

**A 17TH-CENTURY WELL GROUP
FROM ST. STEPHEN'S STREET, NORWICH (SITE 301N)**

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(with a note on the clay pipes by Susanne Atkin)*

SUMMARY

In May 1976 re-building work on St. Stephen's Street revealed a 17th-century well that had later been converted into a cesspit. This contained one of the largest stratified assemblages of local and imported 17th-century wares found so far in Norwich, as well as a large number of clay pipes. As such, it is one of the key sources for the dating of local pottery of this period.

INTRODUCTION

The removal of the sides and floor of a 20th-century basement on the site of no. 48 St. Stephen's Street during May 1976 revealed a number of archaeological features cut into the natural sand. These were recorded by the Norwich Survey, under the supervision of Malcolm Atkin. The work was carried out through the courtesy of the owners, Norwich Co-operative Society Ltd., who have kindly donated all the finds to the Norfolk Museums Service (accession no. 373.976). This report is concerned primarily with the pottery finds from the well. The other features were not associated and their details are merely listed in archive form. The unusually large number of clay pipes from the feature have already been published elsewhere (Atkin and Davey 1984) but the chief results as they relate to the dating of the well have also been summarised in a note to this report. There were no other datable finds. The county sites and monuments number of the site is 301N and all finds and records have been deposited at Norwich Castle Museum.

THE SITE (TG 2286 0812)

The tenement on which the well and other features were found has now been absorbed within the 'Co-operative Stores' complex, but was originally no. 48 St. Stephen's Street as plotted on the 1885 O.S. Map (Fig. 1). This is, in fact, one of the few parts of St. Stephen's Street that remains on the line of the 19th century frontage, after the re-development of the 1960s. The well itself lay directly on a wall line as recorded in 1885, with the suggestion that it originally lay on the rear wall of a building and was then capped when additional rooms were added to the north. The precise role of the well within the tenement was, of course, destroyed on the insertion of the 20th-century basement (Fig. 1B). Thus the well only survived at a depth of 3m below existing ground surface. All the surrounding features had been destroyed, with no relationship to the other features visible in the sides of the excavation after the basement lining had been removed. These features consisted of isolated medieval and post-medieval pits.

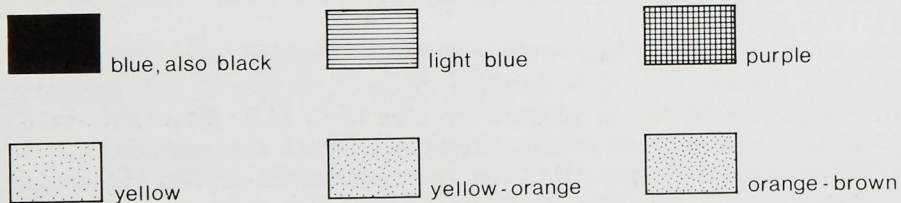
THE EXCAVATION

All recording work had to be completed within a period of two days, before a concrete raft was laid. This dictated the approach of the excavation and meant that stratigraphy could not be examined in detail, and finds from what appeared to be minor lenses within main layers were amalgamated. The basic stratigraphic phases were, however, quite distinct and have been supported by the subsequent analysis of the finds.



COLOUR CODE SYMBOLS

Tin - Glazed Earthenware



Slipwares



Fig. 1

Site location plans: A 1885 (Scale 1 : 500); B 1976 (Scale 1 : 1000). Shaded area indicates modern cellarage. Pottery Colour-code conventions.

The Well (Feature 1)

This consisted of a 3.90m deep feature, with an oval plan (1.30m x 1.40m) at the surviving top, narrowing to a round base of 0.85m dia. and cutting through natural sand into the bed-rock chalk. The overall depth of the feature may have been *c.* 6.90m, before being destroyed by the modern basement and was dry when excavated. It was lined to a depth of 2.48m (the junction with the solid chalk) with flint nodules and broken bricks, set in a very clayey yellow-grey mortar and 15cm wide. The bricks in the lining have been identified by Mr. Paul Drury as being of type LB1, a common type of the 16th-early 17th century (Drury 1982).

The fills of the feature fell into a number of clear phases, although there was some disturbance of the upper layer which was initially investigated by workmen before the find was reported to the museum. These major phases are summarised in Table 1.

Table 1

Phase	Layer	Character	Interpretation
I	7	Primary fill of sandy mortar (45cm)	Construction debris
	6	Mixed rubble (10cm)	
II	5	Very humic brown loam (15cm)	Accumulation during use as well
III	4	Mixed rubble (40cm)	Debris from surface building work
IV	3	Grey silt (30cm)	Conversion to use as cesspit
	2	Succession of finely-banded silts with a high ash and organic content (50cm)	
	1	Highly organic brown silt (1m)	

The dating and further interpretation of the feature will be discussed below.

THE POTTERY

The pottery from this well which was later turned into a cess-pit, spans nearly the whole of the 17th century. This assemblage comprises a minimum of some 290 vessels which form an important group of both local wares and imports from England and the Continent. Although there was earlier material from pits in the area of the well, there was no earlier, intrusive pottery in the well itself, so the contents of this feature form a cohesive whole. The imported pottery, together with the additional dating evidence of the clay pipes (see below p. 34) and Atkin and Davey 1984 forthcoming) gives an unusually precise picture of the pottery in the 17th century, without the masking effect of residual pottery which is normally found on excavation sites with successive periods of construction and occupation. As a result the site has given a very clear picture of the development of the locally made wares, particularly the Glazed Red Earthenwares (a type of pottery that was manufactured over a long period of time).

The Glazed Red Earthenwares were mass produced for local distribution and were the cheapest form of ceramics available at this date, providing the basic vessels in general use. Although not made in Norwich, Glazed Red Earthenwares

(GRE) are known to have reached there in the last quarter of the 16th century, and by the early 17th century they dominated the local market, providing all the domestic and kitchen ceramics with the sole exception of drinking mugs and cups. They were one of the longest surviving groups of pottery and were produced in vast quantities throughout the 17th and 18th centuries, and continued to be made in the 19th and early 20th centuries. Potteries producing this type of ware were usually situated in the countryside, but within easy reach of large centres of population. Probably several kiln sites supplied Norwich at any one time, and one of these during the 17th century was certainly a kiln site near Wroxham which was producing both Glazed Red Wares and the Black-glazed mugs and tygs, similar to those found on this site (pers. comm. A. Rogerson).

GRE dominates this group of pottery for the whole period and the relatively limited number of vessel forms and the used to which they have been put shows that the group can only have been from a domestic household and most of the vessels were probably discarded from the kitchen.

The material from the lower well forms a group in its own right and provides an interesting contrast to the later material found in the cesspit. Several of the forms that are in this phase are not present in the cesspit and *vice versa*. As there is very little material in layer 7, and layers 6 and 5 contain fragments of the same vessels, the material from these layers has been dealt with as a single group, without any attempt to separate the pottery into different stratigraphical sections. Several of the hollow wares are extensively sooted on the exterior, and have obviously been used for cooking over a long period (whereas in the later phases only the flatwares were used). Of the examples in the well at least two are tripod vessels (Fig. 2, Nos. 12 and 13) and another, a pipkin, also probably had three feet, but insufficient of the base remains to be certain (Fig. 2, No. 11). Although little of the handle survives, enough of the rim remains to be certain that the handle does not re-attach (cf. Jennings 1981, fig. 71). These pipkins often continued to be used after the handle had been broken, or even after one or more of the tripod feet were missing. The other hollow wares in GRE are jugs, chamber-pots and storage-jars. One of the jugs (Fig. 3, No. 26) was found intact except for a small section of the rim. Both the jugs are taller than the later examples and have more sloping shoulders. Although there are three chamber-pots (Fig. 2, Nos. 14-16) there are no fragments of either the tall storage jars or the straight-sided small jars found in Phase III upwards. There is one large and substantial tripod base which was probably not used for cooking but is more likely to be the base for a larger storage-jar, unfortunately none of these vessels survive in anywhere near a complete form in this group. Fig. 2 No. 10 is the only example of a lamp in the well. Although lamps are common in the Saxo-Norman period in Norwich, very few medieval examples are known, and it is not until the post-medieval period that they become relatively common again. The post-medieval lamps obviously derive from Dutch examples, which were copied by local potters, along with several other forms, in the late 16th and early 17th century.

The flatwares in this phase are mainly represented by steep-sided bowls and shallow dishes (Fig. 3, Nos. 22-25). Neither of these forms changes very much during the 17th century, but the small bowls with either vertical or horizontal handles, common in the upper cesspit, are not present in this lower deposit. A few of the flatwares have signs of sooting on the back, including one of the steep-sided bowls, but fewer of these have been used for cooking than in the later period.

