

Chichester *Thermae* reconsidered

RECENT EXCAVATIONS AT TOWER STREET, CHICHESTER

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The re-exposure of the Roman public bathhouse in Tower Street, Chichester, to form the centrepiece of the new Novium museum, offered a unique opportunity for the reassessment of our understanding of the building. The bathhouse, previously excavated by Alec Down in the 1970s, was re-recorded using modern GPS techniques. Based on this updated survey, new interpretations can now be offered. In addition, part of the associated Roman sewer ditch was also excavated, as well as previously unknown archaeological features. Using recent work and the earlier published accounts, an attempt has been made to rephrase the whole of the known structure and offer some further comments on its likely form and use. An earlier revised end date for the use of the baths is also proposed.

INTRODUCTION

The site of the Roman bathhouse in Chichester was first investigated in the 1970s by Alec Down in a pioneering excavation into the Roman, and later period, evolution of the north-west quadrant of the city (Down 1978). During this work, virtually all the post-Roman deposits were removed, but part of the bathhouse, a *caldarium* room, was left *in situ* by Down, in the hope that one day it might be made accessible for public display.

That aspiration finally came to fruition in 2011. As part of the planning for the building of a new museum for Chichester, to become known as the Novium, an archaeological excavation was required to revisit the earlier excavations and expose the bathhouse remains, ahead of public display in the lower ground floor of the new museum (Figs 1 and 2; Archaeology South-East 2012). Residential development in the northern half of the site also allowed for the re-examination of a sewer previously excavated on both sides of Tower Street in the 1960s and 1970s (Archaeology South-East 2014). The site is bounded by Tower Street to the west, The Woolstaplers to the north, and an access road to the east (NGR SU 859049). In terms of the geography of the Roman town, the bathhouse lay at its very heart, probably close to other public buildings such as the forum (Fig. 3).

ARCHAEOLOGICAL BACKGROUND

The site has a long and complex history of archaeological investigation, starting with the

large-scale excavations carried out by the Chichester Excavation Committee in 1974 and 1975 (Fig 4; Down 1978). In 1990, trenches were dug by the Chichester District Archaeology Unit to re-identify the bathhouse and cistern (Browse 1990). Finally, a series of investigations by Archaeology South-East were carried out between 2008 and 2014 (Archaeology South-East 2008; 2012; 2014).

THE 1974–75 TOWER STREET EXCAVATIONS

The excavations directed by Alec Down in 1974 and 1975 at Tower Street were part of a wider series of rescue excavations carried out across Chichester in advance of multiple redevelopments (Fig. 4; Down 1978). They identified a small residual assemblage of Iron Age pottery and coins suggesting some pre-Roman activity on the site, although the earliest definable activity dated to the years immediately following the Roman conquest (Down's Periods 1 and 2). This activity consisted of an initial levelling of the site, with some possible beam slots representing early structures (Period 1), followed by the construction of at least three timber buildings interpreted by Down as possibly of military origin (Down 1978, 140), although this interpretation has recently been scrutinised (Magilton 2003) and is now open to question.

The subsequent Period 3, as defined by Down, covered the construction, use and disuse of the Roman bathhouse, which dominated the southern half of the site. The initial activity in this period included a series of insubstantial timber buildings, interpreted as possible workmen's huts associated with the construction of the bathhouse, which were eventually sealed by an extensive layer of gravel and

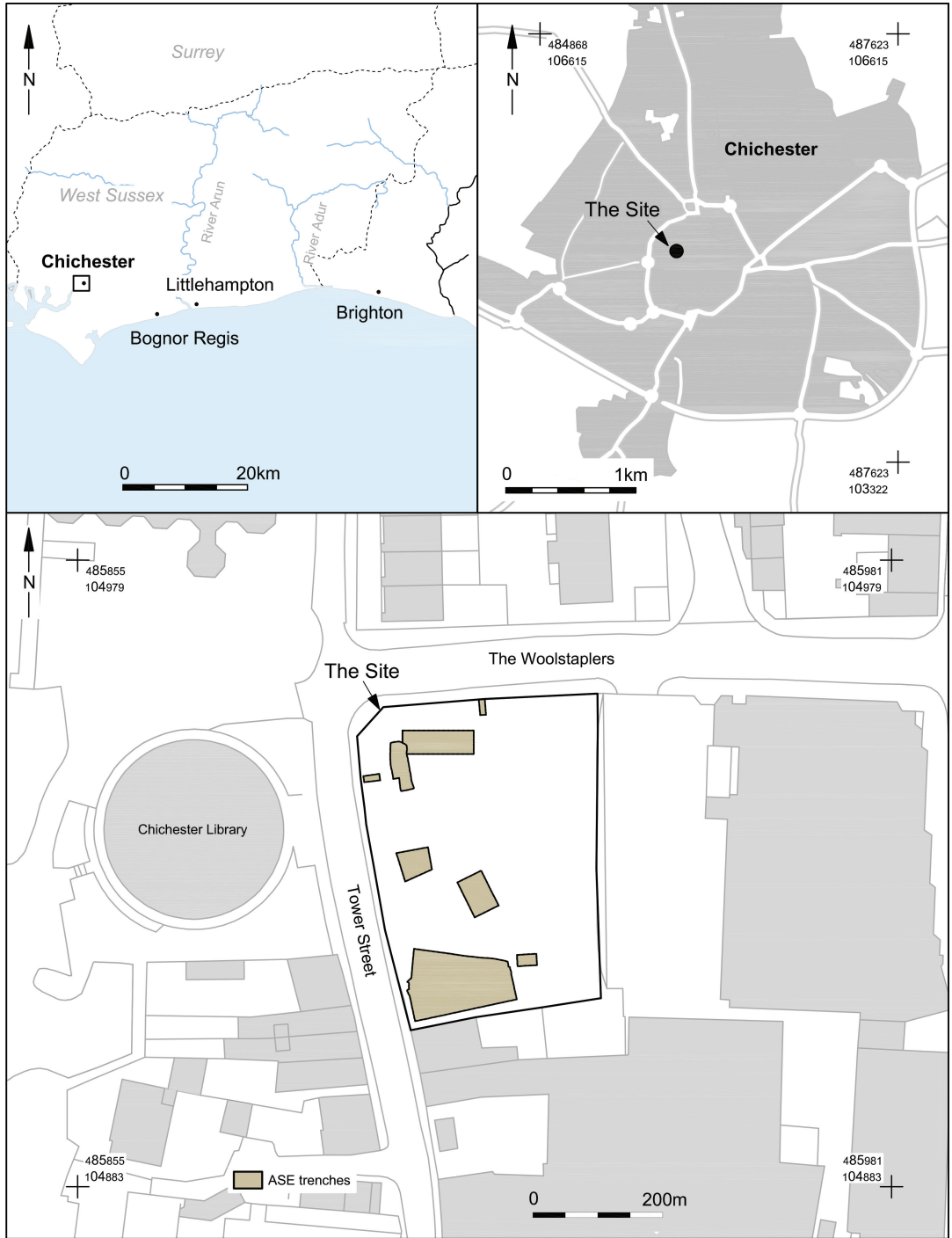


Fig. 1. Site location.



Fig. 2. The excavation of the bathhouse.

mortar hard-standing, laid down on completion of the baths (Down 1978, 140–1).

There remains uncertainty around the date of the initial construction of the bathhouse. Down based his Flavian date mainly on finds from what he believed was a large construction trench for the building and from the adjacent cistern (1978, 142–4). However, our re-excavation of the former feature suggests that this is more likely to represent a robber trench ([101]) and, therefore, its finds cannot be used to date the construction of the bathhouse.

In its earliest form, the bathhouse consisted of a range of two hot rooms in the southwest of the site, with an associated ‘stokery’, and a range of tepid and cold rooms to the east and north of the hot rooms (Period A; Down 1978, 145–9). Of particular interest was the most western of the two hot rooms, which was apsidal in form and appeared to be built within a much larger, rectangular, foundation cut of uncertain origin. Down surmised that this may have been originally intended to house the ‘stokery’ for the bathhouse, but that this was abandoned in favour of the eventual location further to the east.

The most recent excavation suggests this might not be the case.

The water supply for the baths consisted of a masonry structure of massive proportions that presumably supported a cistern at sufficient elevation to provide an adequate head of pressure, initially thought by Down to comprise a rectangular structure, but subsequently shown to be D-shaped in plan (Down 1978, 143–6; Browse 1990). The baths were further serviced by a drain which fed into the main east–west sewer running through the northern half of the site (Down 1978, 151).

