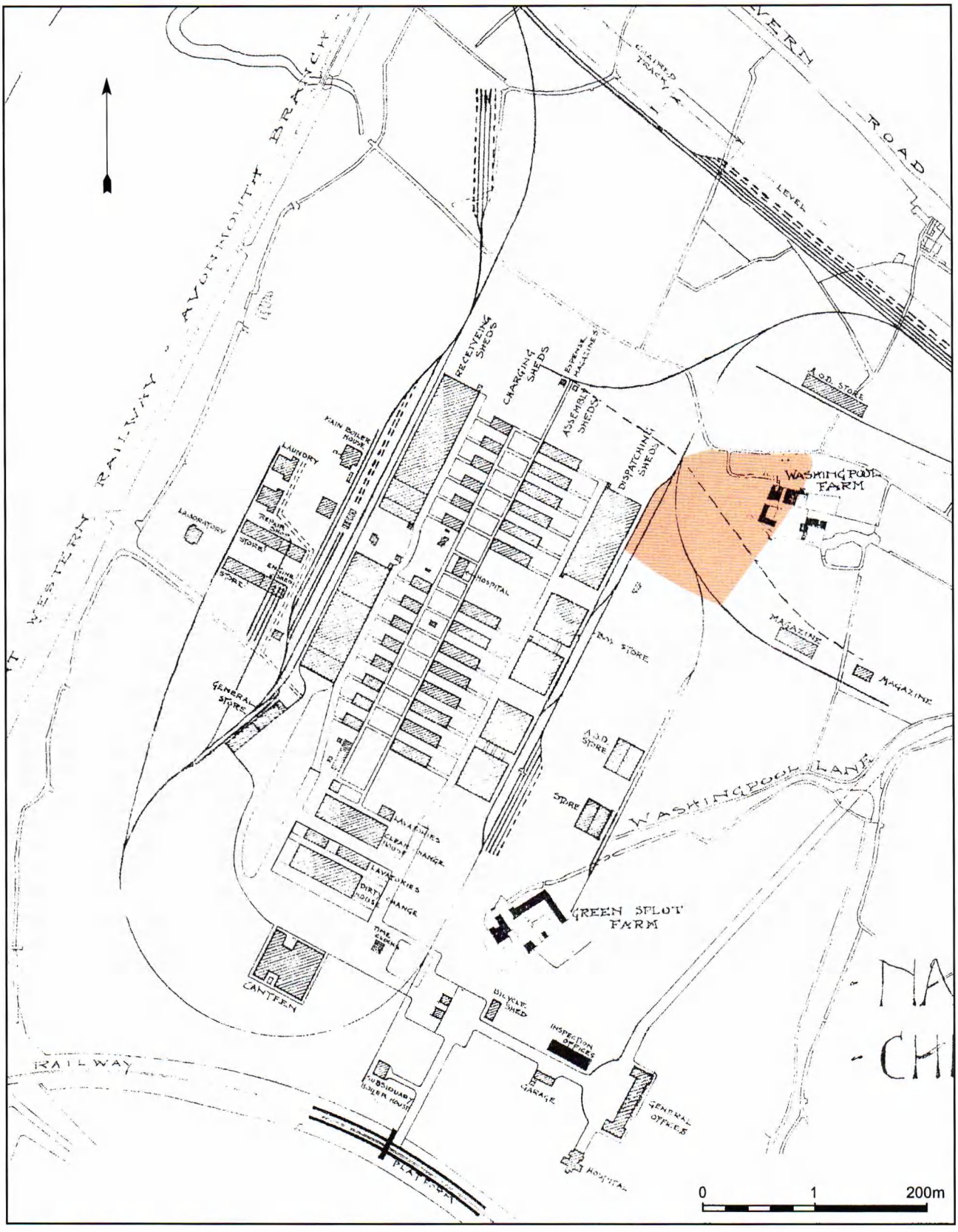


Fig.5 The 1918 Munitions plan of National Filling Factory No.23, Chittening, scale 1:5000.

Romano-British (AD43-early 5th century) evidence in the Avonmouth area has so far been found to be limited to the eastern part of the levels. This is probably because the coastline at that time lay further east of the modern coastline. Excavation at Crooks Marsh Farm in 1979 resulted in the discovery of a Romano-British farmstead below 0.5m of alluvial clay, suggesting that after the site was abandoned it was constantly flooded. The farmstead

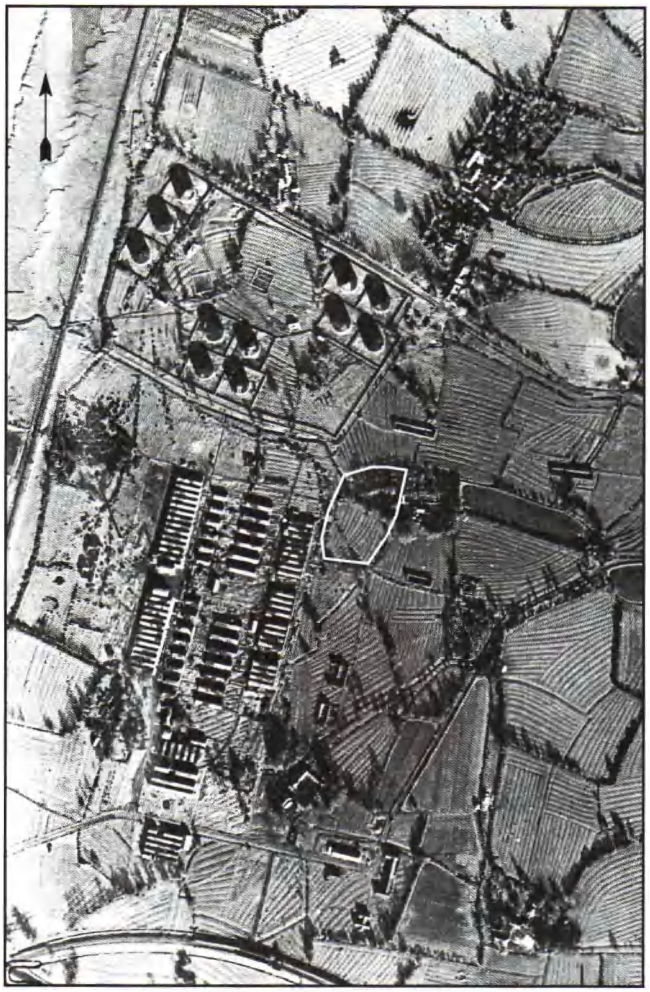


Fig.6 Aerial photograph of the north Avonmouth area. Washingpool farm is highlighted. RAF, 1946. Bristol SMR.

existed in a contemporary landscape containing two Roman roads, small settlements at Henbury School and Cattybrook, a villa at Kings Weston and the small town of Portus Abonae on the river Avon (Bryant 2004, 8).

Little archaeology dating to the early medieval period (early 5th century-1066) has yet been found. It is in the later medieval period that activity increased (AD1066-1500). The Avonmouth Levels have been found to contain many small moated sites, whose origins may lie in the medieval period. From his studies on the Caldicot Levels, Rippon (2001, 153) has argued that the earliest features in the Gwent landscape were infield sites, roughly oval-shaped enclosures of farmland attached to a farmstead, which were linked in the landscape by trackways and droveways.

Examples of infield sites can be found in the Avonmouth area. Excavations at Rockingham Farm between 1993-7 (BSMR 5215) revealed that a small farmstead existed in the 12th /13th century directly south of the Salt Rhyne. The site contained rubbish pits and ditches surrounding a raised internal area. Another example may be a site at Seabank Power Station, where a series of five drainage ditches containing domestic refuse was excavated. The ditches dated from the 11th-18th centuries and suggest the presence of a domestic site nearby (Insole 1997).

Medieval settlement may also exist on later, post-medieval occupation sites. Farms such as Rod Bourn Gout (BSMR 2991), Westhouse Farm (9231) and Washingpool Farm all contain adjacent moated sites. On the former (earlier) Washingpool Farm, east of the development site, lies a small island overgrown with trees, and surrounded by a ditch 1m deep (Jackson 1996, 26; BSMR 9232). Jackson also suggests that it may have functioned previously as a moated site. It is possible it may have been a former farmstead and the land containing the 19th-century Washingpool Farm was an earlier infield, which was later built on when drainage was improved.

Other evidence of possible medieval activity can be seen from the 1946 RAF aerial photos (Fig.6). The central and southern part of the site contained ridge and furrow, which terminated at the southern rhyne of the later 19th century Washingpool Farm.

THE EXCAVATION

Methodology

Topsoil (100) and modern overburden (101) were removed by mechanical excavator from two areas totalling 987m^2. Area 1 (940m^2) was bounded by the A403, south by a rhyne, west by scrubland and north by a small orchard and another rhyne. Owing to breeding birds, the excavation had to cease at the perimeter of the orchard. Area 2 (47m^2) was located approximately 60m due west from Area 1.

The Area 1 excavation area incorporated the 1997 BaRAS evaluation trench. Extensive 20th-century deposits and undisturbed clays were excavated by machine, followed by hand cleaning and the excavation of sondages through features or deposits to understand the archaeological sequence. Photographs were taken using a Ricoh digital camera, and a conventional 35mm SLR camera using black and white print film.

The site was planned at a scale of 1:20 using a 5m grid. The fixed grid was established using a Total Station, linked to the Ordnance Survey grid. The relative heights of all layers, features and structures were related to the Ordnance Survey Datum and are referred to as heights above Ordnance Datum (aOD). Sections were drawn at the scale of 1:20.

Site Phasing

Phasing of the excavation is based upon the analysis of the stratigraphy, the physical sequence of structures and features, and examination of the finds.

Phase 1: 18th - early 19th centuries
Phase 2: Early - mid 19th century
Phase 3: Mid 19th - mid 20th centuries
Phase 4: Mid - late 20th century

Plate 1 Sondage 2, Pit 144, looking east. A domestic rubbish pit dating from Phase 1.

AREA 1

Phase 1: 18th to early 19th century
(Figs.8-11)

Located in Sondage 2 beneath stone cobbled floor 103 of Building 4 was Pit 144 (Fig.9, Plate 1). The pit was shallow at only 0.3m deep, sub-rounded and approximately 1.85m wide. It was filled with dark brown-grey silty clay 144 and contained small, angular, limestone inclusions, ceramic floor tile, and clay pipe suggesting it was formerly a domestic rubbish pit. Based on a vitrified sherd of English stoneware, Pit 144 was infilled in the early 19th century. The sherd was from a high-necked jug and was decorated with an applied decoration of a cross motif and linear bands.

Also dating from this phase was a large sub-rounded pit having steep sides (Pit 136). It was located beneath Buildings 1 and 5 (possibly continuing beneath Building 2), and measured 7.3m x 4.2m x 1.2m deep. It was separated by a 1m thick baulk, so was assigned separate pit numbers, Pit 136A south of the baulk, and Pit 136B north of the baulk. It was investigated in two 1m wide sondages, Sondage 3 in the south and Sondage 4 in the north, which were approximately 3m apart. The pit was cut into natural alluvial clay deposit 121, and was the earliest archaeological activity in the north-west part of Area 1.

Excavation of Sondage 3 revealed seven fills (141, 164, 140, 139, 163, 138 and 137). The earliest deposit was waterlogged silty clay, context 141 (Fig.11, Plate 2). This deposit reflected the primary silting of the pit, which probably occurred soon after it was cut. It dated to the late 18th century on the basis of South Somerset and North Devon Gravel Tempered Wares found within it. Above 141 were two other organic silty clay deposits, (140 and 164), containing roots and angular sandstone inclusions. Of particular interest was context 164, which contained a fragment of a Bristol stoneware jug with the grooved-stamp of REED, NICHOLAS ST, BRISTOL. The jug probably originated from a 19th century shop in St Nicholas Street, Bristol.

Overlying 140 and 164 was demolition dump 139. The layer contained creamy white mortar with charcoal flecks and ceramic roof-tile. This was overlain by silty clay deposit 163 containing small fragments of timber and heavily corroded amorphous iron fragments.

Sondage 4 comprised 3 fills dating from the late 18th-mid 19th century. The primary deposit (184) was very similar to fill 141 in Pit 136A. It contained similarly dated pottery such as Transfer Printed wares, Staffordshire wares, Late White China and English Porcelain. This was overlain by 185, a clayey silt dump deposit containing coal and clinker. The final fill was a demolition deposit (189) containing creamy white mortar, whose soil matrix was very similar to 139 in pit 136A.

Pit 136 did not continue on the southern side of the baulk though it is possible that the pit was completely truncated by modern pit 170, dating from Phase 4.

Phase 2: Early to mid-19th century (Figs.7 & 8)

The early - mid 19th century saw the first phase of construction on the site. In the north-west part of Area 1 the remains of three walls of Building 1 were uncovered (walls 113, 203 and 205). This was the only Pennant Sandstone structure on site and may represent the rectangular building

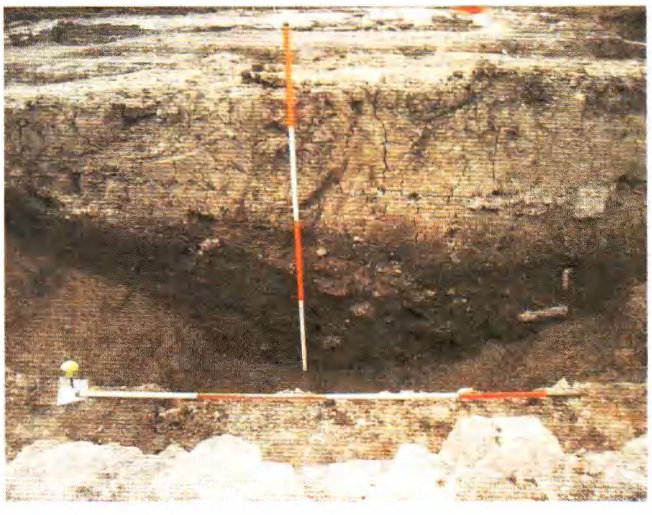


Plate 2 Sondage 3, Pit 136A looking south. Possibly a former rhyne or domestic rubbish pit.

Fig.7 Plan showing the northern section of Area 1. This shows Building 2, a two-phased structure overlying Pit 1 - a former rhyne or domestic rubbish pit backfilled from the late 18th to early 19th century.

recorded on the 1841 tithe map. The building was on a roughly north-south orientation but had no return in the east. The walls were all approximately 6.5m x 0.7m wide, constructed in random courses and bonded with white, lime and charcoal-flecked mortar. It was constructed inside cut 133, which had been cut within the upper levels of Pit 1 and natural clay (121).

Owing to the high level of disturbance the function of Building 1 is unknown but it may have been used for storage purposes. It was incorporated into Building 5 in Phase 2, the main building period of Washingpool Farm.

Abutting Building 1 was Building 2 comprising Carboniferous limestone walls 122, 124, 126 and 130 and measuring 4.3m x 2.2m externally (Plate 4). It abutted wall 204 at the south and continued into the northern section. On its eastern side, abutting walls 126 and 130, was stone culvert 128, on an east-west orientation. The culvert did not continue inside the building.

Phase 3: Mid 19th century – mid 20th century
(Figs.7-10 & 12)

From the mid 19th to the mid 20th century the domestic area of Washingpool Farm effectively doubled in size. It comprised four stone buildings with cobbled yard surfaces, and occupied an area between the Stuppil Rhyne in the north

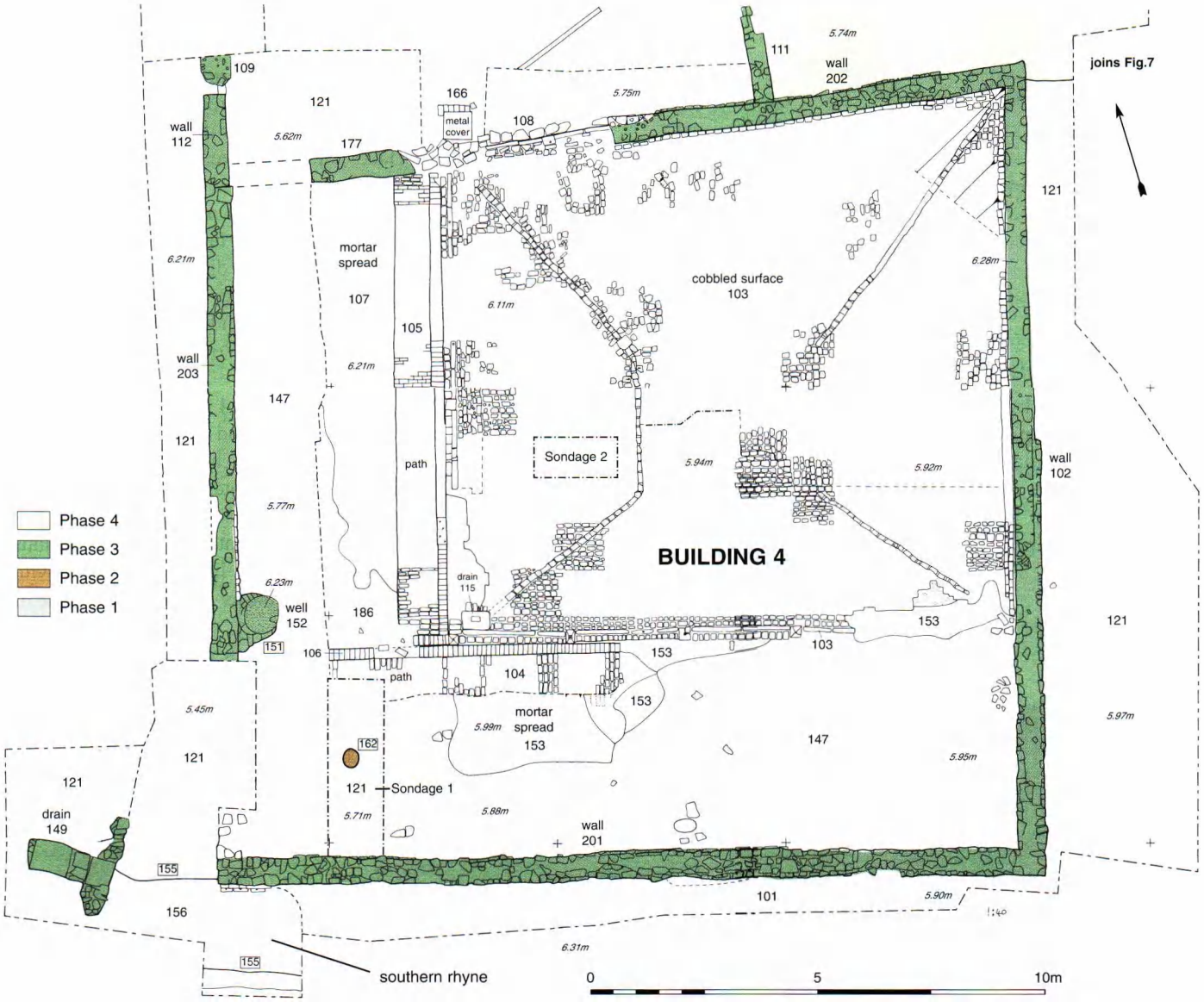


Fig.8 The southern part of Area 1 showing the 19th-century farmstead and part of the southern rhyne (Phase 3). The building probably comprised a cattle shed with cobbled yard surface.

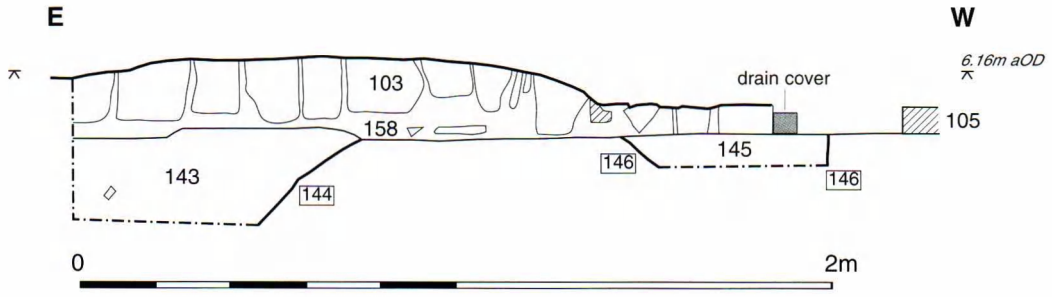


Fig.9 Section through Sondage 2, Pit 144, beneath Building 4. Looking south. Scale 1:20.

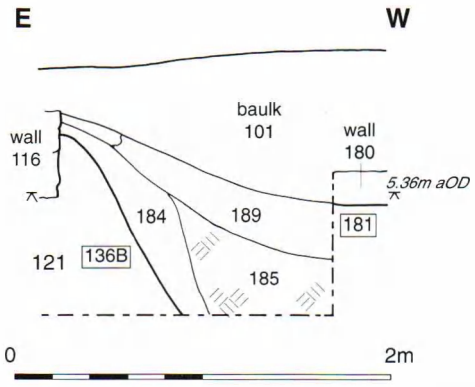


Fig.10 North-facing section through Sondage 3, Pit 136B, beneath Buildings 1 and 5. Scale 1:40.

and unnamed rhynes in the south, east and west. The buildings are depicted on the 1st, 2nd and 3rd edition OS plans. Three buildings lay within the development area, of which only the foundations and some floor surfaces of Buildings 4 and 5 remained (Buildings 1 and 2 appear to have been incorporated into the new Building 5).

Building 4

Excavation in the southern part of Area 1 revealed a number of walls and other structures collectively called Building 4 (Plate 6). It measured 17m x 16m, and consisted of a square, limestone cobbled yard surface (103) enclosed within limestone boundary wall 102. The cobbled surface overlay a bed of sand covering an area measuring 12m x 13m. In the south-west were drain 146 and concrete drain cap 115. The drain and cap were inserted at a later date to assist drainage of the cobbled surface, and were covered by a new cobbled surface (154).

Surrounding the cobbled surface on the west and south were brick paths 104 and 105, and brick drainage channel 106. These overlay an expanse of dirty clayey silt (147). These structures were previously protected from the elements by an L-shaped building, and probably would have functioned as a cattle shed, as shown on the 1880s Ordnance Survey.

The external wall of Building 4 comprised limestone rubble laid in random courses and bonded with white, charcoal-flecked lime mortar. The wall (102) was approximately 0.6m thick, faced internally and externally. In the north west corner of Building 4, a new wall was constructed (112), cutting wall 203 at the northern terminus and wall 177 at the west. Wall 112 linked Building 1 with Building 4, fulfilling the same role as 122 on the east side of the site.

Abutting wall 203 near the south west corner of Area 1

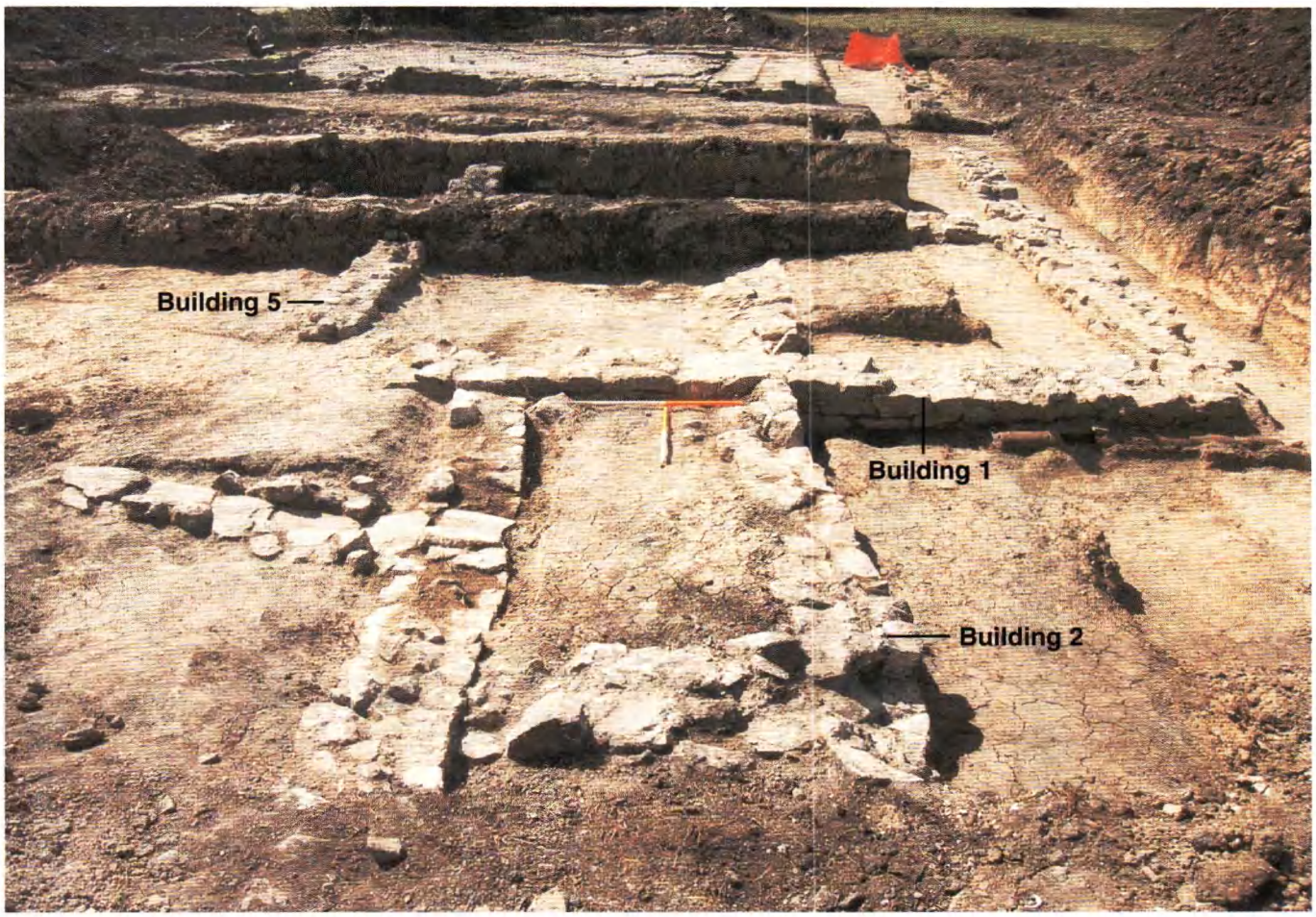


Plate 4 The remains of Buildings 1 and 2 (later incorporated into Building 5) looking south. The buildings were constructed upon Pit 136.

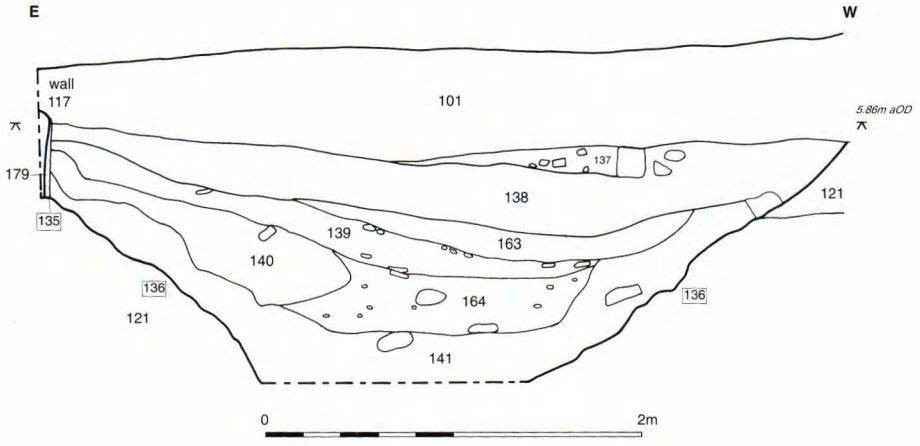


Fig.11 Section through Sondage 4, Pit 136A, beneath Building 5. Looking south. Scale 1:40.

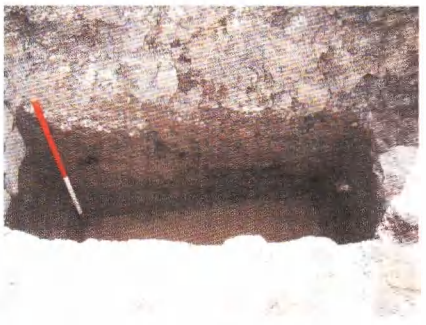


Plate 3 Sondage 4 through pit 136B, looking south.

was stone and brick well 152. This measured 1m across and was located at a height of 6.23m aOD.

Building 5

Building 5 was located in the north-western part of Area 1. It incorporated the earlier Phase 3 Buildings 1 and 2. The 1880 Ordnance Survey records the building as measuring 18m x 11m, with a small yard in the north and larger yard abutting Building 4.

The building was heavily truncated, the wall foundations only surviving to 1 or 2 courses. It was constructed over Pit 136 and deposits 200 and 188. The building comprised limestone walls 114, 116, 117, 118, 122 and 180 constructed in random courses, and bonded with white, charcoal-flecked lime mortar. No floor surfaces were found within the building and the truncation of it was unclear owing to the high level of disturbance.

AREA 2

The Cottage

The truncated remains of the cottage were located in a trench at the far west of Area 2 (Fig.12).

Sealed beneath topsoil 100 was wall 191, built from limestone and brick within natural alluvial clay deposit 121.

The cottage first appeared within Parcel 317 on the 1880 Ordnance Survey plan. As it did not appear on the 1840s tithe map within Parcel 977, it was probably constructed in the period between 1840 and the 1880s.

Phase 4: Mid 20th century to present

A 1957 Planning Application (2081P/57) reveals that Washingpool Farm was demolished and the A403 Chittening Road constructed through the centre of the site. The plan (although dealing with development on the east side of Washingpool Farm) shows that the recent Bristol & Avon Waste development site had become an area of wasteland by this date.

Farm buildings 4 and 5 were demolished and floors were removed leaving only yard surfaces and the lower courses of the wall foundations. As the cottage from Area 2 is absent from the 1957 planning application, it is probable that it was demolished at the same time as Washingpool Farm. Further desturbance would have occurred when a new effluent pipeline was laid through the north-eastern part of Area 1, cutting the central part of Building 5 and western part of Building 3.

The Pottery

by Stuart Whatley

Methodology

The pottery was analysed using a x 20 magnification hand lens and divided into fabric types based upon colour, firing technique, production (wheel thrown or handmade), glazed or unglazed and inclusions. Within each fabric type the sherds were quantified by weight and number and then totalled. The pottery was then compared to the Bristol

Plate 5 Buildings 1 and 2 from Phase 2 looking east. These buildings were incorporated into Building 5 in Phase 3.

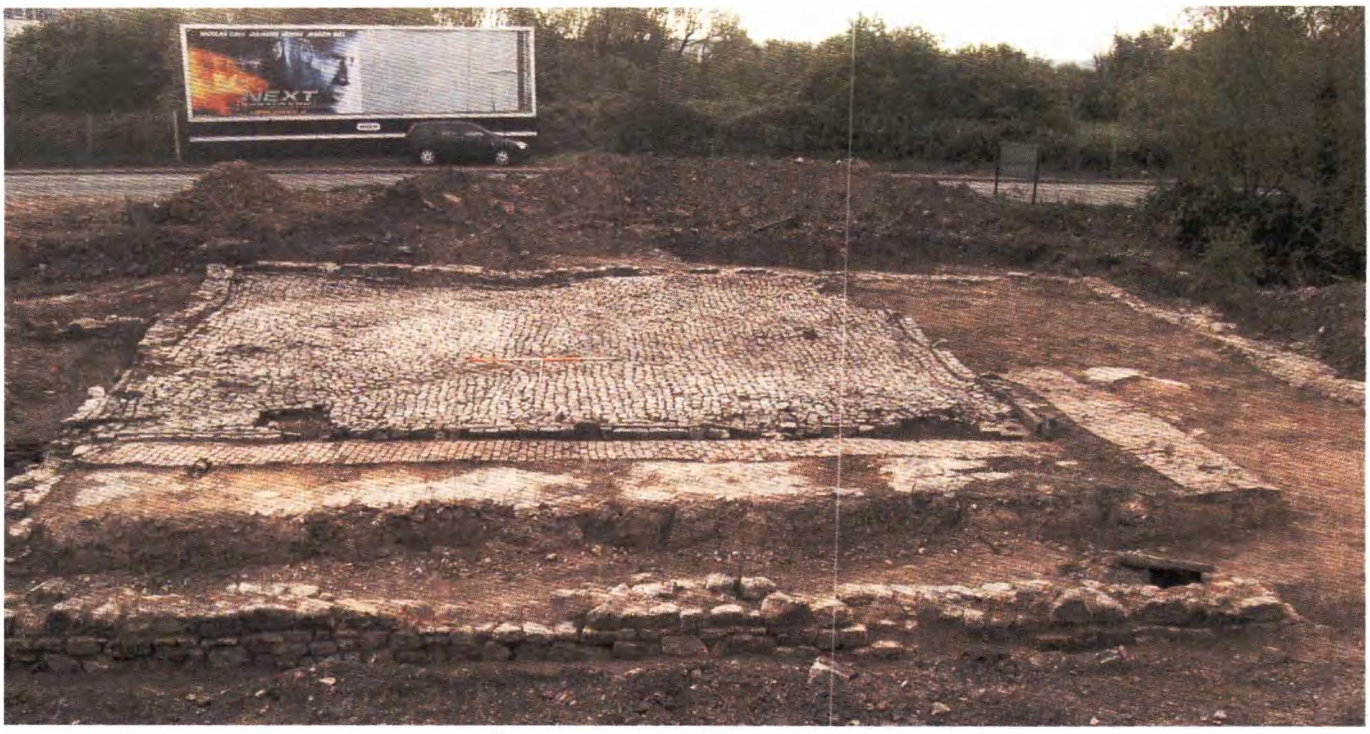
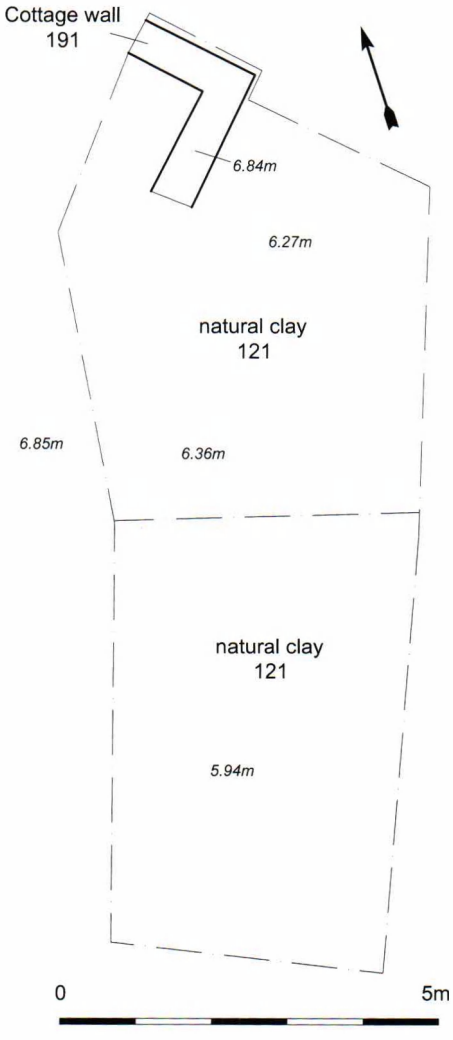


Plate 6 Building 4 dating from Phase 3, looking east.



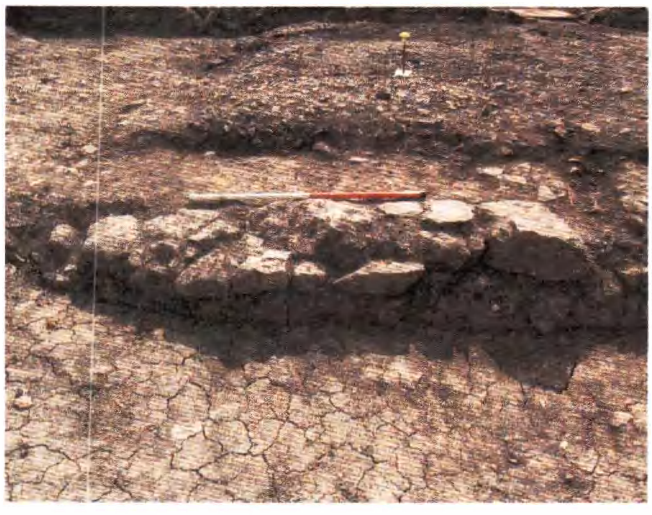


Plate 7 Wall 172 and cobbled surfaces 110 and 109 from Building 5, looking south. The wall was truncated by modern pit 170, dating to Phase 4.

Fig.12 Plan of Area 2. The remains of the late 19th century cottage can be seen as wall 191. Scale 1:100.

