Chapter 5: The Finds

Eternity, with all its years,
Stands present in thy view;
To thee there's nothing old appears;
Great God, there's nothing new.

Isaac Watts

POTTERY *by Duncan H. Brown*

Introduction

The French Quarter site produced a very important assemblage of pottery, adding significantly to current understanding of the city's ceramic history. Of particular note has been the opportunity to characterise and quantify a large post-medieval assemblage, thus providing a useful comparison with earlier and more exhaustively researched periods. The analysed assemblage (excluding unphased contexts and soil sample finds), numbered 21,135 sherds weighing 556,716 g, with a rim % of 37,668 and a maximum vessel count (MVC) of 15,328.

This report discusses the assemblage as a whole, considering the range of ware and vessel types present, introducing new types, and making comparisons with other Southampton assemblages. This is followed by a brief consideration of the pottery by site period and property. A more detailed report is provided as Specialist Download F1.

Fabrics and forms

Previous work has identified three post-Conquest ceramic periods for medieval pottery in Southampton (Brown 2002, 3), and the same framework is followed here, with the addition of earlier and later periods. The small quantity of Roman pottery is entirely residual and is not described in detail here. Samian, colour-coated, grey wares and late grog-tempered types are all present. There is also a small quantity of pottery identified simply as 'medieval'. This consists mainly of plain body sherds of coarse sandy and sandy types of uncertain date, often present as residual types in post-medieval contexts. The following text includes references to Southampton fabric numbers that have already been described and illustrated (ibid., 7-87).

Late Saxon or Saxo-Norman pottery (Fig. 5.1)

The term Saxo-Norman applies to pottery types with origins in the late Saxon period, the 10th and early 11th centuries, but which seem to have continued in production and use after the Conquest, perhaps until the 12th century. Wares pre-fixed 'late Saxon' were recovered from definite pre-Conquest deposits or are those types that date before the Conquest. Those pre-fixed 'Early medieval' are potentially pre- or post-Conquest. The main late Saxon types have been described in detail elsewhere (Brown 1995) and the same wares are present here in similar proportions. Table 5.2 shows the range of late Saxon, Saxo-Norman and early medieval ware types present in the whole assemblage. The most common type is late Saxon flint-tempered coarseware (Southampton Fabrics 900 and 1000), with late Saxon sandy ware (Fabric 906) and organic-tempered sandy ware (Fabric 907) present in much smaller amounts. These wares typically take the form of round-based jar/cooking pots with everted rims (No. 1), although there are six bowl rims in late Saxon flint-tempered ware. More unusual is a spouted pitcher (No. 2) that may have been inspired by non-local or imported forms. There is also a shell lamp (No. 3). An unusual handled jar (No. 4) in flint-tempered coarseware is from a probable post-

Table 5.1: Quantities of pottery for each ceramic period

Period	*Date range*	*Rim %*	*Weight (g)*	*Sherd count*	*Maximum vessel count*
Romano-British	*c* 100 – 350	9	135	12	11
Saxo-Norman	*c* 900 – 1100	4459	70108	4453	3604
Anglo-Norman	*c* 1100 – 1250	4076	68457	3684	2916
High medieval	*c* 1250 – 1350	4728	86512	5823	4606
Late medieval	*c* 1350 – 1510	5614	101321	2896	1686
Medieval	*c* 1100 – 1500	176	4049	201	193
Post-medieval	*c* 1510 – 1720	10903	185269	3092	1726
Post-industrial	*c* 1720 – 1850	7703	40865	974	586
Totals		37668	556716	21135	15328

Conquest deposit, while a socketed bowl fragment (No. 5) and a complete bowl profile (No. 6) may be residual in high-medieval contexts. Chalk-tempered ware (Fabric 903) is invariably late Saxon and a spout is likely to be from the characteristic triple-spouted pitcher or storage jar (ibid., 133), as is a stamped rim (No. 7). Michelmersh-type ware (Fabrics 909, 910, 911) is also a late Saxon type and there is a rim and spout from a pitcher with rouletted decoration. Other rim and body fragments have applied strips with quatrefoil stamps, while plain applied strips occur on several other body sherds. These are probably from pitchers, as is a thumbed rim (No. 8) that is residual in a post-medieval context.

There is a significant quantity of pre-Conquest glazed ware, in a variety of fabric types. Many of these may come from continental Europe, probably the Seine Valley or perhaps the Meuse region. A few examples compare with the 10th-century glazed product identified as Winchester ware (Biddle and Barclay 1974). One glazed sherd is decorated with applied and rouletted motifs (No. 9). Imported wares are rare in comparison with some other sites (see Brown 1995) but the usual range is present, including North French white and black wares, and a sherd of North French pinkware. More unusual is the shaft of a pedestal or shell lamp in North French red-painted whiteware.

Anglo-Norman pottery (Figs 5.1-5.2)

Anglo-Norman pottery includes ware types introduced after the Norman Conquest. The chronology for this is uncertain, but it is believed that by 1100 most of the typical wares of this period were being produced, particularly Scratch-marked ware (Fabrics 1007, 1008), the most common type of the period. The only identifiable Scratch-marked ware form from the French Quarter site is a round-based jar/cooking pot with an everted rim (No. 10), which is derived from Saxon predecessors. One unusual vessel was pierced, pre-firing, below the rim (No. 11). Related coarsewares, with no scratch-marking, are the second most common ware type. The predominant form is the round-based jar/cooking pot, but there are also sherds from twelve bowls, some wide-mouthed (No. 12), others smaller (No. 13). The body sherd of one jar bears a handle scar. A pulled lip is suggestive of a pitcher or jug, and a footed base may also be from an unglazed tripod pitcher. There is the complete profile of a spike lamp (No. 14), a fragment of one other, a thick shaft and base that may be from a pedestal lamp and the rim of a lamp bowl. Three vessels have holes pierced, pre-firing, above the base while another has holes in the base as well as another in the body (No. 15). These are probably strainers and are usually associated with making cheese. Glazed wares were probably not made locally until well into the 12th century, and probably after 1150. All the glazed ware sherds present here are probably from tripod pitchers or jugs. A fixed spout (No. 16) is characteristic of tripod pitchers. One base is broken off very neatly along the line of one of the handbuilt coils and this may have been a deliberate method for re-use (No. 17).

Non-local wares include flint-tempered (Fabric 1013) and coarse sandy (Fabrics 1101, 1102, 1103), types seen elsewhere and attributed to Dorset (Brown 2002, 10). Three shell-tempered sherds are distinctly different to other shelly types previously seen. One has abundant, very coarse shell tempering in a dense, coarse, sandy fabric. The other two have

Table 5.2: Quantities of Saxo-Norman ware types

Ware type	*Rim %*	*Weight (g)*	*Sherd count*	*Maximum vessel count*
Late Saxon flint-tempered	3324	53526	3448	2753
Late Saxon organic-tempered	164	2044	122	91
Late Saxon sandy	245	3105	313	278
Late Saxon chalk-tempered	84	1337	51	41
Michelmersh-type	149	2553	99	48
Late Saxon non-local		32	2	2
Late Saxon glazed	18	644	28	26
Late Saxon North French whiteware	36	409	21	19
Late Saxon North French red-painted	26	206	4	4
Late Saxon North French blackware	47	992	38	36
Late Saxon North French pinkware		20	1	1
Late Saxon import		40	3	3
Saxo-Norman coarseware	267	4514	308	289
Early medieval non-local	23	317	9	8
Early medieval French	57	294	2	1
Early medieval import	19	66	2	2
Crucible		9	2	2
Totals	4459	70108	4453	3604

Table 5.3: Quantities of Anglo-Norman ware types

Ware type	*Rim %*	*Weight (g)*	*Sherd count*	*Maximum vessel count*
Scratch-marked	2011	38802	2078	1587
Anglo-Norman coarseware	1116	15295	797	668
Anglo-Norman glazed	165	5031	230	175
Anglo-Norman non-local flint-tempered		169	2	2
Dorset sandy	43	728	38	33
Anglo-Norman non-local	70	1335	30	9
Anglo-Norman shell-tempered	9	66	3	3
Anglo-Norman greyware	5	35	2	2
Normandy gritty	266	3115	203	184
Normandy smooth	7	171	13	13
North French sandy		13	2	2
North French red-painted	103	743	43	16
North French whiteware	59	542	37	33
North French coarse whiteware		248	12	12
North French gritty whiteware		70	5	3
North French green-glazed whiteware	182	1288	153	146
Rouen-type	38	142	6	6
North French greyware		150	2	2
North French pinkware		78	6	5
Early Saintonge type		59	4	3
French whiteware		253	8	4
Andenne-type		45	4	3
Blaugrau		13	2	2
Flemish greyware	2	66	4	3
Totals	4076	68457	3684	2916

abundant shell that is not so coarse. All are likely to derive from non-local sources. A greyware vessel with an everted rim and a thick strap handle is also probably non-local in origin (No. 18).

Normandy gritty ware (Fabric 1284) is the most common imported type. Handles with thumbed applied strips and similarly treated body sherds represent the large pitchers that typify this product in Southampton, although some sherds may have come from jars. There is also a rare Normandy gritty ware lamp (No. 19) and another larger pedestal lamp in a related gritty North French coarseware (No. 20). Normandy smooth ware (Fabric 1286) is also present, along with North French sandy ware (Fabric 1413). Among the body fragments of red-painted whiteware are 25 sherds, including the rim, body and base, of a costrel (No. 21) and a handle from a pitcher. There is a range of other unglazed coarse or sandy whitewares from northern France. Green-glazed whiteware, probably mainly from the Seine valley, is the second most common imported type in this period. These take the form of jugs, and exhibit a variety of decorative techniques, including ribbing, cordons, applied strips and pellets and rouletting. Rouen-type ware jugs (Fabric 1402) are represented in small quantities. Also from northern France are grey and pink wares that may be related to late Saxon types. Early Saintonge ware (Fabric 1269) is also present. The term French whiteware is applied to a range of fine, white fabrics with few distinctive characteristics to indicate a likely source area. They may have been produced to the south of Normandy. One body sherd is from a highly decorated jug with brown and green painted stripes and rouletted lines.

At this period in Southampton, most imported pottery came from France and this assemblage conforms to that pattern in that Andenne-type or Meuse valley glazed ware, Blaugrau or Paffrath and Flemish greyware are only present in small amounts.

High medieval pottery (Figs 5.2-5.3)

Table 5.4 shows the range of high medieval wares present in the whole assemblage. Southampton coarseware (Fabric 1123) is the most common single ware type, mostly taking the form of high-shouldered jar/cooking pots with sagging bases and rims with a distinctive internal bead (ibid., 12). Other forms include bowls, curfews, dripping pans and jugs. A shallow dish-shaped form might be a lid. Another shallow dish has a thick sooty encrustation on the inside, which may suggest it was a lamp or candle-holder. Three body and base sherds from the same vessel have the edges of pre-firing cut-outs in the style of the complete lantern recorded elsewhere (ibid., 13 and no. 46) and there is a body sherd from another, similar vessel. A rim with a handle scar may be from a pipkin. Southampton coarseware

jugs are rare but include a tripod base and strap handle (No. 22), as well as an equally large jug with a pulled pouring lip (No. 23). The related fabric, Southampton sandy coarseware (Fabric 1024) is present in smaller quantities, mainly in the form of jar/cooking pots but also as bowls (No. 24). There are many other high medieval coarsewares present, but these were not separated into individual fabrics; they mainly take the form of jar/cooking pots, but a few bowls (Nos 25, 26) and curfews (No. 27) are also represented. An unusual coarse sandy ware lid (No. 28), with splashes of glaze on the underside, has been identified as 'medieval'. Although it occurs mainly with late Saxon pottery it is likely to be high medieval or later. There are a few sherds of coarseware that are probably non-local in origin, including a green-glazed jug base in a coarse micaceous fabric that is probably Cornish.

A greater variety is apparent among the sandy wares, although the usual range of types found in Southampton predominates. Southampton sandy ware (Fabric 1150) is the most common type, along with South Hampshire redware (Fabric 1248). Jugs are the most common form, although bowls, jars and dripping pans also occur in both ware types. A South Hampshire redware face jug is noteworthy (No. 29). Local pink sandy ware (Fabric 1087) is probably related to South Hampshire redware, and is the third most common high medieval glazed sandy type present. There is a surprisingly small

Table 5.4: Quantities of high medieval ware types

Ware type	*Rim %*	*Weight (g)*	*Sherd count*	*Maximum vessel count*
Southampton coarseware	2316	38279	2342	1824
High medieval coarseware	272	4770	292	246
Southampton High Street coarseware		68	2	2
Cornish coarseware		171	3	1
High medieval non-local coarseware	5	98	4	4
Southampton sandy ware	462	7319	544	448
Southampton whiteware	26	573	41	36
South Hampshire redware	255	8552	509	412
Local pink sandy	73	3609	229	169
Local whiteware	18	1377	97	92
Laverstock	109	1170	81	74
Dorset sandy	71	974	46	31
Dorset whiteware		515	24	14
High medieval sandy	27	1023	81	79
High medieval glazed sandy	454	7553	654	564
High medieval non-local sandy		38	2	2
High medieval non-local glazed sandy	21	452	13	11
Developed Normandy gritty	107	452	30	27
North French whiteware		27	3	3
North French green-glazed whiteware	19	18	1	1
Developed Rouen-type		74	11	8
Seine Valley highly decorated		40	3	3
Seine Valley whiteware		12	3	2
Seine Valley zoomorphic		9	1	1
North French micaceous whiteware		27	2	2
Breton coarseware	8	39	2	2
Saintonge whiteware	110	3336	150	100
Saintonge green-glazed	290	4796	519	348
Saintonge bright green	61	318	58	47
Saintonge red-painted		6	1	1
Saintonge highly decorated		6	1	1
Saintonge polychrome		378	44	28
Saintonge sgraffito		10	1	1
Saintonge redware		29	1	1
South-west French whiteware		9	1	1
French whiteware		110	12	9
French highly decorated		82	10	6
Andalusian lustreware	24	181	3	3
Micaceous coarseware		12	2	2
Totals	4728	86512	5823	4606

quantity of Southampton whiteware (Fabric 1044), and Laverstock-type ware (Fabric 1034), while the proportion of local whiteware (Fabric 1118) present is less unpredictable. All these wares mainly occur in the form of glazed jugs, including a Laverstock-type face jug (No. 30) and a local whiteware tripod jug that has the further embellishment of a thumbed base (No. 31). A wide range of other high medieval glazed sandy wares have not been sorted into individual fabrics. Most of these are likely to be local in origin and occur mainly as jugs in a variety of forms (Nos 32, 33), although there are a few bowls and a lamp (No. 34). Dorset sandy ware (Fabric 1430) and Dorset whiteware (Fabric 1156) occur in small amounts and other possible non-local sources include Surrey, the midlands and Scarborough.

Saintonge pottery is the most common continental import. A wide range of types is present, the most common of which is the green-glazed jug (Fabric 1272). One notable example is a jug with a bib glaze that may indicate a date towards the middle of the 14th century (No. 35). Two whiteware pegaux handles bear post-firing 'merchant marks' (Nos 36, 37), while there is also a good example of an applied face in bright green-glazed Saintonge whiteware (No. 38). North French types occur in much smaller quantities than the Anglo-Norman period, but there is a wide range present. Developed Rouen-type (Fabric 1403), Seine Valley whiteware (Fabric 1548), highly decorated and zoomorphic types (Fabric 1407) and North French micaceous whiteware (Fabric 1711) are all present. There is also a relatively high quantity of Developed Normandy gritty ware (Fabric 1754), a hard, finer version of the Anglo-Norman type, usually fired to pale or dark grey colour. An unusual vessel in this ware is a small jar with a flared rim (No. 39). Breton coarseware is rare but a jar rim (No. 40) is characteristic of the form in which this fabric typically occurs in medieval Southampton. A few sherds have been identified as high medieval French wares, but no specific place of origin can be ascertained. One small fragment of whiteware with a green glaze and heavily incised lines may be Orleans-type whiteware. The others range from sandy to fine fabrics, nearly all of which are glazed and probably come from jugs.

Andalusian lustreware (Fabric 1067) is a more exotic high medieval import. It occurs here in the form of two bowls and a straight-sided jar or albarello. In all three instances the decorative pattern is difficult to discern. Two sherds of very micaceous coarseware may also have an Iberian source, but Brittany, or even Cornwall, are other possibilities.

Late medieval pottery (Figs 5.3-5.6)

Although the late medieval period can be said to begin around 1350, few of the wares identified as late medieval are likely to pre-date 1400, and most of them are probably later than 1450. Southampton organic-tempered sandy ware (Fabrics 1130, 1136), similar in fabric to the high medieval Southampton sandy ware, is perhaps the most likely late medieval product to span the transition between the high and late medieval periods. There is one certain fragment of a bunghole pitcher but some of the other rims and handles identified as jugs may well have come from similar vessels. Among the variety of fabrics grouped together as late medieval sandy wares are those that may also be late 14th and early 15th century in date, but there is little about them to indicate that possibility. Internally-glazed bowls (No. 41) and jars (No. 42) are likely to be later, and the same is perhaps true of the single bunghole pitcher and pipkin, and two lids. A handled cooking pot in imitation of Low Countries redware forms is also likely to date after 1450 (No. 43). Other forms include jugs and a dripping pan, and there are also fragments that might come from industrial vessels, including a receiver (No. 44). Late medieval well-fired sandy ware (ibid., 19) is certainly later 15th century in date. Bowls, including pancheons, bunghole pitchers, dripping pans, jar/cooking pots, pipkins (No. 45), jugs (No. 46) and lids (No. 47) are all present. A strainer or draining vessel has holes pierced in the base. A two-handled jar is unusual (No. 48), while a vessel with a rounded square base may have an industrial purpose (No. 49). A small group of sandy wares may be dated to the early 16th century, and could relate more to later post-medieval types. These include a mug made in imitation of stoneware types, which has a thumbed base and is covered in a greenish-clear glaze that extends into the interior (No. 50). Mugs, or small jugs, and cups, are typical forms in Tudor Green ware, which is relatively common here. Less common is a small jar (No. 51), although this may be a jug with no trace of the handle remaining. Surrey whiteware is also present, mainly as cooking pots with a distinctive internally flanged rim, but a jug and a lid are also represented. Other non-local wares are less easy to provenance. A micaceous coarseware with a white slip under a greenish-clear glaze is comparable to south-western coarseware, while two whiteware sherds may be Surrey types, or from further afield.

It is typical of the late medieval period that the range of continental imports is far more diverse than the local products, which are largely plain and utilitarian. North French types include plain whiteware, with gritty and micaceous types being present. A pierced body sherd in a gritty whiteware probably represents a strainer. There are also fragments of a chafing dish in a finer whiteware with a green glaze. More common are Normandy stoneware (Fabric 1349) and Beauvais types, although it is unusual, in an assemblage of this size, to find only two sherds of Martincamp-type ware. Illustrated here are dishes in Beauvais green-glazed whiteware and Beauvais sgraffito (Nos 52 and 53). There is also a bowl in Beauvais slipped whiteware (No. 54), a less common type in Southampton. Late

Table 5.5: Quantities of late medieval ware types

Ware type	*Rim %*	*Weight (g)*	*Sherd count*	*Maximum vessel count*
Southampton organic-tempered sandy	48	6103	125	70
Late medieval sandy	542	10645	426	307
Late medieval well-fired sandy	1270	27503	802	429
Late/post medieval sandy	23	570	16	10
Surrey whiteware	54	314	21	20
Tudor Green	189	1176	125	76
South-western coarseware		20	1	1
Late medieval non-local		6	2	2
Late medieval North French gritty		23	2	2
Late medieval North French micaceous	7	75	3	2
Late medieval North French whiteware	14	62	2	2
Normandy stoneware	68	1494	41	22
Beauvais whiteware	123	818	22	10
Beauvais sgraffito	82	718	15	4
Beauvais double-slipped sgraffito	17	70	6	5
Beauvais slipware	92	272	8	1
Beauvais stoneware		60	3	3
Martincamp whiteware		4	1	1
Martincamp stoneware		26	1	1
Late medieval Saintonge	120	4395	139	25
Late medieval French	54	159	5	1
Low Countries redware	993	13737	436	316
Low Countries slipped redware	19	260	11	9
Siegburg stoneware	132	627	29	6
Siegburg green-glazed stoneware		5	1	1
Raeren stoneware	258	3027	94	63
Cologne stoneware	90	437	11	3
Stoneware	12	17	1	1
Seville coarseware	461	15550	185	66
Seville whiteware		273	5	5
Iberian whiteware		192	5	3
Iberian coarseware	147	3403	67	52
Iberian micaceous redware	369	3665	116	71
Micaceous coarseware		24	1	1
Micaceous whiteware		17	2	1
Iberian redware	72	1150	16	8
Seville white tin-glazed		13	1	1
Seville blue tin-glazed		238	7	2
Seville blue and purple tin-glazed		43	1	1
Valencian lustreware		186	4	4
Iberian tin-glazed	57	916	14	10
Archaic Pisan maiolica	92	1441	31	16
Montelupo maiolica	6	39	3	1
Italian maiolica	195	760	45	18
Italo-Netherlandish tin-glazed		82	4	4
Maiolica	8	79	14	13
North Italian sgraffito		38	4	3
North Italian slipped redware		261	7	4
North Italian red earthenware		310	13	7
Alkaline glazed		8	1	1
Late medieval import		10	1	1
Totals	5614	101321	2896	1686

medieval Saintonge whiteware (Fabric 1454) occurs as jugs or pitchers, a tubular spout from a pitcher, and a rim sherd from a green and yellow-glazed chafing dish. More unusual is a convex jar with a tubular spout and a faceted base (No. 55), which may have been used to settle thick liquids such as olive oil. Five fragments of a whiteware chafing dish with a green glaze have been identified simply as French. Low Countries redware (Fabric 1297) is the most common imported type, mainly taking the form of the three-footed *grapen*, although bowls, skillets and dripping pans (No. 56) are also present. A few Low Countries redware bowls have an internal white slip either overall or in the form of trailed lines. Raeren-type (Fabric 1245) is, as usual, the most common type of Rhenish stoneware, with Siegburg (Fabric 1246) and Cologne (Fabric 1378) types present in much smaller quantities. Some stoneware fragments could only be identified as 'Rhenish'. All these wares take the form of mugs.

There is an extensive range of Iberian coarseware. Seville coarseware (Fabric 1308), which takes the form of olive jars, is the most common type. Seville whiteware (Fabric 1327) and the general Iberian coarseware group, also occur mainly as olive jars. Iberian red micaceous ware, which includes the ware latterly known as 'Merida', is more diverse, and includes bowls (Nos 57, 58, 59), costrels, a flask, jars, a jug and a lid (No. 60). Iberian redware also occurs as bowls, jars (No. 61) and lids (No. 62). A small glazed coarseware jar (No. 64) is more of an oddity. A range of Iberian tin-glazed ware is present in relatively small quantities. These include an albarello or straight-sided jar in Seville blue (No. 63) and a Valencian-type lustreware bowl (No. 65). A dish with blue-painted decoration (No. 66) is of less certain origin and may be Portuguese. There is also relatively little Italian pottery, although several vessels in Archaic Pisan maiolica (Fabric 1241) have survived well (Nos 67, 68, 69). Common types such as Montelupo (No. 70) and North Italian sgraffito are also present. A ring-handled vase (No. 71) and a small bottle or flask (No. 72) cannot be attributed to any specific centre. A rare find is a sherd of alkaline glazed ware, probably from Syria.

Although all the usual late medieval pottery types are present here, the assemblages are not of comparable scale to some of those recorded elsewhere in Southampton (eg sites SOU 124 and SOU 128, ibid., 104, 149). Even so, imported material still accounts for over 50% by weight of all the late medieval pottery, and 48% and 46% respectively of the sherd count and maximum vessel count. Much of this material is made up of Iberian coarseware and Low Countries redware, and there is not as much fine imported material, such as tin-glazed ware, that typifies other late medieval assemblages in the south-western quarter of the medieval town. It should also be recognised that a proportion of the Iberian coarseware occurs in post-medieval contexts, and probably post-dates the late medieval period. These products were still being made in the 17th century, without any obviously discernible changes in fabric or form. They have been grouped together here as late medieval, but some may be dated later than that.

Post-medieval pottery (Figs 5.6-5.11)

There is at present no published description of the post-medieval fabrics and forms found in Southampton. This project offered the opportunity to establish some of the principal types, but the range of wares that occurs here is by no means fully representative of the great variety of types observed in other assemblages. Table 5.6 shows the range of post-medieval ware types identified. The most common types are locally produced earthenware, especially post-medieval redware and Verwood. Post-medieval redware typifies most 16th and 17th century assemblages in the south of England, and was produced locally across the area. Around Southampton production sites were located near the Hampshire downs, close to Bishop's Waltham, and towards Portsmouth. A wide variety of forms was produced, including here bowls (Nos 73, 74, 75 – a possible chamber pot), chafing dishes (Nos 76, 77), dishes, jars (Nos 78, 79, 80), jugs (No. 81), lids, mugs, pipkins (Nos 82, 83, 84, 85), skillets and a strainer. This product seems to have superseded the typical local late medieval earthenware types, and as it is highly glazed is certainly a more attractive product, similar to Low Countries redware and sometimes indistinguishable. Production began in the middle decades of the 16th century, and continued until the early 18th. There is a later, 19th-century variant, more highly fired and with a distinctive shiny glaze, but in Southampton at least, post-medieval redware is not present in 18th-century deposits in the same quantities observed for earlier periods. Post-medieval sandy redware is another lead-glazed earthenware, similar in form to post-medieval redware, but paler and often with a green rather than clear glaze. The two products seem to be contemporary. This might be an early type of Verwood ware, and is worthy of further research. Vessel types include bowls (Nos 86, 87, 88, 89), a chafing dish, dripping pans, jars (Nos 90, 91), pipkins (Nos 92, 93), jugs (Nos 94, 95), lids (Nos 96, 97) and strainers.

The increased use of Verwood ware probably led to the decline in post-medieval redware. There had been potteries at Verwood since the medieval period, but the distinctive products, with a cream-buff coloured fabric and orangey yellow, yellow, yellowy green and green glazes, were probably not widely distributed until the mid-17th century. By the 18th century Verwood was the most common earthenware product in use in Southampton, and this continued throughout the 19th century. Vessel forms present here comprise bowls (Nos 98, 99, 100), including pancheons, a candlestick, a chafing dish, chamber pots (Nos 101, 102), colanders, costrels, dishes, jars (Nos 103, 104, 105), pipkins, bowls (No. 106), jugs (No. 107) and mugs. One

Table 5.6: Quantities of post-medieval ware types

Ware type	*Rim %*	*Weight (g)*	*Sherd count*	*Maximum vessel count*
Post-medieval redware	2044	28347	520	317
Post-medieval sandy redware	1403	24539	257	131
Verwood	3971	99352	1447	727
Alderholt-type	125	1102	32	10
Wiltshire black-glazed	14	27	3	1
Post-medieval brown-glazed	4	116	3	3
Post-medieval black-glazed	48	522	2	2
Post-medieval earthenware	666	8916	201	165
Hants-Surrey border ware	62	610	14	11
Post-medieval whiteware	181	2530	61	39
Post-medieval non-local	67	864	14	7
Post-medieval slipware	269	2799	51	25
Donyatt slipware	17	395	2	1
Tin-glazed	1287	5150	217	151
Post-medieval North French whiteware	35	423	13	4
Post-medieval Saintonge	21	1714	18	10
Breton slipped coarseware	14	92	2	1
Post-medieval French whiteware		31	1	1
Post-medieval French earthenware	8	126	6	6
Netherlands tinglazed	20	186	4	4
Frechen stoneware	332	3877	92	49
Westerwald stoneware	241	2161	86	27
Werra	8	46	4	3
Rhenish stoneware	25	218	9	9
Stoneware	4	234	7	5
Andalusian post-medieval tin-glazed		11	1	1
Iberian micaceous coarseware		73	1	1
Italo-Netherlandish tin-glazed	3	50	6	6
Maiolica		27	6	3
Italian polychrome		6	1	1
Italian red earthenware		24	1	1
Mediterranean earthenware		568	6	1
Mediterranean red-painted	19	110	2	1
Post-medieval import	15	23	2	2
Totals	10903	185269	3092	1726

remarkable survival is a complete large storage jar buried in the floor of a house at Tenement 173 (No. 108). Alderholt-type ware is the name often given to brown-glazed Verwood pottery, and it usually takes the form of mugs, tygs or tankards (No. 109), that can be dated to the late 17th or 18th centuries. There is also a mug in black-glazed earthenware that may have come from Wiltshire. Other black and brown glazed earthenware may have come from further afield, perhaps Staffordshire. Whiteware from the Hampshire/Surrey border, known in London as Border ware, is present in small quantities. This is typical in Southampton, which was beyond the normal markets for those products. There are larger amounts of another post-medieval whiteware that has a coarser fabric, and a yellow or green glaze. Vessel types include bowls, dishes, dripping pans, jars, jugs and pipkins. The origins of this ware are unknown, but it occurs in sufficiently large amounts to warrant further investigation.

Several other fabrics, including sandy types and whiteware, which occur in small amounts, have been grouped together as post-medieval earthenware. The variety of vessel type – which includes jugs (No. 110, 111), bowls (No. 112, 113), dishes, dripping pans (No. 114) and jars – shows that these wares were required for much the same purposes as more local types. Much of the post-medieval earthenware identified as non-local probably originated from the West Country, including gravel-tempered coarseware and a micaceous fabric with an olive or dark green glaze (No. 115). Black-glazed Staffordshire pottery is also present, including a rare matchholder (No. 116). There is a relatively small amount of post-medieval slipware, including one piece that can be identified as Donyatt (No. 117). There were nearer sources of slipware, including Graffham in Sussex but it is difficult to distinguish individual products. The slipwares represented here are all redware, and probably derive mostly from local

sources. They mainly take the form of bowls (No. 118) or dishes (No. 119, 120, 121) with linear slip-trailed decoration. A straining dish with internal slip lines is unusual.

Most of the post-medieval tin-glazed ware has been identified as English, although it is not always easy to distinguish these from Dutch types. English tin-glazed ware dates from *c* 1600, and continued in production until around 1800. The plain white and pale blue types, which are well represented here, date from the second quarter of the 17th century. Most of the tin-glazed ware occurs in deposits dated to the 18th century. The range of vessel types includes bowls (No. 122), chamber pots, dishes (No. 123, 124, 125), ointment pots and plates (No. 126).

A variety of French post-medieval pottery is present, but not in very high quantities. North French whiteware occurs as colourfully glazed bowls and a jug, in contexts that are dated to the 17th and 18th centuries. Saintonge ware is the most common of the post-medieval French wares. It is mainly 17th century in date, characterised by a dark green glaze. Among the unidentifiable material are a bowl rim and a jug handle. Three chafing dishes (No. 127, 128) were recovered from pit 3169 in Tenement 237, along with three further body sherds. Rim, body and base sherds of a bowl (No. 129) in a highly micaceous whiteware with an internal green glaze over a white slip has been identified as Breton. A range of fine white and buff-coloured fabrics have been identified as French, but no more specific source can be ascertained.

Four pieces have been identified as Netherlands tin-glazed, all in 18th-century contexts, including a fragment of a ring-handled vase. Rhenish stoneware forms the bulk of the imported material. Frechen stoneware is late 16th and 17th century in date, while Westerwald stoneware is early 18th century. Werra slipware is usually 16th and 17th century in date, but the two bowls present here came from 18th-century contexts, and may be residual.

A single base sherd of a late Andalusian lustreware bowl, and a body sherd of micaceous coarseware are the only Iberian pieces represented among the late medieval material. Italian pottery is better represented, including a few small sherds of maiolica. There is a single sherd of an Italian polychrome earthenware with green, white and amber lead glaze. A dark red earthenware vessel, with a dark green glaze on the outside and inside, is also probably Italian and probably 16th century in date. A substantial part of a dark green glazed red earthenware with calcareous inclusions is identified as Mediterranean. Also attributed to the Mediterranean is the rim and body of a jar with red painted decoration (No. 130).

Industrial period pottery

The range of industrial period pottery present is all of established types that need little introduction here. Refined earthenware is the most common type present, and most if this is 19th century in date. The same is true of much of the English stoneware. Feathered and marbled slipware, white salt-glazed and scratch blue all date from the mid-18th century. In deposits of that date there are high quantities of Verwood ware, whereas contexts dated after 1800 are characterised by transfer printed ware.

Pottery by site phase

Table 5.7 shows the amounts of pottery, by period, present in each of the excavated tenements, also showing the character of the tenement as recorded in the Terrier. Table 5.8 shows the range of vessel types present throughout each ceramic period, demonstrating the changing requirements of consumers. Together, these tables indicate the development of pottery use in general and within individual dwellings.

Late Saxon (AD 900-1066)

The range and relative quantities of vessel types assigned to this period are similar to most other late Saxon Southampton assemblages, being dominated by flint-tempered ware. Jars/cooking pots are the most common form, as they were throughout the Saxon and Anglo-Norman periods (Brown 1997). Bowls are scarce, while pitchers were not produced locally, but brought in from nearby Michelmersh, or from the Continent. There is limited chalk-tempered ware in evidence, and none of the spouted pitchers typical of that product, at least in the stratified late Saxon material. Two chalk-tempered jar/cooking pots are represented by rims. Glazed ware may indicate a degree of refinement, but there are only two sherds from deposits assigned to this period.

Pit 188 (Property H, later Tenement 173) produced the most significant group, with an MVC of 135. This group mirrors the late Saxon assemblage as a whole, in that flint-tempered ware accounts for 95% of the pottery by weight, sherd count and maximum vessel count, and 100% by rim percent. There are single sherds of late Saxon sandy ware, Michelmersh ware, and North French blackware. More interesting are two sherds from two different crucibles, which suggest metalworking in the vicinity. The base of a pedestal lamp and the rim and handle of a bowl are also unusual.

Anglo-Norman (AD 1066-1250)

Large quantities of Saxo- and Anglo-Norman pottery came from Properties 1 and 2 (later Tenement 237), and included among this material are five bowls and two lamps in Anglo-Norman coarseware. Both of these vessel types are rare in local pottery of this period, and may be an indicator that this property was of some importance even at

Table 5.7: Total quantities of Anglo-Norman to post-medieval pottery from each tenement, with % of the overall totals in italics

Tenement	*Terrier description*	*Rim %*	*Weight (g)*	*Sherd count*	*MVC*
166	Tenement	227	2569	227	217
		1	*<1*	*1*	*2*
167	Cottage	339	7047	328	205
		1	*1*	*2*	*1*
168	Tenement	384	4179	204	149
		1	*1*	*1*	*1*
169	Tenement	242	4201	382	339
		1	*1*	*2*	*2*
170	Tenement	4140	55279	1763	1066
		12	*11*	*9*	*7*
171	Tenement	556	2224	90	55
		2	*<1*	*<1*	*<1*
172	Tenement	4338	52682	1818	1306
		12	*10*	*9*	*9*
173	Capital tenement	3819	61059	2880	2413
		11	*12*	*15*	*17*
174	Tenement	2948	33524	686	446
		8	*6*	*4*	*3*
175	Tenement	102	2288	122	104
		<1	*<1*	*1*	*1*
176	Tenement	1168	18309	231	151
		3	*4*	*1*	*1*
177	Cottage	425	5832	318	256
		1	*1*	*2*	*2*
178	Cottage	695	9909	451	298
		2	*2*	*2*	*2*
179	Cottage	521	6066	253	118
		1	*1*	*1*	*1*
180	Tenement	457	10767	553	459
		1	*2*	*3*	*3*
237	Capital tenement	12864	193369	6574	4682
		36	*37*	*34*	*33*
238	Vacant plot	938	19415	768	645
		3	*4*	*4*	*5*
239	Tenement	32	950	67	53
		<1	*<1*	*<1*	*<1*
240	Tenement	339	6735	301	231
		1	*1*	*2*	*2*
241	Vacant plot	962	20870	914	694
		3	*4*	*5*	*5*
242	Garden	229	2898	226	174
		1	*1*	*1*	*1*
243	Tenement	221	2904	270	228
		1	*1*	*1*	*2*
Totals		35946	523076	19426	14289

this early date. The relatively high amounts of Anglo-Norman glazed ware and Continental imported pottery may support that interpretation. The southern part of Property 8 (later Tenement 173, the other capital tenement), produced the second highest quantity of Saxo- and Anglo-Norman pottery. One of the more unusual vessels of this period is a fragment of a North French red-painted whiteware lamp from Property 5 (Tenement 243), a plot that produced comparatively little pottery.

High medieval (AD 1250-1350)

Table 5.7 shows that material from the two capital tenements (Tenements 173 and 237) is comparable: both produced high quantities of high medieval pottery, which perhaps underlines their comparative wealth. More significantly, it is here that most of the exotic high medieval imported types were found. The highly decorated French jug with white applied leaf decoration came from Tenement 173, along with thirteen Saintonge polychrome jugs out of a total of 28 from the whole excavation. A further eight were recovered from Tenement 237, along with fragments of jugs in Seine Valley zoomorphic and Seine Valley highly decorated wares. One of the three high medieval Andalusian lustreware vessels came from Tenement 173, the other two from Tenement 237. It is the presence of more unusual imports that often distinguishes certain households from lower status dwellings, and the pottery found at Tenements 173 and 237 matches the status assigned to them. These might therefore be identified as merchant households. Large numbers of serving vessels are typical of urban households of high economic status (Brown 1997) and some of the other tenements here, especially Tenements 169, 172, 174, 238 and 241, may therefore fall into that category as they produced quantities of jugs. There are relatively high amounts of imported pottery at most of these sites also, which perhaps underlines their comparative wealth. The properties identified as cottages in the 1454 Terrier (Tenements 167, 177, 178 and 179) produced low quantities of high medieval pottery. At each of them there seem to have been more jugs than jar/cooking pots, and if these were relatively lowly dwellings at this time then this may be evidence that jugs were used in towns at a higher rate than is usually seen on equivalent rural sites, even at the lower end of the social hierarchy.

Late medieval (AD 1350-1510)

The pattern of tenements set out in the Terrier should provide a neat backdrop to discussions of the late medieval assemblages, but in fact there are few very large groups of late medieval material. It has been observed previously that rubbish disposal in the late 14th and 15th centuries was managed differently than before. Backyard pits were rare and in Southampton most large groups of late medieval pottery have been recovered from backfilled stone structures such as garderobes and cellars (Brown 2002, 157). The late medieval pottery from Tenement 237 comprised 38% of the total maximum vessel count for the late medieval pottery and there are few other large groups. A range of exotic types,

including Archaic Pisan maiolica and North Italian earthenware may reflect the tenancy of the Venetian consul. Tenement 172 produced 13% of the total maximum vessel count, and 38% of that are imported types. This may suggest some status for the occupants in the late 15th century. With the exception of Tenement 177, the cottages identified in the Terrier (Tenements 167, 178 and 179), do not stand out as ceramically very different from some of the tenements. Each of them produced high proportions of imported pottery, which perhaps confirms that such material was easily available throughout the town.

Post-medieval (AD 1510-1750)

In the post-medieval period, as before, pottery from Tenement 237 represents a high proportion of the total, 46% by maximum vessel count, and 51% by weight. There is little to be gained from comparing post-medieval material between tenements, as there are no other comparably large groups. Much of the

Table 5.8: The overall range of vessel types in each ceramic period by maximum vessel count, arranged in chronological order of first appearance then alphabetical order. Unidentified sherds have been excluded

Vessel type	*Late Saxon*	*Saxo-Norman*	*Anglo-Norman*	*High medieval*	*Late medieval*	*Post-medieval*	*Early modern*	*Total MVC*
bowl	6	12	12	40	107	254	106	537
jar/cooking pot	863	1208	1902	1018	69	10		5070
jar	8	3	12	9	153	156	37	378
jug / pitcher	22	11	392	1695	113	100	16	2349
lamp	1	9	8	1				19
crucible		2						2
lid		1			11	10	7	29
costrel			1		6	3		10
strainer			3		1	9		13
aquamanile				1				1
curfew				6				6
dish				2	22	53	14	91
dripping pan				11	6	10		27
lantern				2				2
pipkin				2	6	42		50
bottle					2	1	5	8
bung-hole pitcher					8			8
chafing dish					3	12		15
cup					24		9	33
draining vessel					1	1		2
flask					4			4
industrial vessel					2			1
mug					75	21	3	99
ring-handled vase					2	1		3
skillet					4	1		5
tazza					1			1
watering pot					1	2		3
chamber pot						14	7	21
candlestick						1		1
ewer						1		1
matchholder						1		1
plate						23	97	120
stopper						1		1
tankard						11	3	14
whistle						1		1
gorge							1	1
mortar							1	1
flower pot							11	11
pestle							1	1
saucer							1	1
teapot							6	6
Total MVC	900	1246	2330	2787	621	739	325	8948

material from Tenement 237 (317 vessels or 38% by maximum vessel count), came from cess pit 3169 (Fig. 4.36). No other post-medieval feature on the entire site produced anything approaching that amount. This is a major group that may be ceramically dated to the late 16th or 17th centuries. The presence of Frechen stoneware suggests a date after 1550, while the absence of tinglazed ware indicates a date before the early 17th century. There is Verwood ware, which ought to be later 17th or even 18th century, but one important aspect to this group is that it may represent the early appearance of Verwood pottery in Southampton, for Beauvais sgraffito ware and post-medieval Saintonge chafing dishes also indicate a late 16th or 17th century date. Comparative analysis with other tenements is hindered by a lack of finds but there is enough in total to initiate some interpretations of pottery supply and use in the post-medieval town (below).

Early modern (AD 1750-1900)

There may be little that the pottery can add to understanding the occupancy of particular dwellings in the post-industrial period, informed as it is by a plethora of documentary sources. Pit 228 at Tenement 172 produced a group that may be dated to the late 18th century. White salt-glazed, scratch blue stoneware, English brown stoneware and a refined earthenware bowl are all post-industrial products. There is a large amount of Verwood, with Chinese porcelain and English plain tin-glazed ware. The absence of white refined earthenware or transfer-printed types suggests a date before 1800. Pit 6278, at Tenement 170, is 19th century in date, with quantities of white and transfer-printed refined earthenware. Post-medieval redware and Verwood are also present, in much smaller quantities than would be expected in the 18th century.

Discussion

Previous studies have shown that throughout the medieval period pottery was acquired from local sources (Brown 1995). This is also true here and the relative percentages of local, non-local and imported ceramics reinforce previously observed patterns. Pottery of the late Saxon and Saxo-Norman periods from the site is predominantly flint-tempered, and mainly takes the form of handbuilt jar/cooking pots. There is a relatively high quantity of pre-Conquest glazed ware, a maximum of 26 vessels in all. The Anglo-Norman pottery, dating from the late 11th century to the mid-13th, is also predominantly in the form of locally produced, scratch-marked cooking pots but glazed local and imported jugs are present in greater quantities. Jugs are even more common in the high medieval period, which dates from the mid-13th century to the late 14th. Cooking vessels, now wheelthrown, remain common but there is a noticeable increase in the quantity of glazed jugs. A shift in the emphasis of trade is also indicated by high amounts of Saintonge pottery as opposed to the northern French types prevalent in earlier periods. Breton and Andalusian types are unusual but not unknown in Southampton at this date and are present here in small amounts. Pottery from France is a much smaller presence in the late medieval period, which extends from the late 14th to early 16th centuries.

A wider variety of imported wares and vessel types include pottery from the Rhineland, the Low Countries, France, Portugal, Spain and Italy. This reflects changes in the patterns of international trade as well as a demand for types not made in the Southampton region, such as tin-glazed and stoneware. The demand was high enough to increase the quantities of imports to almost 50% of the total maximum vessel count for the late medieval period, whereas they had been at 15% for the high medieval. Although all the usual late medieval pottery types are present here, there are none of the large groups, dominated by imported material, that have been observed elsewhere (eg sites SOU 124 and SOU 128; Brown 2002, 104, 149). The post-medieval period saw a decline in the quantity of imported pottery as local pottery-makers once again competed with foreign sources and trade was interrupted by religious divisions and internal and international strife. The emphasis at this period was mainly on the importation of stoneware from Rhenish manufactories such as Frechen although tin-glazed ware was also being imported from the Netherlands. From the late 17th century the Orient was the focus of much international trade but this is not well reflected here, as there are relatively small amounts of Chinese porcelain. This might suggest that Southampton did not benefit greatly from the development of global trade routes, nor indeed from the opening up of much of the country through the inland waterways. The town was, at one point in the late 17th century, in danger of becoming something of a backwater and its later reinvention as a spa town is not greatly reflected in the ceramic record here.

Catalogue of illustrated pottery (Figs 5.1-5.11)

Fig. 5.1. Late Saxon and Anglo-Norman pottery

1. **Jar/cooking pot**. Late Saxon flint-tempered ware, 10th-11th century. Ctx 4502, Pit 4612, Property 2 (Tenement 237), Phase AN
2. Rim and spout of **spouted jar** or **pitcher**. Late Saxon flint-tempered ware, 10th-11th century. Ctx 4796, Pit 4790, Property C (Tenement 238), Phase LSAX
3. **Lamp**. Late Saxon flint-tempered ware, 10th-11th century. Ctx 8206, Pit 8207, Property E (Tenement 243), Phase LSAX
4. Handled **jar**. Late Saxon flint-tempered ware, 10th-11th century. Ctx 3363, Pit 3303, Property 2 (Tenement 237), Phase AN
5. Socketed **bowl**. Late Saxon flint-tempered ware, 10th-11th century. Ctx 265, Pit 266, Property H/9 (Tenement 173), Phase LSAX/AN

Fig. 5.1 Late Saxon and Anglo-Norman pottery (Nos 1-20)

6. Hemispherical **bowl**. Late Saxon flint-tempered ware, 10th-11th century. Ctx 4502, Pit 4612, Property 2 (Tenement 237), Phase AN
7. **Pitcher** rim with grid stamped decoration. Late Saxon chalk-tempered ware, 10th-11th century. Ctx 4685, Pit 4670, Property 2 (Tenement 237), Phase AN
8. **Jar** rim with thumbed edge. Michelmersh-type ware, 10th-11th century. Ctx 5135, Pit 5139, Property 6 (Tenement 178), Phase AN
9. Body sherd of **pitcher** with rouletted and applied decoration and an external clear lead glaze. Early medieval glazed ware, 10th-11th century. Ctx 6252, Pit 6251, Property 10 (Tenement 170), Phase AN
10. **Jar/cooking pot** rim. Scratch-marked ware, 12th-13th century. Ctx 4436, Pit 3115, Property 2 (Tenement 237), Phase AN
11. **Jar/cooking pot** rim with pierced raised lug. Scratch-marked ware, 12th-13th century. Ctx 4435, Pit 3115, Tenement 237, Phase AN
12. Shallow **bowl**. Anglo-Norman coarseware, 12th-13th century. Ctx 4416, Pit 4415, Tenement 237, Phase HMED
13. **Bowl** or **lamp**. Anglo-Norman coarseware, 12th-13th century. Ctx 7029, Pit 7031, Property 10 (Tenement 170), Phase AN
14. **Lamp**. Anglo-Norman coarseware, 12th-13th century. Ctx 4504, Pit 4614, Property 2 (Tenement 237), Phase AN
15. Pierced **bowl** or **strainer**. Anglo-Norman coarseware, 12th-13th century. Ctx 3622, Pit 3618, Property 3 (Tenement 238), Phase AN
16. Attached tubular spout from tripod **pitcher** with rouletted decoration on top of rim and external greenish-clear lead glaze. Anglo-Norman glazed ware, 12th-13th century. Ctx 4404, Pit 4402, Tenement 237, Phase HMED
17. **Pitcher**/**jug** base with partial, external, greenish-clear lead glaze. The base may have been deliberately trimmed for re-use. Anglo-Norman glazed ware, 12th-13th century. Ctx 5373, Pit 5358, Tenement 180, Phase HMED
18. Rim, handle, body and base of an unglazed **pitcher** with scratch-marking. Non-local Anglo-Norman coarseware, 12th-13th century. Ctx 4504, Pit 4614, Property 2 (Tenement 237), Phase AN
19. Shell **lamp**. Normandy gritty ware, 12th-13th century. Ctx 4091, Pit 4097, Tenement 237, Phase HMED
20. Pedestal **lamp**. North French whiteware, 12th-13th century. Ctx 8192, Pit 8200, Property 5 (Tenement 243), Phase AN

Fig. 5.2. Anglo-Norman and high medieval pottery

21. **Costrel** with red-painted linear decoration. North French red-painted whiteware, 12th-13th century. Ctx 6297, Pit 6302, Tenement 170, Phase HMED
22. Handle, body and base of tripod **jug**. Southampton coarseware, 13th-14th century. Ctx 1050, Pit 813, Tenement 173, Phase HMED
23. Top half of a **jug** with a pulled lip. Southampton coarseware, 13th-14th century. Ctx 1050, Pit 813, Tenement 173, Phase HMED
24. Inturned **bowl** with partial internal clear lead glaze. Southampton sandy coarseware, 13th-14th century. Ctx 467, Pit 466, Tenement 172, Phase HMED
25. **Bowl** with partial internal clear lead glaze. High medieval coarseware, 13th-14th century. Ctx 4316, Pit 4318, Tenement 237, Phase HMED
26. Shallow **bowl**. High medieval sandy coarseware, 13th-14th century. Ctx 6297, Pit 6302, Tenement 170, Phase HMED
27. **Curfew** rim with applied and thumbed strips. High medieval coarseware, 13th-14th century. Ctx 8432, Pit 8429, Property 5 (Tenement 241), Phase AN
28. **Lid** with clear lead glaze splashed on the underside. High medieval sandy ware, 13th-14th century. Ctx 8507, Pit 8505, Property 5, Tenement 241, Phase AN
29. **Jug spout** sculpted into a human face; overall external dark green glaze. South Hampshire redware, 13th-14th century. Ctx 7599, Pit7595, Tenement 166, Phase HMED
30. **Jug** rim with applied human face decoration; external clear lead glaze. Laverstock-type ware, 13th-14th century. Ctx 4355, Pit 4351, Tenement 237, Phase HMED
31. Thumbed **jug** base with foot; splashed external green glaze. Local whiteware, 13th-14th century. Ctx 4164, occupation layer, Tenement 238, Phase HMED
32. Pear-shaped **jug** with external green glaze. High medieval sandy ware, 13th-14th century. Ctx 911, Pit 900, Tenement 173, Phase HMED

Fig. 5.3. High and late medieval pottery

33. **Jug** with thumbed base and partial, external, dark green glaze. High medieval sandy ware, 13th-14th century. Ctx 1093, Pit 1092, Tenement 173, Phase HMED
34. **Lamp** with pulled lip with greenish-clear external and internal glaze. High medieval sandy ware, 13th-14th century. Ctx 4315, Pit 4401, Tenement 237, Phase HMED
35. **Jug** with mottled green 'bib' glaze. Saintonge whiteware, 14th century. Ctx 430, Pit 172 , Tenement 172, Phase HMED
36. **Pégau** rim and handle with post-firing 'merchant's mark' scored into the handle. Saintonge whiteware, 13th-14th century. Ctx 1198, Pit 1197, Tenement 174, Phase LMED
37. **Jug** or **pégau** rim and handle with five vertical lines scored inside the rim after firing; possibly a 'merchant's mark'. Saintonge whiteware, 13th-14th century. Ctx 1093, Pit 1092, Tenement 173, Phase HMED
38. **Jug** rim with applied human face. Saintonge bright green glazed whiteware, 13th-14th century. Ctx 7320, Pit 7321, Tenement 241, Phase PMED
39. Small **jar**. Developed Normandy gritty ware, 13th-14th century. Ctx 6573, Pit 6553, Tenement 172, Phase LMED
40. **Jug** rim. Breton coarseware, 13th-14th century. Ctx 650, Pit 651, Tenement 173, Phase HMED
41. **Bowl** with internal clear lead glaze. Late medieval sandy ware, 15th century. Ctx 7760, Pit 7763, Tenement 168, Phase LMED
42. **Jar**/**cooking pot** with partial, internal clear lead glaze and a horizontal band of applied and thumbed clay, with evidence of knife-trimming on the lower body. Late medieval sandy ware, 15th century. Ctx 8478, Pit 8481, Tenement 241, Phase LMED
43. Handled **jar/cooking pot**, with partial, external clear glaze and white slip liner decoration. Late medieval sandy ware, 15th-16th century. Ctx 7760, Pit 7763, Tenement 168 , Phase LMED
44. Flanged rim of **industrial vessel**, possibly a receiver, with partial external and internal green glaze. Late medieval sandy ware, 15th-16th century. Ctx 4010, Pit 4009, Tenement 237, Phase LMED