Subsequent modifications were made to the bathhouse during its lifetime. These included the conversion of the warm rooms to cold rooms and the addition of a new hot room during the later 2nd century AD (Down’s Period B). During the 3rd and 4th centuries, a new channelled hypocaust was added and a previously unheated room was converted into an additional ‘stokery’ (Down’s Period C). While the abandonment of the baths was poorly understood, the results of Down’s work suggested a relatively protracted decline, in concert with evidence from elsewhere in the town, with the

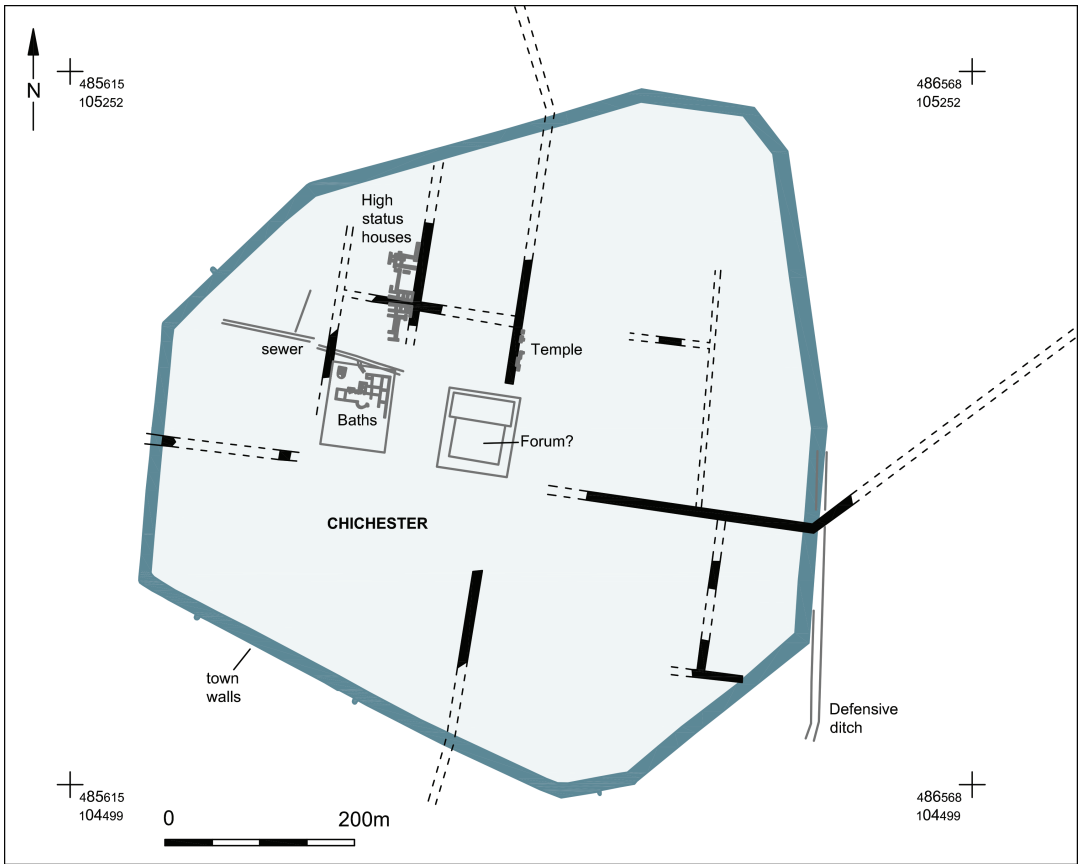


Fig. 3. The bathhouse in relation to the rest of known Roman Chichester (after Down 1988).

baths eventually falling into disuse in the later years of the 4th century (Down 1978, 152).

Elsewhere on the site, Period 3 activity included three phases of poorly preserved timber buildings in the north of the site, between the cistern and drain, including the remains of both post-built and sill-beam buildings. Following the abandonment of the bathhouse in the later 4th century, the site appears to have remained unoccupied until the Saxon and Saxo-Norman periods (Down 1978, 158–61).

REMAINS OF THE BATHHOUSE SEEN ELSEWHERE

The Tower Street excavation only explored the north-west portion of the bathhouse, with much of the structure lying beneath commercial buildings to the south and east, and under Tower Street to the west. The monitoring of the redevelopment of Morant's department store (now House of Fraser), to the immediate south, in the 1960s identified

a geometric mosaic floor and masonry structures (Holmes 1965 10–13; Fig. 4). The floor, of late 1st-century date, was located in the east of the building (Neal and Cosh 2009, 519; Fig. 5). A tessellated floor was also discovered in the adjacent room to the immediate north, laid over a filled-in, cross-flue hypocaust (Down 1978, 145). In the south, Holmes recorded a large apse built over the wall and floor of an earlier phase of building. He interpreted this apse as a cold plunge bath (1965, 10–13). To the south of the apse was an area of gravel, interpreted as part of the bath's exercise yard or *palaestra*, and possibly enclosed by a colonnaded wall (Down 1978, 145).

Elsewhere, other masonry elements were found in service trenches monitored by Down in the 1970s (Fig. 4). These included parts of a hypocaust and wall foundation in the centre of Tower Street, to the immediate west of Down's Room 1. Down points out that as no remains were found beneath

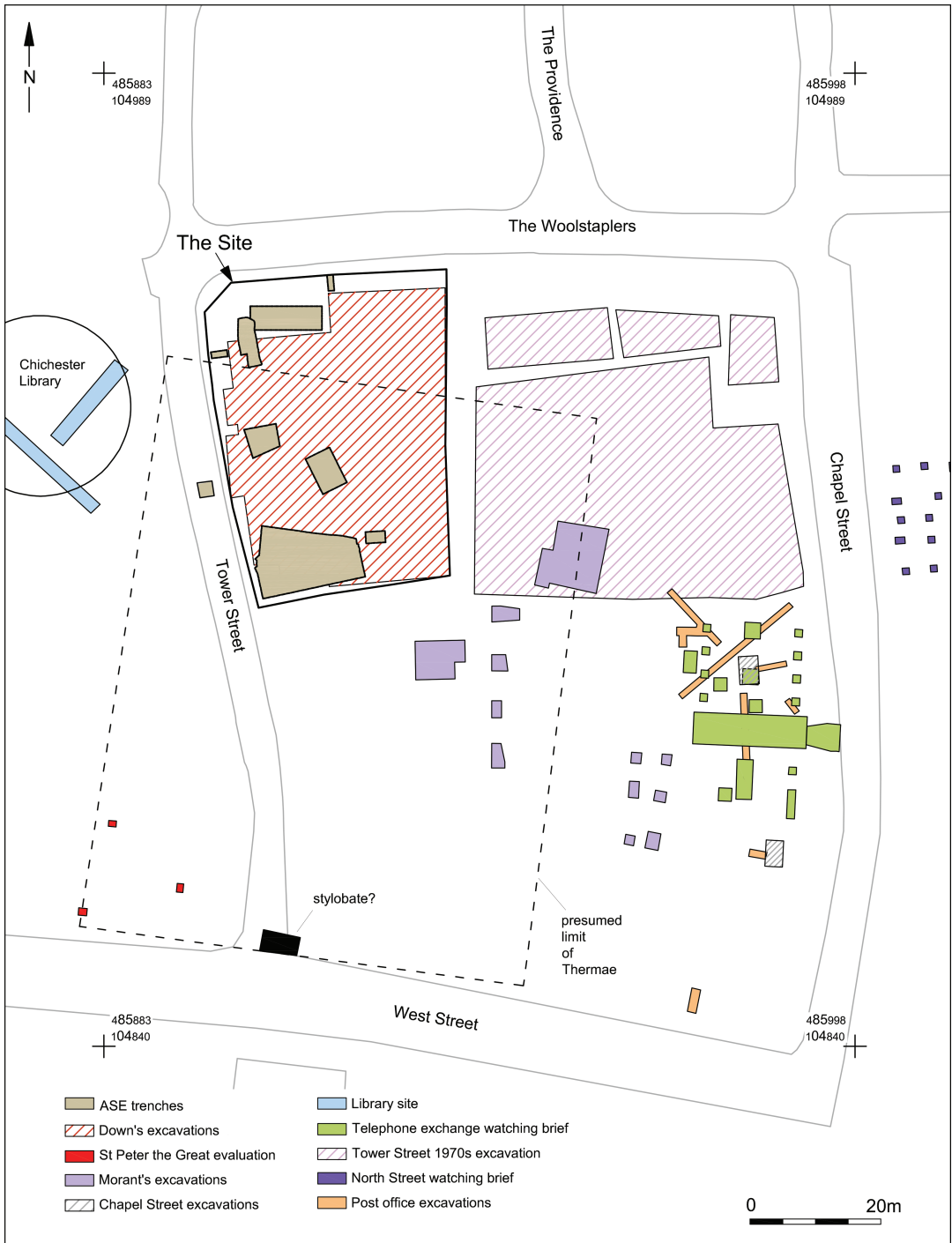


Fig. 4. Plan of the locations of the previous excavations near the bathhouse in the north-west quadrant.

Chichester Library, the western limit of the bathhouse lay somewhere on the west side of Tower Street (*ibid.*).

Further monitoring at the junction of Tower Street and West Street in the 1970s may have identified the southern limit of the bathhouse, with three wall foundations seen in a narrow service trench. The most notable of these was a large (1.8m wide) east-west wall of limestone and greensand blocks, interpreted as a possible *stylobate*. The other two walls to the immediate south were parallel and markedly smaller (0.3m wide), but Down could offer no interpretation for these (*ibid.*).