Pottery Type Series (BPT). The assemblage was found to consist of 75 ceramic sherds weighing 4615g and spanning a period of nearly 700 years.

The pottery was retrieved from ten stratified contexts within Area 1. No pottery was found from Area 2.

Medieval

The assemblage contained only two medieval sherds, which were probably from a glazed storage vessel/pitcher made at Ham Green (BPT 23). They were small, slightly abraded and were obviously residual in modern deposit 171.

Post-Medieval

The other seventy-three sherds date from the the late 18th to early 20th century. Apart from a single vitrified fragment of possible German stoneware, and a sherd of Wedgwood Jasper ware, the majority of the pottery was from domestic vessels manufactured locally, a common feature of the Bristol ceramic record. Examples of these fabrics include South Somerset ware (BPT 96), North Devon Gravel Tempered ware (BPT 112), Bristol/Staffordshire ware (BPT 100), post-medieval wares local to the site (BPT 201) and Late White China (BPT 202).

The large number of post-medieval sherds suggests that the farmstead dates from the late post-medieval period to the mid 19th century.

Animal Bone Report

by Joss Davis

Methodology

The entire assemblage was collected by hand and was subjected to assessment by rapid scanning. The following information was recorded; species, skeletal element, side, age-related features, and completeness (using a zoning method following Serjeantson (1996)). The assemblage was also examined for evidence of butchery, taphonomy and pathology. This information was entered into a database and is available in the site archive. The methods used are those outlined by Davis (1992).

A small assemblage of eleven animal bones was recovered from two contexts (dated to the 18th and 19th centuries, within Area 1. The species identified were cattle and horse, which is not unusual for the period, and evidence of butchery was present, suggesting that the remains represent a domestic dump, probably of kitchen waste. Due to the statistically insignificant size of the assemblage, no further conclusions can be drawn.

Environmental Remains

by Julie Jones

Introduction and Methodology

Excavation at the site off Chittening Road was carried out to uncover the remains of Washingpool Farm. The farm layout, including farm buildings, yard surfaces and an orchard enclosed by rhynes, first appears on an early 1880s map. Its origins are unclear and may be associated with the occupation of a supposed moated site (BSMR 9232) on a small island surrounded by a ditch, to the east of Washingpool Farm.

Two pits were found beneath the 19th century remains of two farm buildings. The basal fills of pit [136] were a series of silty clay deposits, including small quantities of late 18th-early 19th-century pottery, animal bone and clay tobacco pipe. The pit was fully in-filled by the mid 19th century and Building 2 was then constructed above it. The function of the feature was not ascertained, as only the east and west boundaries were excavated, but it is possible that this formed part of a section of rhyne.

The organic clay primary fill (141) was sampled to ascertain the preservation of palaeoenvironmental data. The sample was flotation sieved to a 250-micron float and a 500-micron residue and analysis showed that there was good organic preservation including an abundance of waterlogged plant remains, wood fragments, invertebrates and occasional molluscs from the anaerobic conditions existing in the feature. The results of the analysis are shown in Table 1, which shows the taxa recovered. This mostly refers to fruits and seeds unless otherwise stated (e.g. buds). Identifications were made by consulting the author's reference collection and illustrations by Bertsch (1941) and Cappers, Bekker & Jans (2006). Habitat information and nomenclature are based on Stace (1991).

Results

The waterlogged plant remains recovered from the primary basal pit fill represent a number of habitat groups and together with other macrofossil remains of invertebrates and molluscs are thought likely to be representative of the natural environment of the feature, rather than the remains of a rubbish pit. Features such as these act as pit-fall traps with remains of locally growing vegetation becoming incorporated by natural means, such as wind and rain. If the pit had been a repository for rubbish, a higher concentration of animal bone and other non-organic domestic debris would have been expected. Any plant material which had become naturally incorporated into the pit is unlikely to have travelled far, so it seems likely that the waterlogged plant macrofossils are the remains of herbaceous plants and shrubs growing in its vicinity and are therefore representative of the local environment of the pit.

Four main habitat groups are represented by the plant taxa recovered from the basal fill. The first group is the wetland component (18%), which includes both aquatic, marginal and marshland taxa. This either reflects plants that were growing in water in the pit, or close-by in a rhyne, ditch or other water-filled depression. The aquatics present suggest slow moving freshwater, which is likely to have been subject to fluctuating water levels throughout the seasons. Both water crowfoot (*Ranunculus* subg. *Batrachium*) and duckweed (*Lemna*) are floating aquatics,

RANUNCULACEAE			**HABITAT**
Ranunculus acris/repens/bulbosus	Meadow/Creeping/ Bulbous Buttercup	385	DG
Ranunculus sceleratus L.	Celery-leaved Buttercup	144	MPR
Ranunculus subg. *Batrachium* (DC.)A.Gray	Water Crowfoot	177	APR
URTICACEAE			
Urtica dioica L.	Common nettle	1061	DGHWp
BETULACEAE			
Corylus avellana L. (buds)	Hazel	30	HSW
CHENOPODIACEAE			
Atriplex spp	Orache	120	CDn
Chenopodium rubrum/glaucum	Red/Oak-leaved Goosefoot	671	CDs
CARYOPHYLLACEAE			
Cerastium spp	Chickweed	36	CDG
POLYGONACEAE			
Polygonum aviculare L.	Knotgrass	40	CD
Rumex c.f. *conglomeratus* Murray	Clustered Dock	5	BGw
Rumex spp	Dock	107	DG
BRASSICACEAE			
Brassica/Sinapis/Raphanus ssp	Mustard/Rape/Cole etc	4	CD#
Coronopus squamatus (Forsskaol) Asch	Swine Cress	25	Do
Rorippa nasturtium-aquaticum (L.)Hayek	Water-cress	128	BPR
SALICACEAE			
Salix sp (bud)	Willow	1	w
PRIMULACEAE			
Anagallis arvensis L.	Scarlet Pimpernel	28	CW
Primula veris/elatior L.	Cowslip/Oxlip	4	Gl base rich
ROSACEAE			
Crataegus monogyna Jacq	Hawthorn	10	HSW
Potentilla erecta (L.)Raeusch	Tormentil	25	EGa
Potentilla spp	Cinquefoil	36	FMbr
Prunus sp (fragment)	Cherry/Plum	1	HSW
Rosaceae indet (thorn)	Rose Family	36	HSW
Rubus sect. *Glandulosus* Wimmer & Grab	Bramble	69	DHSW
FABACEAE			
Trifolium sp (pod caps)	Clover	4	
APIACEAE			
Aethusa cynapium L.	Fool's Parsley	35	C
Anethum graveolens L.	Dill	2	CD#
Apiaceae indet	Carrot family	10	
Daucus carota ssp *carota*	Wild Carrot	3	G,s
SOLANACEAE			
Solanum dulcamara L.	Bittersweet	7	DHS
LAMIACEAE			
Lycopus europaeus L.	Gipsywort	1	FRw
Prunella vulgaris L.	Selfheal	44	DG
PLANTAGINACEAE			
Plantago major L.	Greater Plantain	220	CDG-o
SCROPHULARIACEAE			
Odontites/Euphrasia sp	Bartsia/Eyebright	4	CD
ASTERACEAE			
Arctium minus (Hill)Bernh.	Lesser Burdock	1	D,W (clearings)
Bellis perennis L.	Daisy	36	G
Centaurea spp	Knapweed	5	DG
Cirsium c.f. *arvense* (L.)Scop	Creeping Thistle	17	CDGH
Cirsium spp	Thistle	22	DGMW
Cirsium/Carduus spp	Thistle	26	DGMW
Leucanthemum vulgare Lam.	Oxeye Daisy	9	G-rich soils

Table 1 Waterlogged plant remains from Pit [136] (context 141).

Picris echioides L.	Bristly Oxtongue	4	DHWc
Senecio aquaticus Hill	Marsh Ragwort	8	MPRw
Sonchus asper (L.)Hill	Prickly Sow-thistle	17	CD
Tripleurospermum inodorum (L.)Schultz-Bip	Scentless mayweed	8	CD
LEMNACEAE			
Lemna spp	Duckweed	37	A
JUNCACEAE			
Juncus spp	Rush	200+	GMRw
CYPERACEAE			
Carex spp	Sedge	28	GMPRW
Carex divulsa Stokes	Grey Sedge	15	GH,W(edge)
Carex flacca Schreber	Glaucous Sedge	147	G dw
Carex hirta L.	Hairy Sedge	12	G (damp)
Carex pendula Hudson	Pendulous sedge	6	Whw
Carex vulpina L.	True Fox-sedge	17	Wh/M ditches
POACEAE			
Poaceae indet	Grass	1137	G
MOLLUSCS			
Discus rotundatus	Rounded Snail	2	
Planorbis c.f. *leucostoma*	White-lipped Ram's-horn Snail	11	
Vallonia costata	Ribbed Grass Snail	3	
Vertigo pygmaea	Common Whorl Snail	1	
OTHER REMAINS			
Caddis fly larvae cases		Occasional	
Charcoal fragments		Occasional	
Cladoceran ephyppia	Water-flea egg cases	Abundant	
Moss		Occasional	
Ostracods		Very frequent	
Wood fragments		Abundant	

Habitats

A:	Aquatic	a:	acidic
B.	Bankside	c:	calcareous
C:	Cultivated/Arable	d:	dry soils
D:	Disturbed	h:	heavy soils
E:	Heath/Moor	n:	nitrogen rich soils
F.	Fens/Bogs	o:	open habitats
G:	Grassland	p:	phosphate rich soils
H:	Hedgerow	s:	coastal
M:	Marsh	w:	wet/damp soils
P:	Ponds, ditches - stagnant/slow flowing water	#:	cultivated plant/of economic importance
R:	Rivers, streams		
S:	Scrub		
W:	Woodland		

Table 1 (continued) Waterlogged plant remains from Pit [136] (context 141).

duckweed in particular commonly forming a carpet on the water's surface, as it floats freely and is not rooted in the mud. Water-cress (*Rorippa nasturtium-aquaticum*) forms part of a community in swampy margins where there is water cover for most of the year. Other indications of water come from aquatic fauna including water-flea egg-cases (cladoceran ephyppia), caddis-fly larvae cases, very frequent ostracods (small bi-valved crustaceans of freshwater and saline habitats) and the snail *Planorbis leucostoma* that lives in ponds, ditches and marshes. Other more marginal species recovered, live in the shallow margins or muds adjacent to bodies of water, such as ditches or ponds. These include celery-leaved crowfoot (*Ranunculus sceleratus*), a characteristic plant of nutrient-rich, including rather polluted muds at the margins of ponds, especially where there is some disturbance (Hall *et al* 1983). Many species of rush (*Juncus*) and sedge (*Carex)* are also typical of damp situations; true fox-sedge (*Carex vulpina*), for example often occurs in standing water in ditches on heavy clay soils.

The majority of taxa recovered are however from areas of waste or disturbed ground (40%) and meadow/pasture (39%), with grasses (Poaceae) representing 22% of the grassland component. In addition to the grasses, other meadow species include numerous buttercup (*Ranunculus acris/repens/bulbosus*), greater plantain (*Plantago major*), dock (*Rumex*), selfheal (*Prunella vulgaris*), daisy (*Bellis perennis*) and thistles (*Cirsium/Carduus*). Some of these grassland taxa can also be indicative of areas of waste or disturbed ground and are found with other ruderal species (i.e. those plants growing in waste places near human habitation). Some ruderal species can be recovered in huge numbers, such as the small achenes of nettle (*Urtica dioica*), found here at 20% of the total assemblage. Nettle is an indicator species for localised areas rich in nitrogen, often around settlements where there is continual trampling, providing bare ground for other weeds to flourish. Greig-Smith (1948, 345) describes nettle as 'a universal follower of man and his animals' that occurs on almost all soil types. Other disturbed ground taxa recovered, including knotgrass (*Polygonum aviculare*), fool's parsley (*Aethusa cynapium*) and great plantain can grow where there has been some trampling or abrasion and can also easily gain a foothold in crumbling or loose masonry or cracks between stones. Areas of disturbance are also good for annuals, such as spiny milk thistle (*Sonchus asper*) and chickweed (*Cerastium*) to germinate. This may therefore suggest that there may have been some human activity, with trampling or clearance, maintaining areas of bare or open ground, with some nutrient enrichment possibly from cattle allowing nettles to thrive.

There is also a small percentage (3%) of taxa from areas of waysides, scrub and hedgerow which includes the shrubs bramble (*Rubus* sect *Glandulosus*), hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*) and willow (*Salix*), with the scrambling perennial, bittersweet (*Solanum dulcamara*), typical of damp woods and scrub.

Conclusions

The site at Chittening Road lies on the alluvium of the North Avon Levels, close to the coastline of the Severn Estuary. Even in the recent past this would have been an area of low-lying wet grassland, partly managed as farmland criss-crossed by a network of watercourses originally created as drainage channels, but also forming field boundaries acting as wet fences, suitable for the management of cattle. Today it is an area of industrial development based around Avonmouth but some relics of earlier farmland remain like the meadows at Lawrence Weston Moor (ST547 793) which still retains dry and wet meadows, with reed-beds bordering rhynes, but many of the species in the Avonmouth area are those adapted to waste ground and disturbance (Green et al 2000, 4) much like the plant assemblages described from Chittening Road.

The primary fill (141) of the feature formed a reasonable depth (0.20m) of organic debris within the silts and suggests that the feature remained open for some time, allowing the accumulation of elements of the naturally occurring local vegetation. The analysis of the palaeoenvironmental remains suggests that this lay close to an area of scrubby growth including blackberry, hawthorn and hazel, in an area well-vegetated with stands of common nettle, docks and thistles, typical of rough ground. If this feature was a pit, the evidence suggests that it was, at least seasonally, water-filled with aquatic flora and fauna, with marginal areas suggesting damp marshy ground close by. A ditch or rhyne could also easily support the community described. The disturbed ground elements, some of which also suggest nutrient-enriched soils, may indicate that livestock were using this area. Cattle poaching of damp ground would have provided bare, disturbed areas helping to maintain the open character of the vegetation cover. The impermeable clay soils around Chittening Road may have been used as seasonal pasture and are likely to have been prone to flooding.

DISCUSSION

The excavation revealed that Washingpool Farm was built in the early-mid 19th century and was in use until the mid 20th century.

The farm was constructed on natural clay from the Upper Wentlooge formation and was set within an area enclosed by rhynes or drainage channels of unknown date. It is possible that the enclosed area may represent a former medieval infield site, a settlement pattern found along the coast in Gloucestershire, Somerset and Gwent, as suggested by Rippon. These sites are characterised by roughly oval-shaped enclosures of farmland attached to a farmstead, linked in the landscape by trackways and droveways (Rippon 2001). The island on the east side of the A403 may be a former medieval moated site attached to the enclosed field. The recovery of two residual Ham Green pottery sherds from modern pit 170 also suggests medieval activity nearby.

The development site is first depicted in the 1773 map of Henbury parish as two fields - an unnamed field (western portion of the development site) and another called Pickes Leafes (eastern portion). Pit 136A/B, which dated to this phase, may have originally existed as a former rhyne or a domestic rubbish pit. The pottery from this feature spans a period of over 40 years, suggesting that it was infilled over a long period of time. This is also reflected in the palaeoenvironmental remains, where the organic debris and silts from the basal fill (141) suggest that the pit was open for some time, allowing the accumulation of elements of the naturally occurring local vegetation.

The earliest evidence for a farm on the development site may be seen in the 1830 OS (2 inch), although the name Washingpool Farm was not officially recorded until 1839. In the 1841 tithe award, the site encompassed parcel numbers 977, 979 and 987. From this phase, Buildings 1 and 2 were uncovered, directly overlying Pit 136A/B. The house or dwelling (Building 3) depicted on both the 1830 OS plan and the 1841 tithe award can possibly be attributed to the

building listed as 'house' in parcel number 987 from the Stowick tithing. Unfortunately, this building was demolished with the construction of the A403 Chittening Road, and the later laying of an effluent pipe.

Washingpool farm effectively doubled in size between the mid-19th and mid-20th centuries. Within the development area from Phase 3, the remains of Building 4 and Building 5 were discovered. Building 4 appeared to have replaced the earlier Building 2 (depicted in the 1841 tithe award) and possibly functioned as a cattle shed with yard surface. Building 5, on the other hand, incorporated parts of Buildings 1 and 2 in the new structure, and was possibly used for storage.

The farm was still in use in the early 20th century. It was set within a landscape containing military buildings, which included the National Filling Factory dating to the World War I, World War II magazines and an Ordnance Department Store.

In the late 1950s, Planning Application (2081P/57) revealed that Washingpool Farm was destroyed by the construction of the A403 Chittening Road. Building 3 was completely destroyed in this process and the other buildings demolished.

ACKNOWLEDGEMENTS

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JACOB'S WELL, BRISTOL: FURTHER RESEARCH

by
Joe Hillaby and Richard Sermon

INTRODUCTION

Jacob's Well was rediscovered in 1987 when the Temple Local History Group was given permission to investigate the site at No. 33 Jacobs Wells Road (Vaughan and Martelett 1987). The removal of a substantial wall revealed the springhead consisting of a small rock-cut chamber entered by two stone steps and a low rectangular arch (Figure 1). Part of a damaged Hebrew inscription was identified on the large stone lintel over the entrance, which it was suggested read *zochalim* זחלים meaning 'flowing' (Figure 2). On this basis it has been argued that the inscription marked the site of a medieval Jewish ritual bath or *mikveh* מקוה, and was to reassure users that the waters in the chamber were pure (Emanuel and Ponsford 1994).

Initial doubts about this interpretation were raised by the unlikely position of the suggested *mikveh*, which in the 12th-13th century would have been remote from the town in a hilly and wooded area over 1.5 km by road from Bristol's two medieval Jewries (earlier Quay Street and later Wine Street). Given that a *mikveh's* principal use is by the women of the community for their monthly ritual purification (Leviticus 15:19-24), they would have been extremely vulnerable visiting such an isolated site (Hillaby 1990, 96). It should be noted that other known European medieval *mikva'ot*, such as the two discovered in London, were located either within or in close proximity to the Jewry (Sermon 1990; Blair *et al* 2001 and 2004). Furthermore, the low height of both the spring entrance and chamber would have made it very restricted for bathing.

Research published in 2002 accepted the existence of the damaged Hebrew inscription over the spring entrance, but called into question the previous reading and suggested an alternative interpretation of the site. Whilst the spring later known as Jacob's Well was remote from the two medieval Jewries, it was situated very close to the medieval Jewish cemetery on Brandon Hill. It may therefore have served as a *bet tohorah* בית טהרה 'house of purification' for the Jewish practice of washing the dead before burial (Ashkenazi *tohorah*; Sephardic *taharah*), or as a convenient source of pure water for the *tohorah* ritual (Blair *et al* 2002; Hillaby and Sermon 2004). However,

Fig.1 Jacob's Well springhead (photograph by Richard Sermon).

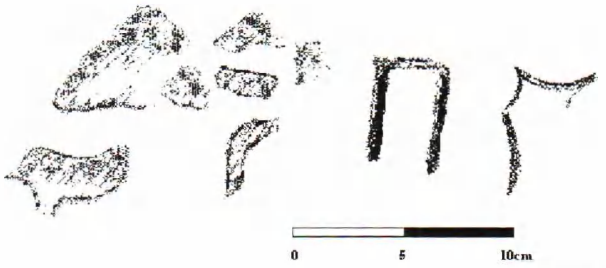


Fig.2 Jacob's Well Hebrew inscription (drawing by Richard Sermon).

with no known records directly linking Jacob's Well to Bristol's medieval Jewish community, this reinterpretation rests on three main arguments - the close proximity of Jacob's Well to the medieval Jewish cemetery, the existence of medieval springs and conduits in the area, and the interpretation of the markings over the spring entrance as a Hebrew inscription. The purpose of this short note is to outline further research in these areas.

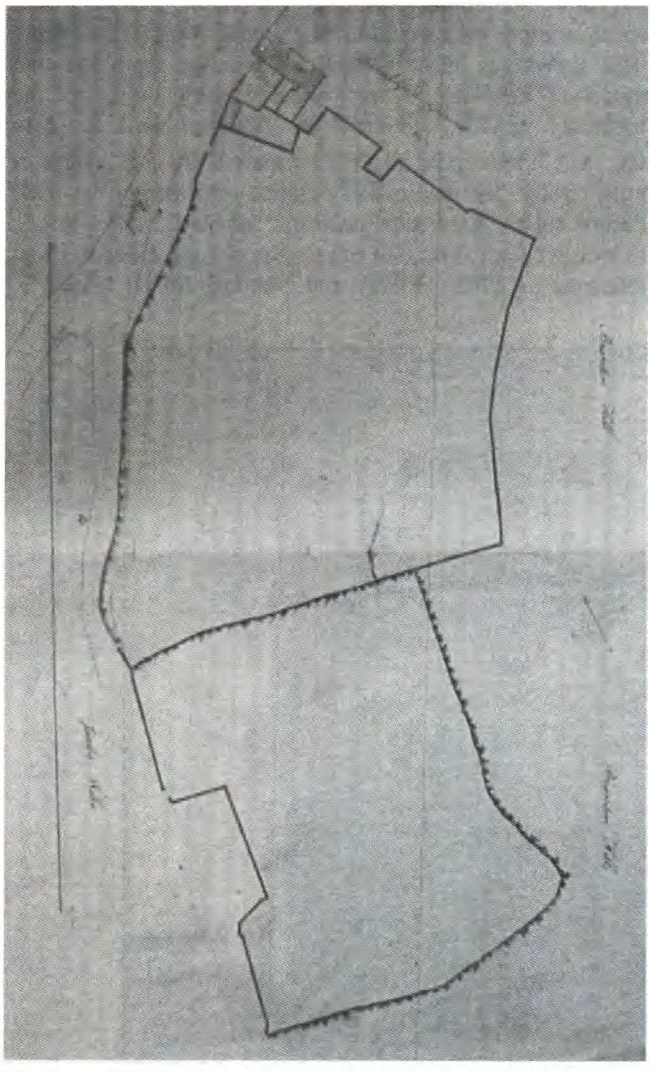


Fig.3 Plan of the Jews Church Yard about 1790 (courtesy of Bristol Record Office).

LOCATING THE MEDIEVAL JEWISH CEMETERY

The Bristol Jewry was a relatively late foundation, the earliest record being that of 'Leah the widow' found in the Pipe Rolls for 1188 (Hillaby 2007, 9-18). The community's cemetery must have been established sometime after 1177 when Henry II granted the provincial Jewries the right to establish their own burial grounds outside the town walls. The first documentary evidence for the Jewish cemetery on Brandon Hill appears in the *Great Red Book of Bristol*, which records an annual rent due to the Crown from a certain '*Josce de Reigny pro Cimiterio Judeorum iuxta Montem sancti Brandani*' of 6s 8d (Veale 1933, 74). Following the general expulsion of the Jews from England in 1290, the accounts of the Constables of Bristol Castle record receipts of 2s in 1291, and 3s 4d in 1295, 1296 and 1301, from the sale of herbage '*from a certain cemetery of the Jews*', and of 5s in 1303 for '*the farm of the former Jewish cemetery*' (Sharp 1982, 26, 33, 40, 50 and 59). A deed of 1325-1326 records that Sir John de la Warre granted St. Bartholomew's Hospital '*one croft at Clifton against the Jews' cemetery*' (Gloucestershire Record Office D340a/T143; Holmes 1955 184). However, the medieval records provide no information as to the precise location of the cemetery on Brandon Hill. It is not until the late 18th century that we have the first cartographic evidence and description of the site boundaries. In 1788 the Corporation of Bristol renewed a lease to Benjamin Hill, previously held by his father Thomas, of a close called the '*Jews Church Yard*' for an annual rent of £4 (Bristol Record Office, 5139/422). The land measured 4 acres and was bounded by a house and garden to the north, Brandon Hill to the east, land called the '*Jews Acre*' to the south and a lane to Jacob's Well (Jacobs Wells Road) to the west:

> *...the said close of pasture ground called the Jews Church Yard now in the possession of William Wanklyn* [not Franklyn] *distiller containing by estimation four acres be it more or less, situated near Jacobs Well in the parish of Saint Augustine the Less in the said city, having Brandon Hill on the East part, ground called Jews Acre in the possession of Mr James Cross on the South part, a lane that descends from ground called Purkin Grove towards Jacobs Well aforesaid on the West part, and a house and garden in the possession of Mary Scott widow on the North part, together with all ways and appurtenances...*

A contemporary measured '*Plan of the Jews Church Yard*' (Figure 3) dating to about 1790 (Bristol Record Office, 00568/9i) shows '*two pieces of ground adjoining [Bran]don Hill*' and is labelled '*Franklyn's Ground*' to the north, '*Brandon Hill* 'to the east, and '*Road to Jacobs Well*' to the west. The northern piece of ground covers about 4 acres with a house and garden shown to the north, and is therefore consistent with the '*Jews Church Yard*' described in the 1788 lease, which would make the southern piece of ground the '*Jews Acre*'. However, on a later '*Plan of Brandon Hill*' in 1823 (Bristol Record Office

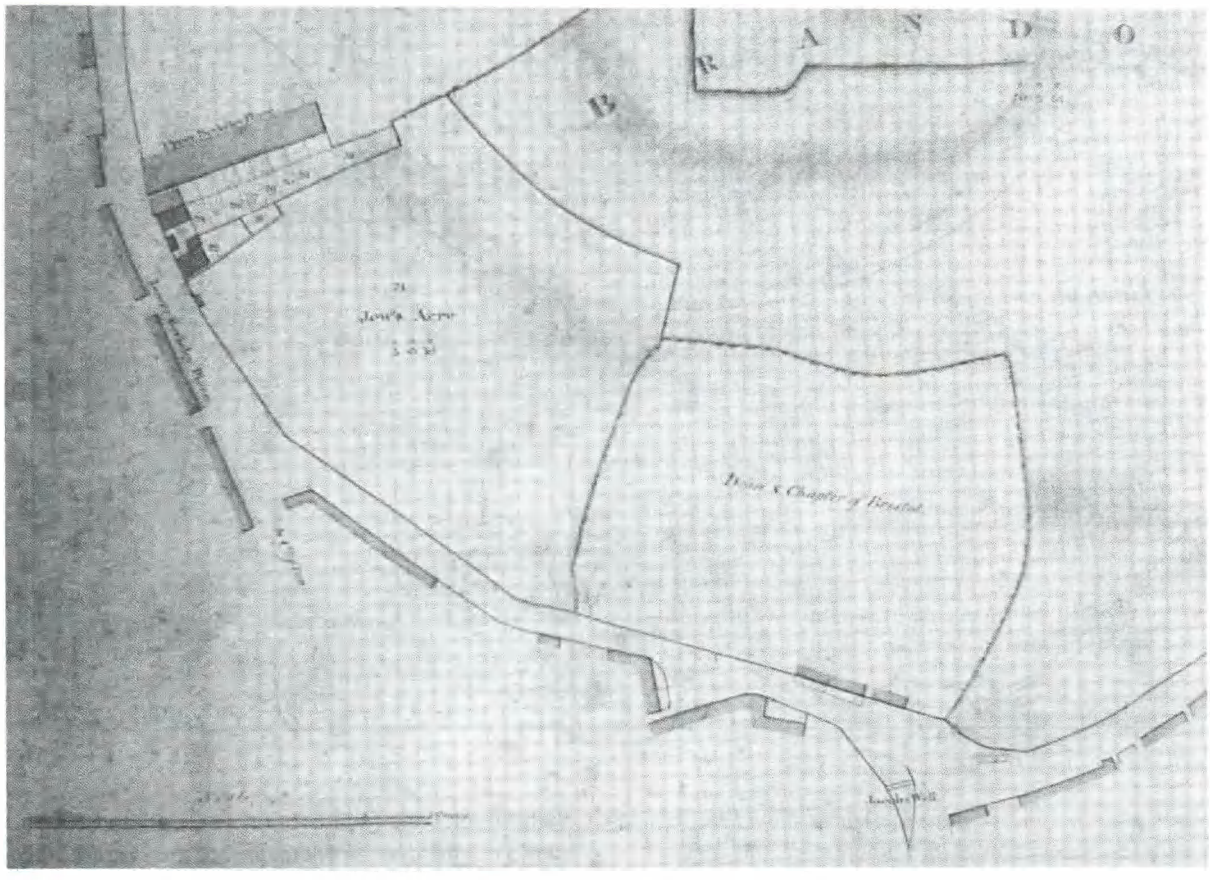


Fig.4 Plan showing Jews Acre and Jacob's Well in 1823 (courtesy of Bristol Record Office).

08556) the northern piece of ground is annotated '*Jews Acre*' (*Let to John Elliott*) and the southern piece of ground '*Dean & Chapter of Bristol*' (Figure 4). The reason for this confusion may simply be that the names '*Jews Churchyard*' and '*Jews Acre*' were used interchangeably. Nevertheless, in 1842 when the trustees of Queen Elizabeth's Hospital decided to move their school from Christmas Street to a new site on the north-western slope of Brandon Hill, the land they purchased was this northern piece of ground once again called '*The Jews Churchyard*' (Sampson 1908, 74-7). Physical evidence that this was indeed the site of the medieval Jewish cemetery came to light in 1844 on digging the foundations for the new school – George Pryce in his *History of Bristol* records that '*a number of gravestones were found, with inscriptions in Hebrew characters; they were, however, thoughtlessly used in the building, and thus, probably, some interesting discoveries in our local history were lost forever to the antiquary*' (Pryce 1861, 23). By 1885 the Ordnance Survey clearly shows the '*Jews Churchyard*' or '*Jews Acre*' occupied by the Queen Elizabeth Hospital (Figure 5). However, the earlier field boundary walls can still be traced on this map, and survive on Brandon Hill today.

THE MEDIEVAL SPRINGS AND CONDUITS

Jacob's Well is one of a number of springs that rise along a geological fault in the valley between Clifton Wood and Brandon Hill, which also forms the parish boundary between Clifton and St Augustine the Less. The first reference to these springs appears in a charter of about 1148-1183, in which William earl of Gloucester granted an *(h)ortum*, garden or grounds, to the canons of St Augustine's Abbey '*in the upper part of the way towards Wedewelle*'. In a further charter of about 1205-1235 Roger lord of Clifton granted St Augustine's Abbey *'the springs and water-courses arising in the croft once held by Adam the reeve, between that croft and Adam's house as far as the hill, and above the canons' conduit at Wdewelle (Woodwell), opposite the (Brandon) hill* (Walker 1998, 16 and 387-8.). Similar rights were also gained by St Mark's Hospital in about 1235-1245, when Ignacious lord of Clifton granted Henry de Gaunt master of the hospital '*...all that messuage, with the curtilage and spring contained therein... which Matilda, widow of Simon de Clifton once held... for the purpose of digging and leading away the water whither they wish...*' for an annual rent of 3s (Ross 1959, 257). These charters are the earliest record of two parallel medieval water supplies from Woodwell Lane (Jacobs Wells Road) to St Mark's Hospital via Gaunt's Pipe and to St Augustine's Abbey via the Abbey (Dean and Chapter) Conduit. However, the first specific reference to Jacob's Well does not appear until 1627 when the cost of repairs are recorded in the City Chamberlains' accounts '*...for stones from Jacobs well 2s... and for lyme at Jacobs well 3s*' (Livock 1966, 104). William

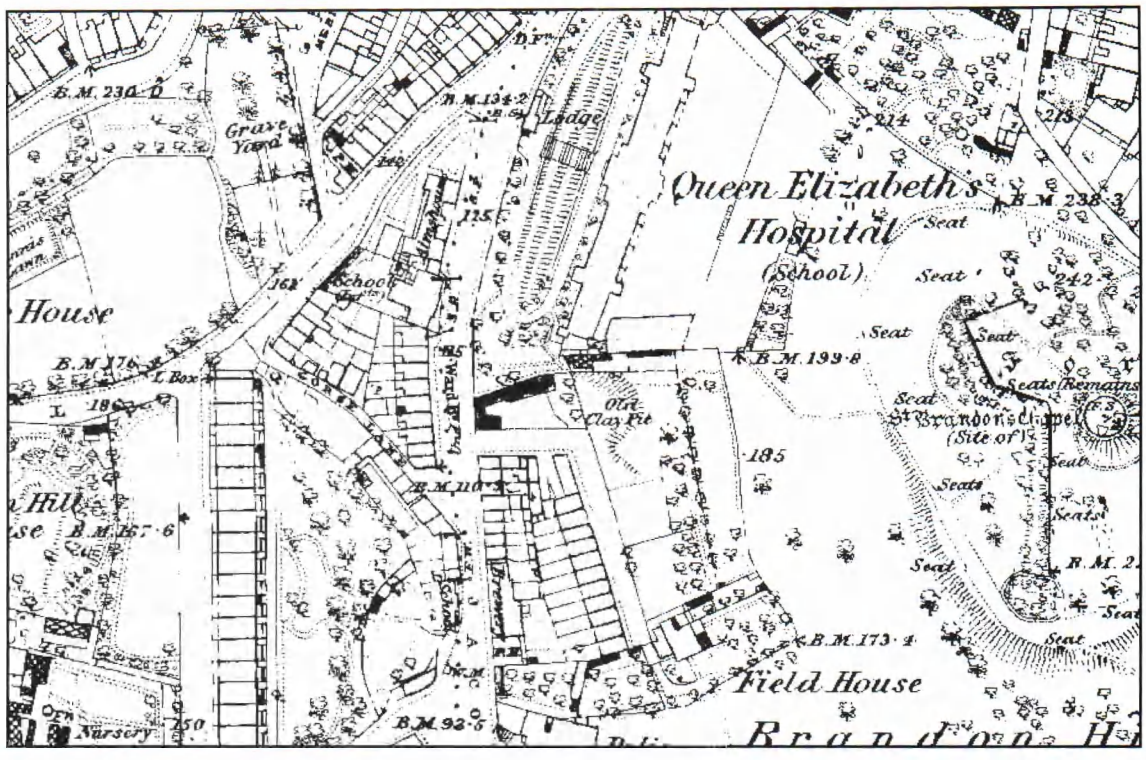


Fig.5 Queen Elizabeth Hospital (Ordnance Survey, 1885).

Halfpenny's plan of 1742 (Figure 6) clearly shows Jacob's Well in its present location at the junction of the road to Clifton (Constitution Hill) and the road to St. Michael's Hill (Jacobs Wells Road), whilst the Dean and Chapter Conduit is shown on the opposite side of the road fed by another spring further to the north, (Bristol Record Office 04479/2, Plan Book B, 1c). On this basis it has been suggested that Jacob's Well was the spring feeding Gaunt's Pipe, which supplied water to St Mark's Hospital (Russell 1999). However, the precise ownership of Jacob's Well in the 12th-13th century is not clear, and whether held by the Manor of Clifton, St Augustine's Abbey or St Mark's Hospital this would not have precluded a lease or other arrangement allowing the Jews occasional access to the spring waters. Alternatively its use by the Jewish community could have predated any grant to these religious houses. In any event, Jacob's Well was situated only 100m south-west of the Jewish cemetery, which lay on the adjacent slopes of Brandon Hill.

THE HEBREW INSCRIPTION AND ITS DATE

When first discovered it was suggested that the Jacob's Well inscription read *zochalim* זחלים, the plural of *zochal* זחל 'to flow', with the remaining plaster possibly covering the word *mayim* מים to give the text מים זחלים *mayim zochalim* 'flowing waters', a term used in Jewish oral law the *Mishnah* (*Mikva'ot* 1:8). However, the inscription occurs towards the right-hand side of the lintel, leaving little space before it (to the right) for the word *mayim* מים, of which no trace could be found. Of the five Hebrew letters that make up the word *zochalim* זחלים (read from right to left), the final two letters (*yod* י and *mem sophit* ם) could not be identified, this part of the stone surface having been hacked to provide a key for modern plaster or render. The third letter (*lamed* ל) could not be identified either, although some of the later damage did superficially resemble the Hebrew letter (Figure 2). In the case of the first two letters (*zayin* ז and *chet* ח) the shape of the *zayin*, if the previous identification is correct, is rather unusual, the top of the letter being off-centre. In contrast the *chet* is

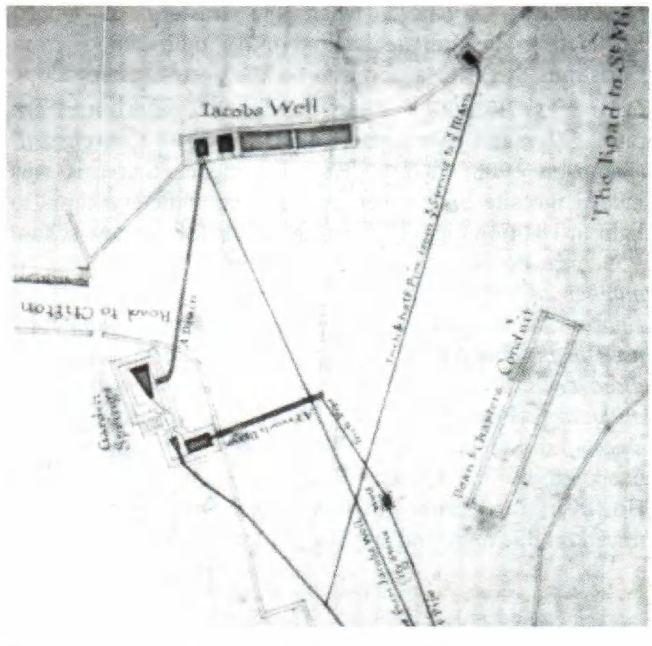


Fig.6 William Halfpenny's plan of Jacob's Well in 1742 (courtesy of Bristol Record Office).