Another type of locally-made earthenware present in this phase is the Black-glazed ware. The thick, opaque black glaze was achieved by the addition of iron and manganese to the commonly used clear lead glaze and was mainly used on jugs and drinking vessels. Although other vessel forms have been found elsewhere with this type of black glaze, including a rectangular dripping-dish and several storage-jars, this is rare and certainly in the case of the storage-jars, the date is at least a century later. The black glaze seems to have been used for all the locally made undecorated drinking mugs of the 17th century. Examples in GRE are virtually unknown and no complete examples have so far been found in Norwich.

The pottery dating evidence for this lower group is mainly given by the imported wares. In layer 7 one of the few fragments is a Frechen Stoneware base, similar to Fig. 2, No. 7, and is also probably the base of a bellarmine bottle. Frechen Stonewares are first found in Norwich in the later half of the 16th century, but the bellarmines tend to date from the 17th century. Other imports from layers 6 and 5 include a single sherd of Weser Slipware, Metropolitan Slipwares, Dutch tin-glazed earthenware, a Martincamp Type II flask, and fragments of three Surrey White Ware vessels. Weser Slipwares were made in the area between the middle River Weser and the River Leine area of Germany in the late 16th and the first quarter of the 17th century. Most examples in Norwich seem to date from the early 17th century but evidence from excavations has, however, shown that these highly decorated vessels had a long life survival and were usually discarded in the second quarter of the 17th century. The single sherd of Weser ware is from a shallow dish with typical wavy line decoration (Fig. 2, No. 5). Metropolitan Slipwares were made at Harlow, Essex from *c.* 1615 onwards (Newton 1960, 358-62) and the rim fragments of a ?mug is typical of the products of these kilns, with white slip decoration under a clear lead glaze. Surrey White Wares were made in several places near the Hampshire/Surrey border and the three identifiable vessels (Fig. 2, Nos. 1-3) can be paralleled by the products from a kiln at Cove, East Hampshire, dated to the second quarter of the 17th century (Haslam 1975, 164-5). The bowl has the standard rolled-rim of many of the Surrey Ware flatwares, and the small cup (Fig. 2, No. 2) which probably had a horizontal loop handle, is a form that was copied by local potters in GRE (cf Fig. 10, No. 121). Even in small fragments the Martincamp flasks are distinctive vessels, with rounded bases and tall thin necks. They were imported from Dieppe to Yarmouth in large numbers during the late 16th and 17th centuries and according to the documentary evidence they were covered in with wicker-work (which may have enabled them to stand upright). The tin-glazed fragment is rather small but enough survives to show that it is from the base of a shallow dish with a lead-glazed back (Fig. 2, No. 4). On both form and subject grounds it is far more likely to be Dutch than English, and at this period the majority of the tin-glazed earthenwares found in Norwich are from the Netherlands. The sherd shows part of a wing and can be paralleled to paintings of cherubs often found on Dutch dishes which date to the first half of the 17th century (Korf 1963, 86-7).

The range of imports from the well would, therefore, indicate a period of deposition from *c.* 1600 to the mid-17th century, which broadly matches the dates of the earliest clay pipes.

Phase III (layer 4) produced a different range of GRE forms and the first examples of Speckled-glazed Wares, as well as an increase in the number of Black-glazed Wares. The main new GRE vessel forms are storage-jars in two

different sizes (Fig. 5, Nos. 40 and 45) and the small bowls (Fig. 5, Nos. 52-55). These are all in common use until the end of the life of the cesspit. During the mid-17th century the use of ceramic hollow wares as cooking-pots largely dies out. It seems likely that they were totally replaced with metal cauldrons but, however, traces of these are rarely found during excavation as they are patched if damaged and re-cycled when beyond repair. It is from the mid-17th century that many of the flatwares, small bowls and shallow dishes particularly, show extensive signs of having been used over open fires; this is the case with the four small bowls from Phase III, and at least one of the steep-sided bowls. These were used for preparing small amounts of food, probably sauces or something similar. Fig. 5, No. 54 is an example of a bowl form that is common on excavation sites during the first half of the 17th century, but dies out after the introduction of small bowls. The flat bottom frying-pan (Fig. 5, No. 51) from this phase is the only example in the whole assemblage, although there is a tripod skillet from Phase IV. The occurrence of frying-pans is more frequent in the 16th than the 17th century, when they were imported from Holland in large numbers. This example was, however, made locally, it has a flat base whereas the Dutch frying-pans have sagging bases, and a pronounced ridge on the inside at the junction of the side and the base.

The tall thin-walled storage-jars are very similar in form to the chamber-pots, but they are always some 5 to 7 cms taller and never have handles. The smaller jars usually have straight or slightly concave sides (Fig. 5, No. 45 is the only example with slightly convex sides). All the examples from this well are glazed on at least the upper three-quarters of the outside as well as the inside, whereas most of the tall storage-jars and chamber-pots are glazed on the inside only. From this phase onwards the majority of the wide mouth hollow wares have three small stacking scars in the glaze on the inner base. They are the marks left by triangular stilts or trivets used to separate glazed pots during firing in a kiln. The chamber-pots and storage-jars were obviously used as saggars, and the more delicate or expensive items were placed inside them for protection while they were being fired in the kiln. In two cases the inner bases also have what is probably traces of a darker, or black glaze, and it is therefore likely that the Black and Speckle-glazed mugs and cups were fired this way.

Speckle-glazed Wares have an even, translucent, rich brown glaze with the addition of small particles of iron oxide. When the dry glaze melts during firing the iron oxide particles dissolve and run downwards through the glaze producing irregular streaks of darker brown. Like the Black-glazed jugs the Speckled examples are well made and finished, and often have additional embellishments such as a rolled piece of clay at the top of the handle. Although the Speckle-glazed Wares were providing vessels with the same functions as the Black-glazed Wares, jugs and drinking vessels, the forms are slightly different. The tops of the jugs are wider whilst the drinking vessels are squatter with rounded bases and have a cup shape rather than a tall mug shape. Fragments of these Speckle-glazed cups are present in Phase III, but the more complete and illustrated examples come from Phase IV (Fig. 9, Nos. 103-105). It is not known if the Speckle-glazed Wares were made at the same centres as the Glazed Red Earthenwares and Black-glazed Wares. They do, however, have small tripod stacking marks on some of the bases and are thin-walled, so would need to be protected either by a sagger made for the purpose, or by being placed inside a larger pot.

The range of imports in Phase III has changed little from that in Phases I and II, but some of the forms are different. There are two examples of Metropolitan

Slipware dishes (Fig. 4, Nos. 29-30) but no hollow wares. Only two small featureless sherds of Surrey White Ware were found and this type of pottery does not occur again in the cesspit. The numbers of tin-glazed earthenwares increases and includes both English and Dutch examples. The Dutch fragment is probably from a large 'tulip' charger. Two of the identifiable English tin-glazed vessels date to the mid-17th century; one is a nearly complete plain white-glazed mug (Fig. 4, No. 32), the other is from the base of a sponged-manganese dish (Fig. 4, No. 34). The form of the mug has a date range of 1640-70 and examples with dates included in the decoration are known of 1642 and 1650 (Garner and Archer 1972, pls. 8A and 33A). The fragments of the plain tin-glazed plate (Fig. 4, No. 33) are found in layers 1, 2, 3 and 4, and it is possible that the fragment from layer 4 is intrusive from higher up the cesspit, as this form of plate does not usually occur until the end of the 17th century, but they can date from *c.* 1650 onwards. An unusual find in Norwich are the two fragments of a Hispano-Moresque copper lustre bowl (Fig. 4, No. 31). The copper lustre decoration was added after the bowl had been glazed and fired and it was then re-glazed in a kiln at a lower temperature. Although it is not possible to date these small fragments very closely, this is undoubtedly a 17th-century example.

Several of the vessels found in Phase III have joining fragments in Phase IV, layer 3. Those vessels that are present in both phases have been dealt with in the lower phase. The very small amounts of Surrey White Ware, the tin-glazed earthenwares and the Metropolitan Slipwares would all indicate a mid-17th century date for this phase.

The cesspit itself (Phase IV) contains the bulk of the pottery from this whole feature. Layer 3 has some pottery which is earlier than layers 1 and 2 as well as fragments that join to material from those two layers. For this reason the material from layer 3 has been illustrated separately, while layers 1 and 2 have been dealt with together.