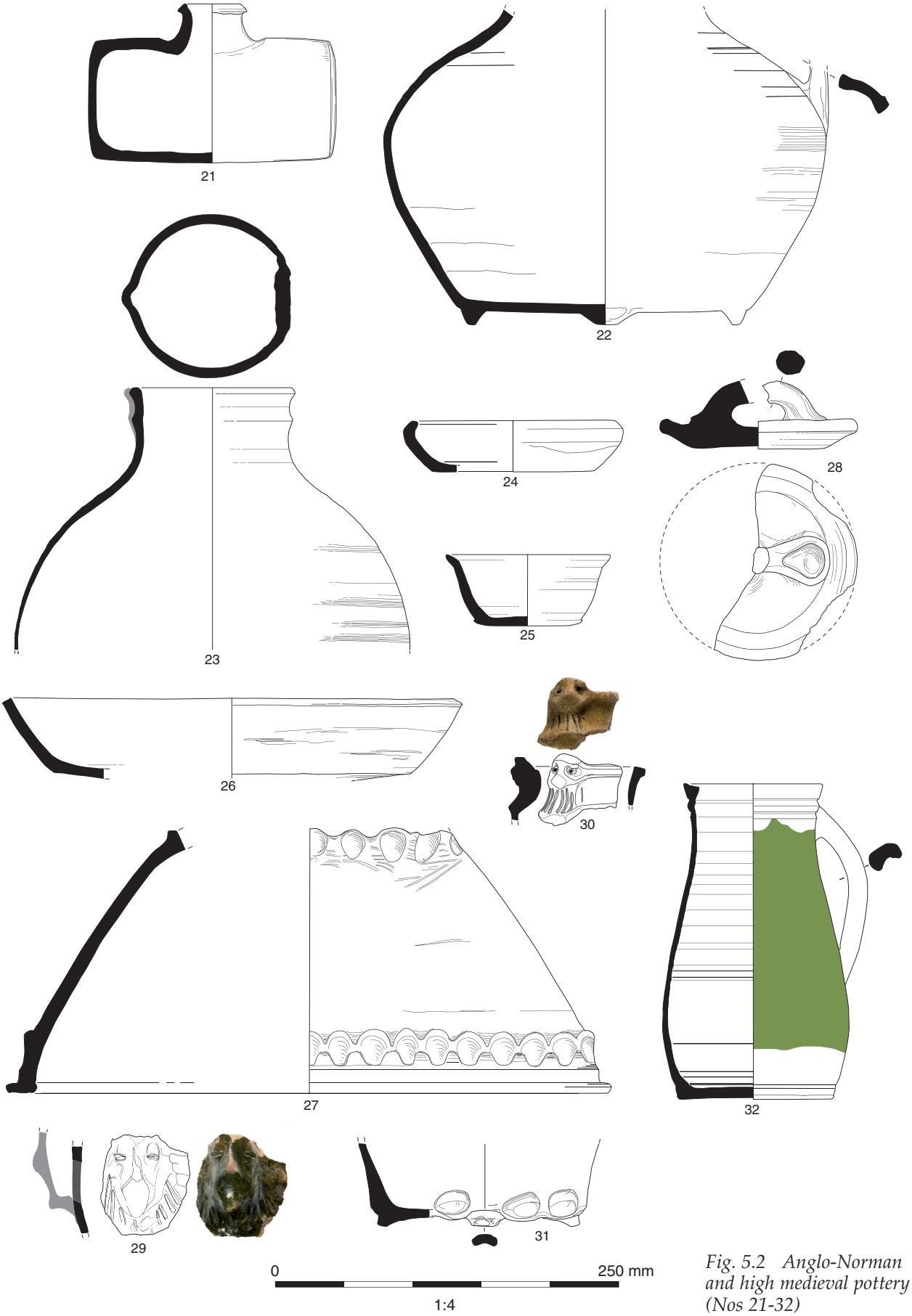


Fig. 5.2 Anglo-Norman and high medieval pottery (Nos 21-32)

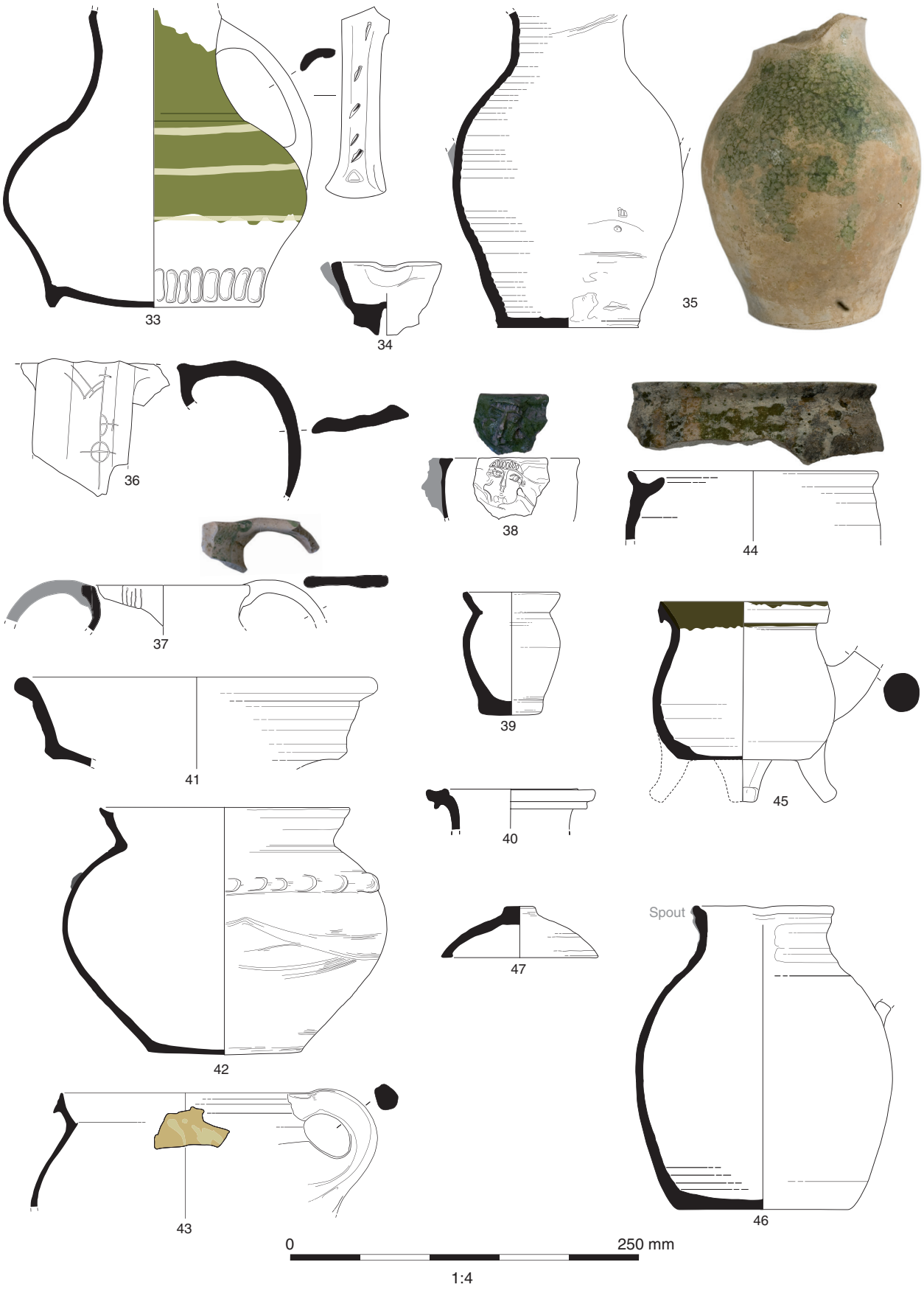


Fig. 5.3 High and late medieval pottery (Nos 33-47)

Fig. 5.4 Late medieval local and imported pottery (Nos 48-55)

45. **Pipkin** with internal dark green glaze. Late medieval well-fired sandy ware, 15th-16th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
46. **Jug** or **pitcher**. Late medieval well-fired sandy ware, 15th-16th century. Ctx 5100, Pit 5099, Tenement 179, Phase LMED
47. **Lid**. Late medieval well-fired sandy ware, 15th-16th century. Ctx 4010, Pit 4009, Tenement 237, Phase LMED

Fig. 5.4. Late medieval local and imported pottery

48. Two-handled **jar/cooking pot**. Late medieval well-fired sandy ware, 15th-16th century. Ctx 6680, Pit 6682, Tenement 240, Phase LMED
49. Oval base, possibly of an **industrial vessel**. Late medieval well-fired sandy ware, 15th-16th century. Ctx 6146, Pit 6144, Tenement 170, Phase LMED
50. **Mug** with scalloped base imitating stoneware types; overall external and partial internal greenish-clear lead glaze. Late/post-medieval sandy ware, 15th-16th century. Ctx 6146, Pit 6144, Tenement 170, Phase LMED
51. **Jar** with green glaze inside rim and partially on the external surface. Tudor Green ware, 15th-16th century. Ctx 6148, Pit 6144, Tenement 170, Phase LMED
52. **Dish** with internal sgraffito motto on rim and floral motif. Beauvais sgraffito, 15th-16th century. Ctx 1398, Pit 1401, Tenement 174, Phase PMED
53. **Dish** with internal sgraffito motto on rim and human face. Beauvais sgraffito, 15th-16th century. Ctx 3172, Pit 3169, Tenement 237, Phase PMED
54. **Bowl** with internal overall red slip under a clear lead glaze. Beauvais whiteware, 15th-16th century. Ctx 5100, Pit 5099, Tenement 179, Phase LMED
55. Spouted **jar** or **pitcher** with external green glaze. Late medieval Saintonge whiteware, 15th-16th century. Ctx 6987, Pit 6856, Tenement 172, Phase LMED

Fig. 5.5. Late medieval imported pottery

56. **Dripping pan** with ornate, pierced rim. Low Countries redware, 15th-16th century. Ctx 6574, Pit 6553, Tenement 172, Phase LMED
57. **Bowl** with incised line below rim, above a thumbed cordon; internal honey-coloured glaze. Iberian micaceous redware, 15th-16th century. Ctx 3187, Pit 3186, Tenement 237, Phase PMED
58. **Bowl**. Iberian micaceous redware, 15th-16th century. Ctx 5059, Pit 5055, Tenement 179, Phase LMED
59. **Bowl**. Iberian micaceous redware, 15th-16th century. Ctx 5058, Pit 5055, Tenement 179, Phase LMED
60. **Lid**. Iberian micaceous redware, 15th-16th century. Ctx 6843, Pit 6483, Tenement 240, Phase PMED
61. **Jar** rim with clear lead glaze inside rim. Iberian redware, 15th-16th century. Ctx 6843, Pit 6859, Tenement 240, Phase PMED
62. **Lid**. Iberian redware, 15th-16th century. Ctx 6843, Pit 6859, Tenement 170, Phase LMED
63. **Drug jar** or **albarello**; white tinglaze with blue lines. Seville blue and white, 15th-16th century. Ctx 3616, Pit 3582, Tenement 237, Phase LMED
64. **Jar** with external and internal light green glaze. Iberian coarseware, 15th-16th century. Ctx 6573, Pit 6553, Tenement 172, Phase LMED
65. **Bowl**; tin-glazed with internal copper lustre decoration. Valencian/Seville lusterware, 15th-16th century. Ctx 7075, Pit 6645, Tenement 172, Phase LMED
66. **Bowl**; tin-glazed with blue painted decoration. Iberian tin-glazed, possibly Portuguese, 15th-16th century. Ctx 3163, Pit 3169, Tenement 237, Phase PMED

Fig. 5.6. Late medieval imported and post-medieval local pottery

67. **Bowl** with internal tin glaze and external clear lead glaze. Archaic Pisan maiolica, 15th-16th century. Ctx 3616, Pit 3582, Tenement 237, Phase LMED
68. **Bowl** base with internal tinglaze and painted figurative motif; external lead glaze. Archaic Pisan maiolica, 15th-16th century. Ctx 3600, Pit 3582, Tenement 237, Phase LMED
69. **Jug** with external tin glaze and internal clear lead glaze. Archaic Pisan maiolica, 15th-16th century. Ctx 3643, Pit 3582, Tenement 237, Phase LMED
70. **Dish** rim with blue and yellow painted tin glaze. Italian maiolica, 15th-16th century. Ctx 5082, Pit 5081, Tenement 178, Phase MOD
71. Ring-handled **vase** with blue-painted tin glaze. Italian maiolica, possibly Seville-type blue and white, 15th-16th century. Ctx 7636, Pit 7636, Tenement 167, Phase LMED
72. **Bottle** or **flask** with blue and yellow painted tin glaze. Italian maiolica, 15th-16th century. Ctx 7755, Pit 7757, Tenement 168, Phase LMED
73. **Bowl** with internal white slip lines beneath a clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
74. Handled **bowl**, unglazed. Post-medieval sandy redware, 16th-17th century. Ctx 6203, Pit 6200, Tenement 170, Phase PMED
75. Handled **bowl**, unglazed. Post-medieval sandy redware, 16th-17th century. Ctx 6215, Pit 6127, Tenement 170, Phase HMED
76. **Chafing dish** with thumbed 'rosette' inside the bowl; internal clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase LMED
77. **Chafing dish** with internal clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED

Fig. 5.7. Post-medieval pottery

78. **Jar** with external partial clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 5062, Pit 5069, Tenement 177, Phase PMED
79. Handled **jar** with external combed lines and internal clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
80. Handled **jar** with score marks at the handle joins; internal clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
81. **Jug** with thumbed applied horizontal strip painted with a white slip; partial clear lead inside and out. Post-medieval redware, 16th-17th century. Ctx 3187, Pit 3186, Tenement 237, Phase PMED
82. **Pipkin** with internal clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
83. **Pipkin** with internal clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
84. Tripod **pipkin** with internal clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 3519, demolition layer, Tenement 237, Phase PMED

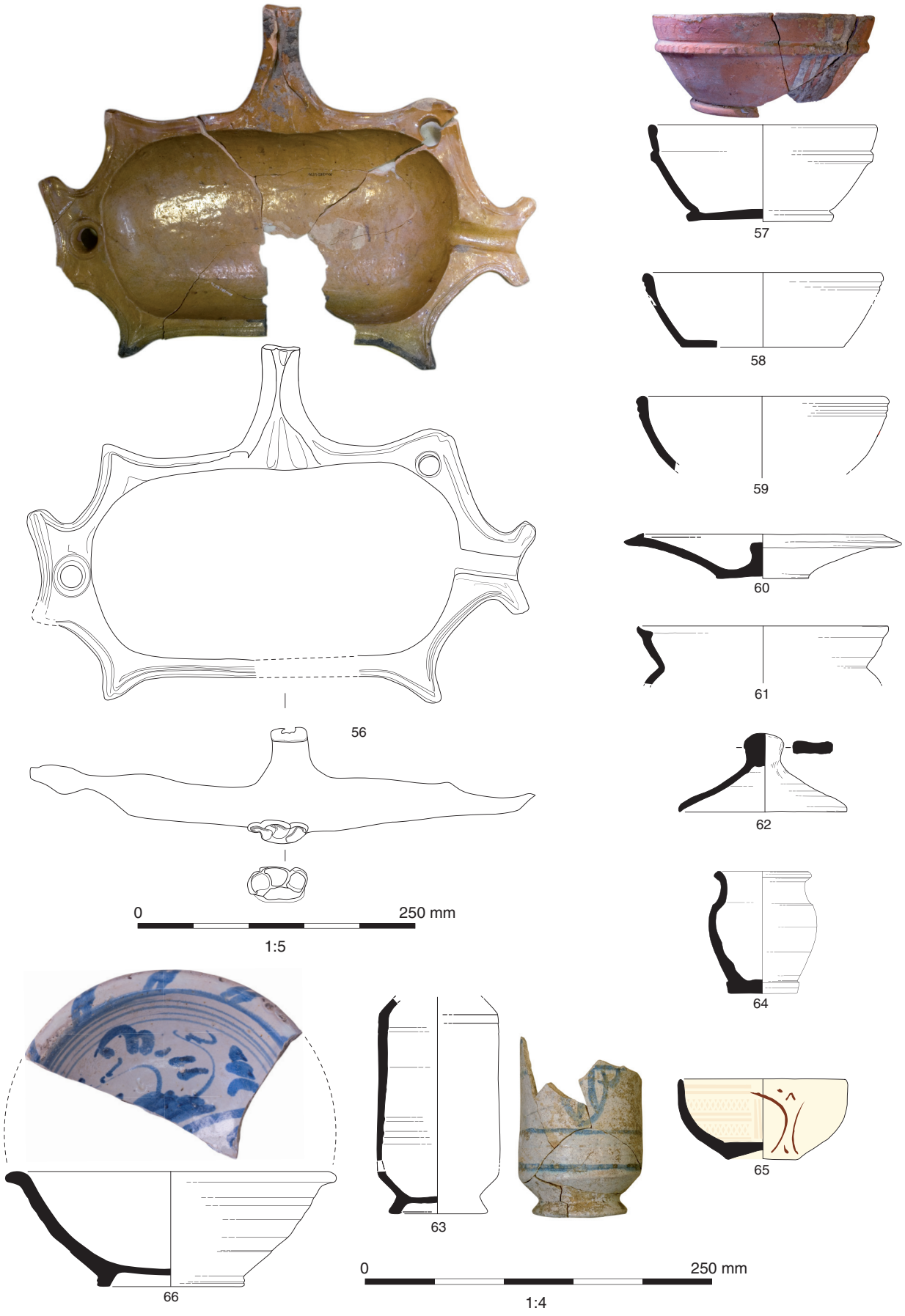


Fig. 5.5 Late medieval imported pottery (Nos 56-66)

Fig. 5.6 Late medieval imported and post-medieval local pottery (Nos 67-77)

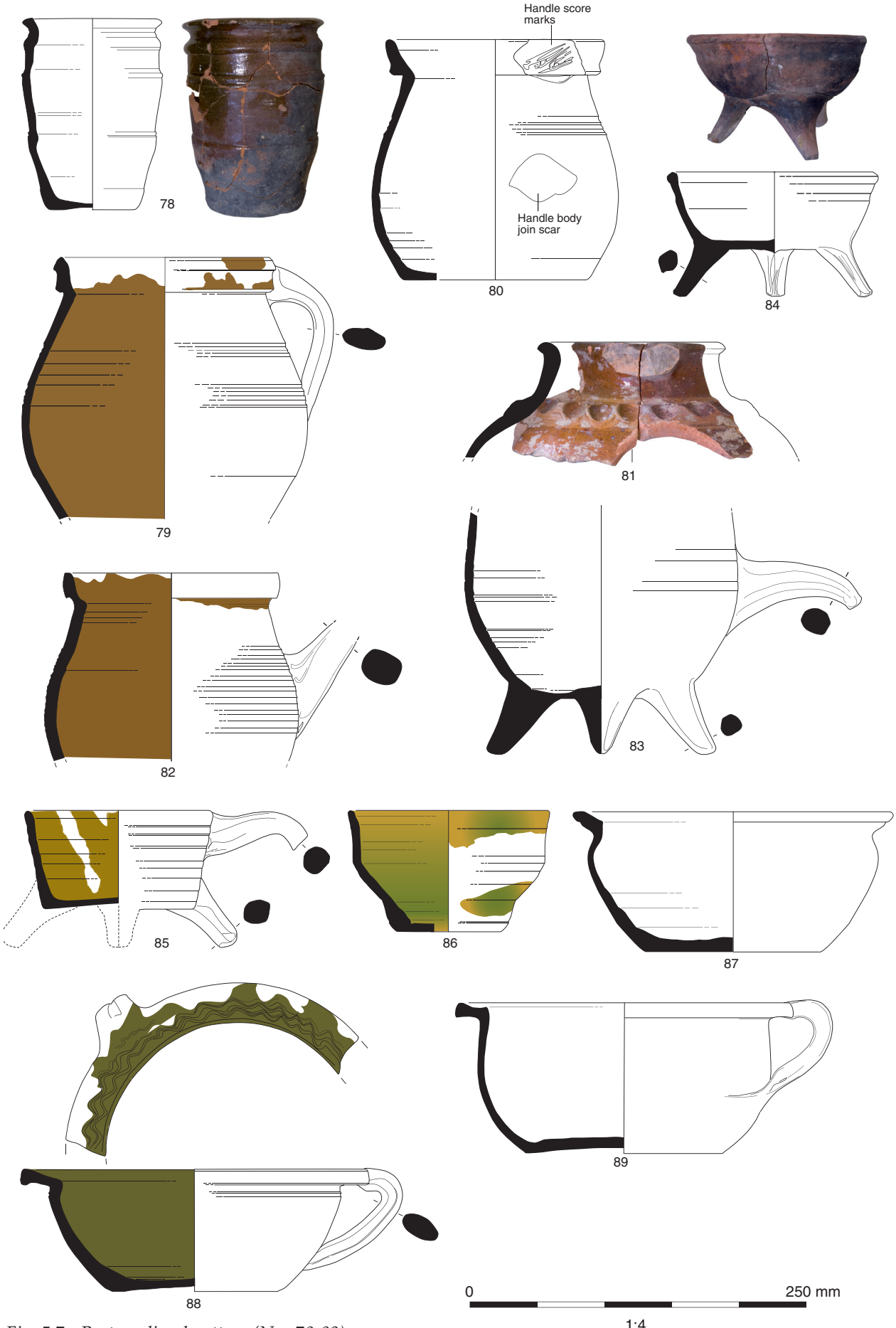


Fig. 5.7 Post-medieval pottery (Nos 78-89)

85. Tripod **pipkin** with internal greenish-clear lead glaze. Post-medieval redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
86. **Bowl** with internal greenish-clear lead glaze extending over part of the exterior. Post-medieval sandy redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
87. **Bowl** with internal greenish-clear lead glaze. Post-medieval sandy redware, 16th-17th century. Ctx 3187, Pit 3186, Tenement 237, Phase PMED
88. Handled **bowl** with combed wavy line on rim; internal partial reduced green lead glaze. Post-medieval sandy redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
89. Handled **bowl**, unglazed. Post-medieval sandy redware, 16th-17th century. Ctx 6202, Pit 6200, Tenement 170, Phase PMED

Fig. 5.8. Post-medieval pottery

90. **Jar** with internal clear lead glaze. Post-medieval sandy redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
91. Handled **jar** with internal dark green glaze. Post-medieval sandy redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
92. Tripod **pipkin** with internal clear lead glaze. Post-medieval sandy redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
93. Tripod **jar** or **pipkin**, with no evidence of a handle join; internal greenish-clear lead glaze. Post-medieval sandy redware, 16th-17th century. Ctx 3168, Pit 3169, Tenement 237, Phase PMED
94. **Jug** with strap handle; overall external and partial internal greenish-clear lead glaze. Post-medieval sandy redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
95. **Jug** with strap handle; overall external greenish-clear lead glaze. Post-medieval sandy redware, 16th-17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
96. **Lid**. Post-medieval sandy redware, 16th-17th century. Ctx 3519, Pit 3519, Tenement 237, Phase PMED
97. **Lid**. Post-medieval sandy redware, 16th-17th century. Ctx 6271, Pit 6278, Tenement 170, Phase MOD
98. **Bowl** with internal yellow glaze. Verwood-type ware, 17th-18th century. Ctx 3646, Pit 3635, Tenement 176, Phase PMED
99. Handled **bowl**, rilled beneath the rim; internal olive green lead glaze. Verwood-type ware, 17th-18th century. Ctx 3647, Pit 3635, Tenement 176, Phase PMED
100. Handled **bowl** ribbed beneath the rim; internal olive green glaze. Verwood-type ware, 17th-18th century. Ctx 3646, Pit 3635, Tenement 176, Phase PMED
101. **Chamber pot** with external and internal yellow-green glaze. Verwood-type ware, 17th-18th century. Ctx 3647, Pit 3635, Tenement 176, Phase PMED
102. **Chamber pot** with external and internal green glaze. Verwood-type ware, 17th-18th century. Ctx 3647, Pit 3635, Tenement 176, Phase PMED

Fig. 5.9. Post-medieval pottery

103. Two-handled **jar** with internal amber glaze. Verwood-type ware, 17th-18th century. Ctx 1399, Pit 1401, Tenement 174, Phase PMED
104. **Jar** with incised wavy line on rim and around upper body; internal light green glaze. Verwood-type ware, 17th-18th century. Ctx 3163, Pit 3169, Tenement 237, Phase PMED
105. **Jar** with internal light green glaze. Verwood-type ware, 17th-18th century. Ctx 3163, Pit 3169, Tenement 237, Phase PMED
106. Handled **bowl** with external and internal greenish-clear lead glaze. Verwood-type ware, 17th-18th century. Ctx 6215, Pit 6214, Tenement 170, Phase MOD
107. **Jug** with combed horizontal line on neck; partial extrernal greenish-clear glaze. Verwood-type ware, 17th-18th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
108 Two-handled **jar** with thumbing below the rim; internal yellow glaze. Verwood-type ware, 17th-18th century. Ctx 1119, Pit 1033, Tenement 173, Phase PMED
109. **Tankard** with ribbing below rim and above base; external and internal brown lead glaze. Verwood-Alderholt-type ware, 17th-18th century. Ctx 3163, Pit 3169, Tenement 237, Phase PMED
110. **Jug** or **mug** with external greenish-clear lead glaze; possibly emulating stoneware forms. Post-medieval sandy ware, 17th century. Ctx 3168, Pit 3169, Tenement 237, Phase PMED
111. **Jug** or **mug** with external dark green lead glaze. Post-medieval sandy ware, 17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
112. **Bowl** with internal greenish-clear glaze on the base. Post-medieval earthenware, 17th century. Ctx 6203, Pit 6200, Tenement 170, Phase PMED
113. **Bowl** with internal yellow glaze. Post-medieval whiteware, 17th century. Ctx 3167, Pit 3169, Tenement 237, Phase PMED
114. **Dripping pan** with internal greenish-clear glaze. Post-medieval whiteware, 17th century. Ctx 3163, Pit 3169, Tenement 237, Phase PMED

Fig. 5.10. Post-medieval pottery

115. **Bowl** with internal dark green glaze. Post-medieval non-local earthenware, 17th century. Ctx 3616, Pit 3582, Tenement 237, Phase LMED
116. **Match-holder** with striking surface on neck; overall black glaze. Staffordshire-type black-glazed ware, 17th-18th century. Ctx 3323, Pit 3322, Tenement 237, Phase PMED
117. **Dish** with white slip sgraffito motif beneath a clear lead glaze. Donyatt-type slipware, 17th-18th century. Ctx 1397, Pit 1401, Tenement 174, Phase PMED
118. **Bowl** with internal white slip-trailed decoration and white slip vertical lines on the outside of the rim. Post-medieval slipped redware, 17th-18th century. Ctx 3189, Pit 3188, Tenement 237, Phase PMED
119. **Dish** with internal white slip decoration. Post-medieval slipped redware, 17th-18th century. Ctx 3074, Pit 3169, Tenement 237, Phase PMED
120. **Dish** with internal white slip decoration. Post-medieval slipped redware, 17th-18th century. Ctx 3187, Pit 3186, Tenement 237, Phase PMED
121. **Bowl** with internal white slip concentric lines. Post-medieval slipped redware, 17th-18th century. Ctx 3189, Pit 3188, Tenement 237, Phase PMED
122. **Bowl** with white tinglaze and painted blue zoomorphic decoration. Anglo-Netherlandish tin-glazed ware, 17th-18th century. Ctx 3074, Pit 3169, Tenement 237, Phase PMED
123. **Dish** with white tinglaze and internal blue and green painted lines and floral decoration. Anglo-Netherlandish tin-glazed ware, 17th-18th century. Ctx 3647, Pit 3635, Tenement 176, Phase PMED

124. Shallow **dish** or **plate** with white tinglaze and blue-painted floral decoration. English tin-glazed ware, 17th-18th century. Ctx 6215, Pit 6214, Tenement 170, Phase MOD

125. Shallow **dish** or **plate** with white tinglaze and blue-painted decoration. English tin-glazed ware, 17th-18th century. Ctx 6215, Pit 6214, Tenement 170, Phase MOD

Fig. 5.8 Post-medieval pottery (Nos 90-102)

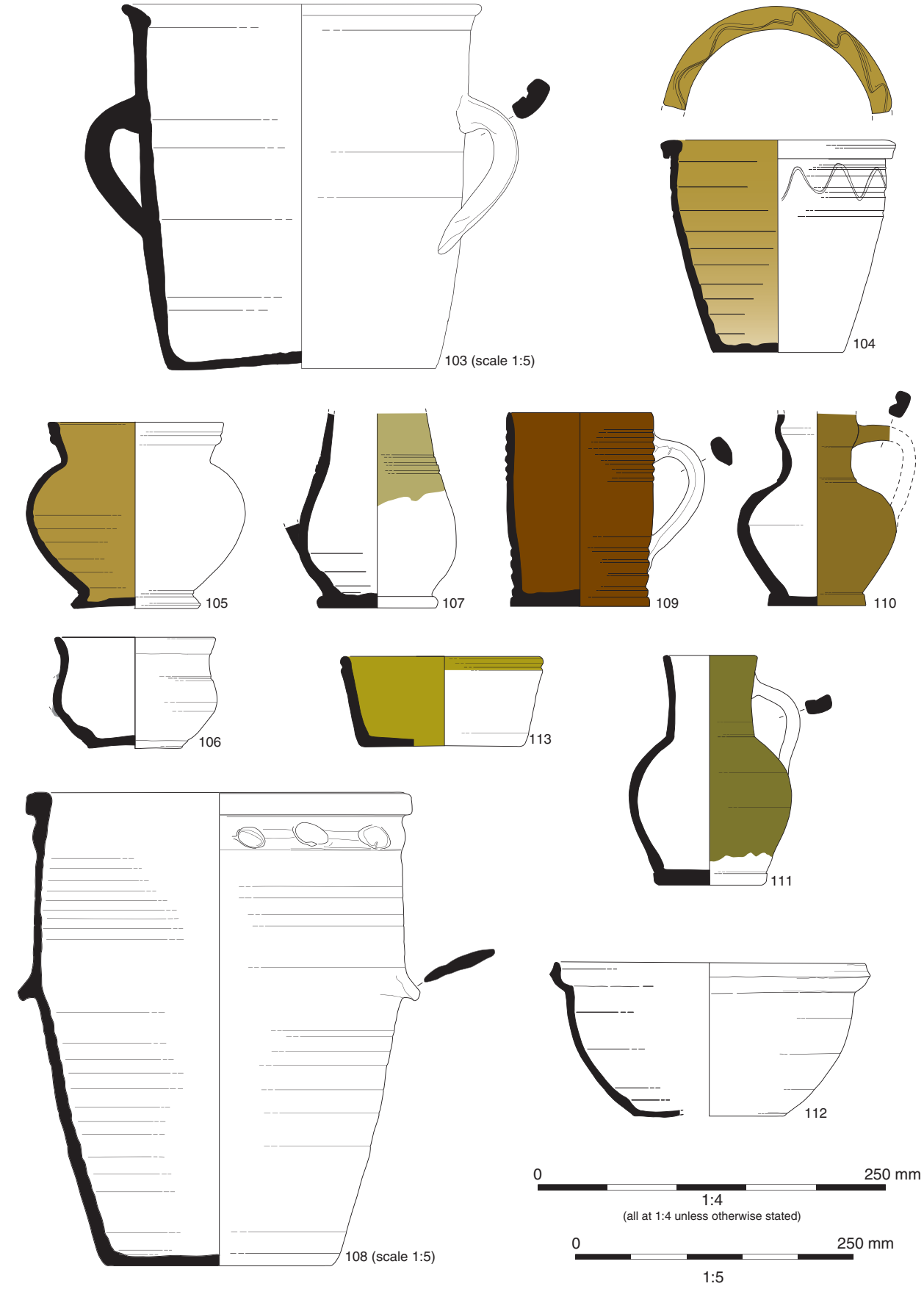


Fig. 5.9 Post-medieval pottery (Nos 103-113)

Fig. 5.10 Post-medieval pottery (Nos 114-121)

Fig. 5.11. Post-medieval pottery

126. **Plate** with white tinglaze and blue-painted floral decoration. Anglo-Netherlandish tin-glazed ware, 17th-18th century. Ctx 3647, Pit 3635, Tenement 176, Phase PMED
127. **Chafing dish**, unglazed. Post-medieval Saintonge whiteware, 16th-17th century. Ctx 3163, Pit 3169, Tenement 237, Phase PMED
128. **Chafing dish**, unglazed. Post-medieval Saintonge whiteware, 16th-17th century. Ctx 3163, Pit 3169, Tenement 237, Phase PMED
129. **Bowl** with internal white slip under a green lead glaze. Post-medieval Breton coarseware, 16th-17th century. Ctx 3187, Pit 3186, Tenement 237, Phase PMED
130. Narrow-necked **jar** or **jug** rim with red slip lines. Post-medieval Mediterranean earthenware, 16th-17th century. Ctx 7537, Pit 7528, Tenement 167, Phase PMED

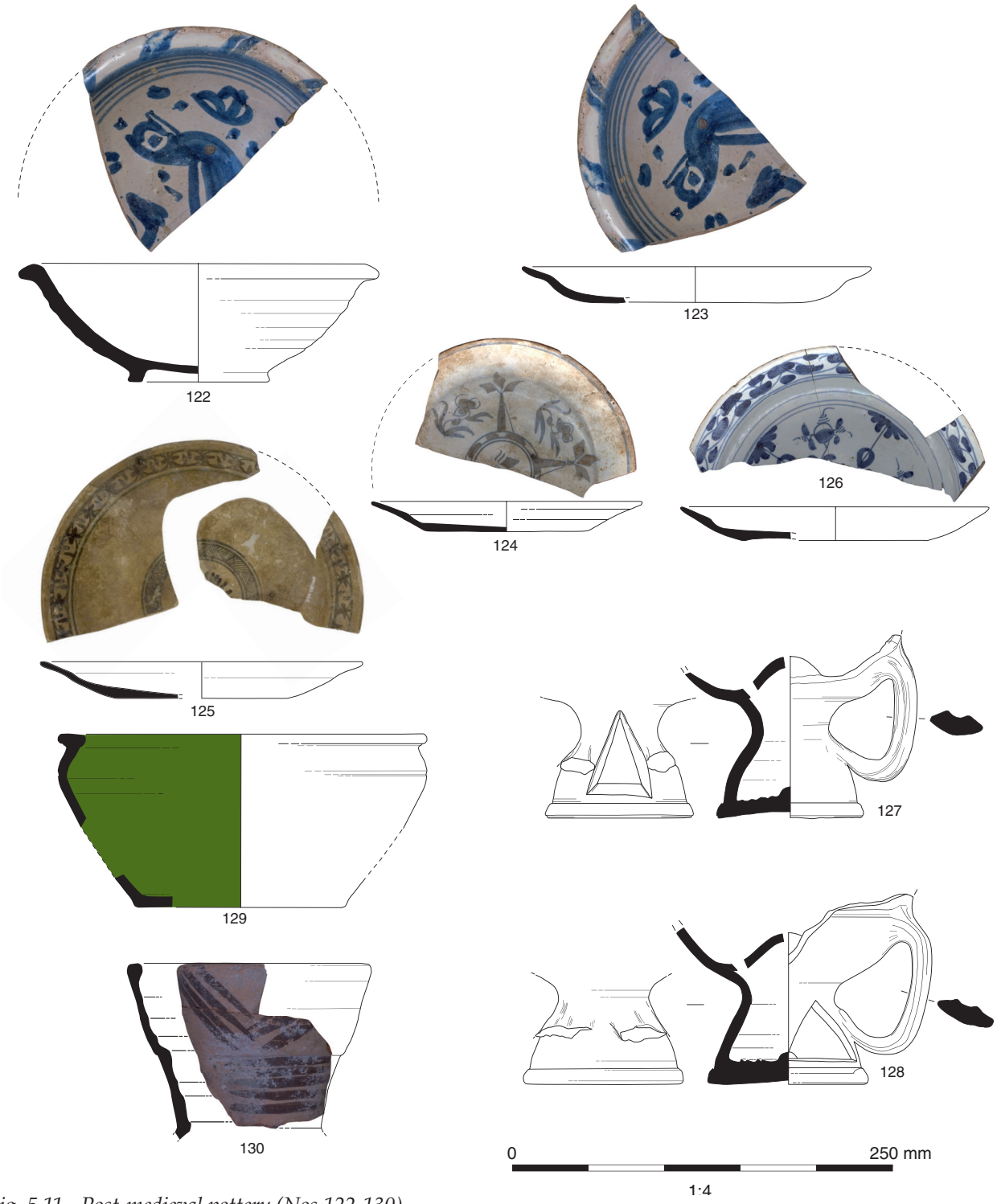


Fig. 5.11 Post-medieval pottery (Nos 122-130)

BUILDING MATERIALS

Structural and fired clay (Figs 5.12-5.21)
by Cynthia Poole

Introduction

The assemblage of structural and fired clay comprises 6541 fragments (a total of 107.84 kg), including several large groups. The material came from each phase, with 10% in late Saxon contexts, half found in the Anglo-Norman contexts, a third (32%) in high medieval deposits and with an unsurprisingly rapid decline from the late medieval period onwards.

Fabrics

Two broad fabric groups were identified (Fabrics A and B), with sub-types showing additional characteristics. A few examples of a third fabric (Fabric C) took the form of green clay that may have formed the basis for the other types.

Fabric A: Colour: red, reddish/yellowish brown, brown, grey. Matrix: sandy earthy micaceous clay. Fine inclusions: fine-medium sand and silt mostly quartz and rare mica (probably occurring naturally in the clay). Coarse inclusions: common gravel (flint, chert, hard fine-grained rock) (angular – subangular – subrounded) mostly 10-20 mm, but from 5 up to 47 mm. Rare chalk (subangular) 1-5 mm. Occasional broken shell, including mussel, 4- 20 mm. Fine organic voids from grass, hay, or cereal straw.

Sub-type Ao: High density of organic temper: fine and coarse stems, leaves. The impression of seed/flower head visible on one piece was identified as cereal rather than hay, although the exact species could not be determined. It is likely that most of the impressions derive from cereal straw, rather than hay. The very high density of vegetal inclusions in this sub-type resulted in a very porous and fragile texture.

Fabric B: Colour: red, orange, reddish brown, brown, grey. Matrix: fine sandy silty micaceous clay. Fine inclusions: moderate – high density of fine, medium and coarse poorly sorted quartz sand, low density of mica silt/fine sand, rare shell sand. Coarse inclusions: generally low density of grit (angular) 2-5 mm and flint/chert gravel (angular – sub-rounded) 5-15 mm; pebbles (rounded) 15 mm; shell 8-10 mm (often as leached voids); rare grog (pot/CBM/FC) up to 23 mm. Generally hard and well fired. A few examples have a very high density of gravel.

Subtype B2: was differentiated by its soft and powdery texture.

Subtype Bo: was characterised by the addition of some organic material in the form of cereal straw/hay added in moderate density and resulting in a more porous texture, though never in a density comparable to Ao.

Fabric C: Colour: yellowish green clay with brown streaks of iron rich clay. Coarse inclusions: rare rounded chalk grit.

Fabric B accounted for 83% of the assemblage (by weight), while Fabric A accounted for 13%. The clay source is likely to have been in the immediate area. Clay or brickearth deposits were found in the excavation area and it is possible the purpose of some pit-digging was to obtain clay for structural use. Fabric A appears to have a higher soil content, perhaps indicating that a clayey subsoil or mix of earth and clay was used. Fabric B appears to be a purer sandy clay, probably from cleaner clays below the main soil horizons. A study of fabrics used in wattle and daub walling (Graham 2004) indicates that wall daub was normally made of a clayey sand soil with a mean clay content of only 7% and coarse aggregate should not normally form more than 20% of the daub mix. No detailed analysis of particle size of the fired clay was made, but the general impression is that the clay content is higher than that found in wall daub.

Forms

Wattle reinforced structure

Most of the fired clay (80%) derived from structures reinforced with a wattle framework, some of which have smooth or roughly finished exterior surfaces. These fragments are generally flat, although some have curving or concave surfaces. Several samples have organic impressions in the surface which includes chaff, cereal straw or grass and fine organic impressions, perhaps created by the imprint of turves and suggesting the use of insulation. The inner surfaces of the fragments are covered with interwoven wattle impressions, with horizontal roundwood rods being interwoven around vertical roundwood sails. The arrangement of some of the wattles suggests that the vertical sails were set 160 mm apart. The rods measured between 5 and 29 mm with the densest concentration between 10 and 18 mm, while sails overlapped in distribution with a range of 11-40 mm. The only change observed in an analysis of sizes over time was a decrease in wattle size from the earlier to the later phases (Fig. 5.12).

A study of wattle and daub from Wiltshire buildings suggests that the upright sails or staves if made of riven oak were 15-25 mm deep by 60-90 mm wide, while hazel poles were routinely 20-30 mm diameter (Graham 2004), with staves being commonly shaped to a diamond shaped section. Roundwood wattles may have been an earlier phenomenon, with laths not becoming common until the 14th or 15th century. Coppice on a seven-year cycle would produce wattles of 12-25 mm diameter: the thinner sections could be used complete and the thicker halved or quartered. Graham's measurements of wattles showed a range in size from 5 to 30 mm, which compares well with the French Quarter material, although the spacing

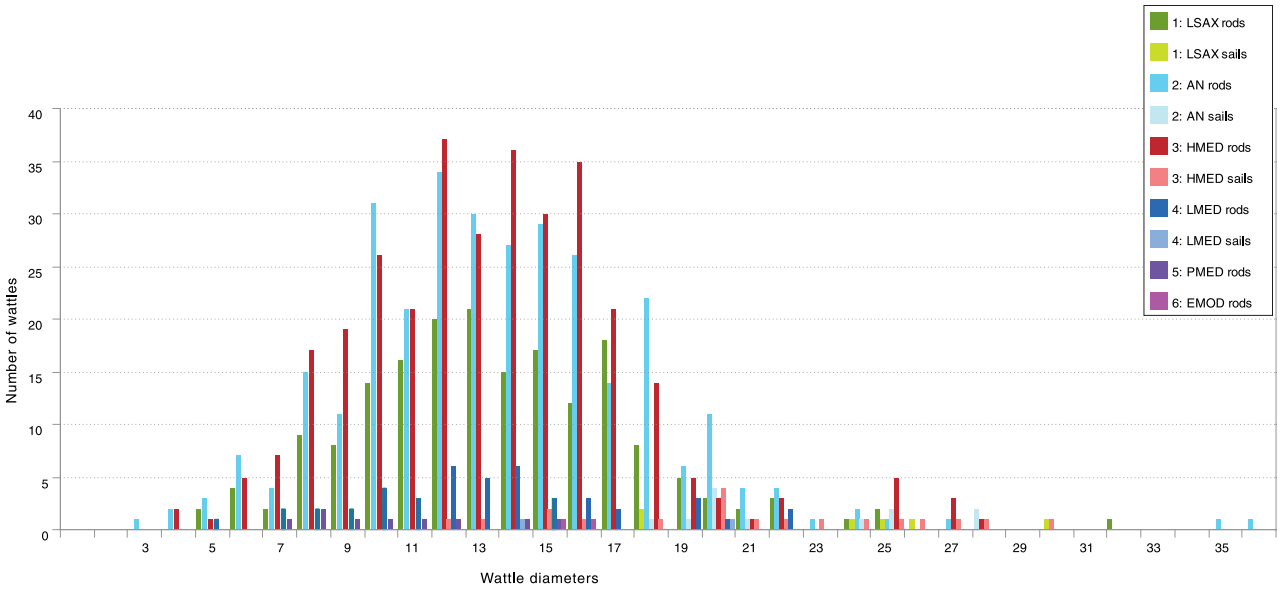


Fig. 5.12 Fired clay: distribution of wattle impression sizes quantified by phase

between wattles (at 160 mm) is less than that found elsewhere (at *c* 250 mm). While the wattle sizes from the French Quarter are comparable to those on wall panel fragments from other sites there is very little or no evidence for other anticipated features (such as split wattles, laths or for riven or shaped staves of appropriate size), raising the possibility that some of the material may relate to other structures such as ovens.

Ovens/hearths

The possible oven/hearth material (7% of the site assemblage) was identified largely on the basis of association with archaeological features, with several hearths and ovens of varying date having been excavated. Oven structure from Anglo-Norman pit 5090 (Property 7, Tenement 178) includes pieces with dense organic impressions, possibly from turves, on the exterior convex surface. From this same context came fragments with a curving rounded edge, one possibly from a circular vent *c* 100 mm wide and others from an arched opening *c* 140-160 mm in diameter. The large quantities of wattle reinforced structure associated with this material adds weight to its interpretation as oven wall. Two further closely related groups of wattle reinforced structure were found in association with a late Saxon pit (4496, Property B, Tenement 237) and in this case certainly represent oven wall.

Another group of material was found within a high medieval oven base (oven 8444 at Tenement 241). This is made in a very porous fabric (Ao or Bo) with a high density of organic temper represented by the voids of coarse cereal straw (Fig. 5.13). It has characteristics in common with a building technique known as 'light earth' which involves tamping a clay mix containing a large quantity of straw into a framework and then cladding both faces. The construction acts as a form of insulation rather than as a load-bearing structure and the material needs a waterproof surface if used externally or may be finished off with an earth plaster indoors. The association of this type of fired clay with an oven base may represent insulation that would be necessary around a bread oven. Although other insulating materials such as sand or soil infilling the gap between wall and oven can be used, this highly porous fired clay may have been preferred as a lighter or more effective alternative. Little evidence of structural form of this highly porous fired clay survived: some pieces have a flat surface and one piece forms a flat slab.

Other material tentatively identified as oven furniture was sparse and includes a firebar, oven plate and a small disc, possibly used as a prop or support. The dearth of complex oven structure or furniture suggests any ovens were of simple design, which would accord with the simple domed chamber with a single opening typical of bread ovens. However the presence of ceramic hearth and kiln tiles (see below) is a reminder that the more complex elements may have been made separately. A post-medieval brick bread oven (3787) at Tenement 237 had clearly been lined with a clay or daub render.

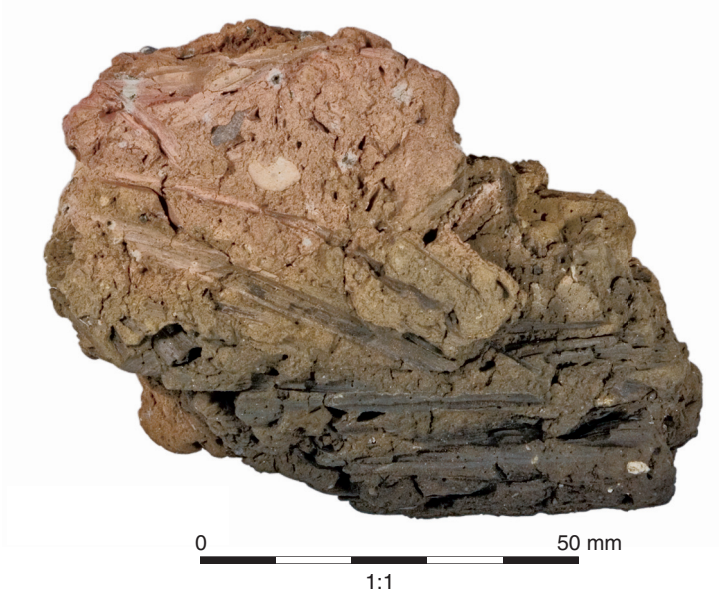
Other objects

Two fired clay objects were found in Anglo-Norman pits at Property 2 (Tenement 237): a complete discoidal spindle whorl and a fragment of possible loomweight.

Distribution

The bulk of the assemblage was concentrated in a few of the tenements, some of it being associated with six oven bases such as those within the

kitchen range and brewhouse at Tenement 237. The largest amount (over 32 kg) was found on this property with five other tenements (167, 170, 172, 178 and 241) producing substantial amounts of between 9 and 14 kg. Tenements 240-3 were destroyed in the French raid of 1338, but the fired clay does not exhibit any difference in character to other groups. Tenements 173 176 and 177 produced moderate amounts (*c* 2-6 kg) of fired clay, but the remaining tenements only *c* 1 kg or less. This distribution pattern is similar in some respects to that of the ceramic building material with the emphasis on Tenements 170, 172, 173, 237 and 241. The other properties to produce above average quantities of fired clay (Tenements 167 and 176-8) yielded only minor amounts of brick and tile. This suggests there may be more than one factor affecting the distribution of fired clay that was not relevant to the brick and tile. The latter may have been used to display the prestige and wealth of the owners, while the fired clay related to functional aspects. There does, however, appear to be some relationship of the distribution of various building materials to the status of a property. One category of tile that may be relevant in terms of function, and occurs in the same areas or tenements as the larger assemblages of fired clay, is hearth/kiln floor tiles (see below).



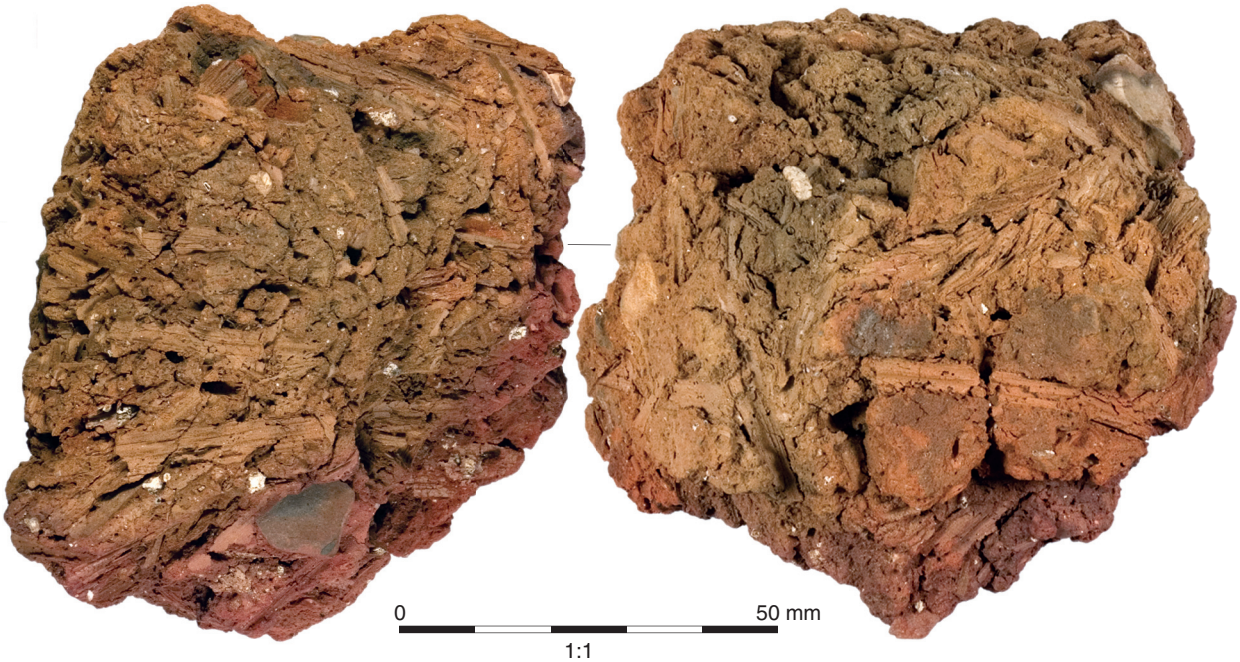


Fig. 5.13 Fired clay: oven/hearth material from high medieval oven 8444 at Tenement 241

Discussion

Wealthier properties may have possessed certain types of structures of a utilitarian character that were not normally or commonly present in the humbler dwellings, making interpretation of the function of the fired clay highly significant. It had been hoped that wattle sizes might show some clear differentiation, which could be used to distinguish oven structure from building daub in conjunction with other characteristics. The patterns found when comparing individual groups or by phase, however, show very little difference. The only variation is one relating to phase suggesting a slight diminution in wattle sizes from the late Saxon to Anglo-Norman values to the high and late medieval values. This change may reflect the availability of coppiced poles and changes in woodland management in the hinterland possibly indicating that the coppice cycle was shortened. This perhaps reflects a greater demand for building materials but environmental factors affecting growth could be an alternative factor. A less likely interpretation is that there may have been deliberate selection of thinner wattles relating to structural preferences, but no other evidence is available to confirm such an hypothesis.

Certain properties appear to have had their own ovens constructed of clay over a wattle framework. The wattles probably supported or reinforced the clay dome of the oven and may also have formed the exterior walling. Bread ovens require some form of insulation to maintain temperatures once the hot coals were raked out and the bread placed inside for baking. This may have been achieved by constructing the ovens with suitably thick clay walls. The evidence of clay with a very high cereal straw content, which would appear to be the medieval equivalent to the modern construction technique known as 'light-earth', can be interpreted as insulation material. The presence of turf impressions on some of the exterior surfaces suggests this may also have been used as insulation, implying that the oven was set in a larger construction with the insulation placed between the oven walls and an exterior cladding.

Medieval manuscripts illustrate a variety of bread ovens (Fig. 5.14). Some are simple clay domes with a single chamber and vent forming a free-standing structure, sometimes shown set on carts as portable ovens. Others appear to be more elaborate, set into a building with the oven at waist height and sometimes an additional chamber underneath. The more elaborate and later types of oven of 15th century or later date illustrate the use of bricks in their construction. This coincides with the archaeological evidence on the site for the rapid decline in the quantity of fired clay after the high medieval period and the increase in brick during this period. It is possible that both materials were combined when brick was first introduced and expensive, the brick possibly being used only for the opening in the wall of the oven, which would be subject to greatest wear. A number of heavily burnt and vitrified bricks were noted in the ceramic building material assemblage and these are likely to have been used in ovens or malting kilns.

It is known from historical records that only limited numbers of households had their own bread oven – in rural areas this was often the manor house and the lord would charge for others to bake their bread in his oven. The same may have held true in towns and the distribution of fired clay together with hearth and kiln bricks can be interpreted as indicating those properties which had a bread oven on the premises. This coincides with those properties which have evidence for their wealth or status in other materials – Tenements 237, 241, 170, 172 and 173. These facilities were not, however, exclusive to the more prestigious properties and some of the smaller cottages (Tenements 167, 174-6, 178) on the High Street/English Street frontage also produced sufficient fired clay to indicate the presence of such structures. This raises the possibility that these may have served as a baker's shop at some point during the Anglo-Norman or high medieval phases.