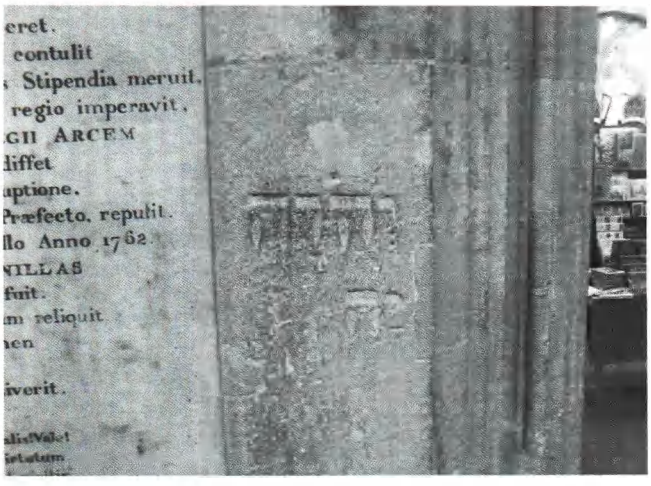


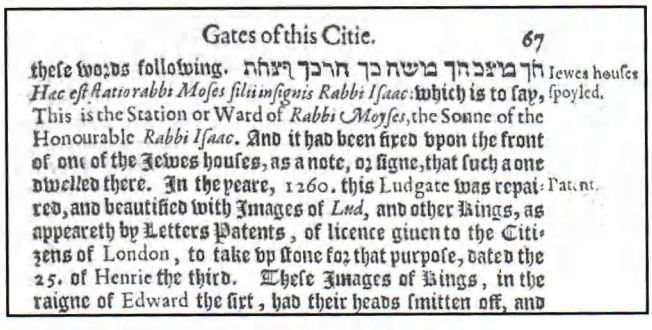
Fig.7 Hebrew inscription at Bath Abbey (photograph by Richard Sermon).

very well preserved, being finely cut with a deep 'V' section. Previously it has been suggested that this letter could be a Lombardic 'N'. However, this seems unlikely given the very square (Hebrew) form of the letter, with the two vertical sides being completely parallel, whereas the Lombardic '𝔑' has a more cursive top and right-hand side. The Greek letter *Pi* 'Π' has also been suggested but is again highly unlikely in this context.

Given these doubts about the reading of the inscription, we should perhaps consider other alternatives such as *mayim tehorim* מים טהורים, 'pure waters' (Ezekiel 36:25) or *mayim chayim* מים חיים, 'living waters' (Leviticus 15:13 and Numbers 19:17). Interestingly, the latter biblical reference concerns the type of water required to cleanse a person after contact with a corpse. Furthermore, it could be suggested that the doubtful *zayin* ז is more likely to be the remnants of *mem-sophit* ם, which if followed by the letter *chet* ח could be reconstructed to as [מי]ם ח[יים] [*mayi*]*m ch*[*ayim*], 'living waters'. However, as only one of the letters, *chet* ח, can be read with confidence, the precise meaning of the inscription is likely to remain a mystery. Nevertheless, this one letter compares extremely well with other known medieval examples, such as the Northampton tombstone (Figure 11), and confirms it to be a Hebrew inscription.

Recently, it has been suggested that the inscription could in fact be of Christian origin (Sivier 2002, 118-20). Whilst strongly discouraged by the Papacy, some non-Jewish scholarship of Hebrew was practiced in medieval England (Loewe 1953). These Christian scholars included Herbert of Bosham (died after 1190) who wrote a commentary on the Jerome's Hebrew Psalter, Stephen Harding (*c* 1060-1134) who learnt Hebrew from Jewish tutors, Andrew St Victor (1110-1175) who was accused of 'Judaizing' for using rabbinical works in his commentaries, and Robert Grosseteste (*c* 1175- 1253) who owned at least one Hebrew Psalter (Olszowy-Schlanger 2001, 107-8). However, the number of non-Jewish Hebrew scholars at any one time was probably relatively small. Roger Bacon (*c* 1214-1292) complained that fewer than four of his contemporaries actually knew Hebrew grammar well enough to teach it. A number of Christian Hebrew manuscripts survive, including a medieval Hebrew grammar at Cambridge University (MS UL Ff. 6. 13.), which may have been written by Roger Bacon. More recently a unique 13th century Hebrew, Latin, French and English dictionary has been found in the library of Marquis of Bath (Longleat House MS 21), which probably originated from Ramsey Abbey in East Anglia (Olszowy-Schlanger 2007), where a school of Christian Hebraists is known to have existed.

Hebrew was not used in Christian inscriptions until after the Reformation, when protestant reformers wanted to return to the original biblical texts in Hebrew and Greek for their translations of the Bible, rather than using the Latin Vulgate. A local example is the 17th century Hebrew inscription *YHWH* יהוה 'God' at the former west entrance to the cloister of Bath Abbey, which according to local tradition was carved by Parliamentarian hospital orderly during the English civil war (Figure 7). Such inscriptions are usually found in churches or on religious memorials, whereas until the early 19th century Jacob's Well was remote from the town in a hilly and still partially wooded area. The only logical explanation for a Hebrew inscription at this location is in relation to the neighbouring medieval Jewish cemetery.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theſe wo:ds following. חך מיצב חך מושח בך חרכך ויצחח Iewes houſes
Hac eſt ſtatio rabbi Moſes filii inſignis Rabbi Iſaac: which is to ſay, ſpoyled.
This is the Station or Ward of *Rabbi Moyſes*, the Sonne of the Honourable *Rabbi Iſaac*. And it had been fixed vpon the front of one of the Iewes houſes, as a note, o: ſigne, that ſuch a one dwelled there. In the yeare, 1260. this Ludgate was repai- Patent.
red, and beautified with Images of *Lud*, and other Kings, as appeareth by Letters Patents, of licence giuen to the Citi-
zens of London, to take vp ſtone fo: that purpoſe, dated the 25. of Henrie the third. Theſe Images of Kings, in the raigne of Edward the firſt, had their heads ſmitten off, and

Fig.8 Ludgate Hebrew tombstone, London (The Survey of London, 1598).

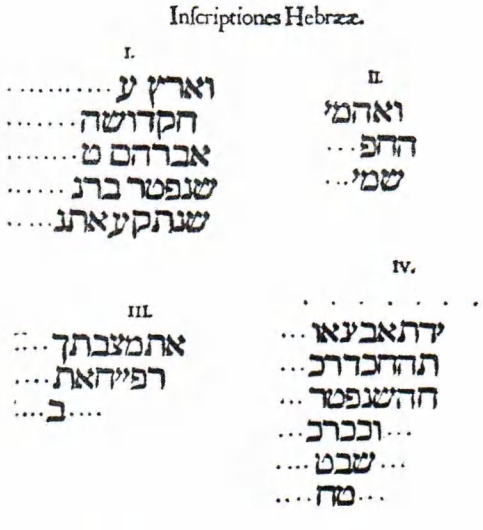

Fig.9 Aldersgate Hebrew tombstones, London (Marmora Oxoniensia, 1676).

HEBREW INSCRIPTIONS OF THE ENGLISH MEDIEVAL JEWRY

When compared to other Jewish communities in medieval Europe very few Hebrew inscriptions have survived in England from that era. Only three inscriptions are still extant, which include the Jacob's Well springhead, a tombstone fragment from Northampton and a cast bronze bowl from Norfolk. However a further eight medieval Hebrew inscriptions were recorded in Cambridge, London and Winchester between the 16th and 18th centuries, but subsequently lost. Nevertheless, it is possible to reconstruct parts of these lost inscriptions, by using alternative readings for some commonly mistaken Hebrew letters and damaged letters where the stones appear to have been broken (Table 1).

The Cambridge tombstone was discovered when the Guildhall foundations were built in 1782, and reported to have been part of a Hebrew inscription translated '*The sepulchral stone of Israel... who died...*' (Cooper 1866, 133; Dobson 1992, 11). Doubts have been raised about the use of this name in the 12th-13th century as it does not appear in any of the starrs and Jewish charters preserved in the British Library, or in the plea rolls of the exchequer of the Jews (Stokes 1913, 114). However, the name is recorded in 13th-14th century Germany and France, such as the Talmudic scholars Israel of Bamberg, Israel Ben Uri Shraga and Israel of Valabregue. Therefore its use in medieval England should not be ruled out (Jewish Encyclopedia 1901-1906, 667 and 670).

Fragments of six Jewish tombstones were discovered in London's medieval wall and gatehouses, though all were subsequently lost (Honeybourne 1964, 153-4). The first of these tombstones was found in 1586 when Ludgate was being rebuilt. It was drawn and recorded in Latin as '*Hæc est statio Rabbi Moses, filii insignis Rabbi Issac*' by John Stow who mistook it for a plaque from a Jewish house (Figure 8). The inscription should probably read '*Behold the memorial of Rabbi Moses, son of the great Rabbi Isaac*' (Stow 1598, 67). Four more tombstones were found in 1617 when London's Aldersgate was being rebuilt. The stones were later taken to the Ashmolean Museum in Oxford (Figure 9), where somewhat garbled transcriptions were made (Prideaux 1676, 310-14). The sixth London tombstone (Figure 10) was found in 1753 embedded face down in the London Wall near the Bethlehem Hospital, which stood at Moorfields (Ames 1753). Previously it has been suggested that the inscription may have included the name Nahum, Nathan or Nathaniel (Honeybourne 1964, 154).

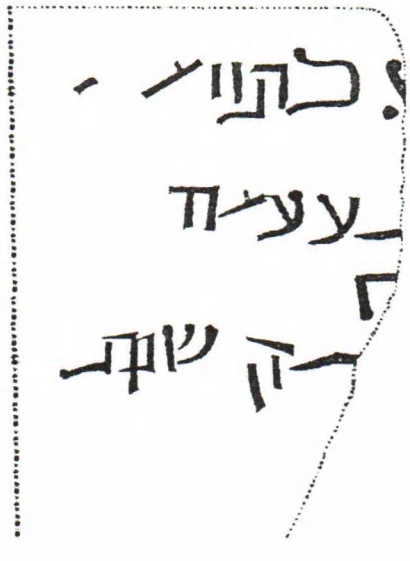

Fig.10 Moorfields Hebrew tombstone, London (Gentleman's Magazine, 1753).

Fig.11 Northampton Hebrew tombstone (photograph by Richard Sermon).

The only extant fragment of a medieval Jewish tombstone in this country was rediscovered at Northampton Central Museum in 1987 (Roberts 1992). It is one of two fragments found in the 1840's re-used in a cellar wall in Princes Street (Figure 11). What survives is the top right-hand corner with the frame and part of the inscription. This occupies four lines, which can be read with some degree of confidence as '*This is the tombstone of the learned... Solomon...*', opening words that were commonly used amongst the Ashkenazi. The second letter (from the right) on the second line of this inscription is the Hebrew letter *chet* ח, which compares very well with the Jacob's Well inscription (Figure 2).

The Bodleian Bowl is a two-handled cast bronze pot, decorated with two *fleurs-de-lis* and standing on three hoof-shaped feet. Though often said to have been found in 1698 by a fisherman in a Suffolk brook (Abrahams 1905 and 1925; Lipman 1967, 313-5), recent research suggest it first came to light in 1696 when it 'was taken out of an old

Location	Translation	Reconstruction
Jacob's Well, Bristol	Living waters (Numbers 19:17).	[מי]ם ח[יים] ?
Guildhall, Cambridge	Grave and tombstone of Israel... who died...	מצבת קבורת ישראל... גוע...
Ludgate, London	Behold the tombstone of Rabbi Moses son of the great Rabbi Isaac.	הן מצבת ר(ב) משה בן הרבן יצחק
Aldersgate 1, London	And land... the holy... Abraham... who died on 4th Nissan (20th March) the year 4971 (1211) TNZBH (May his soul be bound in the bond of life eternal, I Samuel 25:29).	וארץ... הקדושה... אברהם... שנפטר בד נ[יסן] שנת (דתת)קעא תנ[צבה]
Aldersgate 2, London	This is the tombstone of the fellow (learned) Rabbi Samuel son of...	זאת מ[צבת] החב[ר רב] שמ[ואל בן...]
Aldersgate 3, London	This is your tombstone... Rabbi Jachat...	[ז]את מצבתך... רבי יחאת (יחת ?) ...
Aldersgate 4, London	Memorial of Avigay (Abigail) daughter of the fellow (learned) Rabbi Isaac, who died... Shevat (January-February)...	ידת אביגאי [ב]ת החבר רב [יצ]חק שנפטר[ה]... ... שבט... ...
Moorfields, London	Tombstone of... risen to eternity the 18th... the year...	[מ]צבת... ...עע (עלה לעולם) יה ...השנת
Princes St, Northampton	This is the tombstone of the fellow (learned) Rabbi Solomon son of...	זאת מ[צבת] החב[ר רב] של[מה בן...]
Bodleian Bowl, Norfolk	The vow (gift) of Joseph son of the holy Rabbi Jechiel, may the memory of the righteous and holy be a blessing, the respondent and inquirer (religious advisor) to the congregation, thus a redeemer worthy to behold the face of Ariel (Jerusalem, Isaiah 29:1-7) as it is written in the law of Jekuthiel (Moses, I Chronicles 4:18) 'and righteousness delivers from death' (Proverbs 11:4).	הנדר יוסף בן הקר (הקדוש רב) יחיאל זצקל (זכר צדיק וקדוש לברכה) המשיב ושואל לקהל כה [ג]ואל כד(א)י לחזות פני אריאל בכת (כתב) בדת יקותיאל וצדקה תציל מ[מות]
Vault, Winchester	Day six (Friday) of Emor (2nd May) were imprisoned all the Jews of the land of the isle, in year 47 of the 6th thousand (1287), I Asher inscribed this.	יום ו אמר היו תפיסים כל יהודי ארץ האי שנ(ת) מז לפ(רט) לאלף ששי אני אשר חקקתי

Table 1 Hebrew inscriptions of the English medieval Jewry.

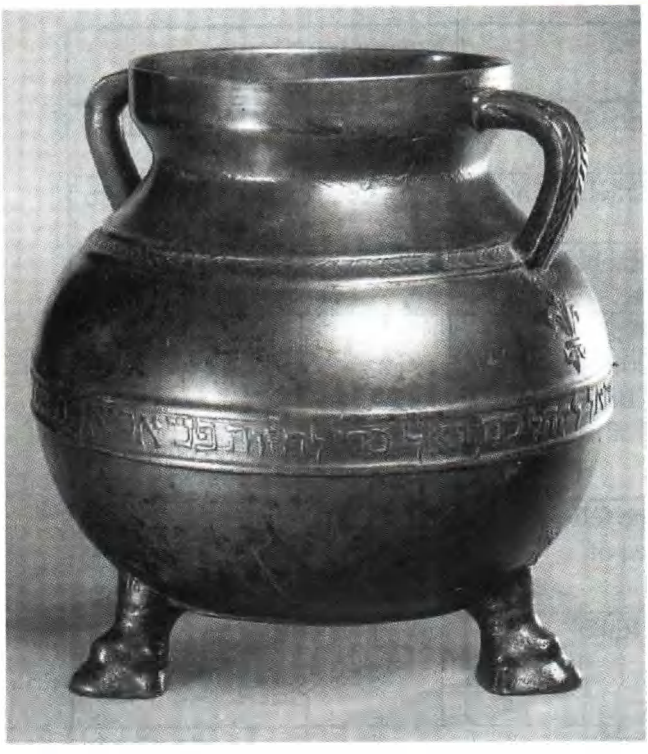

Fig.12 Bodleian Bowl (courtesy of the Ashmolean Museum).

mote in Norfolk' (Katz 1990). The bowl was presented to Oxford's Bodleian Library in 1755. A Hebrew inscription around the bronze vessel records that it was a gift of Joseph son of Rabbi Jechiel (Figure 12). Previously it has been suggested that the bowl is of French origin as a Joseph and his father Rabbi Jechiel were teachers in the great Talmudic school in Paris. In 1260 the Talmudic school moved from Paris to Acre in Palestine, from where it is suggested the bowl may have reached England as Crusader's booty. However, the bowl could equally be of English origin as the same names appear in records of the Colchester Jewry. In 1258 a Rabbi, Samuel son of the Rabbi Jechiel, was given 15 years' tenure by his brothers, Rabbis Isaac, Joseph and Benjamin of a house in Stockwell Street (Davis 1888, 365; Rigg 1905, 193; Stephenson 1985). Given that the bowl was found in a neighbouring part of East Anglia, an English origin would seem more likely than the circuitous provenance of Paris via Acre.

The Winchester inscription was recorded by the distinguished 17th-century scholar *Patricius Junius* (Patrick Young, 1584-1652) and reported to John Selden who included it in his work on law theory *De Jure Naturali* (Selden 1640, 215; Tovey 1738, 150). The inscription was cut into the wall of an old vault in the city and read '*Day six* (Friday) *of Emor* (the week in which Leviticus 21:1 to 24:23 is read), *were imprisoned all the Jews of the land of the isle, in year 47 of the sixth thousand* (5047), *I Asher inscribed this*' (Figure 13). The text provided physical evidence for the imprisonment on the 2nd May 1287 of all the Jews in the kingdom, not being released until they had paid a fine of 20,000 marks. The writer is thought to have been Asher or Sweteman of Winchester, son of Licoricia of Oxford (Roth 1949, 79 and 273).

CONCLUSIONS

The close proximity of the Jacob's Well springhead to Bristol's medieval Jewish cemetery is now proven beyond question. We have reliable medieval evidence that the cemetery was located on Brandon Hill, and 18th-century documents revealing the later field names and boundaries. By the 19th century the '*Jews Churchyard*' or '*Jews Acre*' was occupied by the Queen Elizabeth Hospital, where Hebrew tombstones were found during the school's construction, little more than 100m from the site of Jacob's Well. The presence of medieval springs and conduits in the area is recorded in a number of monastic charters, which describe grants of water supplies by the lord of Clifton to St Augustine's Abbey and St Mark's Hospital. Whilst the precise ownership of Jacob's Well in the 12th-13th century is unclear, it would not have prevented a lease or other arrangement allowing the Jews occasional access to the spring waters. Alternatively its use by the Jewish community could have predated any grant to these religious houses. Jacob's Well would have provided a convenient source of water essential for the Jewish practice of washing the dead before burial. Furthermore, such 'living waters' (Numbers 19:17) from a spring or *mayan* מעין were considered ideal to cleanse a person after contact with a corpse.

The Hebrew inscription at Jacob's Well has been the subject of much debate, and is the primary evidence for the site's Jewish associations. Whilst the authors have called into question the previous reading *zochalim*, they still believe it to be a mutilated Hebrew inscription. The most clearly recognisable character is the Hebrew letter *chet* ח, which is very well preserved being finely cut with a deep 'V' section. Other interpretations of this letter have been suggested such as a Lombardic 'N' or even the Greek letter *Pi* 'Π', neither of which seem likely in respect of their letter shape or historical context. In contrast, this letter compares extremely well with other known medieval examples, such as the Northampton tombstone, and confirms it to be a Hebrew inscription. Whilst some non-Jewish scholarship of Hebrew is recorded in medieval England, it was strongly discouraged by the Papacy and was not used in Christian inscriptions until after the Reformation. The only logical explanation for a Hebrew inscription at this once remote location is in relation to the neighbouring medieval Jewish cemetery.

there was an odd Teſtimony of it diſcover'd by *Patricius Junius*, in an old Vault at *Wincheſter*; and by him communicated to Mr. *Selden*, who publiſh'd it in the Original as follows.

יומם ואסר חיו
חפיסים כל יהודי
ארצ האי שנ'
מ'ז לפ' לאלוף
ששי אני אשר
חקקתי

Selden de Jure Nat. l. 2. c. 6. p. 215. edit. *Wilk.*

The Meaning of which is, ALL THE JEWS OF THIS NATION WERE IMPRISON'D IN THE YEAR
An. Chriſt. 1287. FIVE THOUSAND AND FORTY SEVEN.
I *ASHER* WROTE THIS.

Fig.13 Winchester Hebrew inscription (Anglia Judaica, 1738).

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BUILDING RECORDING AT WESTEND FARM, NEAR WICKWAR, SOUTH GLOUCESTERSHIRE, 2007

by
Andy King

SUMMARY

Archaeological building recording and a watching brief were carried out at Westend Farm, to the south-west of Wickwar in South Gloucestershire. Former farmyard outbuildings were recorded prior to their redevelopment as residential accommodation. The earliest structures were a corn barn and a former pigsty that may have dated from the late 17th century. An adjoining cowshed dated from the later 19th century and the most recent buildings were a former granary and a Dutch barn constructed between 1902 and 1921. During groundworks a stone-built drain with slab capping was exposed that was contemporary with the cowshed. Excavation of the farmyard pond revealed that it had been partially lined with stone setts.

INTRODUCTION

Westend Farm is situated about 1km to the south-west of Wickwar in South Gloucestershire and 500m south of the hamlet of Westend, centred on NGR ST 7136 8802 (Fig.1). The site covers an area of approximately 1150 square metres and is bounded to the west by Westend Road that runs between the hamlets of Westend and Hall End, north and east by fields belonging to adjoining properties and south by the remaining outbuildings of Westend Farm. Planning consent was granted for the redevelopment of part of the farm, known as Edwards Barn. Bristol and Region Archaeological Services were commissioned to carry out a programme of archaeological building recording with a subsequent watching brief to monitor groundworks. The building recording was carried out in January 2007 and the watching brief in February and April 2007. No previous archaeological investigation had been done on this site.

Most of the buildings that have been recorded were outbuildings of a moderate-sized dairy and corn farm that faced an open yard-space with access off Westend Road (Fig.2). Fronting the northern side of the yard were a corn barn and a former cowshed. Along the eastern side of the yard was a former pigsty and another animal stall adjoining the cowshed. The buildings facing the southern side of the yard were not part of the development site and have not been included in this report. To the north of the corn barn and with its own separate access from Westend Road was a two-storey building known as the granary. At the time of the survey some of the buildings were in use as storage space and all were in various states of dilapidation. The central yard area had a filled-in pond in the south-western corner

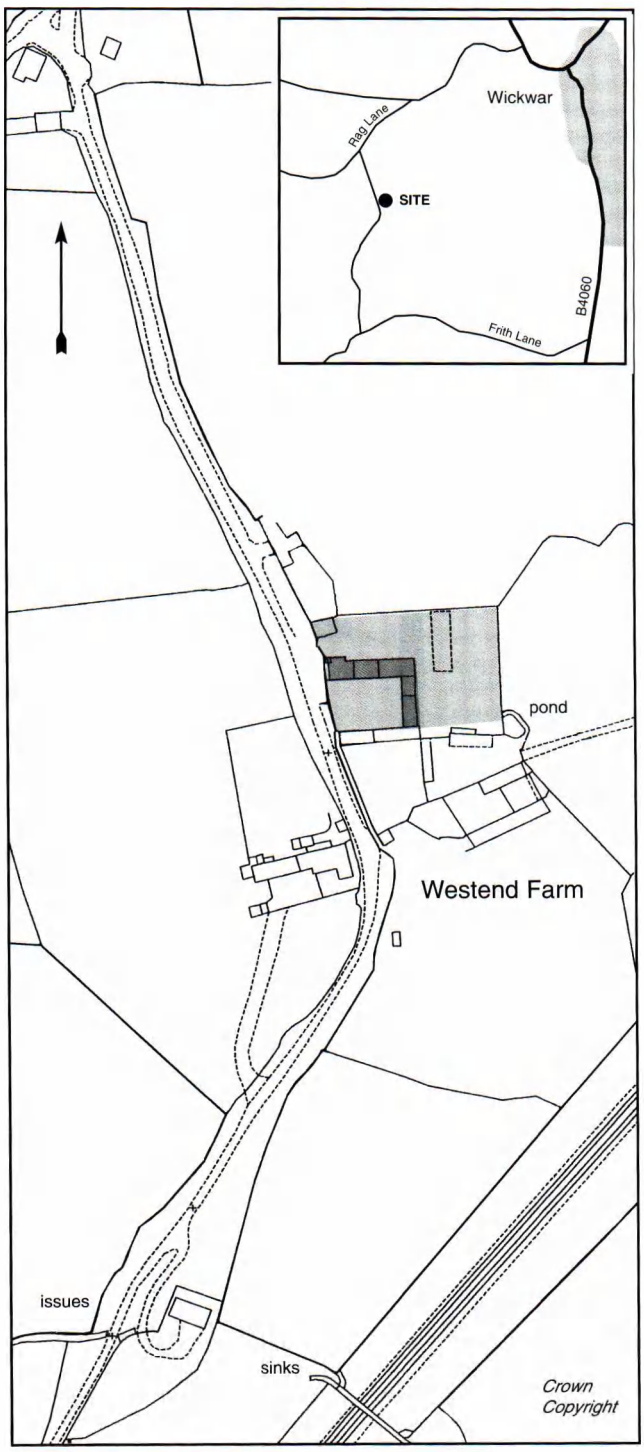

Fig.1 Site location, scale 1:2500 (slightly reduced).

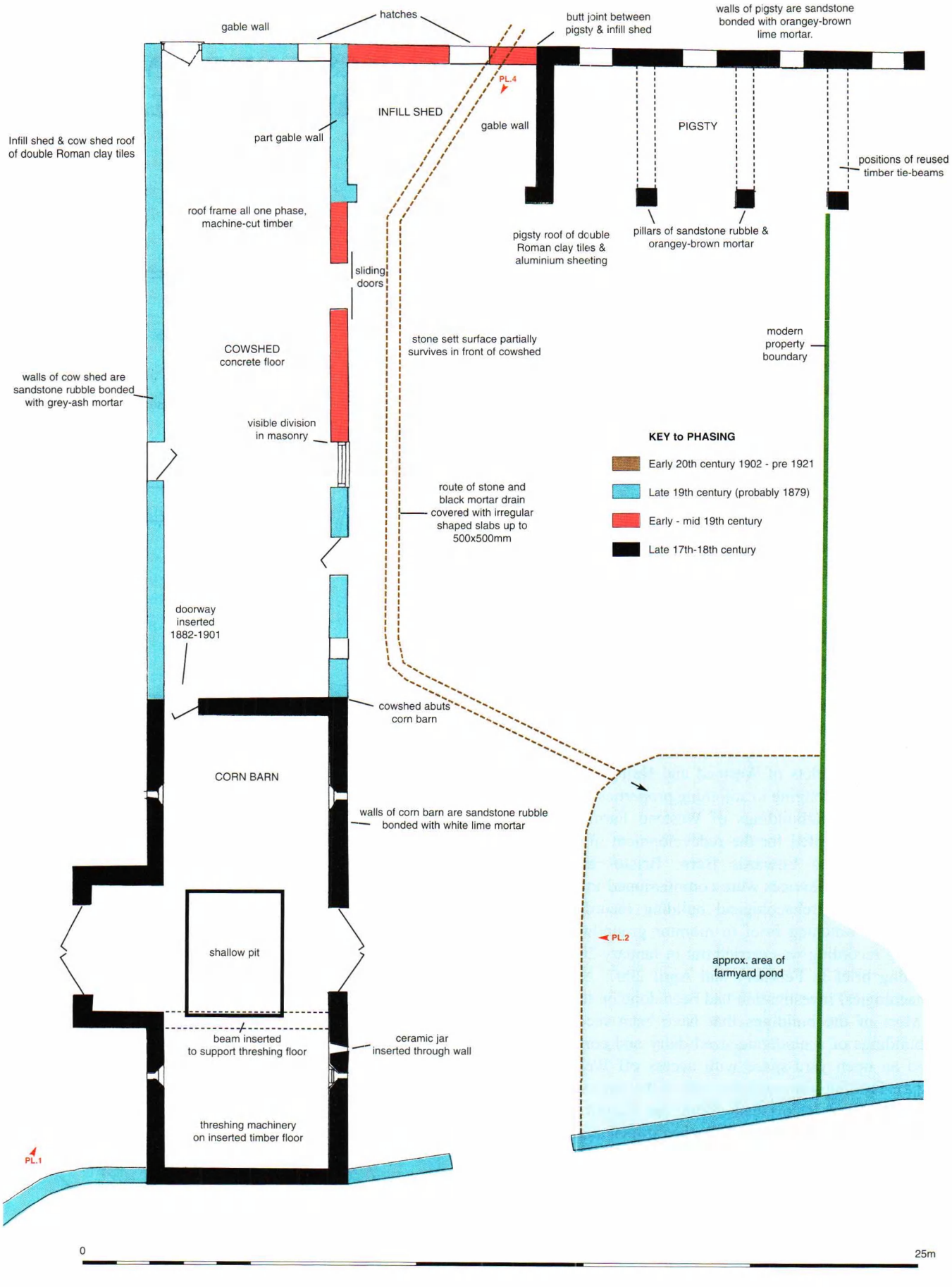

Fig.2 Annotated ground floor plan of corn barn, pigsty, infill shed & cowshed, showing plate directions and phasing.

and concrete ramps to most of the buildings. An area of land east of the outbuildings was partially enclosed by a boundary wall and contained the remains of an early 20th-century Dutch barn.

It was the aim of the fieldwork to conduct a photographic survey of the former corn barn, pigsty, cowshed, and granary buildings and to annotate architects' plans to show historical phases of construction and notable architectural features. The subsequent watching brief monitored intrusive groundworks carried out as part of the redevelopment.

The site slopes gradually downwards to the west between approximately 65m and 63m above Ordnance Datum. The geology of the study area comprises Mercia Mudstone of the Triassic period (British Geological Survey 1984).

The building recording and watching brief have been assigned the South Gloucestershire Sites and Monuments Record number 18097. The Project archive is deposited with Bristol City Museum Service under Accession Number BRSMG 2007/3.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Wickwar has not yet been covered by the Victoria County History series and no major archaeological fieldwork has occurred within the town itself. A possible prehistoric long barrow approximately 600m to the south-east of the site, on Frith Farm, is recorded in the South Gloucestershire Historic Environment Record (SGSMR 3061). Frequent finds of Iron Age and Romano-British features and artefacts were recorded at Hall End Farm approximately 750m to the south (SGSMR 7368; La Trobe Bateman 1996, 6-7). Most recently, an important discovery in this area, identified from geophysical surveys and trial excavations, was the course of a Roman road aligned roughly north-south and the plan of a large, rural, roadside settlement with substantial stone buildings, industrial structures and waterlogged deposits adjacent to the Ladden Brook (Wills 2006, 173).

The South Gloucestershire Historic Environment Record has an entry suggesting a medieval farmstead existed at Westend Farm (SGSMR 9092), although at the time of writing no evidence for this could be ascertained on site. The external appearance of the former farmhouse of Westend Farm would indicate a late 17th-century date of construction, assuming it was not a rebuild of an earlier house on the site. Some of the farm outbuildings, only one of which is included in this recording, may date from this period.

Slater's directory for 1868 listed one William Daw as the farmer at Westend Farm. In 1879 the tenant was Mrs Ann Moreton. The 1882 edition O.S. plan showed the farmyard outbuildings arranged roughly in a U-shape with principle access from Westend Road (Fig.3). The 1882 plan also showed that the farmyard had fewer buildings at that time and some of those were arranged in a different layout. For

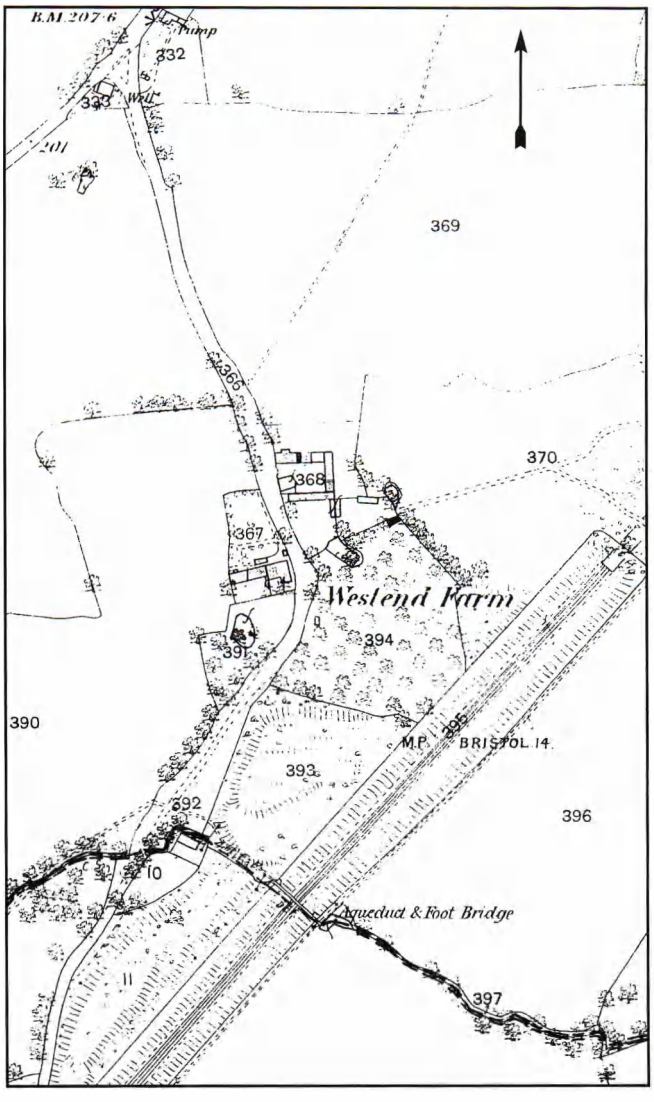

Fig.3 Ordnance Survey plan, 1882 edition showing Westend Farm, original scale 1:2500.

Plate 1 Corn barn, looking south-east, showing access from Westend Road.

Plate 2 Corn barn, southern side, looking north.

example, a small building in the location of the cowshed did not adjoin the corn barn and did not extend far to the east because the pigsty and infill shed extended further north than at present. The granary building had not been constructed and the eastern boundary wall of the farmyard was closer to the buildings.

The farm remained with the Moreton family until the first decade of the 20th century. The 1902 edition O.S. plan showed that the cowshed had been extended west to abut the corn barn and eastwards to truncate the end of the pigsty range. The granary had not yet been built but the farmyard boundary wall had been moved to its present alignment.

The 1921 edition O.S. plan was the first to show not only the granary building but also the Dutch barn. No major changes to the buildings' layout were shown on subsequent O.S. editions. Westend farm was next held by the Isaac family until 1939 and then by the Stinchcombe family until the present.

THE BUILDING RECORDING

The farm complex incorporated four main buildings, the earliest of which appeared to date from the late 17th to early 18th-century. For the purposes of this report, the recorded structures are described individually as follows:

Corn barn
Pigsty
Infill shed
Cowshed
Granary building
Dutch barn & boundary wall

The Corn Barn (Figs.2 & 4)

This was the principal building within the farmyard and is a small, yet fairly standard example of a two-storey barn, originally intended for the threshing and storage of corn. The barn is of Pennant sandstone rubble construction, bonded in white-lime mortar and had the remains of a stone-tile roof. In plan it is rectangular in shape, measuring 6m north-south by 14.5m east-west, with an inserted upper floor at the western end and a porch projecting 2m by 4.7m on its northern side (Plates 1 & 2). The porch would have been useful for the general protection of the interior and also for parking waggons clear of the threshing floor.

The threshing floor was made of large stone slabs, some of which survived in-situ lying between the opposing doorways for the sake of a through-draught. The barn had six ventilation slits instead of windows and all of these survive, although both slits at the western end of the barn were blocked, the slit in the western gable-wall had been partially truncated by the insertion of a later doorway and the slit in the eastern gable was blocked by the roof of the adjoining cow-shed. An owl hole was situated close to the eastern gable apex. A doorway had also been inserted in the eastern gable wall at ground-floor level to connect the barn with the cowshed.