All of the standard Glazed Red Earthenwares that appear in Phase III, storage-jars and small bowls together with jugs, chamber-pots and shallow dishes, continue in use until the end of the life of the cesspit. However, several vessel forms, usually with just a single example of each, only occur in layers 1 and 2. These include the tripod frying-pan or skillet (Fig. 9, No. 97), a small cooking-vessel with a handle and pouring lip (Fig. 9, No. 99) and a large tripod pipkin (Fig. 9, No. 102) that was probably also used for cooking, and fragments of two strainers (Fig. 9, No. 100). The large thick-walled storage vessels (Fig. 9, Nos. 95-96) mostly come from layer 1; none are anywhere near complete and several are represented by substantial bases only. There are no Black or Speckle-glazed jugs from Phase IV, but mugs, two-handled tygs and cups are well represented. Fig. 10, No. 115 is the only example of a Speckle-glazed Ware chamber-pot.

Phase IV contains a large number of imports and these include the only examples of Westerwald Stonewares as well as small sherds of Italian Marbled Ware and Staffordshire Combed Slipware, together with the tin-glazed wares, Frechen Stoneware and Metropolitan Slipwares which were also found in the lower sections of the well. Italian Marbled Wares were made at Pisa, Italy, during the first half of the 17th century (Jennings 1981, 94-5) and this single sherd is probably residual. The small sherds of Staffordshire Slipware come from a hollow ware vessel with typical combed decoration on the exterior surface. The earliest known dated examples of this type come from the 1680s (Mountford 1975, 2-3). All of the tin-glazed earthenwares that can be definitely attributed come from England. These include fragments of three plain drug or ointment pots of a type made over

Table 2

FABRICS AND FORMS		I	I and II	III	IV 3	IV
Imported Wares	Weser Slipware		2			
	Surrey White Ware	1	3	2		
	Metropolitan Slipware		1	3		7
	Frechen Stoneware	1	4	1		8
	Dutch Tin-glazed Earthenware		1	1	1	1
	English Tin-glazed Earthenware			4	2	20
	Hispano-Moresque			1		
	Italian Marbled Ware					1
	Dutch Slipware				1	
	Staffordshire Combed Slipware					1
	Westerwald Stoneware					5
Glazed Red Earthenwares	steep-sided bowls		9	4	5	8
	small bowls			6	4	16
	shallow dishes		5	2	1	17
	chamber-pots		4	12	5	18
	small storage-jars			1	3	3
	tall storage-jars			1	1	2
	large storage-jars			1		9
	jars		3	2	1	2
	jugs		4		1	5
	cooking-vessels		4			2
	tripod ?storage-jars		1			1
	frying-pans/skillets			1		1
	lamps		1			
	misc. vessels		4	3		18
Black Wares	jugs		1	2	1	
	mugs	1	4	4	1	6
	tygs					3
Speckle Wares	jugs			1	1	
	cups			2		5
	chamber-pots					1
TOTALS		3	49	54	28	160

a long period of time, and fragments of eight plain white plates which date to the end of the 17th century on grounds of shape. Fig. 8, No. 86 has a Wan Li style border with a 'daisy' central motif. This is a style of decoration common in both the Netherlands and England in the mid-17th century (Noël Hume 1977, 45-7). The Metropolitan Slipware dishes show some signs of having been used over a long period of time, with scoring and scratch marks in the glaze of the base area.

Apart from the Staffordshire Slipware, the other group of imports dating to the end of the 17th century are the Westerwald mugs and jug (Fig. 7, Nos. 77-81). These were made in an area east of the Rhine between the River Sieg and the River Lahn called Westerwald. The distinctive light grey stoneware decorated with cobalt blue, and later with manganese purple, was imported into England from the early 17th century and by the late 17th century the numbers involved were vast. This type of pottery is still in production today (Reineking-von Bock 1971). The straight-sided mugs become very common in Norwich at the end of the 17th century and during the early 18th century when, together with imports from Nottingham and Staffordshire, they gradually replace the locally made examples.

The date range of the imports found in Phase IV is from the middle to the end of the 17th century, which is also the date range of the clay pipes. However, it should be stressed that highly decorated imported wares were relatively expensive compared to locally made pots, and although easier to date more precisely, often had a much longer life.

The Illustrated Material

As the number of different fabrics in this group are limited, broad fabric descriptions are given. These apply to individual vessels unless stated otherwise.

Glazed Red Earthenwares (GRE): slightly sandy fabric, sometimes with occasional white, red and small black mineral inclusions; colour varies from light orange through orange and red, to brown. The clear lead glaze takes most of its colour from the fabric.

Black-glazed Wares: fabric as for GRE. Thick opaque black glaze which becomes translucent only when thin. Vessels can often be partly reduced around the rim.

Speckle-glazed Ware: fabric as for GRE. Translucent rich brown glaze with darker brown streaks. The vessels are consistently fired and the fabric is usually bright orange in colour.

Surrey White Ware: slightly sandy fabric with small orangey-red inclusions which vary in frequency, colour range off white to pale creamy pink in colour. Semi-translucent lead glaze on interior of vessel only. The vessels in this group only have a light yellow glaze.

Metropolitan Slipware: iron-rich clay varying in colour from light to brown through orange to brownish-red. Decoration of trailed white pipe-clay under a clear lead glaze, giving the slip a cream to pale yellow colour.

Frechen Stoneware: reduced grey fabric; exterior covered with a salt glaze which is usually brown but sometimes with grey areas.

Westerwald Stoneware: fine pale grey fabric with a light grey salt glaze over. Decoration in both cobalt blue and manganese purple.

Tin-glazed Earthenwares: fairly fine off white to cream fabric, tin glaze often with varied decoration on at least one surface.

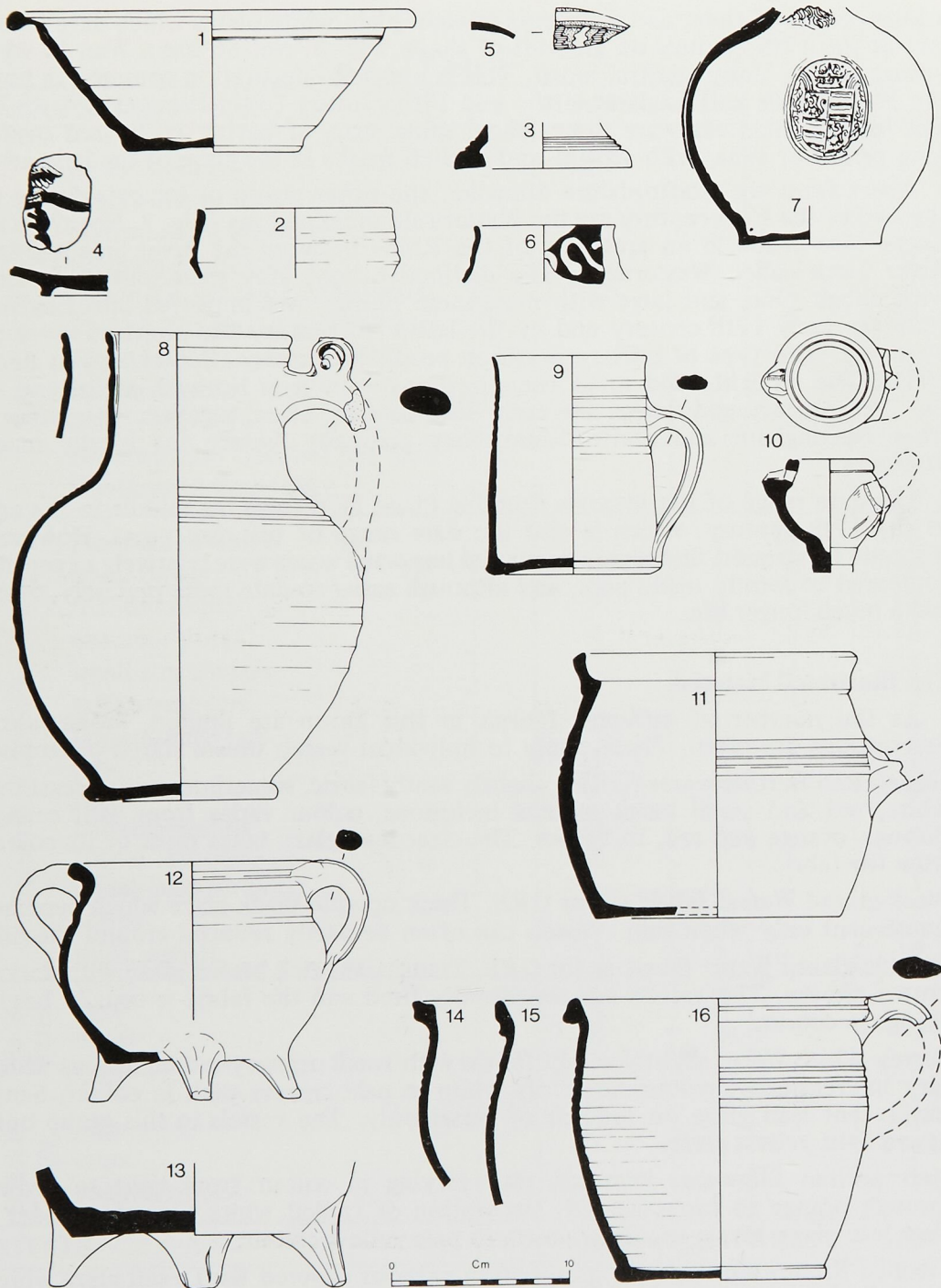


Fig. 2
Phases I and II. Imports, Black-glazed wares, Glazed Red Earthenwares (GRE). (Scale 1 : 4)