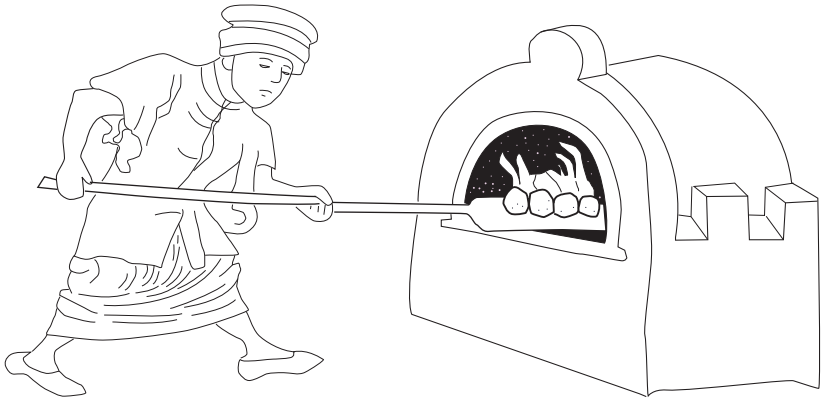


Fig. 5.14 Baking scene – taken from Hours of Catherine of Cleves, c 1440, 226 (after Margeson 1993, 154)

Ceramic building material (Figs. 5.15-5.21)
by Cynthia Poole

Introduction

The assemblage of ceramic building materials amounts to 3635 fragments, weighing nearly 485 kg: it provides significant new evidence for the built character of this part of Southampton. A small quantity of material was related to actual structures, including walls, floors and ovens, while the remainder came from a range of layers and features. The assemblage is dominated by medieval forms which also appear frequently as residual material in post-medieval contexts alongside definite post-medieval forms. Roman tile accounted for 5% of the assemblage (175 fragments, 26,603 g), with at least one example of each of the forms generally found on sites of this period (including tegula, imbrex, brick, tegula mammata, wall tile, plain tile, flue tile and voussoir). This was mainly found in deposits of the earlier phases. This material is not reported in detail here, but a full report is held in the archive, along with additional data on the entire assemblage (Specialist Download F5). The following report provides an overview of fabrics and forms, followed by a summary by site period.

Fabrics

The medieval and later tile was assigned to a fabric series established for this assemblage. These have been compared to those in the Southampton type series (held by Southampton Museum) and equivalents are shown below.

Fabric A: (Southampton Series (SS) nos 1 and 34). Pale pink/cream or light reddish yellow/buff in colour, fine-medium sandy silty micaceous clay with rounded red and cream sandy clay pellets, used mainly for brick. Sub-type A1 (SS no. 34) is distinctly laminated often with paler colours more dominant and few clay pellets. Subcategory A2 (SS nos 20, 28 and 29) is more reddish in colour and contains distinct red and buff clay pellets and angular unwedged clay fragments up to *c* 8 mm. This is less sandy and may be a quite separate fabric. It was commonly used to make crude early peg tiles.

Fabric B: (SS nos 19, 31, ?35). Red, reddish brown sandy clay containing frequent medium-coarse poorly sorted quartz sand and dark red iron oxide grains 0.5-2 mm. Used predominantly for floor tiles, malting kiln floor and bricks.

Fabric C: (SS nos 25, ?35). Red, orange brown, micaceous clay containing medium-coarse quartz sand generally in moderate density. Used for roofing.

Fabric D: (SS no. 10). Red, orange, light brown, fine sandy uniform clay. Used for roofing, drain pipes and rarely floor and brick, especially in the post-medieval phase.

Fabric E: (SS nos 15, ?12). Dark red, brown, or grey sandy clay contains a high density of coarse quartz sand and burnt flint grit temper. Used for flanged and curved roof tiles and floor tiles; probably exclusively of Anglo-Norman date.

Fabric F: (SS no. 9). Red, orange sandy clay containing frequent fine-coarse quartz sand and occasional iron oxide grains or iron rich clay pellets. Used for bricks. Some examples are similar to Fabric A and this may be a better mixed and produced variant from the same basic clay source.

Fabric G: Four samples with frequent coarse grits were assigned to this category, but they do not form a single coherent fabric and may be individual representatives of different fabrics or variants on some of the other sandy fabrics.

A group of sandy fabrics appear to be of medieval date (prefixed Med). This group was used for roofing and roof furniture including peg tiles, crested ridge tiles, chimneys and louvers. Chimney pots were produced exclusively in Fabric Med3. Fabrics Med1 and Med2 were used additionally for floor and kiln tiles. These fabrics may have come into production late in the Anglo-Norman phase, but the main periods of use are high and late medieval with some possibly continuing in use into the post-medieval phase, although production probably ceases before or during the early post-medieval period.

Med1: (SS nos 8, 14, 23, 24, 27 and 28). Yellowish red, orange, red exterior, pale grey core or sometimes grey through out. Moderate – high density of medium quartz sand.

Med1a: (SS nos 16, 11, 37, 43). High density of well sorted rounded/sub-rounded quartz sand *c*. 0.5 mm.

Med1b: (SS no. 4). Distinguished by occasional coarser grits.

Med1c: (SS nos ?4, ?37). Distinguished by presence of rounded red clay/iron oxide pellets/inclusions *c*. 1-2 mm.

Med2: (SS nos 2, 13). Red, orange, pale grey core; frequent quartz sand <0.3 mm interspersed with coarser sand and red clay pellets up to 1.5 mm.

Med3: (SS no. ?41). Red, orange; mid or dark grey core; high density of medium – coarse quartz sand and grits up to 3 mm and scattered white platy shell fragments up to 5 mm.

Med4: (SS no. ?5). Red, orange, reddish brown micaceous clay containing a high density of fine

sand and little coarse sand and red clay pellets 0.5-1 mm.

A small group of modern fabrics were identified, some or all of which may derive from large-scale production centres well outside the local area.

Forms

Flanged and curved tiles (Fig. 5.15)

The small number of flanged and curved tiles are similar in basic design to Roman tegulae and imbrices (Nos 1 and 2). All were made in the coarse sandy flint gritted Fabric E, though there is one curving tile in Fabric D, which could be imbrex, curved tile or an unglazed ridge tile. No complete dimensions were obtained apart from thickness. In general these tiles were well finished, with even surfaces and edges.

The flanged tiles range from 15 to 24 mm thick, the maximum surviving width and length being 135 mm. The flanges are noticeably narrower than Roman varieties although a similar range of profiles were observed including rectangular (type A), angled inner edge (type B), and rounded profiles (type D, F). These tiles do not have cut-aways in the manner of Roman tegulae, instead having a taper to allow them to interlock. Some flange ends, however, are moulded to a diagonal chamfer. The flanged tiles are glazed across the centre often stopping short of the flange in an abrupt line, suggesting the width of overlap of tiles. It is clear that often only the area that would be visible and no more was glazed, suggesting that glaze was an expensive commodity or at least one not to be wasted unnecessarily. The colours were always variants of amber, brown and green frequently slightly mottled.

The curved tiles, with inverted U-shaped profiles, measure 14-26 mm thick, with an estimated width of 140-150 mm and height of 62-*c* 120 mm. The maximum surviving length is only 110 mm. All curved tiles had a glazed exterior surface in shades of brown and mottled greenish brown and occasionally amber. Frequently only the curved apex of the tile was glazed leaving a bare margin along the lower sides.

The curved and flanged tiles are an early form that was replaced by the more common peg tile. They have been found at York, Scarborough, London and Reading Abbey. At York they have been dated to 11th to 13th century (Lewis 1987, 6; Betts 1985, 384) and they are increasingly being recognised as an indicator of the presence of high status buildings of Anglo-Norman date. At Battle Abbey (Streeten 1985) they were found in the foundations of the Chapter House suggesting they were in use here as early as *c* AD 1100. In Southampton examples from Quilter's Vault (Platt and Coleman-Smith 1975a) have been dated to the early 13th century. In the current excavations these have been found in the Anglo-Norman phase (AD 1066-1250) and in some contexts associated with material dated as early as AD 1070-1150.

Peg tile (Fig. 5.15)

Most of the peg tiles are medieval, supplemented by a small number of post-medieval examples. All are unglazed, with three broad groups being observed. The earliest types are rougher and more crudely made with rough irregular or undulating surfaces. Some have finger depressions and grooves from smoothing and handling, while others retain impressions of straw or grass stems across the surfaces. Most of the tile made in Fabric A2 falls into this category. A small number of this type come from the Anglo-Norman phase suggesting that production of peg tiles began in the late 12th century or early 13th century.

The most common variety of peg tile is thick but fairly well finished with even, slightly cambered surfaces and sharp arrises and corners. Undersides are usually even and sanded with slight creasing. These tiles are prolific during the high and late medieval phases (mid 13th to early 16th century), their use continuing into the post-medieval period. The third type are thinner and very neatly finished with smooth even surfaces, angular arrises and corners and sometimes with a shallow margin 5-17 mm wide pressed into the upper surface along the side. These appear in the post-medieval and early modern phases and their manufacture probably begins in the late 16th or early 17th century. They are most commonly made in Fabric D.

Only one near-complete tile (No. 3) has all three dimensions surviving and two other examples had probably been deliberately trimmed down. The complete tile is probably of earlier medieval manufacture although found in a post-medieval context; it measures 265 mm long, 170 mm wide and 13-17 mm thick and is pierced by two circular peg holes. Widths of the remaining tiles range from 140 to 176 mm. The range of sizes occurs across all periods, with the earlier medieval tiles generally being around 170 mm and the high to late medieval tiles being dominated by examples *c* 160-165 mm wide. There is a clear reduction in thickness from the earlier medieval peg tiles through to the later types.

Peg holes are circular, square or diamond shaped (square set diagonally to the edges), frequently tapering to the base; the different shapes occur at all periods. Most were made with a blunt-ended stick or implement, which frequently did not completely pierce the base. Occasionally the peg hole was cut. The majority of the medieval tiles have peg holes measuring 12-15 mm wide, but this is less apparent with the late medieval and later tiles in which there appears to be a tendency for smaller peg holes, perhaps reflecting a change from attachment by wooden pegs to nails.

Pantile

A few pantiles came from the post-medieval and early modern phases. None are complete, but two complete width measurements (of 235 mm and 246 mm) survived and the maximum surviving length was 215 mm. Thickness is generally in the range of 12-14 mm. Five tiles retain the projecting nib from the top edge at the back of the tile. These are rectangular, sometimes tapering to the top. Fabric D was the most frequently used to produce this form with occasional examples in Fabrics C, B and A2. One produced in Med 1 fabric may be a particularly early example (possibly 16th-17th century). This form generally appears in the late 17th century but was being imported into London from the Low Countries earlier than this.

Ridge Tiles (Figs 5.16-5.17)

Ridge tiles from the site consist almost entirely of glazed or more rarely unglazed crested ridge tile, although a few fragments may come from plain semi-circular unglazed ridge tile. Most of the crested ridge has a triangular profile, with straight sides converging to an angular apex surmounted by the crest. A smaller proportion of tiles have a more curved or semi-circular profile, although often it is only the tile apex that is rounded with the sides splaying out straight. Only one near complete tile was found: it measures 400 mm long, 240 mm wide, 128 mm high (to the base of crest or 170 mm to top of crest) and the walls are 10 mm thick.

The glazes are in mottled shades of green, amber or brown, varying from light to dark, sometimes with flecks of dark green or brown. The glaze only partially covers the tile, having evidently been brushed along the upper surface close to the crest. Treatment of the crests is also variable with some almost entirely left bare, others partially glazed on one side only or with only a very patchy glaze on the second side. Certain crest forms have glaze thickly and consistently applied over both sides and edges, as is particularly apparent with crest types 5 and 9.

A range of different crest forms were identified and were divided into twelve types (Figs 5.16 & 5.17). These can be broadly grouped into hand made (Group D: types 4 moulded and 12 thumb-pressed), cut triangular (Group A: types 1, 2, 3 truncated triangle, 8 asymmetric triangle), pyramidal (Group *C*: type 11) and applied strip with knife stabbing (Group B: types 5 scalloped with aperture, 6 triangular with aperture, 7 individual triangles, 9 solid strip). Some of the forms have identical or close parallels from previous excavations in Southampton: triangular varieties equivalent to type 1 are common (Platt and Coleman-Smith 1975b fig 216. 1416 fig. 217 nos 1429, 1432, 1433). There is one example comparable to type 1b with the base of the crest pierced by a small perforation from High Street, Southampton (Platt and Coleman-Smith 1975b fig. 216 no. 1422) and examples have also been found in Winchester (Poole and Shaffrey 2011, 290-1). The most conspicuous are those equivalent to type 5, 6 and 9 (Platt and Coleman-Smith 1975b fig. 214 no. 1407, 1408, 1409).

Ridge tiles with knife cut triangular crests are the more usual form and they exhibit considerable variation in size. They have been found at Winchester (ibid.) and were in use at Portchester Castle from the early 13th century through to the post-medieval period. Tiles of this sort were being produced at the Laverstock kilns, and their production may reflect influence from Southampton reaching Laverstock through merchants trading between Southampton and the West Country via Salisbury (Ransome 1962, 126).

Crested ridge tiles are most frequent in the high medieval phase reflecting their predominance in the 13th to 14th century. A small number (with crest types 1, 5 and 6) found in Anglo-Norman contexts suggest that production commenced in the early 13th century and decreased in the late and post-medieval periods. An unglazed example with small pyramidal spurs (type 11) and a type 1 with incised lines radiating from the spur crest, both from the post-medieval phase of Tenement 237, may be late forms. The numbers of any particular crest type are too few to ascertain whether certain varieties were produced at a particular period. Although the hand-moulded crest forms have been shown to precede cut forms in some centres such as Oxford (Jope 1951, 86) there is nothing in the current assemblage to substantiate such a claim for Southampton.

The majority of the ridge tiles were made in Fabrics Med1 group, Med 2, Med 3 and Med 4 with just a few in each of Fabrics A, B, C and D. Very similar fabrics were utilised for ridge tiles at Winchester (Poole and Shaffrey 2011).

Finials (Fig. 5.18)

A complete bottle-shaped finial and the upper half of an anthropomorphic finial were both found at Tenement 237 in a high medieval courtyard layer. The anthropomorphic finial (No. 12) portrays a man playing a trumpet or horn held to his lips in his right hand. The left arm is broken, but appears to have run diagonally across his chest possibly to hold reins as this appears to be part of a horse and rider type finial. The hair is stylised as a short bob (or tonsure) ending above the nape of the neck. The man's beard is shown in stylised manner as a series of short incised lines down his right cheek to the chin; the trumpet obscures the left side of the face. The eyes are almond shaped outlined by incised lines with the pupils made by circular impressed depressions. A lentoidal incision in the right hand side of his head may be intended to portray his ear. A similar but larger incision in the right hand side under his arm may portray some detail of clothing. A ridge across the lower back appears to represent

part of the saddle. The figure was covered in a green glaze with brown mottling and was heavily weathered in places.

Zoomorphic and anthropomorphic finials are known throughout the country from Exeter (Allan 1984, 227) to Edinburgh (Haggarty and Murray 1992): their distribution is more densely concentrated in the Midlands and East Anglia (Dunning 1979) and they occur more commonly in large towns and ports. Zoomorphic finials previously found at Southampton have been dated to the 13th to 14th centuries (Dunning 1975, 186, fig 214, 1404; fig 215, 1425). These were made in the same or a very similar fabric. The eyes on the stag finial (Dunning 1975, fig 214, 1404) are treated in a very similar manner to those of horseman from the present excavation. Horse and rider finials have been found at Winchester and parts of six were found at the 14th-century manor house at Faccombe Netherton, Hampshire (Webster and Cherry 1974). The head of a horse from Bath (Dunning 1979) was dated on the basis of the decorative horse gear around the head and ears to the late 13th or early 14th century. The body of a horse from such a finial from Bedford (Dunning 1974) has been dated to the mid-15th century. A recent find of part of a horse and rider finial in a London ware pottery kiln at Woolwich (Cotter 2008) has been dated to *c* AD 1350-1400. The horse and rider from Edinburgh is one of the latest examples having been dated to the later 16th century. This Southampton example appears to be one of the earlier examples of this type of finial. The second fragment, though found in a late medieval context dating between AD 1350-1510, is in the same fabric and very similar in character to the earlier example and is likely to be broadly of the same date.

The bottle-shaped finial is complete together with the end of the crested ridge tile to which it joined, though the whole ridge tile does not survive. The finial itself (No. 13) is partly wheel thrown with the lower part hand moulded. It has a globular body narrowing to a closed top and to the base. The top has been knife-trimmed/shaved on the wheel, and it is glazed on top and sides with a variegated amber-brown glaze with olive-green patches. It was found alongside Saintonge polychrome jugs, green-glazed and local wares of AD 1250-1350. A similar example previously found in Southampton (Dunning 1975, fig 214, 1405) dated to AD 1300, and this type also has affinities with examples from London (Pearce *et al.* 1985, 48).

Louvers (Fig. 5.19)

A small quantity of louvers (36 fragments) was identified: louvers were structures placed in the centre of a roof which allowed smoke to escape without letting in the rain. Dunning (1975) identified two types: type 1- a separate structure and type 2 – attached to a ridge tile. It is uncertain which type is represented in the French Quarter assemblage and equally whether any of the ridge tiles with openings in the tile apex supported louvers or only finials. Applied cordons frequently subdivide sections of louvers often running just above or below the apertures and are present on the more complete louvers from this site as well as others from Southampton (Dunning 1975) and Portchester (Dunning 1977a), where deep slash marks were also present.

Substantial sections of two louvers both came from a late medieval pit (6856) on Tenement 172. The more complete example (No. 14) forms the top of a green-glazed louver consisting of the circular cap, open at the top and four hoods, which vary in size. Two small perforations made pre-firing are set asymmetrically in the cap. The green glaze is thickest and most consistently applied along the cordon and over the hoods. Glazing drips indicate that the louver had been set upside down to glaze the missing lower section. Other pieces from the same context appear to form a separate louver of similar type.

The fragments of the second louver (No. 15) come from the base of the object. The lower edge is hand moulded with a rounded thickened rim, which joins with the edge of a lower aperture of semicircular form. There is evidence that more than one of these was present and they extended to just below an applied cordon. No. 8 is again coated with bottle green glaze, which is most consistently applied along the cordon and up to the hooded vents.

These louvers are from the late medieval phase (AD 1350-1510), although this type is more usually dated to AD 1250-1350 and the amount of weathering on the surfaces indicates they had been in use for some time before falling into disuse. Both louvers are similar in size and form but not identical in design to one previously found in excavations on the High Street (Dunning 1975, 186, fig 216, 1419), which has been dated *c* AD 1300. This louver in common with the ones from the current assemblage has sub-rectangular apertures, which are only known from Easton, Essex (Dunning 1966), also dated *c* AD1300 and London Trig Lane (Pearce *et al* 1985), the latter being dated to *c* AD 1430. Circular or triangular apertures are generally more common, with examples from Winchester (Dunning 1964) and Laverstock (Musty *et al* 1969, 142-3). This type from Southampton is smaller than average and less elaborate in design suggesting it may be a locally developed product. No louvers had evidence of the distinctive slash marks found on the hoods of louvers from Winchester (Dunning 1964), suggesting that these products were too fragile to be traded any distance and accounting for the considerable variation found in louver designs.

Chimney pots (Fig. 5.20)

A pair of complete chimney pots (Nos 16 and 17) were found in a high medieval pit (7418) on Tenement 241. Both are near complete and made in

the same Fabric Med3 (or possibly E), which is closely equivalent of Southampton coarseware. They are both coil built, with distinct corrugations visible running round the circumference in the interior. On both the base is flared and accentuated by a single deep finger groove encircling it on No. 9 and two grooves on No. 10. The top on both is encircled by a flange and is partly covered with a sub-oval vent. Sooting or burning, which has turned the surface dark grey, occurs on the top of the chimney pots but not on the interior. The exterior surface is decorated by vertical lines of circular/sub-oval skewer perforations.

Two small fragments both in Fabric E are also thought to be parts of chimneys, although the patchy olive green glaze on one piece may indicate that it is the base of a free-standing louver of beehive form rather than a chimney. If so it may be quite an early form as this fabric appears to relate to Anglo-Norman manufacture.

These chimneys are very similar to one previously found in Southampton (Dunning 1975, 186, fig 212, 1385), from an early 13th-century context. All are typical in fabric, form, size and stab marks of the Sussex type (Dunning 1961), well-represented at Chichester and Lewes. Examples have been found at Portchester (Dunning 1977a) and Wickham Common. Kilns at Orchard Street, Chichester are known to have been producing chimneys during the 13th century and at Binstead, Sussex maximum production occurred during the 14th century.

Flooring (Fig. 5.21)

Floor tiles were common at the site, occuring in a range of types which divide into plain unglazed, plain glazed in a number of colours, encaustic, quarry tile and brick paviours. Fabric B was most commonly used followed by Med1 and Med1a. A few examples also occur in most of the other medieval and post-medieval periods fabrics. A range of sizes are clearly represented by the variation in thickness, though only a small number have a complete width/length surviving.

Plain glazed and unglazed floor tiles were found in all phases and in a range of sizes and finishes, measuring between 17 and 48 mm in thickness. Two tiles measuring 250 and 257 mm wide may be Roman pedales reused in a high medieval floor surface (3106) at Tenement 237.

The earliest contemporary type consists of fragmentary plain floor tiles, sometimes with evidence of a dark brown, green or greenish brown glaze, made in Fabric E. These were probably produced during the Anglo-Norman phase, their manufacture perhaps continuing later. These measure between 20 and 33 mm thick and one example was 124 mm wide. They have smooth flat surfaces, with rounded corners and arrises.

Plain unglazed floor tiles in Fabrics B and Med1a also appear in the Anglo-Norman phase measuring 27-34 mm thick. During the high and late medieval phases the most common variety of tiles had plain glazed surfaces either an opaque yellow (amber over a white slip) or dark shades including green, greenish brown, brown and yellowish brown glaze directly on the tile surface. These are thought to have been used in combination to form a chequer board pattern on floors. Surfaces are generally smooth and even, though a few have the imprint from other tiles stacked on edge during the drying or firing process. One of the largest type had been diagonally scored pre-firing, but had not been snapped prior to use. The tiles may have both perpendicular or bevelled edges undercut by 1-5 mm. One of the largest type has two opposite edges bevelled and the other two vertical. All have plain flat undersides.

Several size groups are represented and in general tile thickness increases with the overall size of the tile. Few tiles have both width/length dimensions surviving, but where they do, were square or roughly so. The smaller examples (4-5$^1/_2$ ins by 1-1$^1/_4$ ins thick) are predominant in the high medieval phase although it is clear that larger examples (over 6 ins – 8 ins) existed at this time including one of the thickest (2 in). The smaller types continued in use in the late medieval phase, while the largest size (9 in) becomes more frequent. Examples of all the size groups were found in the post-medieval and modern deposits. Similar types have been previously found in Southampton (Platt and Coleman-Smith 1975b, 199-200, fig. 219), dated to the 13th -16th centuries.

Four examples of encaustic decorated tiles of 13th-14th century date were found in pit fills of high and late medieval date on Tenements 167, 179, 180 and 237. These tiles were decorated in a bi-chrome pattern formed by white clay inset in a stamped design and covered by a lead glaze resulting in a yellow colour over the pattern and brown over the background area of the tile. One complete heavily worn example (No. 18) has a pattern of a central fleur-de-lys and quarter circles enclosing rosettes in the corners. This example is very similar to a Penn-type floor tile found in London at Old Swan Lane, Upper Thames Street and dated to 1326-1375 (Museum of London 2009) and one from Oxford (Ashmolean Museum 2004a). A partial tile (No. 19) is heavily worn with only the pipe clay inlay surviving. It probably formed part of a four-tile pattern having a dotted quarter circle enclosing a small quatrefoil but the pattern outside of the dotted circle is unclear. Similar designs have been found in Oxfordshire at Rewley Abbey (Ashmolean Museum 2004b) and Eynsham Abbey (Ashmolean Museum 2004c). A small fragment (No. 20) may preserve part of a fleur-de-lys design. A larger tile (No. 21) is decorated with a fleur-de-lys set diagonally across it. This was the only encaustic tile with a conchoidal scoop cut in the base for the keying: if this was symmetrically placed it would indicate the tile width was *c* 180 mm (7 in) in total. This type of large diagonal fleur-de-lys design is commonly

found on floor tiles and similar, though not identical, examples occur at Southampton High Street (Platt and Coleman-Smith 1975b, 197-8, no. 1437) dated to the 13th century, at Winchester (Cunliffe 1964, 158-9), in Winchester cathedral and at Exeter (Allen and Keen 1984 fig. 140, nos 49, 52).

Quarry tile was found in post-medieval and early modern contexts, while brick paviours came from post-medieval and early modern contexts.

Kiln floor and hearth tiles (Fig. 5.21)

A small number of tiles have been identified as hearth or kiln tiles, a number of hearths or ovens surviving *in situ*. Several of the plain unglazed floor tiles had been burnt grey on the surface and may also have been used as a hearth surface. One group of tiles was found forming the surface of hearth 3335 (within the stables at Tenement 237) and aided the identification of a small number of other tiles with similar characteristics as hearth tiles. Some of these were clearly trapezoidal in form with corners greater than 90°. Corners and edges were often rounded though some edges had been knife trimmed flat or bevelled.

A significant number of malting kiln floor tiles or bricks were found in high and late medieval pit fills. The few fragments found in post-medieval or modern deposits are certainly residual medieval examples comparable with the earlier examples. A few pieces made in Fabric E may indicate that this type of tile started to be made in the Anglo-Norman period, although the greatest quantity occurs in the late medieval phase suggesting that malting activity was most intensive in this period and reflecting the known presence on the site of a brewhouse.

These distinctive rectangular or trapezoidal tiles (eg No. 22) are characterised by rows of perforations piercing their surface. They range in thickness from 20 to 37 mm though most are less than 30 mm. None are complete, but the best preserved measures 150 mm wide tapering to less 120 mm by over 185 mm long. The upper surface is usually even and smooth and the lower more undulating and irregular. Edges may be flat, vertical or bevelled, and sometimes cut. Some tiles thicken to the edge.

The perforations pierce the lower surface and occasionally protrude through the upper surface or leave a small protruding bulge of surplus clay. These holes were made with different implements, nearly all at an oblique angle to a lesser or greater extent. The skewer stabbed perforations were made with a tapering pointed implement to form narrow conical perforations creating circular or oval holes. Square or rectangular perforations were made with a nail. A few with more wedge shaped perforations may have been made with a knife blade, but it was noted on both skewer and nail stabbed examples that a trilobate form occurred at the surface where the implement had been pulled out more vertically than the initial oblique piercing. The perforations are spaced at intervals of 10-35 mm on average, though occasionally closer or more distant. They appear to have been laid out broadly in rough parallel rows, often at a diagonal to one of the edges.

Similar bricks have been found previously in Southampton (Platt and Coleman-Smith 1975b, 201-2, fig 220) where they have been described as hearth tiles and most are dated to the late 13th to early 14th centuries. One in a fabric very similar to Fabric E with thin vertical skewer marks was dated to the second half of the 12th century. This type of tile is not very well represented in medieval tile assemblages though tiles from the Valiant Sold kiln in Exeter (Allan and Keen 1984, fig. 142 nos 83, 84) have vertical circular and triangular skewer stab marks – it is unclear whether these are floor or kiln tiles. Some examples of skewer and knife stabbed kiln tiles come from phases 7 (14th-15th century) and 8 (16th century) at Carisbrooke Castle (Cleal 2000, 165-7). This type of perforated tile has commonly been associated with corn drying or malting ovens in the post-medieval period such as at Standish Hall corn mill dating from the 16th century and later (Wigan Archaeological Society 2009). The character of the stab marks indicates that the intention was to allow the bricks to warm through and provide a heated surface on which the grain could be placed. The absence of burning or sooting supports the use of gentle heat and such a function.

Brick

A range of medieval and post-medieval bricks was found in a variety of sizes. They are made predominantly in Fabrics A, A1, A2 and F, with a small quantity in Fabrics B, D and Med1b. The majority of these bricks appear to be medieval in character including a high proportion found in post-medieval and modern contexts.

Those made in Fabric A were found in deposits of all phases from Anglo-Norman onwards and range in thickness from 32 to 64 mm, in width from 95 to 130 mm and in length from 160 to 240 mm. An unusually short brick found in modern deposits but probably of late medieval or early post-medieval date (measuring 50 x 100 x 160 mm) is overfired and distorted and may be a special kiln brick.

The medieval bricks from both high and late medieval phases are similar in character regardless of fabric. They are crudely made with rough undulating surfaces, frequent irregularities, including finger grooves and depressions and on the bases impressions of pebbles, vegetal matter or grit. There is some creasing of the sides and corners and arrises are usually rounded. A number of bricks are overfired, bloated or vitrified with a thick ash glaze and are more common in the late medieval period, perhaps reflecting a larger number of ovens or kilns in use at this stage.

Through the post-medieval and in to the early modern phases the bricks become neater and more regularly finished. Several overfired and vitrified

examples were found. No frogged bricks were present. Several bricks have skintling or pressure marks on the sides. On one it is clear that the bricks stacked above and below were differently aligned. In some cases the marks are defined by an ash glaze on the adjacent exposed areas of the brick indicating that these particular examples represent stacking in the kiln preparatory to firing. These may represent changes in kiln technology introduced during the 19th century.

Markings

Deliberate or accidental markings are uncommon on medieval and post-medieval tile, though manufacturing stamps appear in the 19th century. The only deliberate marking observed among the French Quarter assemblage was a possible tally mark of incised lines, which occurred on the flat edge surface and the arris of a probable flat roof tile.

Imprints are mainly the result of fingertip depressions from handling. Animal imprints are rare: part of a dog paw print was noted on a flanged roof tile of Anglo-Norman date and a paw print – possibly of a fox – on a late medieval brick. Vegetal impressions, mainly straw or hay, occur commonly on the earlier medieval brick and peg tile. The most interesting is a textile mark from a potter's arm on the inner surface of a chimney pot (No. 9) of 13th-century date. The cloth appears to be quite a fine weave of *c* 19 threads in *c* 20 mm width.

Ceramic building material by site period

Late Saxon (AD 900-1066)

The ceramic building material from the late Saxon period consists of Roman brick and flat tile indicative of material brought in for reuse. This occurred in greatest concentration on those plots which in subsequent periods produced the more impressive and larger collections, in particular Property H (later Tenements 170 and 172) and to a lesser extent Properties B and D (Tenements 237 and 241), suggesting that the status of the buildings and properties was established in this early phase and maintained in the post-Conquest period.

Anglo-Norman (AD 1066-1250)

In this period the largest quantity of ceramic building material came from the area of Anglo-Norman Property 2 (later Tenement 237; see Fig. 5.15, Nos 1 and 2), with a substantial proportion from the locality of Anglo-Norman Properties 11, 9 and 5 (later Tenements 170, 173 and 241) and smaller groups of material on Properties 10 and 9 (later Tenements 172 and 174). Much of the tile is made in Fabric E and comprises flanged and curved roof tile and plain glazed floor tile in dark brown or green. The main concentrations of these were in the area of later Tenement 237 (Property 2) and Tenements 170-174 (Properties 9-11). Some smaller concentrations were found on Tenements 175, 177, 180 and 240 in later phases. The curved and flanged roof tiles are typical of the 12th century and their production appears to be confined to the Anglo-Norman period. They are made exclusively in Fabric E and it is therefore assumed that the floor tile in this fabric was also confined in its production to this period. Circular discs chipped from these tiles (Fig. 21, No. 23a-c) suggest that they were already falling into disuse during this period and this can only have accelerated in the succeeding high medieval phase. The function of the discs is uncertain, though they have been interpreted as lids for pots (pers. comm. J. Cotter); they would be rather large for use as gaming counters and none are perforated to suggest use as weights. Fabric E is similar to Fabrics Med1b and Med3, which may represent the continuation of this industry in a slightly finer form into the high medieval period.

Glazed ridge tile and peg makes its appearance during this period at Properties 11, 2 and 5 (later Tenements 170, 237 and 241) and represents the introduction of these forms probably in the early 13th century. At Property 5 (later Tenement 241) the ridge tile may have been used in conjunction with slate as this was the only property to produce any quantity of slate in this phase (see Shaffrey below). The earliest bricks also appear in this period, once again concentrated on what would later become Tenements 237 and 170-173. On most other properties Roman brick was still being recycled and accounted for most of the tile found on Property 5 (Tenement 241) in this period.

High medieval (AD 1250-1350)

This period accounts for about a third of the ceramic building material assemblage and represents a time of considerable building activity. All tenements produced some building material, although in some cases it was in small quantities or only of one type. The largest groups came from Tenements 237 followed by Tenements 172, 173 and 241, with more moderate amounts from Tenements 170, 174, 175, 180, 238 and 239-240.

A high proportion of the tenements produced assemblages comprising roofing material, typically peg and crested ridge tile, floor tiles, and brick. Medieval brick becomes more common appearing on all the properties, alongside Roman brick, which decreases in quantity from this phase onwards. The floor tiles are usually of plain dark brown or green glazed type. One bichrome tile was found on Tenement 180; such tiles are usually associated with religious establishments, but they were also used in the houses of wealthy merchants and this one may have come from Polymond's Hall with which Tenement 180 was associated. The more unusual items of roof furniture – louvers, finials and chimneys – were found on Tenements 172, 175, 237 and 241 suggesting that the buildings on these plots were of more elaborate construction. It is probable

that the wealthier owners used such items not only to make their homes more comfortable but as imposing displays of their status and wealth. The small quantity of decorated floor tile of 13th-14th century date suggests that such types were used on a very limited scale, possibly only in one main reception room and perhaps in conjunction with the plain tiles.

Hearth and kiln floor tiles were found for the first time on Tenements 166, 173, 175 and 237, although ovens and a bread oven were found only on Tenement 237. The hearth tiles from Tenement 237 formed part of an *in-situ* hearth within the stables. The specialised kiln floor tiles were normally used in malting ovens and indicates some that households were undertaking their own malting and presumably production of ale, as is known to have occurred in the brewhouse at Tenement 237. Support is given to this suggestion from the carbonised plant remains as samples from Tenement 237 contained a significant quantity of detached cereal grain sprouts (see W. Smith, Chapter 6).

Late medieval (AD 1350-1510)

In this phase there is continued evidence of development on Tenements 237 and 170-174, but a slight shift in emphasis on some of the other tenements with an increase in material from Tenements 167, 178-180 and 242. Tile was sparse or absent on the remaining tenements, suggesting that few structural changes or repairs were being undertaken.

The pattern and range of material is similar to the preceding phase with roofing, bricks, floor tiles and kiln bricks in evidence. Fragments of louver were found on Tenements 172 and 242. By this phase Flemish type floor tiles in light yellow and dark green or brown to create a checkerboard pattern were becoming increasingly common. A fragment of bichrome decorated tile was found on Tenement 167, another on Tenement 179 and one from Tenement 237. The latter is unsurprising in view of the previous evidence of wealth lavished on Polymond's Hall, but prior to this period of refurbishment on the other two properties there was little evidence to suggest this type of flooring would have been in use.

Post-medieval (AD 1510-1750)

Bricks became increasingly common in this phase suggesting rebuilding or perhaps more probably refacing of the buildings in brick. Plain peg tiles are the most common roofing materials represented, but pantiles start to appear towards the end of the period, all on properties along the High Street frontage (Tenements 167, 170-173,176 and 180, the majority coming from Tenement 170). All the floor tiles are yellow or dark green/brown Flemish-type floor tiles, which now include the larger variety. A brick pavior also appears late in the phase.

Early modern (AD 1750-1900)

The greatest changes in this phase took place on Tenements 170, 172 and 173. Substantial quantities of brick on these properties are indicative of major structural change. The medieval roofing is replaced by peg tile and pantile and the glazed medieval floor tiles by quarry tiles and brick paviours. Internal fixtures are represented by glazed wall tiles, with Delft ware introduced at the start of this phase and other decorative styles appearing later in the 19th century. The earliest evidence for provision of services came in the form of sewer pipes/drain-pipes.

Discussion

As a port Southampton must have been constantly subject to a barrage of new ideas and goods, and the building material reflects nearly a thousand years of change and development in this area. Its altering character documents changes in construction techniques, and demonstrates the status and aspirations of the owners or tenants. In the earliest phases the re-use of Roman brick reflects the very limited use of ceramic material in what were predominantly timber-framed, wattle and daub and thatched buildings. The first changes came in respect of roofing and flooring with the introduction of curved and flanged tiles copying Roman forms and floor tile in the Anglo-Norman period, to be replaced with the decorative roofing and flooring of the high medieval period. The increasing use of roof tile or slate was encouraged by the authorities to prevent the spread of fires, while the variety of glazed and crested ridge tiles and highly decorative roof furniture must have provided ample opportunity to impress and display one's wealth and status. The introduction of new roofing materials in the form of pantiles continues the pattern of change in the post-medieval period.

Polymond's Hall at Tenement 237 was a substantial and wealthy property, as is reflected in the quality and range of the building materials recovered from it and the apparently constant improvements to which it was subject. Tenement 173 was a capital tenement and the ceramic building material supports this as being a prestigious property. By contrast there is little documentary evidence for the buildings on Tenements 241 and 172, although the quantity and quality of building material is comparable and indicates that these buildings were in the same class. In between there appear to have been buildings constructed on a more modest scale.

Building activity varied in intensity and the late medieval period appears to have been a time when fewer changes were made. The post-medieval period saw major building work utilising brick either in rebuilding or refacing structures, the internal subdivision of medieval halls or the introduction of brickwork for fireplaces and chimneys. Newly introduced pantiles gradually became

common along the high street frontage, while decorative wall tiles hint at internal alterations, possibly reflecting new fireplace designs.

Catalogue of illustrated ceramic building material (Figs 5.15-5.23)

Fig. 5.15. Anglo-Norman roof tile and medieval peg tile

1. Anglo-Norman flanged **roof tile** ('tegula' type). Fabric E; width (estimated) *c* 270 mm; length > 125 mm; 20 mm thick. Nail hole 11-12 mm diameter. Ctx 4128, Pit 4058, Property 1 (Tenement 237), Phase AN
2. Anglo-Norman curved **roof tile** ('imbrex' type). Fabric E; width *c* 140 mm; height *c* 120 mm; 23-24 mm thick. Ctx 4131, Pit 4058, Property 1 (Tenement 237), Phase AN
3. **Peg tile** probably of earlier medieval date. Fabric A2; width: 172 mm; length >155 mm; 15 mm thick. Peg holes: LH conical 21-10 mm diameter; central cylindrical 13 x14 mm diameter. RH cylindrical 15 mm diameter; all centred 38-40 mm from top edge. Ctx 3187, Pit 3186, Tenement 237, Phase PMED

Fig. 5.16. Ridge tiles

4. **Ridge tile**: crest type 1a. Triangular spurs cut the full height of the crest down to or into the tile apex. Cross-section rectangular with flat or rounded edge; crest sides may be vertical or slightly converging. Green glaze with dark green copper speckles. Spurs: 45 and 52 mm long; 26 and 20 mm high; 10-12 mm wide. Ctx 3781, Pit 3778, Tenement 175, Phase LMED
5. **Ridge tile**: crest type 1b. The base of each spur is pierced centrally by a small circular hole *c* 8 mm diameter. Thin amber glaze; spur: 80 mm long; 40 mm high, 10-12 mm wide; perforation at base of each spur 7-10 mm. Ctx 367, Pit 329, Tenement 172, Phase HMED
6. **Ridge tile:** crest type 4. Fairly low rounded triangular cut and/or hand moulded spurs with clay luting to attach crest. Rounded spur cross-section. Spurs measure 50 mm long; 9-27 mm wide tapering to the top. Ctx 7181, Fill of pipe trench, Phase EMOD
7. **Ridge tile:** crest type 5. Large crest made of semi-circular conjoined nibs each perforated by a large semi-circular aperture with a finger groove encircling the aperture ('Loch Ness Monster' type). Rectangular cross-section with flat rim. Knife stab marks along basal angle of both sides.
   (a) crest 16-25 mm wide; 75 mm high; aperture *c* 40 mm high. Ctx 8029, Pit 8029, Tenement 242, Phase HMED.
   (b) crest *c* 75 mm high, 20-30 mm wide, aperture 31 mm high. Ctx 250, Pit 249, Tenement 172, Phase LMED
8. **Ridge tile:** crest type 6b. Large crest made of conjoined triangular spurs each perforated by a triangular aperture. Rectangular cross section with flat rim. Knife stab marks along basal angle of both sides. Spur 80 mm long; 60 mm high; 13-17 mm thick. Patchy amber brown glaze. Ctx 4317, Pit 4318, Tenement 237, Phase HMED
9. **Ridge tile:** crest type 7. Large triangular spurs, possibly individually applied. If applied as a continuous strip, knife cutting into the ridge apex has separated the spurs so that they become detached as individual spurs. Cross-section narrows to apex; edges and arrises of spurs rounded smooth by hand. Spur 85 mm long; 70 mm high; 7-14 mm wide. Ctx 6151, Pit 6149, Tenement 170, Phase HMED
10. **Ridge tile**: crest type 12. Shallow triangular/pyramidal thumb-pressed spurs with rounded triangular/semi-circular cross section. Patchy olive-green glaze. Spur 15 mm long; 20 mm wide. Ctx 7157, Pit 7147, Tenement 168, Phase PMED
11. **Ridge tile**: crest type 12. Shallow triangular/pyramidal thumb-pressed spurs with rounded triangular/semi-circular cross section. Evenly applied mottled green glaze; depressions on the underside of spurs suggest these were pushed up and pinched out before being thumb-pressed into scalloped shape. Ctx 7396, Pit 7398, Tenement 240, Phase HMED

Fig. 5.18. Finials

12. **Finial.** Anthropomorphic finial of horse and rider type consisting of upper body of a man playing a trumpet or horn held in his right hand. The left arm, which appears to have run diagonally across his chest and has broken off possibly held the reins. The hair is stylised as a short bob (or tonsure) ending above the nape of the next. The man is bearded with the beard shown in stylised manner as a series of short incised lines down his right cheek to the chin; the trumpet obscures the left side of the face. The eyes are almond shaped faintly outlined with the pupils made by circular impressed depressions. A lentoidal incision in the RH side of his head may be intended to portray his ear, a similar but larger incision on the RH side under his arm may be intended to portray aspects of clothing. Fabric Med1a; diameter (base) 47 mm; >114 mm H. Layer 3078, SF 72, Tenement 237, Phase LMED
13. **Finial**. Bottle shaped finial and crested ridge tile with crest type 11. Fabric: Med1a; Finial diameter: 85 mm (top); 162 mm max; 110 mm at base; height: 245 mm. Single pyramidal spur from ridge crest. Ctx 4315 and 4317, Pit 4401/4318, Tenement 237, Phase HMED

Fig. 5.19. Louvers

14. **Louver.** Upper section of louver with four hooded oval vents 130, 135 140 and 157 mm long by *c* 50 mm high. Two small perforations 9 mm diameter, made pre-firing, are set asymmetrically 25 and 34 mm below the top edge. An applied cordon 10 mm wide encircles the louver 80 mm below the upper rim. Fabric Med1 (Southampton white ware) Diameter: 134 mm (top); 200 mm (at cordon) 290 mm (max.); height: >160 mm; wall thickness 7-13 mm. Ctx 6987, Pit 6856, SF257, Tenement 172, Phase LMED
15. **Louver.** Lower section of louver encircled by an applied cordon 150 mm above the base. Above this were oval hooded vents 80-90 mm long. Glazed in bottle green. Fabric Med1 (Southampton white ware) Diameter (at cordon) *c* 340 mm; height: >190 mm; wall thickness 7-10 mm. Ctx 6987, Pit 6856, Tenement 172, Phase LMED

Fig. 5.20. Chimney pots

16. **Chimney pot.** Fabric Med3; height: 264 mm; top diameter: 173x182 mm; base diameter: 210 mm; wall

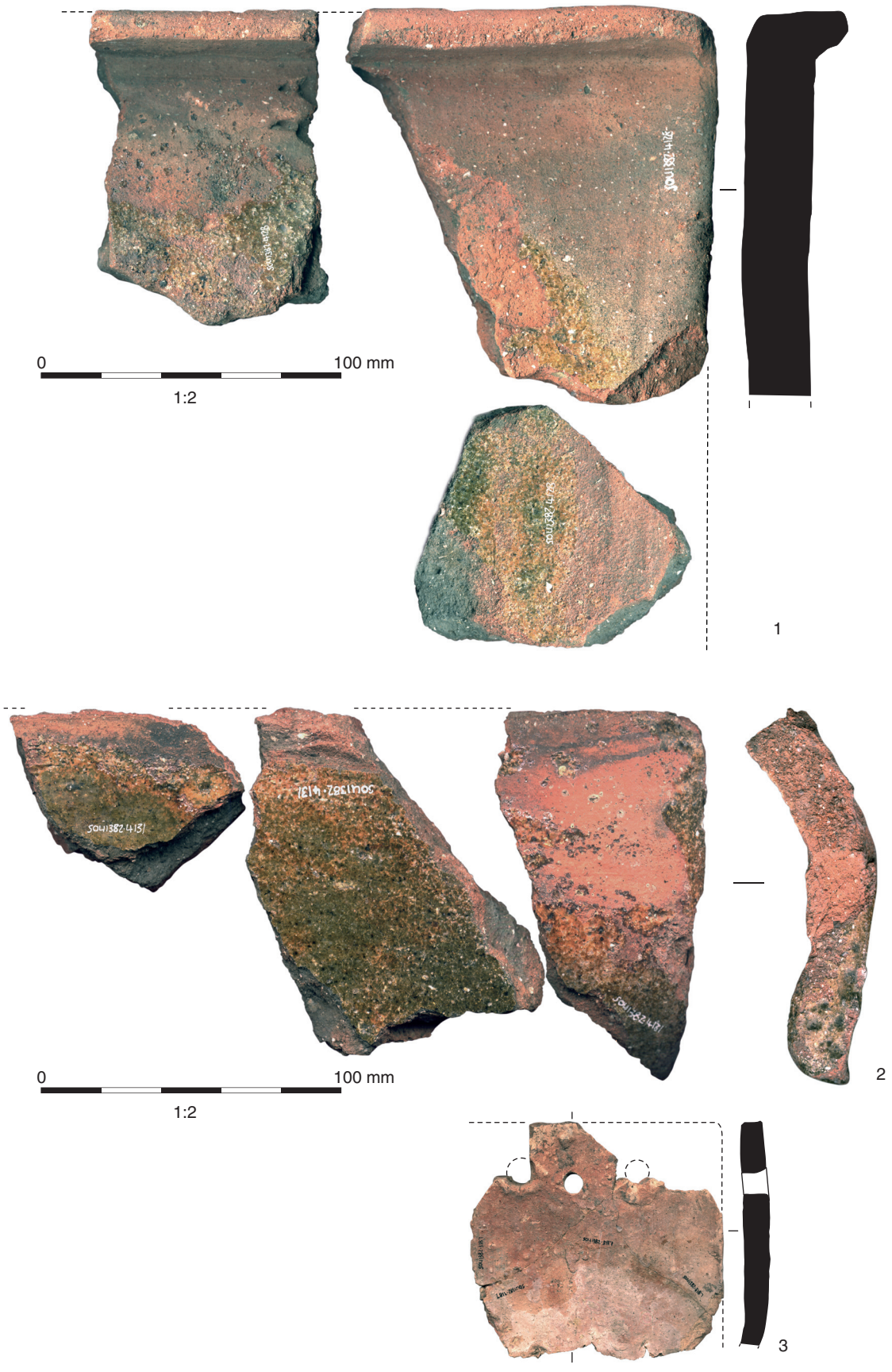


Fig. 5.15 Ceramic building material (Nos 1-3)

thickness 13-18 mm. Decorated with six vertical lines of four skewer perforations 9 mm diameter. Vent in top egg-shaped 60x68 mm. Ctx 7417, Pit 7418, SF287, Tenement 241, Phase HMED

17. **Chimney pot**. Fabric Med3; height: 260 mm; top diameter: 180 mm; base diameter: 200 mm; wall thickness 13-20 mm. Decorated with seven vertical lines of four or five skewer perforations 7 mm diameter. Vent in top, sub-circular 63x70 mm. Ctx 7417, Pit 7418, SF288, Tenement 241, Phase HMED

Fig. 5.21. Decorated floor tile and miscellanea

18. **Floor tile**. Encaustic with stamped inlaid decoration Central fleur-de-lys; quarter circles in corners enclosing quadrant of rosettes. Fabric Med1c; length: 115 mm; width: 115 mm; thickness: 19 mm. Ctx 7635, Pit 7658, Tenement 167, Phase LMED
19. **Floor tile**. Encaustic with stamped inlaid decoration Quarter dotted circle, with small quatrefoil in interior; ?trefoil in corner. Fabric B; length/width: 105 mm; thickness: 23 mm. Ctx 5155, Pit 5152, Tenement 179, Phase LMED
20. **Floor tile**. Encaustic with stamped inlaid decoration. Foliate or floral design: possibly part of fleur-de-lys. Fabric B; thickness: 23 mm. Ctx 5305, Pit 5306, Tenement 180, Phase HMED
21. **Floor tile**. Encaustic with stamped inlaid decora-

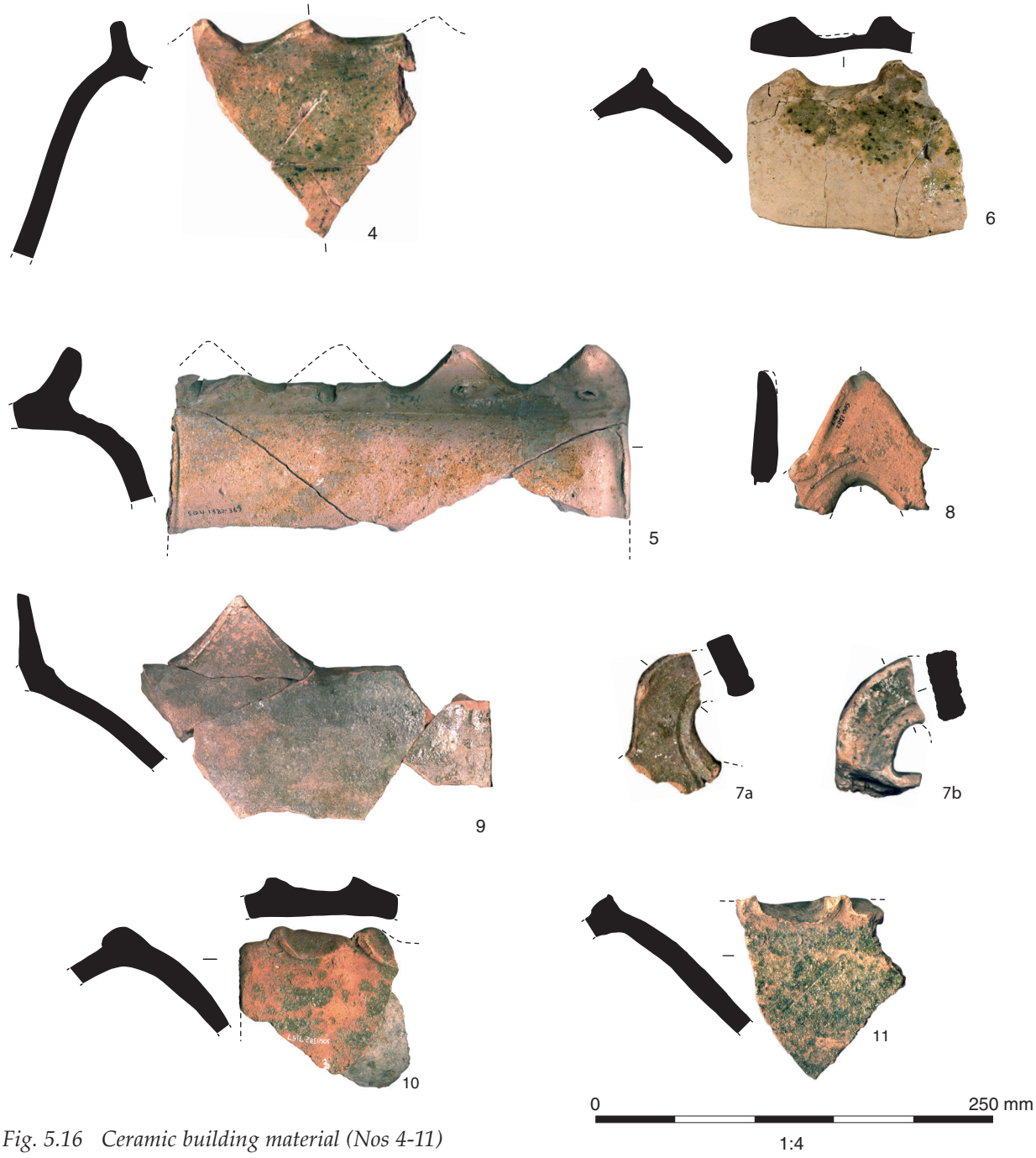


Fig. 5.16 Ceramic building material (Nos 4-11)

tion. Fleur-de-lys set diagonally. Scoop cut in base. Fabric A2; length/width (estimated): 180-200 mm; thickness: 25 mm. Ctx 9028, Pit 9029, Tenement 237, Phase LMED

22. **Kiln floor tile**. Trapezoidal tapered form; vertical edge, nail stabbed perforations 7x5 tapering to 1x3 mm; 20-25 mm thick; 150-<120 mm wide; >185 mm long. Ctx 9028, Pit 9029, Tenement 237, Phase LMED

23. **Tile discs.** Fabric E. Three examples, all from Ctx 5146, Pit 5147, Property 7 (Tenement 178), Phase AN
(a) Amber-brown glaze. Length: 47 mm; width: 45 mm; thickness: 16 mm; weight: 38 g.
(b) Dark greenish brown glaze. Length: 55 mm; width: 50 mm; thickness: 17-19 mm; weight: 60 g.
(*c*) Amber – green glaze. Length: 58-53 mm; width: 54-50 mm; thickness: 25 mm; weight: 101 g.