At the western end of the corn barn an upper floor level, constructed of timber, had been inserted to house threshing machinery that would have been powered from an agricultural engine or tractor outside the barn. At the time of the survey access to this floor level was not possible for reasons of health and safety. Holes had been made through the barn walls at suitable places for the axles and belts of the threshing machinery, some of the pulley and fly-wheels

were still in place. In the southern side-wall a large ceramic pot had been utilised as a vent. A small brick enclosure associated with the installation of the threshing machinery had been built against the north-western corner of the porch.

The roof structure of the barn contained four trusses, recorded as Nos.1 - 4 (Fig.4). Trusses 2 and 4 had peg-holes and mortices, originally intended to take braces. All the tie-beams had mortices to support floor joists, however the mortices in beams 2 and 3 were upside down indicating that these beams had been re-set. The principle rafters of the roof contained carpenters' marks in Roman numerals at the joints with the collars and mortices that did not correspond with the existing purlins. This would suggest that all the main timbers in the roof were re-used. The lintel above the porch door also had mortices for floor joists, however there was no

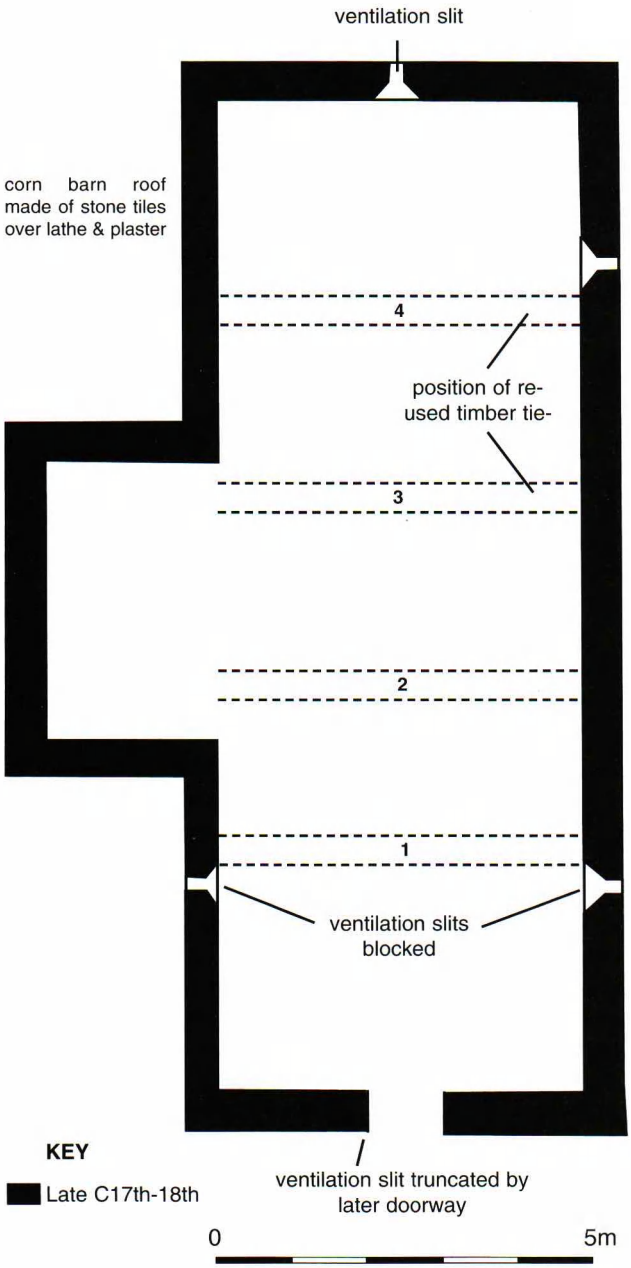

Fig.4 First floor plan of corn barn, scale 1:100.

Plate 3 Granary building, looking north-east.

beam parallel with the porch lintel, at the same height, to hold the opposite end of joists. The masonry above the lintel had evidence of cracking and had been heavily re-pointed, possibly even rebuilt.

The Pigsty

This pigsty building may have been contemporary with the corn barn. In plan, the pigsty was a three-sided building, measuring 4.5m east to west by over 14m north to south and continuing southwards beyond the edge of the study area. The pigsty was open at the western side and divided into four stalls by three supporting pillars with timber shuttering. The pigsty was constructed of Pennant sandstone bonded with a friable, orangey-brown, lime-flecked mortar. The eastern wall had four window openings, each just over 1m square with wooden shutters. The pigsty was divided roughly in two by a timber and plaster/stud wall that extended as high as the eaves.

The roof framework contained three main trusses with the western end of the tie-beams resting on the stone pillars. Two of the tie-beams had mortices for floor joists and were re-used timbers; however, unlike the corn barn roof, the principle rafters and purlins of the pigsty were contemporary. Apart from some machine-cut common rafters, segments of wall-plate and window lintels, the roof frame of the pigsty was evidently unaltered from its original construction. The purlins continued through the southern gable wall of the pigsty, resting on angled wall-posts. The east-facing roof pitch had double Roman clay tiles and the west-facing pitch had been re-roofed with modern aluminium sheeting.

The Infill Shed

This animal stall was the smallest of the farmyard buildings to be surveyed and measured 4.5m east to west by 6m north to south. The shed was constructed of Pennant sandstone rubble bonded with pale grey-ash mortar, the eastern wall had a single door and the western side had a partial timber-frontage. The eastern wall had a clear butt joint in the

Plate 4 Stone-built drain exposed during groundworks, looking west.

masonry where it abutted the gable wall of the earlier pigsty and most of a stone sett floor survived within. This shed may have extended further to the north in the last decades of the 19th century, but by 1901 it had been altered to its present size.

The Cowshed

The cowshed dated from the later 19th century and was constructed of Pennant sandstone rubble and brick bonded with a pale grey-ash mortar. The building measured 6m north to south by 19.5m east to west. The southern wall had two windows and two doors wide enough for cattle to pass through, the northern wall had a single door and the eastern gable wall had a door, a window and a vent in the apex made of land-drain pipes. Sometime between 1882 and 1902 this building was rebuilt in its present form, partially replacing an earlier structure on the site, extending eastwards and westwards to abut the corn barn. As previously mentioned, a door had been inserted through the eastern wall of the corn barn so the two buildings were interconnected. Masonry of the earlier structure appeared to survive within the southern wall and a butt joint was visible in the stonework.

The roofs of the cowshed and that of the infill shed were contemporary in their construction and consisted entirely of machine-cut timbers clad in double Roman clay tiles. The trusses had collars but no tie-beams and the principle rafters were braced against the side walls.

The Granary (Figs.5 & 6)

This two-storey building was constructed sometime between 1902 and 1921. Three of the walls were of Pennant sandstone rubble bonded with pale-grey mortar, whereas the southern side was open on the ground floor; a single timber post and acrow-props held up a reinforced steel joist that in turn supported the brick-built first floor (Plate 3). This steel joist also supported one end of the floor joists that had herringbone strutting between them.

A stone-built external staircase with brick treads, against the eastern gable wall, led to the first floor of the granary. There was a doorway in both gable walls and a narrow window just below the eaves in the northern wall. The frame of the roof was two machine-cut trusses supporting corrugated iron cladding. Against the north-eastern corner of the granary was the scar of the former boundary wall of the farmyard.

The Dutch Barn & Boundary Wall

To the east of the farmyard buildings was a Dutch barn, measuring 7m east to west by 44m north to south, constructed of steel girders set in concrete with a roof of corrugated iron. As with the granary building, the Dutch barn was constructed sometime between 1902 and 1921.

Along the northern, eastern and western edges of the farmyard area was a stone wall, in various states of repair, bonded in greyish-white, lime mortar. The eastern section of this boundary wall had been re-aligned between 1882 and 1902.

THE WATCHING BRIEF

Redevelopment of the study area began in February 2007. The concrete ramps of the farmyard were removed and the pigsty and infill shed rebuilt. The roof and concrete floor were removed from the cowshed, revealing the ventilation slit in the east wall of the corn barn and undisturbed red clay beneath the floor.

The roof and first-floor brick wall were removed from the granary. The ground floor level of the corn barn was reduced by 400mm and the inserted floor together with the threshing machinery removed. A shallow, sub-rectangular stone-lined pit was revealed, roughly in the centre of the corn barn floor. This pit measured 2.09m north-south by 3.78m east-west and had only one course of stonework giving it a depth of 220mm. There was no masonry base to the pit that had been excavated into the underlying clean red clay. The white, lime-mortar bonding the stonework was contemporary with the main walls of the corn barn.

Foundation trenches were dug along the lines of the former walls of the pigsty and infill shed and for the construction of a new boundary wall along the southern edge of the study area bisecting the site of the farmyard pond. Clean, undisturbed natural clay was exposed within these trenches at a maximum depth of 300mm beneath the modern surfacing.

During the course of excavating the new foundation trenches a stone-built drain was exposed, measuring 210mm in width and up to 330mm deep, capped with large, irregular-shaped sandstone slabs, bonded with black mortar (Plate 4). The drain flowed from the south-east, running for

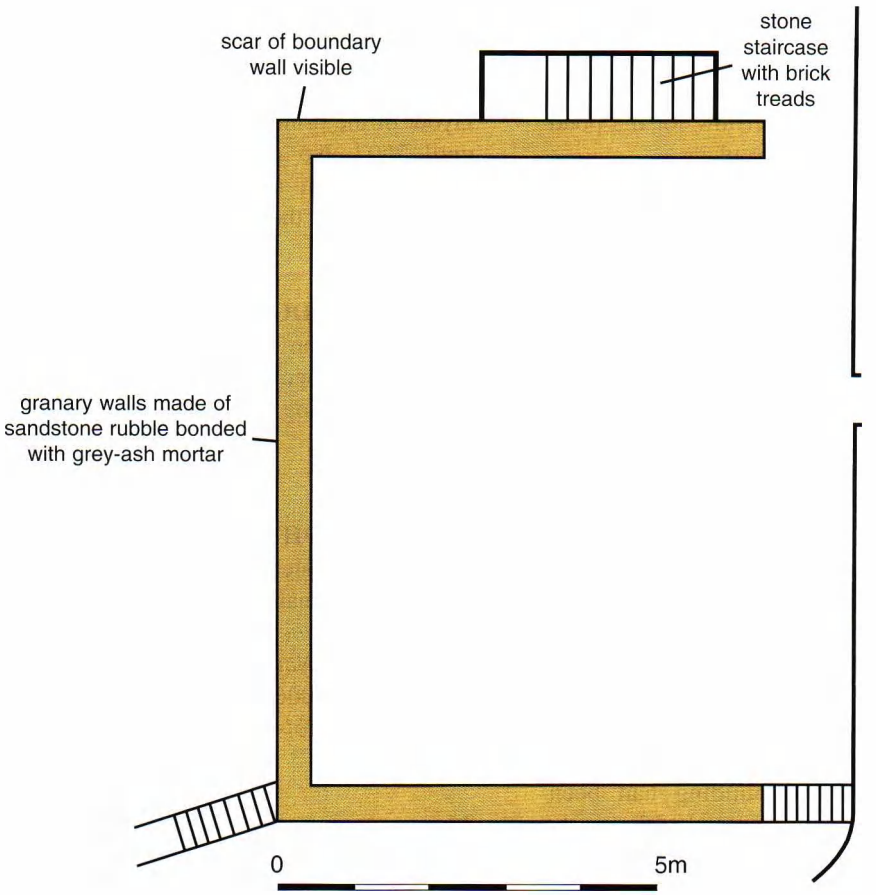

Fig.5 Ground floor plan of granary building.

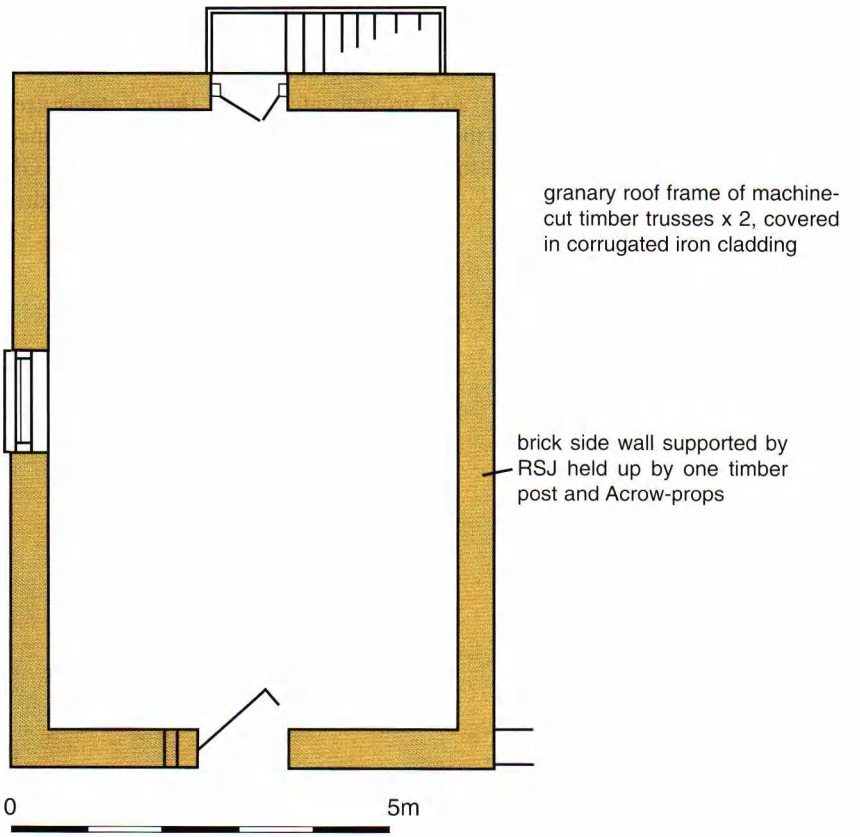

Fig.6 First floor plan of granary building.

30m beneath the former infill shed, past the cowshed and turning south towards the site of the farmyard pond before continuing westwards beneath the farmyard boundary wall. It is possible that this drain was an overflow for the pond shown east of the farmyard on early O.S. plans.

The former farmyard pond was re-excavated and was found to be at least 1.4m in depth at the southern end, with a gradual slope at its eastern side. The eastern slope had been partially lined with stone setts laid in ridges, presumably to enable cattle to gain access to the pond.

Trenches were excavated along the northern edge of the granary building and cowshed for drainage runs; as with the other groundwork trenches, these exposed clean undisturbed clay beneath the modern surfacing.

DISCUSSION

The building recording and watching brief have shown that the outbuildings of Westend Farm dated from no earlier than the later 17th century, in particular the former pigsty and the corn barn were the earliest structures. In the mid-19th century the infill shed had extended the pigsty further to the north and a small building abutted its western side in the location of the present cowshed.

By 1901 the present cowshed building had been completed, partially replacing the northern end of the pigsty and incorporating the infill shed. The cowshed was extended west to abut the corn barn and a small brick enclosure associated with the installation of threshing machinery was in place west of the corn barn porch. The eastern farmyard boundary wall had also been rebuilt on its present alignment. At the height of the farms' prosperity, in the first two decades of the 20th-century, the granary building and the Dutch barn were erected. Surface and groundwater drainage from the farm was channeled to the farmyard pond, which may have been a natural pool beforehand, but was edged and given a lining of stone setts.

Modern concrete and hardcore surfaces were laid around the buildings, roofs were partially repaired, alterations were carried out to doors and partition screens, however the layout of the principal farm buildings remained unchanged until 2007. No evidence for medieval occupation was exposed within any of the new service or foundation trenches across the site.

ACKNOWLEDGEMENTS

Bristol & Region Archaeological Services are grateful to Mr Edward Stinchcombe and Mr Mark Atkinson for their assistance during these works. Ann Linge produced the illustrations.

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1902 Ordnance Survey plan, 1:2500. Revised 1901, published 1902, Gloucestershire Sheet LXXIV.10.

1921 Ordnance Survey plan 1:2500. Published 1921, Gloucestershire Sheet LXXIV.10.

Abbreviations used in the text

OS Ordnance Survey

SGSMR South Gloucestershire Sites and Monuments Record.

ARCHAEOLOGICAL EXCAVATIONS AT HEATH HOUSE AND HIGHWOOD HOUSE, STAPLETON, BRISTOL, 2004-2005

by
Darren Lankstead

INTRODUCTION

Between October 2004 and October 2005 Bristol and Region Archaeological Services (BaRAS) conducted a series of archaeological investigations in the grounds of Priory Hospital, Purdown, Bristol. The work was undertaken as part of the planning process with the aim of preserving by record archaeological remains within the footprint of the developments. The projects were funded by Priory Healthcare and involved a watching brief during the construction of a new healthcare facility on the site of the former Highwood House and evaluation and subsequent open area excavation within the grounds of Priory Hospital/Heath House (Fig.1).

The results from the two projects are discussed separately below given the marked difference in the recovered archaeological evidence.

LOCATION AND GEOLOGY

The two sites lay on the pronounced hill of Purdown immediately to the west of the M32 motorway. Priory Hospital/Heath House sits on a pronounced terrace upon Purdown at an elevation of approximately 66m aOD. Purdown rises to the north-west, falls away sharply to the south-east and a more gentle slope descends to Muller Road and the Eastgate Shopping Centre to the south-west.

The underlying geology of Purdown belongs to the Mercia Mudstone group - a red mudstone with occasional thin greenish bands and blebs. The north westerly dip of the sediments was clearly visible within the exposed sections at Highwood House (Plate 1) where the greenish bands of clay and limestone could be seen rising to the surface (Roger Clark pers. comm.).

HISTORICAL BACKGROUND

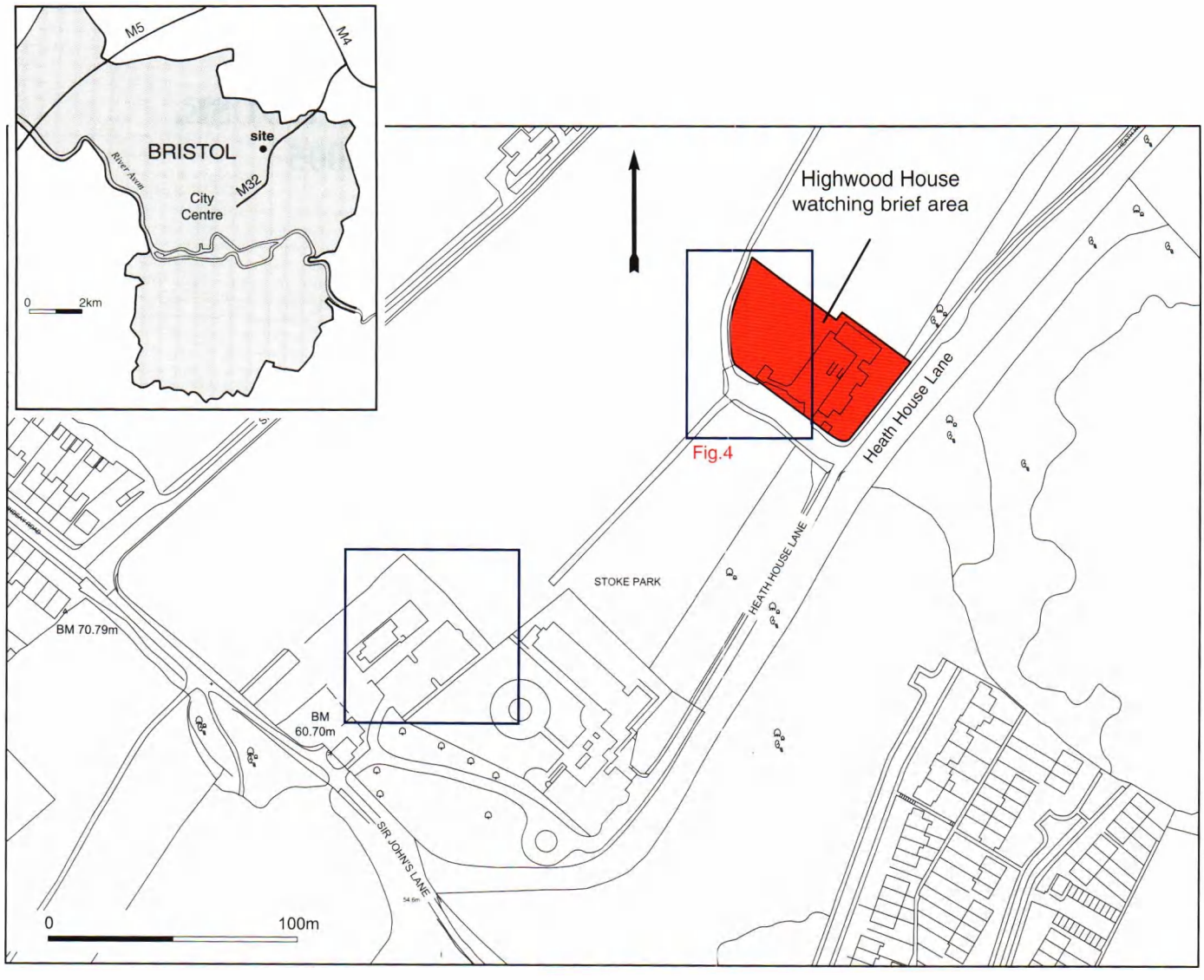
The sites lay within the grounds of Heath House in the ancient parish of Stapleton, Gloucestershire. Stapleton, together with the city of Bristol and parishes of Mangotsfield and St George comprised the hundred of Barton Regis. Stapleton village itself lies approximately 0.75km to the north-east. No mention is made of Stapleton in Domesday and little is known about the parish in pre-Norman times.

Plate 1 Geological sequence revealed during groundworks at Highwood House.

The earliest documentary evidence for Heath House estate occurs in a deed of 1425, which mentions the capital messuage or mansion called 'Little Horfyld' or 'the Hethe House'. In 1531 Lord De La Warre conveyed the Hospital of St Bartholomew, Bristol and its estates (including Heath House) to Robert Thorne in order that he found a grammar school on the site of the hospital. In 1572 the estate was sold by Nicholas Thorne to Thomas Walter of Horfield. The estate subsequently passed through several generations of the Walter family until it eventually came into the ownership of the Smyth family.

The first cartographic evidence for the Heath House estate is the Joseph Whitchurch Estate map dating to 1767 (Fig. 2). This depicts the original north to south oriented manor house and a number of subisidary buildings. Of particular relevance to this study is the most northerly structure which consists of a rectangular building with a fence line extending from its southern face.

In the late 18th century Thomas Smyth considered the original mansion too small and gave instructions to master architect John Hensley of Bath to erect a new dwelling house (Bantock 1984, 154) together with the construction of a brewhouse, gardener's house, man's room, weighing room, laundry and washhouse (Upton Way 1912, 47). This is best seen on the 1839 Stapleton tithe map (Fig. 3), which



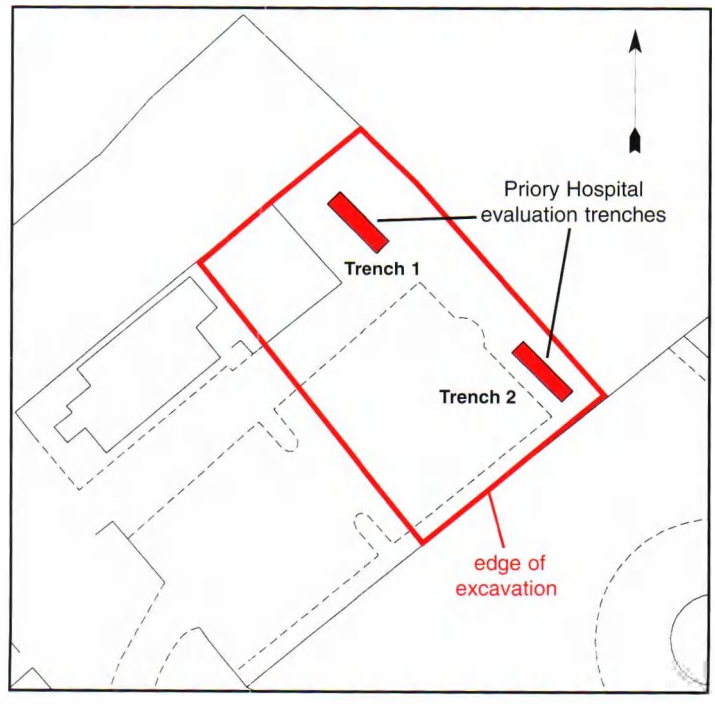


Fig.1 Site and trench location plans, main plan scale is 1:750.

shows the original manor house to have been replaced by the new Heath House.

Heath House remained within the Smyth family or their heirs until it was acquired by the Reverend Harold Burden in 1921 for the purpose of housing 'young people of enfeebled minds'. In the 1940s Heath House was incorporated into the National Health Service and became part of the Frenchay Health Authority's estate. Although the house was assigned Grade II listed status in the 1970s, it remained empty and fell into disrepair. The Ordnance Survey map dated 1970 depicts the building identified within the 2004 evaluation and 2005 excavation, as well as a trackway at its southern edge. Highwood House, situated to the north-east of the entrance to Heath House, first appeared on the 1950 Ordnance Survey plan and and was subsequently used as both school and a health care facility.

Heath House was acquired by the Priory Hospital Group in 1991 for development as a psychiatric hospital. Work commenced on the hospital in 1992 and included the refurbishment of Heath House, removal of a number of outbuildings and construction of a new bedroom wing as well as extensive landscaping works within the surrounding area (Heath House Priory News 1994). This probably involved the demolition of the rectangular building depicted on the estate map of 1767 and the eastern extension of Heath Cottages to make way for a car park.

ARCHAEOLOGICAL BACKGROUND

Prehistoric

Approximately 500m to the south west of the site, a possible prehistoric earthwork (SAM 26, BSMR 1330) consisting of

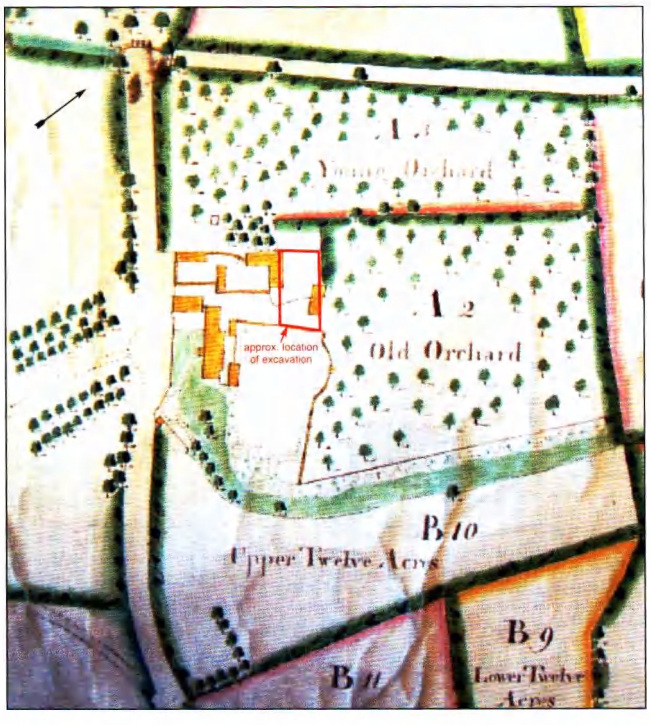


Fig.2 Extract from the estate map of 1767 showing approximate location of the Highwood House excavation.

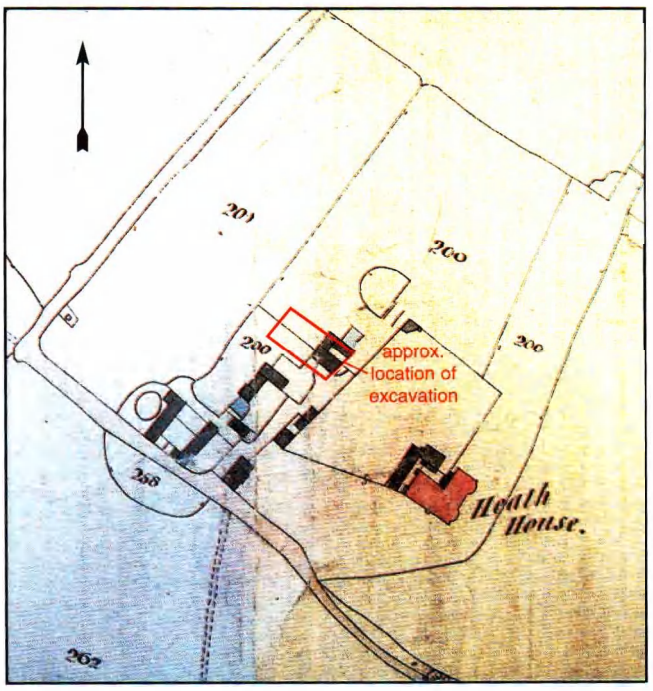


Fig.3 Extract from the 1839 Stapleton tithe map.

a half circle bank with an outer ditch and avenue was surveyed in the 1940s (Tratman 1946, 167-168). The nature and date of the monument was questioned by O'Neil and Grinsell who believed it to be the remains of a tree-lined enclosure bank and a formal avenue or linear plantation of probable 18th-century date (O'Neill & Grinsell 1960, 68). An earthwork survey by Mark Corney in 2003 confirmed the late date of the monument and the site was subsequently de-scheduled by English Heritage (Corney n.d.).

A strip and record exercise in 1999 was undertaken on the site of the former Stoke Park Hospital to the south of Priory Hospital. This work uncovered evidence of Late Bronze Age activity in the presence of a possible rectangular enclosure and associated features interpreted as hearths (Barber 2007). Further Bronze Age and prehistoric activity on Purdown is attested by the discovery of a barbed and tanged arrowhead in 1951 (BSMR 1375) and prehistoric flint recovered from the southern slope of Purdown (BaRAS 2005).

Romano-British

An ancient well in the immediate vicinity of Heath House was postulated as being of Romano-British construction (BSMR 1365).

HIGHWOOD HOUSE SITE

BaRAS were commissioned to undertake a desk-based assessment of the Highwood House site prior to the construction of residential flats (BaRAS 2001). This development failed to take place and was replaced by a planning application for a new healthcare facility. A subsequent watching brief observed the mechanical

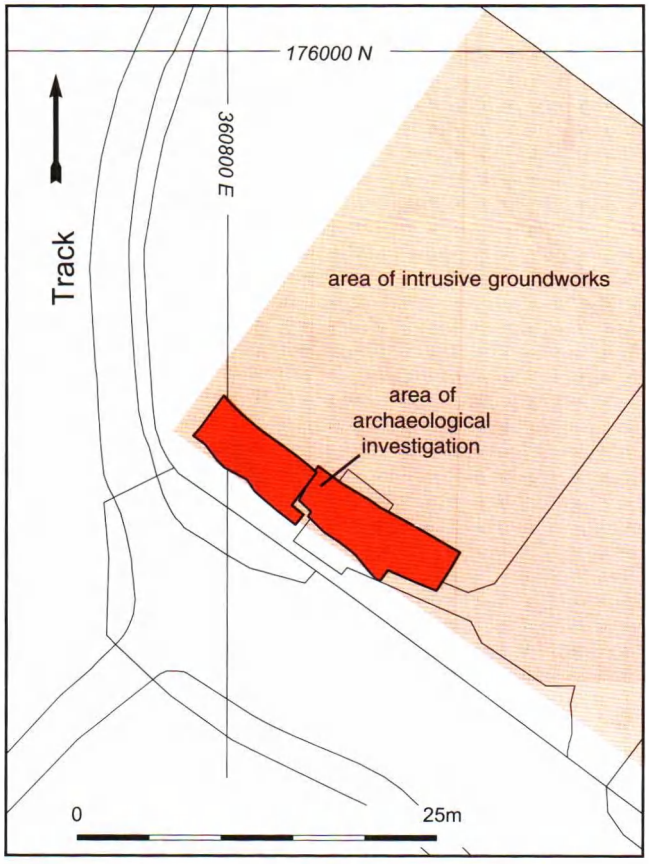


Fig.4 Highwood House watching brief areas and area of archaeological investigations.

excavation of up to 4m of stratigraphy over an area measuring 60m x 34m (Fig. 4). The complete site archive can be consulted by appointment at Bristol City Museum and Art Gallery quoting Accession Number 2004/62.

RESULTS

Following the initial stripping of topsoil from the site, bulk excavation of the subsoil was monitored. Initially this revealed no features or artefacts of archaeological interest. However, when this process was drawing to a close a dark horizon containing charcoal fragments was noted at the south-western corner of the site. There followed a controlled excavation of this area and a monolith for geoarchaeological assessment was taken through the relevant geological units. Assessment reports on the palaeoenvironment, palynology, clay tobacco pipe, glass and ceramic building material are contained within the site archive and in the unpublished client report (BaRAS 2006), whilst reports on the pottery, faunal remains, and registered finds are included below.

Archaeological Features

A total of 22 discrete cut features were identified within the excavated area. All except 131/114, were cut into the uppermost portion (surface horizon) of context 104 and were sealed by 103.

Ditch (Figs. 6 & 7, Plate 3)

A V-shaped ditch (146), maximum dimensions 1.4m wide and 1.4m deep was recorded running in a broadly east to west direction in the north-west of the area. A sondage excavated at the westernmost end of the ditch revealed the gently sloping sides to be partially lined with small blocks of limestone. A concentration of animal bone was also noted at this point.

A total of 144 fragments of animal bone were recovered from the fill of the ditch (140). Sheep and cattle bones were the most common with all parts of the carcasses being present (Higbee 2005a). This suggested waste from different processing activities were deposited within the ditch. Plant remains from the ditch fill included hazlenut and weeds of cultivated and disturbed ground (Opium poppy, vetch, fat hen and charred knotgrass). Thirty-six ceramic sherds were recovered. These included 26 body sherds of Butcombe type III ware, nine bodysherds of Marshfield CM20 type ware and a single decorated rim-sherd of Nazareth House type IV/4 ware The ceramic assemblage dates to the early Romano-British period.

Pits (Fig. 6 & 8)

Cut 124 was oval in shape and exhibited a rounded concave base. It was filled by a firm, mid brownish-grey silty clay (107) and contained a single sherd of Butcombe type XIII ware and a sherd of Severn Valley ware, both of which date to the early Romano-British period. Four charred grains of emmer/spelt wheat (Triticum dicoccum/spelta) were recovered from the feature (Mann 2005a).

Cut 128 was a regular rectangular pit with a flat base, vertical sides and was 210mm in depth. The cut was filled by a firm, mid yellowish-grey silty clay (111) that contained fragmentary animal bone, three sherds of Butcombe type II

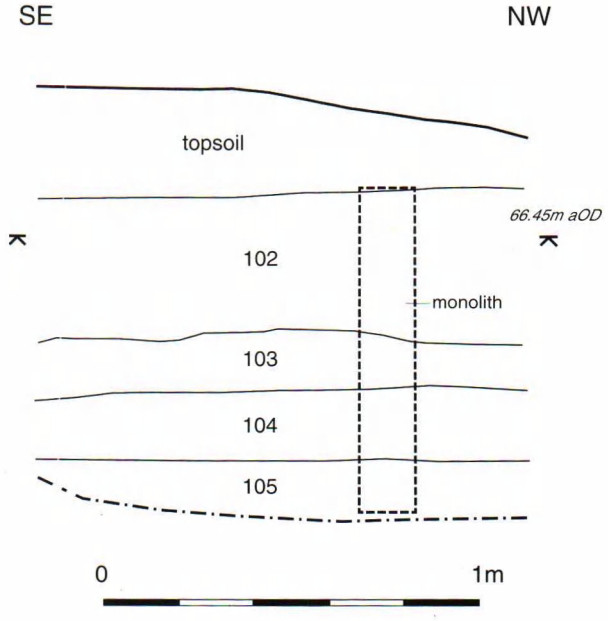


Fig.5 Section showing colluvial sequence in south-west portion of the site, scale 1:20.