Fig. 3
Phase I and II. Glazed Red Earthenwares. (Scale 1 : 4)

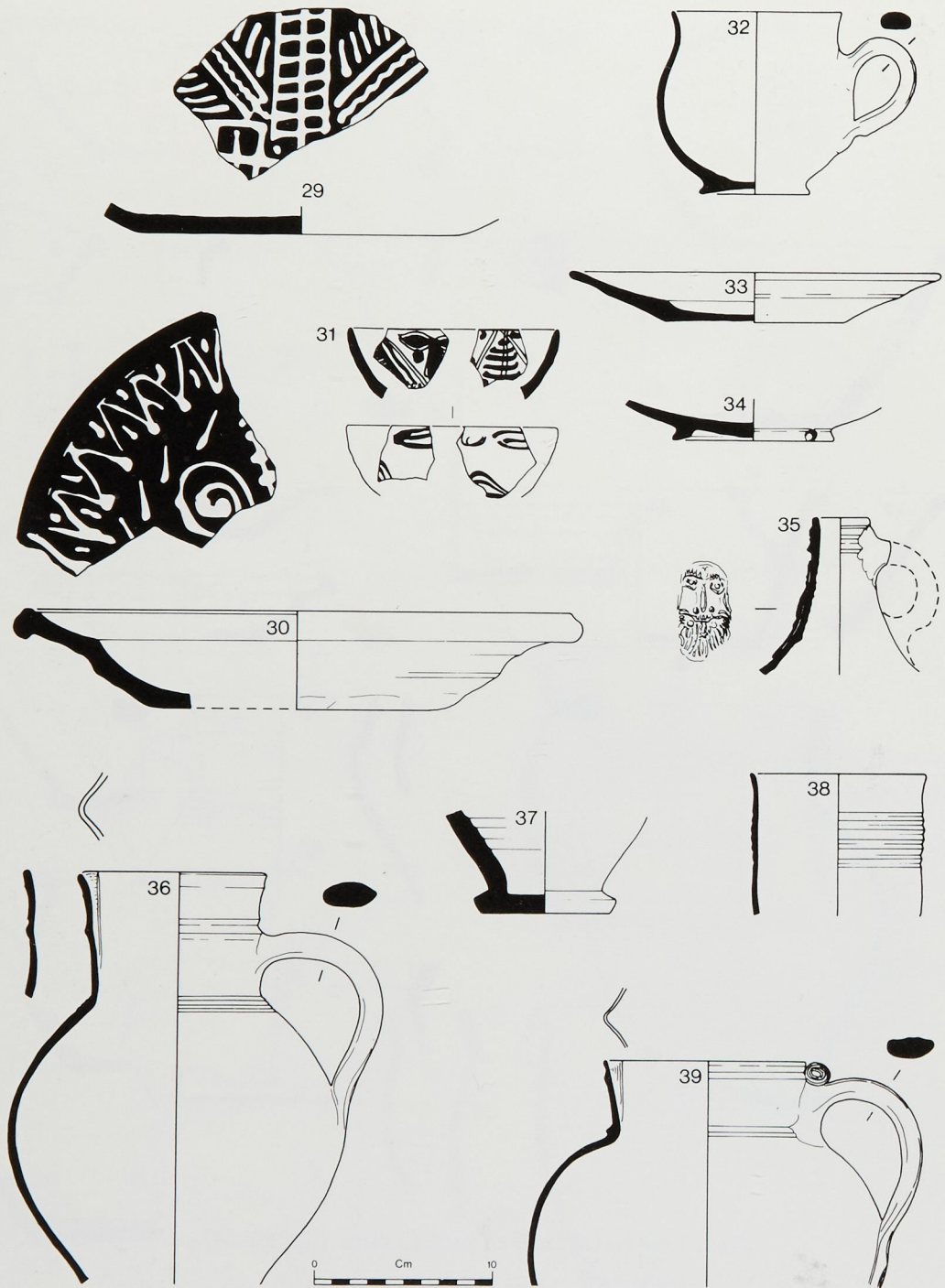


Fig. 4
Phase III. Imports, Black and Speckle-glazed wares. (Scale 1 : 4)

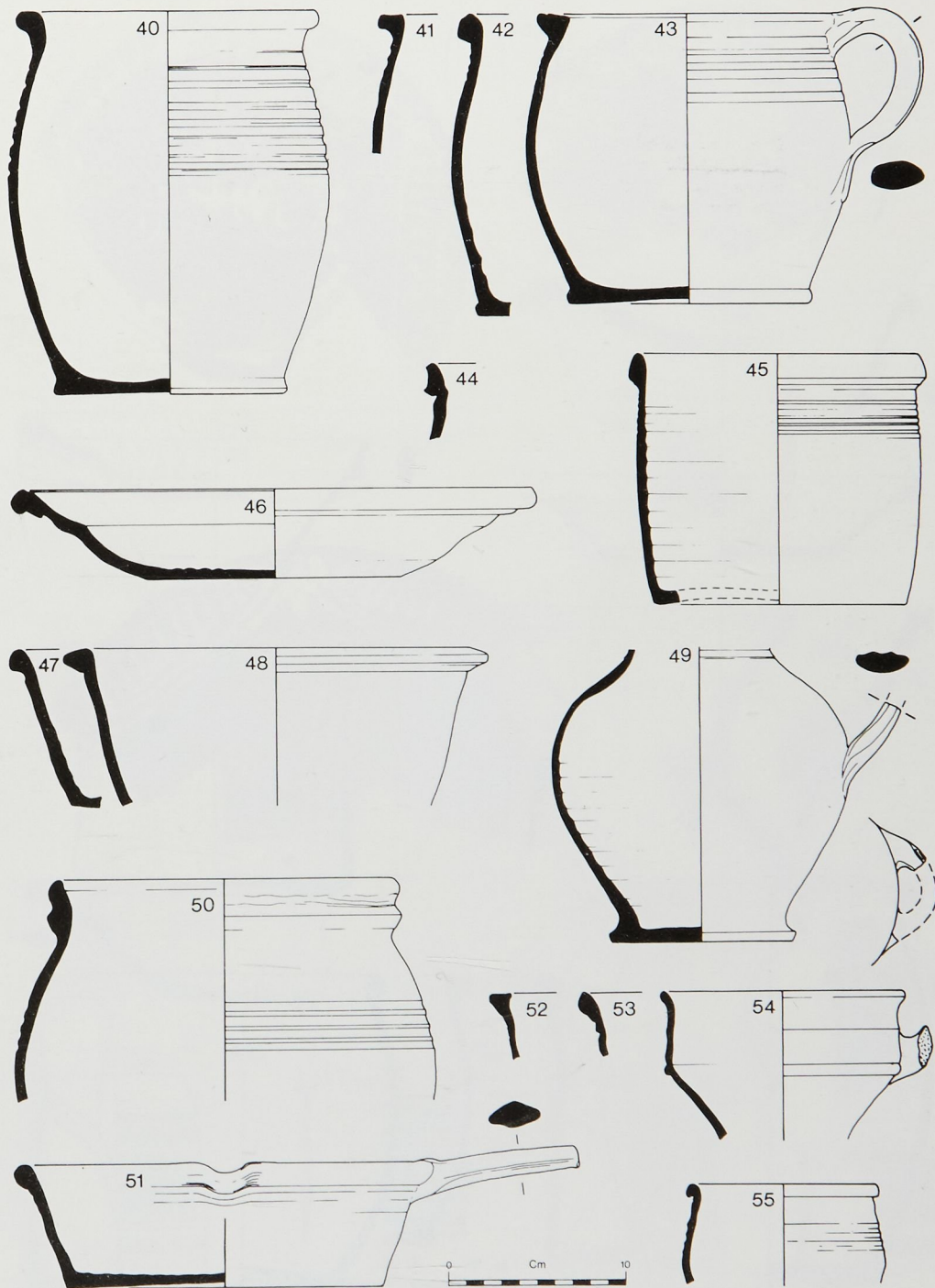


Fig. 5
Phase III. Glazed Red Earthenwares. (Scale 1 : 4)