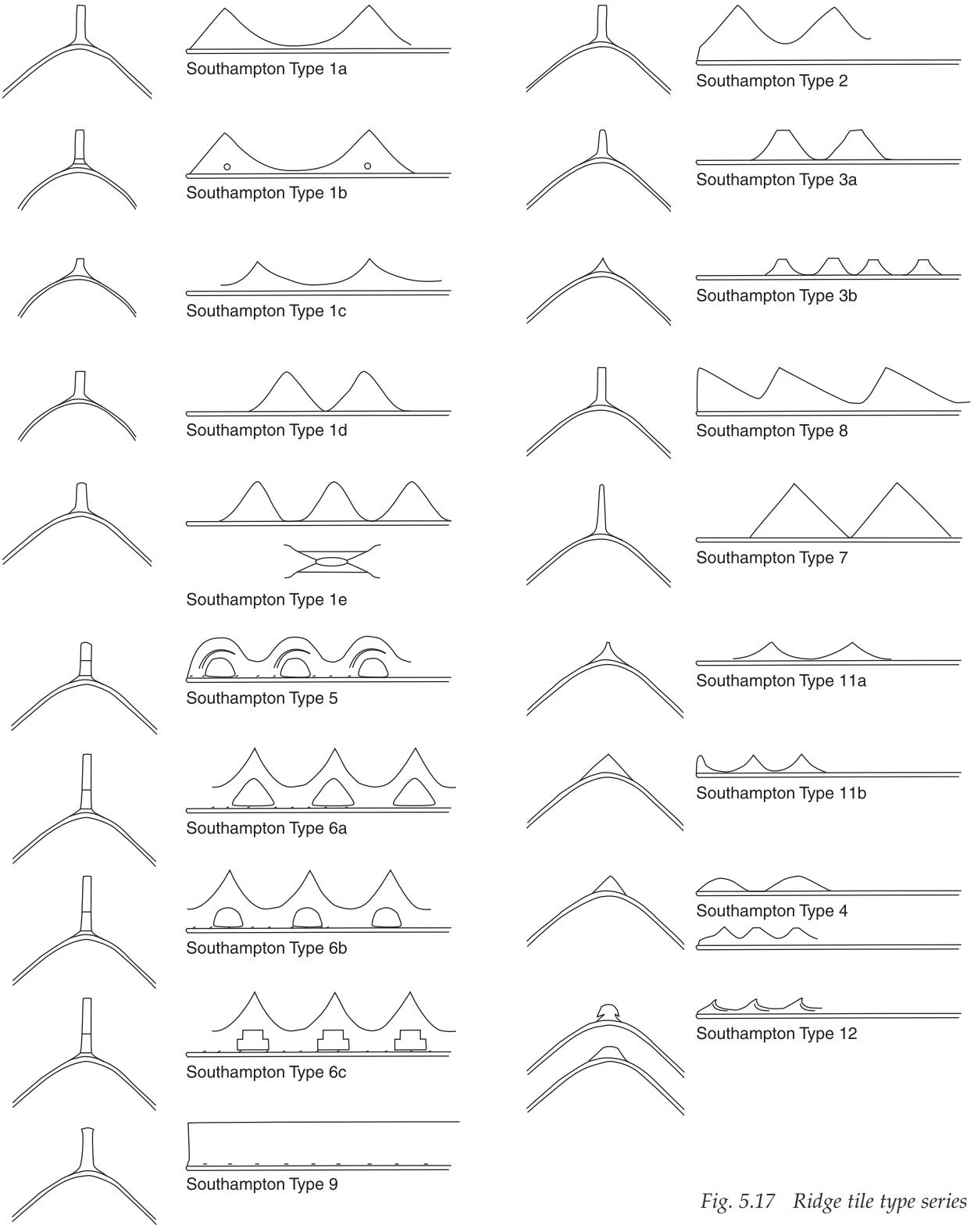
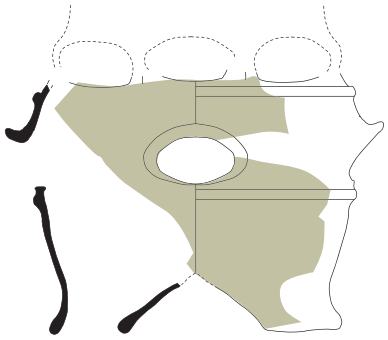
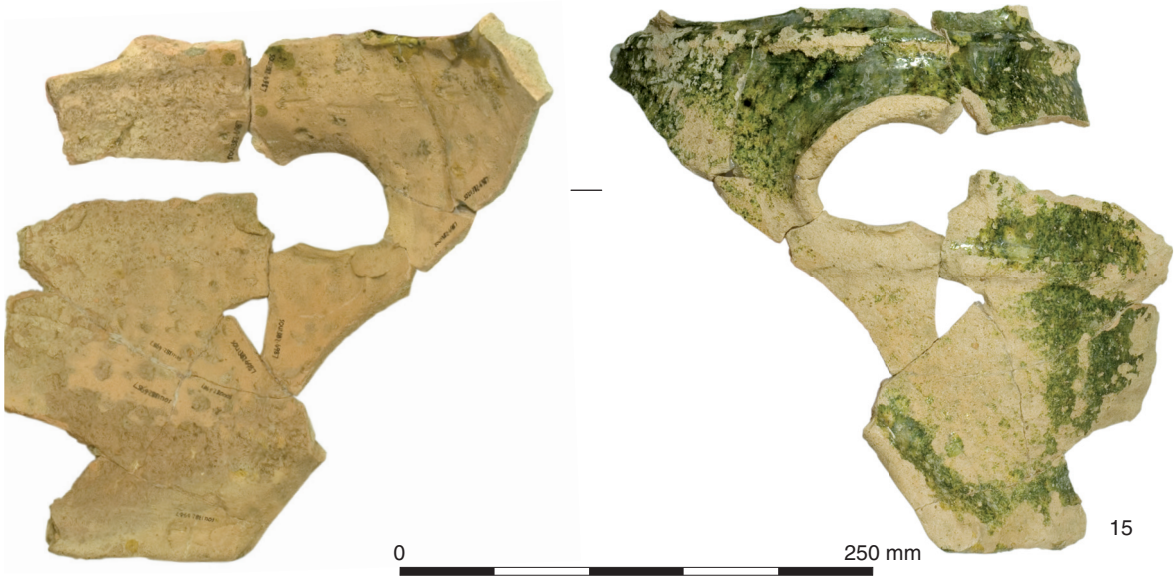


Fig. 5.17 Ridge tile type series

Fig. 5.18 Ceramic building material (Nos 12-13)


i
ii
iii
iii
i
14

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250 mm
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Fig. 5.19 (facing page) Ceramic building material (Nos 14-15)

Fig. 5.20 Ceramic building material (Nos 16-17)

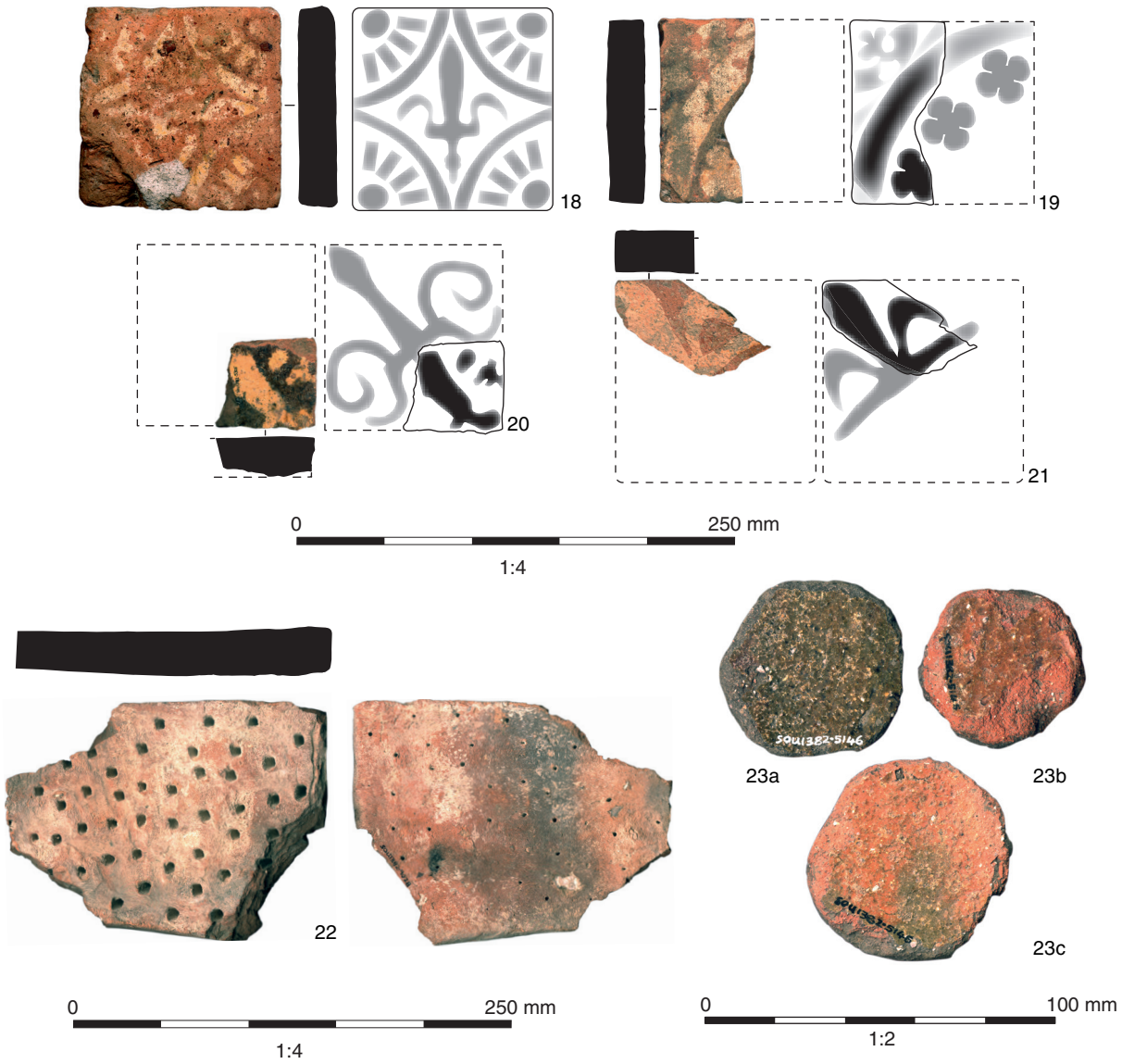

Fig. 5.21 Ceramic building material (Nos 18-23)

Roof slates *by Ruth Shaffrey*

A total of almost 14 kg of roof slates came from the excavations, most of which was found in high medieval contexts. No tenements produced significant quantities of slate although more than 1 kg was recovered from each of Tenements 173, 237 and 241. The slates vary in colour from light to dark grey, with rarer examples in brown and purple: they all probably originated in the south-west and are derived from Devonian formations. Devon has previously been identified as the most common source for roofing slates in Southampton from the 1170s AD (Platt and Coleman-Smith 1975a, 25). The French Quarter group are of typical medieval shapes and sizes (Holden 1965, fig 2; Allan 1984, fig 168; Jope and Dunning 1954; Platt and Coleman-Smith 1975b, fig 271), varying from almost square to rectangular to tapered with at least one example shaped to fit a particular spot. Several examples have double circular, oval or rectangular perforations. While some appear to have been fixed by nails, the majority seem to have larger holes of 10-12 mm diameter/width suggesting the more common use of wooden pegs (Jope and Dunning 1954, 213).

COINS, JETTONS AND TOKENS *by Martin Allen and Mark Blackburn*

A group of 25 coins, jettons and tokens was recovered from the site, of which two were common later 3rd-century Roman types. Two silver pennies (Nos 1 and 2) were found stuck together and redeposited into the upper part of pit 266 at Property H (later Tenement 173): although the pit itself dates to the late Saxon period, this upper fill dates to the 13th century. These are both Ælfred silver pennies of *c* 880-899. A

10th-century silver penny attributed to either Edmund or Eadgar (No. 3) came from a late Saxon pit at Property F (later Tenement 179) and dates to 939-*c* 973 – it would not have remained in circulation beyond *c* 980. A silver penny of William II (No. 4; early to mid 1090s) came from Anglo-Norman pit 8114 (Property 6, later Tenement 243) and was probably lost no later than *c* 1100. Three coins of high and late medieval date were found in contemporary pits at Tenements 180 and 175, comprising a possible continental imitation of a Henry III Long Cross farthing (No. 5, dating to 1248-*c* 1279), a silver halfpenny of Edward III (No. 6, 1335-1343), and a Portuguese copper *ceitil* of Alfonso V (No. 7, 1438-1481), which was found residually in the floor of the cellar at Tenement 170. The remainder of the group consists of jettons spanning the mid-late 15th century to the early 17th century, and tokens dating from the early 17th century to the modern period. Further details of these items are available in Specialist Download F7.

1. **Ælfred, silver penny**
   c AD 880-899. Two-Line type, North 1994, no. 635-7. Moneyer uncertain, anomalous style, not from one of the main groups. Obv. AE[L] FRED RÆ, small cross. Rev. inscription in two lines, obscured by encrustation. Corroded, encrusted, broken and repaired. Wt 1.13 g. SF 3, Ctx 265, Pit 266, Property H (Tenement 173), Phase AN (found attached to No. 2).

2. **Ælfred, silver penny**
   c AD 880-899.Two-Line type, North 1994, no 639. Moneyer Æthelræd, Winchester style (probably minted at Winchester). Obv. AEL FRE DRE, small cross. Rev. Æ_ER/+ + +/ED MO.Wt 1.29 g. SF 4, Ctx 265, Pit 266, Property H (Tenement 173), Phase AN (found attached to No. 1)

3. **Edmund or Eadgar, silver penny**
   AD 939-46 or 959-*c* 973Two-Line type. Moneyer and mint uncertain. Obv. [. . . ND or AR] REX. Rev. illegible. Corroded and encrusted. Wt 2.02 g. SF 89, Ctx 5187, Pit 5186, Property F (Tenement 179), Phase LSAX

4. **William II, silver penny**
   Early to mid 1090s. *BMC* type 2, London mint, moneyer Edric. Obv. +PIL[ ]E[ ]
   Rev. +ED[ ]CONL[ ]. Wt 1.21g. SF 311, Ctx 8113, Pit 8114, Property 6 (Tenement 243), Phase AN

5. **Continental imitation (?) of Henry III or Edward I**
   AD 1248-c1279.Long Cross coinage, silver cut farthing. London mint. Broken and repaired. Two small pieces missing.Wt 0.17 g. SF 146, Ctx 5371, Pit 5358, Tenement 180, Phase HMED

6. **Edward III, silver halfpenny**
   AD 1335-1343. Worn and incomplete. Wt 0.38 g. SF 128, Ctx 3782, Pit 3784, Tenement 175, Phase HMED
7. **Portugal, Alfonso V (1438-81), copper *ceitil*.**
   AD 1438-1481. Chipped and corroded. Wt 1.56 g. SF 216, Floor 6266, Tenement 170, Phase EMOD

METALWORK (Figs 5.22 – 5.33) *by Ian Scott*

Introduction

A substantial assemblage of metal finds was recovered from the site (2742 objects, 3211 fragments), although preservation is not good and the assemblage does not demonstrate the same elevated status as some of the other material categories. The total includes 492 unidentified fragments, many of iron, 78 pieces of slag or cinder, and 25 coins, jettons and tokens (reported above). Excluding these the assemblage comprises 2147 metal objects (2588 fragments) and is dominated by ironwork (1831 objects, 2079 fragments). The remainder of the group includes 272 copper alloy objects, 27 pieces of lead, a single length of thread of gold and an object in an unidentified non-ferrous alloy.

Late Saxon (AD 900-1066)

The finds from late Saxon contexts are limited in number, amounting to 33 objects or fragments, excluding slag and small unidentified fragments. Nails, miscellaneous fragments and fragments of uncertain function formed the bulk of the late Saxon assemblage. There are two structural items, a U-staple and a washer or rove.

Most of the late Saxon assemblage came from Property H (encompassing later Tenements 169-173). Although largely consisting of nails, miscellaneous fragments and fragments of uncertain function, there is also a fragment possibly from a bladed tool or knife, recovered from pit 48.

Items of personal adornment include a length of gold thread (No. 45) from Property B (later Tenement 237), and possibly the decorative mount (No. 19) from Property H (later Tenement 170). There is no exact parallel for this piece, although the Brasenose brooch (Hinton 1974, 50-3) is perhaps broadly comparable. The decoration comprises scrolls on the flat central boss of the stud, with a beaded or milled border around the angled rim. The design of the decoration is comparable to that found on some Saxon saucer brooches (eg. MacGregor and Bolick 1993, 42, and nos 2.1-2.16), although its execution is quite different. The object may have been a mount from a vessel or box, or it may have been a brooch and probably dates to the later Saxon period, ie. the 10th or 11th century.

A single undiagnostic knife came from Property J (later Tenement 167). A pair of prick spurs (No. 10) were recovered from pit 1318 at Property G (later Tenement 174). Their long straight arms, the short goad on a straight expanded neck, and the presence of decorative bosses all indicate a 10th-11th-century date for these spurs, which compare well with examples from York (Ottaway and Rogers 2002, 2956-57, fig. 1522: 12735), Thetford (Ellis 1984, 101-104, figs 140-41) and Winchester (Ellis 1990, 1038-39, fig.331, nos 3860-3863).

From a high medieval pit (172) at Tenement 172 came a residual Hinton Type C strap end of late Saxon type (No. 36). Hinton has suggested (1996, 41-2) that this form of strap end was predominantly a 9th-century type but may have continued in use until the 10th century and perhaps even into the 11th century. He noted the absence of this type of strap end from the Test-side successor to the middle Saxon port of *Hamwic*; the French Quarter example is of course from within that Test-side successor. It may be a stray find, or it may confirm that the type had a long life as Hinton suggested.

Anglo-Norman (AD 1066-1250)

Of the 125 metal finds from Anglo-Norman contexts, the largest functional groups are nails, miscellaneous pieces, structural items and objects of uncertain identification. The latter include a small domed copper alloy object with a hole at its apex (No. 70).

The structural items include a number of clench nails, clench nails with attached roves, loose roves and a forelock bolt wedge; such items are usually associated with the structure of ships. There are many more clench nails and roves from the high medieval phase, predominantly from Tenement 172 (see below). The remaining Anglo-Norman objects include an awl – probably used for leather working – half of a horseshoe, a buckle (No. 25), four knives or knife blade fragments and a rectangular iron strip or binding with nail holes and preserved wood grain. A scale pan for a small balance (No. 13) and a probable balance arm (No. 14) were also found. Such small folding scales or balances are found in early Saxon graves (Scull 1990), in later Saxon contexts (Kruse 1992) and right through the medieval period.

High medieval (AD 1250-1350)

An assemblage of 639 metal objects came from the high medieval phase. Of note is the fact that all the items of arms and armour and over half the structural items from the whole excavation came from contexts of this phase. The arms and armour comprise two arrowheads (Nos 1 and 2), five pieces of mail armour and two quite large pieces of plate armour (Nos 3 and 4). One arrowhead (No. 2) is leaf-shaped head and is from Tenement 237, the other is a bodkin point (No. 1) from Tenement 172. With the exception of a small fragment of mail from Tenement 239, the pieces of armour are all from Tenement 172; indeed all the arms and armour from this property came from pit 172. The presence of the pieces of mail in a context dated to the late 13th or early 14th century is to be expected.

The form of the larger piece of plate armour (No. 3) which has a curved rolled upper edge with regularly spaced rivets parallel to the edge is useful in that this can be reasonably confidently identified as the arm and neck edges of armour, whereas this interpretation has been less easy to ascribe to some of the simple squared and riveted plates often found in Southampton at this period (Platt and Coleman-Smith 1975, 279 & 282 & fig. 253, nos 2029-2032; fig. 254, nos 2057-2059). However there are other armour fragments from a 14th–century context at Cuckoo Lane which appear to be from a solid breast plate (ibid., 285, fig. 255, no. 2069 & pl. 128).

The larger piece (No. 3) might be one of a pair of plates protecting the upper chest, and can be compared to the relevant pieces (plates numbered 9 & 11) of armour 7 from Wisby (Thordemann 1939-40, 354-59, pls.32-3 & 38) or to armours 4 (ibid., 350-52, pls 21-2 & 25-6) and 5 (ibid., 352-53, Pls 27-29). However given the shape and curvature of the top of the plate with its rolled and curved edge, there is a possibility that it formed a single plate of inverted T-shape over the upper chest and that one arm of the T is lost.

The smaller piece from the present excavations (No. 4) is an approximate trapezoid and has one curved edge and a line of rivets along its length. It probably formed the lower corner of a second L-shaped breast plate, perhaps forming a pair with plate No. 3.

Comparatively few pieces of armour can be positively identified and the best evidence comes from pictorial depictions, and in particular funerary monuments. Medieval brasses are an excellent source for armoured knights, although less is known of the armour of classes below knights. The full panoply as illustrated by brasses was expensive.

It is likely that men below the rank of knight would have worn a 'coat of plates', in which rectangular metal plates were sewn into a leather or cloth garment (Eaves 1989, pls xxxviii-xxxix; Blair 1987, 169). Later versions were the brigandine where the plates were riveted to the garment and the 'jack of plates' with small plates sewn between two layers of fabric.

The pieces of plate armour recovered in the excavation can be interpreted as parts of a coat of plates. The best comparative evidence for these comes from Wisby (modern Visby) on the Swedish island of Gotland where a number of complete or near complete coats of plates were recovered during the excavation of mass graves (Thordemann 1939-40). A variety of different types of coats of plates were recovered.

Most of the Wisby armours were tentatively interpreted as the armour of the peasant militiamen of Gotland worn during their unsuccessful defence of their city against the invading Danes in 1361 (ibid., 225-28). It is thought that this armour was old at the time of the battle. However Thordemann argued that Armour 7, with its applied heraldic devices or badges, could have been the armour of a Danish knight (ibid., 228-29).

There are three tools from high medieval contexts: the blade of a gouge or drill bit from

Tenement 239, a billhook from pit 172 in Tenement 172, and an incomplete copper alloy needle from Tenement 173. Items relating to transport include part of a worn horseshoe (oven 3228) from Tenement 237, and three horseshoe nails from Tenement 172. There is another fragment from a small balance, probably of a type with a rigid arm (No. 14) from Tenement 241. Later medieval examples of such balances have been published from Winchester (Biddle 1990b, 917-18, fig. 284, no. 3212), York (Ottaway and Rogers 2002, 2952-53, fig. 1519, no. 13402), Norwich (Margeson 1993, 204, fig. 155, No. 1573), and London (Egan 1998, 326, fig. 243, no. 1055). Small balances were used to weigh coins and small items of high value.

Among the personal items is a shield-shaped seal matrix with three lions passant guardant (No. 17). Although the object could have been a harness pendant, the fact that it is cut in negative strongly suggests that it was intended as a seal. The three lions were the arms of England from the reign of Richard I until the Union of the crowns of England and Scotland in 1603. The seal matrix was found at Tenement 237. Other personal items include a finger ring (No. 20), a probable pendant (No. 21) and a decorative cast openwork pin head (No. 22). There are seven buckles or buckle fragments (eg. Nos 23-26), an octofoil belt mount (No. 29), an oval strap loop (No. 30), a possible decorated belt mount (No. 31), two belt mounts or stiffeners (Nos 32 and 34), and two strap ends (Nos 37-38). Other personal items include pins and lace chapes.

A possible toilet implement (No. 18) is of a type interpreted as earscoops and toothpicks. There are very similar objects from Battle Abbey (Geddes 1985, 162, fig. 52, no. 77) and from excavations on the Thames Exchange, City of London (Egan and Pritchard 1991, 379, fig. 251, TEX 88). Both of these examples have a ring fixed to the handle for the attachment of a cord. A simpler example comes from York (Ottaway and Rogers 2002, 2932, fig. 1501, no. 15227). An example from France illustrated by Gay (1887, 526) dates to the reign of Charles VI of France (born 1368, reigned 1380-1422). The French example is more ornate and has a handle in the form of a cast figure.

Household items include two knives, one of which is of a post-medieval type with integral bolster, vessel fragments (No. 49), sheet vessel repairs (No. 54) and a cast copper alloy tap (No. 55). In addition to the specific household items, there are fragments of decorative copper alloy bindings or mounts (Nos 61-63) and a piece of edge binding, which may have had an application within the house, and a single iron hinge strap fragment, possibly for a door. There are two key fragments, a latch rest and a U-shaped copper alloy bolt from a small barb-spring padlock (No. 69).

The structural items from this period number 102 pieces, 67 of which comprise clench nails and roves. These are usually associated with clinker-built medieval ships. The construction sequence of clinker-built ships began with the laying down of the keel. The sides of the vessel were built-up from the keel by adding overlapping strakes, which were fastened together with clench nails and roves (Hutchinson 1994, 8, 30, figs 1.2, 2.3). The planks within each strake were scarf jointed and the joints reinforced with more clench nails and roves. The frame was added after the clinker-built shell was completed.

Late medieval (AD 1350-1510)

The 422 objects from the late medieval phase include a large socketed blade possibly from a mattock, and a thimble (No. 6). With its decorative border, the latter is possibly a Nuremberg thimble of mid to late 16th-century date. Items related to transport comprise three horseshoe fragments and two horseshoe nails.

Personal items include buckles and belt fittings: a circular buckle, a cast buckle tongue, a belt mount or stiffener (No. 33), a pendant loop and mount (No. 35), and a hooked clasp (No. 40), clothes fastenings (including two, possibly three, wire loop fasteners; eg No. 43, lace chapes and pins. There are also three lengths of cord plaited from fine copper alloy wire (No. 46).

Household items are limited in number. They comprise a knife blade and a knife with plate tang, both of late or post-medieval form, and an undiagnostic blade fragment. There is also a cauldron fragment (No. 51) and a candlestick of plain early post-medieval form (No. 58). Other probable household objects include a probable hinge plate (No. 66), a copper alloy decorative binding or mount fragment (No. 60) from a box or chest, and a piece of curved copper alloy edge binding. A hinge strap probably came from a door, while a key with a kidney-shaped bow was also found. In addition, there are a number of structural fittings and nails and miscellaneous fragments from late medieval contexts.

Post-medieval (AD 1510-1750)

Post-medieval contexts produced the highest quantity of metal objects (635). These included 415 nails, 63 miscellaneous pieces and 66 items of uncertain identification. Identified finds included a number of tools: an adze blade, an incomplete axe or hammer head, a small cross pein hammer head with part of its shaft preserved as mineralised wood, the tip of a saw blade with large teeth, a punch, a needle (No. 5) and thimbles. Ring thimbles (such as No. 8) were widely used by tailors and other professionals; this example could well date to the 16th-century. There is also part of a single lead cloth seal (No. 12) representing trade.

The personal items include 18 pins and four lace chapes. There is also a sub-square buckle frame, a button decorated with the arms of the Board of

Ordnance (No. 41), and a wire loop fastener. Finally from pit 3188 at Tenement 237 there are mineralised hobnails and fragments of leather, probably from the heel of a boot.

Household items amount to 13 objects and include a possible knife fragment with non-ferrous bolster plate, a whittle tang knife of post-medieval form, a possible knife blade fragment and a knife handle with antler plates and an elongated solid bolster. A second handle of bone may be from a knife or possibly from a tool. Vessels are represented by a cast vessel rim fragment (No. 50), a cast cauldron leg, a possible cauldron leg or foot and a small vessel with an elongated spout (No. 53). A paper clip rivet was probably used to repair a sheet metal vessel.

From pit 5180 at Tenement 180 came a pair of scissor candlesnuffers (No. 59). Other household finds include a decorative copper alloy binding or mount (No. 64), and an elongated decorative copper alloy plate or mount apparently in the form of a dummy hinge (No. 65). A possible rectangular hinge plate, an iron hinge strap and a hinge ride or split spike loop were also found. Finally there are some fragments of window leading.

A pair of keys for a rotary lock (No. 67) were found on a ring – they are poorly preserved, but the x-ray plate suggests that they have similar shaped bits. Another poorly preserved key with possible chain fragments (No. 68) was also found. Finally there is a heavy plate with a large circular hole. This may have been a bolt plate for a large bolt, or perhaps more likely a reinforcement for a door pivot.

Early modern (AD 1750-1900)

Among the finds are objects which are of post-medieval date: these and others included here may be residual in this phase. A thimble (No. 7) and a ring thimble (No. 9) are handmade and therefore predate the 18th century. No. 7 is a tall rimless thimble and probably of 18th- or early 19th-century date. Another example (not illustrated) is fragmentary but has a waffle pattern rather than individual pits suggesting an 18th-century date. A final example is also incomplete and is probably a late medieval or early post-medieval type. Personal items include a double oval buckle frame (No. 27) and a large Georgian shoe buckle (No. 28). They also include a strap end with forked spacer (No. 39) which is a late medieval form and clearly residual. A late medieval or early post-medieval clothes hook (No. 42) is again residual, as is a small pin with looped head (No. 44).

Household objects include a whittle tang knife with integral bolster (No. 47), a small spoon (No. 48) and a hemispherical bowl pierced with a regular pattern of holes (No. 56), possibly a strainer or colander. The iron hoops (No. 57) from pit 886 at Tenement 173, are clearly from a large cask, probably a tun or a pipe. A tun could hold anything from 204 to 216 gallons, and a pipe, depending upon its country of origin and its date, could contain from 92 to 126 gallons. There is also a furniture tack or stud, a plate hinge, hinge strap, window leading and a looped handle or pin, possibly decorated. A large triangular iron plate is of uncertain function.

Conclusions

The range of metalwork present suggests the presence of both domestic occupation and limited craftwork on the site, but more particularly trading activities, as would be expected. In particular, the presence of clench nails and roves, which were concentrated in the high medieval phase at Tenement 172, is indicative of shipping activity. The discovery of fragments of a number of small balances, usually associated with small-scale high value transactions, is also of interest; whether they represent trading in spices or valuable metals, or simply money changing. Given the level of status exhibited among some of the other categories of finds in particular tenements, the metalwork is comparatively utilitarian in character; notable exceptions include the gold thread from late Saxon Property C, in the vicinity of later Tenement 237, which may reflect the higher status of this property at an early date.

Catalogue of illustrated metalwork (Figs 5.22-5.33)

Arms and Armour (Fig. 5.22)

1. Socketed **arrowhead** with possible bodkin point. Fe. L: 87 mm; D of socket: 12 mm. Ctx 349, Pit 172, Tenement 172, Phase HMED.
2. Leaf-shaped socketed **arrowhead**. Fe. L: 75mm, L of blade: *c* 45mm; W of blade: 20mm; D of socket: 10mm. Ctx 3337, levelling layer, Tenement 237, Phase HMED.
3 **Plate armour**. Two fragments forming an approximate L-shape piece of armour curved in section. The upper end of the broader portion has a concave curved rolled edge with parallel regularly spaced rivets. There are rivets spaced along each adjacent edge. The lower portion forms a narrow arm extending to one side. There is a line of at least 5, and possibly 7, rivets running parallel to its slightly curved lower edge. Fe. L: 210 mm; W: 230 mm. Context 375, Pit 172, Tenement 172, Phase HMED.
4 **Plate armour**. Tapering trapezoid fragment with evidence of rivets along its length. It has a clearly original curved edge on one side, with a probably original straight side opposite. The short straight end was also original. The fourth side is broken. Fe. W: 90 mm. Context 375, Pit 172, Tenement 172, Phase HMED.

Sewing and needlework (Fig. 5.23)

5. Well-preserved **needle**. Cu alloy. L: 71 mm. Ctx 7758, Pit 7759, SF 316, Tenement 168, Phase PMED.
6. **Thimble**, handmade and well preserved. The top or crown of the dome has a slight peak. The sides and

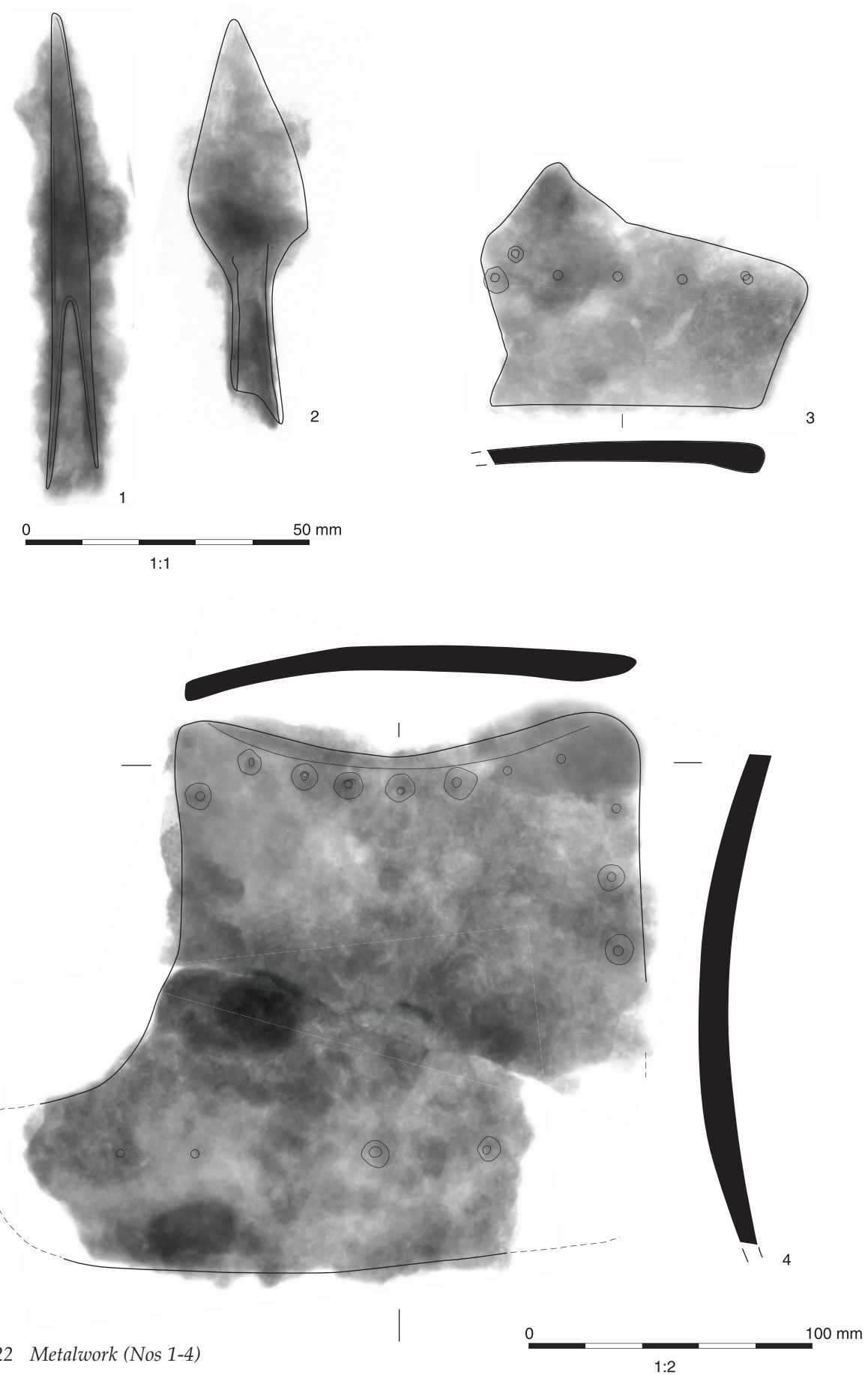

Fig. 5.22 Metalwork (Nos 1-4)

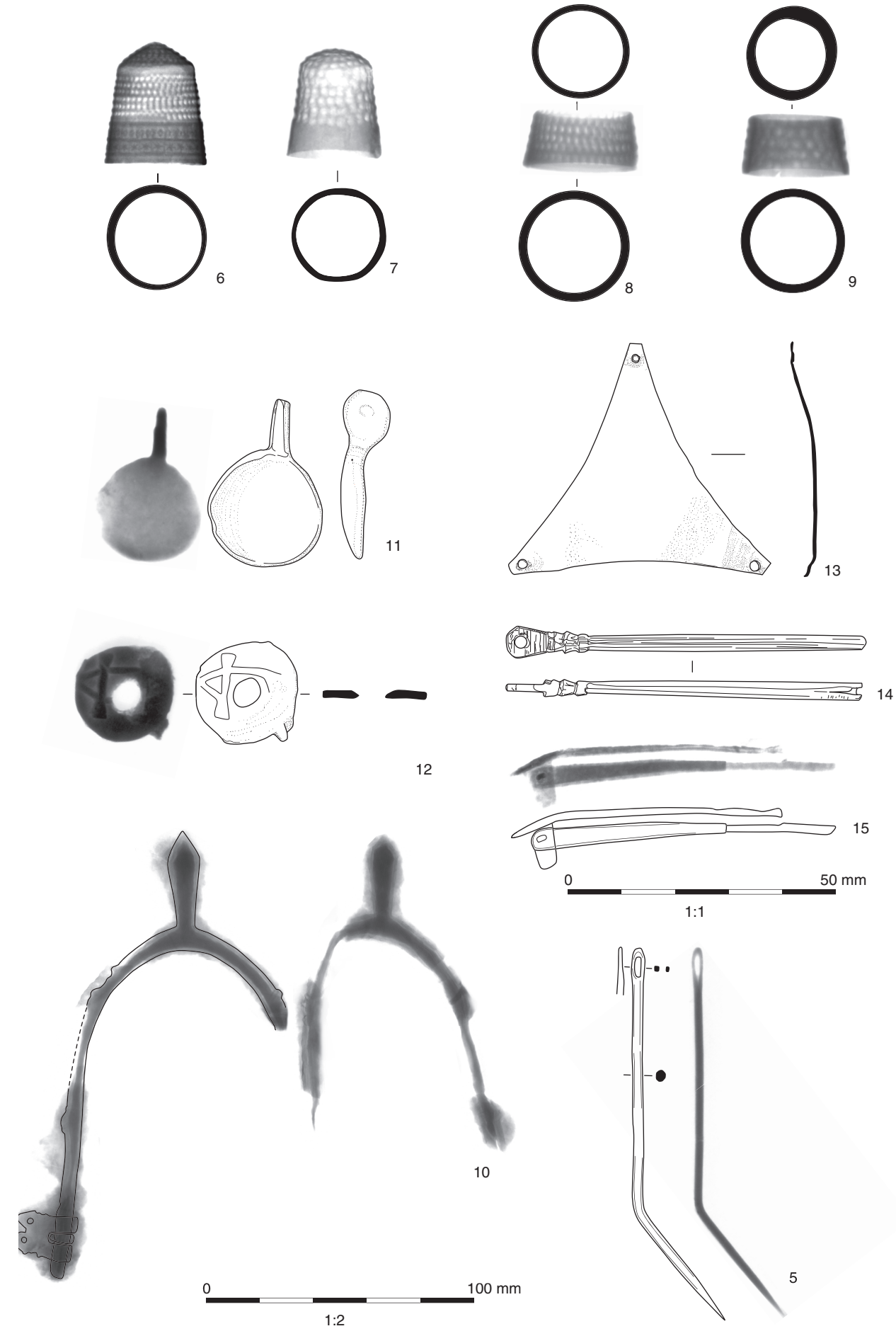

Fig. 5.23 Metalwork (Nos 5-15)

top have punched pits. The lower portion of the body has two decorative bands or borders. It has no rim. The metal is thin. Possibly a Nuremberg thimble. Cu alloy. Ht: 23mm; D: 18mm. Ctx 5005, Cess pit 5003, SF 69, Tenement 178, Phase LMED.

7. **Thimble**, handmade. Rimless, with drilled or punched pits over the upper portion of the body and crown. The lower part of the body is plain. Cu alloy. D: 21 mm. Ctx 6036, Pit 6289, SF 203, Tenement 170, Phase EMOD.
8. **Ring thimble**, handmade, with four rows of pits. Cu alloy. D: 22 mm, H: 11 mm. Ctx 6507, Pit 6682, SF 242, Tenement 240, Phase PMED.
9. **Ring thimble**, handmade, with four rows of pits. Cu alloy. D 20 mm; H: 10 mm. Ctx 6016, floor, SF 232, Tenement 171, Phase EMOD.

Transport (Fig. 5.23)

Items relating to transport are limited in range of types of objects. Horse transport is poorly represented with only 6 fragments of horseshoe, and 6 horseshoe nails. The other items relating to horses are a pair of stirrups (No. 28).

The most numerous class of object is the combination of clench nail and rove (Fig. 5.33 shows an x-ray image of a selection of these). These are strongly linked with wooden shipbuilding. The clench nails are very much concentrated in Tenement 172 in the high medieval phase. In addition to the clench nails and roves, a single forelock bolt wedge was also found in Tenement 172 in an Anglo-Norman context (pit 110).

10. Pair of **prick spurs**, seven fragments. Both spurs have long straight sides of D-shape section, and a short goad or prick at the end of a straight expanded neck. The terminals are rectangular, but it is unclear from the radiographs whether the terminals are pierced with two slots to form a buckle frame, or whether there are rivets to secure the straps. The more complete example has one complete arm with terminal *in situ*. This arm has evidence for two decorative bosses equally spaced along its length. The incomplete arm has one boss visible at a similar spacing. The second example has both terminals detached but extant. One of its arms has two extant bosses, the other which is less complete has one boss extant. Both spurs show slight traces of tinning or inlay on the radiographs. Fe. 1: L: *c* 175 mm; W: *c* 100 mm; 2: L: *c* 115 mm extant; W: *c* 80 mm. Ctx 1323, Pit 1318, Property G (Tenement 174), Phase LSAX.
11. Probable **harness pendant** with almost circular dished body – no visible decoration – and a pierced lug for suspension extending from one edge. Function uncertain. Cu alloy. L: 31 mm; W: 21 mm. See an example from Ludgershall Castle (Robinson and Griffiths 2000, 125, fig. 6.1, no. 4). Ctx 3337, levelling layer, SF 130. Tenement 237, Phase HMED.

Trade (Fig. 5.23)

12. Probable **cloth seal**. Comprising circular flat object with central perforation. There is a cast pattern on one face, and a broken link to a second part of the seal. Pb. D: 20 mm. Ctx 6073, ?Pit 6075, Tenement 169, Phase PMED.

Weights and Measures (Figs 5.23-5.24)

13. **Scale pan** from a small balance set. Concave triangular sheet with concave edges. Holes at each corner for suspension. Cu alloy. L of edges: 49 mm x 48 mm x 49 mm. See similar pans from Winchester (Biddle 1990b, 925, fig. 285, Nos 3217-18, 3220). Ctx 3091, soil horizon, SF 155, Property 2 (Tenement 238), Phase AN.
14. Probable **balance arm** comprising thin cast rod of circular section, broken at one end where it is pierced with a hole or slot, and terminating in a pierced flat lug at the other end. Decorated with mouldings. Cu alloy. L: 67 mm. Probably from balance with a rigid arm rather than a folding balance. Ctx 3091, soil horizon, SF 156, Property 2 (Tenement 238), Phase AN.
15. **Balance arm** from a folding balance. Comprises a tapering stem with small collar and pierced loop with loose ring at narrow end. The other end has a flat plate pierced with a single pivot hole. Cu alloy. L: 102 mm. Ctx 267, Pit 257, SF 5, Tenement 173, Phase HMED.
16. Small **balance**. Probably parts of a small rigid balance, it appears to comprise part of the balance beam and pointer and parts of the 'fork' or stirrup. Cu alloy. L 57 mm. For small balance with rigid beams see examples from London (Egan 1998, 325-26, fig. 242, Nos 1051 & 1054; & fig. 243, No. 1052) and Winchester (Biddle 1990b, 922-24, fig. 284, No. 3209). Ctx 7334, Pit 7356, SF 280. Tenement 241, Phase HMED.

Seal matrix (Fig. 5.24)

17. Shield-shaped **seal**, rather than a harness pendant with attachment lug at back. The shield has a round bottom, which is a shape that came in towards the end of the medieval period. The Royal Arms of England – three lions passant guardant – are clearly visible. These were the Royal Arms from the reign of Richard 1 until the union of the crowns of England and Scotland in 1603 with the accession of James I and VI. Across the top of the shield is a rectangular panel with a clearly defined border. Within this panel is a possible inscription, perhaps a name, or pattern. The lug is on the back near the top of the shield. Cu alloy. L: 24 mm. Ctx 4317, Pit 4138, SF 180, Tenement 237, Phase HMED.

Personalia (Fig. 5.24)

18. **Toilet implement**, formed from thin rod or wire, with small spoon at one end. The other end is divided into two arms, which are flattened and widened. At the centre of the object is what appears to be corrosion build up, but the x-ray suggests that there is something wrapped around the stem. This appears to be a handle or grip formed from knotted fine wire or chain. Cu alloy. L: 55 mm. Ctx 636, Pit 632, SF 35, Tenement 173, Phase HMED.

Jewellery (Fig. 5.24)

19. **Decorative stud** or **mount**, with flat raised central boss with scroll pattern. Part of the surface of the boss is completely lost. The remaining portion has parts of three scrolls, positioned in such a way as to suggest that there were originally only four scrolls.

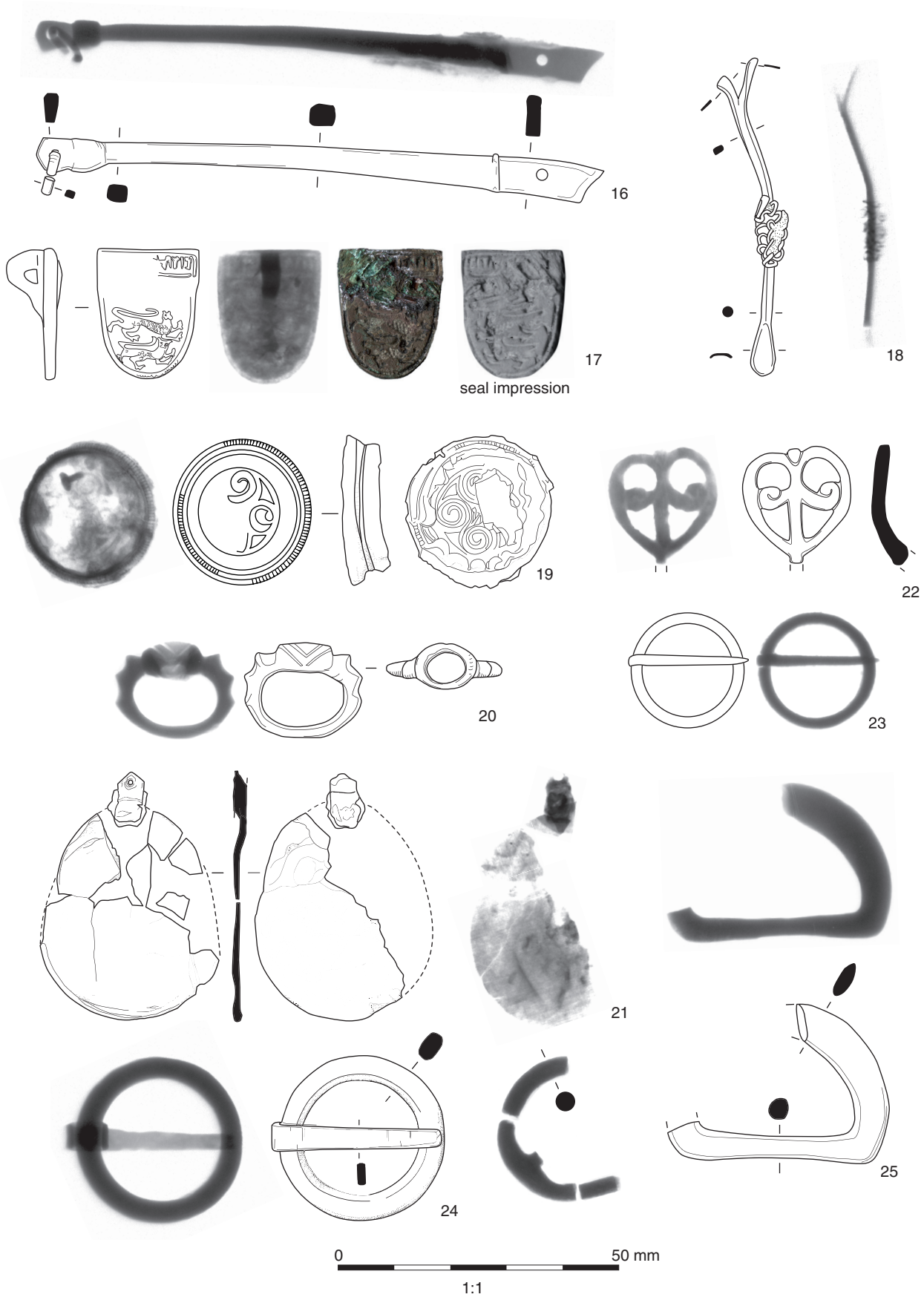

Fig. 5.24 Metalwork (Nos 16-25)

There is a suggestion that edges of this boss were held by a series of triangular or tooth-like claws which spring from an angle rim decorated with a beaded raised strip. Saxon. Cu alloy. D: 27 mm. Ctx 6698, Pit 6695, SF 246, Property 2 (Tenement 170), Phase AN.

20. **Finger ring** with oval bezel. The shoulders of the hoop are decorated with three raised mouldings on each side. Cu alloy. L: 22 mm. Ctx 6021, Pit 6020, SF 201, Tenement 169, Phase HMED.
21. Possible **pendant**, incomplete. Three fragments. Radiograph shows some patterning, but is not conclusive. One fragment has a piercing for suspension. Possibly originally teardrop shaped. L: mm; W: 33 mm. Ctx 4088, Pit 4086, SF 152, Tenement 237, Phase HMED.
22. Decorative **pin head** cast openwork decoration, heart-shaped overall, with internal scrolls. Cu alloy, L: 23 mm, W 20 mm. Ctx 4198, layer, SF 174, Tenement 238, Phase HMED.

Items of dress (Figs 5.24-5.26)

Buckles

23. Small circular **buckle** or **brooch**. Cu alloy. D: 20 mm. Ctx 4115, levelling layer, SF 153, Tenement 237, Phase HMED.
24. Circular **buckle** with plain frame of flat oval section and plain pin or tongue. Cu alloy. L: 31 mm, W: 30 mm. Ctx 374, Pit 172, SF 14, Tenement 172, Phase HMED.
25. D-shaped **buckle frame** fragment. Cu alloy. L: 26 mm, W 38 mm. Ctx 8538, Pit 8537, Property 5 (Tenement 241), Phase AN.
26. Oval **buckle frame** with ornate outer edge, and plate. Cu alloy. L: 44 mm. In London this form of buckle seems to have been in use from late 12th to the late 14th century (Egan and Pritchard 1991, 76). Ctx 7599, Pit 7595, SF 284, Tenement 166, Phase HMED.
27. Double oval **buckle frame**. Incomplete, originally *c* 40 mm long. Cu alloy. L extant: 28 mm; W: 37 mm. Ctx 39, demolition layer, Tenement 172, Phase EMOD.
28. Large **shoe buckle**, Large rectangular buckle frame cut from sheet. Georgian. Cu alloy. L 103 mm, W 52 mm. Ctx 6438, Pit 6435. Tenement 170, Phase EMOD.

Strap loops and belt mounts

29. **Belt stud** or **plate**. Floral motif with eight petals. Cu alloy. L: 18 mm; W 17 mm. Ctx 1067, Pit 1069, SF 50, Tenement 173, Phase HMED.
30. Oval **strap loop** with rivet. Cu alloy. L: 18 mm, W 17 mm. Ctx 1110, Pit 1113, SF 61, Tenement 173, Phase HMED.
31. Possible decorative **belt plate** comprising small square plate, slightly dished, with two nail or pin holes positioned in diagonally opposite corners. The radiograph shows a pattern of incomplete small circles punched into its surface. The punched decoration forms borders to the plate and a possible cross in the centre of the plate. Cu alloy. L: 16 mm; W 15 mm. Ctx 4638, Pit 4579, SF 205, Tenement 237, Phase HMED.
32. **Belt mount** or **stiffener** formed of narrow cast strip with squared ends and attachment points with washers. Bent. No visible decoration. Cu alloy. L: 40 mm; W: 6 mm. Ctx 3440, Pit 3493, SF 137, Tenement 237, Phase HMED.
33. Possible **belt mount** or **stiffener**. Formed from sheet, it is long and thin and slightly curved in cross section, with an embossed moulding at one end. L: 52 mm; W: 6 mm. Ctx 6577, Pit 6553, Tenement 172, Phase LMED. Found with hooked clasp No. 40.
34. **Belt mount** or **stiffener**, comprising long hollow strip rounded at the ends and fastened with two pins. Cu alloy. L: 54 mm, W 4 mm. Compare with the mounts from London (Egan and Pritchard 1991, 213, fig.134, nos 1147 & 1151). Ctx 3083, levelling layer, SF 116, Tenement 238, Phase HMED.
35. **Pendant loop and mount**. This comprises a small cast circular pendant loop with a collared terminal knob, which was attached by a narrow strip or plate to the edge of a belt. The narrow strap was folded around the bar of the pendant loop and has one nail or rivet hole extant. It was apparently undecorated. Cu alloy. Strap: L: 12 mm, W 4 – 5 mm; pendant loop: L: 15 mm; W: 12 mm. Ctx 1357, Pit 1361, Tenement 174, Phase LMED.