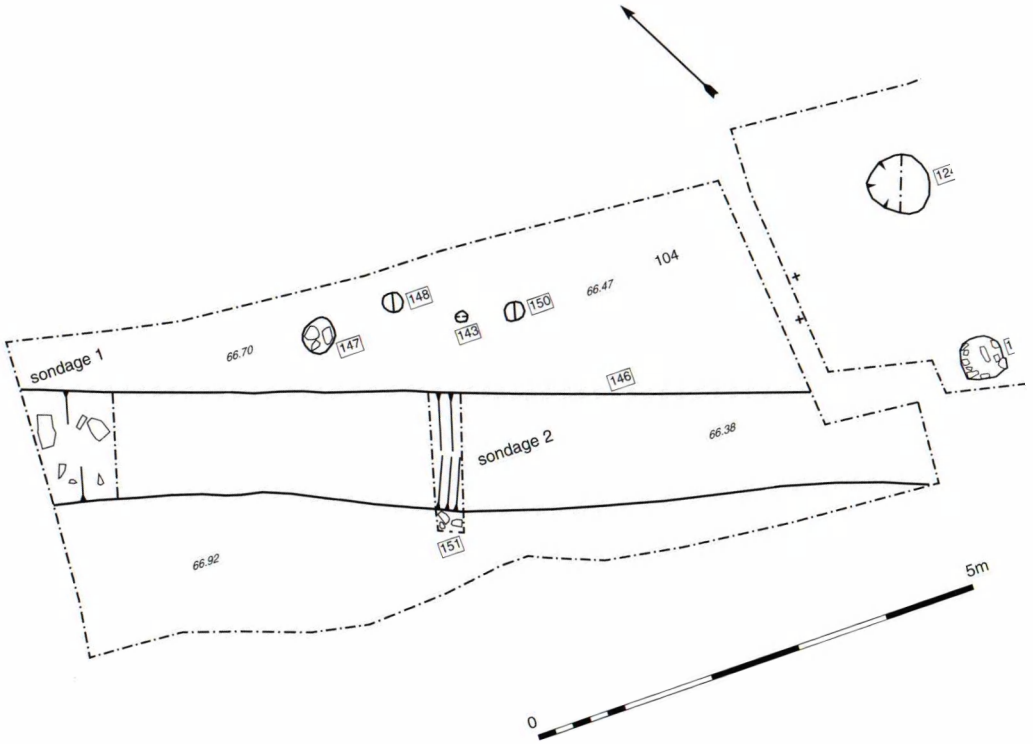
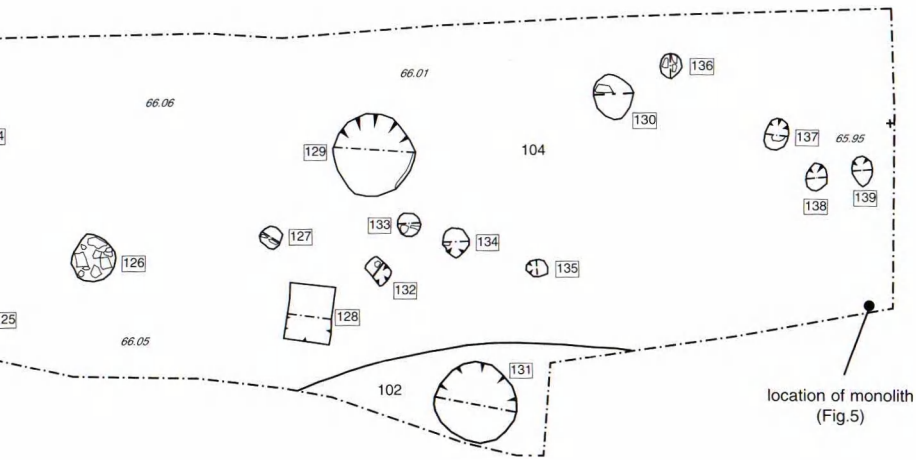


Fig.6 *Highwood House: plan of excavated features.*



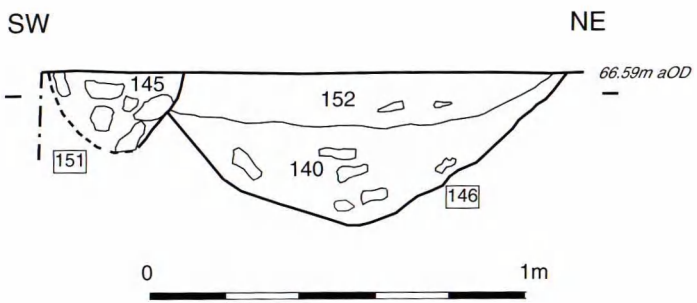


Fig.7 Section drawing of ditch 140/145 and post hole 145/151. scale 1:20.

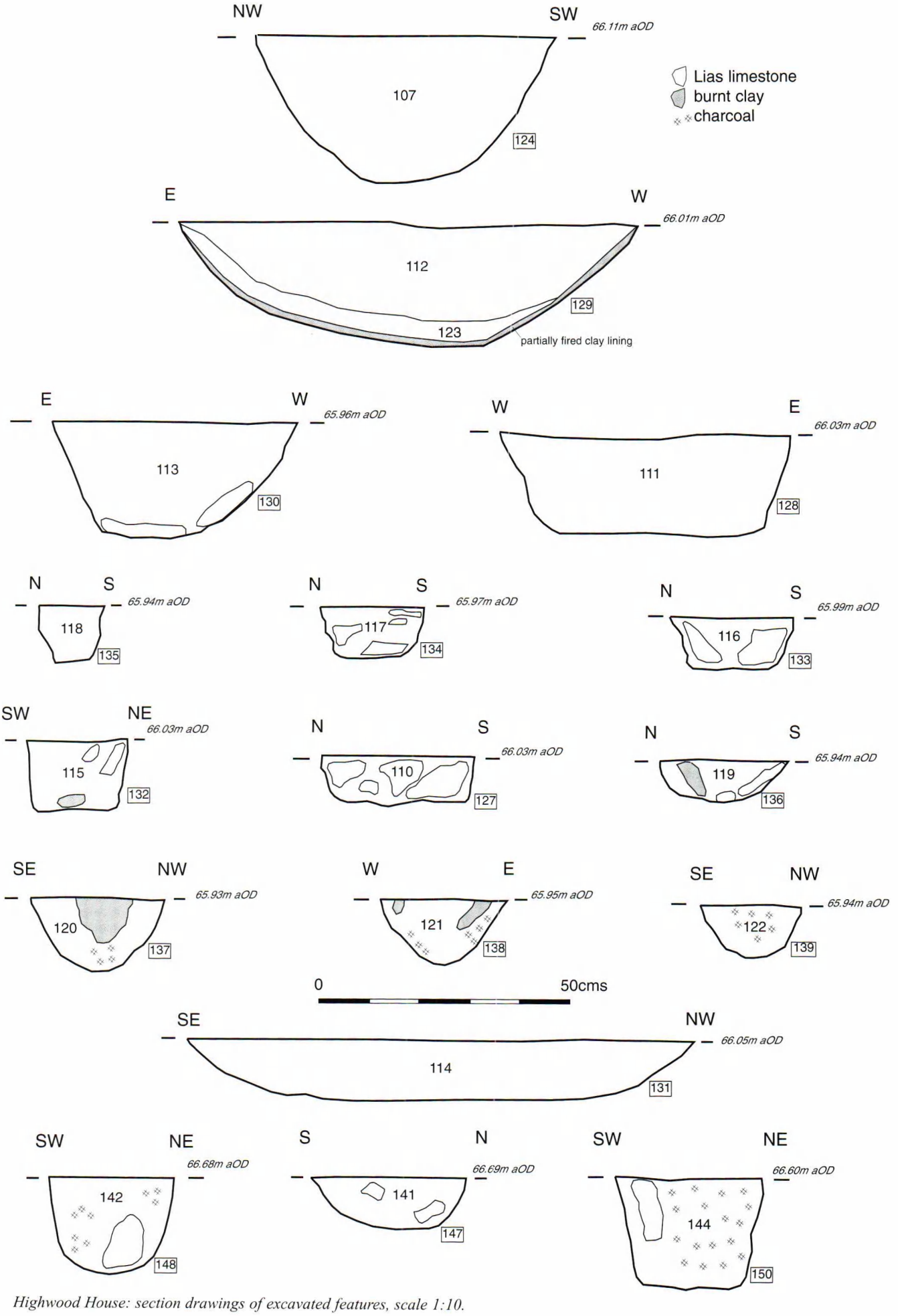


Fig.8 Highwood House: section drawings of excavated features, scale 1:10.

ware and two sherds of Severn Valley ware which date to the early Romano-British period.

Cut 129 (Plate 4) was 900mm in diameter with concave sides and a rounded base. The clay in the base of the cut exhibited an orange-red hue which suggested exposure to heat. The primary fill of the feature (123) comprised mainly charcoal with the upper fill (112) consisting of a mid orange-grey silty clay containing burnt sandstone fragments and flecks of charcoal. The lack of charred grain or hammerscale within the sieved residues suggested the feature was not utilised as a bread oven, corn drier or industrial feature. No datable artefactual evidence was recovered from the feature.

Post holes (Fig. 6 & 8)

Cut 125 was 480mm in diameter with concave sides and a rounded base. Limestone slabs lined the base which may have acted as packing to support an upright post. The fill of the feature (108) was a mid brown-grey silty clay containing occasional burnt sandstone and charcoal flecks.

Cut 126 was 500mm in diameter with concave sides and a flat base. Limestone packing was again present at the base of the feature. It was filled with a moderate to firmly compacted, mid brown-grey clayey silt containing occasional charcoal flecks (109).

Cut 127 was 300mm in diameter with vertical sides and a flat bottom, filled with limestone packing. It was filled by a firmly compacted, mid orange-grey, silty clay containing occasional charcoal flecks and small limestone fragments (110).

Cut 130 was irregular in shape with both concave and vertical sides. It was lined by substantial pieces of limestone on its western face and its base. It was filled by a firmly compacted, dark grey silty clay containing frequent charcoal flecks, occasional small bone and limestone fragments (113) and contained three sherds of early Romano-British Butcombe type III ware.

Four discrete post holes were recorded within the north-western excavation area. North of ditch 146/140 lay a broadly linear alignment of negative features. The most westerly cut (147) was circular in plan with a diameter of 300mm and concave sides with limestone fragments lining its flat base. The fill of the feature consisted of a moderately compacted, dark brown-grey silty clay which contained limestone and occasional charcoal fragments (141).

Post hole 148 had vertical sides, was circular in plan, with a diameter of 250mm. Again, traces of *in situ* limestone packing lined its rounded base. It was filled by a firmly compacted, dark blue-grey clayey silt containing several concentrations of charcoal flecks (142). The fill of the feature contained a single body sherd of Butcombe type XIIIV ware that again dates to the Late Iron Age or Early Romano-British period.

Cut 150 was circular in plan with a diameter of 290mm. It had vertical sides and its flat base was lined with flat Lias limestone fragments. It was filled by a moderately compacted, dark blue-grey clayey silt which contained occasional limestone fragments. A concentration of charcoal was recorded at its southernmost edge which may indicate the *in situ* burning of a post.

Plate 2 Highwood House - detail of contexts 104, 103 and colluvial deposit 102.

Cutting ditch fill 140 on its southern edge lay post hole 151. It was sub-circular in plan with a diameter of 700mm, concave sides and a rounded base. It was filled by a firmly compacted, mid yellow-grey silty clay (145) that contained frequent limestone fragments, several of which appeared to line its physical junction with ditch 146.

Stake holes (Figs. 6 & 8)

A series of four stake holes lay to the east of pits 128 and 129. Cut 132 had vertical sides with a flat base and was broadly rectangular in plan and contained apparently *in situ* limestone packing at its base. It was filled by a mid orange-grey silty clay containing occasional charcoal flecks and burnt sandstone fragments (115). Cut 133 was 240mm in diameter, had vertical-sides and a flat base. Again, limestone pieces were packed into the base of the cut. It was filled with a firmly compacted, mid orange-grey, silty clay containing occasional charcoal and limestone flecks (116).

Cut 134 was sub-rectangular, had vertical sides and a flat base lined with limestone. It was filled by a firmly compacted, mid orange-grey silty clay containing occasional charcoal flecks (117). To the east of 134 lay a small oval cut (135) which had vertical sides and a flat base. It was filled by a firmly compacted, mid orange-grey, silty clay containing occasional charcoal flecks (118).

To the east of post hole 130 lay a single stake hole (136). This was sub-circular with concave sides and a flat bottom lined with limestone fragments (136). A sloping concentration of burnt clay was suggestive of *in situ* burning of the stake.

A further three stake holes (137-139) were present at the extreme eastern limit of the excavated area. Cut 137 was oval in plan with a round base and concave sides. The fill was moderately compacted, dark brown-grey clayey silt

Plate 3 Highwood House - ditch 140/146. Note the overlying colluvium (102) towards the centre of the feature.

containing charcoal flecks (120). In the centre of the stake hole was a V-shaped concentration of burnt clay which may indicate the *in situ* burning of the stake.

Cut 138 was sub-circular in plan with a V-shaped base. It was filled by a moderately compacted, mid brown-grey silty clay containing moderate charcoal flecks (121). Two lenses of burnt clay respected the outer limits of the cut and are again thought indicative of *in situ* burning. Cut 139 was oval and broadly U-shaped in section, filled by a firmly compacted, mid brownish grey, silty clay containing a concentration of charcoal fragments in the centre.

The limited number of stake holes identified within the excavated area allowed no firm inferences upon their spatial patterning. However, broadly speaking the western group of four stake holes were found to contain limestone packing whereas the eastern group showed some evidence of their contents having been burned *in situ*. Although no datable evidence was forthcoming, given their similar stratigraphic relationships to the datable features, they probably belong to the early Romano-British period.

Later Pit (Figs. 6 & 8)

Stratigraphically later than the features described above lay a single, circular, shallow pit which was seen to cut 103. The cut (131) had concave sides and a flat base, and was filled by a moderately compacted, dark brownish-grey clayey silt containing frequent charcoal flecks.

Palaeoenvironmental and Geoarchaeological Summary (Fig. 5, Plate 2)

Above the natural Mercia Mustone (context 105) lay a mid brown silty clay (104). Analysis suggested deposit 104 was representative of a stable, brown earth soil profile succeptible to waterlogging. An abrupt interface between 104 and the overlying deposit (103) suggested that an organic surface horizon formed in the upper reaches of 104 (Terra Nova 2005a).

Deposit 103 was a dark greyish brown silty clay with its darker hue being formed by the presence of highly humified organic matter and charcoal. Environmental and pollen analysis showed both mechanical damage and a dominance of species belonging to open ground (Tinsley 2005). This, along with the geoarchaeological interpretation, implied that deposit 103 was derived from a redeposited surface horizon deposited via an erosional, colluvial depositional regime. The deposit (103) contained 18 sherds of pottery dating from the early Romano-British period.

Overlying 103 lay a mid brown clayey silt (102) which was similar in composition to 104. The lack of organic matter and fine depositional stratigraphy suggested that the deposit accumulated rapidly via a colluvial depositional vector. This event is likely to have been caused by slope failure to the north and west of the site resulting in the erosion of material similar to deposit 104 over the darker, organic context (103). Deposit 102 contained evidence for sphagnum (bog moss), bracken, fern and knotgrass which implied areas of open, sequentially waterlogged and disturbed ground (Mann 2005a).

DISCUSSION

The limited exposure of archaeological and sedimentological features made their interpretation difficult although it was possible to draw some tentative conclusions.

Context 104 initially formed in the early Holocene (present post-glacial) period where it eventually formed a stable, sequentially waterlogged, brown earth soil. Although the calcareous nature of the parent bedrock was not suitable for pollen preservation, the single pine pollen found could indicate the presence of coniferous woodland during at least part of this period.

Into the upper soil horizon a series of archaeological features were cut, with the ceramic material indicating a Late Iron Age/Early Romano-British date for this event. The only inter-cutting features present on the site suggest that the ditch pre-dated a single post hole.

The ditch could represent either a boundary/enclosure ditch or a drainage feature. The faunal assemblage was analysed specifically to address this question, the results of which indicated that the remains were characteristic of those normally found located centrally on domestic sites (Higbee

Plate 4 Highwood House - pit 129 with charcoal primary fill 123.

2005a). Therefore, although the exact function of the ditch is still unclear, it was excavated in an area that was succeptible to waterlogging and contained a faunal assemblage which would normally be characteristic of those found towards the centre of a settlement.

The settlement interpretation is further supported by the presence of a series of post holes and stake holes, several of which contained stone packing and evidence for burning. These would seem to indicate the construction of shelters and/or structures at the site. The presence of cereal grains in pits 107 and 111, animal bones with cut marks, and a possible hearth also suggest that food processing and consumption occurred at the site.

The relatively small quantity of recovered cultural and environmental remains from Highwood House may imply that the focus of the settlement lay further to the south or west. Alternatively, the archaeological features may represent a small, unsophisticated settlement that was occupied either ephemerally on a seasonal basis or for a short period of time. If the latter, then the short period of occupation may be explained by the alteration of depositional regime shown between contexts 103 and 104. The analysis of 103 which sealed the archaeological features, suggested that the material was formed from a redeposited surface horizon (palaeosol) derived from up-slope. This colluvial deposit was dominated by taxa indicative of disturbed ground and it is a tantalising, albeit unproven, possibility that the erosion was caused by the anthropogenic clearance of the area. This erosional sequence continued with the deposition of deposit 102, which seems to have derived from a deposit similar to the underlying context 104.

The Pottery

by Stuart Whatley

Introduction

The pottery was examined using a hand lens to x20 magnification. The assemblage was then divided into a fabric type series based upon colour, firing technique, production (wheel thrown or handmade), glazed or unglazed and inclusions. The sherds were then quantified by weight and number within each fabric type. Reference was made to the pottery collection held by Bristol City Museum and by Bristol and Region Archaeological Services. Seventy-four sherds were retrieved weighing 321g. The assemblage was found to contain a mixture of Late Iron Age and Romano-British domestic coarsewares sealed by post-medieval pottery in the subsoils and topsoil.

Fabric Type Series

1. Butcombe Type II Ware

Blackish grey to yellowish fabric with leached out inclusions. Corky exterior with no trace of a smooth finish. Unglazed, handmade, lightweight domestic coarseware vessels with flattened and beaded rims. Abraded, fired in reduced conditions and probably made locally. Very similar to Type II fabric found at Westmead, Row of Ashes Farm, Butcombe (Fowler 1976). Late Iron Age/Early Romano-British.

2. Butcombe Type III Ware

Grey fabric with very white shell inclusions. Fairly hard fabric with corky exterior. Unglazed, handmade, domestic coarseware vessels with thin walls. Probably made locally. Fired in Reduced conditions. Very similar to Type III fabric found at Row of Ashes Farm. Late Iron Age/ Early Romano-British.

3. Butcombe Type XIII Ware

Grey fabric with dark speckled quartz and grit inclusions, some leaching. Very worn and abraded. Hard fabric. Unglazed, handmade, domestic coarseware vessels. Probably made locally. Fired in reduced conditions. Very similar to Type XIII fabric found at Row of Ashes Farm. Late Iron Age/Early Romano-British.

4. Butcombe Type XIIIV Ware

Grey fabric with dark speckled quartz and grit inclusions, some leaching. Very hard fabric. Unglazed, handmade, domestic coarseware vessels. Probably made locally. Fired in reduced conditions. Very similar to Type XIII fabric found at Westmead Row of Ashes Farm, Butcombe. Late Iron Age/Early Romano-British. Very similar to Butcombe XIII fabric, harder fabric represents a better firing technique.

5. Marshfield CM20 Type Ware

Dark brown to black exterior with black core with frequent limestone shell inclusions. Fairly hard with a smoothed exterior. Unglazed, handmade, domestic coarseware vessels, probably made locally. Fired in reduced conditions. Very similar to CM20 fabric found at Ironmongers Piece, Marshfield (Blockley 1985). Late Iron Age to Romano-British.

Fabric Type (FT) / Context Number	(103)	(107)	(111)	(113)	(140)	(142)	Total
FT 1	2		3				5
FT 2					26		26
FT 3		1		3			4
FT 4						1	1
FT 5					9		9
FT 6	5						5
FT 7	3	1	2				6
FT 8	1				1		2
FT 9	1						1
FT 10	1						1
FT 11	4						4
FT 12	1						1
TOTAL	18	2	5	3	36	1	65

Table 1 Iron Age and Romano-British fabric types (FT) present within each context.

6. Lodge Farm Type 26 Ware

Grey fabric with calcareous inclusions. Hard with slightly soapy exterior. Unglazed, handmade, domestic coarseware vessels, probably made locally. Fired in reduced conditions. Very similar to Type 26 fabric found at Lodge Farm (Fowler *et al* 1976, 51-86). Romano-British greyware.

7. Severn Valley Ware

Fine, orange fabric with mica, shell and grit inclusions. Hard and moderately smooth. Domestic and storage coarse earthenware vessels. Unglazed, wheel thrown vessels produced in the Severn Valley area. Some pieces contain lattice decoration. Mostly all sherds oxydised orange, but there are a few grey or black reduced sherds. Lodge Farm Type 6 ware. Manufactured throughout the Romano-British period, from 1st century AD.

8. Nazareth House Type IV/4

Black ware with calcareous inclusions mainly leached out. Fairly hard with soapy exterior. Unglazed, handmade, domestic coarseware vessels, probably made locally. The assemblage contains one open-form rim sherd with roulette decoration. Fired in reduced conditions. Very similar to Type IV/4 fabric found at Nazareth House, Sea Mills (Bennett 1985, 39). Romano-British.

9. Nazareth House Type IV/1

Black ware with fossil shell inclusions. Fairly hard with soapy exterior. Unglazed, handmade, domestic coarseware vessels, probably made locally. Fired in reduced conditions. Very similar to Type VI/I1fabric found at Nazareth House, Sea Mills. Romano-British.

10. Unidentified Greyware

Grey exterior with a lighter grey core with black mica and frequent grog inclusions. Relatively hard with a powdery surface. Unglazed pottery, possibly wheelmade and fired in reduced conditions. The one rim sherd was probably from an abraded open-form vessel. Probably locally made. Romano-British.

11. Miscellaneous Oxidised Shell-Tempered Ware 1

Orange, oxidised fabric with frequent shell and rare mudstone, red haematite and white mica inclusions. Relatively hard surface, but very abraded. Handmade, probably manufactured locally. Unglazed. Late Iron Age/Romano-British.

12. Miscellaneous Oxidised Shell-Tempered Ware 2

Brownish red oxidised ware with a reduced grey core containing frequent small shell and rare mudstone. Very hard with a rough surface. Unglazed, handmade vessel, probably locally made. Late Iron Age/Early Romano-British.

Discussion

A total of seventy four sherds weighing 321g were retrieved from the watching brief. The assemblage consisted of sixty-five sherds dating from the late Iron Age and early Romano-British periods weighing 249g, and nine post-medieval sherds weighing 72g. The Late Iron Age and Romano-British sherds came from various pits and post holes and a V-shaped ditch, which were sealed by colluvial subsoil and topsoils containing a few post-medieval sherds. The quality of the prehistoric and early Romano-British sherds was varied. Most were poorly fired and heavily abraded with only a few sherds in good condition. The acidic nature of the soils was also a major factor in their condition. The assemblage consisted mainly of bodysherds with only a few rims and no bases. The post-medieval sherds were common fabrics found throughout the period.

The assemblage featured a collection of shell-tempered and corky reduced native wares dating from the Late Iron Age and Early Romano-British transitional period alongside Romano-British greywares and Severn Valley wares. As in sites such as Lodge Farm and Butcombe, it appears that the Iron Age manufacturing tradition carried on into the Early Romano-British period at the same time as the production of the Romano-British wares such as greywares and Severn Valley wares. The Iron Age/Early Romano-British assemblage consisted of sherds from domestic vessels in the

form of jars and bowls which appear to have been manufactured locally. Excavations at Lodge Farm, Butcombe and Nazareth House, Sea Mills produced similar assemblages. No imports or high status wares were found. The ceramic assemblage confirms the archaeological evidence of the site as being a low status small farmstead in the Early Romano-British period (1st-2nd century AD).

The Faunal Remains

by Lorrain Higbee

Introduction

Animal bone was recovered from eight Romano-British contexts. A total of 159 fragments (or 1.2kg) of animal bone were recovered from the site during the normal course of hand-excavation. An additional small amount of bone (37 grams) was retrieved from sample residues. Only 48 fragments could be identified to species or higher taxonomic order (Table 2).

The following report outlines the results of analysis by feature or deposit-type. Detailed information relating to age, biometry and butchery is available in the project archive. The discussion attempts to determine if the bone assemblage can shed any light on the nature or proximity of settlement activity in the area.

Methods

Analysis was carried out following Davis (1992). Using this method a selective range of skeletal elements, termed parts of the skeleton always counted (or POSAC's) were recorded in full. Bones were only recorded if at least 50% of a given part was present and Dobney and Reilly's (1988) zonal recording method was incorporated for this purpose. Given the small size of the assemblage, identifiable non-countable bones were also recorded but in less detail and are shown in parenthesis in Table 2. Vertebrae and ribs (articular end only) were recorded to general size categories (e.g. cattle-sized).

The following methods were used to record epiphyseal fusion, tooth eruption/wear, biometry and preservation: Behrensmeyer (1978); Davis (1992); Grant (1982); O'Connor (1989); Payne (1973 and 1987); Payne and Bull (1988); Silver (1969) and Von den Driesch (1976). Individual measurements are presented in Tables 3 and 4.

Information on gnawing and butchery was recorded where present. Butchery was recorded by type (i.e. chop, knife cut, sawn), position and orientation (using standard anatomical terms and orientation). No pathological conditions were observed.

Results

The assemblage is well preserved, only 21% of recorded fragments show moderate signs of weathering and this takes the form of exfoliated or cracked cortical surfaces. Gnaw marks were recorded on two fragments, both from ditch 146.

Sheep/goat bones account for *c* 50% of all identified specimens. Cattle bones are also relatively common (27%) and less common species include pig, horse, field mouse (*Apodemus sylvaticus*) and an unidentifiable species of small bird from the passiformes order. Table 1 lists the species identified by feature or deposit type; identifiable bone fragments were recovered from five contexts.

Colluvium (103)

Identified fragments include a loose lower third premolar (tooth) from a 3-3? year old horse (Levine 1982) and a loose upper cattle premolar. This deposit sealed 15 cut features, four of which produced identifiable bone fragments.

Ditch 146 (140)

A relatively large quantity of bone was recovered from this feature; the total fragment count is 144 (or 1.1kg) of which approximately one third could be identified to species. Sheep and cattle bones are common and loose teeth outnumber all other skeletal elements. Post-cranial bones include joints of high meat value and butchery waste. Age data is limited but tooth wear suggests that sheep/goat aged 4-6 years (stage G after Payne 1973) are represented. Chop

Taxa	Feature/Deposit type colluvium (103)	enclosure ditch [146]	postholes [130/148]	retangular pit [128]	Total
cattle	(1)	5 (7)	-	-	5 (8)
sheep/goat	-	7 (3)	8 (5)	1	16 (8)
pig	-	2 (2)	-	-	2 (2)
horse	1	-	-	-	1
?field mouse	-	-	1	-	1
passerine	-	-	1	-	1
cattle-sized	-	(2)	-	-	(2)
sheep-sized	-	-	(1)	(1)	(2)
Total	**1 (1)**	**14 (14)**	**10 (6)**	**1 (1)**	**26 (22)**

Table 2 Number of specimens identified to species (or NISP) by feature/deposit type. Figures in parenthesis are non-countable bones after Davis (1992).

Bone id	BSMR	Context	Feature	feature/deposit type	Taxon	Element	p2 W	p2 L	m1 Wa	m2 Wa	m2 L	m3 Wa	m3 Wc	m3 L
18	2004/62	103	-	colluvium	eq	to	161	275	-	-	-	-	-	-
31	2004/62	140	146	enclosure ditch	oc	man	-	-	59	59	-	-	-	-
32	2004/62	140	146	enclosure ditch	oc	to	-	-	-	63	-	-	-	-
33	2004/62	140	146	enclosure ditch	oc	to	-	-	-	-	-	77	-	-
34	2004/62	140	146	enclosure ditch	oc	to	-	-	-	-	-	75	-	-
28	2004/62	140	146	enclosure ditch	s	man	-	-	-	-	181	145	146	339

Table 3 Measurements of lower cheek teeth, in tenths of mm. Where eq = horse; oc = sheep/goat; s = pig; to = loose tooth and man = mandible.

Bone id	BSMR	Context	Feature	feature/deposit type	Taxon	Element	Gli	Di	Bd	BT	HTC
36	2004/62	140	146	enclosure ditch	b	ast	568	302	368	-	-
37	2004/62	140	146	enclosure ditch	b	ast	577	300	360	-	-
42	2004/62	140	146	enclosure ditch	oc	hum	-	-	-	244	117
41	2004/62	140	146	enclosure ditch	oc	tib	-	-	217	-	-
35	2004/62	140	146	enclosure ditch	s	ast	403	213	237	-	-

Table 4 Measurements of various post-cranial elements, in tenths of mm. Where b = cattle; oc = sheep/goat; s = pig; ast = astragalus; hum = humerus and tib = tibia.

and cut marks were noted on four cattle bones. Chop marks were noted on the cranial border of a scapula and cut marks were noted on two astragali and a metatarsal. Marks on the astragali generally relate to detachment of the lower limb and the marks noted on the metatarsal probably result from skinning.

Identified pig bones include a mandible from an adult individual with a heavily worn second molar and an astragalus bearing cut marks across the distal articular surface. In addition two non-countable metapodia (foot bones) were also recorded, one of which is charred.

Post holes 130, (113) and 148, (142)

With the exception of three hand-recovered bones all of the identified material from these post holes was retrieved from sample residues (samples 4 and 12). Sheep bones and teeth are common, mostly loose incisor teeth and phalanges (small foot bones). All post-cranial epiphyses are in an unfused state suggesting that lambs are represented. Cut marks were noted across the planar surface of one navicular (ankle) bone.

The mandible from a field mouse and the distal half of a femur from a small species of bird (or passerine) were also identified from post hole 130. Both of these species are unlikely to have an anthropogenic origin, they may have nested in the structure represented by the post holes, or been attracted by stored foodstuffs.

Rectangular pit 128 (111)

A fragmented sheep/goat tooth and a non-countable sheep-sized vertebra are the only identified bones from this feature. Both of these fragments were retrieved from sample 3.

Discussion

The preservation state of the assemblage and the low incidence of gnaw marks suggests that bone waste was rapidly deposited out of the reach of scavengers, with little reworking or re-deposition of fragments. The fragments recovered from colluvial deposit 103 show no evidence of edge abrasion, which might be expected if these fragments had been transported down slope. Furthermore, the rather moderate signs of weathering seen on fragments from cut features is likely to have occurred in the burial environment rather than due to surface exposure and secondary deposition. Bone preservation therefore, suggest that fragments are in their primary place of deposition, but this does not help to determine the proximity or longevity of any settlement activity in the area since bone waste can be discarded close to areas of domestic activity or transported to the periphery of a settlement.

Spatial analysis of animal bone assemblages from Iron Age and Romano-British sites by Wilson (1996, 23) has shown that the frequency of the main domestic species is graded from central to peripheral areas of a site in order of increasing fragment size, and therefore the body size of an animal. In other words, larger bones (e.g. cattle and horse) tend to be more abundant at the periphery of occupation sites whilst small bones (e.g. sheep and pig) tend to be disposed of near the focus of domestic activity. With this in mind it would seem that the Highwood House assemblage, with its relatively high frequency of sheep/goat bone, is characteristic of centrally located domestic activity areas. However, there are numerous other factors that influence the relative frequency of domestic livestock species on any one site, for example the suitability of the local environment to support particular husbandry regimes (Grant 1984) and

dietary preferences (see King 1978, 1984 and 1999). Add to this the limited nature of the archaeological intervention and the small size of the assemblage, and it is difficult to draw conclusions one way or another.

Analysis of the animal bone assemblage has thrown up more questions than it is able to answer, and a larger assemblage would be required to address the research questions posed by the results of the watching brief. Small bone assemblages of Romano-British date have been recovered from West Street and Sea Mills (Higbee 2006a and 2006b), the evidence is quite limited however. The West Street assemblage is characteristic of rural settlement activity and species frequencies suggest native dietary preferences, whilst the Sea Mills assemblage is characteristic of Roman influences and is dominated by cattle bones.

PRIORY HOSPITAL SITE

Redevelopment to form an Adolescent Unit at Priory Hospital was preceded by a desk-based assessment in 2003 (BaRAS 2003), evaluation by trial trenching in 2004 (BaRAS 2004) and area excavation in October 2005 - the subject of this report. The complete site archive can be consulted by appointment at Bristol City Museum and Art Gallery quoting Accession Number 2004/69.

RESULTS

The evaluation revealed a substantial limestone structure (Building 1) and associated metalled surface towards the eastern edge of the car park due for redevelopment. The subsequent excavation covered an area measuring 490 sq. metres. No archaeological features or deposits pre-dating the medieval period were found.

Assessment reports on the palaeoenvironment, geoarchaeology, palynology, clay tobacco pipe, glass and ceramic building material can be found in the site archive and the post-excavation assessment report.

Site Phasing

Period 1:	Pre-medieval
Period 2:	Medieval
Period 3:	Post-medieval
Period 4:	18th century
Period 5:	19th century

Period 1

Formation of Colluvium

Following the results of the geoarchaeological analysis at Highwood House a colluvial deposit at the Priory Hospital site was examined. The abrupt interface between the colluvial deposit (1004) and later intrusive features indicated that the deposit had been truncated by past landscaping (Terra Nova 2005b). The colluvium is likely to be analogous to the lower, archaeologically sterile, reaches of context 104 within the Highwood House project (see above).

Period 2

(Fig. 9)

A single gully (1121) oriented in a south-west/north-easterly direction, contained abraded ceramic material dating to the medieval period. The gully measured 9.5m in length and was a maximum of 750mm wide and 100mm in depth. It is thought the feature was truncated by the 18th-century landscaping event identified in the geoarchaelogical study.

Period 3

(Figs. 9 - 11)

A number of pits and post holes were excavated that artefactually and/or stratigraphically pre-date the construction of Building 1. However, given the post-medieval nature of the ceramic assemblage, it could be argued that several of the cut features detailed in Period 5 belong to Period 3.

Slightly offset from the centre of the western limit of Building 1 lay a substanitial pit (1188) which was later cut by the masonry remains detailed in Period 4 (below). The pit was rectangular in plan and measured 3.0m by 1.9m with a maximum depth of 950mm. The primary fill of the pit (1236) was a compact, light-bluish grey silty clay containing occasional charcoal and wood fragments. The clay-rich nature of the sediment indicated it could have been deposited to seal the base of the pit. A series of organic-rich deposits were stratified above 1236. These were characterised by their humic nature and the presence of both large and fragmentary timber fragments. The larger timber fragments were identified as both Ash (*Fraxinus excelsior*) and pear/applewhitebeam/hawthorn (*Maloideae*), which suggested they were discarded in the pit rather than forming the *in situ* lining for the feature.

The organic-rich deposits were sealed by a redeposited colluvial-type sediment which relate to the construction of wall 1206 in Period 4. The abrupt interface between the redeposited and the organic-rich deposits indicate a possible alteration of the function of the pit. No datable artefactual material was recovered from the primary fills of the pit, although the artefacts abutting the base of wall 1206 suggest the pit pre-dated the construction of Building 1 in the 18th century.

West of Building 1 lay a truncated oval-shaped pit measuring 2.5m by 5m with a maximum depth of 1m. The construction of the pit was similar to that of pit 1188 in that its clay-rich primary fills (1103 and 1104) were overlain by an organic-rich deposit containing charcoal and wood fragments. In turn these were sealed beneath a redeposited colluvial type deposit (1036) that contained ceramic material dating to the 18th century.