INTERPRETATIONAL PROBLEMS

Although the extent of the bathhouse complex seems to have been largely defined, aside from the elements within the 1970s Tower Street excavation, the understanding of its layout and development is very poor. The main problems are that the observations and interpretations are either based on a small number of minor interventions (such as in the service trenches on the south side), or when larger areas were exposed and, despite the heroic efforts of the local archaeologists, little time was allowed for anything more than rudimentary excavation and recording. Areas particularly difficult to understand are the Morant's store excavations (Holmes 1965, 10–13) and those on the eastern side of the building (Down's Area 3). In these excavations, multi-phase structures were identified but, largely due to expediency, they could not be fully explored and their precise chronology is unknown.

In the Tower Street excavation, there has long been a suspicion of errors in the original surveying of features (James Kenny, pers. comm.). A good example of this is that, on re-examination in 1990, the stone cistern was found to be D-shaped and not square, as planned in the 1970s (Browse 1990). In addition, the bathhouse structure itself had previously been described only in summary detail (Down 1978, 145–9), and this clearly needed re-addressing.

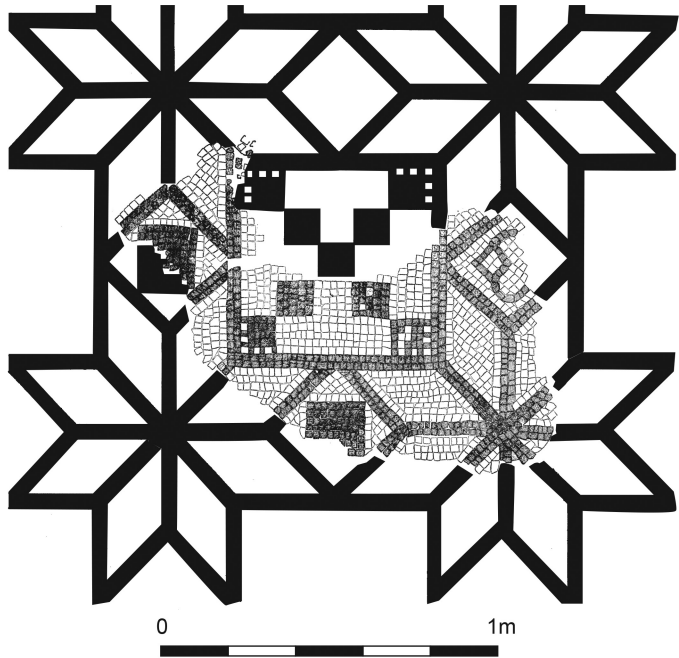


Fig. 5. Geometric mosaic excavated in the 1960s, located in the east of the building, probably near the entrance.

The opportunity to revisit the Tower Street excavation therefore offered a unique chance to both clarify several outstanding issues with the form of the surviving structure and enable a wider re-appraisal of the bathhouse in its urban context. For ease of reference, the recent excavations have adhered to the period structure imposed by Down on all his investigations in the north-west quadrant between 1968 and 1975 (Table 1). In addition, Periods A, B and C were used by Down to separately describe the individual phases of the bathhouse.

THE FIELDWORK RESULTS

The fieldwork comprised two main elements: the re-exposure of the bathhouse structure and the excavation of a small area of surviving archaeological stratigraphy in the north of the site. This consisted principally of a small quarry pit and a length of the sewer ditch known from Down's excavations.

THE QUARRY PIT

Cut into the brickearth natural was quarry pit [135], about 3.5m in diameter and 1.8m deep, with steep sides and a flat base (Figs 6, 7 and 8). The feature

Table 1. Down's chronological framework.

Down's Roman Periods	Approximate dates	Down's Description
0	AD 43 at the latest	Pre-Roman Late Iron Age
1	AD 43 +	Claudian
2	AD 43–69	Claudian–Neronian
3	Flavian (AD 69) to early 2nd century	Flavian–Trajanic
4	Early to late 2nd to early 3rd century	Hadrianic–Antonine
5	Mid-3rd to early 4th century	
6	Early 4th to late 4th century	
7	Late 4th to 5th century	
Thermae Period A	AD 69–98	Probably Flavian
Thermae Period B	Mid/late 2nd century	Antonine?
Thermae Period C	Mid/late 2nd to 4th century	

was dug through the natural brickearth and gravel deposits approximately to the depth of the present-day water-table and is interpreted as a small quarry for material needed in the construction of adjacent buildings.

Soon after the digging of the pit, it began to fill with silt [148] and slumping of loose material from the pit walls [147]. The former fill contained a fragment of a rare lace mosaic glass bowl (RF <2>), of a type that is likely to have gone out of production by around AD 69. The partially filled quarry pit remained open into the 2nd and early 3rd century and was gradually filled by sporadic dumps, silting and slumping. One of these dumps [142] contained a residual fragment of decorated glass, probably from a Hofheim cup (RF <15>).

This quarry pit is likely to be contemporary with Down's Periods 1 and 2, consisting principally of two timber buildings (Buildings A and B), Ditch 3 and demolition dumps of charcoal and burnt daub (D40) from an earlier unidentified building (Down 1978, 140–2). The layer of demolition material (D40) excavated by Down lay immediately to the south of the 2014 excavation area. The similarity between this deposit and lower quarry pit fills ([136], [144] and [143]), also abundant in charcoal and fired clay, is notable and these may well relate to the same demolition event. This suggests quarry pit [135] was a contemporary feature with Down's pre-Flavian Ditch 3 and the timber buildings (A and B), interpreted as military stores (*ibid.*). Compared to other quarry pits known from Chichester, such as at Eastgate Square (Archaeology South-East 2012a), pit [135] was very small. However, it may represent a

single opportunistic event to gain a relatively small amount of aggregate for a nearby construction.

THE SEWER DITCH

The sewer ditch (Figs 9, 10 and 11) was previously excavated by Down in the 1960s and 1970s on both sides of Tower Street (Down's Ditch 1). The earliest form of the sewer identified was late 3rd century in date, although the repeated re-digging of the ditch may have removed all evidence for earlier phases. When the sewer was first established is uncertain. Although Down believed it was laid out during the initial planning of the town in the late 1st or early 2nd century (1978, 155), there is no archaeological evidence to support this.

Two ditch cuts were visible: an earlier, heavily-truncated cut (recorded as [6/021] in the evaluation trench), and the near complete profile of a later re-cut (recorded as [6/006] in the evaluation trench and [123] in the excavation; Fig. 10). The single fill ([6/020]) of the earlier ditch contained no datable finds, but a large finds assemblage was recovered from the re-cut (fills [134], [124] and [125]). Although little of the earlier ditch was seen, it is highly likely that it was of a similar form to the ditch re-cut. The ditch re-cut was V-shaped, with a square, box-like trench at the base measuring 3.25m wide and 1.3m deep, very similar to the ditch portions previously excavated elsewhere by Down. Although there was no evidence of surviving revetment, the form of the basal trench suggests it was almost certainly timber-lined, and contemporary with the first re-cut of the ditch previously excavated by Down to the east (1978, 151).



Fig. 6. Plan of the pre-Flavian features (Down's Period 2).

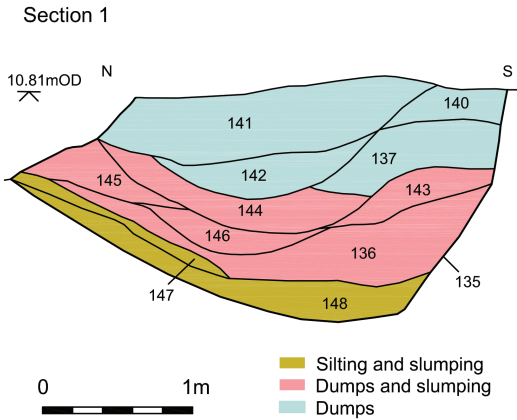


Fig. 7. Section of the quarry pit [135].

It is likely that the sewer was never an open feature; rather, it was a box-shaped drain, initially in masonry and later in timber, built in the ditch bottom and backfilled (James Kenny pers. comm.). Down interpreted the timber or masonry drain as extending vertically to the uppermost level of the

ditch, where it was topped with removable covers (Down 1974, 42). However, there is no evidence for this elaborate construction and the exact form of the upper portion of the drain remains conjecture.

Down interpreted some of his fills as water-lain silts deposited in the drain, but there is no evidence for such deposits in this portion. Rather, fills [134] and [124], broadly dating to the latter half of the 3rd century, are likely to be the deliberate backfill of the re-cut sewer ditch. The uppermost fill [125] had a slightly later date, the first half of the 4th century, and this may be interpreted as the infilling of the top of the feature after the backfill had settled and slumped (Fig. 10).

It is uncertain exactly which of the three ditch cuts excavated by Down to the east are contemporary with the earlier ditch and ditch re-cut. However, the bases of both ditch cuts were located *at around* 10.10m OD, suggesting that they relate to the first (around 9.75m OD) and second (around 10m OD) of Down's ditches. If this correlation is correct, the sewer had a relatively gentle gradient with a flow running west to east.



Fig. 8. The quarry pit [135] facing east.

The most recently excavated portion of the sewer ditch does not add significantly to the overall understanding of its dating and evolution, partly because the evidence of the earlier incarnations had been removed by the later Roman re-cuts. However, the investigation has confirmed what was already suspected and has clarified the ditch's location. Although a modest finds assemblage was recovered from the sewer ditch, Down's dating of the feature cannot be greatly revised.