Strap ends

36. **Strap end**, Hinton type C: flat double riveted with convex sides. Cleaning has revealed the outline of the decorative panel clearly, but only tantalising glimpses of the decoration within the panel. The tip of the tag, which would have been decorated with an animal (however stylised) shows very little. The radiograph does not show any clear decoration. There are some very small traces of gilding on the face of the tag. Cu alloy. L: 32 mm, W 12 mm. See Hinton 1996, 40-43, fig.16 for examples from *Hamwic*. Ctx 343, Pit 172, SF 9, Tenement 172, Phase HMED.
37. Two-piece **strap end**, incomplete. It is plain and tapers and has a pair of nail or rivet holes at the wider end. Cu alloy. L extant: 19 mm, W 10 mm. Ctx 267, Pit 257, Tenement 173, Phase HMED.
38. Three-piece **strap end** with forked spacer, fragment. It is incomplete and badly corroded. It shows quite clearly on the radiograph. Cu alloy. L: 25 mm, W 13 mm. Strap ends with forked spacers are a 14th-century type: see examples from London (Egan and Pritchard 1991, 140-43, fig. 93) and York (Ottaway and Rogers 2002, 2900). Ctx 1089, Pit 1092, SF 57, Tenement 173, Phase HMED.
39. **Strap end** with forked spacer. Narrow example with a collared knop. Cu alloy. L 29 mm. Similar to, though smaller than, an example from London (Egan and Pritchard 1991, 143, fig. 94, No. 676). Ctx 6367, layer, SF 226, Tenement 240, Phase EMOD.

Hooked clasp

40. **Hooked clasp** formed from embossed and folded sheet. Iron hinge pin. This example is incomplete and has lost its hook. Cu alloy. L: 25 mm, W extant: 25 mm. Found with possible belt mount No. 33. Compare with a complete example from London (Egan, 2005, 46, fig. 28, No. 167). Ctx 6577, Pit 6553, Tenement 172, Phase LMED.

Clothes fastenings

41. Flat circular **button** with cast loop on back. X-ray shows the arms of the Board of Ordnance: shield

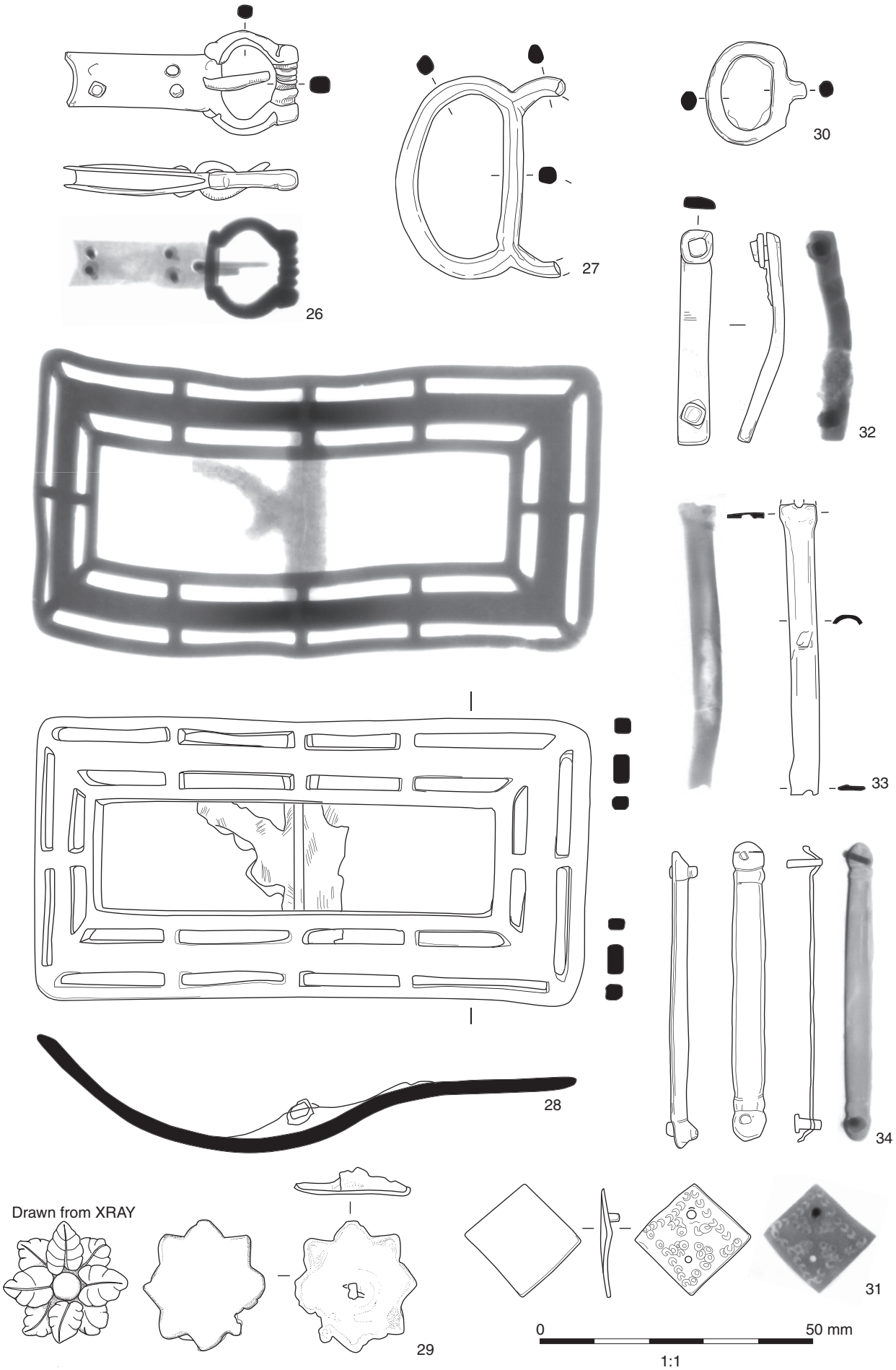

Fig. 5.25 Metalwork (Nos 26-34)

with three cannon in pale and three cannon balls in chief. Cu alloy. D: 25 mm. Ctx 669, Brick-lined feature 854, SF 32, Tenement 173, Phase PMED.

42. **Clothes hook**. Formed from wire. A form of fastening common in the late 16th century and 17th century, used to hook breeches and cost together. Cu alloy. L: 19 mm, W: 9 mm. Ctx 76, unstratified, Tenement N/A, Phase EMOD.
43. Wire **loop fastener**, comprising ring of wire with twisted closure. Cu alloy. L: 16 mm, W: 11 mm. Ctx 5008, Pit 5003, Tenement 178, Phase LMED.
44. **Pin** with looped head, bent double. Originally *c* 55 mm long. Cu alloy. L: 31 mm; loop D:8 mm. Ctx 133, Cess pit 169, Tenement 172, Phase EMOD.

Lace chapes

A small number of lace chapes was recovered from the excavations, exclusively from medieval and post-medieval contexts. The numbers are so small that there are no meaningful concentrations in any

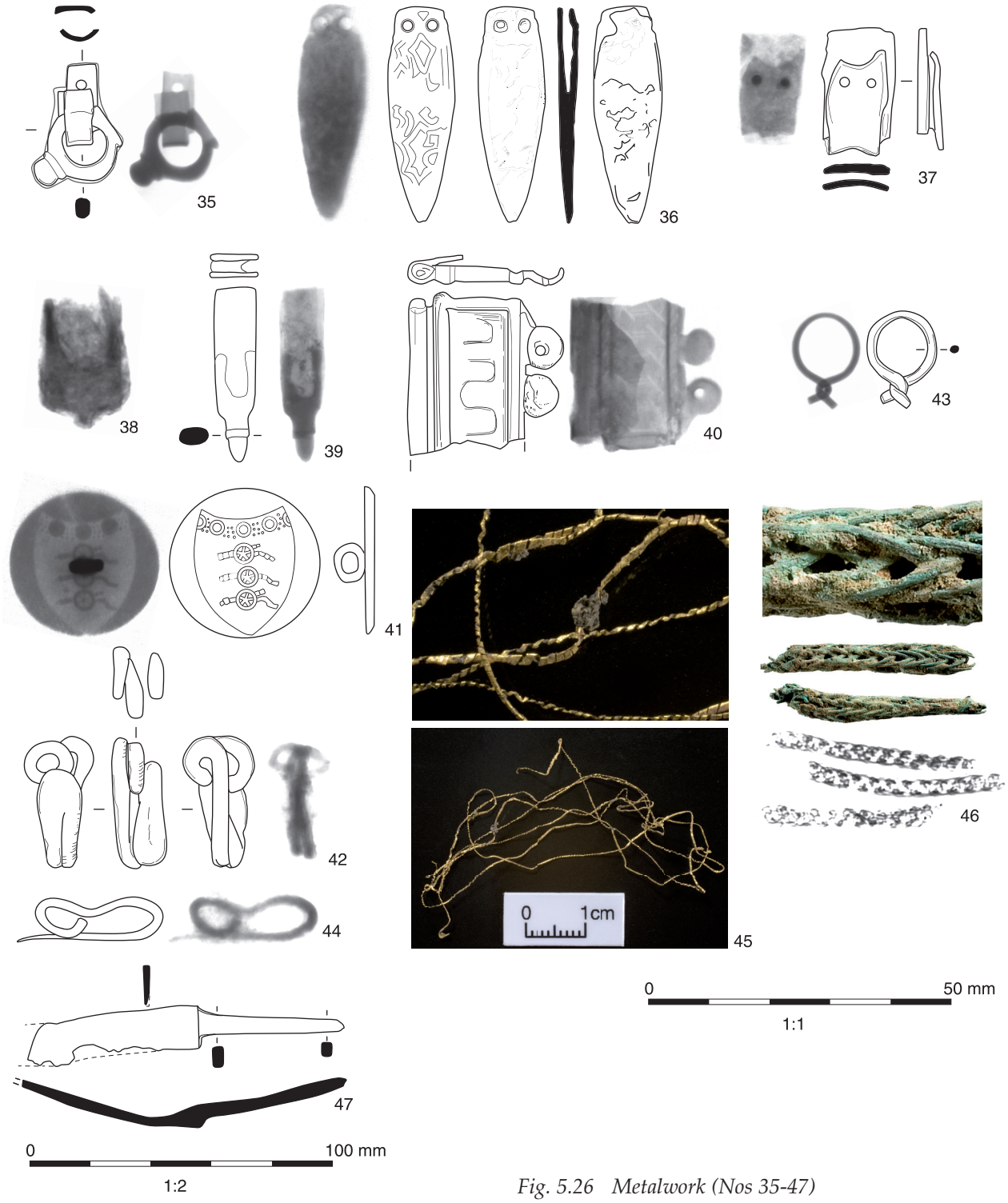

Fig. 5.26 Metalwork (Nos 35-47)

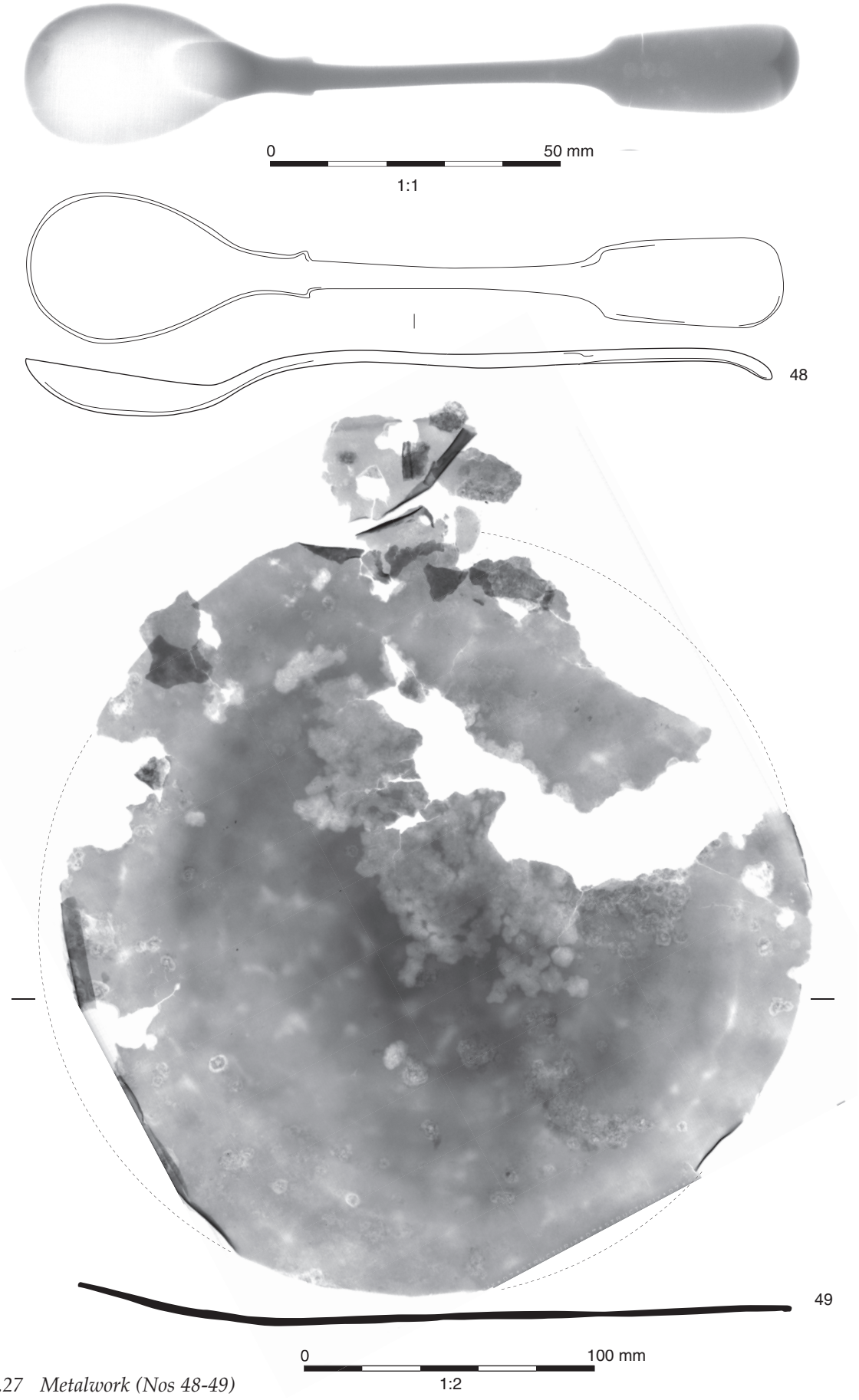

Fig. 5.27 Metalwork (Nos 48-49)

phase or tenement. The chapes include examples with overlapped seams, in-turned seams and butting seams. The latter include examples with pinholes.

Pins

Dress pins were found in small numbers predominantly from late medieval and post-medieval contexts. The pins include examples with wire wound heads and cast heads. Wire wound heads are predominant. No tenement produced many pins: the largest numbers were nine pins from Tenement 237 and six from Tenement 179. The small number of pins is notable, since pins are often very common on late medieval and post-medieval sites.

Other fragments related to dress

45. **Thread of gold**. Very fine long single strand scrunched and folded. Gold. Not measured. Ctx 4791, Pit 4790, SF 228, Property C (Tenement 237), Phase LSAX.
46. **Cord** plaited from fine wire. Three fragments. Cu alloy. L: 35 mm, 33 mm, 32 mm. Ctx 3133, Pit 3130, SF 75, Tenement 237, Phase LMED.

Household (Figs 5.27-5.31)

Knives and cutlery

47. Whittle tang **knife** with integral bolster. Possible maker's stamp on bolster. Blade incomplete, but parallel sided? 17th- or 18th-century form. Fe. L: 104 mm. Ctx 76, overburden, Phase EMOD.
48. Small **spoon** with fig-shaped bowl and oar pattern stem and handle. Non-ferrous alloy. Probably of 19th-century date. L: 134 mm. Ctx 8055, floor, SF 314, Tenement 242, Phase EMOD.

Vessels

49. Possible **plate**. Broad copper alloy disc slightly dished, no obvious rim or shaping. Possibly a plate. Cu alloy. D: 260 mm. Ctx 3106, floor, Tenement 237, Phase HMED.
50. **Vessel rim** fragment. Everted rim. Cu alloy. L 82 mm; W: 37 mm. Ctx 669, Pit 854, Tenement 173, Phase PMED.
51. **Cauldron**. Curved cast fragment of irregular outline, with stump of handle at one corner. Cu alloy. L: 115 mm, W: 70 mm. Ctx 6679, Pit 6682, SF 247, Tenement 240, Phase LMED.
52. **Cauldron rim** fragment with handle *in situ*. Cast Fe. L: 148 mm. Ctx 3566, Pit 3573, Tenement 237, Unphased.
53. Small **vessel** with elongated spout. Cu alloy. L 42 mm; W: 27 mm. Ctx 3168, Pit 3169, Tenement 237, Phase PMED.

Sheet repairs

54. Two **strips** laid one on the other and joined by three paper clip rivets inserted through slots, two on one edge and the third on the opposite edge. Broad strips, curved in cross-section. A repair for a sheet metal vessel. Compare with an example from London (Egan 1998, 177, fig. 144, No. 494), and numerous examples from York (Ottaway and Rogers 2002, 2813-4, fig. 1399). Cu alloy. L: 96 mm; W: 34 mm. Ctx 1409, Ditch 1408, SF 124, Tenement 174, Phase HMED.

Tap

55. **Tap**. A decorative tap or finial and plain tapering tap case. Cu alloy. L: 65 mm. A very similar though slightly larger tap from London is published by Egan (1998, 242-44, fig. 189, no. 746). Ctx 7614, Pit 7619, SF 289, Tenement 166, Phase HMED.

Strainer or colander?

56. Possible **strainer** in the form of a hemispherical bowl pierced with a regular pattern of holes. The bowl has a roughly triangular flange, a little squashed. The flange is not regular and has some fixing holes. Pb. L: 330 mm; W: 280 mm. Ctx 886, Barrel-lined pit 885, Tenement 173, Phase EMOD.

Cask hoops

57. **Cask hoops.** (not illustrated) Thirty-three large to medium fragments and 34 smaller fragments. Fe. L: 450 mm to 550 mm extent. W: 45 mm to 55 mm. Although there is evidence for mineralised wood, the information is not very clear. It is not possible to establish with any confidence the width of any individual cask stave. The x-ray plates show some vertical lines on the iron hoops that might indicate that some staves were 90 mm wide. One hoop fragment, measuring *c* 55 mm wide and at least 420 mm long, has extensive mineralised deposits that show possible traces of two staves, one *c* 85 mm and the adjacent example *c* 70 mm wide. There are at least two hoop fragments, which have been joined with lap joints fastened by pairs of rivets. Although the hoops are fragmentary, they are clearly from a large cask. The likelihood is that the cask was either a pipe or a tun, both of which were large and used for transporting wine. The sizes of both tuns and pipes could vary depending on their country of origin. Ctx 886, Barrel-lined pit 885, Tenement 173, Phase EMOD.

Lighting

58. **Candlestick** with plain dish-shaped tray and skirted flange. In two pieces. The quite tall stem has two plain mouldings and is topped by a plain cup. Cu alloy. H: 166 mm, Base D: 132 mm. The stem is comparable to an example from London found with mid 16th-century ceramics (Egan 2005, 81, fig.69, No. 337). Ctx 3643, Pit 3582, Tenement 237, Phase LMED.
59. Scissor **candle snuffers**, one arm missing. Decorated with ring and dot on top plate. Fe. L: 169 mm. Ctx 5010, Pit 5180, SF 74, Tenement 180, Phase PMED.

Decorative bindings or mounts

60. Decorative **binding** or **mount**, comprising cast strip of half-round section pierced with three elongated slots, and terminating in a flat plate decorated with punch marks. Cu alloy. L: 93 mm; W: 5mm; end plate W: 12 mm. Ctx 5105, Cess pit 5104, SF 80, Tenement 179, Phase LMED.
61. Decorative **binding** or **mount** fragment. cast with an open circle and a pierced expansion. Cu alloy. L: 35 mm; open circle D: 14 mm. Ctx 3440, Pit 3493, SF 136, Tenement 237, Phase HMED.

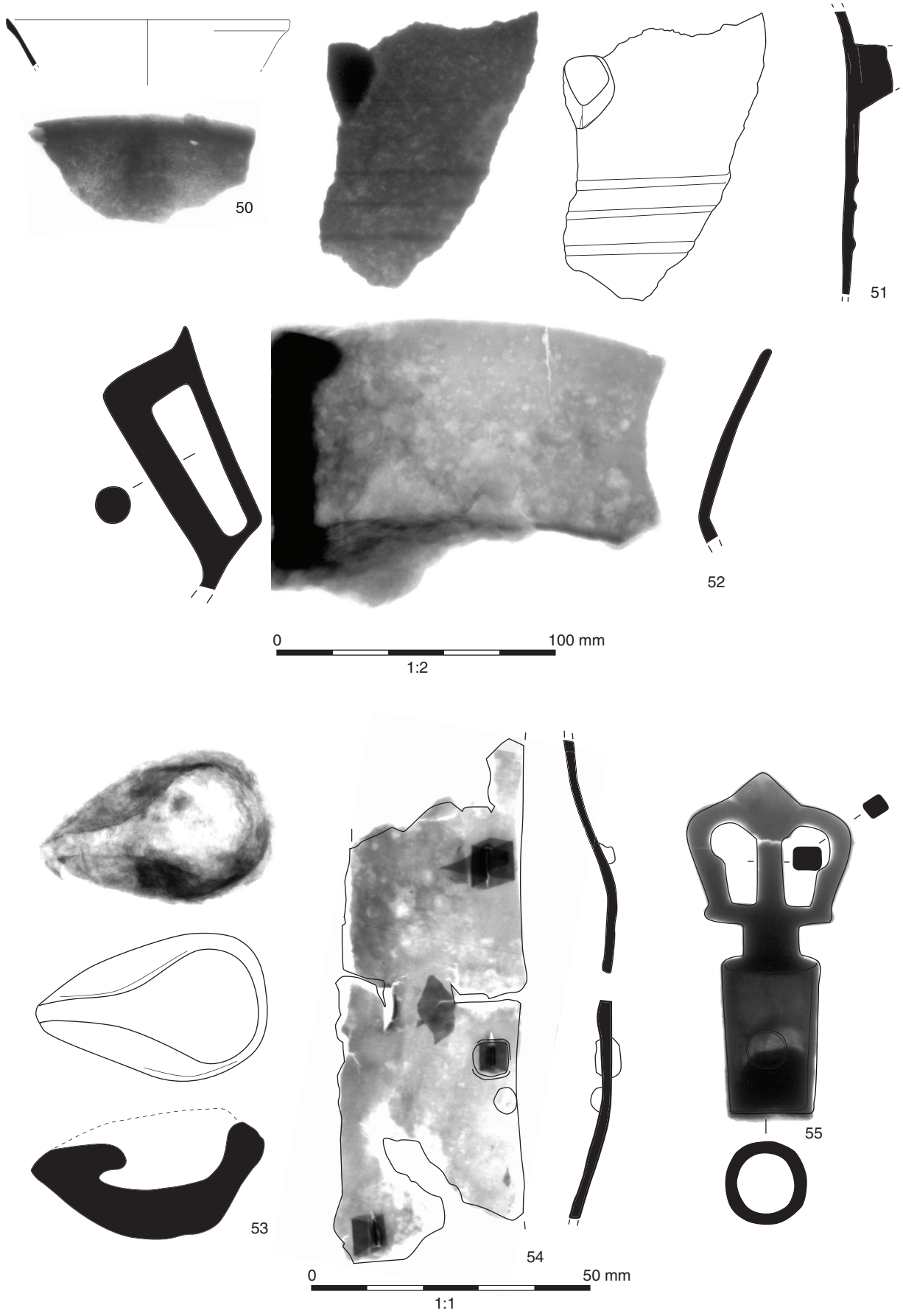

Fig. 5.28 Metalwork (Nos 50-55)

Fig. 5.29 Metalwork (No. 56)

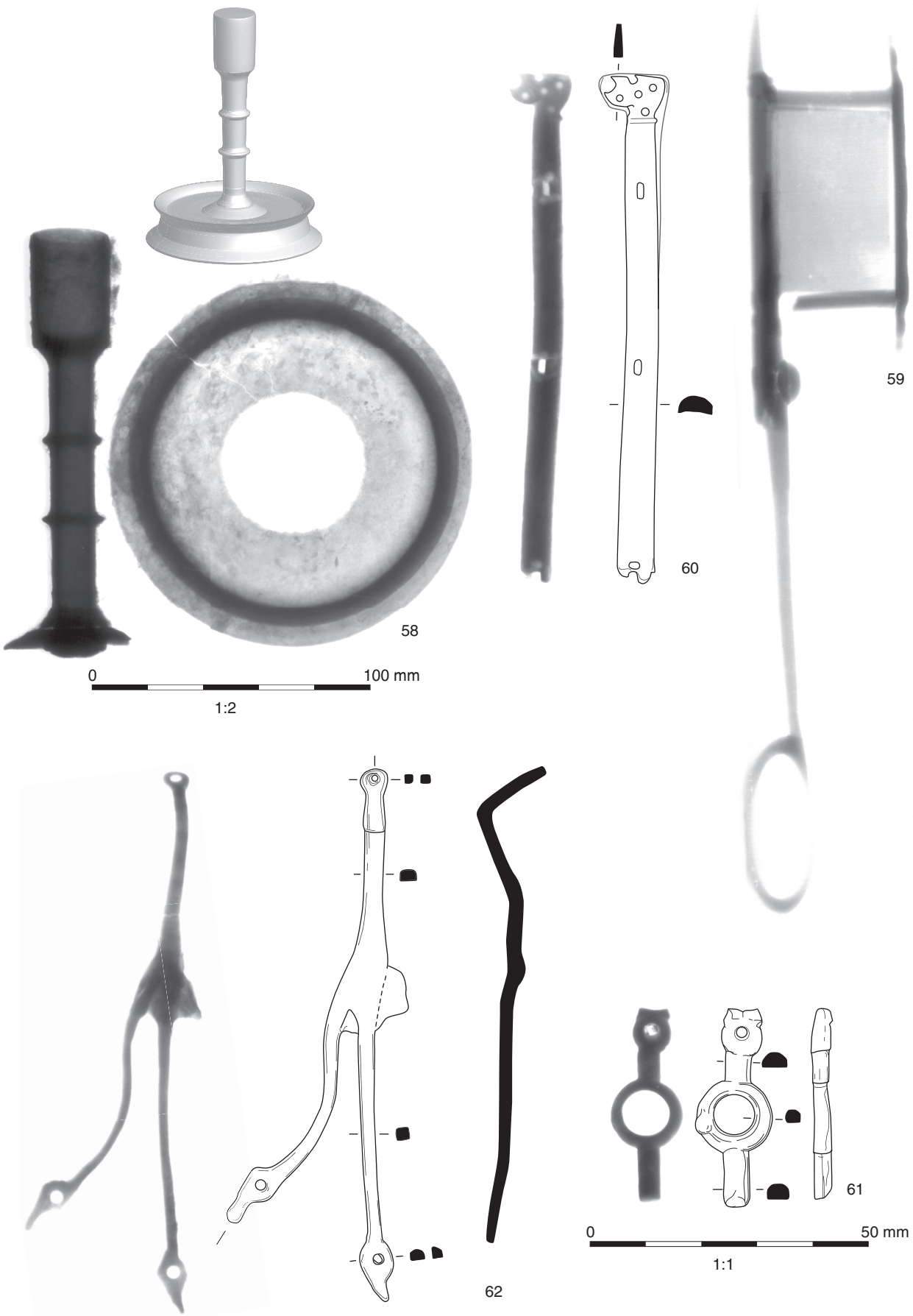

Fig. 5.30 Metalwork (Nos 58-62)

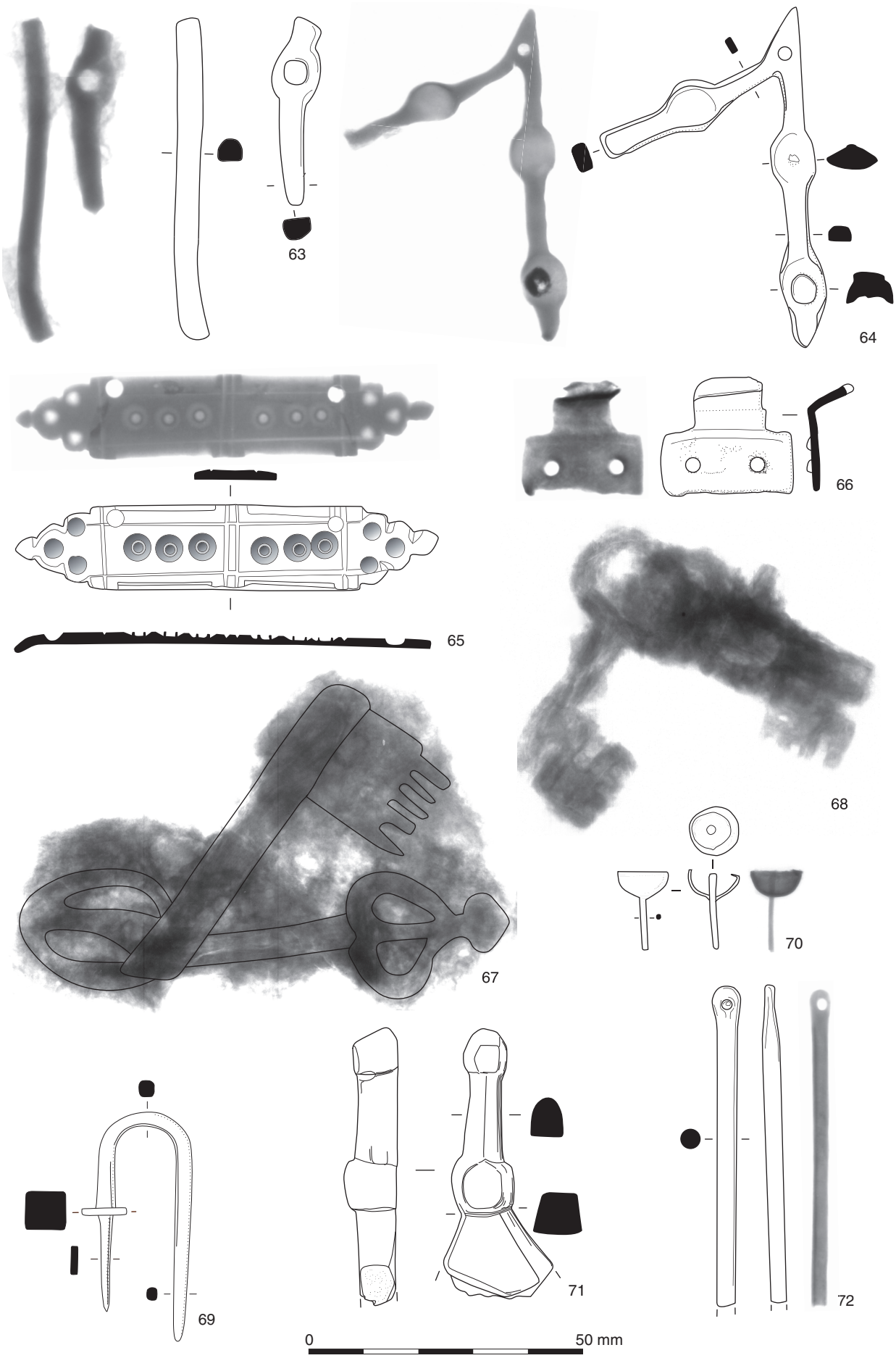

Fig. 5.31 Metalwork (Nos 63-72)

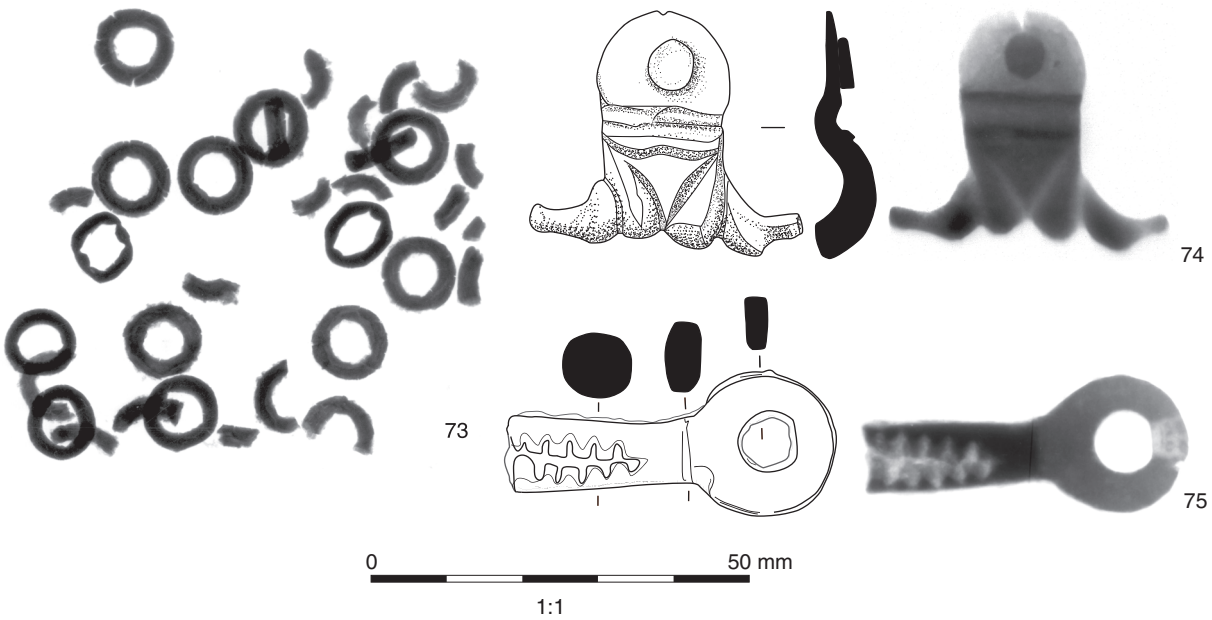

Fig. 5.32 Metalwork (Nos 73-75)

62. Decorative **binding** or **mount**. Cast Y-shaped fragment with at least three pierced expansions. Originally a fourth arm, now missing. Two of the arms terminate in pierced expansions and points. The third arm ends in a pierced expansion. Cu alloy. L: 97 mm. Ctx 4315, Pit 4401, SF 178, Tenement 237, Phase HMED.
63. Decorative **binding** or **mount**. Two cast fragments. Single pierced expansion. 2 fragments. Cu alloy. L: 89 mm. Ctx 4164, layer, SF 179, Tenement 238, Phase HMED.
64. Decorative **binding** or **mount**. V-shape fragment of cast binding with fixing hole at the junction of the two arms. One arm has a single flattened circular expansion and is broken at the end. The other arm has a flattened circular expansion and second pierced expansion with a terminal point. Cu alloy. L: 62 mm; W: 42 mm. Ctx 3413, demolition layer, Tenement 237, Phase PMED.

Other household fragments (Fig. 5.31)

65. Elongated decorated **plate**. Possibly for a box or casket. Looks like a dummy hinge. Cu alloy. L: 77 mm; W: 15 mm. Ctx 5010, Pit 5180, SF 70, Tenement 180, Phase PMED.
66. Possible **hinge plate** comprising rectangular plate with 2 nail holes. At the centre of one long side is a strip extending at right angles. This is broken and appears to have been curved originally perhaps as part of the hinge itself? Fe. L: 21 mm, W: 24 mm. Ctx 3370, SF 139, Tenement 237, Phase LMED.

Security

67. **Pair of keys** for rotary locks on a ring. Very heavily encrusted. On the radiograph the two keys appear to have the same shape bit. Fe. Key L: 50 mm, 47 mm; bow W: 22 mm, 22 mm. Ctx 6647, pit 6855, Tenement 170, Phase PMED.
68. **Key** fragment. Key encrusted with possible chain links. Stem and large bit visible on radiograph. Fe. L: 70 mm; W: 31 mm. Ctx 3172, pit 3169, Tenement 237, Phase PMED.
69. Barb spring **padlock bolt**. U-shaped bolt from a small padlock. Cu alloy. L: 38 mm. Ctx 1018, Pit 1020, SF 56, Tenement 173, Phase HMED.

Structural fittings and nails

The number of structural fittings is not large, but includes some 150 clench nails and roves. Clench nails and roves are used in clinker construction to fasten together the overlapping strakes of the vessel; their concentration in Tenement 172 in the high medieval phase is significant.

Uncertain identity (Figs 5.31-2)

The following pieces cannot be positively identified. The large number of other pieces that cannot be certainly identified is in part due to the poor preservation of much of the assemblage.

70. Small domed **object** comprising hemispherical dome, pierced at its apex with pin hole. Thin wire of pin passes through the hole. The dome is thin. Cu alloy. L: 15 mm; W: 9 mm. Ctx 3283, Pit 3303, SF 115, Tenement 237, Phase AN.
71. **Cast object**. Possibly a terminal. The broader end is broken. The other end has a round moulding with neck and the further round terminal moulding. Flat on one face, moulded on other face. Leaded bronze? Function uncertain. Cu alloy. L 49 mm; W: 20 mm. Ctx 5170, Pit 5166, SF 86, Tenement 180, Phase HMED.
72. Possible **pendant** with almost circular dished body – no visible decoration – and a ?pierced lug for suspension extending from one edge. Function uncertain. Cu alloy. L: 31 mm; W: 21 mm. Context 3337, SF 130, Tenement 237, Phase HMED.
73. Small **rings**. 13 complete rings; 6 half rings; 13 smaller fragments. At least 20 rings and possibly as

many as 32 rings represented. Suitable size for mail. Material of rings is uncertain. Not cu alloy? D: 9-10mm. Ctx 1357, Pit 1361, SF 102, Tenement 174, Phase LMED.

74. Cast decorative **fitting**, broadly T-shaped with two thin short arms, and a body pierced for attachment perhaps to a strap. Cu alloy. L: 33 mm; W: 37mm. Ctx 794, Post hole 793, SF 37, Tenement 172, Phase PMED.
75. **Ferrule** or **terminal** comprising tapering socket/stem, which appears to be threaded internally, and to end in a pierced flat circular terminal. Cu alloy. L: 43mm; terminal D: 18mm. Ctx 1284, Pit 1280, SF 90, Tenement 174, Phase PMED.

METALWORKING WASTE *by Lynne Keys*

Distribution

A small- to medium-sized assemblage of metal-working waste (almost 18 kg) was retrieved by hand and by soil sampling during excavation. The late Saxon material was focused in Property H (in the area of later Tenements 169 – 173). Here, pit 210 contained two smithing hearth bottoms and a small quantity of undiagnostic slag, while pit 105 contained four smithing hearth bottoms, some undiagnostic slag and vitrified hearth lining. Pit 287 yielded part of a possible smithing hearth bottom.

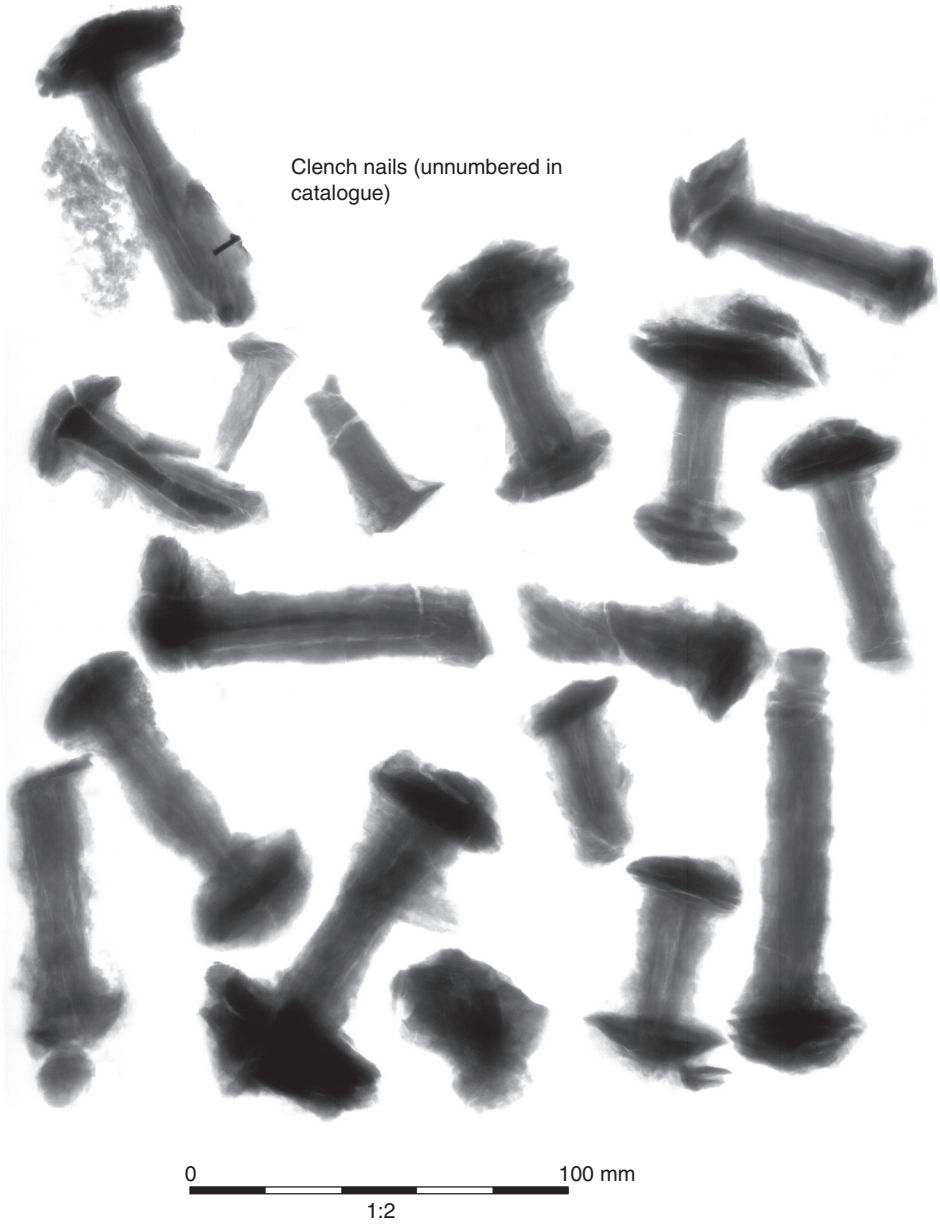

Fig. 5.33 Metalwork, clench nails

Two crucible fragments also came from Property H (see Brown, above).

Pits in Anglo-Norman Properties 2 and 4 (Tenements 237 and 239) also contained slag: a small amount in pit 4614 (a smithing hearth bottom) and a larger quantity in pits 7256, 7423 and 7425 (a total of three smithing hearth bottoms, undiagnostic slag and some cinder). Anglo-Norman pit 7242 at Property 10 (later Tenement 172) contained small quantities of undiagnostic slag, cinder and fuel ash slag.

Of the medieval and later properties, Tenement 173 produced five smithing hearth bottoms and small amounts of undiagnostic iron slag. Small quantities of slag recovered from post-medieval deposits may well be re-deposited earlier material. Pit 3188 in Tenement 237 contained two normal-shaped smithing hearth bottoms, a rather elongated example and a small amount of undiagnostic slag which may have been in the area during that period; in the same property, tank 3549 also contained undiagnostic slag.

Discussion

The entire slag assemblage, based on the diagnostic slag types present, was produced by smithing: hot working, using a hammer, of one or more pieces of iron to create or repair an object. No hammerscale was found. The slag type described as 'smithing hearth bottom' is a plano-convex shaped slag formed as a result of high temperature reactions between the iron, iron-scale and silica from either a clay furnace lining or the silica flux used by the smith. The iron silicate material from this reaction dripped down into the hearth base forming slag which, if not cleared out, developed into the smithing hearth bottom. Before it could grow large enough to block the tuyere hole (where the air from a bellows entered the hearth) the smithing hearth bottom was removed and dumped in the nearest pit, ditch or unused area. The tenements with most smithing hearth bottoms were Tenement 173 (six examples), Tenement 172 (five examples), Tenements 237 and 239 (three examples each). It seems highly likely that most of the smithing hearth bottoms are re-deposited from elsewhere but if any smithing, such as repair of horseshoes or some other small-scale activity, did take place on site it was a one-off or very occasional activity which left very little trace.

GLASS (Figs 5.34-5.41) *by Hugh Willmott*

Introduction

A very substantial assemblage of glass (2073 fragments from 191 contexts) was recovered from the excavations in the French Quarter and, although it is often highly fragmented, it is the most important assemblage of its kind to have been excavated in the last decade. Historically Southampton has produced the finest collections of late medieval and early post-medieval vessel glass outside of London. The late Robert Charleston's analysis of the glass recovered from excavations undertaken in the town between 1953-69 still remains one of the key reference works on glass of this period (Charleston 1975), and the excavations in the French Quarter compliment and extend this report. It is interesting to note that many of the groups encountered mirror those from earlier excavations, and for the later medieval period it is clear that Southampton had its own distinct patterns of glass consumption. As a result of the size of the assemblage, and the high degree of fragmentation in some layers, not every piece of glass is discussed in this report. Instead the material is discussed by tenement area either concentrating on specific groups from well-defined contexts or occasional vessels of exceptional quality. Additional illustrations are available in the downloadable report (Specialist Download F8).

Tenement 167

Very little glass of interest came from contexts within this tenement, perhaps confirming its status as a cottage as indicated by the Terrier of 1454. The only fragments of note come from two vessels that are near contemporaneous with this register (Nos 1-2) and both are portions of bases from fine soda-rich pedestal flasks or *Inghistera* that date to the late 15th or early 16th centuries. These are typical Italian products and similar undecorated examples with a closed base-ring similar to No. 1 have been found in Southampton at the National Provincial Bank and Quilter's vault sites, while a flask with an open base-ring similar to No. 2 was found at Wacher's Site E12 (Charleston 1975, 218-9).

Tenement 172

This tenement contained only one significant group of glass, dating to the 18th century, although a number of important individual vessels were found that are earlier in a variety of different contexts. These include tablewares, the simplest of which (No. 3) is a small tapering tumbler. Entirely plain and very thinly blown, this simple vessel is nonetheless of very high quality and is probably of similar late 13th- to 14th-century date to a more complete example found at Cuckoo Lane A, Southampton (Charleston 1975, 216 no 1484), although this form continued in use into the 15th century.

A considerably rarer item is the edge of a millefiori vessel (No. 4). Although it has the initial appearance of a beaker or goblet rim, it is more probably the edge of a lid as it has an applied external trail that would have acted as the rest. The vessel has a colourless ground and is decorated with marvered millefiori beads as well as optic-blown ribbing. There are also small flecks of gold surviving both internally and externally suggesting that the edge was originally gilded. Millefiori glass

is a very unusual find and there is no exact parallel for this lid in England. The rim of a goblet or beaker was found at the National Provincial Bank site in Southampton (Charleston 1975, 218 no 1523), although this has a pale blue and not a colourless ground to the marvered beads. Likewise the only other published finds of millefiori glass, a bowl from Post Office Court, London (Tyson 2000, 11 no 243) and an otherwise undiagnostic body fragment from Whitefriars, Coventry (Willmott 2005, 322 no 4), also have a blue ground. The examples from the National Provincial Bank site and London are dated to the late 15th century, and the Coventry fragment the early 16th century, making it probable that this new example dates to a very similar period.

Another vessel without precise parallel is a small fragment of rim from a bowl (No. 5). The rim is unusual as it is formed by folding-out the glass to produce a tubular edge. The bowl is decorated with at least one surviving fine trail and there are a few small patches of surviving opaque white enamel visible, but this is far too degraded to determine what decorative scheme was used. The nearest parallel for this vessel is a bowl found in pit B4 Quilter's Vault, Southampton (Charleston 1975, 218 no 1526). The final tableware from this tenement is a single fragment of folded base from a 16th-century pedestal goblet, although insufficient remains to tell if it was a plain or decorated example.

Two late medieval potash-rich vessels also came from this tenement. No. 6 is the plain sheared rim and tapering body from a cucurbit, or receiver, from a distillation apparatus. Although not particularly common, similar cucurbits have been found in 15th-century contexts at Selborne Priory (Moorhouse 1972, 100-1, nos 13-15) and Sandal Castle (Moorhouse 1983, 225 Nos 12-14). A fragment of the stub base from a hanging lamp of 13th to 15th-century type is of a form usually associated with ecclesiastical sites, but occasionally also high status domestic dwellings.

Pit 228 contained an important range of post-medieval glass, which without exception dates to the first half of the 18th century. However, the clay pipes found in association with the glass indicate that the pit was filled at the end of that century. Given this slight disparity in dates, it would appear that the glass was quite old when discarded, and might represent some household or other clearance.

A number of high quality tablewares were recovered, and these include three wineglasses. The first is a complete bowl (No. 7), which is waisted and would originally have had a solid rod stem, similar to a more complete examples from Portsmouth (Fox & Barton 1986, 228 no1), or Poole (Charleston 1992, 141 no 65). Although dating to *c* 1720-40, this example appears to be made in a soda glass, although it is possible it does contain some lead oxide as well. The other two wineglasses (Nos 8 and 9) are made in a lead glass and are both elongated stems from glasses that originally had trumpet-shaped bowls, a type typical for the period 1720-50 and not infrequent finds in urban contexts, such at Plymouth (Charleston 1986, 51 no 22) or Poole (Charleston 1992, 141 no 76). Another drinking vessel made in a good quality lead glass is a small fragment of tumbler, decorated with a wheel engraved foliage pattern (No. 10). Dating to the mid-18th century, this is nearly identical in design to a more complete example (No. 24) found in pit 3635 within Tenement 176, and although it is unlikely this is from exactly the same vessel both are discussed in detail below. The final tableware from this pit is a portion of kick and lower body from a pedestal bowl made in a high-quality lead glass. The fragment is relatively undiagnostic, and given its form this could date to the late 17th century, although an early 18th-century date is more likely.

The most numerous type of find from this context was the phial. Phials first appeared in the latter half of the 17th century, but became increasing common in the 18th century. All of the French Quarter examples date to this period, and two types can be differentiated in the assemblage. The first are fragments from a minimum of four different broad cylindrical examples (including Nos 11 and 12). These are made from a green-tinted mixed alkali glass and have a diameter that is typically no less than a third of their total height, and are a phial that was most popular in the first half of the 18th century. The second type, the narrow cylindrical phial, is represented by three examples (including Nos 13 and 14), and these typically have a diameter that is no more than a quarter of their overall height. This second variety was longer-lived, and popular throughout the 18th century. Both types are common finds on 18th-century sites and often in large numbers, such as the cellar fill of the Old Hall at Temple Balsall (Gooder 1984, 221-5).

The remaining vessels are all bottles. The most unusual of these (No. 15) is a complete light green spherical bottle that probably functioned as a more capacious phial, rather than for comestible products, and similar examples have been found alongside phials at a pit in Tunsgate, Guildford (Fryer & Shelley 1997, 200, nos 14-15). The other bottles are all more common types associated with drinks. No. 16 is the base, and upper portion from a bottle with a prominent shoulder, a type often known to have contained Piermont mineral water during the first half of the 18th century, although in the absence of the characteristic seal that is usually present (eg Charleston 1987, 248, nos 63-4), this cannot be said for certain. Of similar date are two squat 'bladder' shaped wine bottles, while two others are squat cylindrical wine bottles that date to around the middle of the 18th century. The final glass from this pit is a small amount of plain window glass, which is surprisingly absent from many contexts across the whole site. One piece has a distinctive edge demonstrating that it was made by the cylinder, and not the crown method, which is entirely consistent with its 18th-century date.

Tenement 173

This tenement produced few pieces of interesting glass, and these were not concentrated in any particular context. However, three medieval vessels are worthy of note. The first (No. 17) is a portion of upper flaring base, decorated with optic-blown ribbing, from a tall rod-stemmed goblet with a finned bowl. This 14th-century form is well-known from a number of sites including two from High Street C in Southampton (Charleston 1975, 218-9, nos 1512 & 1514) although the most complete found to date comes from Ludgershall Castle (Wilson & Hurst 1970, 117 & plate xiii). The two other vessels from this tenement are more utilitarian, and both made in potash-rich glass. No. 18 is a slightly everted rim from a large hanging lamp, and another fragment is the basal push-in from a globular flask. Both of these vessels can be broadly dated to the 13th and 15th centuries.

Tenement 174

Again this tenement contained little glass of note, with the exception of one rare vessel (No. 19) – this is a small colourless hemispherical bowl, with an applied pinched base-ring and decorated with a fine blue thread trails. Only one other example has been thus far identified, although it is much less complete, and probably not coincidentally this was found in feature 29 at Cuckoo Lane, Southampton (Charleston 1975, 218 no 1520). It is also possible that a rim decorated with a blue horizontal trail found at the College of the Vicars Choral, York is also of this type, although it is too fragmentary to determine this for certain (Tyson 2002, 2818 no 13533). Although this vessel apparently came from a post-medieval pit, it is 13th or more probably 14th-century in date and must be a residual find in this context.

Tenement 176

Pit 3635 contained a significant group of early to mid 18th-century glass. Although the clay pipes suggested there might be slight variations in the deposition dates of the various fills, the glass all belongs to the same period, and is therefore discussed together. One find (No. 20) is clearly residual. It is the lower portion of a domed goblet lid decorated with twisted opaque white *vetro a retorti*. Goblet lids are much less common than the vessels they were intended to cover, and only really occur in any numbers during the first half of the 16th century, after which they apparently fell out of favour (Willmott 2002, 75).

Other drinking vessels are contemporaneous with the filling of the pit. No. 21 is the upper base, drawn stem and lower bowl from a plain wine glass, while Nos 22 and 23 are similar, but with round, almost completely solid ball knops in the stem. Both types are made in a heavy lead glass and date to the period *c* 1720-50 when such tablewares were becoming increasingly common on the tables of the emerging middle classes. The remaining item of tableware is rather more unusual (No. 24). Made in a thick lead glass it is decorated with both circular polished facets and abraded wheel engraving, together forming a floral and foliate pattern. It is similar to another fragment (No. 10) from Tenement 172, and both are executed with extreme care, making them very high quality pieces without exact archaeological parallel, although a broadly similar if smaller example was found in Plymouth (Charleston 1986, 52 no 49). Difficult to date precisely due to their simple shape, they are broadly contemporaneous with the wine glasses. The other vessels are all typical 18th-century containers; No. 25 is a cylindrical phial, Nos 26-28 onion or bladder shaped examples, with one unillustrated example being a near-complete example of the former and No. 27 the latter.