In the north-west of the excavation area was a broadly square pit with rounded corners and a flat base. Its primary fill (1115) was of an organic nature and was sealed by a firmly compacted, mid orange-yellow clay containing

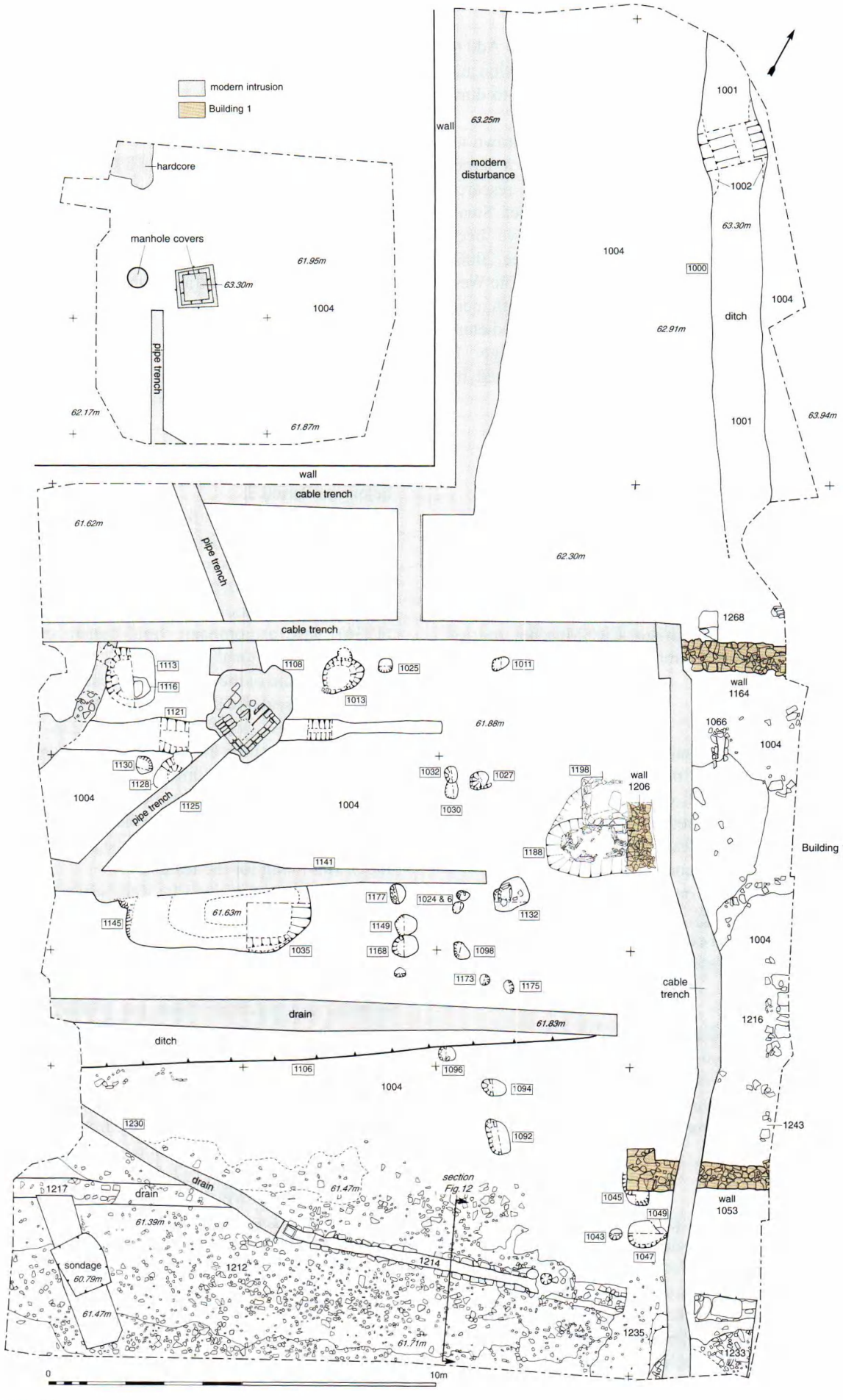


Fig. 9 Priory Hospital: plan of excavated areas and features showing modern intrusions.

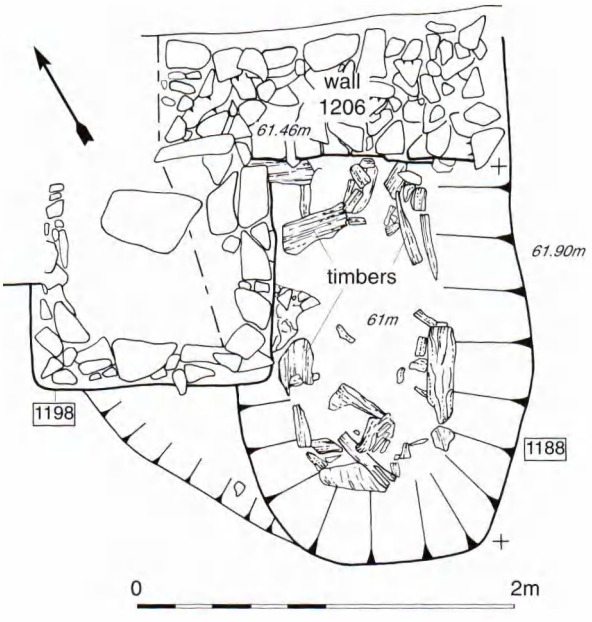


Fig. 10 Detail of pit 1188 and associated features, scale 1:40.

Plate 5 Priory Hospital - pit 1188 shown with the timber-rich primary fills (1236) and later intrusive wall 1206.

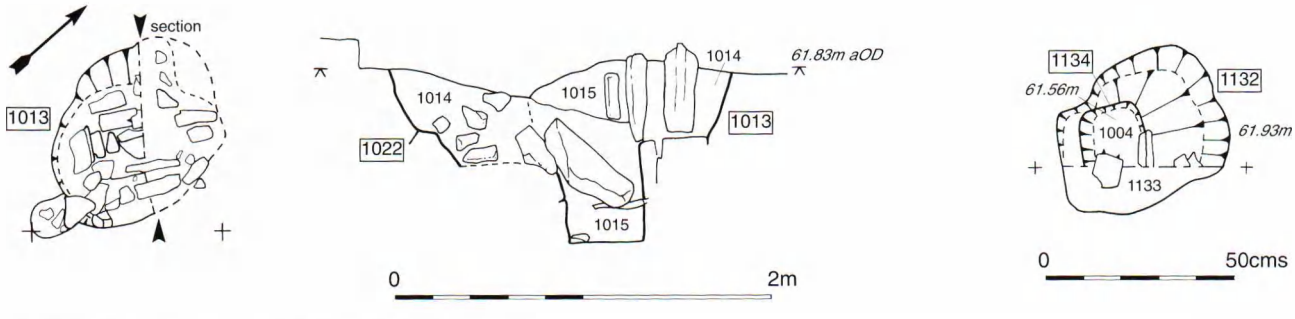


Fig. 11 Plan and section of pit 1013 and plan of 1132.

frequent sub-angular limestone fragments (1114). The feature contained no datable remains and it is tentatively assigned to period 3 given its similarity to pits 1188 and 1035 and the fact that it was stratigraphically cut by post hole 1116 (Period 5).

Several features that possibly pre-dated Building 1 were found close to its south-west corner. The earliest of these was a sub-circular, vertically-sided cut with a rounded base (1049). The nature of the cut probably indicates the feature was utilised as a small pit or a post hole. The fill of the feature was a friable, mid greyish/brown silty clay flecked with charcoal and mortar (1050). Fill 1050 was truncated by a sub-ovoid north-east/south-west oriented pit or large post hole (1047) whose friable, dark-greyish brown fill (1048) contained ceramic material dating to the early to mid 18th century, suggesting that it pre-dated Building 1 in Period 4.

North-west of 1047 and 1049 lay a further, sub-circular post hole (1045). The loosely compacted, dark grey clayey silt fill contained a ceramic assemblage which broadly dated to the post-medieval period. However, the fill itself was cut by the southern wall of Building 1.

Period 4
(Figs. 8, 9, 11)

Both the cartographic and ceramic evidence indicate that the substantial masonry walls (1053 and 1164) at the excavation's south-eastern corner dated from the 18th century and almost certainly relate to the building (Building 1) depicted on the estate map of 1767. The northerly and southerly walls were constructed of roughly hewn limestone blocks bonded with yellow, sandy, lime mortar, their construction trenches having been cut directly into colluvial layer 1004. There was no evidence for a connecting wall to the west which suggests that either this side of the building was open or that doors were utilised. Internally, traces of cobbling (1216 & 1243) and Pennant sandstone flagstones (1268) are all that survived of a floor. It is likely that the majority of internal features were truncated during the demolition of the building in the 1970s. On the exterior of Building 1, a short length of limestone wall (1206) was built over the initial organic filling of pit 1188 of Period 3 (Plate 5), and the pit was backfilled with re-deposited colluvium containing 18th-century ceramic material (1190, 1191 and

Plate 6 Priory Hospital - pit 1035 viewed from the south.

1248).

Two semi-circular depressions along the length of the wall may have held timber base plates for upright posts that may have helped support the roof of Building 1.

Extending across the south side of the excavation was a cobbled trackway (Fig. 12, Plate 7). The initial construction of the trackway was characterised by the excavation of a east-west oriented V-shaped ditch (1254) edged with limestone blocks along its southern edge. The blocks retained a mid orange-brown silty clay that contained frequent limestone fragments (1249 and 1255). The initial surface of the track (1237) was worn, rounded quartzite cobbles and crushed lias limestone bonded by a mid grey-brown silty clay.

Surface 1237 itself was overlain by subsequent track bedding surfaces (contexts 1183, 1208 and 1212) containing 18th-century ceramic material (see Period 5). The estate map of 1767 depicts an opening between the Building and retaining wall to the south. This would seem to indicate that the trackway led to the 'Old Orchard' located immediately east of Building 1. Although the pottery from the trackway surfaces indicated a broad post-medieval date, it is thought likely that the trackway was constructed in the 18th century.

About 5m west of Building 1 and cut by a modern drain lay a south-west to north-east oriented ditch (1106) filled with a concentration of limestone debris (1107) that contained two sherds of abraded, residual medieval pottery. The feature broadly corresponds with an east/west oriented boundary hedge depicted in the 1767 estate map, shown to extend from the west side of Building 1 to a range of buildings to the north west. The boundary is shown on the 1839 Stapleton Tithe map but had apparently gone by the time of the 1881 Ordnance Survey. A further ditch (1000) was also identified north of Building 1, running in a north-west/south-east direction, and probably defined the boundary to the 'Old Orchard' on the east. This was also shown on the 1767 estate plan and was still there in 1881, but filled in by the end of the century.

Period 5
(Figs. 8 -11)

As discussed in Period 4 redeposited material was dumped against wall 1206 in the 18th century. These deposits were subsequently cut by a square pit (1198) lined with roughly hewn limestone blocks on its south, north and west sides.

The trackway continued in use, with evidence for repairs, construction of a stone lined drain (1214) and, in the south-east corner of the site, evidence of a cobble surface, until the late 19th or early 20th century.

West of the north wall of Building 1 lay a linear alignment of four post-holes (1011, 1025, 1013, 1116), the two westerly ones (1013 and 1116) with packing stones. The post holes probably relate to the fence line shown on the 1839 Stapleton Tithe map (Fig. 3).

This period of occupation included three more post holes and a number of other negative features.

The Pottery

by Reg Jackson

The ceramic material recovered from the excavated contexts was quantified by sherd count and weight. The fabrics were visually examined using a hand lens (x10) and identified by comparison with the Bristol Pottery Types (BPT) series held in the Bristol City Museum and Art Gallery.

The assemblage consisted of 321 sherds weighing 3.214kg recovered from 36 excavated contexts.

Apart from one possible Romano-British sherd and a few abraded medieval sherds, the pottery dates to the 18th and 19th centuries.

Romano-British

One sherd of possible Romano-British blackware came from context 1101. It was small and very abraded making identification difficult.

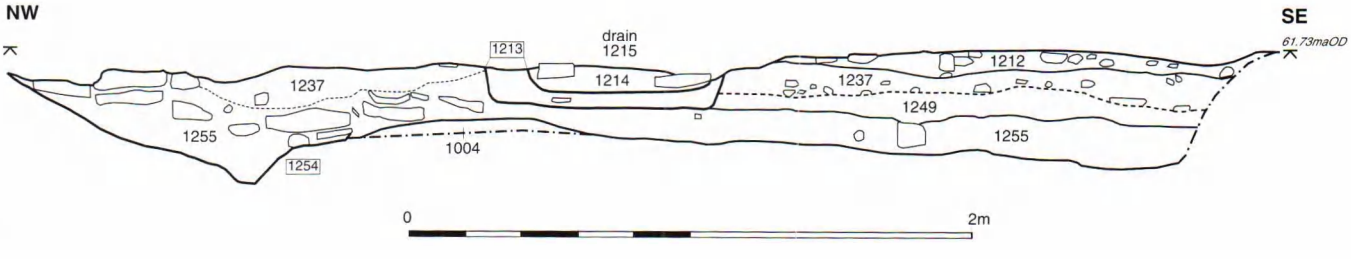


Fig. 12 Cross-section through trackway.

Plate 7 Priory Hospital - latest phase of trackway (19th/20th century), viewed from the south.

Medieval

The site produced five sherds of medieval or possible medieval pottery, all the sherds being very small and abraded suggesting they came from cultivated soils. There was one sherd each of Ham Green glazed ware (BPT26), Ham Green unglazed redware (BPT32), Bristol/Redcliffe ware (BPT72) and, possibly, Surrey whiteware/Tudor Green ware (BPT182). One medieval sherd could not be identified to fabric type. The pottery came from contexts 1010, 1111, 1122 and 1183, that in contexts 1010 and 1183 being clearly residual in post-medieval deposits.

Post-Medieval/Early Modern

All the post-medieval/early modern fabric types appear to date to the 18th and 19th centuries, although some continued to be produced into the 20th century.

The assemblage was dominated by two fabric types: cream ware (BPT326; 89 sherds; 28% of the assemblage) and locally produced redware (BPT201; 87 sherds; 27% of the assemblage). The cream ware consisted mainly of plates and dishes but included the spout of a decorated teapot and fragments of other table wares. The redwares were mainly flowerpots (40 sherds) together with pancheons, bowls and other storage vessels.

Also present in relatively large quantities were Staffordshire white salt-glazed stoneware consisting of plates with scalloped and decorated rims (BPT179; 25 sherds), late white china (BPT202; 24 sherds), English brown salt-glazed stoneware (BPT277; 22 sherds), North Devon gravel-tempered ware (BPT112; 16 sherds), Bristol/Staffordshire yellow slipware plates and cups (BPT100; 15 sherds) and transfer-printed earthenware (BPT278; 16 sherds).

Less common were English tin-glazed ware (BPT99; 5 sherds); English porcelain (BPT203; 5 sherds), Bristol/Staffordshire mottled glazed ware (BPT211; 2 sherds), Nottingham stoneware (BPT211; 2 sherds), South Somerset (Donyatt) ware (BPT96; 1 sherd) and black basalt ware (BPT311; 1 sherd).

There were only two sherds of imported pottery: a fragment of a moulded coat of arms from a Westerwald tankard (BPT95) and part of the base of a Chinese porcelain saucer or shallow dish.

The high proportion of cream ware and Staffordshire white salt-glazed stoneware and the presence of English and Chinese porcelain in the assemblage suggests that this site was of moderate to high status during the occupation of Priory House in the 18th century.

The Small Finds

by Stuart Whatley

Seventy-four small finds were recorded from the excavation at Priory Hospital but were not worthy of reporting here. However, a full assessment report can be consulted in the site archive.

DISCUSSION

A study of the geoarchaeology at Priory Hospital indicated that the upper colluvial layer which had sealed Romano-British remains at Highwood House, had been truncated by landscaping associated with the development of the site in the 18th century. This possibly explains the absence of Romano-British features and why the earliest occupation phase consisted of a single, truncated medieval gully.

Initial occupation of the site in the 18th century was represented by three pits with organic material, and several pits and post holes in the south-east of the excavation area. Several of the more broadly dated post-medieval features assigned to Period 5 may also date to this period.

Some understanding of the post-medieval development of the site was gleaned from cartographic sources, in particular the Stapleton estate map of 1767, tithe map of 1839 and the first edition Ordnance Survey of 1881. Building 1 is almost certainly the rectangular structure depicted on those maps, lying adjacent to the 'Old Orchard' on the east and the main complex of buildings of Heath House on the west. The building may have been a barn or other agricultural building as it was certainly either open-sided or had large wooden doors on its west side.

CONCLUSION

The fieldwork has shown that the terrace at the Highwood House site lying at approximately 66m aOD was occupied from at least the early Romano-British period. Given the limited exposure of archaeological features it is thought the focus of the settlement lay upslope to the north and the west of the excavated features, an interpretation verified by the archaeological features being sealed by an organic and culturally rich sediment (103) rapidly deposited from the upper slopes of Purdown.

At the Priory Hospital site the upper reaches of the colluvium appears to have been heavily truncated in the 18th century through the construction of Heath House and associated landscaping activities.

The results of this and previous fieldwork in the area has shown that Purdown was occupied, at least intermittently, in the Prehistoric, Romano-British, medieval and post-medieval periods. The Romano-British occupation may have been associated with the clearing of the upper slopes of Purdown for presumably agricultural purposes. Given this, and the short period of occupation at the site of Highwood House, it is thought likely that a larger, Romano-British settlement may lay in the vicinity of Priory Hospital.

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Bristol and Region Archaeological Services owe a debt of gratitude to numerous organisations and individuals for the successful completion of this project: Priory Healthcare Group commissioned and funded the work and Deon Rousow and his on-site construction staff were exceptionally understanding in light of the unexpected discovery of Romano-British features. Thank must also go to Bruce Williams (project management) Ann Linge (illustrations), Historic Environment and Archaeology Service, Worcestershire County Council (environmental assessments), Lorrain Higbee (faunal remains), Reg Jackson (clay pipe, ceramic building material, glass and post-medieval ceramic assessments), Terra Nova Ltd (geoarchaeology), Stuart Whatley (small finds and Romano-British ceramic assessments), Heather Tinsley (pollen analysis) and Carol Blackmore (administration).

The report also benefited from a rigorous edit from both Bruce Williams and Reg Jackson and their efforts are greatly appreciated.

STAPLETON PRISON REVISITED

by
Andrew Townsend

INTRODUCTION

This research note briefly discusses the historical context of an early-19th-century plan of Stapleton Prison (Fig. 1). The plan comprises one in a portfolio of five held at the National Archives at Kew (MPD1/94), all dated to 1815. The others are for establishments (hospitals and prisons) at Forton, Greenlaw, Paignton and Yarmouth. It appears there were originally six plans in the set, but that for Norman Cross is now missing.

The Stapleton plan is entitled *'General Plan of the Depôt for Prisoners of War at Stapleton'* and annotated 'Barrack Office March 31st 1815'. The plan was evidently produced following the Barrack Department's requisition of the prison for use by them as an ordnance store.

For the purposes of this research note, the plan has been illustrated by Ann Linge (Fig. 2).

HISTORICAL CONTEXT

The history of Stapleton Prison - Manor Park Hospital, latterly Blackberry Hill Hospital - has been covered in some detail by Vinter (1956; 1960) and Nelson (1982).

The prison was in existence by 1779, built in response to the problem created by the arrival of large numbers of naval prisoners-of-war at Bristol. In essence, problems with the existing prisoner-detention facilities at Knowle and Redcliffe Back led to the requirement for a new prison to serve the Bristol area. After some deliberation, available land at Stapleton was eventually chosen for the 'New Prison' (otherwise the 'French Prison').

Prior to the construction of the prison, it appears there were a number of buildings already on the site. Vinter (1956, 135) notes the presence of part of a dwelling house, two stables, a barn, dairy, waggon-house and granary. A mid-18th-century survey-plan confirms this, depicting a substantial dwelling on the site annotated 'Holmses House' (Fig. 3), although the building is listed in accompanying survey as 'Henburys House & Orchard'. It is not certain how much, if any, of 'Holmses House' was retained when the New Prison was constructed.

A late-18th-century survey-plan (Bristol Record Office AC/PL59) indicates the 'New Prison' but no details of buildings are depicted. According to Vinter (1956, 135) the new facility was constructed in stone at a cost of over £3000. The main prison building was of two-storey construction, measuring 256 feet (approx. 78m) in length and 45 feet (approx. 14 m) in width. In addition to the main prison-block, there was also a hospital. Foreign prisoners-of-war started arriving at the New Prison in about 1780.

Following the cessation of hostilities the prison was purchased by the Admiralty in 1786 and put to use as a school by the Marine Society. An ink-wash drawing of the Bristol Marine School by Samuel Hieronymus Grimm dated 1788 depicts the establishment, probably as viewed from the south-west (Fig. 4). In the absence of any 18th-century plans of the prison itself, it is problematic to fully reconcile the buildings and features depicted by Grimm with those on the 1815 plan. The long building on the left of the picture, however, appears similar to the hospital building depicted on the 1815 plan (Fig. 2, No. 15).

With a further outbreak of war in 1793 the prison was, once again, put to use for the detention of foreign prisoners-

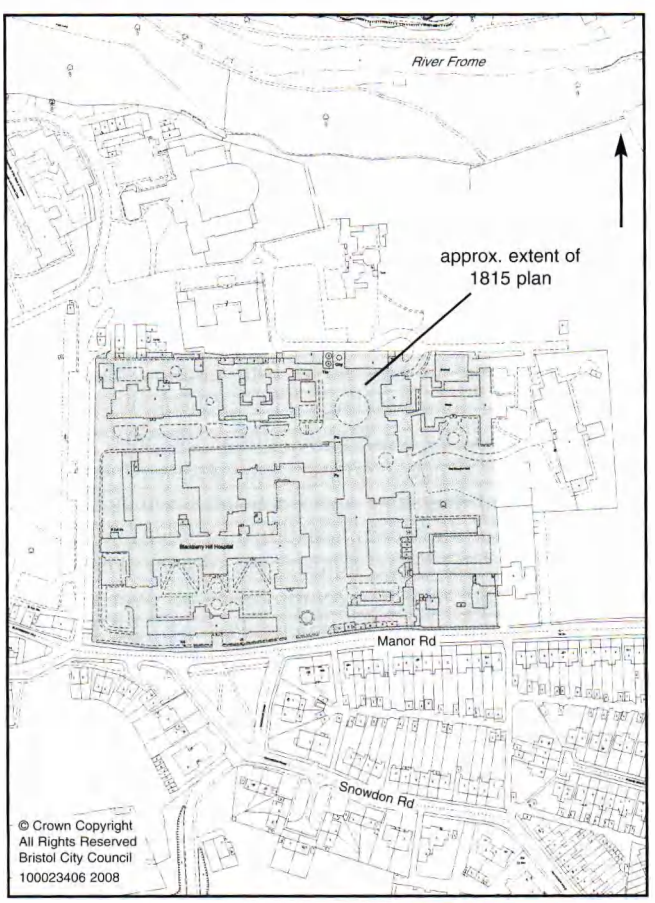

Fig.1 Modern Ordnance Survey plan incorporating the site of the Stapleton Prison (presently Blackberry Hill Hospital) with approximate extent of 1815 plan indicated.

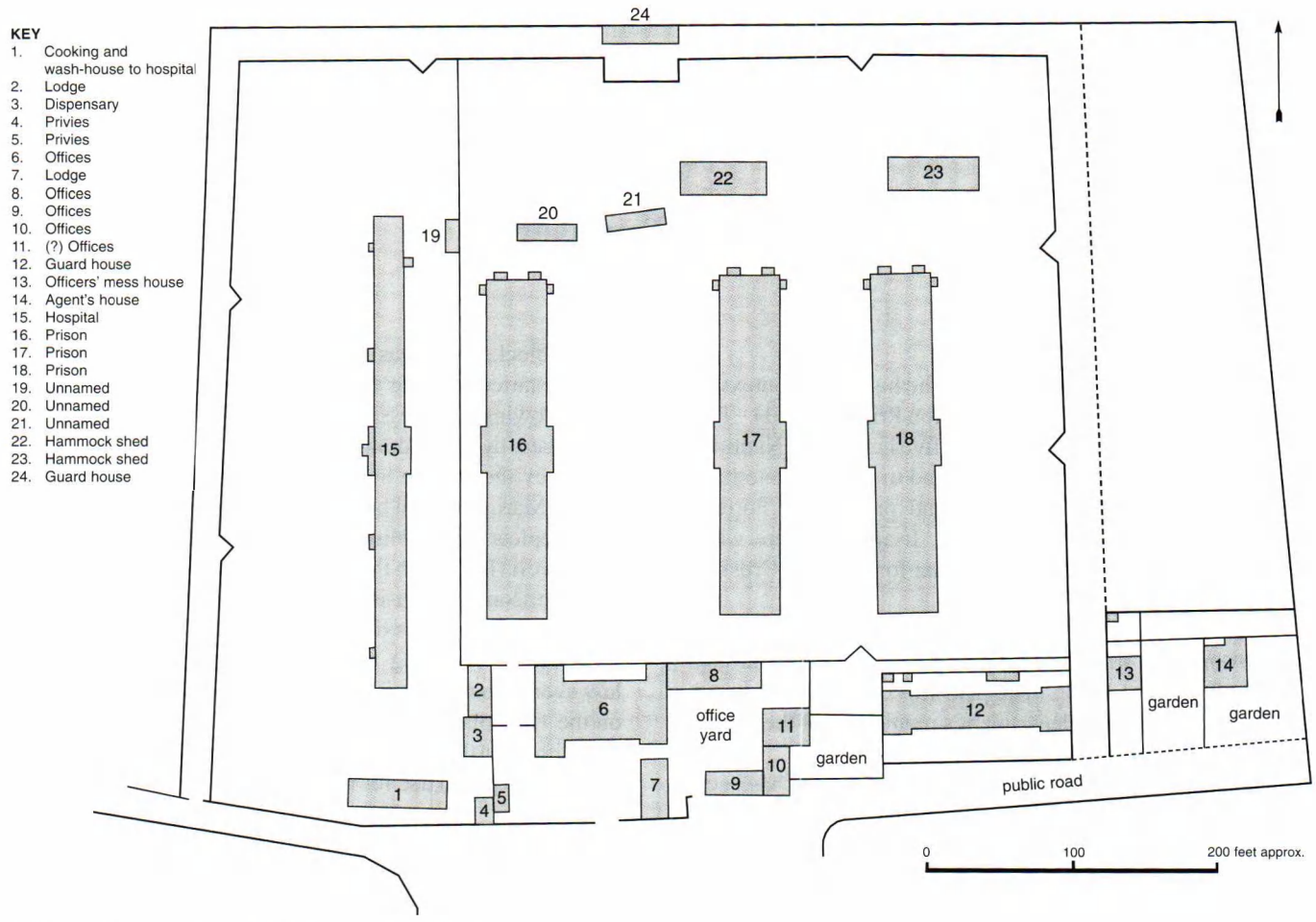

Fig.2 Plan of the 'Depôt for Prisoners of War at Stapleton' after an original held at the National Archives, Kew (drawn by Ann Linge).

of-war. According to Vinter (1956, 143), plans were made for the construction of a new building to house a further one-thousand prisoners, to be completed by 1800.

Overcrowding appears to have been an ongoing problem and, in 1804, two additional buildings were constructed for the housing of some three-thousand prisoners. Vinter (1956, 144) states that in the early 19th century the prison comprised four long buildings with kitchens, hospital and dispensary, shed for baking verminous clothing, washing house, military officers' quarters, guardhouse, mess room, stables, powder-magazine and storerooms. Other buildings included that for the accommodation of women and children and houses for the agent, steward and surgeon. Despite the additions made to the accommodation, overcrowding persisted. An engraving of Stapleton Prison by J.P. Malcolm published in the Gentleman's Magazine in 1814 (Fig. 5) appears to be viewed from the north-east and depicts two of the long buildings and what appears to be the inner prison-wall.

The *Treaty of Paris* (1814) resulted in the release of prisoner-of-war, including some two thousand from Stapleton alone. The prison closed but was subsequently put to use as an ordnance store by the Barrack Department. This is concordant with the date of the present Barrack Department's plan (Fig. 2). The majority of buildings depicted are annotated with their specific function. Note that

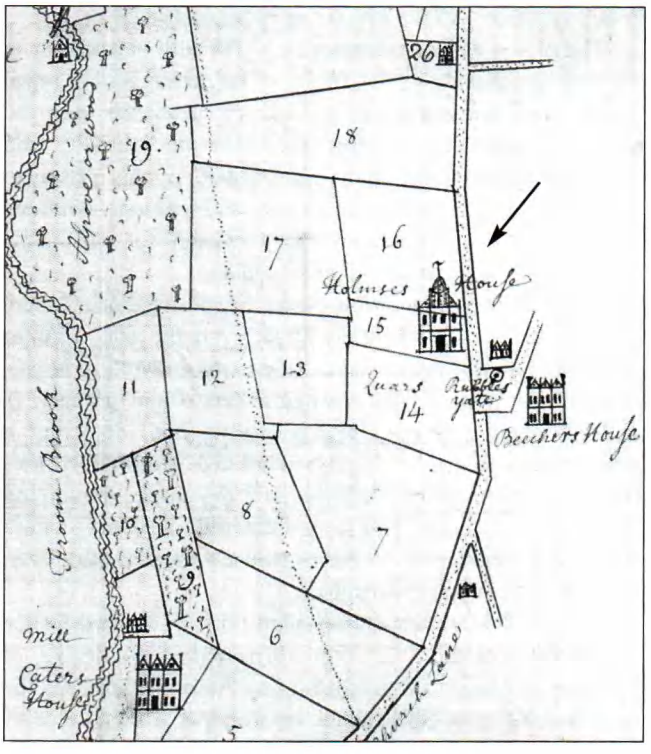

Fig.3 Survey plan (c mid-18th century) depicting 'Holmses House' (Bristol Record Office).

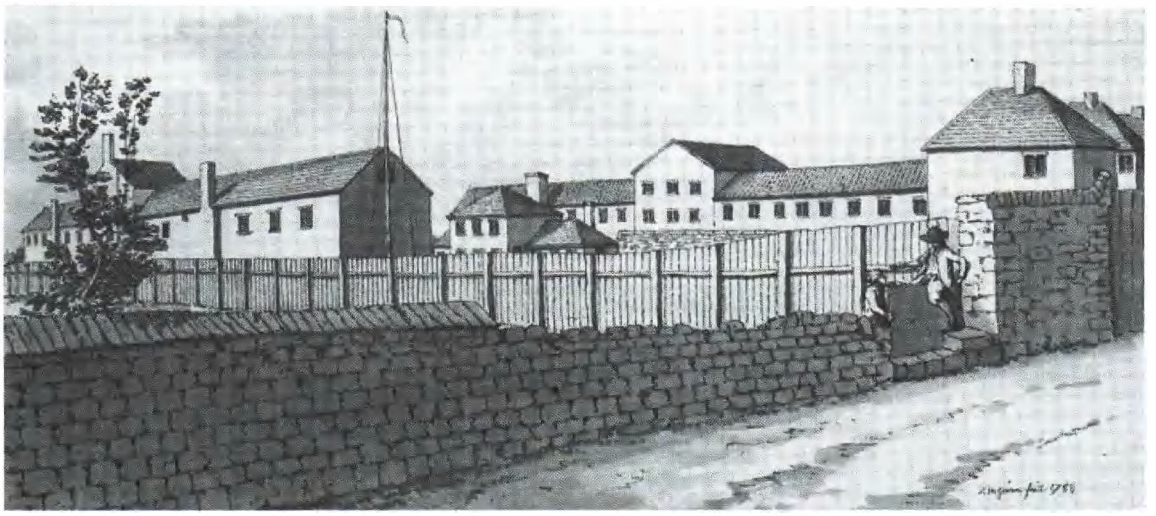

Fig.4 Ink-wash view of the School of the Bristol Marine Society by Samuel Hieronymus Grimm, dated 1788 (reproduced with permission of the British Library).

buildings 22 to 24 inclusive are indicated as of timber construction.

Following a severe outbreak of cholera in Bristol in 1832 the prison underwent a further change-in-use. Saint Peter's Hospital in the City Centre was suffering problems with overcrowding and to help cope with this, part of the Stapleton premises were rented for use as a workhouse by the Incorporation of the Poor. The four main buildings at Stapleton were subsequently purchased in 1837. It is interesting to note that an extant pre-1860s accommodation block (Fig. 2, No. 18) incorporates an architectural stone inscribed '1838' on its west elevation and thus appears to be a later addition to the original building.

The 1839 Stapleton tithe-commutation map (Bristol Record Office EP/A/32/35) depicts the premises as the 'late French Prison' although only shows three long buildings on the site.

Following large-scale demolition works, new buildings were erected on the site between 1861 and 1865. According to Vinter (1956, 168) only two of the earlier workhouse buildings remained. A plan of the 'Workhouse and Other Premises' dating to 1898 (Bristol Record Office 07784[59]) depicts the extensive complex of buildings that were constructed, while incorporating a number of the pre-existing buildings. It is difficult, however, to gauge from the plan all of what is 1860s work and what might be earlier.

In 1918 the premises became the Stapleton Institution for the workshop and maintenance training of certified mental patients. The Regional Hospital Board took control in 1948 whereby the premises became the Stapleton Hospital for the care of elderly patients. Finally, in 1956, the establishment took on the name of Manor Park Hospital, latterly Blackberry Hill Hospital.

DISCUSSION

The episodic rebuilding which has taken place on the site since the New Prison was established in the 1770s has resulted in the extant multi-phase complex of buildings. Vinter's (1956, 1960) account would provisionally suggest six main phases for the present hospital premises (Table 1), although there are also a number of sub-phases that warrant acknowledgement.

'Holmses House' (Phase 1) was possibly removed, or partly removed, in order to make way for the New Prison (vestiges of the building possibly survive). The extent-of-survival of buildings dating to phases 2 to 4 in particular remains, however, an issue of some contention. The 1815 plan discussed here appears to belong to the period between phases 4 and 5.

PHASE	DETAILS
Phase 1	'Holmses House', indicated on a mid-18th-century survey map (Vinter 1956, 135)
Phase 2	Construction of the 'New Prison' (The French Prison) in the 1770s (Vinter 1956, 135)
Phase 3	Construction of new prisoner-block, to be completed by 1800 (Vinter 1956, 143)
Phase 4	Construction of two prisoner-blocks in 1804 (Vinter 1956, 144)
Phase 5	Large-scale redevelopment 1861-65 (Vinter 1956, 168)
Phase 6	20th-century developments, particularly post-1948 (NHS) (Vinter 1956, 168; 1960, 34)

Table 1 Suggested provisional phasing of Blackberry Hill (Manor Park) Hospital site.

CONCLUDING REMARKS

The 1815 plan discussed in this research note provides a useful insight in terms of the layout and function of the Stapleton Prison buildings in the early 19th century, albeit when it was taken over for use as an ordnance store by the Barrack Department.

A degree of caution should, however, be exercised when taking the information depicted on the plan at face-value. As with any building plan of some age, there is always the risk that the detail depicted is inaccurate, or was for

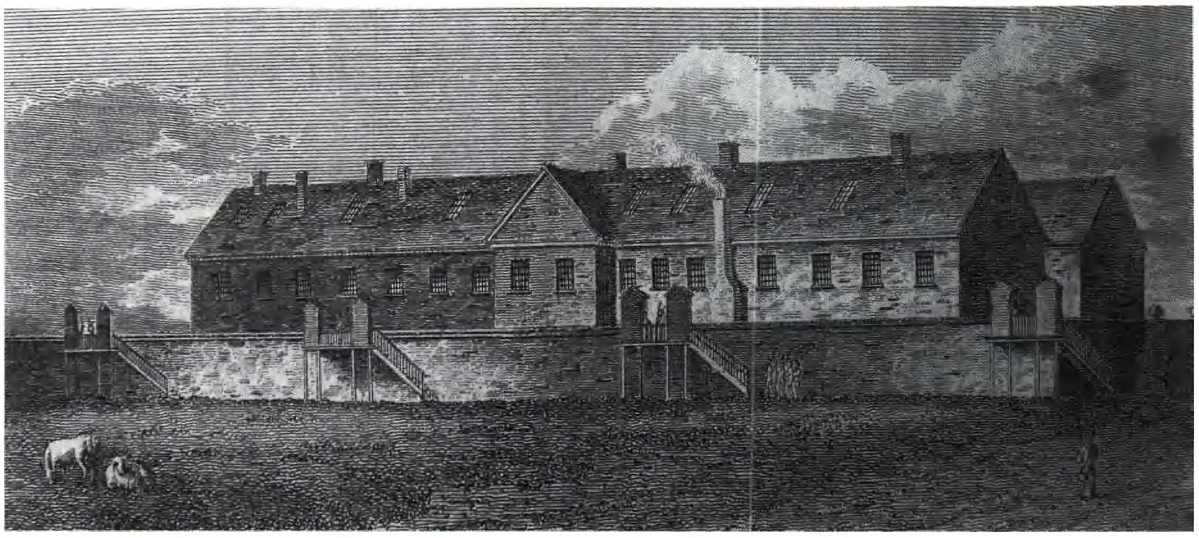

Fig.5 Engraving of 'The French Prison, Stapleton' by J.P. Malcolm, published in 'The Gentleman's Magazine', May 1814 (Bristol Central Library).

proposals that never came to fruition.

Further work is required in order to address some of the many unanswered questions surrounding this historical landmark of Bristol.

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Maps

Mid-18 cent. Survey of Stapleton. (Bristol Record Office AC/WH/5/86a-e).

Late 18th cent. Survey of Stapleton and Kingswood. (Bristol Record Office AC/PL 59).

1839 *Map of the Parish of Stapleton Gloucestershire.* Tithe-commutation map (with apportionment) by Daniel Horwood. With apportionment. (Bristol Record Office EP/A/32/35).

Plans

1815 *General Plan of the Depôt for Prisoners of War at Stapleton* (National Archives MPD 1/94/5).

1898 *Plan Shewing Situation of Stapleton Workhouse & Land Adjoining and Attached Thereto* (Bristol Record Office 07784 [59]).