As there is a fair degree of ambiguity regarding the overall alignment of the sewer ditch, these recent works, which included the use of GPS surveying, enable reassessment. In total, over 150m of the ditch has been seen intermittently from West Sussex County Hall in the west, to Chapel Street in the east. However, these various elements were often excavated under difficult rescue conditions and the accuracy of the plotting of this ditch is debatable. Examination of the plans produced during previous investigations of the sewer ditch reveals a clear misalignment between the excavated lengths either side of Tower Street (Fig. 3). This led to the suggestion that there are two separate, but parallel, sewers (Down 1988, 45), but a new survey of the feature has shown that the elements either side of Tower Street clearly belong to the same sewer ditch. Deciding which way the sewer drained is still a problem, as correlating the multiple re-cuts, full of abundant residual material, is fraught with potential error.

NEW EVIDENCE FROM THE RE-EXCAVATION OF THE BATHHOUSE

The bathhouse structure revealed within the excavation area



Fig. 9. The sewer ditch [6/006] facing east.

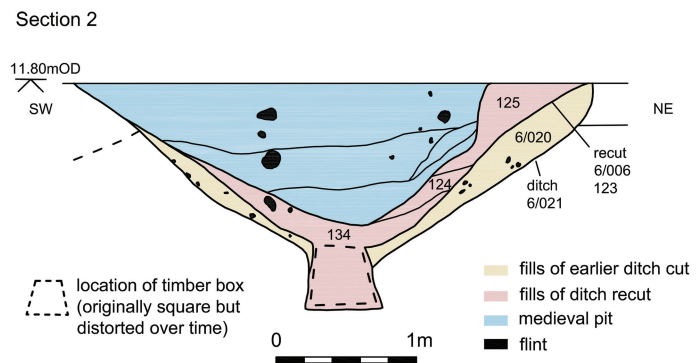


Fig. 10. Section of the sewer ditch.

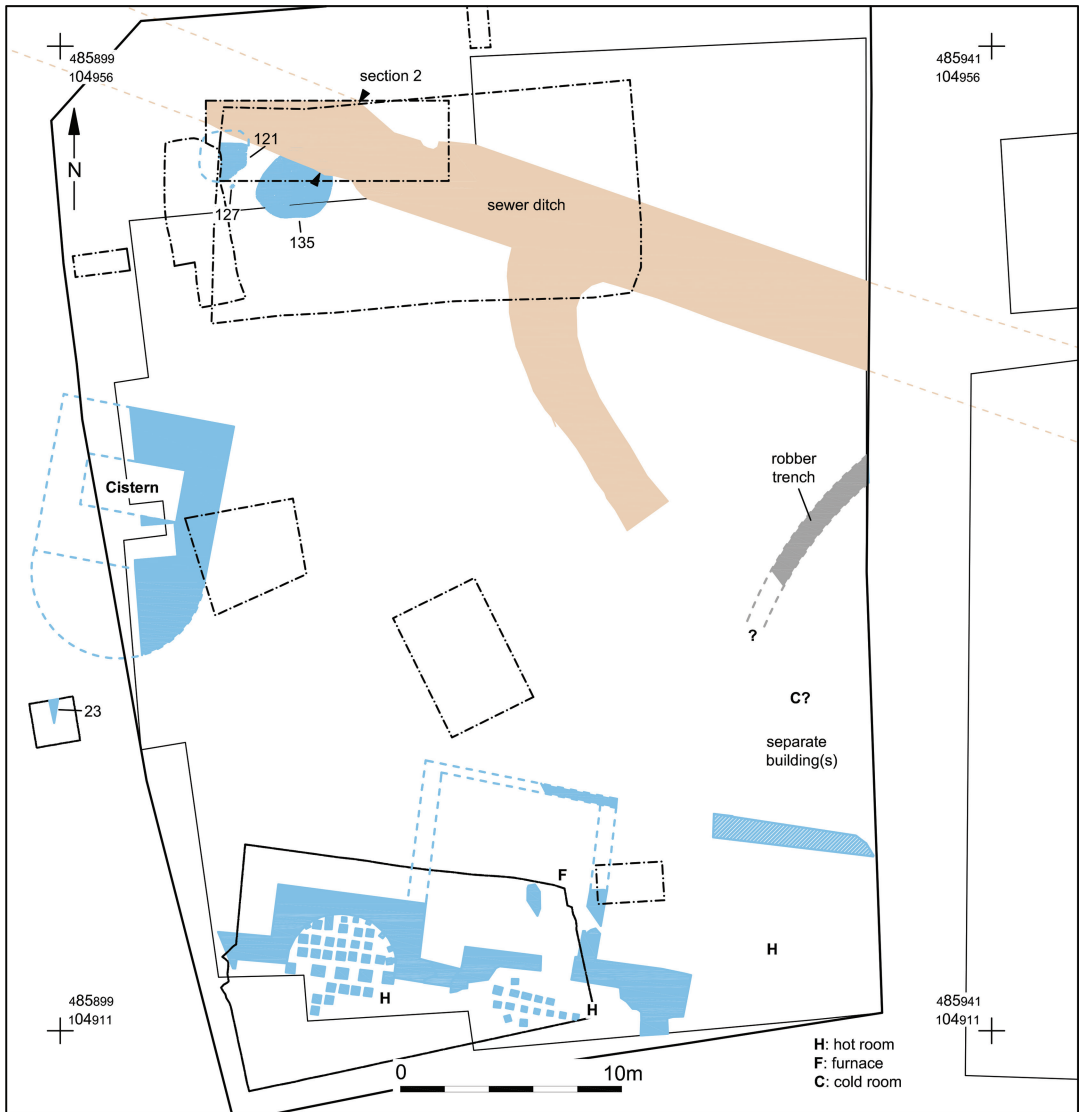


Fig. 11. Plan of the Flavian bathhouse and features (Down's Period A).

included parts of the northern external wall of the bath complex, a furnace and the remains of the internal hypocaust system, as well as areas of collapse and demolition that attest to the demise of the building (Figs 11, 12). Though much disturbed through later robbing, the form of the structure seems reasonably clear and preservation of the monument seems good, with very little evidence of degradation of the structure since its excavation in the 1970s.

Northern external wall

The northern external wall [77] of the bathhouse thickened considerably to accommodate an apsidal room (Down's Room 1). Down describes this as being built within the southern end of a much larger construction cut that extended further north and which was never utilised. The northern face of this section of wall was fully faced with squared limestone blocks to the base of the cut at around 11.24m OD, suggesting that this part of the wall



Fig. 12. Detailed plan of the bathhouse structure.

might have been intended, at least originally, to remain visible or exposed (Fig. 12). In contrast, elsewhere within the area of the excavation, such well-coursed external facing does not appear to extend below 12.20m OD, suggesting that finished ground level outside the building may have lain at around this elevation.

An additional room?

Of particular interest is a short spur of masonry projecting from the eastern corner of wall [77], which suggests the possibility of an additional room immediately north of the apse which has been almost completely robbed. In fact, careful re-examination of the surviving stratigraphic sequence suggests that what Down interpreted as a large construction cut might comprise robbing ([101]) of an additional room to the north of the surviving bathhouse, possibly abutting the furnace (Fig. 12).

Certainly, cut [101] seems to truncate deposits that also abut external wall [77]. Down himself notes that the area to the north of the bathhouse was covered with a layer of screeded mortar that appeared to peter out where it had a boundary with the deep excavation (Down 1978, 144), suggesting that this might constitute a hitherto unrecognised later intrusion.

Rooms 1 and 2: a single room

Internally, the hypocaust system was floored throughout with *opus signinum*, tiles broken up into very small pieces and mixed with mortar, measuring up to 0.30m thick and with a consistent floor level of around 11.48m OD. During the original excavation of the site, Down identified two rooms in this area: the apsidal Room 1 to the west and a simple rectilinear Room 2 to the east, separated by a later robbed-out wall (Fig. 12).

It should be noted, however, that no trace of any such dividing wall could be identified during the recent re-exposure of this part of the bathhouse. Rather, external wall [77] has a simple dogleg in its course and the evidence suggests that what was originally considered to be two rooms is, in fact, a single large room.

A brief comparison of Down's original excavation plan with the recent survey of the site is sufficient to show a significant error in Down's original plan, which places external wall [77] some 1.9m north of the southern limits of the excavation. The recent survey, on the other hand, clearly shows

that the external wall [77] and the southern limit of excavation intersect, leaving no room for Down's putative robbed-out dividing wall. It is possible that the assumption of the existence of a cross-wall in this part of the structure may have been an attempt to reconcile errors in the survey of the site with the observed evidence.

Western external wall of bathhouse?

A small test pit monitored in Tower Street itself, to the west of the site, identified a wall ([23]) of a trench-built foundation of flint and limestone supporting a brick superstructure (Fig. 11). The wall was on a similar alignment to the bathhouse and this masonry may form the part of the west external wall of the complex (see Fig. 16).

Evidence of a plunge bath?