Fig. 6
Phase IV, layer 3. Imports and Glazed Red Earthenwares. (Scale 1 : 4)

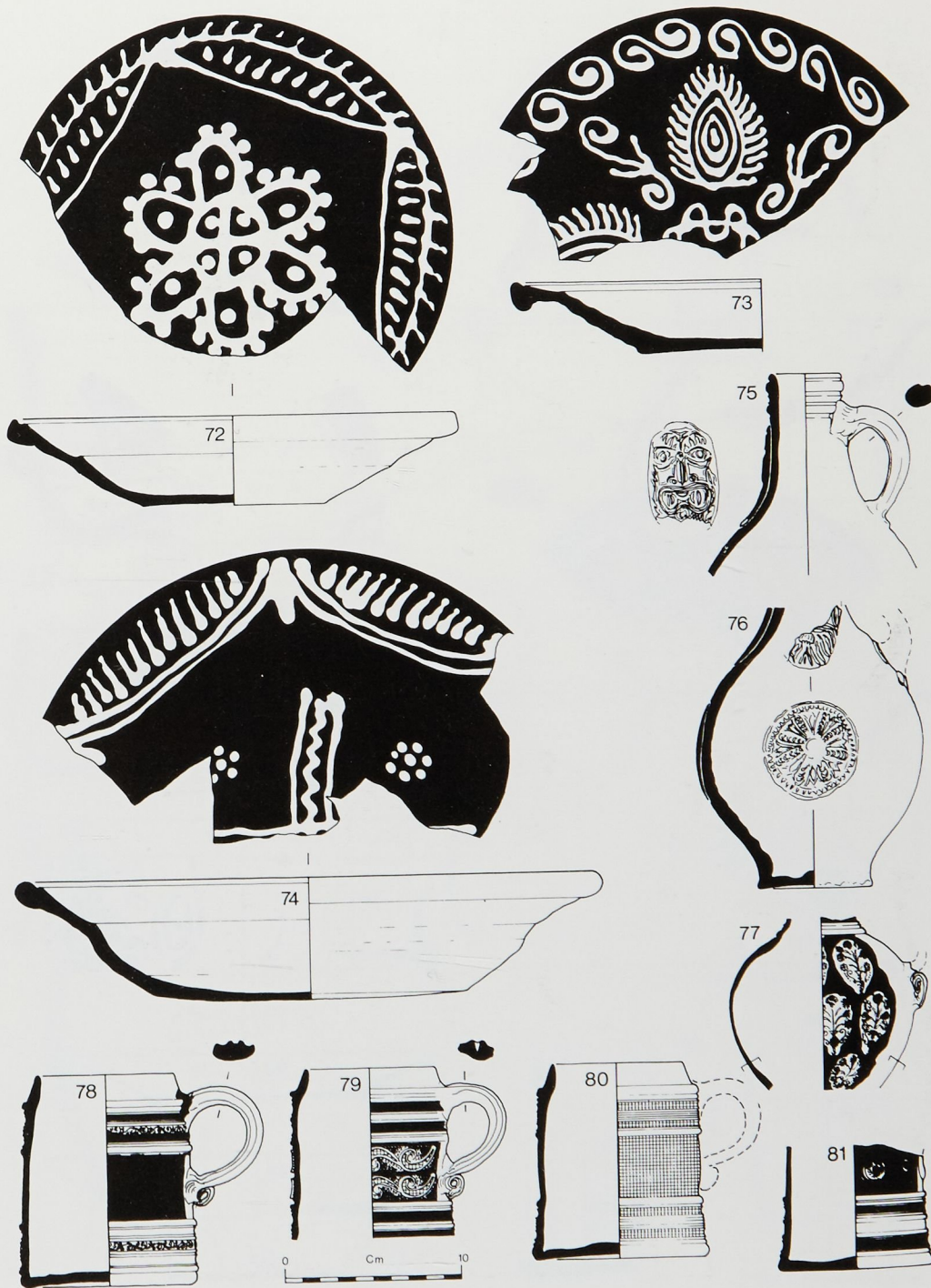


Fig. 7
Phase IV. Imports. (Scale 1 : 4)

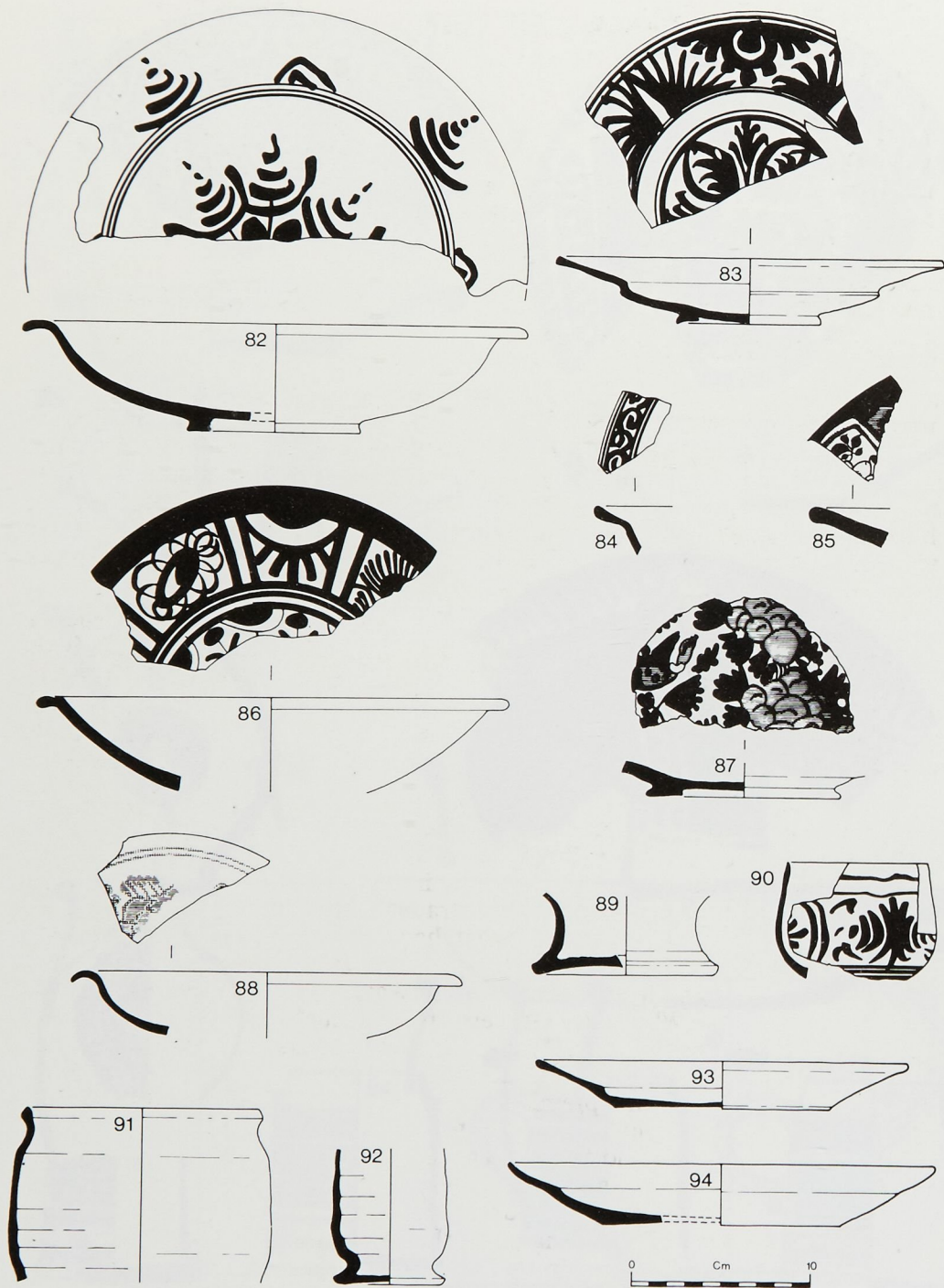


Fig. 8
Phase IV. Tin-glazed Earthenwares. (Scale 1 : 4)