1898 *Ground Plan of Workhouse and Other Premises* (Bristol Record Office 07784 [59]).

Artistic Images

1788 View of the School of the Bristol Marine Society, by Samuel Hieronymus Grimm. (British Library Additional MS 15540, f.160).

1814 *The French Prison, Stapleton* by J.P. Malcolm published in *The Gentleman's Magazine,* May 1814). (Bristol Central Library holdings).

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The writer wishes to thank the following for their help and advice given during the research for this note: Staff of the Bristol Record Office; Staff of the Bristol Central Library; Staff of the National Archives (Kew); Sandra Powlette, Permissions Manager for the British Library; Bob Jones, City Archaeologist. John Bryant kindly read an earlier draft of this paper.

The picture of the School of the Bristol Marine Society by Samuel Hieronymus Grimm was reproduced courtesy of the British Library.

PORTABLE ANTIQUITIES ROUNDUP

by
Kurt Adams

INTRODUCTION

The year 2007 saw the tenth anniversary of the Portable Antiquities Scheme (PAS). Since its creation in 1997 more than 300,000 artefacts have been recorded by a team of 37 Finds Liaison Officers (FLOs) around the country. The post covering the Avon region was not created until 2004, but since the appointment of the Gloucestershire and Avon FLO, more than 6,000 artefacts have been recorded from this region alone. Below are examples of some of the artefacts recorded this year, also viewable on the Portable Antiquities online database www.finds.org.

As well as recording artefacts found by the public, the FLO also deals with artefacts that would be considered treasure under the 1996 Treasure Act; this replaced the law of Treasure Trove. By law an artefact is the property of the landowner and it is up to his or her discretion as to how they are disposed of, with the exception of the artefacts protected by the 1996 Treasure Act.

Under this act the artefacts which are protected are:-

- Objects that are at least 300 years old and contain more than 10% gold or silver, but, if prehistoric it is treasure providing it contains any gold or silver.
- Two or more prehistoric base metal objects from the same findspot.
- Object of any material from the same findspot as a treasure find.
- Two or more coins made of more tham 10% gold or silver and are over 300 years old that came from the same findspot.
- Ten or more base metal coins that are over 300 years old and came from the same findspot.
- Any artefact that would have originally been classed as Treasure Trove.

Since the advent of the Treasure Act, the level of recorded treasure artefacts has risen from 24 in 1996 to 595 in 2005. This growth is directly related to the success of the Portable Antiquities Scheme and demonstrates how FLOs have had an impact on the recording process of archaeological objects.

RECENT FINDS FROM AVON

During 2007 there was an unprecedented increase in the number of posy rings recorded as treasure in the Gloucestershire and, particularly, the Avon region. In the last Treasure Annual Report for 2004, ten posy rings were declared treasure over the whole of the country, while during the first half of 2007, eight posy rings were declared treasure within the Gloucestershire and Avon areas alone. A posy ring is a finger ring with an inscription on either the inside or outside surface. The inscriptions tend to be either religiously significant or a message from a lover, perhaps to be given as a wedding ring.

A remarkable find in the South Gloucestershire area was a silver-gilt Iconographic finger-ring. There are a number of finger rings from the 15th century that depict scenes from the bible. The South Gloucestershire example depicts the

Fig.1 Iconographic finger ring, 15th century. GLO-EF23B6.

Trinity, with Christ suspended from a Y-shaped Cross; on the right, St John the Baptist, and on the left, two female Saints, possibly the Virgin Mary and Mary Magdalene. All of the decoration has been engraved by hand. The finder, Mr Peter Twinn, has waved his treasure reward for finding this finger ring and has kindly agreed to donate it to Bristol City Museum and Art Gallery.

Cast copper alloy annular brooch, Database number: GLO-C03D14

Length 22mm, width 18mm, thickness 4mm, weight 2.6g.

There are four collets spaced evenly around the frame. Each is filled with a white paste that would have held either stone, glass or enamel decoration. Suspended from the brooch is a bird-shaped pendant. The bird is displayed facing the front with wings outstretched, and is decorated with a double row of dots that run down the centre of the tail, body and wings, representing feathers. On the underside of the head is a penannular loop, this loop is not

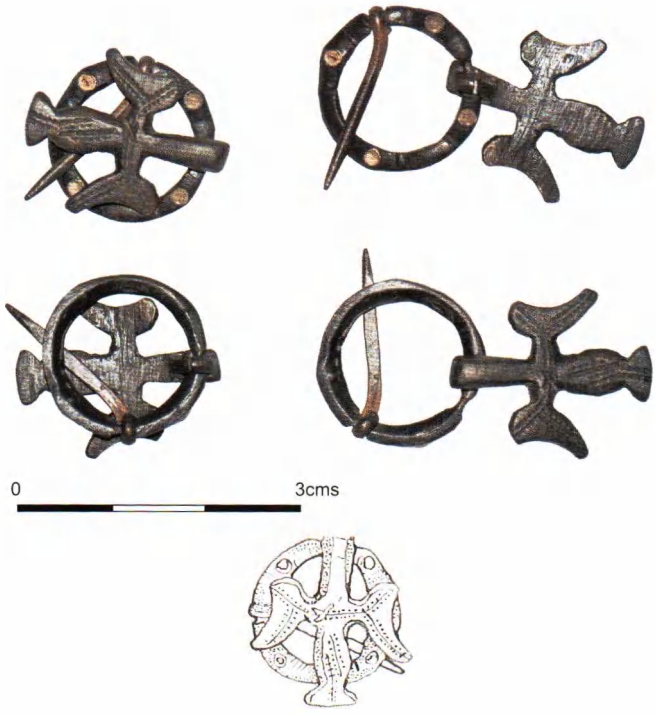

Fig.2 Annular brooch with bird pendant.

dissimilar to a beak and attaches the pendant to the frame of the brooch.

The annular brooch itself is unremarkable with similar forms being found over much of the country. However, the attachment of a decorative pendant appears to be unique. This artefact would date to the 14th century.
Finder: David Gad
Findspot: North Somerset

Neolithic handaxe, Database number: GLO-71A7F4
Fashioned from Devonian Sandstone, length 257mm, width 74mm, thickness 56mm.

The implement has been extensively chipped and ground into a long elongated sub-oval shape in plan, and oval in cross section. The blade edge is rounded and is the only section to have been polished. The edges are slightly convex and at its widest one third along from the blade, after which it tapers for the rest of its length to the butt, which is a rounded point.

The axe dates from between circa 3500 BC to 2100 BC.
Finder: David Hutton
Findspot: Wraxall and Failand

Fig.3 Neolithic handaxe.

Cast copper-alloy Roman buckle, Database Number: GLO-C0FB01
Length 38mm, width 42mm, thickness 7mm, weight 15.31g.

Augustan to Hadrianic date, circa 27 BC to 138AD, very similar to examples from Hod Hill, and Velsen (Bishop and Coulston 1993, 96-97). The buckle has a D-shaped penannular frame, the ends of the arms are expanded into rectangular plates, these have a double grooved line at the base and a circular loop terminal - a pin would pass through these loops attaching the pin in the centre and allowing the buckle to be hinged onto the plate. There is a knop surrounded by two concentric rings on each arm of the frame.

The buckle is heavily corroded resulting in the loss of much of the original surface and therefore much of the detail.
Finder: Mark Sayer
Findspot: North Somerset

Fig.4 Roman buckle.

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REVIEW OF ARCHAEOLOGY 2007

Edited by Bruce Williams

Abbreviations

AAU	-	Avon Archaeological Unit
BaRAS	-	Bristol & Region Archaeological Services
BRSMG	-	Bristol City Museum and Art Gallery
BSMR	-	Bristol Sites & Monuments Record
BUAD	-	Bristol Urban Archaeological Database
CA	-	Cotswold Archaeology
NSMS	-	North Somerset Museums Service
OA	-	Oxford Archaeolgoy

The review of archaeology is arranged alphabetically by parish and covers the four unitary authorities of Bath and North-East Somerset, Bristol, North Somerset and South Gloucestershire, formerly Avon County.

This may not be an exhaustive list however, as not all contractors, whether professional or amateur, inform the editor of their work.

BATH & NORTH-EAST SOMERSET

BATH

King Edwards School, Bathwick, ST 7620 6536. A watching brief was undertaken on behalf of King Edwards School in an area formerly occupied by a group of buildings located adjacent to the main teaching block.

Modern made ground overlay natural undisturbed ground and no significant archaeological deposits or finds were located.

Richard Payne, AAU

CHEW MAGNA

Tunbridge Mill, ST 5763 6299. A desk-based assessment was undertaken on the Tunbridge Mill and its various outbuildings, a site measuring approximately 2050 square metres on the West side of Tunbridge Road.

This study was undertaken in advance of the proposed renovation of the old mill building and redevelopment of the surrounding yard and outbuildings. At the time of this survey the site was largely disused. During the site visit, it was noted that the interior of the mill and one of the outbuildings retained a number of early features.

During the 18th and 19th centuries there were up to 40 mills operating along the 17 mile course of the River Chew, producing cloth, flour and gunpowder.

The earliest documentary evidence for the study area was the 1840 Chew Magna tithe map, which showed a mill at the approximate location of the current building. A building was also shown at the location of one of the outbuildings observed during the site visit. The mill then appears on all subsequent maps including the current OS plan.

A standard trawl of the Bath and North East Somerset Sites and Monuments Record yielded records relating to the study area and its environs, one of which was the mill itself (MBN710). The entry describes Tunbridge Mill as a post-medieval undershot water mill. No previous archaeological works have been undertaken within the study area and none of the buildings are listed. Other records refer to a possible Roman Road, as well as the medieval and post-medieval settlement of Chew Magna.

The mill building, earlier outbuilding and the water wheel were all probably constructed during the early 19th century.

Jo Bruce, AAU

Tunbridge Mill, ST 5763 6299. An appraisal of the machinery and equipment at the Tunbridge Mill (or 'The Old Mill', as it is sometimes called) was undertaken.

Some of the internal equipment may date to the latter part of the 19th century, but by and large the majority of the installation dates from round about the middle of the 20th century. The wooden fittings (bins, silos, chutes, etc) and some sheet metal ducting were not considered in detail.
While it is a diminishing resource, collectively the machinery and equipment is of local interest only and did not justify further detailed recording or preservation *in situ.*

Andrew Smith, AAU

KEYNSHAM

Nos. 69/69a and No. 71 Bristol Road, ST 64825 68900. A desk-based assessment was undertaken. Historically the study area lay within the parish of St. John the Baptist, in the Hundred of Keynsham.

The earliest map of the site is the 1842 Keynsham parish tithe map. The study area lay within a single field called 'Home Ground', located on the south side of what is now the Bristol Road. No subsequent detailed map of the study area was published before the 1891 edition of the OS 1:2500. By that time the study area had been laid out as a

single house with front and rear gardens. No significant change appears to have taken place within the study area before the 1970s when the house and garden was divided into two properties.

No records of archaeological finds or features were located either within or immediately adjacent to the study area.

David Etheridge, AAU

Cranmore House, Nos. 92-94 Temple Street, ST 6450 6925. Seven trenches were excavated in the grounds of Cranmore House. The trenches in the development area contained little of archaeological interest, most were completely sterile but a pit of late post-medieval origin, cobbled surface and limestone wall were recorded.

Kevin Potter, BaRAS

MIDSOMER NORTON

Millards Hill, No. 25 Wellow Brook Court, Welton, ST 66880 54970. An evaluation revealed a rubbish pit/ditch terminus which contained pottery dating from the 11th to the 13th century. Little else of interest was found

Stuart Whatley, BaRAS

PAULTON

Paulton Builders Merchants, Church Street, ST 6501 5656, SMR pending. An evaluation revealed that much of the site had been reduced to the underlying geology. There were cut features truncating the bedrock at the north end (site entrance) of the site and a possible medieval agricultural deposit in the centre east of the site.

Kevin Potter, BaRAS

BRISTOL

AVONMOUTH

Plots 6030 and 6040, Western Approaches Distribution Park, Avonmouth, ST 5510 8340. Evaluation work was carried out prior to redevelopment. The development area was previously evaluated by Wessex Archaeology in 1998 by trial trenching and an auger survey designed to assess the archaeological potential of the underlying alluvial sequence. The evaluation trenches were targeted on the recently demolished post-medieval farm houses (Creed's Farm and Dyer's Farmhouse), and the underlying Wentlooge sequence. They were far less numerous than the trenches excavated more recently on the adjacent plots (4000 and 5000) to the south and east, where extensive Roman-period settlement activity has been identified. Prior to the present phase of trenching it was not clear whether the absence of significant features in Plot 6030/6040 reflected genuinely low archaeological potential or the limited scope of the 1998 evaluation. The present evaluation aimed to address this issue, in particular to determine whether the Roman-period activity identified in Plots 5000 and 4000 continued into Plot 6030/ 6040. Seven trenches were located in areas not covered by the previous work, targeting locations where linear features were expected to continue into the area from the adjacent Plot 5000.

The evaluation identified Roman activity on the southern edge of the site, concentrated in Trench 3 immediately to the north-west of the previously excavated Roman site in Plot 5000. It also revealed ditches and gullies forming part of a possible sub-divided enclosure. Similarities with the features at Plot 5000 suggest that the enclosure is likely to date from the later Roman period (2nd to 4th century AD). Further undated ditches were recorded in Trenches 1 and 4.

Several late post-medieval/modern features were also revealed in Trenches 2 and 7, located close to the former post-medieval/modern farm buildings. The evaluation results help to confirm the postulated construction date in the late 17th and 18th century for Dyer's Farmhouse, and the 19th century for Creed's Farm. No earlier medieval evidence for these settlements was detected. Undated ditches were present throughout the site, many respecting the alignment of extant drainage ditches. Most are likely to be field boundaries and drains of post-medieval and modern date.

Carl Champness, OA

BEDMINSTER

Nos. 165-205 Bath Road, Totterdown, ST 60335 71690, BSMR 24554. A desk-based assessment was carried out for the former Esso petrol filling station, on the corner of Totterdown Bridge. The site includes part of the former turnpike road to Bath, diverted onto the present Bath Road in 1834. There are some remains of the old turnpike house and associated structures. Housing was erected along the Bath Road frontage mainly in the 1880s and 90s but was removed *c* 1970 for a road scheme that was never completed, although the main road and junction were later enlarged. On the lower level was, for many years, a boatyard that repaired barges used in the Bristol Docks and on the Avon.

John Bryant, BaRAS

Nos. 165-205, Bath Road, Totterdown, ST 60335 71690, BSMR 24573. An evaluation was carried out with three trenches opened, two of which contained evidence of two surfaces; a Macadam road and an earlier cobbled limestone surface. The other trench revealed structural remains of the 18th-century Turnpike House and further evidence of the Macadam surface.

Dave Stevens, BaRAS

Nos. 3-7 Cannon Street, ST 5831 7149, BSMR 22573. A trial excavation, involving two archaeological trenches was undertaken within a vacant plot previously occupied by commercial premises.

Both trenches located a number of buried structural features and deposits, principally represented by a series of post-medieval wall foundations. The only significant deposit was recorded in Trench 1, adjacent to the Cannon Street frontage, where an assemblage of post-medieval

pottery, bottle glass and fragments of clay tobacco pipe, all dating to the late 17th to early 18th centuries was retrieved from a rectilinear, rock-cut feature. Although no structures directly associated with this period were located, a small stretch of masonry located in the northern arm of Trench 1, appeared to be of roughly contemporaneous date.

Lynn Hume, AAU

No. 49 North Street, ST 58155 71467, BSMR 24585. A desk-based assessment revealed clear evidence that the building is at least 17th century in origin, contains numerous internal features of that date, and is a survival of considerable architectural and historic significance. It is probably at least a century older than the only building currently subjected to statutory listing along either side of the entire North Street frontage. Editor: The building has since been listed.

Nick Corcos, BaRAS

Parson Street, the Enterprise Inn, ST 5795 7037. Following demolition of the former inn structures, a watching brief was conducted to monitor ground reduction. Nothing of archaeological significance was observed.

Raymond Ducker, AAU

No. 8 Stillhouse Lane and adjoining properties, ST 5889 7181. A desk-based assessment was undertaken on approximately 660 square metres of land intended for redevelopment.

The earliest survey of the study area dates from 1730 and shows the site within a parcel of enclosed agricultural land described on the apportionment as Bedminster Causeway. Another, later, undated apportionment shows that the land was leased for building and by the time of the 1827 Map of the Parish of Bedminster the land had been developed with residential properties fronting Bedminster Place, Stillhouse Lane and a small entrance lane (later Stokes Court). By 1841 a narrow entrance lane, listed on Ashmead's map as Hamley's Buildings had been inserted between Stokes Court and Bedminster Place and small terrace houses had been erected on either side. Thereafter, few changes took place until the early 1900s; the Bristol directories suggest that Stokes Court and 'Hamley's Buildings' (later renamed Vaughan's Buildings and Stones Buildings) had been vacant from around 1897 and a 1918 OS map indicates that the properties appear to have been demolished leaving a vacant plot of land in the 1950s, occupied by hauliers and car repair premises.

Amy Willis, AAU

Nos. 200-202 West St, Bedminster, ST 57838 70887, BSMR 24562. An evaluation was carried out with three trenches excavated revealing a 17th-century limestone structure and cut features at the south-west end of the site and garden soils at the north-east end.

Kevin Potter, BaRAS

Nos. 202-206 West Street, ST 57826 70891, BSMR 24518. A desk-based assessment was undertaken. The evidence examined indicated that there were buildings on the study area from at least the 18th century. Part of the study area comprised land at the rear of The Three Lions public house.

Andrew Townsend, BaRAS

BISHOPSWORTH

No. 33 Highridge Green, ST 56490 69065, BSMR 22531. A watching brief during groundworks revealed various disturbed deposits associated with the modern brick-built house and five walls of the early 19th-century building shown on the 1841 tithe map and named Bishport Farm on the 1952 OS map.

Heather Hirons, BaRAS

Langton Court, No. 47 Langton Court Road, Brislington, ST 62016 72523, BSMR 22517. A desk-based assessment was carried out. The results indicate that the land surrounding the proposed development area was occupied by Brislington Farm, later Langton Court, from at least the 16th century. The first evidence for development within the study area itself is an estate plan of 1791, which shows buildings and enclosed plots. The site changed little until the late 19th-early 20th century when much of Langton Court had been demolished and replaced with terraced housing.

Dave Stevens, BaRAS

Land to the east of Maynard Road, Hartcliffe, ST 58547 68105. A watching brief was carried out on land off Maynard Road. No features or deposits of archaeological significance were observed.

Tim Longman, BaRAS

The Merchants Academy, Withywood, ST 575 681. A watching brief was undertaken on the site of the former Withywood Community School prior to the redevelopment of the site as the 'Merchants Academy'.

The groundworks revealed modern made ground overlying natural undisturbed deposits and bedrock. No significant archaeological deposits or finds were located.

Richard Payne, AAU

Queen's Road, Withywood, ST 5692 6788, BSMR 24549. A watching brief on the site of the former Amelia Nutt Clinic revealed no finds or structures of archaeological significance.

David Etheridge, AAU

BRISLINGTON

Site off Nos. 53-55 Wootton Road, ST 6260 7280. A watching brief was conducted prior to development for residential housing.

Greensand deposits dating from the Pleistocene were recorded in four machine- excavated trenches sealed by late 20th-century demolition deposits.

No finds or structures of archaeological significance were observed.

David Etheridge, AAU

CANON'S MARSH

No. 10 Anchor Road, ST 58175 72601, BUAD 4373. A desk-based assessment was carried out. The study area was part of the lands of the medieval Abbey of St Augustine from the later 12th century and was described as the 'Bishop's Park' following the Religious Reformation of the 1540s. Ponds were cartographically depicted in this location in 1742 and the Park was leased for building development in the early 1770s when the residential streets of Park Square, Stephens Court and the present line of Lower Lamb Street were laid out. The widening of Anchor Lane in the 1890s led to the demolition of most of Park Square. The rest of Park Square, Stephens Court and Lower Lamb Street were cleared in the mid 1930s. A warehouse with an extensive basement was constructed on the site in the 1940s and this building survives today.

Andy King, BaRAS

High Street, Mary-Le-Port Street & Bridge Street, ST 58980 73002, BUAD 4414. Further evaluation was carried out at the western end of Castle Park. Four trenches were excavated, revealing that extensive cellaring had taken place across the site up to the 1930s. The excavation revealed a 19th-century Pennant sandstone floor surface cut into the natural clay, the remains of cellars from the late 18th century, and the remnants of a medieval barrel vaulted cellar with later post-medieval and early modern walls.

Stuart Whatley, BaRAS

CLIFTON

Pro-Cathedral, Park Place, Clifton, ST 5773 7320, BSMR 22579. A historic building survey comprising photographic recording, targeting threatened areas of the Church, with a digital survey of the presbytery was undertaken at Clifton Pro-Cathedral. The survey found much of the standing remains to be original features of the building.

Kevin Potter, BaRAS

Wall in Pro-Cathedral Lane, ST 57799 73209, BSMR 24560. A length of stone walling on the south-west side of Pro-Cathedral Lane, was recorded in advance of its removal during redevelopment of the site. There had initially been a field wall, then St Augustine's Chapel (R.C.) from *c* 1838, the base of which survived complete with two ventilator openings, band course and quoins. A convent was built upslope about ten years later, and three windows from this survived as well as a band course and quoin near the top of the slope. In the 1890s the convent was rebuilt as a school. Further alterations were made later, including new windows at upper level in the chapel and adjacent building. A new entrance off the lane was created in the early 1930s.

John Bryant, BaRAS

No. 151 Hotwell Road, ST 57405 72454, BUAD 4396. A desk-based assessment was undertaken. The evidence examined indicated that the surviving building was probably constructed in the 18th century, serving as the 'New Dock Gates' Tavern/Inn until the 1960s. Although the building had been considerably altered at the time of the study, its essentially 18th-century character was generally preserved externally.

Andrew Townsend, BaRAS

EASTON

Nos. 22-28 St Marks Road, Easton, ST 60690 74275, BSMR 24558. A desk-based assessment was carried out on an area near to the site of a manor house of possible 17th-century date. The evidence examined indicates that a house has existed on the current site since at least 1803, and the remainder of the study area has been in use commercially since the late 19th century.

Jocelyn Davis, BaRAS

HENBURY

Cabot Park, Kings Weston Lane, ST 56350 76310, BSMR 24565. A watching brief was conducted to monitor the initial phase of groundworks on Plot M1 of the Cabot Park industrial estate. No deposits or features of archaeological significance were noted.

Nick Corcos, BaRAS

Chittening Road, Avonmouth, ST 5335 8160, BSMR 24536. An excavation and watching brief uncovered the remains of Washingpool Farm and former cottage on the west side of the development site (see report, this volume). The remains of two farm buildings dating to the 19th century were recovered in one trench along with two late 18th-early 19th -century pits. Within the other trench a small L-shaped section of a cottage wall was uncovered.

Stuart Whatley, BaRAS

Fifth Way, Avonmouth, ST 53350 78650. A watching brief was carried out on land near the M5 motorway. No features or deposits of archaeological significance were observed.

Tim Longman, BaRAS

Lawrence Weston Housing Estate, ST 54330 78180, BSMR 24532. A desk-based assessment was undertaken. The evidence examined suggested that the study area comprised land having exceptionally good archaeological potential. This was borne out by abundant evidence for prehistoric, Roman, medieval and post-medieval activities in the area. The land's coastal/estuarine setting appears to have made it a favourable area for settlement since prehistoric times. A notable monument situated towards the western end of the study area was the Kings Weston Roman Villa, a scheduled monument. Following the Roman period, it appears that the study area and its environs enjoyed more-or-less continuous occupation. During the post-medieval period, the study area was used mainly for agricultural purposes, with the hamlets of Kings Weston and Lawrence Weston comprising the main foci of settlement. Part of the western portion of the study area, however, comprised a parkland landscape (The Great Park or Kings Weston Park) belonging to nearby Kings

Weston House (Grade I Listed). Following its purchase by the Bristol Corporation in the 1930s, the study area was transformed on a major scale with the construction of the Lawrence Weston Housing Estate in the late 1940s. Speed and ease of construction was of the essence and to meet these demands standard Pre-cast Reinforced Concrete (PRC) units were generally used. At the time of the study, buildings of historical and/or architectural interest were extant on the study area including some (e.g. churches and amenity buildings) constructed after the creation of the housing estate in the late 1940s.

Andrew Townsend, BaRAS

HORFIELD

No. 146 Dovercourt Road, ST 60166 76441, BSMR 245831. A watching brief was carried out on an area that was until the mid-20th century part of a small field, formerly an orchard adjacent to Downend House Farm. No features or deposits of archaeological significance were observed during the intrusive groundworks.

John Bryant & Rachel Heaton, BaRAS

No. 4 Downend House Farm, Dovercourt Road, ST 60154 76452 BSMR 24535. A watching brief was carried out during groundworks for an extension to No. 4 Downend House Farm. Some remains of 18th or 19th century and later farm structures were revealed. A deposit of 19th-century blue and white transfer ware pottery wasters and kiln furniture was found, but does not indicate production on the site and may have come from the Bristol Pottery in the city centre.

John Bryant, BaRAS

REDCLIFFE

Land to the South of Portwall Lane, ST 5920 7242, BUAD 4359. An archaeological evaluation was undertaken in November 2006 and March 2007 on land to the south of Portwall Lane. Four trenches were excavated within the area of a proposed footpath in order to locate the remains of the 13th-century Portwall. Neither the Portwall nor evidence for its removal was identified. The presence of a late 13th to 14th-century clay deposit probably indicates the location of a berm, suggesting that the Portwall lay to the north of the evaluation trenches and under the present alignment of Portwall Lane. A series of late post-medieval/modern structures were also recorded; these relate to buildings portrayed on 19th and early 20th-century maps of the area.

Derek Evans & Kelly Saunders, CA

Nos. 1-2 Redcliff Street, ST 5906 7277, BUAD 4456. An archaeological excavation was undertaken at the site of a new Civil Justice Centre, Redcliff Street, Bristol. The site lies on the eastern side of Redcliff Street, immediately to the north of Thomas Lane.

Natural alluvial clay was located at *c* 7m aOD across the site. Excavation identified a 12th/13th-century date for the earliest activity on site. This comprised the cutting of postholes and pits into the alluvial clay. The postholes were associated with the remnants of mortar floor surfaces and stone hearths. The majority of these features were located towards the Redcliff Street frontage. The pits contained well-preserved organic material including human waste and offcuts of leather, shoes, timbers and dyestuffs such as madder. By the 13th/14th century a number of buildings with substantial stone party walls and the stone surfaced Little Thomas Lane had been established. Two of the buildings had square garderobes at their rear. The area became increasingly industrialised from this point with the construction of numerous dye vat/oven bases, a large stone tank, timber-lined pits and drains, stone surfaces, and wells. The pits contained offcuts of leather and appear to be associated with tanning. Also identified were two furnaces used for reheating copper-alloy metal in ceramic crucibles for casting into objects. The fractured remains of crucibles were found scattered around the furnaces and the waste from the casting process (slag) was recovered from inside the furnace structures. Moulds for making skillets (cooking pans) have been found and have been dated to the 16th/17th century. One furnace was relatively small and may represent small-scale craft working within a dwelling, whereas the second furnace was much larger and could represent a commercial enterprise of some size. Other evidence for post-medieval industrial activity included a substantial dump of clay tobacco pipe manufacturing waste. Stamps on the remains of some of the pipe wasters identify the maker as John Hunt, who was a founder member of the Bristol Guild of Pipe Makers in 1652.

Richard Young, CA

Nos. 104-107 Redcliff Street, ST 5905 7260. A desk-based assessment was undertaken in advance of proposed redevelopment.

The study area is located on the west side of Redcliff Street, which it fronts, and is bounded by Ferry Street to the north and west.

By the early 13th century both sides of Redcliff Street appear to have been settled. Piecemeal land reclamation pushed the waterfront back towards its present location, but the line of the waterfront probably still lay within or close to the study area and was populated with stone quays, warehouses, houses, shops and industries, all laid out in tenements whose boundaries persisted into the 20th century.

The western side of Redcliff Street remained settled and occupied as a mixed residential and industrial area throughout the 15th and 16th centuries. A glasshouse was noted north of No. 103 Redcliff Street in the early 18th century and may have operated in the rear of Nos. 104 to 107. By the mid-18th century this had probably been replaced by the Redcliff Brewery, which appears to have operated from the front of No. 107, but extending across the backs of Nos. 104 to 107. The brewery appears to have operated until the 1890s. By 1940 the premises was used by a road haulier. The fronts of Nos. 104 to 106 were utilised for various purposes throughout the 18th, 19th and early

20th centuries, but mostly as shops and public houses. A plan of 1870 indicates there was a cellar in No. 105 Redcliff Street.

David Etheridge, AAU

Redcliff Wharf, ST 58942 72368, BUAD 4397. An evaluation undertaken between April and July 2007 revealed evidence for land reclamation along the waterfront, taking place at least from the 18th century. Wharf walls pre-dating the existing 19th-century waterfront were recorded. Further evidence for the structures of an extensive 18th-century glassworks was recorded within the northern and eastern areas of the site, including brick floors and flues, supplementing evidence from a previous phase of evaluation in 2005. A fragment of a high temperature flue with vitrified surfaces from glassworking, previously recorded in a 1989 investigation by Bristol Museum was re-exposed. This may have formed part of a large glass cone depicted on 18th-century maps, but no other structural remains of this were encountered in the evaluation. Deposits containing considerable quantities of glassworking waste were recovered, often in association with deposits of primary waste, including kiln furniture, from the manufacture of tin-glazed earthenware and stoneware; these derived from an 18th-century pottery manufactory, which must have been in close proximity to the site.

The planform and some floor surfaces of a 19th-century Warehouse and Counting House, and part of a residential dwelling were recorded, with good correspondence to maps and plans from 1828 and the rest of the 19th century. These structures had been extensively robbed in the 20th century.

Tim Havard, CA

REDCLIFFE & ST THOMAS

Redcliffe Village, ST 5916 7266, BUAD 4442. An archaeological evaluation was undertaken at the proposed site of the Redcliffe Village development. Ten trenches were excavated across the development area.

Evidence for activity from the 12th-13th century onwards was identified behind the Redcliff Street frontage in the western half of the development area, including possible medieval hearths, walls and floor surfaces. The evaluation also identified the post-medieval line of the Law Ditch, an originally medieval feature that runs north/south through the centre of the development area, and demarcates the boundary to the rear of plots fronting Redcliff Street to the west, and St Thomas Street to the east. To the east of the Law Ditch medieval wall footings and possible garden soils of both medieval and post-medieval date were identified in an area that would have been to the rear of plots fronting St Thomas Street.

Alistair Barber, CA

STAPLETON

Cossham Memorial Hospital, ST 64238 74555, BSMR 24576. A desk-based assessment was undertaken. The evidence examined suggested that the study area was used for agricultural purposes from at least the 18th century. Coal mining also appeared to have taken place on the study area and its environs during the 18th century, and possibly earlier. It appeared that the study area remained in agricultural use until the Cossham Memorial Hospital was constructed there in the early 20th century (opened 1907). The founding of the hospital resulted from the bequest of Bristol geologist, coal entrepreneur and philanthropist Handel Shepherd Cossham (1824-1890). Despite early teething problems, the hospital expanded, especially following its transfer to state ownership in 1948. The progressive addition of numerous facilities, particularly from the 1960s, transformed the hospital into a medical facility of regional importance, comprising one of East Bristol's foremost historical landmarks. Despite having been considerably altered and extended, the 1907 hospital buildings (Grade II listed) essentially retained much of their original character at the time of the study.

Andrew Townsend, BaRAS

Nos. 747-759 Fishponds Road, ST 63316 75912. Area excavation of part of the site recorded the poorly preserved remains of a post-medieval dwelling and part of the Lower Fishpond. Deposits filling the former fishpond were located and produced a broad spectrum of environmental samples.

Analysis of samples from the pond fill provides a consistent picture of an initially nutrient-poor pond environment with aquatic or semi aquatic plants in still or slow moving shallow water, surrounded by mainly open landscape but including some cultivated and disturbed ground. The latter possibly a consequence of pond construction. The later pond environment appears less acid but remained shallow, with still or slow moving mineral-rich open water. The pond was set in a mosaic of mixed woodland copses dominated by Oak and Hazel, plus significant open grassland, some of which was probably cultivated arable, in addition to indicators of local marginal wetland such as Phragmites and ferns.

Two radiocarbon (C14) determinations obtained from round hawthorn wood from the primary pond silts produced radiocarbon dates, which indicate the ponds were probably laid out and constructed during the 14th century, possibly through the modification and reuse of earlier sandstone quarries.

Andrew Young, AAU

St Matthias Campus of the University of the West of England, Fishponds, ST 63360 76320, BSMR 22530. A desk-based assessment was undertaken. The evidence examined indicated that, prior to the construction of the Bristol and Gloucester Diocesan Training College (opened 1853), the study area comprised land used mainly for agricultural purposes. The cartographic evidence examined, however, indicated that buildings, including dwellings, were present on the study area prior to the construction of the College. The College underwent dramatic expansion in the 20th century, particularly in the 1950s and 60s, to become one of the Church of England's foremost institutions of learning. The College was closed in the 1970s but

subsequently became part of the Bristol Polytechnic after 1978 and latterly known as the University of the West of England St Matthias Campus. A number of the buildings within the study area enjoy listed status.

Andrew Townsend, BaRAS

ST AUGUSTINE

Buildings 5 and 6, Harbourside, ST 5828 725, BUAD 4455. An excavation was undertaken at the site of a new development on Bristol's Harbourside. The site lies in an area known as Canon's Marsh immediately to the south-west of the Cathedral, south of Anchor Lane.

Natural alluvial clay was identified across the site, sloping downhill from the north towards the river channel beyond the southern site boundary. Excavation identified a medieval date for the earliest activity on site. This comprised the cutting of drainage channels into the alluvial clay. Two large east/west orientated channels were joined by a narrow channel running north/south. These features are likely to represent a formalising of the natural drainage pattern. The ground level within the plots defined by the channels was then raised by the large-scale dumping of quarry and building waste. The earliest structure identified within these plots was a boundary wall which divided the reclaimed land within the precinct of the Abbey of St. Augustine (now the Cathedral) from the marsh land to the south. A medieval building with an attached garden was identified within the precinct. Broadly contemporary with the construction of this building was the culverting of the northernmost of the two east/west channels and the laying out of a lane giving access from the Abbey precinct to Canon's Marsh to the south. Evidence for a substantial gateway controlling access to the Abbey precinct was uncovered; the remains of a gate hinge on a freestone block was dated to the 17th century on the basis of its form. At this time more buildings were constructed in the Abbey grounds, possibly for industrial purposes, along with the strengthening of a bridge across the culvert to support a more substantial lane. These buildings seem to have stood into the 19th century, when they were demolished to make way for transit sheds of the Great Western Railway.

Richard Young, CA

The East Purifier House, Canons Marsh Gasworks, ST 57989 72524, BUAD 4383. A desk-based assessment was undertaken. The Gasworks were founded in the first quarter of the 19th century following the formation of the Bristol and Clifton Oil Gas Company in 1823. Gas continued to be manufactured at the works until the 1950s/60s. The East Purifier House was constructed in two stages during the 1870s and 1880s and, at the time of the study, comprised one of the last remaining buildings on the site associated with the Gasworks.

Andrew Townsend, BaRAS

No. 2 Trenchard Street, ST 58485 73008, BUAD 4638. A building-survey and watching brief were carried out. The removal of external and internal render revealed that the ground floor street-frontage of No.2 was of 17th-century construction with the remains of a blocked window, and would have been part of a building that extended north and south along Trenchard Street. The rest of the building was primarily of late 18th-century, brick construction with 19th and 20th-century extensions to the south. However, the first and second floor street-frontage had two phases of stone rubble construction. The northern half was contemporary with the brick build but the southern half was early 19th-century and may have replaced a timber jettied elevation.

Andy King, BaRAS

No. 2 Trenchard Street and Colston House, Colston Street, ST58509 72999, BUAD 4369. An excavation beneath No. 2 Colston Street and Colston House revealed evidence of the very truncated remains of the 13th-century Carmelite Friary, principally one substantial wall of the ?Church, several inhumations and much disarticulated human bone.

Rachel Heaton, BaRAS

ST GEORGE

Nos. 217-227 Two Mile Hill Road, ST 6405 7390. A desk-based assessment was undertaken at this site which incorporates a Grade II listed building of late 18th - early 19th-century date as well as buildings of modern date.

Donne's 1769 map of Bristol shows several buildings either on or in close proximity to the study area and an 1803 plan of the area depicts a large unidentified building on Two Mile Hill Road located close to, or on, the site.