The hypocaust system within the exposed remains of the bathhouse comprised various arrangements of *pilae* stacks constructed with three principal types of brick: small, square *bessales* bricks, larger *pedalis* bricks, and larger still *lydion* brick (Figs 12–13). The basic form of *pila* utilised consisted of a basal *pedalis* brick supporting a stack of square *bessales* bricks and this type was used throughout the exposed area. Additional types of *pilae* employed within the apse included simple stacks of *bessales* bricks arranged around the internal face of the apse, and large rectangular *pilae*, built of a combination of both *bessales* and *lydion* bricks. The different types of *pilae* in this room are likely to reflect the different functions of the superstructure, such as a plunge bath or *alveus* located in the apse, and the floor of the hot room (*caldarium*) to the south. In Roman Britain, the hot plunge baths were commonly located in apses and lacked the metal water-heating tank (*testudo*) known from continental baths (Yegül 2010, 92).

The decline and disuse of the bathhouse

Evidence for the disuse and decline of the bathhouse includes several collapsed *pilae* and an area of collapsed *opus signinum* flooring – still partially supported on surviving *pilae* – within the area of the apse (Fig. 14). The building was subsequently heavily robbed, probably during the medieval period, and several robber trenches were visible. There is little to suggest deliberate demolition or decommissioning of the building during the Roman period and certainly nothing to contradict Down's assumption of a slow decline.



Fig. 13. The apse in Room 1 facing north.



Fig. 14. Collapsed *pilae* stacks in the apse.

The date of the final use of the bathhouse has never been satisfactorily established and Down's proposal of the last quarter of the 4th century is based solely upon casual coin loss. However, a new date of around AD 325–350 can be suggested, based on the stratified finds assemblage from these recent excavations.

DISCUSSION

A substantial review was recently published of the contribution commercial archaeology has made to our understanding of the Roman towns of Britain since 1990 (Fulford and Holbrook 2015). Sadly, largely through the lack of opportunities to investigate significant new sites and the failure to publish on those that were, little new could then be said about Chichester (Fulford and Holbrook 2015, 69). With this in mind, the chance to revisit Tower Street appeared especially relevant. The pertinent question was: can the re-excavation of urban sites yield significant new evidence? We believe that this work has demonstrated that, even on sites where the majority of archaeological deposits have been previously removed, important evidence can still be gained from the re-mapping of structures and the excavation of the remaining isolated blocks of stratigraphy.

Several key points emerged from the re-excavation and resurveying of the bathhouse structure and sewer ditch. Firstly, Down's separate Rooms 1 and 2 were found to be a single large hot room. Also, the identification of an external stub of a masonry wall, contemporary with the initial construction, and an adjacent, large, rectangular robbed area, strongly suggest the presence of a hitherto unknown additional room immediate north of the apse. The two types of *pilae* stacks in the apse itself suggest the presence of a plunge bath or *alveus*. Finally, the probable western external wall of the bathhouse was identified, while the two separate lengths of sewer ditch excavated on either side of Tower Street were found to converge and be one and the same.

THE THERMAE: A RECONSIDERATION

In the light of the re-excavation of Tower Street, and using the other published accounts, we can attempt to re-phase the known structure and offer some further comments on its likely form and use.

Firstly, based on its size and central location, it is clear that this bathhouse was indeed a *thermae*:

a large public bathhouse run by the city. If Down's interpretation of the building's approximate layout is accurate, then the public baths covered an area about 5,500m square: a relatively large size, but quite feasible in the context of Roman Britain. In comparison with other towns, the Chichester public baths were roughly the same size as those at Exeter (Bidwell 1979, 121–3), but bigger than those at Silchester and Leicester and smaller than those at Wroxeter (Wacher 1976, 49–50). In terms of size, Chichester also compares well with other provincial bathhouses from around the Roman Empire (Fig 15). The central location of this *thermae*, most likely near the forum, indicates its importance in urban life; it was almost certainly the biggest public baths in the city. However, even small provincial towns usually had several public baths and Chichester would have had several smaller, neighbourhood establishments or *balneae* (Yegül 2010, 3–9). These have all, as yet, eluded detection.

Overall, the evidence suggests that rather than gradually expanding over time, the baths were already large to begin with. The location of the baths would have been established with the laying-out of the initial street-grid, along with the other public buildings such as the forum. The site of the baths was therefore likely, over time, to have become fossilised within the urban form, and this dictated its later developments. Although the size of the baths is likely to have remained relatively constant, that is not to say they did not evolve, for there were at least three phases of major reconstruction. This often involved changing the function of rooms, such as from heated to unheated and, almost certainly, altering the internal layout and movement of people through the building. The apparent consistent arrangement of hot rooms in the west and the gradually colder rooms in the east suggests that the entrance was in the latter (see Fig. 3). No evidence of any entranceway has been found, but the bathhouse is likely to have had a series of them. It was, after all, a large public building, and bathers are likely to have entered through a different door to furnace stokers or slaves. Indeed, in larger baths, men and women also often entered via different doors.

Although people could bathe as they wished (Yegül 2010, 18), it is possible to suggest a typical movement of bathers through the building, based on historical sources (*ibid.*, 11–20). They would have entered the mosaic-floored eastern entrance,

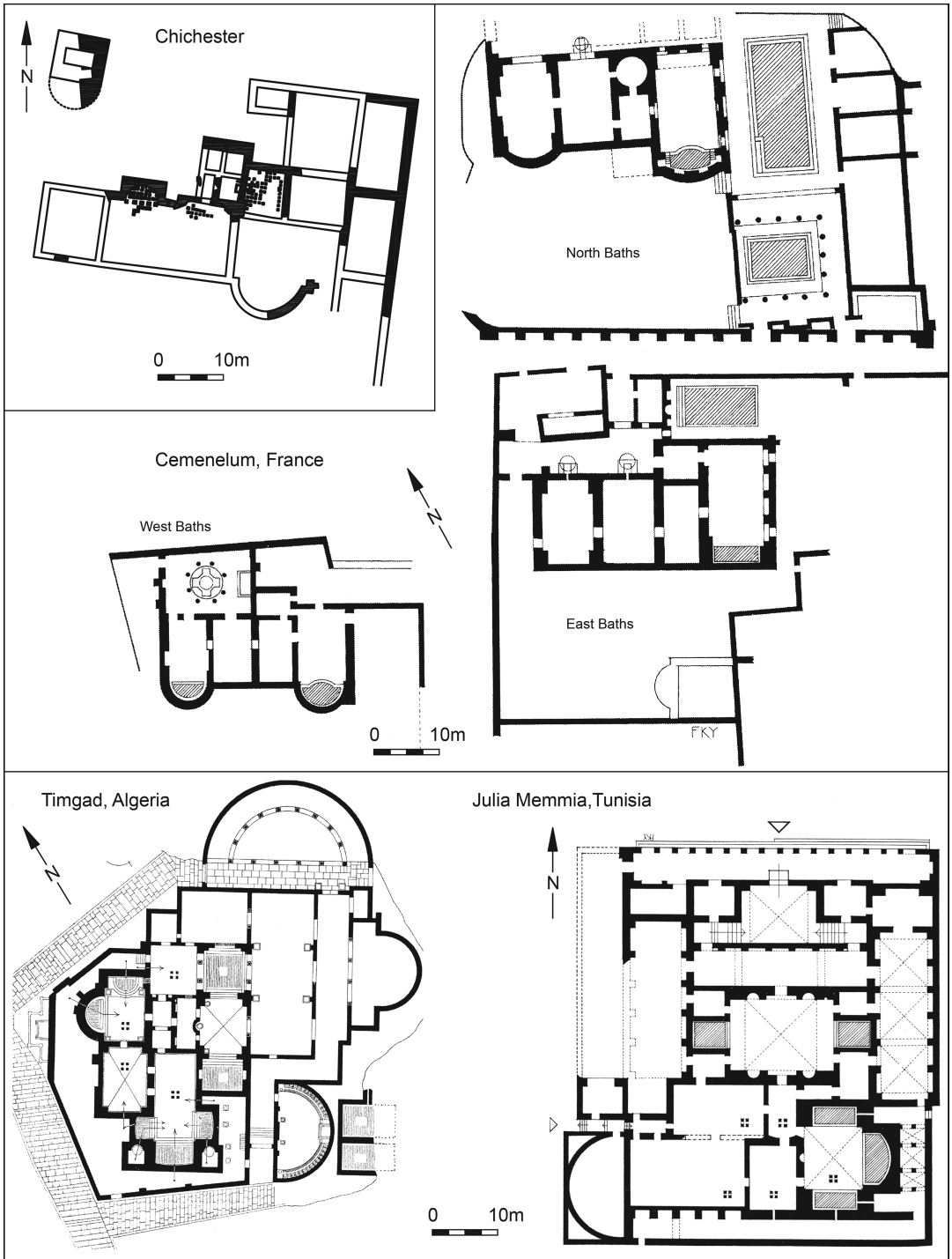


Fig. 15. A comparison of the plan of Chichester bathhouse with other provincial examples from around the Roman Empire.

or changing room (*apodyterium*), from the street. After disrobing, oil would have been applied and exercise undertaken in the yard (*palaestra*) to the south. After being scrapped clean with a *strigil*, they would have entered the baths proper, first the warm room (*tepidarium*), and then the hot room (*caldarium*) with heated plunge bath (*alveus*). The bathers would have finished off with a dip in cold water and returned to the changing room.