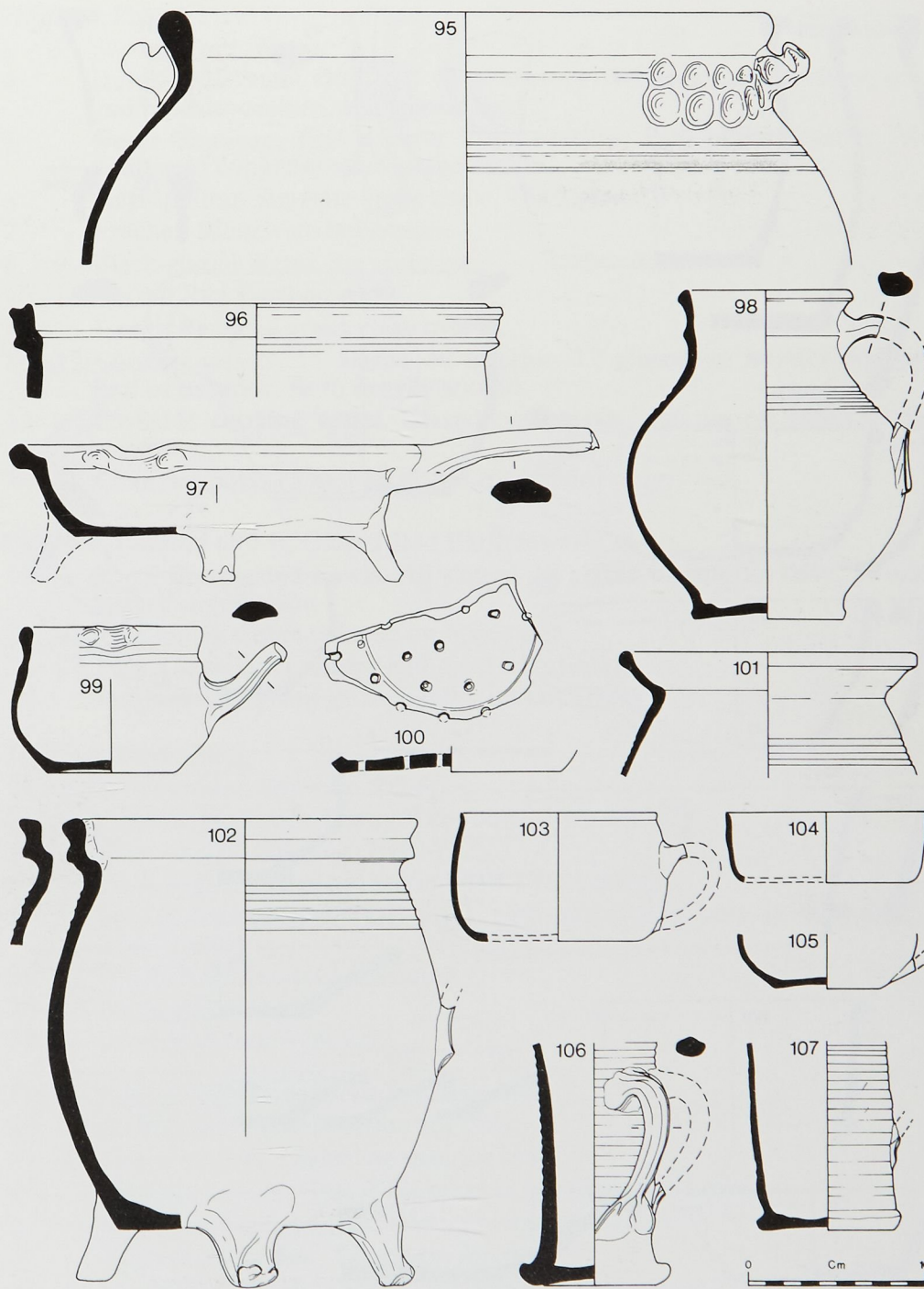


Fig. 9
Phase IV. Glazed Red Earthenwares, Black and Speckle-glazed wares. (Scale 1 : 4)

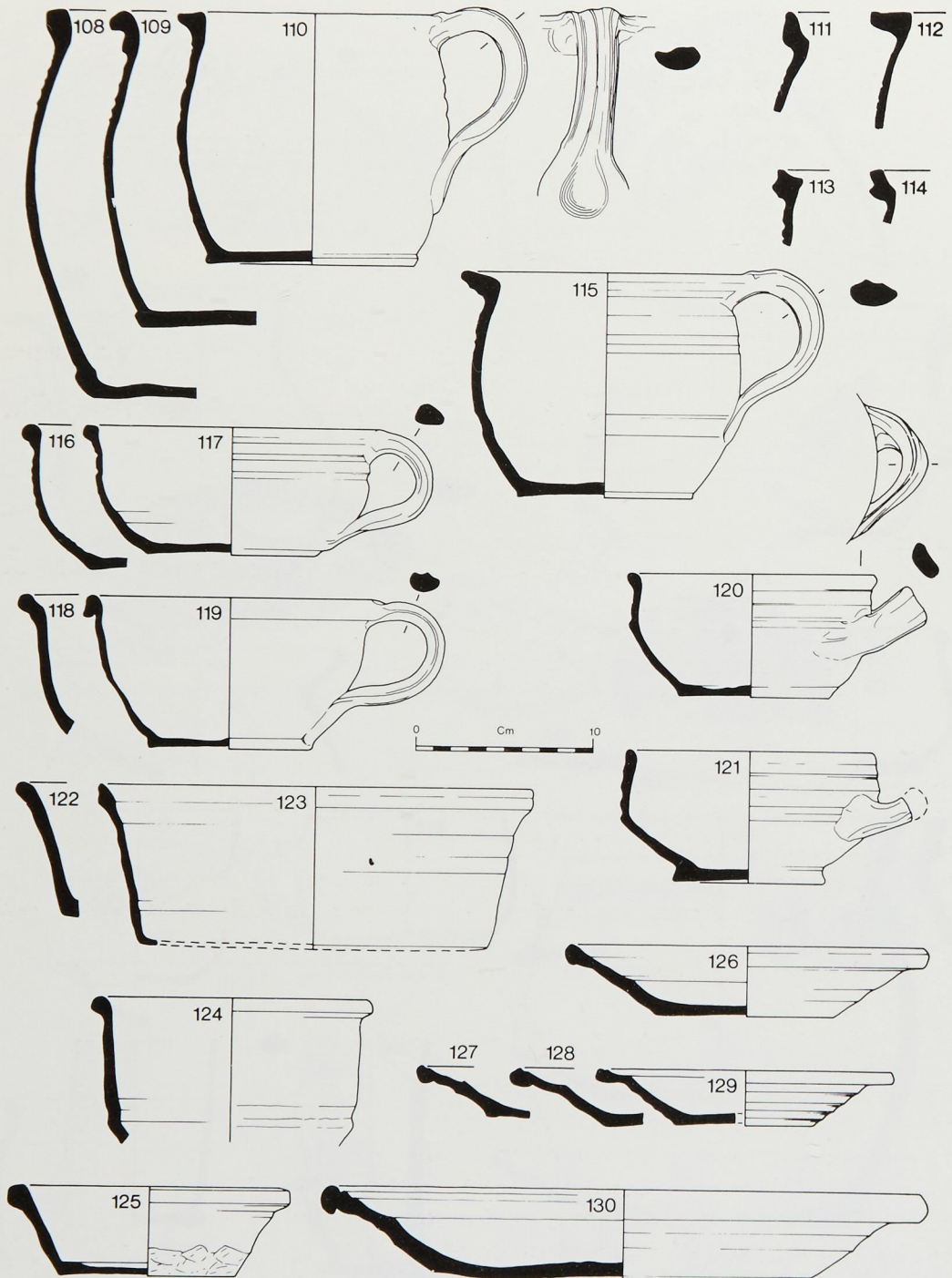


Fig. 10
Phase IV. Glazed Red Earthenwares and Speckle-glazed wares. (Scale 1 : 4)

Figure 2, Phases I and II

- 1 – 3 Surrey White Wares
- 4 Dutch TGE base, first half 17th century. White ground, yellow, orange and blue decoration; lead-glazed back.
- 5 Weser Slipware, first quarter 17th century. Pale pinkish-orange fabric, white and copper green slip decoration.
- 6 Metropolitan Slipware ?mug rim *c.* 1615 plus.
- 7 Frechen Stoneware bellarmine.
- 8 – 9 Black-glazed Wares, jug and mug.
- 10–16 Glazed Red Earthenwares.
- 10 Lamp. Reduced green glaze overall.
- 11–12 Cooking-vessels. 11 glazed on interior. 12 glazed on interior and upper half of exterior. Both heavily sooted.
- 13 Probable cooking vessel. Glazed on interior, patches on exterior. Slight sooting.
- 14–16 Chamber-pots. 15 and 16 glazed on interior only.