Buildings certainly existed on the site by the time of the 1842 tithe map, one of which is the Grade II listed building at No. 227 Two Mile Hill Road. A second is represented by a large building located in the centre of the study area, which survives today.

Jo Bruce, AAU

Speedwell Technology College, ST 6330 7450, BSMR 22409. A watching brief was undertaken during groundworks associated with the main phase (Phase 1) redevelopment of Speedwell Technology College. A red brick mineshaft, probably associated with the former Speedwell Colliery, was uncovered during the course of the works. This had been deliberately backfilled with rubble, and subsequently capped with concrete. No other structures, artefacts or significant archaeological deposits were identified, probably due to the levelling of the site in the past for the current college playing fields.

Steve Sheldon, CA

ST JAMES

Nos. 2-3 Charles Street & Nos.11-6 Dighton Street, Kingsdown, ST 58922 73648, BUAD 4424. A watching brief was carried out during groundworks with no archaeological features or deposits encountered.

Dave Stevens, BaRAS

Former Hill House Hammond Building, Lewins Mead, ST 58509 72999, BUAD 4329. Three evaluation trenches were

excavated within the south-east corner of the precinct of the Fransiscan Friary. After Dissolution in 1538, the site was redeveloped for housing and industry. In modern times a confectionary factory occupied the site, prior to the current office building. Remains of the confectionary factory were recorded in all three trenches. The remains of a possible medieval wall, drains and thin deposits containing sherds of 12th to 14th century pottery were recorded in one trench. In another trench, foundations for a possible wall with associated deposits and a 'pit' were recorded. Pottery retrieved was dated between the 12th and 15th centuries.

Rachel Heaton, BaRAS

ST JAMES WITHOUT

Nos. 17-25 Jamaica St, Stokes Croft, ST 59038 73881, BUAD 4427. A desk-based assessment was carried out for a site at 17-25 Jamaica Street. Early map evidence indicates that the site lay at the very northern end of tenements extending north from Stokes Croft, and that there may have been buildings in that position prior to that date. The key development on the site is in the early 1870s with the establishment of the eastern extension to Jamaica St. The study also identified the survival of substantial sections of stone-built internal walling, integrated into structures otherwise built of brick.

Nick Corcos, BaRAS

Nos. 22-24 Portland Square, St Paul's, ST 5941 7379. BUAD 4430. A desk-based assessment was conducted on several contiguous properties at numbers 22-24 Portland Square, St Paul's. Portland Square was conceived and executed in the late 18th/early 19th century as a coherent unity, and its historic and architectural importance flows from this unifying quality. However, the study revealed that, although subject to Grade I statutory listing, severe bomb damage sustained by the building during WWII, means that very little of original architectural or historic interest appears to survive. The present structures on the site, including the restored façade, are overwhelmingly the result of reconstruction carried out in the early 1970s.

Nick Corcos, BaRAS

ST LEONARD

Nos. 9-11 Small Street, ST 58713 73080, BUAD 4419. A desk-based assessment was carried out for Creswicke House, Nos. 9-11 Small Street. The street itself is of at least medieval origin, with Nos. 9-10 still retaining part of a late medieval wall and also housing other elements relocated during redevelopment work in 1981. There had clearly been a residence of some quality here in the 15th century; part of a 16th or 17th-century street timber-framed front was illustrated in 1746. From the late 18th century onwards Nos. 9-10 were in use for warehousing, for decades as a cheese and butter store, but latterly leather. The warehouse was demolished in 1981 although some walls were retained. At this time archaeological recording was undertaken, although it remains unpublished. Removal of the constrictive St Giles's Gate in the 18th century, possibly in the late 1770s, saw the Small Street frontage to the corner property cut back and rebuilt in brick. It appears, however, that the north-west wall facing onto the head of the quay from the earlier structure survived the rebuilding. Used in the 18th century as a pottery warehouse, shop and dwelling house, the building was in joint office and residential use during the 19th and 20th centuries. Both buildings were fitted out together as open plan offices in the early 1980s.

John Bryant, BaRAS

ST MARY LE PORT/ST NICHOLAS

High Street, Wine Street, Mary-Le-Port Street & Bridge Street, ST 59014 73032, BUAD 4318. An evaluation was carried out at the western end of Castle Park. Twenty-four trenches were excavated around the former route of Mary-Le-Port Street and the area bounded by High Street, Wine Street and Bridge Street. The fieldwork revealed that extensive cellaring had taken place across the site up to the 1930s. The utilisation of blitzed cellars as a car-park in the 1950s, followed by the creation of a park in the early 1970s, has resulted in made ground to depths of over 2m in places and yet medieval archaeology also survived less than half a metre below present ground level in other areas. The discovery of a large 19th-century sewer trench beneath the route of Mary-Le-Port Street throws into doubt the previous interpretation of this street as a Saxon hollow-way.

Andy King, BaRAS

ST MICHAEL

Land off Tyndall Avenue and St Michael's Hill, ST 58296 73467, BUAD 4401. A desk-based assessment was undertaken. The study area included land incorporating a portion of the English Civil War (1642-1653) defence known as Royal Fort, known earlier as the 'Windmill Hill Fort'. From the 17th century, however, the area underwent development for a high-status residential enclave incorporating a number of fine town-houses and was subsequently redeveloped by Thomas Tyndall in the mid-18th century to form part of Tyndall's Park. As part of this, a building known as the 'Great House' was demolished and replaced by the present Royal Fort House, *c* 1760 (Grade I listed). A hospital (Bristol Hospital for Sick Children and Women) was established at the Royal Fort/St Michael's Hill in the 19th century. At the time of the study, the hospital's main building (1880s; Grade II listed) was situated immediately outside the southern flank of the study area. Tyndall Avenue was constructed in 1903 and heralded a number of changes to the area including the construction of new houses (on Tyndall Avenue and St Michael's Hill) and eventually the H.H. Wills Physics Laboratory (1920s). A Nurses Home for the Children's Hospital was constructed on the study area in the early 1930s and extended in 1948. Other buildings that appeared on the study area in the 20th century include extensions to the Children's Hospital (1960s-1990s) and a Physics Workshop (1950s). The H.H. Wills Physics Laboratory (not within the study area) was

extended in the 1960s and was undergoing further extension (Nanotechnology and Quantum Information Building) at the time of the study. The 20th-century redevelopment of the Royal Fort environs resulted in a number of post-medieval buildings undergoing demolition. It was thought that vestiges of these, and possibly those of the earlier features and structures, were present in the burial environment of the study area.

Andrew Townsend, BaRAS

ST NICHOLAS

Crow Lane, Welsh Back, ST 58888 72791, BUAD 4398. An evaluation comprising a single trench was excavated at the front of Favell House on the south side of Crow lane. The site lay within the suspected location of the St Nicholas Parish burial ground. The results confirmed that human burials were still present.

Dave Stevens, BaRAS

ST PAUL

Nos. 55-81 Newfoundland Street, ST 596 737. A desk-based assessment was undertaken on a site incorporating a number of 20th-century conjoined buildings occupied by a motor repair centre, events company and a catering firm.

The study area is located within the former medieval manor of Barton and the ancient out parish of St. James. The study area remained outside the city bounds until the 18th century. A 1610 Map of Kingswood Forest shows the location of the study area as open land. By the time of Rocque's 1742 Map of Bristol, the study area is shown as undeveloped land within the boundary of the city.

A speculative "rage for building" in the late 1780s led to the rapid expansion of the area and by the time of Mathew's 1794 plan, the southwest part of the study area had been developed. Plumley and Ashmead's Plan of the City of Bristol indicates that by 1828 the majority of the site was occupied by terraced properties, whilst part of a burial ground occupied the north-east portion of the site. The private burial ground, known as Howlands, was created in 1804 and had a total of 1339 individuals interred there before it was closed in 1854 by an Order in Council. Archaeological excavations undertaken by BaRAS in 1999, confirmed the location of the cemetery and indicated the burial ground survived intact. It was subsequently incorporated into the new development without disturbance. By the time of the 1885 first edition OS the cemetery appears to have become a garden and a building had been constructed in its southern corner. The Bristol trade directories indicate the study area was occupied by various small businesses and residential properties. By the OS plan of 1971 the study area appears much as the current OS plan and the surrounding area had been further industrialised.

Jo Bruce, AAU

Westmorland House, Ashley Road and Stokes Croft, ST 59172 74065. An evaluation was undertaken on land at Westmoreland House. Three trenches were dug with emphasis on the identification of features or deposits associated with 17th-century Civil War defences that are conjectured to have existed in that area. Trenches 1 and 2 were located on land between the rear of No. 4 Ashley Road and the buildings of Westmorland House, Trench 1 lay to the east of Trench 2. Trench 3 was located on open ground just to the south of Westmorland House.

The site has been extensively occupied since the 17th century, initially by residential properties and subsequently, in part, by commercial properties, including a carriage-works and office block. The earliest archaeological features located in the evaluation trenches were represented by soil-cut features, with primary fills dating from the early 18th century onwards (Trenches 1 and 3), and in one case, the late 17th century onwards (Trench 2).

Extensive evidence of subsequent 18th- and 19th-century residential and commercial buildings was also located. In Trench 1 three walls were recorded, the earliest of which utilised the line of the supposed earlier 18th-century ditch. The outline of the earliest wall is shown on historic maps and plans of the site and has been interpreted as a structure adjoining the apex of the fossilised outline of the Civil War spurwork.

The majority of the later features identified on the site could be related to phases of occupation illustrated on historic maps and plans of the study area, for example the Ordnance Survey of 1885 and Ashmead's map of 1828. Two walls located in Trench 2 are shown on Ashmead's map and the Ordnance Survey as adjoining walls forming a V-shaped junction between No. 4 Ashley Road and Westmoreland House. These have been suggested to reflect the shape of the fossilised Civil War defence spurwork documented at Stokes Croft.

Raymond Ducker, AAU

ST PAUL WITHOUT

The former Dovercourt Garage, Nos. 154-156 Cheltenham Road, ST 5913 7425. A standing building survey and watching brief was conducted prior to partial demolition and redevelopment.

The buildings comprised two adjoining 19th-century residential structures, together with a 20th-century vehicle showroom, workshops and multi-storey garage/car park. The watching brief was undertaken during operations to strip the interior of each house and reduce the ground level in an area of former garage workshops. During the monitoring exercise former garden walls of 19th-century date were exposed together with made ground, all possibly dating from the construction of the two houses, *c* 1812, known as *Crofton House* and *The Limes*. No features or artefacts that could be dated to earlier than the late 18th century were identified.

David Etheridge, AAU

SS PHILIP & JACOB

Land to the rear of John Willis House, Nos. 20-32 Air Balloon Road, St. George, ST 63063 73381. A watching

brief was carried out on former agricultural land belonging to Troopershill Farm, to the east of the suburb of St George in east Bristol. No archaeological features were observed.

Tim Longman, BaRAS

The Former Seymour's Club, Nos. 47-49 Barton Vale, ST 59985 72844. A watching brief was carried out during groundworks on the site. No features or deposits of archaeological significance were observed.

Tim Longman, BaRAS

Former Soap Works, Old Bread Street, ST 59687 72859. Further recording work took place during conversion of the Grade II listed Gingell and Foster & Wood buildings at the Old Soap Works. Conversion building works enabled access to some areas not covered by Pilkington's earlier work (BaRAS report 803/2001).

John Bryant, BaRAS

The Former Drill Hall, Old Market Street, ST 59678 73101, BUAD 4341. A watching brief was undertaken during groundworks associated with the excavation of foundation and drainage trenches at The Former Drill Hall.

The earliest deposits identified appeared to comprise of post-medieval cultivation soils, possibly associated with a garden of former tenement plots fronting onto Old Market Street. All the structures identified during the watching brief appeared to be later than these deposits, and were founded on post-medieval levelling layers. In all likelihood the structures relate to the late 19th-century sugar refinery, which was rebuilt due to a fire which destroyed the original 17th-century refinery. In particular, the remains of a curved brick structure to the western edge of the site were probably part of a chimney stack. Several other stone-built walls were also exposed that appeared to have continued in use from the sugar refinery and were subsequently incorporated into the buildings of the XIth Battalion Territorial Army Headquarters in 1914. This apparent continued use was most evident along the southern and western boundaries to the site. No artefactual evidence was retrieved during the course of the watching brief that pre-dated the modern period.

Steve Sheldon & Kate Cullen, CA

No. 32 Old Market Street and No. 16 Redcross Street, ST 59662 73210. Seven evaluation trenches were excavated within the footprint of two adjoining properties (see below).

No. 16 Redcross Street - Trenches 4, 5 and 6

Evidence of activity associated with the development and settlement of the area during the medieval period was represented by a buried soil horizon. The nature of the deposits suggests human activity of low intensity, possibly associated with gardens or open space to the rear of tenements fronting Old Market Street. Assessment of the pottery assemblage dates this early activity to the 13th - 15th centuries.

The earliest structural activity was represented by a series of truncated gullies and postholes dated by pottery to the 17th - 18th century in Trenches 4 and 5. Subsequent deposits and structures were dominated by truncated masonry foundations and stone culverts of 19th-century date.

No. 32 Old Market Street - Trenches 1, 2, 3 and 7

Trenches opened closest to the Old Market Street frontage exposed a stratified sequence of post-medieval deposits between 1.4 m and 2.1 m deep.

The top of the weathered natural substrata was reached at around 2.1 m (*c* 13.65m aOD) below the modern ground surface in Trench 2, where it was overlain by a medieval soil deposit that produced a quantity of local Bristol and NW Wiltshire type pottery sherds of 13th -15th century date.

Subsequent deposits produced a standard range of ceramics and clay tobacco pipe fragments that indicated a gradual accumulation of deposits during the 17th to 19th centuries. Thereafter the trenches revealed increasing evidence for the digging of pits together with the construction of wall foundations and stone culverts during the 18th-19th centuries, alongside subsequent intrusions caused by cellaring (at the Old Market Street frontage), and modern underground services.

Lynn Hume, AAU

No. 114 Jacob Street, Old Market, ST 5972 7311, BUAD 4426. An evaluation and watching brief were undertaken as part of the redevelopment of the site. Two trenches were excavated. In both, the natural red sand was overlain by post-medieval garden soils which relate to former tenement plots fronting onto Old Market Street. These had been cut by the footings for the extant buildings which originated as an 18th/19th-century malthouse and/or brewery. The presence of a heavily truncated red sandstone wall towards the southern edge of the site may suggest that earlier, potentially medieval, structures once stood on the Jacob Street frontage of the site. The watching brief was undertaken during the excavation of trial pits. A post-medieval well and structural remains belonging to the former malthouse/brewery were identified.

Kate Cullen, CA

SS PHILIP & JABOB WITHOUT

The Forge Inn, Barrow Road, Barton Hill, ST 6056 7306, BSMR 24537. A photographic building survey was conducted on the Forge Inn prior to its demolition. The survey recorded the building internally and externally and found it to be largely of one phase of construction (19th century) with only minor cosmetic alterations.

Kevin Potter, BaRAS

Site off Braggs Lane, ST 5991 7335. A programme of building recording during demolition and subsequent area excavation was undertaken within the footprint of a site containing 19th - 20th-century industrial buildings including

part of a former malthouse.

By 1673 West Street was fully built up while the study area appears to have remained undeveloped until about 1719, when records refer to a house and garden situated in Back (Braggs) Lane. Further records refer to a number of small, low grade industries on Braggs Lane from the 1880s onwards, and in 1885 a building within the study area was in use as a malthouse.

The watching brief recorded late medieval soil deposits that overlay the natural substrata, truncated by a series of post-medieval buildings, including three cellars and a cistern dating from the early part of the 19th century. Associated with the cellars were a number of stone drainage culverts and a series of 19th-century wall foundations. A series of 19th-century brick built structures including fireplaces appeared to reflect former industrial, as opposed to domestic, activity, although their precise function was not established.

The evidence indicates post-medieval 18th-20th century activity and development on the site from the mid 18th century and individual structures from 1828, some corresponding directly with the recorded evidence.

Richard Payne, AAU

The Black Swan Public House, No. 438 Stapleton Road, ST 608 747, BSMR 24522. A desk-based assessment of a site comprising the Black Swan Public House, was undertaken. Historically the study area lay in the Manor of Barton Regis and the ancient out-parish of St. Philip and St. Jacob.

Although it has been claimed the Black Swan was founded in 1651, no evidence could be found for its existence before 1675, when Ogilby's plan of that date indicates a small area of dispersed rural settlement at the approximate location of the present building. The Black Swan is named on a Plan Book of Stapleton Parish compiled before 1753, and thereafter on all subsequent maps and plans of the area. During the 19th and 20th centuries various outbuildings were added and later demolished. In the late 19th century the Black Swan was the headquarters of Bristol Rovers Football Club.

The Black Swan and associated structures are Grade II Listed, the core of the building being of mid 17th-century date, with several later additions up to and including the 20th century. Much of the interior has been extensively altered.

Jo Bruce, AAU

Plot ND8, Temple Quay North, ST 598 727, BUAD 4354. A watching brief was undertaken during groundworks associated with a development of offices and a hotel on land to the north of Avon Street.

The western portion of the site had been heavily truncated by modern buildings and drainage works, such that no archaeological remains survived in this part of the site. To the east, large sub-rectangular pits cut into alluvial clay were recorded during the course of the works. The pits were later used for industrial and domestic waste disposal indicated by quantities of brick, tile, ash and glass slag. Pottery retrieved from the fills of the pits was 18th-century in date. The area is marked as 'The Brick Fields' on a map of 1742 and these pits are presumed to have been originally excavated for clay extraction. The pits were sealed by an extensive deposit of cultivation soil indicating a period of less intensive industrial and occupational usage of the area. This is borne out by a map of 1828, which depicts the site under cultivation.

The cultivation soil was cut by substantial sandstone foundations, which are likely to be from the buildings of the Avonside Engine Works depicted on the 1st Edition Ordnance Survey map of 1883. The sandstone walls were truncated by concrete structures which are probably associated with the development of the site as a paper works in the early 20th century.

James Tongue, CA

ST STEPHEN

Marsh House, No. 11 Marsh Street, ST 58690 72805, BUAD 4262. A watching brief was carried out at Marsh House. No features or deposits of archaeological significance were observed during the intrusive groundworks.

Heather Hirons, BaRAS

Nos. 66-73 Queen Square and Nos.22-26 King Street, ST 58730 72665, BUAD 4403. A desk-based assessment found this area was first developed on the open land known as 'The Marsh' in the 1660s and 1710s and 20s, respectively. All the buildings in the square and many in the street were destroyed during the Bristol Riots in 1831. Replacement houses in the square were of different proportions, while warehouses replaced those lost in the street. Commercial usage took over for more of the premises during the ensuing century. Properties at the west end were cleared in the later 1930s for the new dual carriageway, and there was additional loss in the Blitz. Modern offices replaced warehousing in King Street in the early 1970s, while former houses in the square were joined into larger offices. The west end was redeveloped with new offices in the 1980s.

John Bryant, BaRAS

ST THOMAS/TEMPLE

Nos. 32-36 Victoria Street, Redcliffe, ST 59215 72805, BUAD 4389. An excavation was carried out in two stages. The first phase of excavation recorded the partial remains of five medieval tenement plots that fronted Temple Street with well-preserved sequences of stratified domestic floor surfaces and hearths dating from the first settlement in this part of the marsh through to the 16th century. Several coins were found within the strata of floor surfaces. The second phase of excavation revealed the corner of a medieval building, again with floor surfaces and occupation deposits. Property boundary walls were on a medieval layout and deep deposits of garden soils were excavated. A length of one of the Law Ditches was exposed, this had been re-cut at

least once and appeared to have a bank on its eastern side with a stone revetment. A drainage ditch led into the Law Ditch from the east, presumably draining the properties on that side, or may itself have been an early property boundary. The drainage ditch had silted up and been truncated by a medieval rubbish pit. Leather artefacts were recovered from the fill of the ditch. The Law ditch was culverted in the 18th century and the culvert rebuilt in the 19th century when a ceramic sewer was laid along its base.

Reg Jackson & Andy King, BaRAS

TEMPLE

Counterslip, Finzel's Reach, ST 5922 7294. Excavations were carried out on the site of the former Courage Brewery. In the largest area of excavation, tenement plots extending back to the 12th-13th century administrative boundary of the Law Ditch were uncovered. These plots (on the west side of what was Temple Street) revealed at least three large brick and tile built ovens of probable 17th-century date, each associated with a separate tenement, but the pattern of rebuild seen in the masonry walls suggests that the use of these three tenements was connected. The combination of archaeological and documentary evidence indicates that these ovens were associated with the dyeing process.

Tenement divisions preceding the mid 13th century stone walls were revealed in the form of small ditches and posthole alignments, indicating that the stone tenements represent the second phase of building, the first being probable timber structures. Several barrel-lined wells of 13th-century date were also found. Further excavation of the Law Ditch revealed that it was cut into a very large channel possibly natural or prehistoric, which was later revetted. It is possible that the ditch was the eastern boundary of the defensive Saxon bridgehead of Brygstow, though this remains speculative at this stage before detailed analysis. The channel had a natural curve to the north and west, which still dictated the layout of this part of the city in the 18th century when the new Bath Street was built on the same alignment.

A particularly interesting find from a 12th-century pit was of the wooden bridge of what was probably a rebec, a medieval plucked stringed instrument that was brought from the Middle East by returning crusaders.

The river front area revealed part of a large wooden water pipe (probably elm) of 17th to 18th century date, which would have been part of a water supply system, carrying water from the River Avon into domestic or more likely industrial buildings. Work in this area has also revealed two large, well preserved, ship timbers. These stratigraphically pre-dated the Sugar Factory building, so could belong to the early 19th century or earlier, perhaps *c* 1500-1820.

Kate Brady, OA

WESTBURY-ON-TRYM

Elmlea Junior School, Elmlea Avenue, Westbury-on-Trym, ST 5687 7638, BSMR 24547. A watching brief was carried out during groundworks associated with the construction of four new classrooms, entrance/reception and a staff room and studio. No features or deposits of archaeological significance were observed.

Stuart Whatley, BaRAS

The Greenway Centre, Doncaster Road, Southmead, ST 57845 78005, BSMR 24538. A watching brief was carried out during groundworks associated with additions and alterations to the existing community centre. No archaeological remains within the area of the intrusive groundworks, other than 20th-century made ground was found. Until the mid-20th century this had been part of a farm, so may be located within an associated field or open ground.

John Bryant & Rachel Heaton, BaRAS

The Primary Care Centre, Priory Dene, ST 5726 7735, BSMR 24524. A watching brief on the site of former allotments revealed little of archaeological interest, the only discovery being a circular pit of unknown date.

Kevin Potter, BaRAS

Redland Parish Church, Redland Green Road, Redland, ST 57975 74990. A watching brief was carried out in the churchyard surrounding Redland parish church. Groundworks revealed the tops of four brick-built burial vaults in the churchyard, north-west of the church, each of which was capped with Pennant flagstones. No other features or deposits of archaeological significance were observed.

Tim Longman, BaRAS

No.30 Sabrina Way, Stoke Bishop, ST 5518 7569, BSMR 24556. A watching brief was carried out which revealed no archaeological features or deposits within the development area.

Kevin Potter, BaRAS

No.25 Shipley Road, Westbury-on-Trym, ST 57186 77656, BSMR 22431. A watching brief was carried out on an area that was within farm fields until the inter-war period. No features or deposits of archaeological significance were observed, other than a reinforced concrete bomb shelter.

Jocelyn Davis, BaRAS

WHITCHURCH

David's Road, ST 6125 6889. A desk-based assessment was undertaken on an area of land measuring approximately 1.7 hectares, located at the northern edge of Whitchurch.

Historically, Whitchurch belonged to Keynsham Abbey, in whose hands it remained until the Dissolution around 1539 when it returned to Crown ownership. Around 1541 it was granted to Sir John Loe before passing to the Smyth family of Ashton Court at the end of the 16th century. The Manor remained with the Smyth's until the 20th century.

The earliest cartographic depiction of the study area was Donne's 1769 map. The small nucleated village of Whitchurch was shown some distance to the south of the

site. No buildings are shown in the vicinity of the study area, which appeared to lie in open countryside. The 1846 Brislington Tithe Map shows the study area as lying largely within an enclosed pasture named 'Upper White Cross', presumably affiliated to White Cross Court, a short distance to the south.

No structures were depicted within the study area until the 1938 OS plan, by which time Nos. 2-10 David's Road had been built together with houses on the East side of Wells Road.

Jo Bruce, AAU

NORTH SOMERSET

BACKWELL COMMON

Meadow Lodge, Backwell Common, Backwell, ST 486 698, NSSMR 47395. A watching brief was carried out on the site of a 19th-century coalmine and tip. The groundworks revealed a concrete cap, probably covering a disused mine shaft, and associated walls.

Jocelyn Davis, BaRAS

BANWELL-ROWBERROW

From NGR ST 340507 158663 to ST 344183 158618, NSHER 47366. A targeted watching brief was conducted during the installation of a new water main between Banwell and Rowberrow. A discontinuous, stone linear alignment was recorded, possibly the surviving core of a Roman road surface. In the second area, several post-medieval date features were recognised and recorded, and a small pit may originate from a much earlier period. No other features or archaeological deposits were noted.

Nick Corcos & Rachel Heaton, BaRAS

CONGRESBURY

Frost Hill, Congresbury, ST 4400 6506, NSHER 47390. A desk-based assessment was carried out for land at the Cadbury House Hotel and Country Club, Frost Hill, the site lying under the lee of the north-west section of the ramparts of Cadbury Congresbury hillfort, a Scheduled Ancient Monument. An antiquarian account of a Roman cemetery possibly very close to the development site, just to its south-west, was highlighted in the report as having archaeological implications for groundworks associated with the development.

Nick Corcos, BaRAS

NAILSEA

The Tithe Barn, St Mary's Grove, ST 4659 6990, NSHER 47392. A desk-based assessment was undertaken. The original building (Grade II* listed) is considered to date to the 15th century although was found to incorporate later extension and alteration work. Hannah More used the building as a school in the first half of the 19th century. The building served an educational purpose until the 1970s and from 2000 was in use as a community centre. The barn was considered to be of modest size when compared to the great monastic tithe barns known elsewhere. Its location within the core medieval-settlement of Nailsea (centred on nearby Holy Trinity Church) suggested that the study area comprised land having archaeological potential.

Andrew Townsend, BaRAS

SOUTH GLOUCESTERSHIRE

DOWNEND

Land at the rear of Nos. 29-31 Queensholme Drive, ST 6516 7817, SGSMR 18098. A desk-based assessment was carried out on the site which was undeveloped pasture until 1657 when it was purchased by the Quaker movement for use as a burial ground, with 750 interments up to the year 1800. The last burial took place in 1818 and the site was not in use after this date but remained in the possession of the Society of Friends until 1951. From 1882 until 1955 it was depicted on OS plans as a walled area planted with trees. In the late 1950s, when the present housing development encroached on the surrounding fields, the properties of Nos. 29-31 were constructed immediately east of the burial ground. The rear garden boundaries of these properties were laid out to respect the edges of the burial ground and soil appears to have been imported to raise the ground level. There is no evidence to indicate that the burial ground has ever been cleared of human remains.

Andy King, BaRAS

FILTON

Employment Land, Hewlett Packard, ST 6180 7800. An evaluation was undertaken in September 2007. Thirty-one trenches were excavated across the proposed development area. Modern ditches were identified and a sherd of medieval pottery was recovered from an unstratified context.

Mike Rowe, CA

Filton High School, ST 61737 79478. A watching brief was carried out during groundworks associated with geotechnical trial pits. No features or deposits of archaeological significance were found.

Jocelyn Davis, BaRAS

Hortham Hospital, ST 6181 8424. A watching brief following an earlier evaluation and excavation revealed two ditches sealed by a stone surface recorded in the previous excavation. Finds recovered from these deposits dated to the Romano-British period and were also broadly contemporary with those recovered during the excavation. Evidence for a number of phases of construction of the stone surface was identified. One steep circular pit was also found in the vicinity and found to contain further Romano-British pottery.

Jon Bennett, CA

HANHAM

Site off Abbots Road, ST 6425 7110. A desk-based

assessment was undertaken for a site off Abbots Road.

The earliest map of the study area is a *c* 1670 plan of West Hanham. The plan is not sufficiently accurate to place the study area with certainty, but a building is shown in the near vicinity. That building was not shown on Taylor's 1777 map. By the 1843 Hanham Tithe Map the present boundaries of the study area were delineated and the site was described as a piece of arable land named 'Crews'.

The 1892 first edition OS plan shows a large unidentified feature at the approximate location of a large sub-circular depression viewed during a site visit.

Aerial photographs show an area of medieval ridge and furrow cultivation in the north-east part of the site and from 1946 onwards, a large sub-circular negative feature of uncertain origin can be seen in the approximate location of that previously indicated from the site visit.

Jo Bruce, AAU

HAWKSBURY UPTON

Land to the rear of Blue Boy House, High Street, ST 778 869. A desk-based assessment was undertaken of a site measuring approximately 1150 square metres off the south side of High Street, Hawkesbury Upton.

The study area consisted of an access lane and an area of overgrown land containing a stone barn and a derelict stone pigsty.

The earliest reference to a settlement at Hawkesbury Upton was in a document of AD 972 when 'Uptun' was given along with various other lands by King Edgar to Pershore Abbey.

The form of the historic settlement together with documentary evidence indicated that it was probably laid out as a planned town by Pershore Abbey during the 13th century. Following the Dissolution, Hawkesbury Upton reverted to the Crown before passing to John Butler of Badminton. Around 1620 the Manor passed to Sir Robert Jenkinson, in whose family it remained until at least the 1930s.

The earliest cartographic depiction of the study area was the 1840 Hawkesbury Tithe Map, which depicts a stone barn and pigsty as well as a structure of unknown origin in the south corner of the site. The study area lies within a larger parcel of land together with Blue Boy House (Listed Grade II) and Malthouse Cottage, which is described in the accompanying apportionment as a house, malthouse and garden. The 1882 OS shows a further structure of unknown origin in the study area close to the eastern boundary. By the 1903 OS this structure is no longer shown and the building in the south corner of the site appears to have become derelict and, by 1979, to have been demolished.

Jo Bruce, AAU

IRON ACTON

Acton Court, ST 675 841, SGSMR 18190. A watching brief was conducted on groundwork connected with the insertion of a new domestic drain. No significant finds were recovered.

Raymond Ducker, AAU

OLD SODBURY

Land adjacent to No. 15 Church Lane, ST 756 816. A watching brief was undertaken on an access corridor, grass tennis court, boundary hedge and part of an adjoining pasture at West View House.

The groundwork comprised topsoil stripping followed by general ground level reduction to a depth of between 0.40m and 1.8m. The interior of the adjoining field that lay within the study area was subdivided by a number of low earthworks, previously surveyed by M. Corney and N. Morris. These earthworks were suggested to form part of the remains of a shrunken settlement of medieval origin.

Deposits of topsoil sealing a number of soakaways, an irregular soil deposit of unknown date, subsoil, and archaeologically sterile clay were recorded. The undated soil deposit may have been associated with the earthworks in the adjoining agricultural land, but the nature of the deposit could not be determined.

A small assemblage of finds was recovered mostly from unstratified contexts. The majority of the finds were post-medieval in date, but a single sherd of Romano-British pottery and a single sherd of Bronze Age pottery were also recovered, both as residual finds from stratified contexts. The finds represent an assemblage indicative of low-level human activity in the immediate vicinity and suggest that the earthworks in the adjoining field relate to previous agricultural activity as opposed to intensive settlement.

Raymond Ducker, AAU

OLDBURY ON SEVERN

Wisteria House, Camp Road, ST 6084 9266. A watching brief was undertaken at Wisteria House during groundwork for a double garage and store in the northwest corner of the property bordering Westend Lane. Wisteria House is situated on the western side of the nationally important Scheduled Ancient Monument, Oldbury Camp/The Toot, a probable late Iron Age defended enclosure delineated by a substantial ditch and internal bank (SAM No. 12005).

No archaeologically significant structures, deposits or finds were located and notably, there was no evidence the earthwork defining Oldbury Camp/The Toot extended into the property.

Donna Young, AAU

STOKE GIFFORD

Filton High School, New Road, ST 61737 79478, SGSMR 18172. A desk-based assessment was undertaken. Evidence was found for significant prehistoric, Roman, medieval and post-medieval activities in the areas of Stoke Gifford and Filton. The documentation examined indicated that the study area was used for agricultural purposes from at least the early 18th century until the time it was developed for the Filton High School in the late 1950s. Evidence for possible agricultural features and World War II anti-landing ditches were observed on the study area during the walkover survey. Archaeological monitoring of geotechnical pits on the study area, however, revealed no features or deposits of

archaeological interest. A feature of interest observed immediately outside the study area was a World War II Balloon Command anchor-station (assigned SGSMR 18185) and anti-aircraft gun-pit (assigned SGSMR 18186), although it appears that no traces of these features survived.

Jocelyn Davis & Andrew Townsend, BaRAS

THORNBURY

Nos. 16-18 Castle Street, ST 6370 9031, SGSMR 18173. An evaluation was carried out to locate burgage plot boundaries, which may have extended east across the site from the Castle Street frontage. Two trenches were excavated, the first contained evidence of a possible boundary wall, two small gullies and a fairly modern pit. The second contained no evidence of plot boundaries, however, a number of pottery sherds dating to the medieval period were recovered suggesting activity beyond the current known boundary.

Rachel Heaton, BaRAS

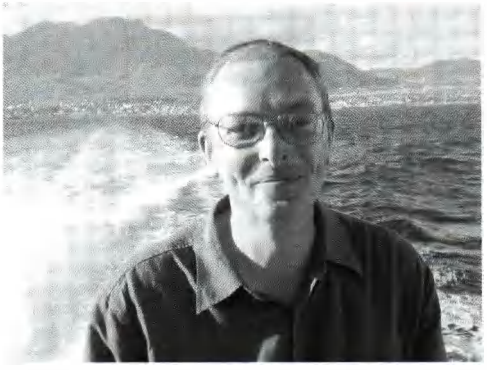
WICKWAR

Westend Farm, Westend Road, ST 7136 8802, SGSMR 18097. A building-survey and watching brief were carried out at Westend Farm, with former farmyard outbuildings recorded (see report, this volume). The earliest structures were a corn barn and a former pigsty that may have dated from the late 17th century. An adjoining cowshed dated from the later 19th century and the most recent buildings were a former granary and a dutch barn that were constructed between 1902 and 1921. During groundworks a stone-built drain with slab capping was exposed that was contemporary with the cowshed.

Andy King, BaRAS

OBITUARY

Jon Brett
1966-2007



Jon Brett, who died suddenly on 23rd March 2007 aged 40, made a formidable contribution to the knowledge, understanding and conservation of the archaeology and historic buildings of Bristol, and his death will be sorely felt by his friends and colleagues in the spheres of Archaeology, History and Planning. Jon was born in 1966 and was educated at Newport Free Grammar School, in Newport, Essex and at the University of Warwick where he studied Renaissance and Modern History. More recently he gained a Masters degree in Geographical Information Systems and Environment at Manchester Metropolitan University.

In Bristol he made a major contribution to bringing together knowledge of the city's built and archaeological heritage through his construction for the City of Bristol and English Heritage of the Bristol Urban Archaeological Database, a continuing major source of information about the city's history and archaeology. His lasting legacy will be the Assessment of Bristol's archaeology, of which he was the principal author and which is now on its way to publication. Jon had the ability to spot the potentially important opportunity and was much informed by his own reading of current literature and ideas. Friends and colleagues learnt of many a new significant piece of writing through Jon's recommendations.

He was always ready to assist in and contribute to a wide range of projects and initiatives, including the Bristol Legible City programme and the exhibition 'Thinking of the Outside', where the historic centre of Bristol was transformed into a huge art gallery. Jon was one of prime instigators behind the project where a number of leading artists came together to use the medieval defences of the city to re-examine present attitudes and the concept of boundaries.

His death will be an especial loss to the world of historical or post-medieval archaeology. Jon's support for the Society for Post-Medieval Archaeology's conference on colonial landscapes held on Nevis in 2005 followed his own contributions to archaeological research on Nevis and St Kitts in the preceding year with a team from the University of Southampton, Bristol Museum and National Museums Liverpool, and might have led, but for his early death, to his input to constructing archaeological databases to protect the archaeology and built heritage of these two islands.

Jon was an entertaining companion with a very positive approach to life, a kind and gentle man whose loss will be much felt by all who knew him. His patience and good humour and his willingness to impart the fruits of his great knowledge will be much missed.

Photo by Rob Philpott, National Museums Liverpool.