The final pieces of glass from this pit (No. 29) come from a mirror. Mirrors were made by casting sheets of good-quality colourless glass on a flat surface, before polishing both surfaces smooth. The back of the mirror was then 'silvered' with an amalgam of tin and mercury, although as with No. 29 this hardly ever survives. Mirrors are rarely recognised archaeologically, usually being confused with window glass, although by the 18th century they were increasingly common, if costly, household items.

Tenement 237

This tenement contained the greatest concentration of glass compared with all other areas excavated, which is hardly surprising given the archaeological complexity and historical importance of this plot. Furthermore, the glass reflects very well the changing occupants of the site during the medieval and post-medieval periods.

While most of the glass from this tenement comes from well-defined contexts, there are two occasional finds that are also worthy of note. The first (No. 30) is the rim and upper body from a vessel that appears to be a small bowl made in light opaque blue glass, a very unusual colour. Archaeologically this vessel is without parallel, but a few late 15th-century vessels are known to have been produced in this shade, such as a complete Venetian goblet now in the British Museum which is also decorated with enamelling and gilding (Tait 1991, 160 no 203), although there is no indication that the example from Southampton was similarly adorned. The other miscellaneous fragments from this tenement are portions of a base and neck from a large late medieval potash-rich flask (No. 31).

Pit 3582 contained a significant quantity of glass that all dates from the 14th to the mid 15th century. Given this, it probably derives from the period when the site was either occupied by Burgess John Polymond or perhaps more probably the Italian

merchant Christophorus de Vernagis. There are fragments of two or three identical drinking vessels (Nos 32 and 33). They are very thinly blown plain tumblers with tapering sides and kicked bases, and very similar in appearance to four other examples found on the nearby sites at Cuckoo Lane A and High Street C (Charleston 1975, 216-7, nos 1484, 1499-1501). Such beakers were popular in Italy during the 14th and 15th centuries, when they are known as *moioli* and used as wine glasses, as attested by their not infrequent appearance in paintings of the period (Charleston 1984, 43-4). Another tableware from this pit was a hemispherical bowl (No. 34), with a simple pushed-in base and no other apparent decoration. The colour and consistency of its metal suggests that this is 15th century in date, yet bowls of this period almost always have some form of decorative element added.

One other vessel is made in what seems to be a clear soda-rich glass is an imported urinal, identifiable from its everted rim and characteristic convex base with an external pontil mark (No. 35). Almost all urinals found in England are made in a domestically produced potash-rich glass (see pit 3485 below), but a rare exception is a base from Swan Lane, London (Keys 1998, 253-4, no. 778). Urinals were commonly used during this period so that the urine could be inspected for colour and consistency and thus aid in the identification of illnesses and disease. It has been suggested that imported soda glass urinals would not normally have been used in England due to the ready availability of cheaper domestically produced ones, and that any found might represent the personal possession of a foreign visitor (Tyson 2000, 154); an interesting suggestion given the context of this example.

The remaining vessels from this pit (Nos 36-39) are all globular flask or bottles dating to the 14th or 15th centuries and made in a green potash-rich glass. Two (Nos 36 and 39) are decorated with very faint optic-blown roundels or lozenges, while the remainder are plain.

Pit 3485 contained a number of vessels that date to between the 13th and 15th centuries, and it appears that deposition probably took place towards the end of this date range. Only one is made in a good quality soda-rich glass (No. 40). This is a relatively small plain Italian flask, similar to an example from pit 4b at the National Provincial Bank site, Southampton (Charleston 1975, 218 no 1531). A second vessel from the French Quarter pit (No. 41) is made in a green-tinted mixed alkali glass and is decorated with a single surviving applied pointed prunt. Sometimes know as a *Krautstrunk*, this beaker is of north German origin and similar to a fragment found at Wacher's Site B1 in Southampton (Charleston 1975, 221 no 1544) although a more complete example was recovered at Trig Lane, London (Keys 1998, 231 no 672).

The remaining glass is made in the more utilitarian potash metal. There is a base from a plain globular flask and also present are three convex bases from typical English urinals (eg No 42). Unlike their soda counterparts they are quite green in colour; their walls were extremely thinly blown so as not to obscure the colour of the urine. The final fragment of glass in this pit was a single piece of plain window quarry.

Cess pit 3169 contained a large group of glass that is all of very similar date, *c* 1500-50. Present are both good-quality tablewares and more utilitarian storage vessels. The most significant of these vessels is a small cylindrical beaker or tumbler (No. 43), the most complete example of this type thus far found archaeologically. It is lavishly decorated with optic-blown ribbing, gilding and polychrome enamelling, and strongly resembles less complete examples found at Gateway House, London (Tyson 2000, 98, no g177) and Christchurch, Dorset (Charleston 1983, 74, no 2), although both these examples have gilt associated with the enamelled band, which is absent on the Southampton example. Despite this difference all three are in other respects very similar in form, and date to the first decades of the 16th century.

Other tablewares include fragments from at least five different pedestal goblets, glass formed from a single paraison or bubble of glass, and two of these are decorated with opaque white thread trailing around their upper bowls (Nos 44 and 45). This is a form popular in Northern France and the Low Countries during the first half of the 16th century where they were produced, as well as being found in reasonable numbers on high status sites in Southern England, such as at Camber Castle (Cropper 2001, 285, nos 5-9). Other varieties of pedestal goblet are present in the assemblage. No. 46 is probably an Italian import, being made in a much better quality metal and decorated with mould-blown vertical ribs, and is identical to a complete example found at St Michael's House, Southampton (Willmott 2002, 69 fig.77). Likewise No. 47 is the base of a good quality plain pedestal goblet, but being fragmented it is not possible to tell if it was decorated further. The final pedestal beaker (No. 48) is made in a poor quality mixed alkali glass with a distinctive green tint. It is decorated with two bands of horizontal trails and an applied raspberry prunt, a feature typical of Low Country manufacture.

A similar form, but less constricted at the waist, to the pedestal goblet is the pedestal beaker, and a number of decorative designs are represented. No. 49 is the rim and upper body from a plain one, as is the base (No. 51). Two are decorated with optic-blown designs: No. 50 with wrythen ribbing and another example with a mesh or lozenge design. All four pedestal beakers are made in green mixed alkali glass, and are typical vessels found from the mid 16th century onwards (Willmott 2002, 45-6). Two further tablewares were found. No. 52 is a fairly complete example of a cylindrical beaker with rigaree base-ring and decorated with optic-blown mesh design, while the other is a possible small jug

or cruet, although it is too fragmentary for more positive identification.

Given a depositional date in the mid 16th century, it is not unsurprising that the only containers present are flasks, and all are made in a potash-rich glass. The most common are simple and globular shaped, and there are fragments from up to twelve different examples (such as Nos 53-58). This shape first became popular in the 13th century, but all the examples found in this pit are almost certainly late 15th or early 16th century in date. Most are plain, although No. 54 is decorated with heavy wrythen ribbing and No. 55 has a distinctive slightly in-turned rim that is only found on later examples, and given the distinctive yellow tint to the glass it might well be a North European import.

Two other types of flask are present, albeit in smaller quantities. Nos 59 and 60 are flasks, which are clearly oval in cross-section. No. 59 is a neck decorated with a heavy wrythen ribbing, while No. 60 is plain base. Oval flasks seem to date exclusively to the first half of the 16th century and particularly well-dated examples were recovered from the wreck of the *Mary Rose* which sank in 1545. The other variety is a potash-rich pedestal flask with a folded foot, but one that differs from the imported Italian *Inghistera* by having a lower foot as well as being made in a poorer quality glass. At least three examples of this type of flask of varying sizes were found in this pit (Nos 61-62) and in profile resemble a more complete example from Exeter (Charleston 1984b, 270, no 81).

The final fragment of glass from this feature is an object rather than a vessel (No. 63) being part of a solid rod handle from a sleek, or smoothing, stone. These objects were solid discs of glass and are traditionally thought to have been used for smoothing cloth, although other materials such as parchment or even paper are also more than likely.

While many of the clay pipes found in a number of fills within tank 3549 have a consistent date range of *c* 1660-80 (Higgins, below) the glass is much more diverse, and the majority is earlier in date, perhaps indicating that it was quite old when discarded. Given this, it might be associated with the household of Matthew Vibert (see Chapter 2). The earliest pieces (Nos 64 and 65) are the upper bowl and foot from one or more late 16th- or early 17th-century goblets. These are made in a high quality soda-rich glass, and while they may be domestic products, they might also be Italian imports, although in the absence of more distinctive stem fragments this is impossible to tell for certain. No. 66 is certainly an early to mid 17th-century import from the Low Countries, and produced in either Antwerp or Amsterdam. It is a very characteristic clear glass tumbler, decorated with optic-blown teardrops, and with applied opaque white raspberry prunt feet. This is not an infrequent find on English sites, particularly those on the south and eastern coasts, such as several similar examples from Poole (Charleston 1992, 139, nos 49-53). A further early to mid 17th-century tableware found in the tank is a common domestically produced pedestal beaker decorated with wrythen ribbing.

Other vessels are perhaps slightly later, dating more towards the 1620-40s. No. 67 is the base and cylindrical body from a small waisted bottle decorated with gentle wrythen ribbing, while No. 68 is the neck of a similar bottle. Both are made in a slightly better quality mixed alkali glass, and are similar to examples known to have been produced at Sir William Clavell's glasshouse at Kimmeridge, Dorset between 1618-23 (Crossley 1987, 361 nos 68-74). A further container is very fragmented and therefore less diagnostic, but it appears to be the body from the lower side of a flask. The remaining containers dating to this period are common cylindrical jars. No. 70 is the near complete profile from a plain example, while there is also is a smaller fragment of base and lower body.

No. 69 is a single fragment of glass that is distinctly different from others in this context, being the solid bun foot and lower tapering side from an early jelly glass. Dating to the very late 17th or, more probably, early 18th century, this vessel is made in a good quality lead glass. By the early 18th-century jelly glasses were becoming one of the most advertised forms of table glass, yet archaeologically they are not numerous. However, this example is very similar to one found in an inn clearance assemblage from Uxbridge (Pearce 2000, 165, no 61).

Pit 4146 is the last feature to contain glass within Tenement 237. The clay pipes suggest a very specific dating for the fill of this pit, from 1726 to 1758, and a number of the glasses (where they are typologically distinct) confirm this narrow range. This is the period when the tenement was the home of the Watts family, before being sold to Matthew Woodford in 1737. Unfortunately it is not possible to determine whether the glass belongs specifically to either the Watts or Woodford family. Nonetheless it is an interesting domestic assemblage.

Three tablewares are present. No. 71 is a plain drawn-stem wine glass with a tapering bowl (see Nos 8 and 9), while No. 72 has a waisted bowl (see No. 7). A fragment of base was also found, which might have come from either of these glasses, or an entirely different one. These two diagnostic stems are typical for the period 1720-50, and are made in a good quality heavy lead glass.

Four similar narrow cylindrical phials made in a light green mixed alkali glass were found (including Nos 73-74), and two of these are complete. Also made in mixed alkali glasses are four other small bottles that are more unusual. No. 75 is a complete pear-shaped example, made in an olive glass, typical of the larger wine bottles of the period. No. 76 is a larger light green spherical bottle, of the type that probably held medicines and other household liquids (see No. 15 above). More unusual is a cylindrical bottle (No. 77). This is made in a pale glass and has a very simple sheared rim, markedly different to those more commonly found on bottles,

which are either folded or have an applied trail to give added strength. The function and origin of this vessel is uncertain, but the weakness of the rim suggests it never had a permanent stopper. The final bottle (No. 78) is one that is very common on early colonial sites in the New World but rarely identified in England, exceptions being from the cellar fill of the Old Hall, Temple Balsall (Gooder 1984, 233 no 75) and at Poole (Charleston 1992, 145 no 184). When fragmented it appears superficially as a wine bottle, being made of the same dark green metal, but it has a short neck and much wider rim. These have been found in mid 18th-century colonial contexts containing the remains of preserved fruits and other solid foodstuffs, and it is likely that they functioned in the same way in England (eg Noël Hume 1969, 41).

The remaining glass from this feature is much more typical of the period. There are fragments of a near-complete mallet-shaped wine bottle of earlier 18th-century date, as well as a slightly later squat cylindrical type that dates to around the middle of the century (No. 79). The final fragments are eleven pieces of plain green-tinted widow glass.

Tenement 240

Only a single fragment of glass of any interest was found in this tenement. It is the upper neck from a late 15th or early 16th-century soda-rich pedestal flask or *Inghistera* (No. 80). This example is slightly heavier than usual but is decorated with prominent tight wrythen ribbing.

Overburden

Two vessels were recovered from contexts that were from the disturbed overburden covering the site, and cannot be assigned to any particular tenement. However, despite this they are still of sufficient interest and rarity to merit comment here. The first (No. 81) is a very unusual vessel and without exact parallel in Northern Europe. It is a portion of shoulder and lower neck from a spherical flask formed from a double gather of glass and decorated with optic-blown wrythen ribbing. In this respect it closely resembles a fragmentary flask found at Wool House, Southampton (Charleston 1975, 219, no. 1521), and a more complete 14th- or 15th-century example found in Nuremberg (Baumgartner & Krueger 1988, 326, no 391). However, this new example is made in a light purple glass, a colour more normally associated with Islamic traditions of glassmaking, as is the use of the double gather on larger vessels. Whatever the origins of No. 81, it is thus far unique.

A further very rare piece of glass is a good quality soda glass pedestal beaker (No. 82). This vessel is decorated with highly detailed enamelling which unfortunately is significantly weathered (washing out the colours), although their general pattern can still be faintly discerned. Below the rim is an inscription banded above and below with dots, while below is a single surviving portrait bust of a man wearing a beret. This style of enamel work, and in particular the inclusion of a portrait bust is typical of French glasses of the first half of the 16th century (eg Barrelet 1953, 73 & plate XL). Archaeological finds of these glasses in England are rare, but interestingly fragments of at least four were found in Poole (Charleston 1992, 137 nos 5-7), although these only had bands of enamelled inscriptions with no further surviving designs.

Catalogue of illustrated glass (Figs 5.34-5.41)

Fig. 5.34

1. Five joining fragments of closed folded base with a very pointed kick from a **pedestal flask**. Decorated with mould-blown ribbing. Clear soda-rich glass with light weathering. Base diameter 81 mm. Late 15th-early 16th century. Ctx 7638. Pit 7652. Tenement 167. Phase LMED.
2. A fragment of open folded base with a low pointed kick from a **pedestal flask**. Clear soda-rich glass with little weathering. Base diameter 57 mm. Late 15th-early 16th century. Ctx 7659. Pit 7660. Tenement 167. Phase LMED.
3. Five fragments of plain rim and slightly tapering side from a plain squat **beaker** or **tumbler**. Clear soda-rich glass with virtually no weathering. Rim diameter 68 mm. Late 13th-14th century. Ctx 250. Pit 249 Tenement 172. Phase LMED.
4. A fragment of lower edge from a domed **goblet lid** with an applied thick trail, functioning as a rest. Millefiori decorated, using small whole beads marvered into the surface, and then decorated with optic-blown vertical ribs. Both on the inner and outer surface of the edge are very small flecks of gilding surviving. Clear soda glass with no weathering. Rim diameter approx 80 mm. Late 15th-early 16th century. Ctx 335. Pit 346. Tenement 172. Phase LMED.
5. A fragment of folded tubular rim from a **bowl**. Decorated with a colourless trail and the faint remains of opaque white enamelling. Clear soda-rich glass with little weathering. Rim diameter 120 mm. Early-mid 16th century. Ctx 295. Pit 300. Tenement 172. Phase PMED.
6. Six fragments of plain vertical rim and upper body from a **cucurbit**. Green potash-rich glass with very heavy weathering. Rim diameter 50 mm. 15th century. Ctx 6573. Pit 6553. Tenement 172. Phase LMED.
7. A fragment of everted rim and waisted bowl from a baluster stemmed **wineglass**. Clear soda-rich? glass with little weathering. Rim diameter 66 mm. *c* 1720-40. Ctx 218. Pit 228. Tenement 172. Phase MOD.
8. A fragment of drawn stem, with elongated tear, from a trumpet-shaped **wineglass**. Clear lead glass with virtually no weathering. *c* 1720-50. Ctx 218. Pit 228. Tenement 172. Phase MOD.
9. A fragment of drawn stem, with elongated tear, from a trumpet-shaped **wineglass**. Clear lead glass with virtually no weathering. *c* 1720-50. Ctx 218. Pit 228. Tenement 172. Phase MOD.
10. A fragment of lower **goblet bowl** decorated with a facet-cut trefoil and wheel-engraved foliage. Clear

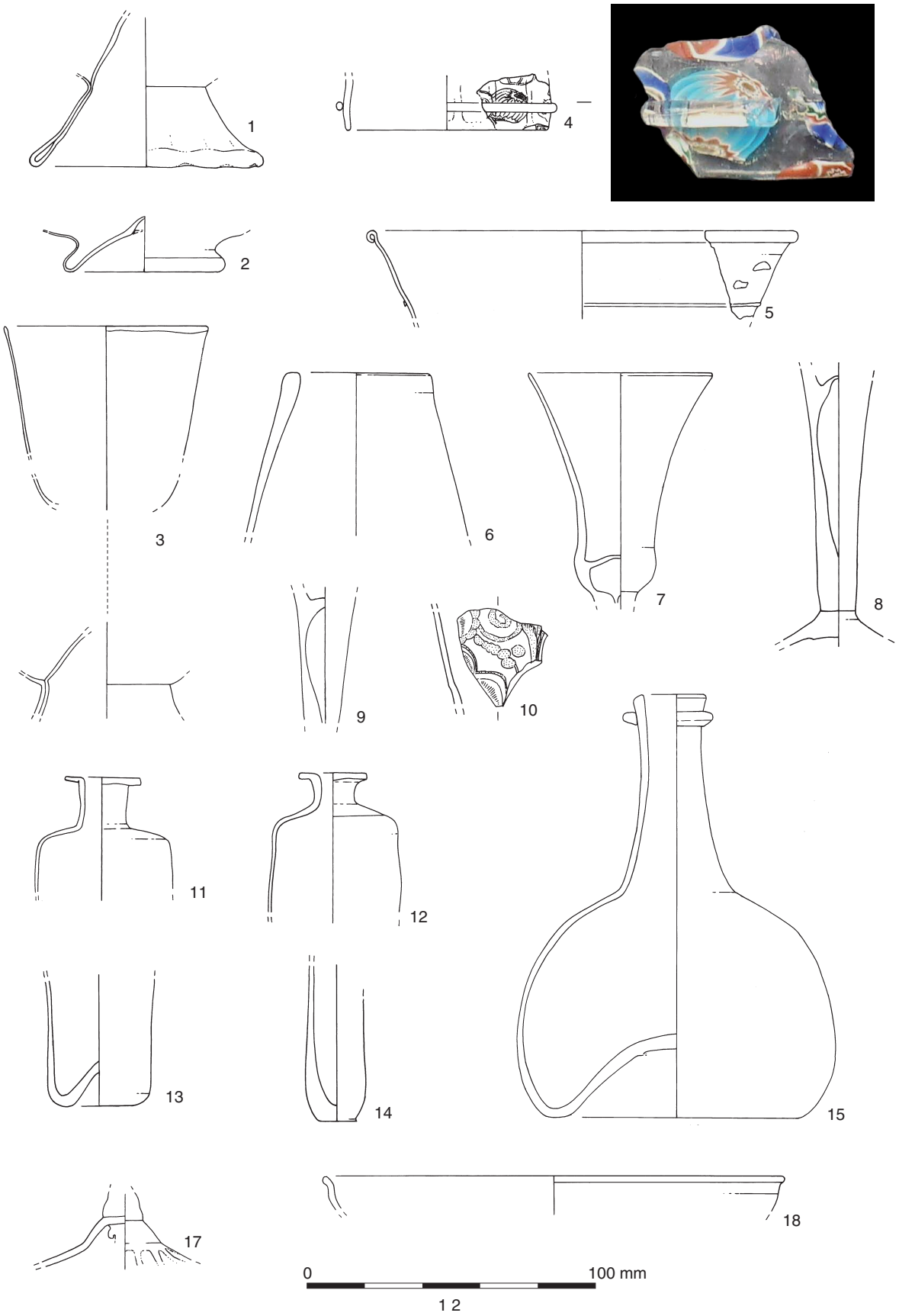

Fig. 5.34 Glass vessels (Nos 1-15, 17-18)

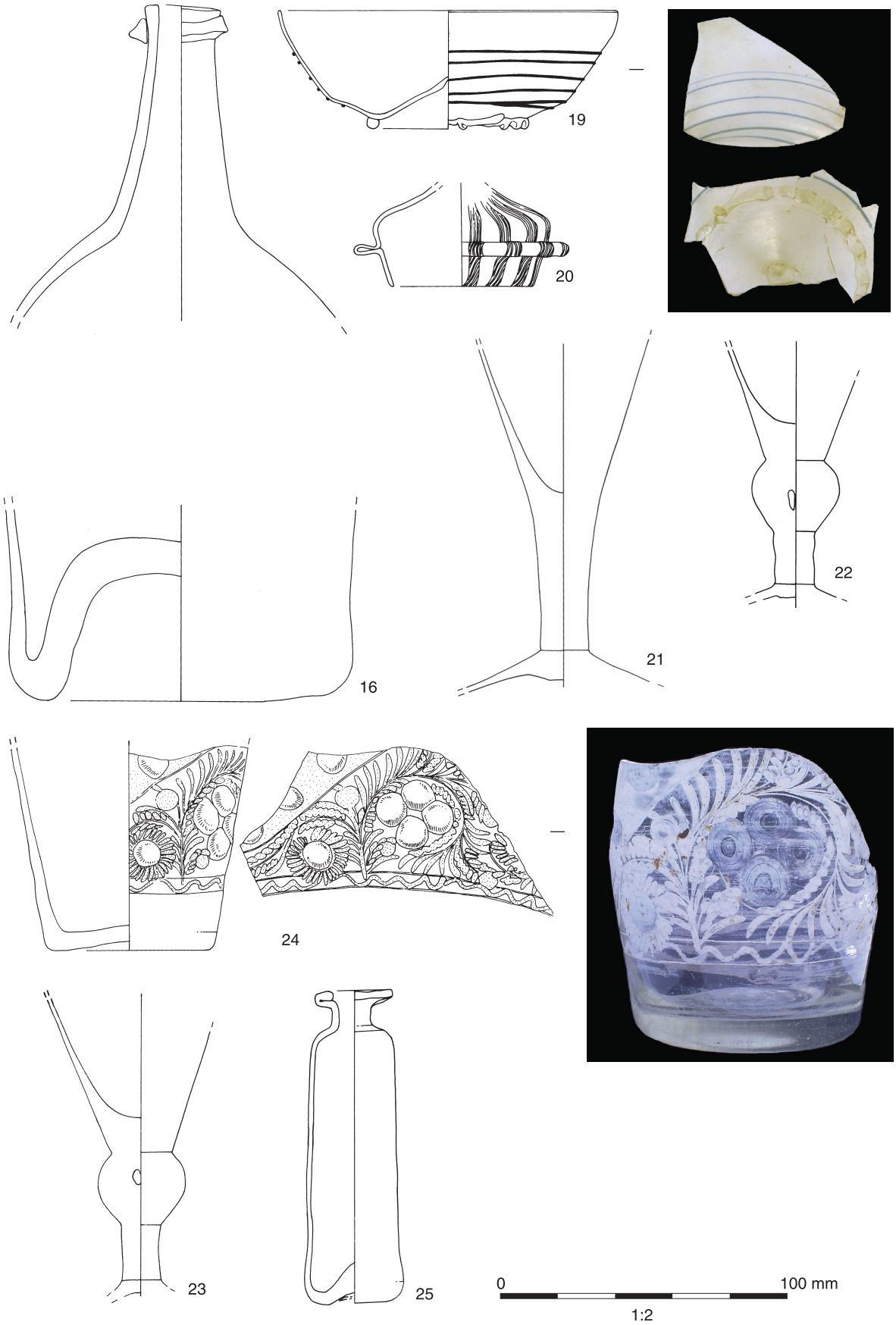

Fig. 5.35 Glass vessels (Nos 16, 19-25)

lead glass with light weathering. Mid 18th century. Same vessel as No. 24? Ctx 218. Pit 228. Tenement 172. Phase MOD.

11. A fragment of everted rim, short neck, and squared shoulder from a broad cylindrical **phial**. Green tinted mixed alkali glass with light weathering. Rim diameter 25 mm. First half 18th century. Ctx 218. Pit 228. Tenement 172. Phase MOD.
12. A fragment of everted rim, short neck, and squared shoulder from a broad cylindrical **phial**. Green tinted mixed alkali glass with light weathering. Rim diameter 23 mm. First half 18th century. Ctx 218. Pit 228. Tenement 172. Phase MOD
13. A fragment of pushed-in base with a small pointed kick and lower body from a narrow cylindrical **phial**. Green tinted mixed alkali glass with light weathering. Base diameter 24 mm. 18th century. Ctx 218. Pit 228. Tenement 172. Phase MOD.
14. A fragment from convex base, possibly from a narrow **phial**, with an external pontil mark. Green tinted mixed alkali glass with light weathering. 18th century. Ctx 218. Pit 228. Tenement 172. Phase MOD.
15. A complete rim, neck, globular body and pushed-in base from a spherical **bottle**. Green tinted mixed alkali glass with some weathering. Rim diameter 23mm, base diameter 80mm, height 146 mm. First half of the 18th century. Ctx 218. Pit 228. Tenement 172. Phase MOD.
16. Fig. 5.35. Two fragments of tapering neck, shoulder and pushed-in base from a possible **mineral water bottle**. Green mixed alkali glass with medium weathering. Rim diameter 24 mm, base diameter 110 mm. First half of the 18th century. Ctx 218. Pit 228. Tenement 172. Phase MOD.
17. A fragment of upper flaring base from a solid, rod-stemmed **goblet** with a large distinctive pontil mark. Base decorated with optic-blown vertical ribbing. Green potash-rich glass, with very heavy weathering. 14th century. Ctx 633. Pit 632. Tenement 173. Phase HMED.
18. A fragment of vertical rim with rounded edge from a **lamp**. Green potash-rich glass with very heavy weathering. Rim diameter approx. 150 mm. 13th-15th century. Ctx 786. Pit 632. Tenement 173. Phase HMED.

Fig.5.35

19. Eleven joining fragments of slightly everted rim, convex side and pushed-in base with a pointed kick from a small hemispherical **bowl**. The base has an applied, solid, pinched base-ring, and the body is decorated with fine mid-blue spiral trailing. Clear soda-rich glass with little weathering. Rim diameter 124 mm, base diameter 56 mm, height 43 mm. 14th century. Ctx 1192. Pit 1194. Tenement 173. Phase LMED.
20. A fragment of edge, folded rest and dome from a **goblet lid**. Decorated with marvered canes of opaque white *vetro a retorti*. Clear soda glass with very little weathering. Edge diameter 45 mm. First half of the 16th century. Ctx 3647. Pit 3635. Tenement 176. Phase PMED.
21. A fragment of upper base, solid drawn stem, and lower trumpet-shaped bowl from a **wineglass**. Clear lead glass with little weathering. *c* 1720-50. Ctx 3647. Pit 3635. Tenement 176. Phase PMED
22. A fragment of solid ball knop stem and lower trumpet-shaped bowl from a **wineglass**. Clear lead glass with light weathering. *c* 1720-50. Ctx 3647. Pit 3635. Tenement 176. Phase PMED.
23. A fragment of solid ball knop stem and lower trumpet-shaped bowl from a **wineglass**. Clear lead glass with light weathering. *c* 1720-50. Ctx 3647. Pit 3635. Tenement 176. Phase PMED.
24. A fragment of solid flat base with polished pontil mark and tapering body from a **tumbler**. Decorated with facet-cut roundels and wheel-engraved foliage design. Clear lead glass with little weathering. Base diameter 56 mm. Mid 18th century. Same vessel as No. 10? Ctx 3647. Pit 3635. Tenement 176. Phase PMED.
25. A complete narrow cylindrical **phial**. Green tinted mixed alkali glass with light weathering. Base diameter 24mm, rim diameter 25 mm, height 108 mm. 18th century. Ctx 3647. Pit 3635. Tenement 176. Phase PMED.

Fig. 5.36

26. A fragment of rim, neck and body from an onion-shaped **wine bottle**. Green mixed alkali glass with heavy weathering. Rim diameter 26 mm. Early-mid 18th century. Ctx 3646. Pit 3635. Tenement 176. Phase PMED.
27. A complete bladder-shaped **wine bottle**. Green mixed alkali glass with little weathering. Base diameter 120 mm, rim diameter 24 mm, height 134 mm. Early-mid 18th century. Ctx 3647. Pit 3635. Tenement 176. Phase PMED.
28. Two fragments of rim, neck, body and base from a bladder-shaped **wine bottle**. Green mixed alkali glass with little weathering. Base diameter 122 mm, rim diameter 24 mm. Early-mid 18th century. Ctx 3647. Pit 3635. Tenement 176. Phase PMED.
29. Two joining fragments of fine cast and polished **mirror glass plate**. Clear colourless glass with light weathering. Early-mid 18th century? Surviving maximum dimensions 92 x 52 mm. Ctx 3647. Pit 3635. Tenement 176. Phase PMED.
30. Four fragments of slightly everted rim and convex side probably from a small hemispherical **bowl**. Opaque light blue glass with little weathering. Rim diameter approx. 110 mm. Late 15th century? Ctx 3189. Pit 3188. Tenement 237. Phase PMED.
31. Thirty-seven fragments of everted rim, neck and basal push-in from a globular **flask**. Decorated with optic-blown wrythen ribbing on the neck. Green potash-rich glass, nearly totally devitrified. Rim diameter uncertain. 13th-15th century. Ctx 3133. Pit 3130. Tenement 237. Phase LMED.

Fig. 5.37

32. Fourteen fragments of rim, slightly tapering side and simple base with a low push-in from a plain **tumbler**. Clear soda-rich glass with light weathering. Rim diameter 80 mm, base diameter 65 mm. 14th-early 15th century. Ctx 3643. Pit 3582. Tenement 237. Phase LMED.
33. Fourteen fragments of rim, slightly tapering side and simple base with a low push-in from one, or may be two different, plain **tumblers**. Clear soda-rich glass with light weathering. Rim diameter 76 mm, base diameter 62 mm. 14th-early 15th century. Ctx 3643. Pit 3582. Tenement 237. Phase LMED.
34. Ten fragments of slightly everted rim, convex side and simple pushed-in base from a plain hemispher-

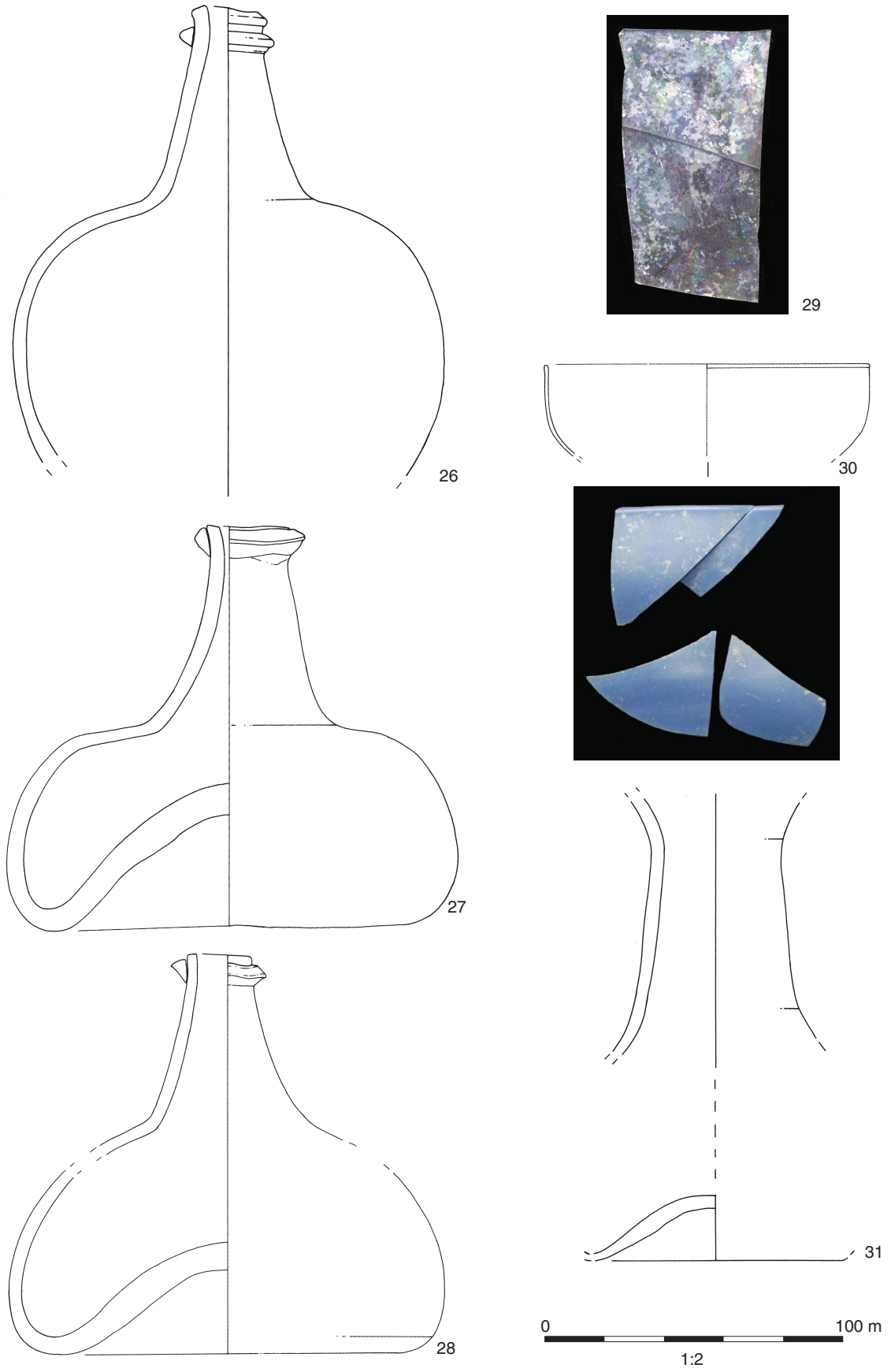

Fig. 5.36 Glass vessels (Nos 26-31)

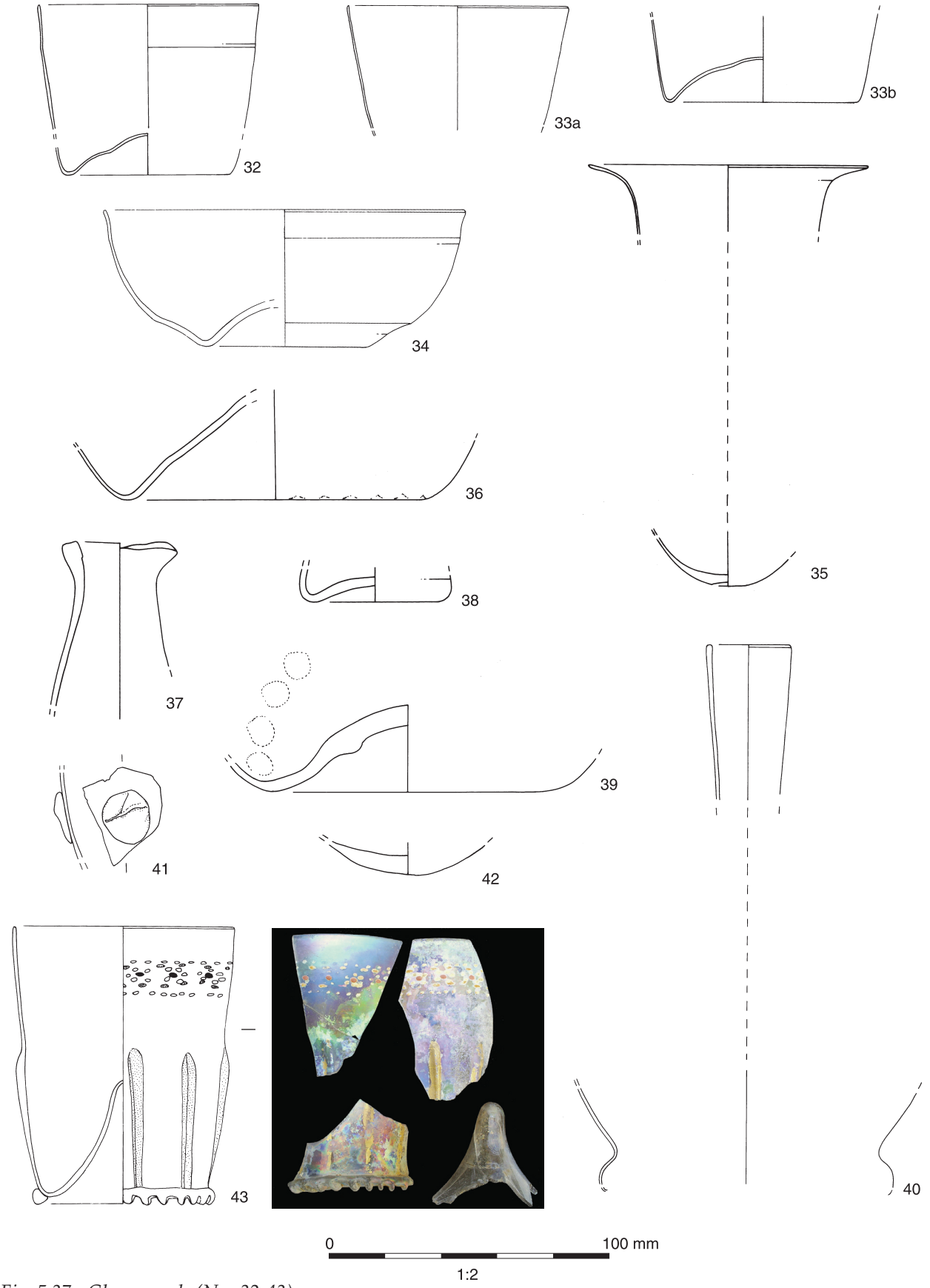

Fig. 5.37 Glass vessels (Nos 32-43)

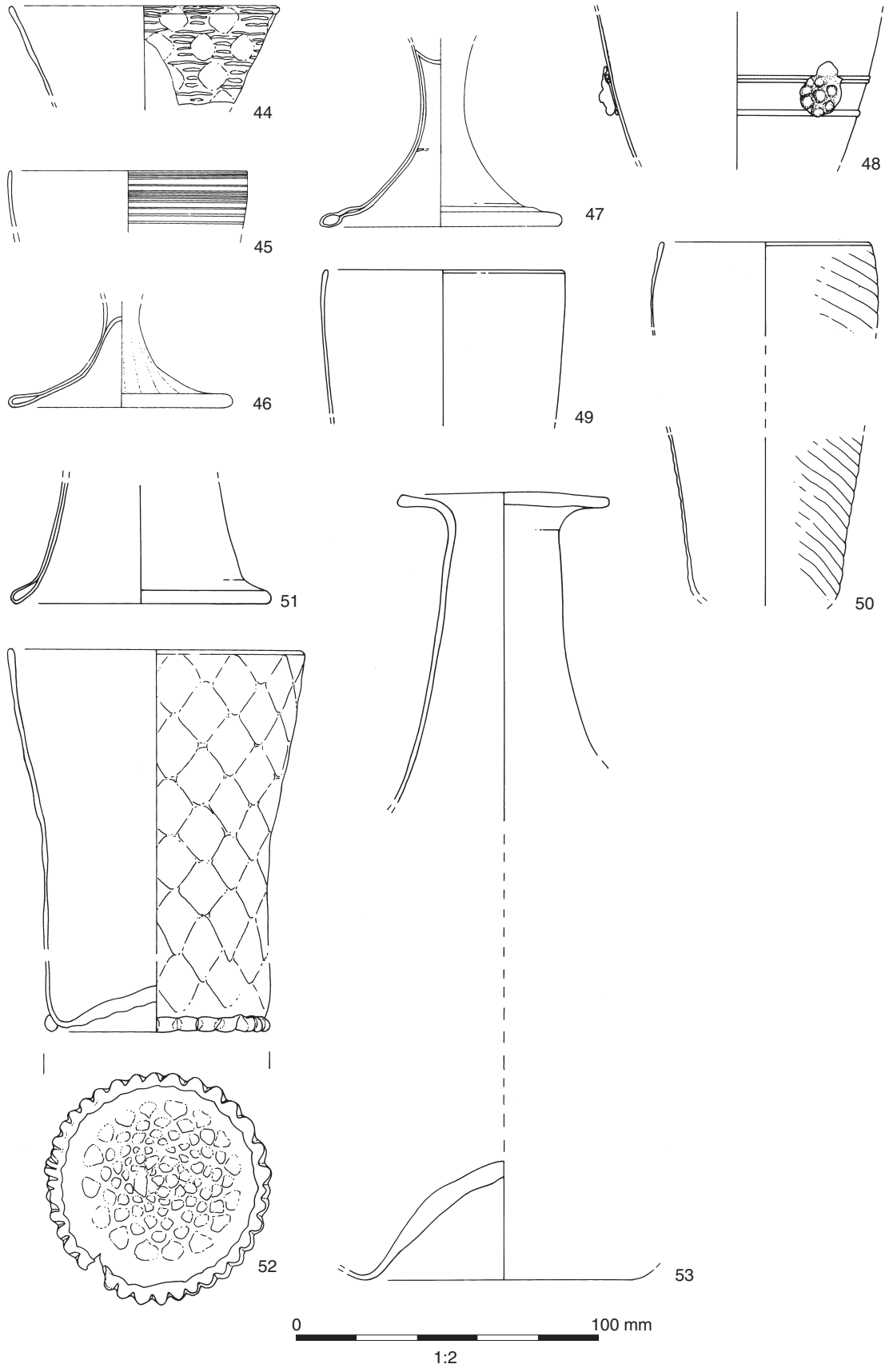

Fig. 5.38 Glass vessels (Nos 44-53)

ical **bowl**. Green tinted mixed alkali glass, with light weathering. Rim diameter 130 mm, Base diameter 65 mm, height 46 mm. 14th-15th century. Ctxs 3657 & 3643. Pit 3582. Tenement 237. Phase LMED.

35. Two fragments of everted rim and wide neck, and a convex base with an external pontil mark from a **urinal**. Clear soda glass with light weathering. Rim diameter 102 mm. 14th-15th century. Ctx 3643. Pit 3582. Tenement 237. Phase LMED.
36. Eleven fragments of pushed-in base with a high kick and convex body from a globular **flask**. Decorated with optic-blown lozenges. Green tinted mixed alkali glass with light weathering. Base diameter approx. 100 mm. 14th century? Ctxs 3643 & 3657. Pit 3582. Tenement 237. Phase LMED.
37. A fragment of everted rim and upper neck from a plain globular **flask**. Green tinted mixed alkali glass with light weathering. Rim diameter 35 mm. 14th-15th century. Ctx 3657. Pit 3582. Tenement 237. Phase LMED.
38. A fragment of base with a very low kick from a small **flask** or **bottle**. Green potash-rich glass which has suffered severe devitrification. Base diameter 46 mm. 14th-15th century. Ctx 3643. Pit 3582. Tenement 237. Phase LMED.
39. A fragment of base with a domed kick from a plain globular **flask**. Decorated with very faint optic-blown lozenges. Green potash-rich glass which has suffered severe devitrification. Base diameter 100 mm. 14th-15th century. Ctx 3643. Pit 3582. Tenement 237. Phase LMED.
40. Thirteen fragments of vertical rim, globular body and open folded base from a pedestal **flask**. Clear soda-rich glass with little weathering. Base diameter uncertain. Late 15th-early 16th century. Ctxs 3487 & 3488. Pit 3485. Tenement 237. Phase LMED.
41. A fragment of vertical body and one surviving applied prunt from a ***Krautstrunk*** or prunted **beaker**. Green clear mixed alkali glass with some weathering. Late 15th century. Ctx 3487. Pit 3485. Tenement 237. Phase LMED.
42. A fragment of thick convex base, with external pontil mark, from a **urinal**. Green potash- rich glass that is nearly completely devitrified. 13th-15th century. Ctx 3488. Pit 3485. Tenement 237. Phase LMED.
43. Five joining fragments of pushed-in base with high pointed kick and an applied pinched base-ring, slightly tapering body and vertical rim from a small cylindrical **beaker** or **tumbler**. Decorated on its lower half with optic-blown vertical ribs, with applied gilt on each rib. On the upper body is a running band of enamelled rosettes formed from a central dark red dot surrounded by yellow and white dots, but above and below by horizontal lines of white dots. Clear soda-rich glass with light weathering. Base diameter 60 mm, rim diameter 79 mm, height 99 mm. Early 16th century. Ctxs 3168 & 3172. Pit 3169. Tenement 237. Phase PMED.

Fig. 5.38

44. Two fragments of everted rim and bowl from a **pedestal goblet**. Decorated with fine opaque white trails, cut by an optic-blown mesh pattern. Clear soda-rich glass with medium weathering. Rim diameter 90 mm. Early 16th century. Ctx 3172. Pit 3169. Tenement 237. Phase PMED.
45. A fragment of everted rim from a **pedestal goblet**. Decorated with fine opaque white spiral trails. Clear soda-rich glass with quite heavy weathering. Rim diameter approx. 90 mm. Early 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
46. Two joining fragments of folded base and narrow stem from a **pedestal goblet**. Decorated with optic-blown vertical ribbing. Clear soda-rich glass with light weathering. Base diameter 74 mm. Early 16th century. Ctx 3172. Pit 3169. Tenement 237. Phase PMED.
47. Two fragments of folded base and narrow stem from a **pedestal goblet**. Clear soda-rich glass with quite heavy weathering. Base diameter 80 mm. Early 16th century. Ctx 3163. Pit 3169. Tenement 237. Phase PMED.
48. Four joining fragments of rim and tapering body from a **pedestal goblet**. Decorated with two prominent horizontal trains and an applied raspberry prunt. Green-tinted mixed alkali glass. Early 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
49. Two fragments of rim from a **pedestal beaker**. Decorated with optic-blown vertical ribs. Green-tinted mixed alkali glass with medium weathering. Rim diameter approx. 80 mm. Early 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
50. Two fragments of rim and body from a **pedestal beaker**. Decorated with optic-blown wrythen ribs. Green-tinted mixed alkali glass, with little weathering. Rim diameter approx. 60 mm. Early 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
51. A fragment of base from a **pedestal beaker**. Green-tinted mixed alkali glass, with medium weathering. Base diameter 82 mm. Early 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
52. Five fragments of vertical rim, slightly tapering body and pushed-in base with a rigaree base-ring from a cylindrical **beaker**. Decorated with optic-blown mesh design. Green-tinted mixed alkali glass. Rim diameter 96 mm, Base diameter 64 mm. First half of the 16th century. Ctxs 3163 & 3167. Pit 3169. Tenement 237. Phase PMED.
53. Two fragments of everted rim, tapered neck and pushed-in base from a globular **flask**. Green potash-rich glass with heavy weathering. Rim diameter 70 mm, base diameter 92 mm. Late 15th-early 16th century. Ctx 3172. Pit 3169. Tenement 237. Phase PMED.

Fig. 5.39

54. Four fragments of everted rim, tapered neck and pushed-in base from a globular **flask**. Decorated with optic-blown wrythen ribbing. Green potash-rich glass with heavy weathering. Rim diameter 52 mm, base diameter 112 mm. Late 15th-early 16th century. Ctx 3172. Pit 3169. Tenement 237. Phase PMED.
55. Two fragments of vertical slightly in-turned rim, tapered neck and pushed-in base from a globular **flask**. Yellow-tinted potash-rich glass with light weathering. Rim diameter 30 mm, base diameter 90 mm. Late 15th-early 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
56. A fragment of everted rim and tapering neck from a **flask**. Green potash-rich glass with little weathering. Rim diameter 38 mm. Late 15th-early 16th century. Ctx 3163. Pit 3169. Tenement 237. Phase PMED.

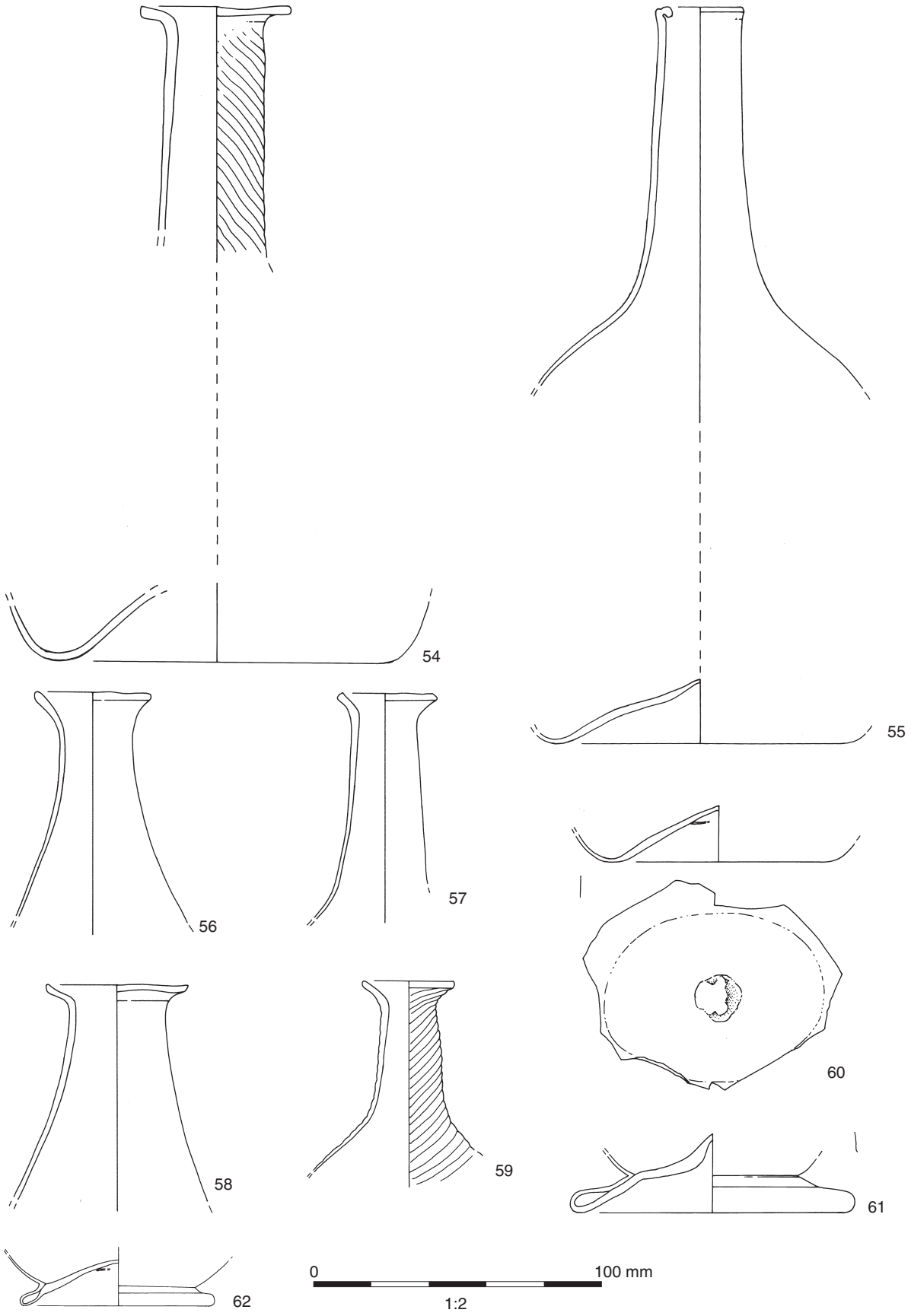

Fig. 5.39 Glass vessels (Nos 54-62)

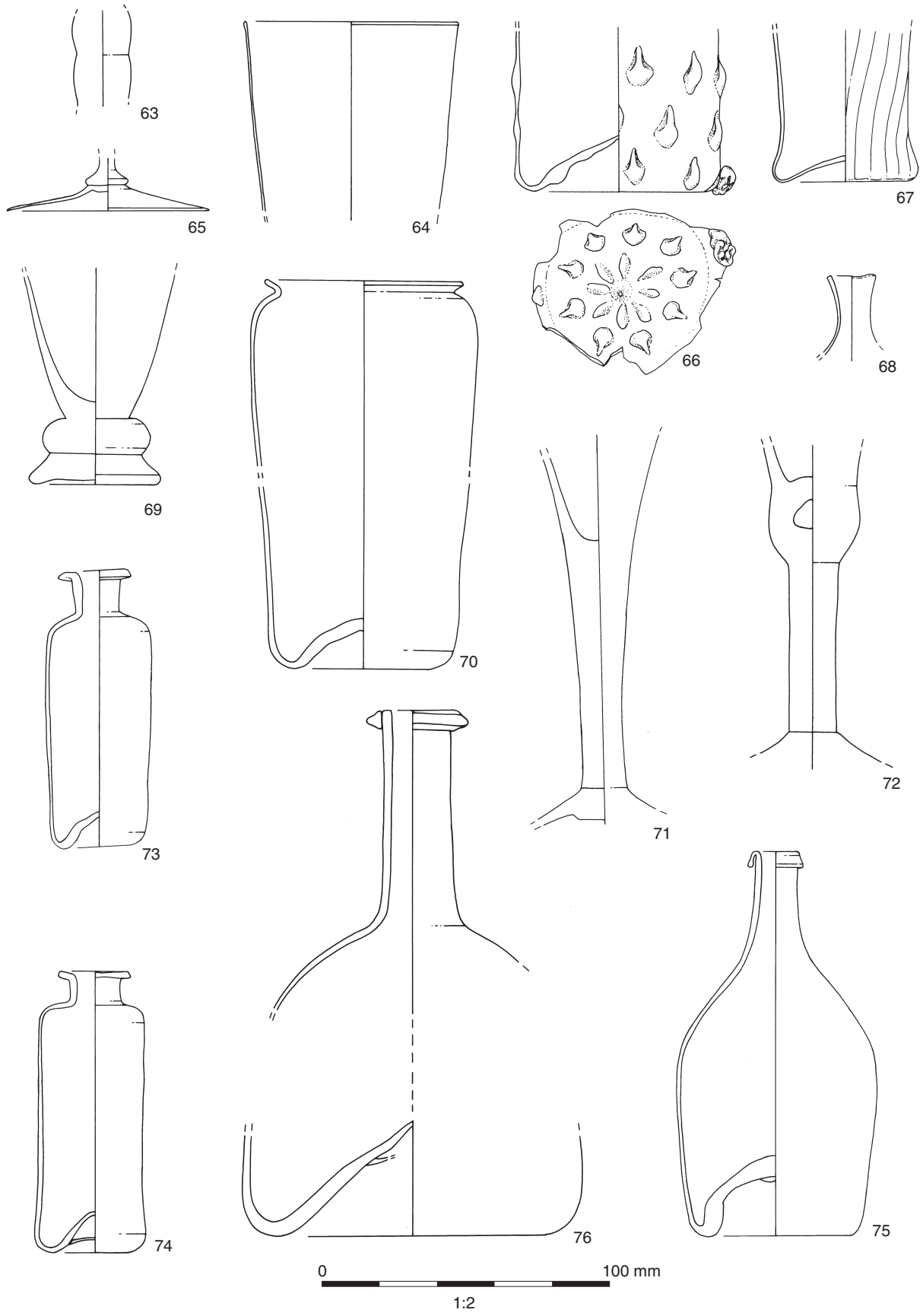

Fig. 5.40 Glass vessels (Nos 63-76)

57. A fragment of everted rim and tapering neck from a **flask**. Green potash-rich glass with little weathering. Rim diameter 32 mm. Late 15th-early 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
58. Two joining fragments of everted rim and tapering neck from a **flask**. Green potash-rich glass with medium weathering. Rim diameter 47 mm. Late 15th-early 16th century. Ctx 3163. Pit 3169. Tenement 237. Phase PMED.
59. A fragment of rim and neck from a small oval **flask**. Decorated with tight optic-blown wrythen ribbing. Green potash-rich glass, with little weathering. Rim diameter 31 mm. Early 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
60. Two joining fragments of pushed-in base from a small oval **flask**. Green potash-rich glass, with little weathering. Base diameter 80x65 mm. Early 16th century. Ctx 3168. Pit 3169. Tenement 237. Phase PMED.
61. Two joining fragments of folded base from a pedestal **flask**. Green potash-rich glass with medium weathering. Base diameter 92 mm. Early 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
62. A fragment of folded base from a pedestal **flask**. Green potash-rich glass with medium weathering. Base diameter 65 mm. Early 16th century. Ctx 3168. Pit 3169. Tenement 237. Phase PMED.