Figure 3, Phases I and II, Glazed Red Earthenwares

- 17-20, 22-23 Steep-sided bowls. All except 18 glazed on interior only; 20 and 22 sooted on exterior.
- 21, 24-25 Shallow dishes. Glazed on inside only.
- 26–27 Jugs. Glazed on exterior and most of interior.
- 28 Jar. Reduced green glaze, patchy on both sides.

Figure 4, Phase III

- 29–30 Metropolitan Slipware dishes.
- 31 Hispano-Moresque Lustre Ware bowl, 17th century.
- 32 Plain white TGE mug, 1640-70.
- 33 Plain white TGE plate, second half 17th century.
- 34 Sponged-manganese TGE plate with suspension hole in foot-ring, mid 17th century.
- 35 Frechen Stoneware bellarmine
- 36–38 Black-glazed Wares.
- 39 Speckle-glazed Ware jug.

Figure 5, Phase III, Glazed Red Earthenwares.

- 40 Storage-jar. Glazed on interior only.
- 41–43 Chamber-pots. Glazed on interior only.
- 44 ?Cooking-vessel. Glazed on interior, sooting on exterior.
- 45 Small jar. Glazed on interior and most of exterior.
- 46 Large shallow dish. Glazed on interior.
- 47–48 Steep-sided bowls. Glazed on interior, 48 sooted on exterior.
- 49 Jug. Glazed on exterior, patchy on interior.
- 50 Jar. Glazed on both sides.
- 51 Frying-pan. Glazed on interior, sooted on exterior.
- 52–55 Small bowls. Glazed on interior, heavily sooted on exterior.

Figure 6, Phase IV, layer 3.

- 56 Dutch GRE octagonal plate, late 17th century. White glaze, dark blue decoration.
- 57 English TGE ointment pot, second half 17th century. White glaze.
- 58 Probably Dutch, 'cockerel-shape' bowl. White slip, clear glaze over orange fabric on both sides. Sooted on base.
- 59–71 Glazed Red Earthenwares.
- 59–60 Small bowls. Glazed on interior, slight sooting on exterior.
- 61 Medium shallow dish. Glazed on interior.
- 63–65 Steep-sided bowls. Glazed on interior only, 65 heavily sooted on exterior.
- 66 Jar. Glazed on both sides.
- 67 Small storage-jar. Glazed on both sides.
- 68 Storage-jar. Glazed on interior and most of exterior.
- 69–71 Chamber-pots. 69 and 70 glazed on both sides, 71 glazed on interior.

Figure 7, Phase IV.

- 72–74 Metropolitan Slipware dishes. 72 and 73 sooted on exterior.
- 75–76 Frechen Stoneware bellarmines.
- 77 Westerwald Stoneware jug, last quarter 17th century.
- 78–81 Westerwald Stoneware mugs, late 17th century

Figure 8, Phase IV, Tin-glazed Earthenwares, mostly English.

- 82 Bowl, late 17th century. White ground, mid-blue decoration, lead glaze on back.
- 83 Dish. White ground, mid blue decoration, lead glaze on back.
- 84 Bowl rim, late 17th century. White glaze, blue decoration.
- 85 Rim. White glaze, blue decoration.
- 86 Bowl, possibly London, possibly Netherlands, c. 1640. White glaze, blue decoration.
- 87 Base. White ground, light and dark blue decoration, lead glaze on back. Suspension hole through foot-ring.
- 88 Bowl. late 17th century. Pale blue glaze on both sides, mid-blue and light purple decoration.
- 89 Base ?of a salt. Plain white glaze.
- 90 Bowl, late 17th century. White glaze, blue decoration.
- 91–92 Plain white drug or ointment jars.
- 93–94 Plain white plates, late 17th century

Figure 9, Phase IV, Glazed Red Earthenwares.

- 95–96 Large storage-jars. Patchy glaze on both sides.
- 97 Skillet, Dutch. Glazed on interior, heavily sooted exterior.
- 98 Jug. Glazed on both sides.
- 99 Cooking-vessel. Glazed on interior, heavily sooted exterior.
- 100 Base of strainer. Glazed on interior.
- 101 Jar. Glazed on both sides.
- 102 Tripod jar. Glazed on both sides, slightly sooted on base.
- 103–105 Speckle-glazed Ware cups.

- 106 Black-glazed Ware tyg.
 107 Black-glazed Ware mug.

Figure 10, Phase IV, Glazed Red Earthenware.

- 108 Storage-jar. Glazed on interior.
 109–114 Chamber-pots. Glazed on interior.
 115 Speckle-glazed Ware chamber-pot. Glazed on both sides.
 116–121 Small bowls. All glazed on interior, all sooted on exterior except 116 and 119.
 122–123 Steep-sided bowls. 123 glazed on both sides.
 124 Bowl, possibly with handle. Glazed on interior, heavily sooted on exterior.
 125 Small bowl. Glazed on interior.
 126 Medium shallow dish. Glazed on interior.
 127–129 Small shallow dishes. Glazed on interior.
 130 Large shallow dish. Reduced green glaze on interior.

THE CLAY PIPES

A total of 220 clay pipe bowls were recovered from the well/cesspit. Due to limited time, the pipe stems were not collected systematically and discussion of these has been omitted from the report. The bowls are the subject of a fuller study published elsewhere (Atkin and Davey 1984) and are discussed here only in relation to the evidence for dating provided by the clay pipes in the archaeological sequence.

It is unusual for a single feature to produce so many 17th-century pipe bowls. Although there were variations in shape and size, they could be sorted into a small number of types (Fig. 11); each type was then compared to other Norwich groups (Atkin forthcoming) and to the London typology of Atkinson and Oswald (1969) in order to produce the suggested date-range. A full typology for Norwich pipes will be published in 1985 (by the Norwich Survey in *East Anglian Archaeology*). The date-range of the pipes for each layer is shown in Table 3, but must be regarded as providing a general guide rather than absolute dates, i.e. the latest date in a range is not meant to necessarily suggest the time-span of deposition, but rather the probable length of time that the form survived in use.

There were three intrusive bowls of types common to layer 1 in layers 6 and 4, possibly due to settling through the layers. The small number of bowls (10) in the bottom two phases (layers 6 and 5) would perhaps be consistent with the use of this feature as a well and not as a rubbish pit. Note that there were no clay pipes at all in the bottom layer (layer 7). Not too much emphasis should be placed, therefore, on the date range of such a small, and mixed, sample, except to suggest the earliest date for the possible deposition of the pipes in the first two or three decades of the 17th century (Fig. 11, nos 1 and 2).

The bowls in phase III (layer 4) would suggest the conversion of the well to cesspit at a date between c. 1640-1670/80, with an emphasis on the middle years of that range (Fig. 11, nos 3 and 4). Marked 17th-century bowls are rarely found in Norwich pipe groups; Fig. 11, no. 4, marked IS, is one of only three similarly marked bowls from excavated groups – all associated with bowls of c. 1650–1670/80.

Over half of the clay pipe bowls came from phase IV – the cesspit. The majority of these were stained, to varying degrees, with brown, caused by calcium phosphate, implying contact with a cesspit or midden containing decaying bone or vegetable matter. There are bowl-types in layers 1 and 2 that appear in layers 3 and 4, but new types of bowl-shape (probably dating from *c.* 1670–1700), and an increase in bowl-sizes, also occurs (Fig. 11, nos 5 to 7), suggesting a fairly continuous, and perhaps rapid, deposition during phase IV. However, bowls typically found in 1690–1710/20 Norwich groups are absent, so the deposition date of the pipes is likely to have been before 1700.

Table 3

Phase	Layer	Typological Date	No. bowls
I	6	1610–1650; 1640–1660/70	7
II	5	1630–1670/80	3
III	4	1640–1670/80	49
IV	3	1640–1680	25
	2	1650–1690	47
	1	1660–1690/1700	89

The Illustrated Material

- Fig. 11 No. 1 Type 3: small spurred bowl. The smallest bowl in size and capacity. One example, layer 6. 1600–1640. (Two larger spurred bowls in layers 4 and 5: 1660–1680)
- No. 2 Type 1: small size and capacity, high milling all around rim. One example, layer 6. *c.* 1610–1650. (Nos. 1 and 2 provide the earliest dating for the pipes in the well phase)
- No. 3 Type 5: curving sides, gentle mid-swell. This was the most common type found, occurring in various sizes in layers 1, 2, 3, 4 and 6. *c.* 1640–1670/80.
- No. 4 Type 4: bulbous bowl; stamped IS. Layer 4. 1650–1680. A few plain, smaller bulbous types (*c.* 1640–1660) occur in layers 4, 5 and 6.
- No. 5 Type 7: increase in size, almost continuous curving sides. Layers 1 and 2. Second half of 17th century.
- No. 6 Type 8: similar to type 7 (no. 5) but with more sharply-defined and outstanding bases. These were the ‘tallest’ bowls in the feature. Layer 1. 1670–1710.
- No. 7 Type 9: narrowing of body, sides more parallel. Layer 1. 1680–1710.