Flavian (Down's Period A)

The geometric mosaic floor in the east range was laid in the late 1st century, and was almost certainly part

of the Flavian building, which as far as we know was the earliest bathhouse in the city. The eastern side, perhaps facing the forum, is likely to be its frontage and existed in some form from the outset. However, unpicking the phases of the east range is far harder than the north-west, as this area was only recorded in the barest details, due to the rescue conditions imposed by the impending development (Fig. 16).

In the north-west, there was a range of rooms north of the hot plunge bath. Their function is unknown, but they may have been stores and service rooms for the adjacent furnace. The form of the rooms in the north-eastern corner is largely

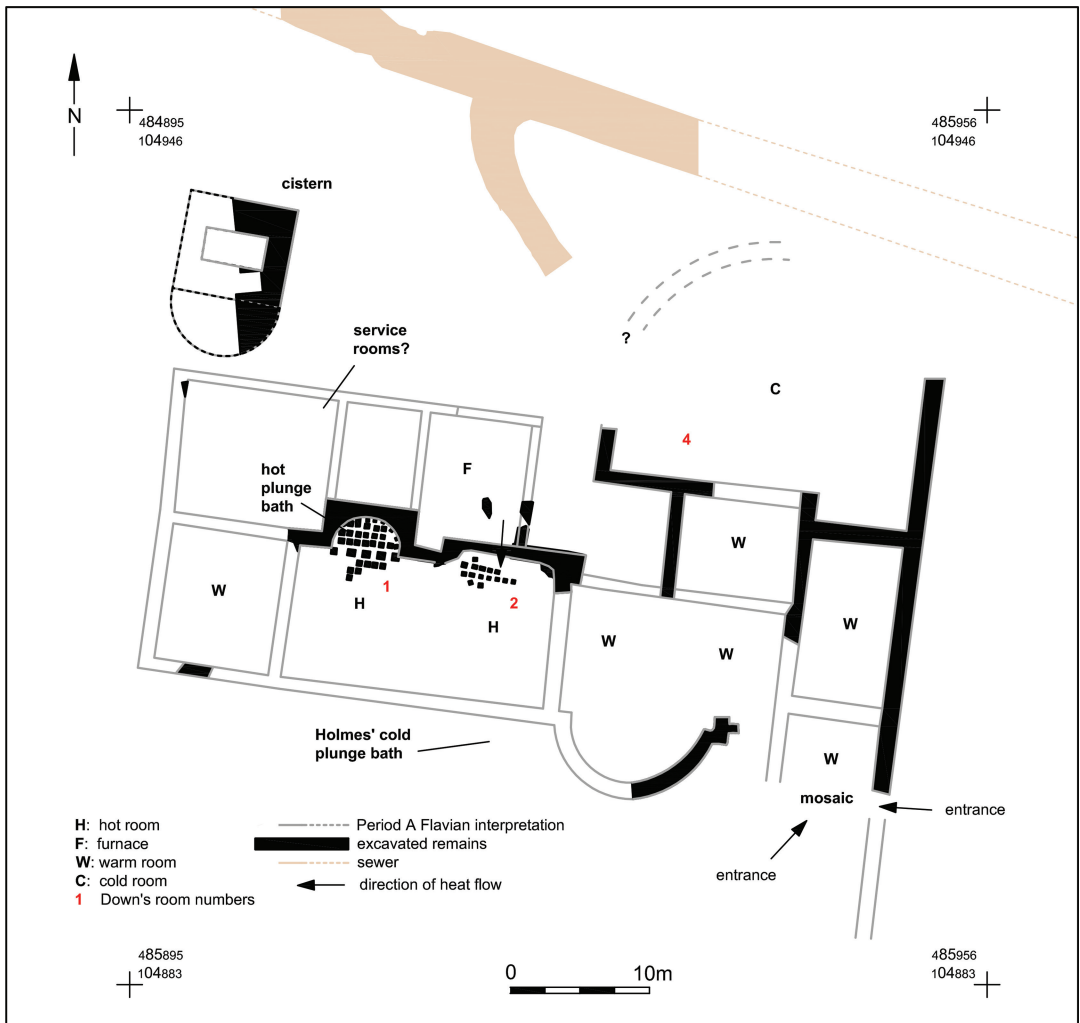


Fig. 16. An interpretative plan of the Flavian bathhouse (Down's Period A).



Fig. 17. An interpretative plan of the Flavian-mid/late 2nd-century bathhouse (Down's Period B).

a matter of conjecture: Down identified a curved robber trench in the Tower Street excavation, but no evidence for this was found to the east (Room 4). While this may suggest some form of apsidal room, this part of the bathhouse is the most poorly understood and its interpretation must remain open.

As Down previously commented, the interpretation of the 'cold plunge bath' is problematic (1978, 145). This was found in 1962 during the monitoring of construction work and, sadly, there is no dating evidence associated with the feature. In addition, its interpretation is based solely on the presence of an *opus signinum* layer

suggesting an intention to hold water (Holmes 1965, 13). However, the floor of the hypocaust identified to the north was a similar *opus signinum* layer and it is more likely that, rather than a plunge bath, this was simply part of a large heated room or series of rooms (Rooms 1 and 2).

Despite this, it is clear that the apsidal plunge bath was built over an earlier masonry building which the excavator, John Holmes, suggested contained a hypocaust. In addition to this, Holmes states that the geometric mosaic found in 1960 was also on an older floor which had probably been the bottom of a hypocaust (1965, 13).

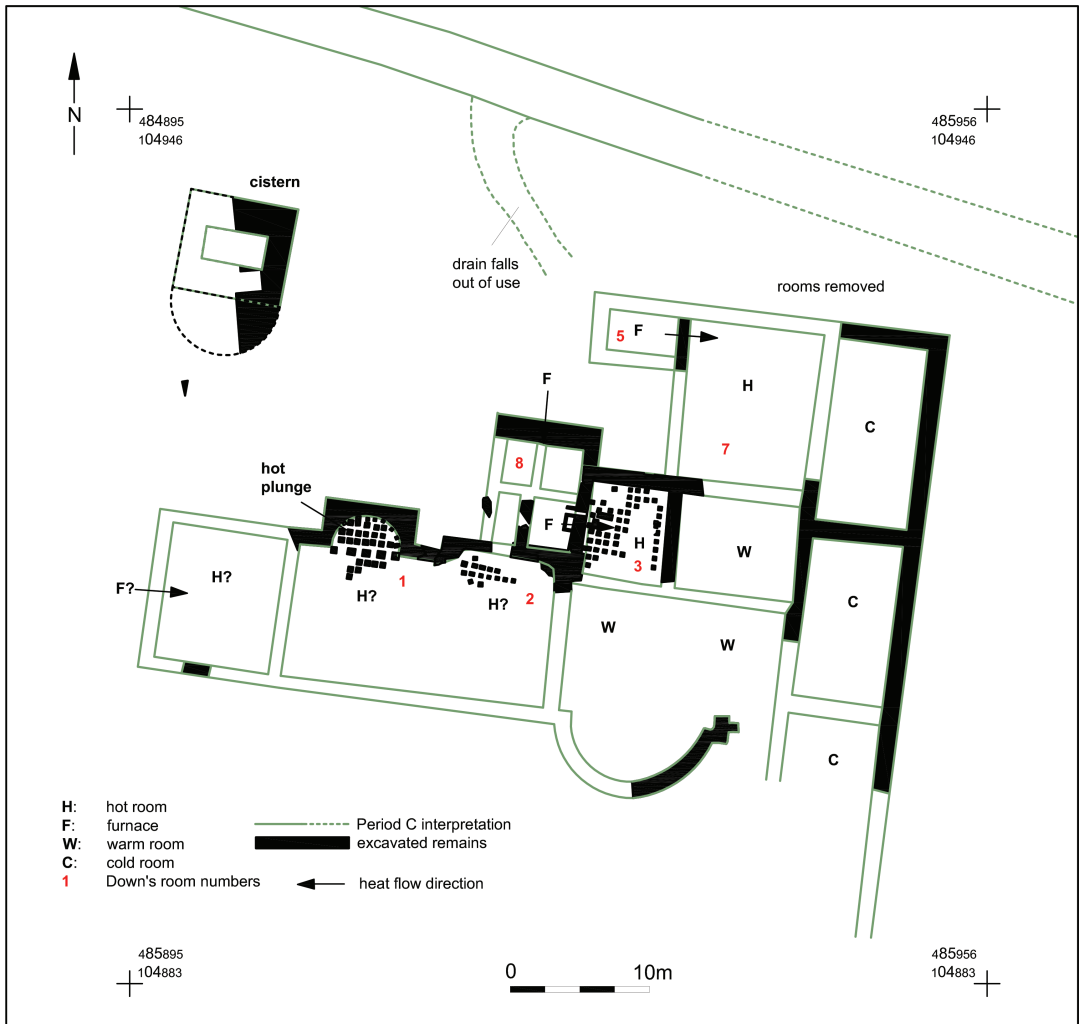


Fig. 18. An interpretative plan of the mid/late 2nd-century-?4th-century bathhouse (Down's Period C).