Fig. 5.40

63. A fragment of solid broadly-ribbed handle from a **sleek stone**. Green potash-rich glass with some weathering. First half of the 16th century. Ctx 3167. Pit 3169. Tenement 237. Phase PMED.
64. Four fragments of rim and tapering bowl from a **goblet**. Clear soda-rich glass with light weathering. Rim diameter 73 mm. Late 16th-first half of the 17th century. Ctx 3656. Tank 3549. Tenement 237. Phase PMED.
65. A fragment of fine flaring base and merese from a **goblet**. Clear soda-rich glass with little weathering. Base diameter 70 mm. Late 16th-first half of the 17th century. Ctx 3656. Tank 3549. Tenement 237. Phase PMED.
66. Six fragments of pushed-in base and lower side from a **tumbler**. Decorated with optic-blown teardrop bosses and an applied opaque white rosette prunt foot. Clear soda-rich glass with light weathering. Base diameter 58 mm. First half of the 17th century. Ctx 3642. Tank 3549. Tenement 237. Phase PMED.
67. A fragment of low pushed-in base and waisted body from a small **bottle**. Decorated with optic-blown wrythen ribbing. Green-tinted mixed alkali glass with quite heavy weathering. Base diameter 47 mm. Early-mid 17th century. Ctx 3641. Tank 3549. Tenement 237. Phase PMED.
68. A fragment of short neck and slight rim from a small **bottle**. Green-tinted mixed alkali glass with quite heavy weathering. Rim diameter 17 mm. Early-mid 17th century. Ctx 3656. Tank 3549. Tenement 237. Phase PMED.
69. Two joining fragments of stepped foot and lower tapering body from a **jelly glass**. Clear lead glass with light weathering. Base diameter 45 mm. Late 17th-early 18th century. Ctx 3640. Tank 3549. Tenement 237. Phase PMED.
70. Six joining fragments of pushed-in base, straight-sided body and small out-turned rim from a cylindrical **jar**. Decorated with optic-blown vertical ribbing. Green mixed alkali glass with medium weathering. Base diameter 48 mm, rim diameter approx. 70 mm. First half of the 17th century. Ctx 3640. Tank 3549. Tenement 237. Phase PMED.
71. A fragment of drawn solid stem, upper base and lower trumpet-shaped bowl from a **wineglass**. Clear lead glass with quite heavy weathering. *c* 1720-50. Ctx 4148. Pit 4146. Tenement 237. Phase PMED.
72. A fragment of drawn solid stem, upper base and lower waisted bowl with a small tear from a **wineglass**. Clear lead glass with light weathering. *c* 1730-50. Ctx 4148. Pit 4146. Tenement 237. Phase PMED.
73. A complete narrow cylindrical **phial**. Green-tinted mixed alkali glass with light weathering. Rim diameter 23 mm, base diameter 24 mm, height 95 mm. 18th century. Ctx 4148. Pit 4146. Tenement 237. Phase PMED.
74. A complete narrow cylindrical **phial**. Green-tinted mixed alkali glass with medium weathering. Rim diameter 24 mm, base diameter 26 mm, height 96 mm. 18th century. Ctx 4148. Pit 4146. Tenement 237. Phase PMED.
75. A complete pear-shaped **bottle** with an out-turned rim. Green mixed alkali glass with light weathering. Rim diameter 16 mm, base diameter 50 mm, height 134 mm. First half of the 18th century. Ctx 4148. Pit 4146. Tenement 237. Phase PMED.
76. Three fragments of rim, neck and base from a spherical **bottle**. Green-tinted mixed alkali glass with some weathering. Rim diameter 23 mm, base diameter 80 mm. First half of the 18th century. Ctx 4148. Pit 4146. Tenement 237. Phase PMED.

Fig. 5.41

77. Two joining fragments of plain sheared rim, tapering neck and shoulder from a cylindrical **bottle**. Green-tinted mixed alkali glass with light weathering. Rim diameter 25 mm. 18th century. Ctx 4148. Pit 4146. Tenement 237. Phase PMED.
78. A fragment of rim and short neck from a wide-mouth **bottle**. Green mixed alkali glass with virtually no weathering. Rim diameter 40 mm. Mid 18th century. Ctx 4148. Pit 4146. Tenement 237. Phase PMED.
79. Two fragments of neck body and base from a squat cylindrical **wine bottle**. Green mixed alkali glass with light weathering. Rim diameter 25 mm, base diameter 95 mm. Mid 18th century. Ctx 4148. Pit 4146. Tenement 237. Phase PMED.
80. A fragment of crudely finished vertical rim and upper neck from a **pedestal flask**. Decorated with heavy optic-blown wrythen ribbing. Clear soda-rich glass with light weathering. Rim diameter 34 mm. Late 15th-early 16th century. Ctx 6680. Pit 6682. Tenement 240. Phase PMED.
81. A fragment of shoulder from a globular **flask** formed from a double gather of glass. Decorated with optic-blown wrythen ribs. Purple soda-rich glass with medium weathering. 14th-15th century. Ctx 76. Unstratified.
82. Six fragments of vertical rim and body, and folded pedestal base from a **pedestal beaker**. Decorated on its body with a wide band of enamelled lettering,

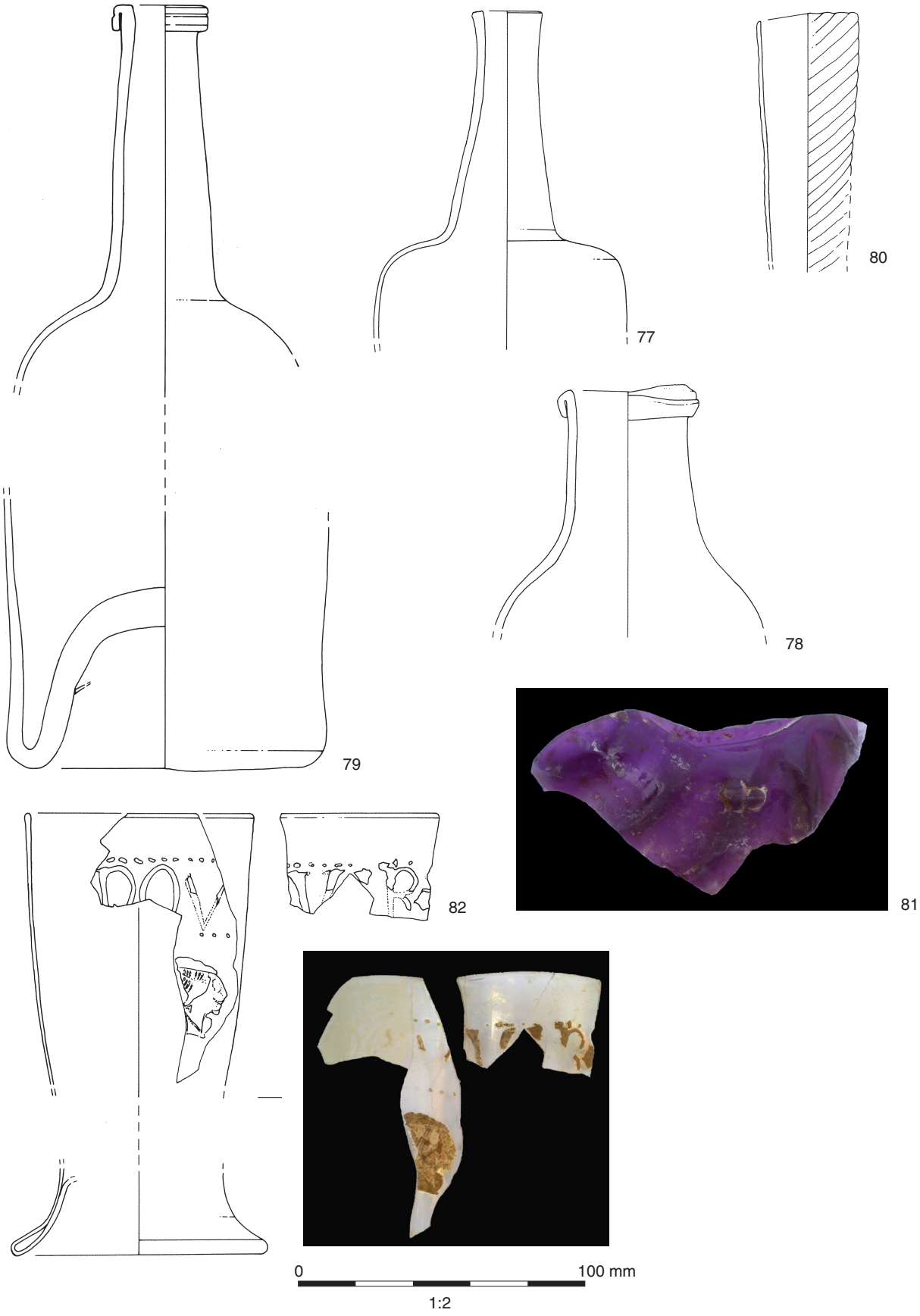

Fig. 5.41 Glass vessels (Nos 77-82)

bounded by enamelled dotting. Below is a single surviving enamelled male head in profile, wearing a beret. Clear soda-rich glass with light weathering to the glass, although the enamelling is severely degraded. Rim diameter 72 mm, base diameter 88 mm. First half of the 16th century. Ctx 3847. Unstratified.

CLAY TOBACCO PIPES (Figs 5.42–5.44)

by David A. Higgins

Introduction

A total of 1095 fragments of clay tobacco pipe were recovered from the excavations, consisting of 235 bowl fragments, 809 stem fragments and 51 mouthpieces. The assemblage includes a total of 67 marked pipes, comprising 34 stamped and 33 moulded examples. There are six stamped heel marks dating from the 17th century but most of the other examples are early 18th-century stem stamps. These later stamped marks include five Dutch examples (two heel stamps and three stem stamps). The 33 moulded marks are of 18th-century or later date. There are also 36 fragments with moulded decoration, which date from the later 18th century onwards. In addition to the clay pipes, a pit at Tenement 173 produced half of a hair curler of typical 18th-century type (No. 23).

Most of the clay pipe assemblages are relatively small, comprising 20 fragments or less. There are 10 groups with between 20 and 72 fragments and two larger groups (see below). These pit groups provide important reference points for a study of the pipes from Southampton and additional details on the entire site assemblage are provided in the downloadable report (Specialist Download F2).

Key groups

Two key groups came from infills of a tank forming part of the well house at Tenement 237 and a pit at Tenement 170. The suggested date of the former assemblage, which spans the mid to late 17th century to the early 18th century, potentially links it to the occupancy of John Combes and Isaac Watts Senior (see Chapter 2). The assemblage from Tenement 170 may date to the 1780s.

The fills of tank 3549 at Tenement 237 produced a total assemblage of 388 fragments of clay pipe from three fills. Fill 3640 contained 39 fragments (7 bowls, 29 stems, 2 mouthpieces) and, although it included one or two residual pieces, this is basically an excellent early 18th-century group with several complete bowls and stem fragments of up to 175 mm in length. There are five marked stems representing four different makers, all of whom were working between about 1690 and 1750 (CAR/TER, THO/MAS/DOD, RICH/ARD.S/AYER (2 examples) and RVB/SYD/NEY; Nos 8 and 11). The marks fit best with a general 1700-1740 deposition, with 1710-30 being the most likely date for this group. It is interesting to contrast the relatively elegant and burnished pipes made by Sayer in East Woodhay with the thicker unburnished stems made by Dod and Sydney. There is also a relatively poor quality unmarked and unburnished spur pipe that was probably made locally. One unusual find is an unmarked heel bowl that is not of a local style (No. 14). Although just possibly a Wiltshire form, this example is best matched in Somerset and Devon and it might reflect coastal trade coming into Southampton.

The 277 fragments recovered from fill 3641 form a large and very consistent group including large fragments of up to 135 mm in length: it comprises 61 bowls, 202 stems and 14 mouthpieces. There are a few residual bowl forms ranging from *c* 1610-60 (eg No. 2) but the majority all fall within the *c* 1660-80 range (eg No. 4), providing a close and reliable date for this deposit. About 40 recognisable bowl forms are present, most of which are of typical styles for the period as illustrated by Atkinson (1975, figs 276-7). The excavated pipes are almost all heel forms with just four spur types being represented (10%). There are, however, a significant number of west-country style bowls with a pronounced 'chinned' form. There are some eight to ten examples of this style, some of which have the rim cut back towards the stem, like an example from 3640 (No. 14). These bowls represent just over 20% of the group as a whole, and thereby form a significant element of it.

This style of bowl is much more typical of Wiltshire, Somerset and Devon than it is of Hampshire. The Wiltshire examples are usually marked, whereas these are all plain, which is more characteristic of the pipes produced in Devon. The examples from this pit seem most likely to indicate either coastal trade from the west or the hitherto unrecorded local production of this style in the Southampton area itself. Only three stamped marks are present in this context (about 7.5%); a running fox (No. 2), a gauntlet (similar to No. 3) and part of a heart-shaped mark with stars above the (damaged) lettering, which seems to comprise a large letter W (No. 4). An example of this W mark from Bridge Street, Christchurch, occurs on a chinned 'west-country' style bowl of *c* 1660-80 with a possible place of manufacture being given as Salisbury (Markell notes, National Pipe Archive), although this author has been unable to find parallels for this mark from there. The fox pipe is also likely to have been produced in Salisbury, while the gauntlet marks appear to have been produced in a number of centres, which probably include places such as Salisbury and Winchester. The range and nature of the pipes in this context are similar to those from fill 3642, which also produced a large, fresh looking group of 72 items (17 bowls, 54 stems and one mouthpiece).

An outstandingly large and consistent group of 127 pipes in very fresh condition came from pit 6435 (fill 6438, Tenement 170), which suggests that they were all used and discarded within a very short period of time. The group consists of 15 bowls, 105

stems and 7 mouthpieces. Its dating can be pinned down quite closely by considering the marks and bowl forms present. One of the pipes is marked AC (No. 18) and can be attributed to Arthur Coster (I) of Fareham, who was born in 1752 and died in 1816 (Fox & Hall 1979, 20). Coster is unlikely to have been in business on his own before *c* 1770, when he would have been just 18, and it is more likely that he would have been in his early 20s, around 1775, before he would have been in a position to start his own workshop. This provides a very useful *terminus post quem* for the group.

Although Coster continued to work until his death in 1816, the bowl forms from the pit are not of the types that would be expected from the 1810s and must therefore date from before this. Quite a number of commemorative pipes were made in the area around 1805 to commemorate the battle of Trafalgar (eg Fox & Hall 1979, figs 40-42) and these are also of later bowl styles, so the pit group probably dates from at least a few years earlier, ie at least before *c* 1800. One unusual feature of the pipes is the early use of stem decoration (No. 15) using a style that can be paralleled among material from the Lumley kiln from Doncaster, which probably dates from no later than 1782 (White 2004, 31 & fig 5.1.7). The general style of the Southampton bowl forms can also be matched by the finds from the Doncaster kiln as well as a pipe found under the floor of a building constructed in 1791/2 (White 2004, fig 167). These constraints firmly place the pit group within the last quarter of the 18th century with a date in the 1780s perhaps being most likely.

Eleven of the surviving 14 spurs or heels in this group are marked WB, presumably for William Browne (II), last recorded leasing a property in French Street for 40 years in 1749 (Arnold 1977, 329). These show that Browne was producing at least four different types of Armorial pipe, each of which is decorated with the Royal Arms and the initials GR for George Rex (Nos 15 and 16). One of these has his initials moulded upright on the spur (No. 16) as opposed to the usual horizontal orientation. Arnold (1977, fig 8.3) illustrates an Armorial marked WB, but without the initials GR flanking the crown, showing that Browne had at least a fifth mould of this type. One of the mould types represented in this pit has its stem decorated with a relief-moulded foliage design, which is very early for this style of decoration (No. 15). Arnold (1977, fig 8.6) illustrated a similar stem but with the initials RB, which he attributes to Roger Browne (II), who died in 1765. This date, however, seems too early for this style of decoration, suggesting that there may have been a later maker with these initials, perhaps a Richard Browne (III).

The WB pipes from the pit also include three examples with a fluted bowl and a heel bowl with a Masonic design, most of which is missing (No. 17). The heel of the Masonic pipe has not been trimmed, an early example of this economy measure. The bases of only three of the 13 spur pipes have been trimmed, so it is clear that trimming of the heel or spur had largely been abandoned by the time this pit was filled. The Masonic fragment joins a further two pieces of stem to give a surviving length of 182 mm, which is long enough to show that this pipe has a straight stem. In contrast, some of the other surviving stem fragments appear to have been curved (eg No. 16) so that both straight and curved forms appear to have been in use. Curved stems were only introduced towards the end of the 18th century, suggesting that this pit group represents a transitional period when both forms were in contemporary production.

Although Arnold (1977, 328) has previously recorded plain and Armorial bowls for William Browne, this pit group not only shows that he made several different patterns of Armorial pipe but also that he was making fluted and Masonic pipes as well, thus extending his known range. Arnold also had a gap during the last quarter of the 18th century when no Southampton pipemakers were known (1977, 325). This group fills this gap and suggests that at least two makers (RB and WB) were working locally, perhaps at the French Street site.

There are also two other designs of fluted pipe in the pit group, one unmarked (two examples, both very fragmentary) and the other marked AC, being the Arthur Coster pipe referred to above (No. 18). The stem fragments in the pit are all very consistent and show that all these designs probably had very long thin stems, ending with simple cut mouthpieces. The slender nature of the stems can be seen from their widths where they join the bowl drawings and show that these thin forms were already well-established by the late 18th century.

The final point of note is that three of the pipe fragments were recovered with some sort of non-ferrous metal blocking their stem bores. One piece is the WB Armorial with the initials moulded upright on the spur (No. 16) and the other two are stem fragments, both of which have been fractured by the force of the metal corroding and expanding within the stem. One of these fits onto the bowl, showing that metal is present over a distance of at least 55 mm of the stem. While the metal could have been the remains of thin wires or metal rods pushed into the stem bore to try and clean them, the metal protruding from the bowl fragment appears to be soft, like lead. Furthermore, one of the stems has fractured so as to reveal the metal, which seems to completely fill the stem bore but ends with a rounded end, as if molten metal had cooled within the stem. Although no metal can be seen in the base of the Armorial bowl, it is known that pipes were occasionally used as ladles for pouring molten metal, sometimes during 'coining', ie producing counterfeit coins. It is extremely unusual to find metal within the stem bore of pipes and these three examples add to only a handful of examples that are known nationally. They also show that at least some of these pipes were being used in an unusual way before being discarded.

Discussion

Trade and marketing

Southampton never seems to have developed a very significant pipemaking industry of its own. Although pipemakers are recorded in the town from the early 17th century onwards (Arnold 1977, 325), they were never particularly numerous, with only five or six documented makers at any one time for most of the late 17th and first half of the 18th centuries. This level of activity is comparable with other south coast ports such as Portsmouth (Fox & Hall 1979, 45) or Exeter (Arnold & Allan 1980, 307) but far fewer than places such as Chester or Liverpool/Rainford where substantial pipemaking industries emerged, with as many as 40-50 pipemakers working in each of these centres during the early 18th century (Higgins 2008, 139).

While there is no doubt that some of the pipes made in Southampton were exported, the industry there must have been as much for local consumption in the town itself as for trade and the Southampton industry was not even vigorous enough to prevent pipes from other centres from circulating in the town. The marked pipes from the excavations include examples from Portsmouth, Fareham and the Netherlands, all of which can be accounted for by shipping trade. In addition, however, there are examples from Boldre, about 10 miles (16 km) to the SSW; East Woodhay about 30 miles (50 km) to the north; Norton St Philip, about 45 miles (70 km) to the north-west; Romsey, about 7 miles (11 km) to the north-west and Salisbury, about 20 miles (30 km) to the north-west. Some of these inland goods have travelled significant distances to reach Southampton but there is no real evidence of trade in the other direction, since the numerous publications on Wiltshire pipes do not record Southampton marks. Indeed, pipes from East Woodhay have also been recovered from the New World (Cannon 1991, 25), probably having been shipped through Southampton. This suggests that not only were these inland manufacturers able to find a market in Southampton but also that they may even have been competing with the town's manufacturers for a share of the export trade.

Pipes were not generally traded very long distances overland because of their fragile nature and a possible explanation of this phenomenon can be found from an examination of the pipes themselves. Two Richard Sayer pipes from East Woodhay were found among a group from the fill of the tank at Tenement 237. Both of these are finely burnished on the bowl and stem while the bowl forms themselves are elegant, thin-walled and well-finished (No. 11). The stems are also noticeably thinner that other examples in this context and they have fine spurs. In contrast, the locally produced pipes have relatively thick stems and they are not always burnished. There is one unmarked spur bowl in particular that, by comparison, has a poor, uneven surface and a thick, poorly formed spur. In short, the pipes from East Woodhay are a much finer quality and better-looking product. Differences such as these cannot be seen from the documentary evidence alone and this is where an examination of the artefactual evidence can provide insights into the trade networks and social status of the goods that were being brought to and consumed within Southampton.

The same context group also produced an unmarked heel bowl of unusual form that clearly marks it out as being an import to the town (No. 14). The style of this piece suggests that it was made well to the west of Southampton, probably in Devon. Shipments of pipes from Southampton to Exeter are recorded during the early 18th century (Arnold and Allan 1980, 314) but not of pipes in the other direction. While this isolated example could just have been a personal possession carried by a sailor it still demonstrates a coastal movement of goods that would not have otherwise have been detected from the documentary sources alone.

The 18th-century Dutch pipes recovered from the excavations provide another example of this type of 'unofficial' trade (eg Nos 5 and 7). Dutch pipes were always rare in England, despite the size and scale of the Dutch pipe industry and its substantial export trade. This is largely as a result of the various wars and trade sanctions that existed between the two countries. When Dutch pipes are found in England, they are frequently in ports and then often close to the quaysides, suggesting that the pipes found are personal possessions that were discarded by sailors rather than the result of formal trade.

From an examination of the available evidence it would appear that, during the 17th and 18th centuries, Southampton had its own pipemaking industry, which supplied most of the town's needs as well a modest export trade. The quality of the pipes, however, was fairly average and the industry was not vigorous enough to prevent other production centres, some of which were some distance inland, from capturing a share of both the home and export markets. One of the key factors in this may have been the better quality of the pipes that were produced in 'specialist' centres, such as East Woodhay, as opposed to Southampton itself.

Social status

As noted above, the Sayer pipes from East Woodhay were of a much finer quality than the Southampton products, and this quality is likely to have been reflected in their price. One of the most obvious features associated with quality was a burnished surface, which is known to have increased the cost of a pipe since it was an additional task to perform in the production process. The use of burnishing was not confined to the East Woodhay makers and it can also be seen on some of the other pipes found in Southampton, for example the Thomas Dod pipe from Boldre and the Richard Hoar pope from

Portsmouth (Nos 8 and 9). These pipes were fully burnished while Thomas Sharp from Romsey seems to have just burnished the bowls of his pipes (eg No. 12). In contrast, none of the locally made pipes produced by the Brown, Richman or Sidney families in Southampton is burnished (eg Nos 6, 10 and 13). Despite the use of burnishing in the neighbouring production centres of Boldre, Portsmouth and Romsey, the Southampton makers seem not to have attempted to compete with these better quality products. This is particularly notable in the case of Richman who had moved from East Woodhay, where burnishing was almost universal, to work in Southampton, where his pipes were unburnished. It would seem that the early 18th-century Southampton makers were content to cater for the cheaper end of the market and that they did not attempt to compete with the better quality pipes that were produced in neighbouring centres.

This excavation is interesting in that in included the site of Polymond's Hall (Tenement 237), a large building that can be considered to have been a high status residence from the medieval period onwards, with a rich documentary history (see Chapter 2). Almost exactly a half of the excavated pipes, 495 out of 1095 fragments, were recovered from the plot associated with this building. Although it is a somewhat crude means of comparison because it does not take into account the chronological range of pipes from the different areas, it is still noteworthy that 23 of the 34 stamped marks were recovered from this plot (68%). The stamped marks almost all date from between *c* 1640 and 1750 and are likely to represent slightly better quality pipes, in that the makers took the trouble to identify them. Furthermore, the majority of the more 'exotic' pieces, imported from further afield, came from Tenement 237. These include all four of the gauntlet marks; the fox and W pipes, possibly from Salisbury; both Richard Sayer pipes from East Woodhay and four of the five Dutch marks from the excavations. Even allowing for the 19th-century groups of pipes found elsewhere on the site (but not present in any numbers from Tenement 237), it seems that there is a still a bias towards marked, burnished and imported (ie better quality) pipes from the site of Polymond's Hall.

Conclusions

As well as providing good dating evidence for the excavated contexts and features, the pipes also contribute to a broader understanding of production and consumption patterns within the wider catchment area of the site. Overall the excavations produced a wide range of pipes dating from the early 17th century through to about 1900, including some important pit groups of 17th-, 18th- and 19th-century date. These groups not only extend the range of known bowl forms and decorative motifs used in Southampton, but also provide evidence for pipe production in the town during the second half of the 18th century, a period when none had been previously documented. The fill of pit 6435 at Tenement 170 deserves special mention as a key group probably dating from *c* 1775-90, which not only provides evidence for pipe production in Southampton at this period but also a closely dated reference point for the introduction of a number of other technological features including the production of long, thin, parallel-sided stems; the end of heel/spur trimming; the frequent use of internal bowl crosses and the introduction of curved stems. This group is also particularly unusual for the evidence of metal having been melted within some of the pipes. From the mid-19th century there are good groups representing the products of George Harding, who was probably the principal maker in Southampton at this time. The finds have allowed the first reasonably comprehensive assessment and definition of this maker's products to be made, which will be of importance in distinguishing his products from those of other makers with the same initials who were working elsewhere on the south coast.

Although pipemaking is documented in the town from 1618/19 onwards, the lists of known makers tend to contain rather brief and often contradictory references (Arnold 1977, 327-335; Oswald 1975, 171-4). While a review of the documentary evidence is clearly needed, the general pattern seems clear in that the town had a consistent but never particularly large pipemaking industry, which can now be seen to have probably been continuous from before 1618 through to about 1914. The French Quarter of Southampton was an area where many of the pipemakers are known to have worked: for instance John Richman, who took a lease of a property next to the Theatre Tavern in French Street in 1687, or William Browne, who rented a property next to the entry to St John's Hospital in French Street in 1749 (Arnold 1977, 329). Several of the manufacturers who worked in this area marked their products and a good range of these have been recovered from the excavations. The excavated material allows the pipe production that was taking place on or near the site to be characterised and shows that, during the 17th century from *c* 1660-80, some 20% of the pipes are of west-country forms. These are unmarked, generally unburnished and without rim milling. This style has not previously been particularly noted from Southampton but the numbers present suggest that they must have formed part of the range produced in the town. During the first half of the 18th century the local makers typically produced spur pipes with stem stamps, but these tended to be of average quality and did not match the finer quality pipes produced in neighbouring centres.

The archaeological evidence suggests that the Southampton industry was sufficient to provide for the majority of the town's needs, and a small export trade, but that the production was generally of standard regional types and mediocre quality. This allowed pipemakers from as much as 40-50 miles

(60-80 km) inland to take a small share of the town's domestic and export markets, particularly where these pipes came from specialist centres producing good quality pipes. There are a small number of imported pipes that must have been carried by coastal or overseas shipping, but never in sufficient quantity to suggest a substantial and organised trade as opposed to small-scale cargoes and/or personal possessions. Just one possible fragment of a specific export-style pipe was recovered from Tenement 237 but, even if this is an export piece, it is insufficient evidence by itself to suggest that they were actually being made in Southampton. The better quality and/or imported pipes appear to be particularly associated with the occupation of Polymond's Hall, a high status household in this part of the town. The Southampton industry appears to have declined towards the middle of the 18th century, but the excavations have produced new evidence that there was a resurgence towards the end of the century, and that this revival continued into the 19th century.

Catalogue of illustrated clay pipe (Figs 5.42-5.44)

Fig. 5.42

1. West-Country style **bowl** of *c* 1640-1670 with an incuse stamped mark on the heel reading IEF/FRY.H/VNT. This can be attributed to either Jeffrey Hunt I (1599-1690) or II (born 1623/4) of Norton St/Philip, Somerset. The bowl has a bottered and fully milled rim and has been finished with a very good burnish. Stem bore 8/64 ins. Ctx 3647, Pit 3635, Tenement 176, Phase PMED.
2. West-Country style **bowl** of *c* 1640-1670 with a relief-stamped mark on the heel depicting a running fox. Presumably made by a pipemaker named Fox, most likely working in Salisbury. The bowl has a bottered and fully milled rim. Stem bore 6/64 ins. Ctx 3641, Pit 3549, Tenement 237, Phase PMED.
3. West-Country style **bowl** of *c* 1630-1650 with an incuse stamped gauntlet mark on the heel. Originally used by the Gauntlet family of Amesbury, this mark was widely copied by other manufacturers in the region. The bowl has a rather square cut rim, which may not have been bottered. The bowl is fully milled rim and has been finished with an average burnish. Stem bore 8/64 ins. Ctx 3413, demolition layer, Tenement 237, Phase MOD.
4. **Fragment** of *c* 1660-1680 with a relief-stamped mark on the heel containing a single letter W. Damaged mark, possibly form Salisbury, although this is rather uncertain. The bowl has a rather square cut rim, which does not appear to have been bottered. The bowl is fully milled rim and has quite a glossy surface that may have been rubbed in some way to help polish it although it does not appear to have been actually burnished. Stem bore unmeasurable. Ctx 3641, Pit 3549, Tenement 237, Phase PMED.
5. Dutch **bowl** of *c* 1720-1750 with a relief-stamped mark on the heel comprising a crowned L. This can be attributed to one of the de Lichts (1730-53) or Frans Verzijl (1753-74) of Gouda. The rim has been bottered and all the surviving section is milled. The bowl surface has an average burnish and the stem bore measures 5/64 ins. This is one of two identical bowls from this context, which also produced two identical roll-stamped stems that would have originally been connected to them. Ctx 4148, Pit 4146, Tenement 237, Phase MOD.
6. **Bowl** dating from *c* 1700-1740 with an incuse stamped mark across the stem reading BRO/WN. The last letter looks like a ligatured NL but was perhaps intended to be NE. This mark can be attributed to one of the Roger or William Brown's of Southampton, who were active in the early 18th century. The rim has been cut and lightly bottered and the stem bore is 5/64 ins. Ctx 3647, Pit 3635, Tenement 176, Phase PMED.
7. **Stem** fragment of *c* 1720-1750 with a Dutch roll-stamped border comprising a series of milled lines with 'ring of pearls' edges. This stem and roll-stamp is one of two identical examples recovered from the same context, which also produced two identical Dutch bowls with crowned L marks (see No. 5), with which they must have originally connected. The stem has a light, average quality burnish and a stem bore of 5/64 ins. Ctx 4148, Pit 4146, Tenement 237, Phase MOD.
8. **Stem** fragment of *c* 1700-1730 with an incuse stamped mark across the stem reading THO/MAS/DOD. This can be attributed to Thomas Dod of Boldre. Oswald (1981, 172) notes marriages for Thomas Dod of Boldre in 1695 and 1723. The stem has a good burnish and a bore of 7/64 ins. Ctx 3640, Pit 3549, Tenement 237, Phase PMED.
9. **Bowl** of *c* 1705-1737 with an incuse stamped mark across the stem reading RIC/HARD/HOAR. This can be attributed to Richard Hoar of Portsmouth who is recorded in parish register entries from 1705-37 (Fox & Hall 1979, 16-17). The rim is cut and the bowl has been finely burnished. Stem bore 6/64 ins. Ctx 3647, Pit 3635, Tenement 176, Phase PMED.
10. **Bowl** of *c* 1690-1730 with an incuse stamped mark across the stem reading RICH/MAN. This can be attributed to John Richman of who moved from East Woodhay to Southampton in 1687 and was still there in 1697. The style of the mark is most likely to date from the early 18th century. The rim has been bottered but not milled and the pipe is not burnished. Stem bore 7/64 ins. Ctx 5010, Pit 5180, Tenement 180, Phase PMED.

Fig. 5.43

11. **Bowl** dating from *c* 1700-1730 with an incuse stamped mark across the stem reading RICH/ARD.S/AYER. This can be attributed to Richard Sayer of East Woodhay. There appear to have been at least two makers of this name working at East Woodhay in Hampshire from at least 1685-1716 (Cannon 1991, 25). The rim has been cut and the bowl given a good quality burnish. Stem bore is 6/64 ins (but nearly 7/64 ins). Ctx 3640, Pit 3549, Tenement 237, Phase PMED.
12. **Fragment** of *c* 1700-1740 with an incuse stamped mark across the stem reading THO/SHAR/P. This is presumed to be the son of the pipemaker Thomas Sharpe of Romsey, who died in either 1689 or 1698 (ambiguous dates from transcripts in the Winchester Museum files taken from Inventory 098/1-2). Individuals named Thomas Sharp were married at Romsey in 1682 and 1728 (occupations

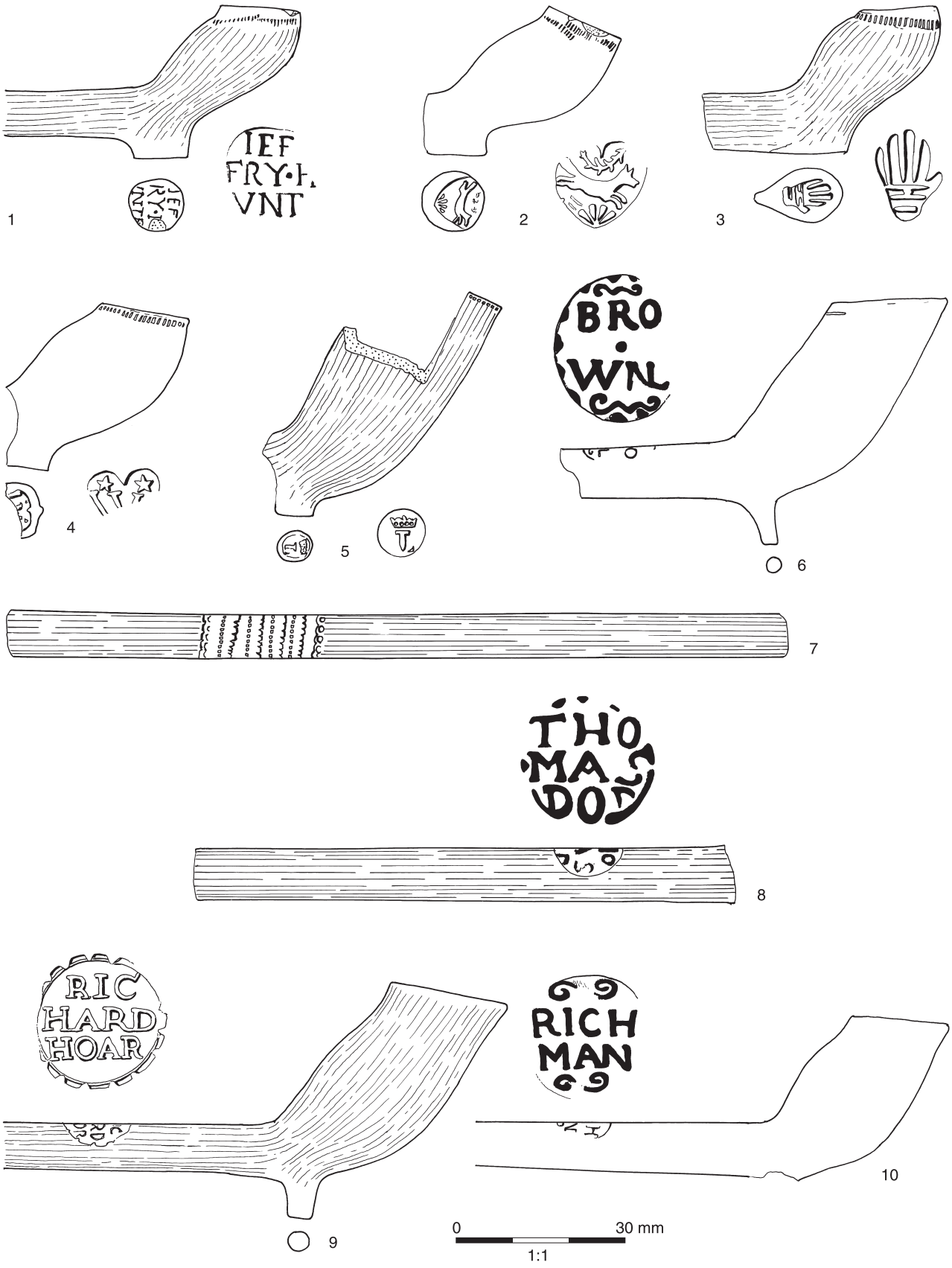

Fig. 5.42 Clay pipe (Nos 1-10)

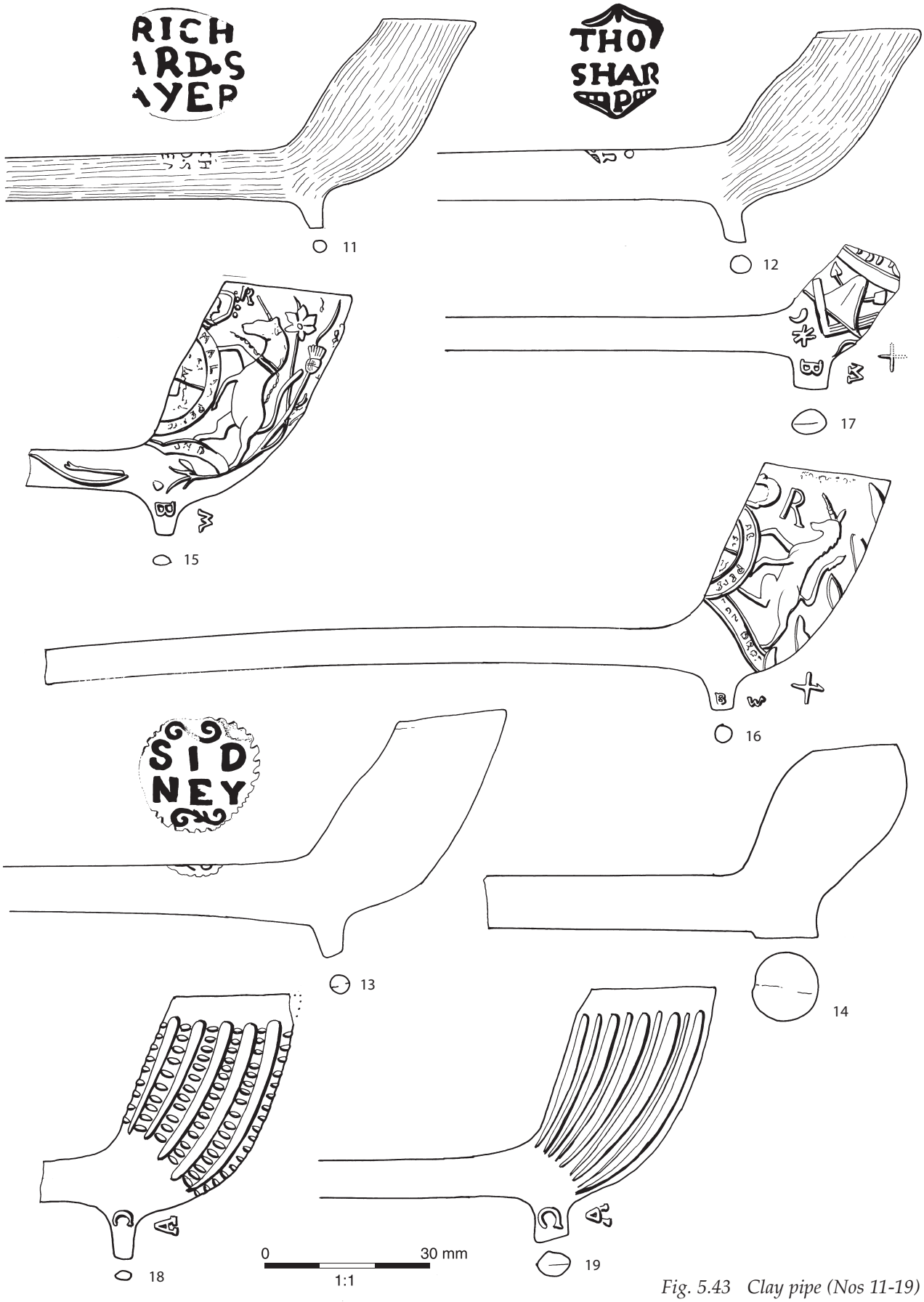

Fig. 5.43 Clay pipe (Nos 11-19)

unknown). The very rim of this pipe seems to have been lightly bottered but it is not milled. The bowl has a good burnish on it but not the stem. Stem bore 7/64 ins. These finishing characteristics are all the same as another bowl from 5010 and a stem from 5073, and so seem to be typical for this maker. Ctx 3876, Pit 3877, Tenement 174, Phase PMED.

13. **Pipe** of *c* 1710-1740 with an incuse stamped mark across the stem reading SID/NEY. This can be attributed to one of the Sidney family of Southampton (see Arnold 1977, 329-31 for details). The rim has been very lightly bottered and wiped but the pipe is not milled or burnished. Stem bore 7/64 ins. Ctx 4179, Pit 4167, Tenement 238, Phase PMED.
14. West-Country style **bowl** of *c*1700-30. Rim has been wiped but does not appear to have been bottered; it is not milled. Stem bore 8/64 ins. Ctx 3640, Pit 3549, Tenement 237, Phase PMED.
15. **Armorial bowl** from a pit group of *c* 1770-1800 (and most likely *c* 1775-90) with the maker's initials WB. These initials can almost certainly be attributed to the William Brown who took out a 40-year lease of a property in French Street in 1749 (Arnold 1977, 329). This is one of four different Armorial designs from the pit made by Brown, this example being characterised by rather confused leaves on the seam facing away from the smoker from which spring both a rose and a thistle on each side of the bowl. The initials GR flanking the arms are rather small. Most notably, this design also has tendril decoration on the stem. The bowl design depicts a slightly inaccurate version of the Hanoverian Arms and the lettering of the mottoes is almost illegible, but appears to have been intended as HONI SOIT QUI MAL Y PENSE around the arms with DIEU ET MON DROIT in the ribbon below. Only one example was recovered, with a stem bore of 5/64 ins. Ctx 6438, Pit 6435, Tenement 170, Phase MOD.
16. **Armorial bowl** from a pit group of *c* 1770-1800 (and most likely *c* 1775-90) with the maker's initials WB. These initials can almost certainly be attributed to the William Brown who took out a 40-year lease of a property in French Street in 1749 (Arnold 1977, 329). This is one of four different Armorial designs from the pit made by Brown, this example being characterised by quite large, clearly separated leaves on the seam facing away from the smoker in conjunction with the large initials GR flanking the arms and set well down from the rim line. The initials WB are also distinctive and unusual in that they have been set upright on the sides of the spur. There are some faint marks just below the rim on the right hand side of the bowl that have been partially blurred by wiping. These could be lettering, although this would be very unusual on

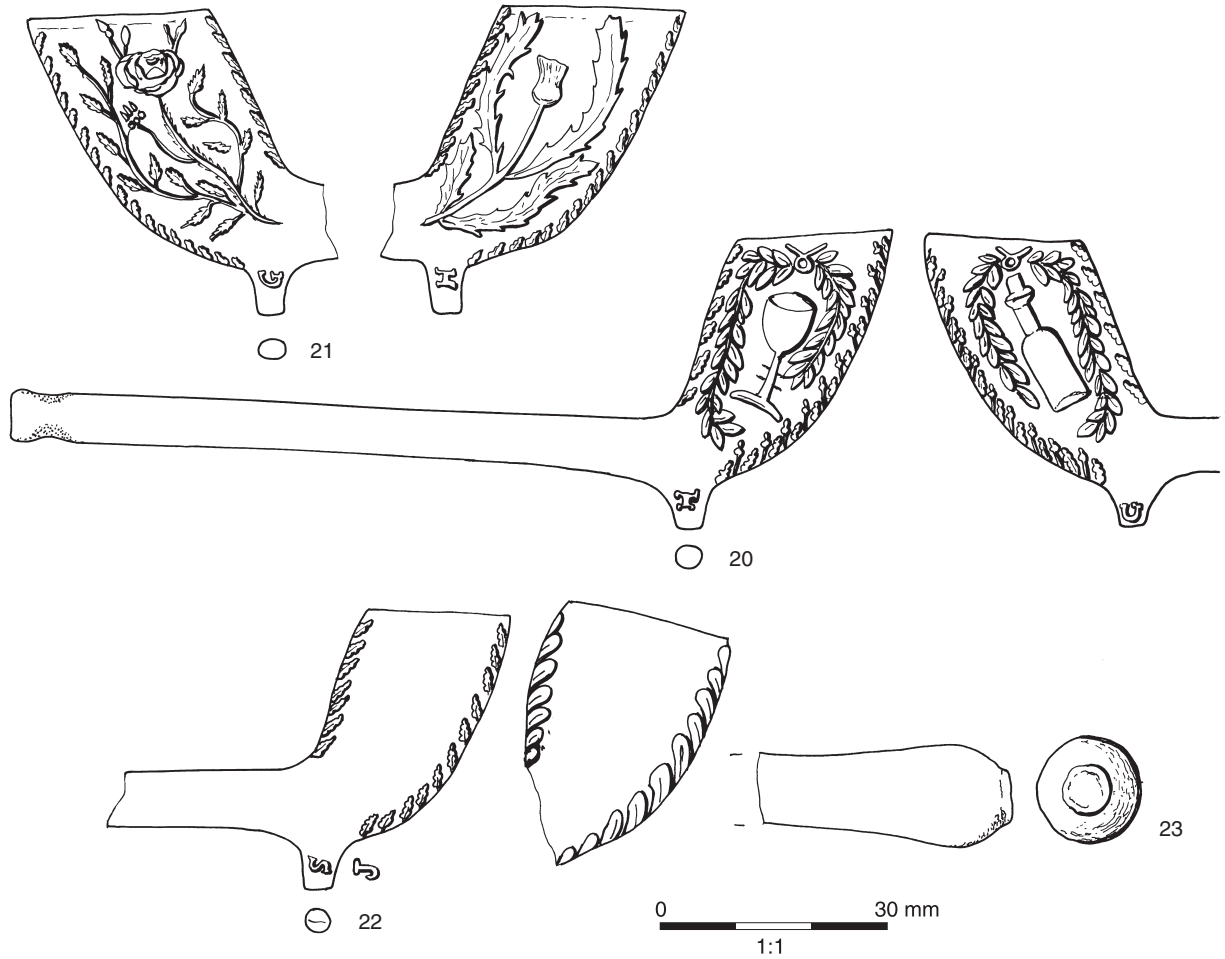

Fig. 5.44 Clay pipe (Nos 20-23)

this style of pipe. The other side of the bowl is missing, so it cannot be seen if this was mirrored. At the interior base of the bowl is a relief-moulded cross, arranged as a '+' in relation to the long axis of the pipe. The design is a slightly inaccurate version of the Hanoverian Arms and the lettering of the mottoes is not all legible (although better than the others in this group), but appears to have been intended as HONI SOIT QUI MAL Y PENSE around the arms with DIEU ET MON DROIT in the ribbon below. Only one example of this style was recovered, with a stem bore of 5/64 ins. This particular example is also extremely unusual in that it has a soft grey metal, probably lead, intermittently blocking the stem bore for at least 55 mm from the bowl. There is no trace of metal within the bowl base itself. Ctx 6438, Pit 6435, Tenement 170, Phase MOD.

17. Fragment of a **Masonic bowl** from a pit group of *c* 1770-1800 (and most likely *c* 1775-90) with the maker's initials WB. These initials can almost certainly be attributed to the William Brown who took out a 40-year lease of a property in French Street in 1749 (Arnold 1977, 329). A joining fragment gives 183mm of surviving stem. This appears to have been straight (not curved) and it shows very little taper over the surviving length, suggesting that this was a very long stemmed design. The base of the heel has not been trimmed and there is part of an internal bowl cross surviving, arranged as a '+' in relation to the long axis of the pipe. Stem bore 5/64 ins. Ctx 6438, Pit 6435, Tenement 170, Phase MOD.
18. Fluted **spur bowl** from a pit group of *c* 1770-1800 (and most likely *c* 1775-90), with a relief-moulded mark on the sides of the heel reading AC. This can be attributed to Arthur Coster of Fareham, who was born in 1752 and died in 1816. Stem bore 5/64 ins. Ctx 6438, Pit 6435, Tenement 170, Phase MOD.
19. Fluted **heel bowl** dating from *c* 1770-1816 with a relief-moulded mark on the sides of the heel reading AC. This can be attributed to Arthur Coster of Fareham, who was born in 1752 and died in 1816. The base of the heel has not been trimmed. Stem bore 5/64 ins. Ctx 6898, Pit 6777, Tenement 170, Phase MOD.

Fig. 5.44

20. **Bowl** decorated with a bottle and glass motif with the relief-moulded initials GH on the sides of the heel. This pipe can be attributed to George Harding of Southampton, who ran his business from *c* 1843-71, during which time he was probably the principal pipemaker in Southampton. This particular example has been broken with 86 mm of surviving stem but then reused, as is shown by the clear tooth wear marks on the stem. Stem bore 5/64 ins. Ctx 139, Pit 166, Tenement 172, Phase MOD.
21. **Bowl** decorated with a rose and thistle design with the relief-moulded initials GH on the sides of the heel. This pipe can be attributed to George Harding of Southampton, who ran his business from *c* 1843-71, during which time he was probably the principal pipemaker in Southampton. Stem bore 5/64 ins. Ctx 487, Pit 487, Tenement 173, Phase MOD.
22. **Bowl** of *c* 1830-1860 with leaf decorated seams and a relief-moulded mark on the sides of the heel reading JS. This can probably be attributed to John Skain/Skeans of Southampton, who is recorded working from 1839-44. Alternatively, there was a James Skeaines was working in Salisbury from at least 1852-75. Stem bore 4/64 ins. Ctx 8301, Pit 8295, Tenement 241, Phase MOD.
23. Half of a **hair-curler** dating from *c* 1700-1800. The curler has been neatly rolled, probably using a former, and has a simple cut end. The curler measures 9.6mm at its narrowest point and 14.6 mm at its maximum swelling. Ctx 487, Pit 487, Tenement 173, Phase MOD.

WORKED STONE (Figs 5.45–5.50)

by Ruth Shaffrey and Cheryl Allum

Introduction

A group of 48 pieces of non-architectural worked stone was recovered from the site (excluding 3 kg of lava fragments, largely from high medieval and earlier deposits). More than half the assemblage relates to food processing in the form of querns and mortars. The remainder of the group is dominated by whetstones and contains a range of other objects.