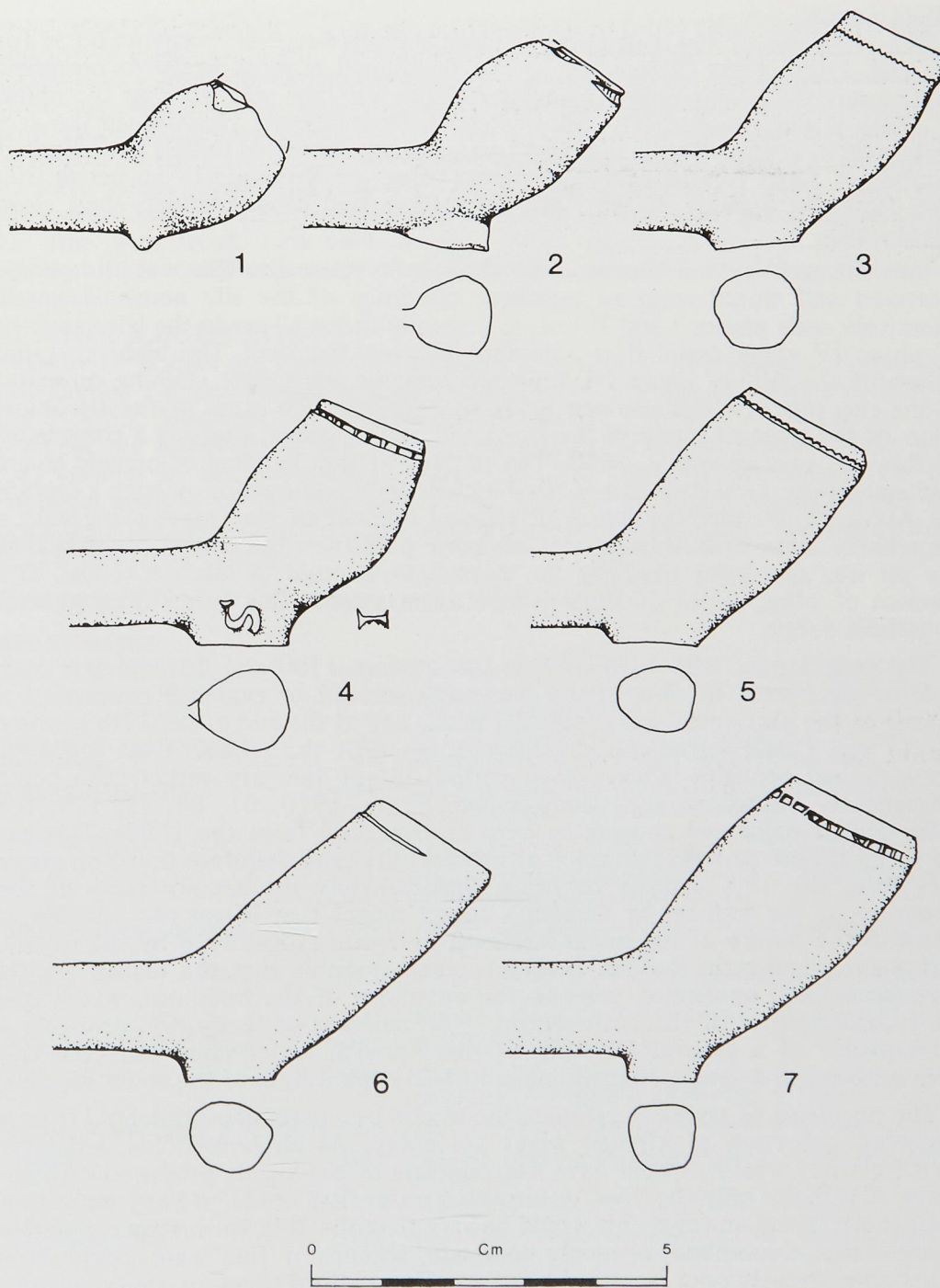


Fig. 11
The Clay Pipes (Scale 1 : 1)

DISCUSSION

The character of the well lining suggests a similar date of construction as for the initial fill of the feature, i.e., *c.* 1610. Phase I is most likely to represent contemporary building debris, associated either with the well itself or the house to which it was attached. The fill of phase II then suggests a continued use as a well up to *c.* 1650, with the relative thinness of the deposits (Table 1) and limited number of finds (particularly clay pipes) being characteristic of an active life. The degree of overlap in the finds from these two phases reflects their close relationship.

Into the well is then thrown the rubble from phase III. This was all heavily-mortared and would seem to represent clearance of the site above. Layer 4 effectively seals phases I and II but, as it merely forms a base to the later activity of phase IV some material is common between the two. The highly organic nature of the fills of phase IV, together with the phosphate staining on many of the clay pipes (which also was likely to have been the cause of the discolouration of the glaze of many of the tin-glazed earthenwares) suggests a conversion of the well to a cesspit *c.* 1650. The pattern of thin banding of organic layers is characteristic of such features. (For a comparable conversion of such a feature see Atkin, M. W. forthcoming). The unusual number of clay pipes along with a remarkably large collection of near-complete pots from the cesspit suggests that the pit was also being used for the immediate disposal of kitchen refuse. The absence of other types of finds would argue against this being from general household debris.

The cesspit may then have been in use until *c.* 1700 and this end-date may well be significant in view of the increasing amount of evidence concerning a change in the pattern of waste disposal in the city at the end of the 17th century (Atkin and Carter forthcoming). Although much of the rubbish from medieval Norwich had probably always been carted out of the city rather than being permanently buried on site (Hudson and Tingey 1910, 61, 84, 85, 109) the collection of night soil appears to have been general from the 1690s. This has led to an almost complete absence of rubbish pits (and therefore finds) on many sites from the 18th century onwards. Unfortunately the circumstances of the discovery of the well on St Stephen's Street meant that it was not possible to establish the nature of the upper levels of the feature (destroyed by the cellar). Although speculation, it does, however, seem probable that the feature would have been filled or capped prior to the extension of the buildings, which was itself characteristic of the 18th century. The well was perfectly dry, probably a consequence of a general lowering of the Norwich water table from the late 19th century (as a result of expanding industrial exploitation of the water supply).

The problems of trying to estimate the wealth of a particular household from a discarded collection of kitchen wares are many. As all households, whatever their (relative) wealth, would have had numbers of the locally-produced earthenwares, it is really only the 'fine' or imported wares that would give any indication of financial status, and even this would be very tenuous. It is, for instance, possible to argue that a complete, or nearly complete, absence of 'fine' wares could show either an extremely poor household that could not afford them, or a very wealthy household that had metal or glass equivalents (the almost complete absence of glass or metal fragments from the site is not particularly helpful in this respect).

The proportions of local wares to 'fine' or imported wares is typical of many assemblages of this date-range in the city and shows the characteristic increase in the range of the latter at the end of the 17th century, as a wider range becomes

more generally available. There are a number of well-decorated tin-glazed dishes and bowls from the early 17th century onwards and at least nine plain white tin-glazed plates from the late 17th century. A number of the dishes are Dutch, and there are also imports from Germany (slipwares and stonewares – including Westerwald stoneware mugs, but not the chamber-pots which are also common in Norwich), Italy and Spain. The Hispano-Moresque lustre ware bowl is unlikely to have come direct from Spain, but was probably traded along the North European Coast. Its rarity would have added to its value. The other major source for 'fine' ware would have been London, either directly in the case of tin-glazed wares, or indirectly as a marketing distribution point for the Metropolitan and Surrey Wares.

ACKNOWLEDGEMENTS

Grateful thanks are owed to Norwich Co-operative Societies Ltd. (especially Mr. Hanks) for permission to record the features and for donating the finds to the Norfolk Museums Service. We are also grateful to W. F. Milligan for first bringing the discovery of the well to our attention, and to Andrew Jones who also assisted in the excavation. Thanks are also due to Peter Murphy for the chemical analysis of the clay pipe stains, and to Paul Drury for identifying the brick and tile. The location plans were drawn by Phillip Judge, and the pottery drawn by Martin Creasey.

February 1984

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The Society is grateful to the Council for British Archaeology for a grant towards the cost of printing this Report.