This presents a series of interpretational problems. Firstly, Holmes offers no evidence or explanation for why he believes this earlier building had hypocausts. If this is the case, it is conceivable that he had recorded the remains of a pre-Flavian bathhouse beneath the apse and mosaic, but as there is no associated dating evidence this will remain unsubstantiated. In addition, caution must be used with Holmes' interpretation since mosaics were built off a series of prepared surfaces, one of which could easily have been misidentified as an earlier floor (Johnson 1987, 7).

Another significant problem with Holmes' apse is that, according to Down's published plans (1978 and 1988), it appears to be at a different alignment to the rest of the building. This may be genuine and represent a different building but, as our recent survey has shown, errors were often made in the original survey, somewhat understandably considering the difficulties of rescue excavation in an age of tape measures. It is perhaps more likely that the apse was on the same alignment as the rest of the bathhouse, although which phase it relates to is unknown. Therefore, we have shown the apse on the illustrations of all three phases.

The middle to late 2nd century (Down's Period B)

The main changes to the baths are a rebuilding of the north-eastern corner, a partial refurbishment of the rooms in the east range and the removal of the service range in the north-west (Fig. 17).

The possible apsidal north-east corner was rebuilt into a squared form (including Rooms 5, 6 and 7), although the continued presence of unheated rooms here suggests that the likely function of entranceway or changing rooms had not altered. In the east range, a cross-flue hypocaust was filled in and replaced with a tessellated floor, changing a heated room to an unheated one. In the Tower Street excavation area, an additional hot room with a furnace (Room 3) was added to Rooms 1 and 2, and this may have coincided with the removal of the adjacent service rooms.

The middle to late 2nd century to the late 2nd–74th century (Down's Period C)

The final phase is the least well understood, and may represent as much as 200 years of use. The most significant change discernible in the Tower Street excavation area was the remodelling of at least part of the eastern range with the inclusion of an additional hot room (Room 7) with furnace (Room 5). This replaced a suite of unheated rooms (Room 6) which were robbed of masonry at this time. Down points out that this change would have made redundant the drainage ditch (Down's Ditch 2) running from the bathhouse to the sewer (Fig. 18).

An additional hot room (Room 8) with a possible furnace was also built. It abutted the north side of Rooms 1 and 2. This expansion must have involved the remodelling of the suite of hot rooms (Rooms 1, 2 and 3), although how this increasingly complex arrangement of hypocaust and flues worked is unclear. What does seem certain, however, is that the furnace for Room 3 fell out of use, a rough mortar floor being laid and two infants interred at some later date (Down 1978, 148–9). How Rooms 1, 2 and 3 were heated, or if they were heated at all, is also unclear.

Changes elsewhere in the bathhouse are not discernible in this later phase, mainly due to the lack of precise dating evidence. Overall, this last phase of use is characterised by an increase in the provision of hot rooms. The reason for this is not obvious, but it may reflect major structural change, such as a division of the building into separate male and female sections.

A revised end date for the bathhouse

When the bathhouse fell out of use has largely been a matter of conjecture. Down describes some form of late occupation in Room 5, although this is undated, and suggested the final use at around AD 375–400, when the coin sequence ends (1978, 152). Our recent excavations cannot give a definitive end date, but we suggest that the date of pottery assemblages may well be a more reliable guide than the coin losses on the site. While the pottery assemblage from the sewer ditch re-cut indicates clear mid/late 3rd century activity, the lack of mid/late 4th-century pottery suggests the more likely end date for the use of the bathhouse is around AD 325–350.

THE SURVIVING REMAINS AND FUTURE OPPORTUNITIES

While a portion of the hot rooms has been preserved for posterity in the Novium museum, how much of the bathhouse still survives in the ground elsewhere is debatable. Much, if not all, of the remains beneath the commercial buildings in the block between Tower Street and Chapel Street are likely to have been removed by the numerous redevelopments. The best locations for preservation of the bathhouse are under the streets themselves: principally Tower Street and to a lesser extent West Street. However, while the opportunity of seeing anything approaching a full layout of the structure has probably now gone, further fieldwork opportunities should prioritise the further unpicking of the construction phases and, if possible, obtain direct dating for the last firing of the hypocaust.

THE FINDS

As most of the Roman finds were found residually in later contexts, only the significant stratified assemblages of pottery and glass are described here. The finds and full site archive will be deposited with Chichester Museum.

THE ROMAN POTTERY by Anna Doherty

A moderate-sized assemblage of Roman pottery was recovered (566 sherds, weighing 13.90kg; 9.8 EVEs; 496 ENV) mostly from the fills of the sewer ditch. Most the pottery is from the mid-3rd to earlier 4th century, including some large stratified groups from the fill of the sewer ditch.

Table 2. Quantification of pottery fabrics from sewer ditch fills [124] and [125].

Fabric	Expansion	Context 124		Context 125	
		Sherd Count	% Sherd Count	Sherd Count	% Sherd Count
AHFA	Alice Holt/Farnham ware	4	4.2%	22	18.0%
BAET	Baetican (Dr 20) amphora	1	1.0%	1	0.8%
BB1	Black burnished ware 1		0.0%	3	2.5%
BB2	Black burnished ware 2	2	2.1%	1	0.8%
BBS	Black burnished style ware		0.0%	15	12.3%
FINE	Unsourced reduced fine ware		0.0%	1	0.8%
GAUL1	Gaulish (Pe. 47) amphora fabric	1	1.0%	2	1.6%
GROG	Grog-tempered wares	2	2.1%	6	4.9%
HCC	Highgate C ware		0.0%	1	0.8%
MHAD	Hadham oxidised ware	1	1.0%		0.0%
NACA	North African cylindrical amphora fabric	2	2.1%		0.0%
NFCC	New Forest colour-coated ware		0.0%	1	0.8%
NFWW	New Forest white ware		0.0%	2	1.6%
NGGW	North Gaulish grey ware		0.0%	2	1.6%
NVCC	Nene Valley colour-coated ware	1	1.0%	6	4.9%
OXRC	Oxfordshire red-slipped ware		0.0%	5	4.1%
OXWS	Oxfordshire white-slipped ware	1	1.0%		0.0%
RWCBB	Rowlands Castle ware (black burnished style)	14	14.6%	6	4.9%
RWCG	Rowlands Castle grey ware	64	66.7%	43	35.2%
SAMLZ	Lezoux samian ware	2	2.1%	1	0.8%
SAND	Unsourced reduced coarse wares	1	1.0%	4	3.3%
Total		96	100.0%	122	100.0%

Most the well-stratified Roman pottery from the site was assigned to *Thermae* Period C, most of which was recovered from two fills of the sewer ditch [6/006]. Although, as whole, this phase can be broadly dated to the mid-3rd to early/mid-4th century, there is some evidence of chronological development between fills [124] and [125] (quantified by fabric type in Table 2). The former probably dates to the mid/late 3rd century; the latter was associated with a *nummus* of the House of Constantine dating to AD 335–340; it should be noted that this probably represents the later end of the expected range of the pottery in this group which is typical of an earlier 4th-century group.

Although both assemblages are dominated by reduced coarse wares, Rowland's Castle wares account for 81 percent of sherds in [124] but only 40 percent in [125]. This pattern can also be seen in a marked decline in form types associated with the Rowland's Castle industry; for example, the classic everted rim jar (Dicks 2009 D2) makes up 53 percent of the EVE total in [124] and only 19 percent in [125]. Other typical Rowland's Castle forms like the tall carinated bowl B1, the finger impressed storage jar D2 and flagon form C1 are all present in the earlier group, but absent in the later one. Although these forms are generally only represented by one or two examples

in the earlier group, this pattern might suggest a concentration on the everted rim (D2) form towards the end of the life of this industry.

Within the Rowland's Castle group, there is a small subset of wares (RWCBB) which appear to have been deliberately fired or slipped to a dark exterior surface, although they share a very similar grey core to the more standard Rowland's Castle grey ware fabric. Where associated with diagnostic forms, these often seem to be used for black burnished style forms. These do not seem to appear in *Thermae* Periods A and B, suggesting that they are broadly a development of the 3rd century.