Querns and mortars

A total of 15 rotary querns (including millstones) and 13 mortars came from the site, with rotary querns occurring in high medieval and earlier contexts and mortars in high medieval and later contexts. Querns were found within the boundaries of seven tenements but noticeably higher numbers came from Tenement 173 (four examples, with four other contexts containing small lava fragments) and Tenement 237 (five examples, with three other contexts containing small lava fragments). Three mortars were also found within Tenement 173. The numbers and the presence of millstone and mortar fragments may indicate a concentration on food preparation in Tenement 173; the higher number on Tenement 237 may simply be due to the larger size of the tenement.

A broad range of querns are represented including several of typically medieval designs such as collared querns, projecting hopper querns (No. 1) and dished, pot querns (eg No. 2, complete with part of the iron spindle). Three examples measuring over 550 mm diameter may be large enough to be considered millstones while a third from a higher medieval context in Tenement 173 has the appearance of a millstone and is decorated (No. 3). Decoration is an extremely rare feature on English medieval querns and suggests some form of high status was attributed to this item. Several Roman examples from Ireland and Wales with identical central decoration are known (Griffiths 1952) and an unprovenanced millstone in Tullie House Museum is almost certainly of Roman date (Mus acc code 2000.709). During the medieval period, decorated rotary querns and millstones were relatively common in Scotland (eg Dunadd: Lane and Campbell, 2000, fig. 4.92) and Ireland (eg Tullydonnel, Co Tyrone) and examples are also

known to have existed in Wales (Watts 1997). In England however, only one decorated example has been published; it was found during the construction of the Manchester Ship Canal (Watts pers. comm.; Bennet and Elton 1898). The example from the French Quarter is therefore very unusual.

One post-medieval quern found at Tenement 237 is unusually small at only 250 mm diameter and may have been used for grinding something other than flour, perhaps malt (Medlycott 1996, 154). Its presence may reflect the known presence of a brewhouse at this tenement, documented in the mid 17th century.

As with the querns, the assemblage of mortars varies tremendously but the variation is not related to lithology and there are no patterns of distribution of the different types. The mortar types include some simple forms with two (non-pierced) ribs and two lugs, one of which also serves as the spout. These simple forms have either curved walls like many of the earlier Southampton examples or straight walls (No. 4). Others are of slightly more elaborate or moulded form, sometimes with chamfered or more carefully shaped ribs. There are no mortars with perforated ribs (handles) but there are some for which the ribs simply do not survive to a great enough height to ascertain whether or not these were originally present. Others are not moulded but have differential tooling around either the top or the base or both to demarcate a band (eg No. 5). This is not a common feature but can be compared to a single other example in Southampton (West *et al.* 1975, 307, id 2213, fig. 269). They are not of the same lithology.

All the mortars were discarded within high medieval or later contexts: the general absence of querns during later phases is an indicator that they were being replaced by mortars at this time. This is in keeping with findings at Winchester which produced no mortars earlier than the mid 12th to mid 13th centuries, evidence which was used as the basis for an assumption that mortars were introduced in the 13th century (Biddle and Smith 1990, 891).

A range of limestone types, particularly shelly limestones, were used to produce the French Quarter mortars, including Purbeck marble, Quarr stone and Purbeck featherbed stone. These materials were all relatively locally available and all but the Quarr stone have been found during earlier excavations in Southampton. The querns are generally made from Lava but there are also querns of types of Greensand (including one possibly of Lodsworth Greensand: found in an Anglo-Norman context at later Tenement 172), two of sandstone and one of probable Purbeck limestone (No. 3).

One mortar fragment of a very fine-grained facies of Quarr stone came from a high medieval pit (pit 598 at Tenement 173). Quarr stone is a creamy coloured shelly limestone consisting of dissolved clam moulds surrounded by a strong calcite cement (Bishop 2001, 34). This stone was exploited during the Roman, Saxon and medieval periods, until the main deposit, capable of providing a reliable and consistent supply, was exhausted by the end of the 12th century (Bishop 2001, 167). Quarr stone mortars have been found at nine late medieval sites, including a late 13th- to early 14th-century context at King's Lynn (Dunning 1977b, 328), suggesting a small-scale industry in the production of mortars on the Isle of Wight (Bishop 2001, 276-7). The proximity of Southampton to the Isle of Wight makes the find relatively unsurprising.

A mortar fragment made from Purbeck marble had been used within the stone lining of a late medieval pit (1289) at Tenement 174. Purbeck marble is a hard, blueish-grey limestone composed predominantly of the dark, fossilised shells of a small freshwater gastropod (*Viviparus cariniferus*) within a fine-grained matrix. It was extensively exploited from the 12th century onwards as a building material, however the main period of mortar production appears to have been during the 13th and 14th centuries at quarries in the Isle of Purbeck, Dorset (Dunning 1977b, 324). Four pieces were recovered from 13th- and 14th-century contexts at Thoresby College, King's Lynn (Dunning 1977b, 323), with Purbeck marble mortars found at over sixty sites in England, predominantly in the south and East Anglia (Dunning 1977b, 325). They were also traded by sea, explaining their presence in ports such as Southampton and in coastal areas of the continent. Complete vessels were found aboard a wrecked dredger off the coast of Suffolk (Dunning 1977b).

The wear on mortars in Purbeck marble has revealed that most were used only for grinding as opposed to pounding due to susceptibility to splitting along the bedding planes (Dunning 1977b, 321). Indeed, the lower, inner side of the French Quarter fragment is worn smooth indicating that the mortar was used for grinding. Purbeck marble mortars tend to fracture at the thinnest part, where the margin of the base has been worn down by a pestle, perhaps explaining the absence of a base for this fragment.

A single mortar fragment was made of Purbeck featherbed stone (from post-medieval wall 6249 at Tenement 169), also from the Isle of Purbeck, Dorset. This stone consists of *Neomyodon* moulds and the occasional ostrocod shell within a crystalline matrix, and was quarried from the 13th century (Dunning 1977b, 103).

Whetstones and other items

The whetstones came from Tenements 170, 174, 177, 237, 239, 242 and 243. Five examples were attributed to the Anglo-Norman phase: three came from Property 9 (later Tenement 174) and the other from Property 7 (later Tenement 177). Only one primary whetstone was recovered, from pit 366 at Property 4 (later Tenement 239). This example is the appropriate size for a small or well-used rotating whetstone at 200 mm diameter with wear around

the edges. Although it seems a little thin in comparison to an assemblage of nine rotating whetstones from Dorestad measuring 80-100 mm thick (Kars 1983, 4), no other interpretation seems likely. Some of the hones indicate casual usage of locally available materials in the form of pebbles (generally fine-grained sandstone such as Pennant sandstone, No. 6) or discarded objects such as roof stones.

The only other whetstone of note is a largely unshaped schist rod, probably Norwegian Ragstone, recovered from an *in-situ* destruction layer (3028) of high medieval date within Tenement 237 (No. 7). This item is particularly noteworthy because it measures an enormous 550 mm in length and is very well used. Flat wear, of the type found on this example, is consistent with the blade having moved across the whetstone while it was static (Parkhouse 1997, 421), a method which seems likely given the size of the French Quarter example. No markings are present on the stone to indicate how it might have been fixed in place but the wear is greatest towards both ends suggesting it was secured in the centre. The presence of this very large whetstone may be explained by Southampton's function as a port, although interestingly, Norwegian ragstone does not appear to have been particularly plentiful in the town. Among the few other examples found is a long rectilinear example (300 mm long; West *et al.* 1975, 311 and fig. 270). The presence of multiple large whetstones may indicate that large rods were imported to Southampton as a raw material and were manufactured into smaller whetstones at their destination. Further afield, an assemblage of 177 whetstones from Winchester included items made from Norwegian ragstone, but the longest is 199 mm (Ellis and Moore 1990, 873 and fig. 264). No examples of comparable size to the French Quarter example have been found in medieval contexts. The two closest examples in terms of size both come from burials. The first, measuring 462 mm in length, is of unidentified lithology and came from a pagan Saxon cemetery at Ulceby in Yorkshire (Parker Pearson 2003, 123; Bruce-Mitford 1978, 362-4). The second parallel is a great bar of 600 mm from Sutton Hoo with decorative faces at both ends (Bruce-Mitford 1974). Although the Southampton whetstone was clearly not ceremonial, its size and rarity indicates that it was an object of some value. A whetstone of this size and character would normally be interpreted as for sharpening large scythes or swords (Parker Pearson 2003, 123), although this does not tally with the domestic kitchen setting in which the French Quarter example was found. An alternative explanation is that its size relates more to status than function.

Two other much smaller fragments of Norwegian ragstone were found: a rod from an early modern deposit at Tenement 243 and an unworked fragment from a fill of post-medieval rubbish pit 5180 at Tenement 180. The general absence of well-crafted whetstones (even the imported Norwegian Ragstone is not highly worked) suggests a lack of industry or workshops in this part of Southampton.

Three large stone balls were recovered from late medieval contexts in Tenements 168 and 172 and an early modern context in Tenement 239. These vary in size from 118 mm (4.7 in), to 140 mm (5.5 in) to 170 mm (6.7 in) but not as large as similar examples found in Southampton of between 280-320 mm (West *et al.* 1975, fig. 266). These examples are neatly finished and almost perfectly spherical suggesting use as shot for a cannon rather than as ammunition for a mangonel. If this is the case, their size indicates use in larger bore cannon such as demi-cannon or culverin and a 16th- or early 17th-century date of manufacture. Although their presence indicates likely conflict, they have not actually been used as cannon balls and may have served a variety of other purposes requiring heavy objects, for example as door props or general weights.

An assortment of other items of worked stone was recovered including processors such as hammerstones. A pestle came from post-medieval pit 5359 at Tenement 180: the recovery of medieval pestles is rare, suggesting that they were normally made from organic materials. A marble palette was found residually in an early modern deposit at Tenement 171 (No. 8) and was evidently an item of high status: it may have been used for mixing small quantities of medicines or toiletries. A fragment of a finely worked slab came from a high medieval pit at Tenement 242 (No. 9). It displays an incised pattern of rings linked by grooves, and is thought to possibly be part of a mould.

Conclusions

Most of the worked stone represents simple domestic activity. The whetstones are largely natural or secondary and even those that stand out for other reasons are not highly worked. A few items indicate higher than usual status, while the millstones also indicate a higher level of food preparation than is usual in normal domestic settings.

Catalogue of illustrated worked stone

(Figs 5.45–5.50)

1. Upper projecting hopper **quern**. Medium grained, well sorted quartz sandstone. Part of a rectangular rynd socket in evidence on the grinding surface, 22 mm deep. Burnt. Measures 500 mm diameter. Ctx 7376, Pit 7418, SF 282, Tenement 241, Phase HMED.
2. Base of pot **quern**. Probable Purbeck limestone. Has remains of iron spindle (which penetrates to the base of the stone) in the centre. Vertical sides and rectangular spout measuring 39 mm wide x 34 mm high at external edge and 27 mm wide inside. Inside of quern worn very smooth. Pecked all over and still visible inside. Measures 30 mm deep inside, walls 31 mm thick, 305 mm diameter x 68 mm max height. SF 310. Ctx 8109, Levelling, Property 6 (Tenement 243), Phase AN.
3. Upper rotary **quern** or **millstone** fragment. Greyish red quartzitic sandstone with veins of quartz.

Central fragment with a very nice finish. It is decorated/moulded with a circular groove around the eye measuring approx. 120 mm in diameter and at least one groove running from the groove to the outside edge. The top is very slightly convex and the grinding surface is flat. It is nicely pecked all over but the grinding surface is worn very smooth with some polish on it. Measures 47 mm thick x unknown diameter. Ctx 130, Pit 165, SF 1, Tenement 173, Phase HMED.

4. **Mortar**. Shelly limestone. Base is worn away altogether. Two ribs, two lugs, one of which is a spout. Vertical sided mortar, which is wider than it is tall. Measures 285 mm external diameter. Ctx 1089, Pit 1092, SF 58, Tenement 173, Phase HMED.
5. **Mortar**. Fine grained white limestone. Two ribs, two lugs, one of which is the spout. Vertical sides. Steep sided mortar, which is wider than it is tall. The sides are not moulded but it has different tooling around the top and bottom to indicate bands. Little used with tooling still clear on the internal faces. Measures 245 mm diameter. Ctx 353, Pit 583, SF 16, Tenement 239, Phase HMED.
6. Natural **whetstone**, complete. Very fine grained grey sandstone. Pebble whetstone straightened along the two long edges and then used so that they are worn very smooth and straight with clear edges to the next faces. One end has some scratches on it that might result from its shaping while the other is natural. Incompletely perforated and with a single long deep groove. Measures 116 x 4 x 16-21 mm thick. Ctx 6647, pit 6855, SF 259, Tenement 170, Phase PMED.
7. **Whetstone**, primary. Norwegian Ragstone? Large whetstone. Crudely shaped with sub-rectangular cross section. Has been well used on at least three

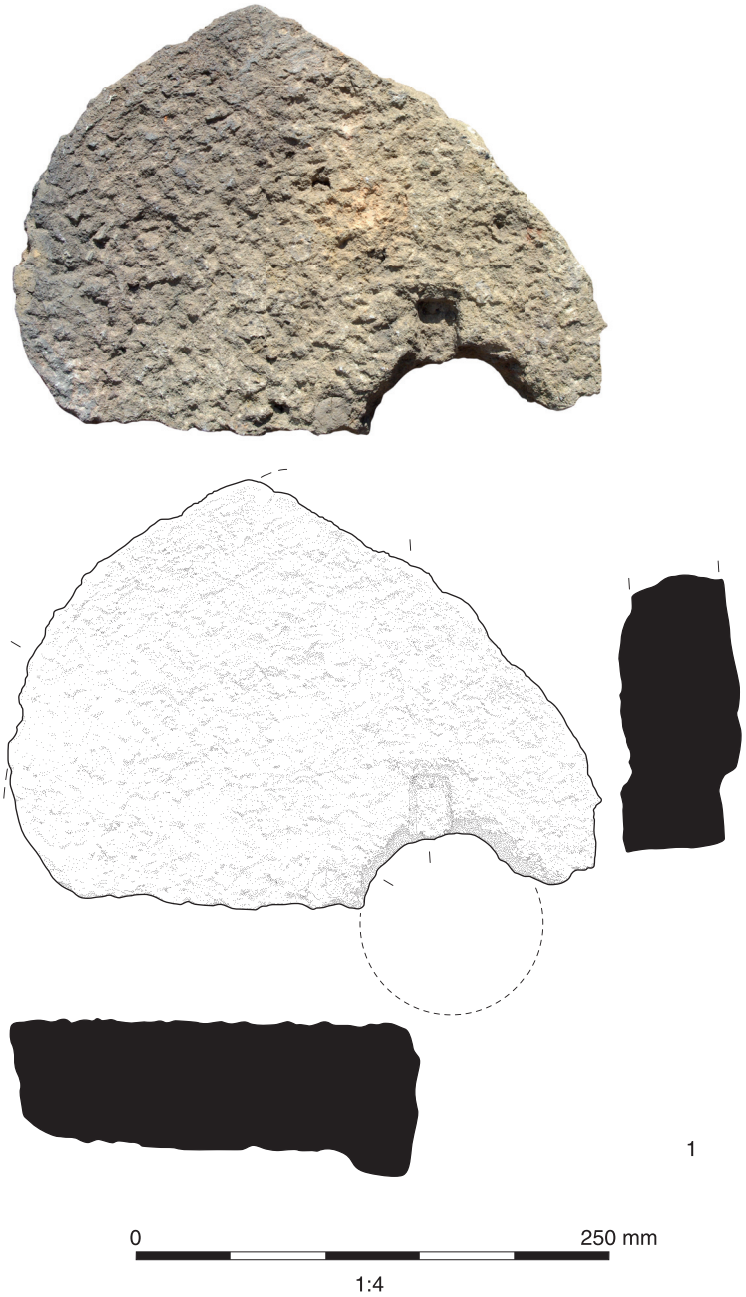

Fig. 5.45 Quern (No. 1)

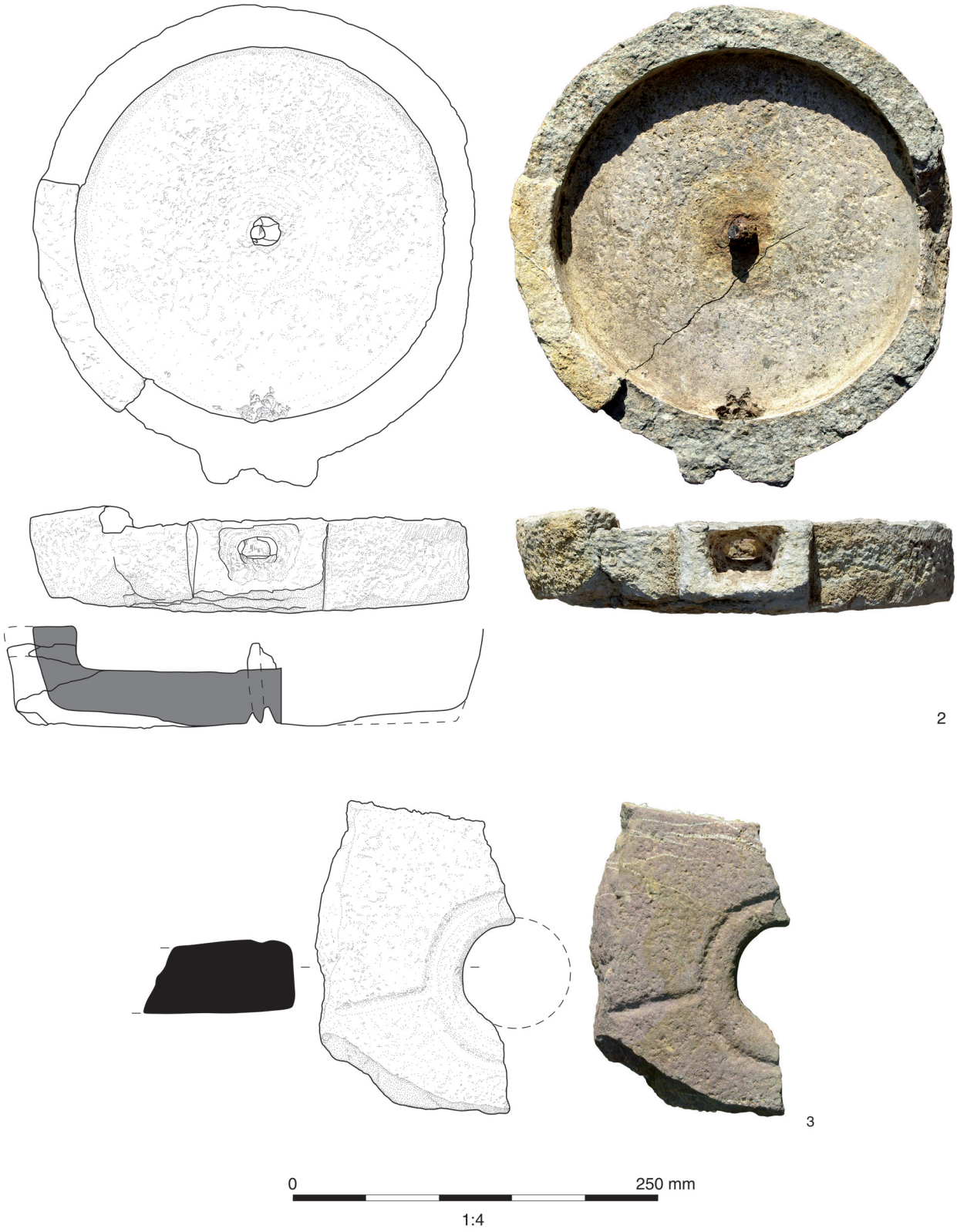

Fig. 5.46 Quern (No. 2) and quern/millstone (No. 3)

Fig. 5.47 Mortar (No. 4)

faces so that they are worn smooth and are flat across the width. The ends are rougher. Measures 550 mm x 26-56 mm x 34-46 mm. Ctx 3028, Occupation horizon, *in situ* destruction layer, SF 36, Tenement 237, Phase HMED.

8. **Palette**, complete. Very fine grey marble. It has a U-shaped shallow indentation that is narrow along the two long sides and wide along the short side. It is smoothed on all its sides and faces but not polished. Measures 81 x 53 x 11 mm. Ctx 6016, Pit 6016, Tenement 171, Phase EMOD.

9. **Incised item**. Very fine-grained non-shelly limestone. Of unknown function and perforated. Possible corner of a mould or slab of which one corner survives. It is incised with four double circles with a pin prick in the centre. The four are divided into two sets joined by a single groove. On the opposite side the stone is very slightly v-shaped leading to a slight groove. Ctx 8026, Pit 8025, Tenement 242, Phase HMED

Fig. 5.48 Mortar (No. 5)

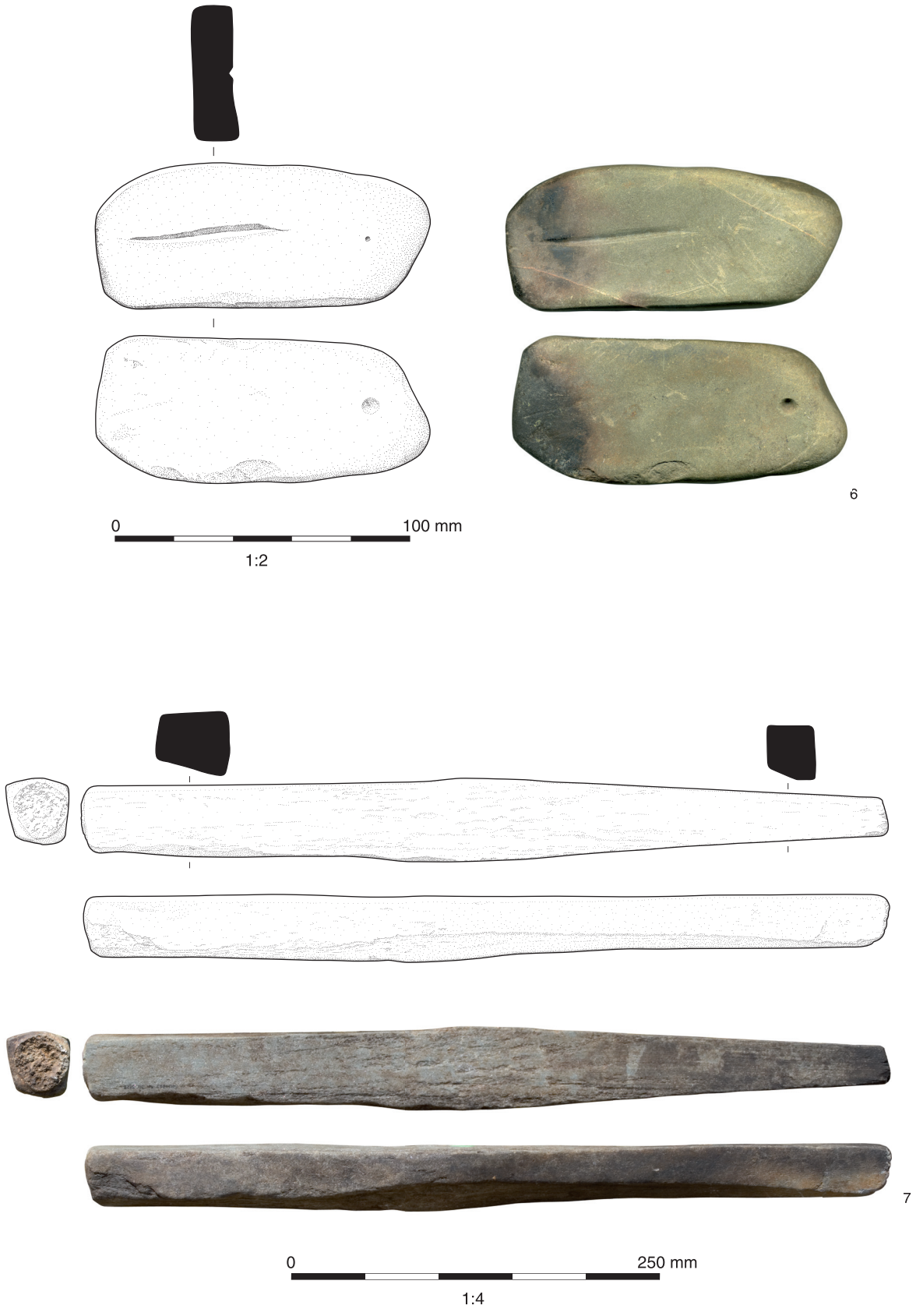

Fig. 5.49 Whetstones (Nos 6 and 7)

WORKED BONE AND ANTLER (Figs 5.51–5.52*)*
by Rosemary Grant, Ian Riddler and Edmund Simons

The assemblage

The group of 44 worked bone objects recovered from the excavations includes objects from a range of functional categories, as well as fragments relating to bone and antler working. Four of the objects are of particular interest and are therefore discussed in detail below, after a summary of the assemblage by site period.

Worked bone by site period

Late Saxon (AD 900-1066)

Among the five objects from the late Saxon phase are two ices skates (No. 7), one made from cattle metacarpal and the other from a red deer radius. Both have been flattened and polished on the underside and show extensive wear to the underside through use. Such skates are well known from late Saxon sites and occurred in the British Isles from the 8th to the 13th centuries (MacGregor 1976, 57-77). An incomplete scale tang handle is made from antler. Only one side of the handle survives, with decoration visible in the form of horizontal bands running along the length. A point made from cattle metatarsal and a piece of worked red deer antler were also found.

Anglo-Norman (AD 1066-1250)

Fourteen objects were recovered from the Anglo-Norman phase, including four needles, a worked pig fibular, an ice skate (No. 8), a single-sided composite comb and a side plate from another (No. 5), a gaming piece (No. 9), three pieces of deer antler tine and a point also made from deer antler. Lastly there is an offcut of bone. Three of the needles are complete and one is incomplete (two of which are illustrated; Nos 1 and 2). Two are made from pig fibulae and two from mammal long bones. The worked pig fibular is flattened and perforated at both ends: such objects were used as pins. The ice skate is made from horse metacarpal and is flattened and polished on the underside with an upswept toe.

High medieval (AD 1250-1350)

Thirteen objects were recovered from the high medieval phase consisting of three ice skates, three needles, a pin, a scale tang handle, a double-sided composite comb (No. 6), two pieces of worked antler and an offcut of ivory. Of particular note is a crossbow nut (No. 10, see below). The three ice skates (one illustrated, No. 8) are all made from horse metatarsals, each with a flattened and polished under surface and an upswept toe. Two of the three needles are incomplete. The other is made from deer antler and is roughly carved. All three have relatively small holes compared to the head and shaft (Nos 3 and 4). The scale tang handle has both side plates remaining and is decorated with

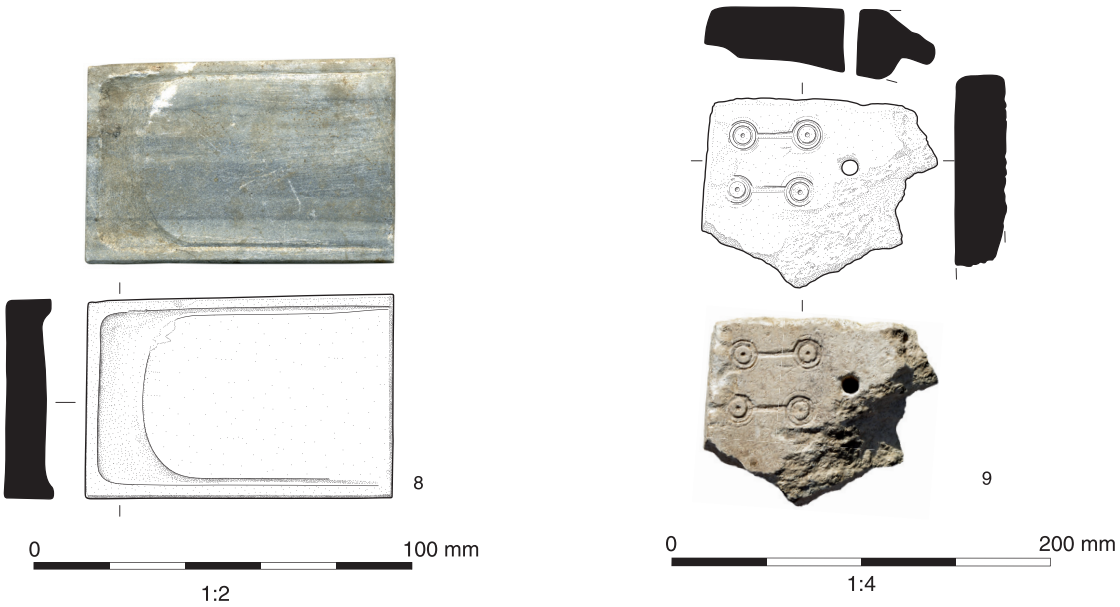

Fig. 5.50 Stone palette (No. 8) and decorated slab/mould (No. 9)

ring and dot motif. There is evidence of an iron tang through the centre of the plates. The double-sided composite comb has a small amount of side plate remaining, and it is decorated with horizontal grooves and ring and dot motif. There are three rivet holes visible where it would have been attached. The teeth are fine and worked into points at the ends.

Late medieval (AD 1350-1510)

A needle and a plate from a scale tang handle, both made from large mammal long bones, were recovered from the late medieval phase.

Post-medieval (AD 1510-1750)

Five worked bone objects came from post-medieval deposits, of which three were made from ivory. The latter group included two double-sided simple form combs (one complete and one incomplete). The third ivory object is a whittle tang handle which has a bulbous end, with threading on the inside of the handle to hold a bung. The two other objects are a possible peg made from a horn core and an offcut of rib from a large mammal.

Early modern (AD 1750-1900)

Five objects were recovered from the early modern phase. A whittle tang handle with a plane shaft has threading on the inside to hold a bung. There is also a possible handle, which has a polished shaft with flattened spatula-like end. The centre section of the shaft is raised and decorated with a band of horizontal grooves. There is also a brush, a mah-jong tile and an offcut of long bone.

Discussion

Combs

The fragmentary comb (No. 5) recovered from Anglo-Norman Property 10 (Tenement 172) is one of the earliest objects from the site. It is single-sided, with decoration restricted to one side, and the saw marks from the cutting of the teeth are also visible on one side only, leaving the reverse entirely blank. The comb therefore has a display side. The provision of a display side on single-sided composite combs occurred only for a relatively short period, during the 8th and 9th centuries (Tempel 1972, 57), and that is the likely date of this comb fragment. Its straight back and near-cylindrical connecting plates suggest that it originally formed a part of a handled comb, a comb type synonymous with *Hamwic*, middle Saxon Southampton. Handled combs were manufactured in large numbers within *Hamwic* across the 8th and 9th centuries, with production increasing steadily over time (Riddler 1990, 19). The emphasis on handled comb manufacture distinguishes *Hamwic* from other contemporary production centres (Riddler 2004, 147). This comb may well have been made there, given its close resemblance to other combs from the settlement, although its simple linear decoration is matched on combs from other sites, including Ipswich, London, Thetford and York (Riddler 1990, fig 2a; Riddler *et al.* forthcoming; Dallas 1993, fig 162.18; Rogers 1993, fig 895.7686). Its closely-spaced riveting, which fastens each tooth segment through its centre, rather than on one edge, is a feature of 9th- to 10th-century handled combs, rather than those of an earlier date (Riddler 1990, 15).

The second comb (No. 6) from Anglo-Norman Property 7 (Tenement 180) is double-sided, with fine teeth on one side and coarser teeth on the other. The connecting plate has a D-shaped section and extends to the end of the comb, with no graduation in the length of the teeth. The comb stands at the end of a long tradition of double-sided composite comb making, extending over the greater part of a millennium. Double-sided composite combs of antler were used in England from the 4th century to the 9th century, at which point circumstances and materials changed abruptly. Double-sided combs continued to be produced from the 9th to the 12th century, but with tooth segments of horn and not antler. Either one or two sheets of horn were retained between connecting plates of bone or antler (Biddle 1990, 678-90; Riddler *et al.* forthcoming). Almost all composite combs of antler were single-sided at this time and double-sided composite combs with antler tooth segments only returned in England in the later 12th to 13th century. The medieval form seen here reflects earlier traditions, but two stylistic features, occurring in conjunction, indicate the date of the comb type. The presence of fine and coarse teeth is a characteristic of the medieval form, but it can also be seen at an earlier date. When it is combined with a lack of graduation in the length of the end teeth, however, then the comb is of medieval date. The movement away from graduating the length of the end teeth of combs can be seen within the Dublin corpus from the middle to the second half of the 11th century onwards and remains a distinctive feature thereafter, albeit with a few combs retaining the older practice (Riddler and Trzaska-Nartowski forthcoming).

Medieval double-sided composites are rare finds in English contexts, a situation noted in the publication of combs from London (Egan and Pritchard 1991, 366). Their absence from medieval contexts is emphasised at Southampton itself, where the earliest medieval comb (of whatever type) from the High Street excavations was assigned to the late 14th to early 15th century (Platt and Coleman-Smith 1975b, 274 no. 1939). Beyond a single example from London, double-sided composite combs have been found at Leicester and Old Sarum (Egan and Pritchard 1991, figs 245-6; Kenyon 1948, 269 and fig. 92.3; MacGregor 2001, 23 and fig 4.12). In contrast, they are relatively common on the

Continent and particularly in Scandinavia, with notable sequences occurring at Dublin, Gdansk, Lund, Ribe and Schleswig, among other sites (Cnotliwy 1973, 189-214; Blomqvist 1942, 153-60; Andersen 1968, 33-41; Ulbricht 1984, tafn 31-2 and 75-7; MacGregor 1985, 95; Riddler and Trzaska-Nartowski forthcoming). One explanation offered previously for their scarcity in England was that double-sided simple combs of horn and wood were preferred instead, yet at Dublin the antler double-sided composite combs are stratigraphically later than the double-sided simple combs of horn, and the latter are more abundant there than anywhere else in Europe (Egan and Pritchard 1991, 366; Riddler and Trzaska-Nartowski forthcoming). Moreover, the comb sequences from England were already diverging from those seen in Scandinavia as early as the 11th century and a more plausible explanation is that the cultural allegiances of craft workers were shifting to France and the Low Countries through the 12th to 13th centuries, and away from Scandinavia. The re-emergence of elephant ivory in England and the corresponding demise of walrus ivory as a raw material have been attributed to a similar shift (MacGregor 1991, 376-7). It is a little ironic, therefore, that a comb from the French Quarter in Southampton may reflect the twilight of a long and enduring relationship with Scandinavia.

Gaming piece

The conical form of the gaming piece (No. 9) and its simple linear decoration, with traces of ring-and-dot patterning at the apex, allow it to be identified as a chess piece. It was recovered from Anglo-Norman Property 2 (Tenement 237) and is similar to antler pawns from a number of English sites, including London, Ludgershall Castle and Winchester (Egan 1998, fig 222.960; MacGregor 2000, fig 6.45.18; Biddle 1990, fig 196.2237; Riddler 1995, fig 1c). Several fragments of antler from St Martin at Palace Plain in Norwich can also be recognised as parts of chess pieces and two in particular share the decorative scheme seen here (Ayers 1988, fig 84.31-2; Riddler 1995, fig 1d). All of these pawns have abstract decoration and are derived ultimately from Islamic designs, which are particularly influential in the early stages of the development of the game in northern Europe. Figurative pieces occur at a slightly later date and even the celebrated sets from the Isle of Lewis still retain pawns of abstract design (J. Robinson 2005, figs 13-14).

Crossbow nut

An antler 'nut' (No. 10) which forms part of the firing mechanism for a crossbow (or arbalest) came from a high medieval pit at Tenement 170. Crossbows have existed in Europe since the late Roman period. The main advantage they have over normal bows is they allow the crossbowman to take careful aim at a target without any physical effort. As such they could be used by untrained troops or for sniping. In the early 13th century new ways of spanning (pulling back the string) on these weapons using windlass pulley systems enabled the building of much bigger and more powerful bows. These new bows were so powerful that they soon changed not only how battles were fought but how castles were built and special cross-shaped loops were inserted into many castles to accommodate the new weapon. In England there were numerous ordinances against private individuals keeping crossbowmen, although exceptions to these laws included certain seaside towns (like Southampton).

The size of the nut from the French Quarter shows that it belongs to a very large military crossbow, possibly even a heavy siege bow. The iron remaining on one side of the nut may even be the remains of the trigger. These very large bows were used from behind cover (either a wall or a man-sized shield called a pavise) and were effectively long-range sniping weapons. The nut would have sat within the bow's wooden stock and would have held the string until the bow was aimed and shot. Although short, the bows of crossbows were very thick and made up of layers of material, making them far too powerful to span (draw or bend) by hand. The notches in the back of the nut were used to hold the crossbow string after it was pulled back by the windlass. The bolt (arrow) was held by the notch running along the rim of the nut (an iron plate would have also kept the bolt in place and this allowed for shooting downwards without loosing the bolt). The trigger was a long pivoted iron bar beneath the stock that held the nut in a V-shaped notch. When the trigger was pressed the nut was released and the bolt would shoot.

Finally, the Southampton find must be considered in relation to the wider context of the current evidence for the dating of crossbows in early medieval England. Biddle published a number of iron objects from Winchester as possible crossbow bolt heads and at least one of them is still acknowledged as probably stemming from a pre-Conquest crossbow (Biddle 1990, 1078-9; Halpin 2008, 45). Arguably more secure dating evidence has been applied to a fragmentary antler crossbow bolt from Dublin, which came from an early 11th-century context (Halpin 2008, 62 and 184). The crossbow was used by the Normans at the battle of Hastings and may have been present in England before that time (MacGregor 1976; 1985, 161). Its *floruit*, however, belongs to the 12th to 13th century, before it was superseded by the English longbow, and this corresponds well with the dating evidence from antler crossbow nuts found in both England and Ireland, including examples from Goltho, Trim Castle, Wareham Castle, Waterford and Winchester (MacGregor 1985, 160; 1987, 192; Halpin 2008, 62; Hurley 1997, 670 and fig 17.4.32; Credland 1990).

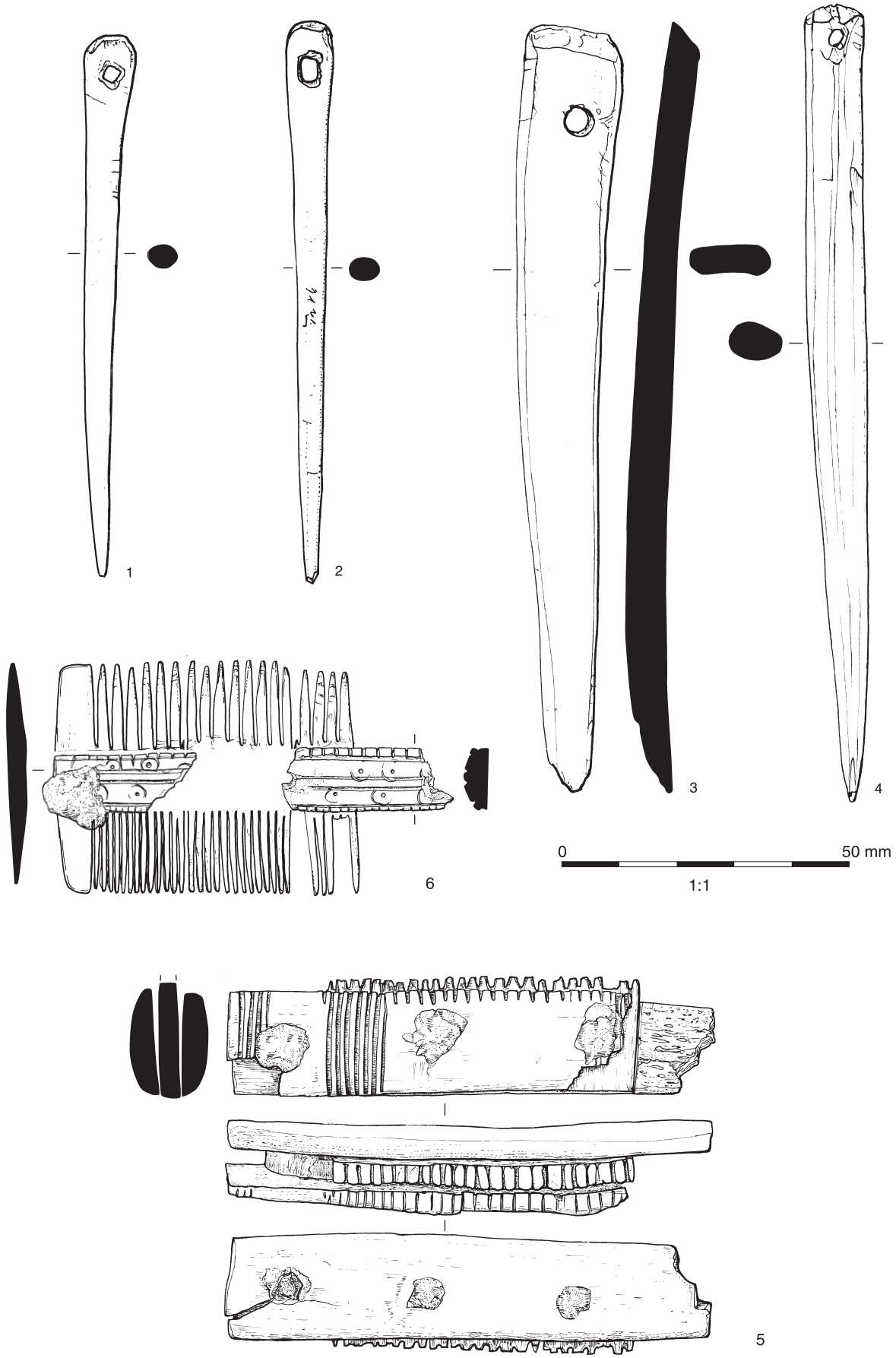

Fig. 5.51 Worked bone and antler (Nos 1-6)

Catalogue of illustrated worked bone
(Figs 5.51–5.52)

Fig. 5.51

1. A complete **needle** made from a pig fibular or large mammal long bone. It has a polished shank with an ovoid section. It has a roughly shaped head with a hole which has been drilled from both sides. It bends along the length, probably through use. (*cf* Harvey 1975, 272, fig. 247, no.1929.) Ctx 6257, Pit 6296, SF215, Property 11 (Tenement 170), Phase AN.
2. A complete **needle** made from a large mammal long bone. It has an ovoid section with a highly polished shank and head. It has a hole which has been drilled from both sides. It bends along the length, probably through use (Harvey 1975, 272, fig. 247, no. 1929). Ctx 265, Pit 266, SF25, Property H/10 (Tenement 173), Phase LSAX/AN.
3. An incomplete **needle** made from a large mammal long bone. It is polished through use and has a large flat head with relatively small hole and an ovoid section. It bends along length, probably through use. (*cf* Margeson 1993, 186, fig. 137, no. 1450.) Ctx 1111, Pit 1113, Tenement 173, Phase HMED.
4. **Needle/point**. Made from deer antler. It is roughly carved with an ovoid section along entire length of needle. Worked to a fine point at the end. Very small hole relative to shaft. (*cf* Harvey 1975, 273, fig. 248, no. 1931.) Ctx 4317, Pit 4318, SF184, Tenement 237, Phase HMED.
5. Bone single-sided composite **comb**. Central tooth plate. Two side plates, one each side. Three rivets are visible on both sides. One side plate is decorated with bands of horizontal groves while the other side plate is plain. There is evidence that the teeth were carved while the tooth plate was in place as there are cut marks extending from the teeth onto the side

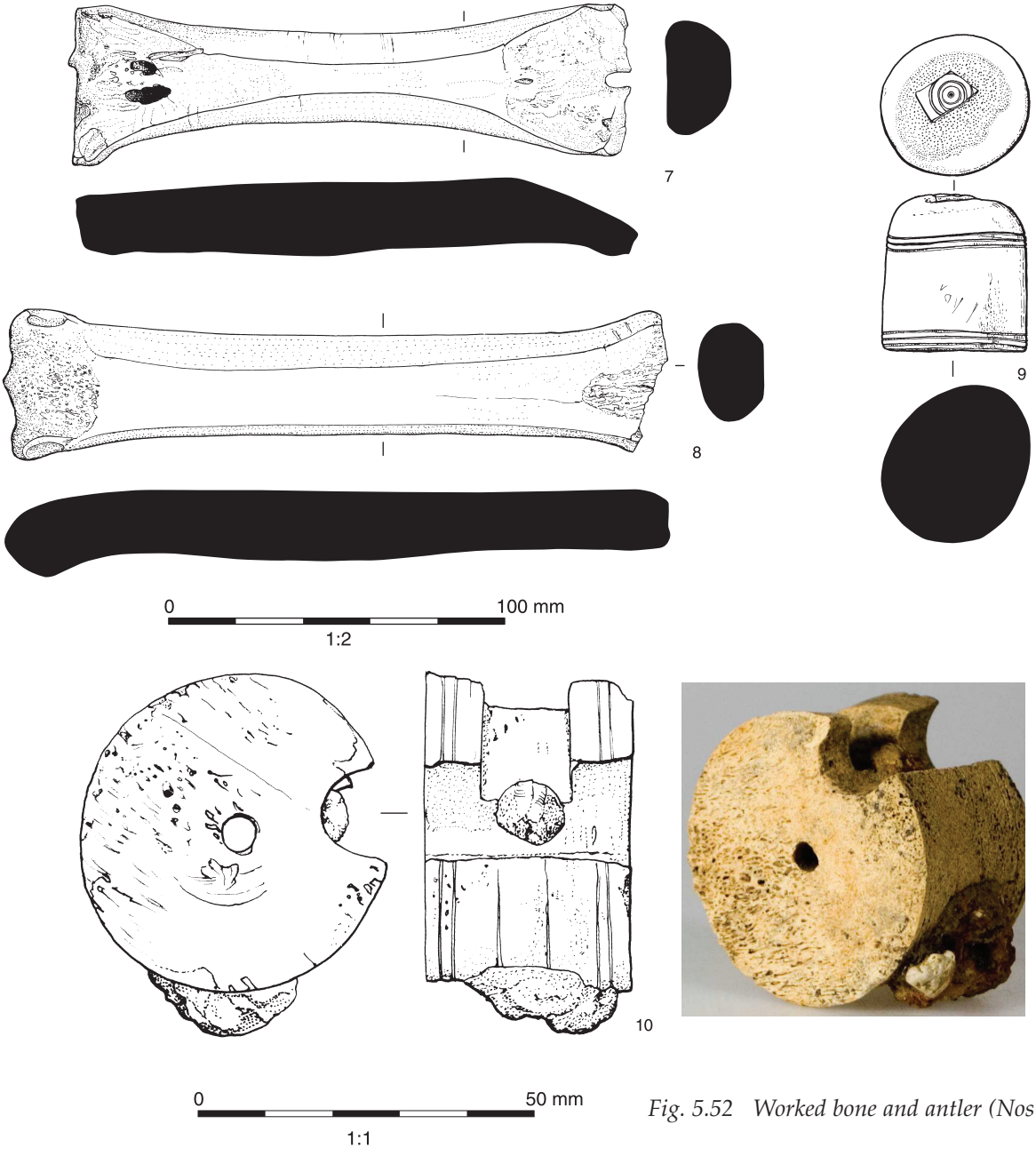

Fig. 5.52 Worked bone and antler (Nos 7-10)

plate. (*cf* MacGregor 1985, 89, fig. 50.) Ctx 7338, Pit 7242, SF279, Property 10 (Tenement 172), Phase AN.

6. Bone double-sided composite **comb**. Convex ends. There are three rivet holes visible on the central reservation of the comb where the side plates would have been attached. A small amount of side plate survives which is decorated with horizontal grooves and ring and dot motif. Two rivets are attached. The comb has fine and coarse teeth. The teeth are worked into fine points at the ends. (*cf* MacGregor 1985, 93, fig. 51d.) Ctx 5373, Pit 5358, SF145, Property 7, Tenement 180, Phase AN.

Fig. 5.52

7. **Ice skate** made from a cattle metacarpal. The skate has a polished and flattened under-surface. There is extensive wear to the underside at each end. (*cf* Biddle 1990, 709, fig. 199.) Ctx 3758, Pit 3756, Property G (Tenement 175), Phase LSAX.
8. **Ice skate** made from a horse metacarpal. The skate has a flattened and polished under-surface and an upswept toe. (*cf* Biddle 1990, 709, fig. 199). Ctx 889, Pit 884, Property H (Tenement 172), LSAX.
9. **Gaming piece** made from deer antler. It is oval with a domed top. It has 3 incised lines that encircle the shoulders with another three encircling the base. The top is worn away but a small amount survives in the centre showing evidence of ring and dot motif. (*cf* Brown 1990, 705, fig. 196, no. 2237.) Ctx 3314, layer, SF144, Property 2 (Tenement 237), Phase AN.
10. Complete **crossbow nut**, cut from the burr of a red deer antler and lathe-turned, with a small, axial perforation at the centre and a curved notch cut into one side. Iron corrosion below the notch represents a part of the trigger mechanism, while a medial groove above the notch retained the end part of an arrow. Traces of wear are visible on the notch, medial groove and axial perforation. Ctx 6054, Pit 6043, Tenement 170, SF 206. Phase HMED.

WORKED WOOD *by Damian Goodburn*

A charred, turned vessel base from a high medieval demolition deposit (8029), apparently associated with the French Raid of 1338 at Tenement 243 was perfectly round with concentric turning rings and centre marks. The splitting marks followed the rays in the timber showing that it had been turned out of a section of pole – goblet-fashion, with the heart in the middle – rather than made from a split log section. It is likely that this was a tough smooth grained wood such as birch or box. It must have been the base of some form of cylindrical container or canister.

Among the remaining assemblage of water-logged wood recovered from the site were a few identifiable objects, most of which came from a 19th-century well at Tenement 170, where a substantial well foundation frame of three timbers was recovered. The timbers refit to form a horse-shoe shaped frame, measuring *c* 1.42 m by 1.3 m wide. While the woodworking technology used has a very broad date range of between *c* 1500 and the end of the 19th century, the solid condition of the timber and associated pottery confirms a late 18th- to early 19th-century date for the frame. Timber frames of curved elements used as foundation sills for wells of stone or brick are well-known structures in London and elsewhere, although the form of assembly varies. There is no sign that the timbers were reused from a ship or any other structural use, although such timbers were widely used as brackets or 'knees' in ships to reinforce the joins, typically between cross beams and the vessels' sides. Although the French Quarter timbers show no signs of the necessary trimming or fastening holes which would indicate that they had been used in this way, they are very likely to have been prepared and stockpiled for use as ship knees. Presumably the carpenters who made the well frame bought the timbers from a nearby shipyard.

Finds from the well fills included a circular elm disk, which may have been a lid for a small tub or large jar. A small crudely axe-shaped wedge was found in the same well fill made from an oak offcut and was perhaps used for splitting logs, to wedge doors or chock up structural timbers. A plank off-cut is of particular interest as it appears to be a dense sub-tropical 'pitch pine' type timber. Pitch pine (now more usually known as Longleaf Yellow Pine) is one of a group of dense rot-resistant pines from south-eastern USA/Caribbean region. It was much used in 19th-century nautical woodwork and joinery in Britain.

TEXTILES *by Penelope Walton Rogers*

The three fragments of textile found are typical of urban English textiles of the periods from which they come and, as such, they form a useful corrective to the only other late medieval collection recorded from Southampton, from late 13th-century Cuckoo Lane (Crowfoot 1975). When first published in 1975, the limited amount of comparative material available could not reveal how unusual the Cuckoo Lane collection was for its date, although it is now clear that the fine-wool tabby-weave textiles, as well as the silks and palm-fibre cordage, probably represent imported goods from the Mediterranean world. The finds from the French Quarter, on the other hand, demonstrate that elsewhere in Southampton there were textiles which had a better fit with English textiles of the period.

Fragments of a relatively coarse wool textile were recovered from Anglo-Norman cess-pit 7572 in Property 12 (later Tenement 167). It is woven in 2/1 twill, which was a weave structure that first appeared in urban sites in the 10th century and became the standard weave for wool textiles from the 11th to the mid 14th century (Walton Rogers 2001, 166-8; Crowfoot *et al.* 1992, 26-8). Textiles of this very common fabric-type have been found in urban centres in many parts of northern Europe and the use of Z-spun yarn in one system and S-spun in the other is typical (ibid.). Comparable examples

have been recorded at 10th- and 11th-century Winchester (Crowfoot 1990; Walton Rogers unpublished), but this seems to be the first from Southampton. The low thread-count of the French Quarter fragment (10/Z x 6/S per cm) suggests either a low-grade clothing fabric or a piece of household furnishing. It may have been used as a latrine-wipe in its final stage of use, or it may have been part of the general domestic rubbish dumped in the cess pit.

Remains of a charred linen textile were found with a length of a fine, tightly plied linen cord in a 14th- or 15th-century demolition layer at Tenement 242. The textile has the typical tabby weave and Z x Z spin of medieval linens, but it is relatively coarse (12-14 x 10-12 threads per cm) in comparison with others of the period (Walton Rogers 2002, 2881-4; Crowfoot *et al.* 1992, 80). It may represent bed linen, or perhaps a working person's dress or shirt material. The fine cord seems coarse for sewing thread and might have been used, for example, to lace a garment.

A folded wool textile was found with late 15th- and early 16th-century glassware on Tenement 237. It is woven in tabby weave (plain weave), with 8/Z x 8/S threads per cm. Similar textiles were found among the large collection of 15th- and 16th-century tailors' offcuts from Black Gate, Newcastle upon Tyne, although most of these had received some form of soft-finishing (Walton 1981, 194-5, 197). The wool of the French Quarter example included pigmented fibres which would have made it less valuable in the eyes of the textile trade and this, together with the low thread-count and the absence of soft-finishing, suggest a household fabric, such as a blanket or cover.