The diminishing proportion of Rowland's Castle ware is probably in keeping with a general decline in the Rowland's Castle industry by the 4th century, at a time when other industries were beginning to grow. One important factor was probably the growing influence of the Alice Holt industry. These wares increased from four percent in [124] to 18 percent in [125]. Another noticeable change between the two groups is in the proportion of black burnished wares. A very small quantity of BB2 survives in [124] declining to a single, likely residual, sherd in [125]. Conversely, BB1 is absent in [124] but appears in small quantities in [125]. Perhaps the most noticeable change is an increase in unsourced black-burnished

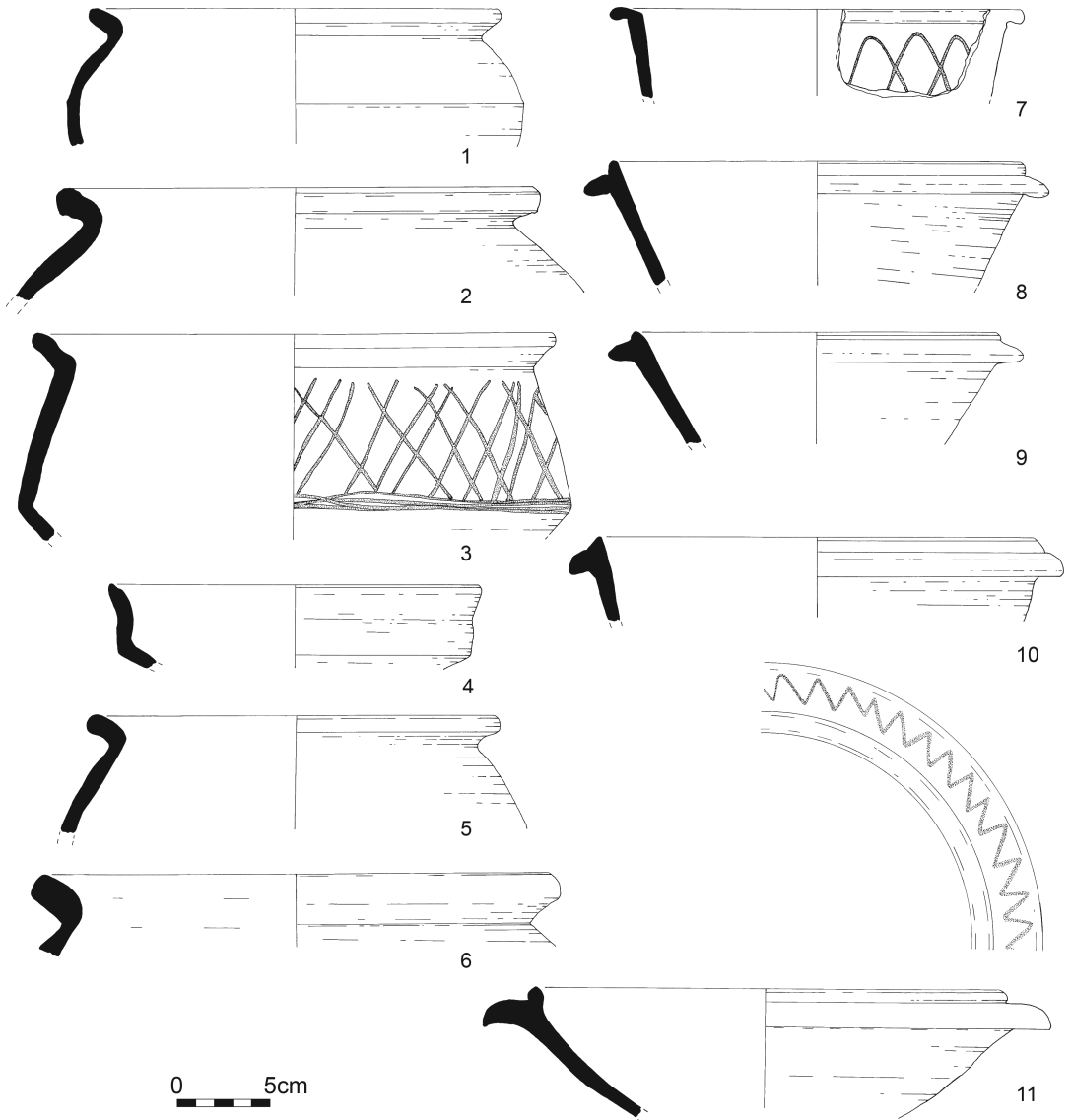


Fig. 19. Pottery illustrations.

Fill [124]:

- P1. Everted rim jar (Dicks 2009) form D2; RWCG.
 P2. Large everted rim jar/storage jar; RWCG.
 P3. Carinated jar/bowl with lattice decoration (Dicks 2009) form B1; RWCG.
 P4. Plain rim dish with slight ledged rim (Dicks 2009) form A1; RWCG.

Fill [125]:

- P5. Everted rim jar (Dicks 2009) form D2; RWCG.
 P6. Large everted rim jar/storage jar; RWCG.
 P7. Flat rim bowl with burnished lattice/zigzag decoration; BB1.
 P8. Bead-and-flange bowl; BB1.
 P9. Bead-and-flange bowl (Lyne and Jeffries 1979) type 5B.1 with possible faint burnished arcs; AHFA.
 P10. Bead-and-flange bowl (Lyne and Jeffries 1979) type 5B.9; AHFA.
 P11. Bead-and-flange mortarium (Fulford 1975) type 105; NFWW.

style wares, not present at all in [124] and making up 12 percent of [125]. There is also a very slight increase in grog-tempered wares from two to five percent. These changes in coarse ware supply are probably linked to a marked decline in the overall proportion of jars (from 65 percent to 39 percent of EVE) as typical black burnished style bowl and dish forms – particularly the 4m bead and flange bowl – increased in fill [125].

Later Roman regionally traded fine wares, such as Nene Valley and Oxfordshire white slipped ware, had started to appear in [124] but, perhaps significantly from a chronological point of view, New Forest wares and Oxfordshire red slipped wares only appear in [125]. Again, this pattern of supply is linked to a slight change in form types with New Forest *mortaria* and fine ware samian style bowls both appearing in [125], having been absent in [124]. Amphorae are present in both groups including individual sherds from North African and Baetican and Gaulish sources; however, there is less of a clear chronological pattern to the distribution of these wares.

The dating of the assemblages from the sewer ditch is worth commenting on, given that previous reports on the Tower Street site were slightly ambiguous on the chronology of the decline of the *thermae*. The report noted the presence of coins dating to the last quarter of the 4th century (Down 1978, 152) but provided no information about the dating of the pottery from deposits relating to the disuse of the baths. The composition of the pottery in the sewer ditch groups from the current project suggest that this drainage feature had probably ceased to function by the time the mid/late 3rd-century group, from fill [124], was deposited. The stratigraphically later group from [125] suggests that this filling process continued into the 4th century, but the continuing presence of Rowlands Castle ware, together with the absence of Portchester D ware and only low quantities of Oxfordshire and New Forest wares, is strongly suggestive of material deposited in the earlier part of that century (Fig. 19). The associated *nummus*, dated AD 335–340, may well be one of the latest things in the deposit, signifying a fairly accurate date of deposition for the group. This seems to suggest that later coins found in previous excavations may have been casual losses well after the main period of Roman activity, or material introduced during later robbing events.

Perhaps one of the surprising aspects of these groups is the dominance of coarse ware jar forms in an urban context, especially in the slightly earlier mid/late 3rd-century group from [124] (Fig. 19). Although the lack of data from currently published sites in Chichester makes it difficult to confirm that this is general pattern, it was also noted in broadly contemporary groups recorded outside the East Gate of the town (Archaeology South-East 2012a). Although, this may be partly a function of the total dominance of the Rowland's Castle industry, which chiefly made jar forms, it must also suggest something about demand for different types of vessel which in turn must reflect patterns of consumption. Compared with quantified groups of the mid/late 3rd to early 4th century

from the City of London, for example (Symonds and Tomber 1991, Table 3–4), it is clear that fewer central and east Gaulish samian forms survive in use in [124] and [125], as well as smaller numbers of *mortaria* and beakers.

THE ROMAN GLASS VESSELS by Elke Raemen

Two vessel fragments were recovered, both dating to the early to mid-1st century from quarry pit [135]. High-quality vessels of this period usually originated in the Mediterranean area (Cool and Price 1995, 225). Cased vessel fragment (RF <15>), probably deriving from a Hofheim cup, was translucent dark blue on the outside, with a thin opaque white internal layer and decorated with a lightly abraded band. Cased glass is not a common find in Britain, but when found it is usually in Claudian and Neronian contexts (Cool and Price 1995, 60; Price and Cottam 1998, 30). Examples in translucent blue are known from Colchester (Cool and Price 1995, 61, numbers 273 and 274) and elsewhere in Chichester (Charlesworth 1981, 293, number 6). Complete cased Hofheim cups are known from the Continent: from Vindonissa (Berger 1960, 45, number 104, Taf 7) and from Bonner Strasse in Koln (Fremersdorf 1958a, 22, Taf 6). With British examples, it is often not possible to establish the vessel forms.

The second piece (RF <2>) comprises a cast, lace mosaic bowl fragment (Fig. 20). The bowl is formed from lengths of narrow, colourless cane with opaque white, double twisted threads, fused together by heat (see Price and Cottam 1998, 11). The rim was formed by a single twisted cane in opaque brown (near black). This type is also rare in Britain. It occurs on sites of the early to mid-1st century and probably went out of production by around AD 69 (Cool and Price 1995, 30; Price and Cottam 1998, 31). Examples are also known from Colchester (Harden 1947, 292).

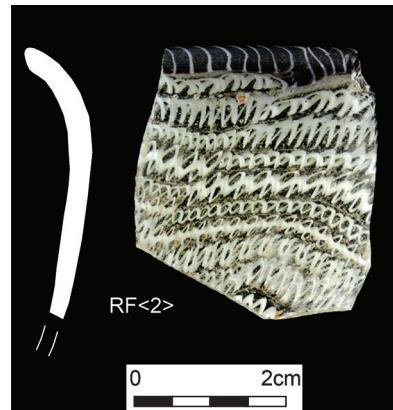


Fig. 20. Glass illustration.

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